

# **PDC ENERGY**

**WELD COUNTY, COLORADO  
SW NW SEC. 10 T5N R64W 6th P.M.  
WACKER 10F-232**

**ORIGINAL WELLBORE  
PROPOSAL #1**

## **Anticollision Report**

**04 February, 2016**



# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

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

<b>Survey Tool Program</b>	<b>Date</b>	04/02/2016		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,882.7	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	6,081.8	5,885.9	4,108.7	3,969.0	29.407	CC, ES, SF
ABDN VERT HEINRICH #1 - Wellbore #1 - Design #1	6,081.8	5,897.9	260.1	127.2	1.957	CC
ABDN VERT HEINRICH #1 - Wellbore #1 - Design #1	6,102.3	5,918.4	260.2	119.0	1.842	ES, SF
ABDN VERT OGRADY #3 - Wellbore #1 - Design #1	6,081.8	5,923.9	1,687.6	1,547.1	12.013	CC, ES, SF
ABDN VERT PLUMB #2 - Wellbore #1 - Design #1	6,081.8	5,893.9	7,989.5	7,846.6	55.927	CC, ES
ABDN VERT PLUMB #2 - Wellbore #1 - Design #1	8,500.0	6,593.6	9,985.7	9,802.6	54.530	SF
EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellb	6,082.5	6,060.0	5,834.2	5,793.6	143.728	CC, ES
EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellb	10,629.9	6,765.0	9,937.5	9,812.3	79.363	SF
EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellb	3,654.6	1,682.2	7,257.6	7,244.2	538.497	CC
EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellb	3,700.0	1,694.9	7,257.7	7,244.1	529.994	ES
EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellb	9,200.0	6,636.3	9,993.2	9,898.8	105.944	SF
EXIST DD JURGENS STATE #B16-30D - Wellbore #1 -	6,095.8	6,333.6	5,739.1	5,681.9	100.376	CC, ES
EXIST DD JURGENS STATE #B16-30D - Wellbore #1 -	11,220.4	7,041.0	9,940.2	9,783.9	63.576	SF
EXIST DD PETERSON B #10-24D - Wellbore #1 - Wellb	9,719.8	6,669.0	2,200.6	2,101.6	22.221	CC
EXIST DD PETERSON B #10-24D - Wellbore #1 - Wellb	9,800.0	6,669.0	2,202.1	2,100.9	21.761	ES
EXIST DD PETERSON B #10-24D - Wellbore #1 - Wellb	11,100.0	6,669.0	2,597.6	2,461.0	19.006	SF
EXIST DD PJ #8I - Wellbore #1 - Wellbore #1	6,081.8	6,110.0	8,619.1	8,577.8	208.595	ES
EXIST DD PJ #8I - Wellbore #1 - Wellbore #1	6,094.6	6,128.2	8,619.0	8,586.3	263.924	CC
EXIST DD PJ #8I - Wellbore #1 - Wellbore #1	7,874.0	6,711.5	9,991.4	9,935.3	178.132	SF
EXIST DD WACKER B #10-20D - Wellbore #1 - Wellbore	8,536.7	6,751.1	931.2	852.6	11.848	CC
EXIST DD WACKER B #10-20D - Wellbore #1 - Wellbore	8,563.0	6,751.1	931.5	852.3	11.754	ES
EXIST DD WACKER B #10-20D - Wellbore #1 - Wellbore	8,800.0	6,750.5	967.7	882.4	11.350	SF
EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore	11,837.6	6,645.0	2,461.7	2,302.8	15.489	CC
EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore	11,883.5	6,658.1	2,462.0	2,301.7	15.352	ES, SF
EXIST HZ MAX #B11-64-1HN - Wellbore #1 - Wellbore #	11,882.7	6,696.0	1,901.8	1,741.6	11.876	CC
EXIST HZ MAX #B11-64-1HN - Wellbore #1 - Wellbore #	11,883.5	6,696.0	1,901.8	1,741.6	11.875	ES, SF
EXIST HZ SEYLROR #B10-64-1HN - Wellbore #1 - Wellbc	539.9	525.9	982.3	980.5	552.777	CC
EXIST HZ SEYLROR #B10-64-1HN - Wellbore #1 - Wellbc	1,574.8	1,575.8	982.7	976.4	154.853	ES
EXIST HZ SEYLROR #B10-64-1HN - Wellbore #1 - Wellbc	11,883.5	10,758.0	1,817.6	1,556.1	6.951	SF
EXIST HZ SEYLROR STATE #B15-79HNM - Wellbore #1	1,547.3	1,553.7	928.1	922.1	153.732	CC, ES
EXIST HZ SEYLROR STATE #B15-79HNM - Wellbore #1	8,400.0	6,188.5	1,881.7	1,819.0	29.980	SF
EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1	5,924.3	5,679.2	2,231.8	2,205.9	86.051	CC, ES
EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1	11,882.7	6,458.3	7,040.7	6,894.9	48.312	SF
EXIST VERT BLOSKAS #1 - Wellbore #1 - Design #1	6,081.8	5,896.9	4,038.6	3,896.6	28.442	CC, ES, SF
EXIST VERT BLOSKAS #12-9 - Wellbore #1 - Design #1	6,081.8	5,886.9	3,879.9	3,737.5	27.256	CC, ES, SF
EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore	6,081.8	5,962.3	3,081.9	3,058.6	132.078	ES
EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore	6,103.8	5,986.2	3,081.6	3,059.9	141.584	CC

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

# Anticollision Report



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<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SW NW SEC. 10 T5N R64W 6th P.M.						
EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore	11,882.7	6,600.0	8,233.4	8,087.5	56.458	SF
EXIST VERT BLOSKAS BOND #9D - Wellbore #1 - Wel	6,081.8	5,983.6	3,335.4	3,308.2	122.507	ES
EXIST VERT BLOSKAS BOND #9D - Wellbore #1 - Wel	6,103.5	6,007.0	3,335.1	3,318.5	201.666	CC
EXIST VERT BLOSKAS BOND #9D - Wellbore #1 - Wel	11,883.5	6,790.0	8,676.2	8,536.1	61.900	SF
EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1	6,081.8	5,908.4	2,692.5	2,666.2	102.152	ES
EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1	6,088.9	5,915.7	2,692.5	2,674.6	150.895	CC
EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1	11,882.7	6,700.0	8,054.2	7,911.0	56.265	SF
EXIST VERT BOND #21-9 - Wellbore #1 - Design #1	6,081.8	5,904.9	2,800.9	2,659.0	19.740	CC, ES, SF
EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1	6,081.8	5,887.2	1,295.5	1,270.0	50.823	ES
EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1	6,084.7	5,889.6	1,295.5	1,276.9	69.704	CC
EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1	11,882.7	6,528.2	6,666.8	6,529.7	48.638	SF
EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1	98.4	68.1	1,030.7	1,030.6	10,000.000	CC
EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1	600.0	569.9	1,031.3	1,029.7	655.826	ES
EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1	9,100.0	6,568.7	1,865.1	1,794.9	26.574	SF
EXIST VERT HECKENDORF #1 - Wellbore #1 - Design	6,081.8	5,897.9	5,416.6	5,274.6	38.143	CC, ES, SF
EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1	6,493.9	6,312.6	1,120.3	971.3	7.519	CC
EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1	6,550.0	6,358.4	1,120.7	971.1	7.488	ES
EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1	6,650.0	6,433.3	1,124.6	973.9	7.461	SF
EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #	6,081.8	5,931.1	5,413.9	5,389.1	218.017	ES
EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #	6,088.1	5,936.1	5,413.9	5,394.0	272.640	CC
EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #	11,122.0	6,668.1	9,927.0	9,802.3	79.561	SF
EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore	6,012.7	5,732.3	6,497.9	6,480.5	375.010	CC
EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore	6,051.8	5,772.0	6,498.1	6,471.5	243.944	ES
EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore	9,940.9	6,400.0	9,958.8	9,899.0	166.613	SF
EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore	5,996.7	5,700.0	5,458.9	5,440.7	300.280	CC
EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore	6,051.8	5,743.7	5,459.4	5,432.5	202.939	ES
EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore	11,023.6	6,373.0	9,998.3	9,894.5	96.354	SF
EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Well	6,002.5	5,717.5	6,405.0	6,384.3	309.335	CC
EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Well	6,051.8	5,760.0	6,405.3	6,380.9	262.450	ES
EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Well	10,200.0	6,304.2	9,978.1	9,879.5	101.163	SF
EXIST VERT JURGENS PM B #B8-10 - Wellbore #1 - D	6,081.8	5,907.9	6,509.3	6,369.0	46.408	CC, ES
EXIST VERT JURGENS PM B #B8-10 - Wellbore #1 - D	10,039.3	6,587.8	9,999.1	9,776.4	44.894	SF
EXIST VERT LOWER LATHAM #8-15 - Wellbore #1 - W	6,012.9	5,740.3	5,887.9	5,870.9	345.263	CC
EXIST VERT LOWER LATHAM #8-15 - Wellbore #1 - W	6,051.8	5,780.9	5,888.2	5,861.1	217.215	ES
EXIST VERT LOWER LATHAM #8-15 - Wellbore #1 - W	10,531.5	6,436.6	9,936.8	9,882.2	181.821	SF
EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1	7,762.9	6,623.0	1,455.4	1,286.5	8.618	CC
EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1	7,800.0	6,622.5	1,455.9	1,286.3	8.583	ES
EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1	8,070.8	6,619.1	1,487.6	1,312.1	8.476	SF
EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1	6,081.8	5,914.9	1,697.0	1,558.0	12.213	CC, ES, SF
EXIST VERT PAULINE #5 - Wellbore #1 - Design #1	6,081.8	5,893.9	8,051.9	7,909.6	56.608	CC, ES
EXIST VERT PAULINE #5 - Wellbore #1 - Design #1	7,200.0	6,610.0	8,760.5	8,605.1	56.390	SF
EXIST VERT PJ #2 - Wellbore #1 - Wellbore #1	5,999.9	5,676.0	7,809.8	7,791.4	425.504	CC
EXIST VERT PJ #2 - Wellbore #1 - Wellbore #1	6,051.8	5,721.4	7,810.2	7,784.5	303.460	ES
EXIST VERT PJ #2 - Wellbore #1 - Wellbore #1	8,661.4	6,400.0	9,963.8	9,906.0	172.458	SF
EXIST VERT PJ #5 - Wellbore #1 - Design #1	6,081.8	5,901.9	8,576.4	8,434.7	60.533	CC, ES, SF
EXIST VERT SLW RANCH #1-10 - Wellbore #1 - Wellbo	11,616.5	6,568.7	1,106.5	968.1	7.994	CC, ES
EXIST VERT SLW RANCH #1-10 - Wellbore #1 - Wellbo	11,882.7	6,564.2	1,138.0	992.3	7.807	SF
EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore	9,305.3	6,524.3	1,551.7	1,475.6	20.400	CC
EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore	9,350.4	6,526.1	1,552.4	1,475.1	20.091	ES
EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore	10,200.0	6,561.1	1,790.9	1,690.7	17.873	SF
EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbor	10,422.5	6,552.7	1,460.0	1,354.4	13.825	CC
EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbor	10,433.0	6,552.6	1,460.0	1,354.1	13.787	ES
EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbor	11,000.0	6,547.9	1,570.0	1,448.6	12.930	SF

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

# Anticollision Report



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<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

## Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SW NW SEC. 10 T5N R64W 6th P.M.						
EXIST VERT WACKER #1 - Wellbore #1 - Wellbore #1	7,697.4	6,616.5	29.3	-7.0	0.807	Level 1, CC, ES, SF
EXIST VERT WACKER #10D - Wellbore #1 - Wellbore #	8,439.4	6,618.6	396.2	342.5	7.366	CC, ES
EXIST VERT WACKER #10D - Wellbore #1 - Wellbore #	8,500.0	6,616.9	400.9	345.6	7.248	SF
EXIST VERT WACKER #2 - Wellbore #1 - Design #1	9,342.6	6,599.8	923.2	716.0	4.455	CC
EXIST VERT WACKER #2 - Wellbore #1 - Design #1	9,350.4	6,599.7	923.3	715.8	4.451	ES
EXIST VERT WACKER #2 - Wellbore #1 - Design #1	9,448.8	6,598.4	929.3	719.3	4.424	SF
EXIST VERT WACKER #22-10 - Wellbore #1 - Wellbore	9,348.6	6,567.3	357.0	280.6	4.672	CC
EXIST VERT WACKER #22-10 - Wellbore #1 - Wellbore	9,350.4	6,567.4	357.0	280.6	4.669	ES
EXIST VERT WACKER #22-10 - Wellbore #1 - Wellbore	9,400.0	6,569.6	360.7	282.9	4.636	SF
EXIST VERT WACKER #31-10 - Wellbore #1 - Design #	10,256.8	6,552.0	1,209.6	979.5	5.256	CC
EXIST VERT WACKER #31-10 - Wellbore #1 - Design #	10,300.0	6,551.4	1,210.4	979.1	5.233	ES
EXIST VERT WACKER #31-10 - Wellbore #1 - Design #	10,433.0	6,549.7	1,222.4	987.5	5.204	SF
EXIST VERT WACKER #32-10 - Wellbore #1 - Design #	10,246.0	6,592.1	11.8	-217.5	0.051	Level 1, CC, ES, SF
EXIST VERT WACKER #41-10 - Wellbore #1 - Wellbore	11,879.6	6,493.3	1,213.6	1,067.9	8.329	CC
EXIST VERT WACKER #41-10 - Wellbore #1 - Wellbore	11,883.5	6,493.0	1,213.6	1,067.8	8.323	ES, SF
EXIST VERT WACKER #42-10 - Wellbore #1 - Wellbore	11,754.4	6,500.0	116.4	-9.5	0.925	Level 1, CC, ES, SF
EXIST VERT WILLIAMS #1 - Wellbore #1 - Wellbore #1	3,840.6	3,718.4	1,347.0	1,331.1	84.683	CC
EXIST VERT WILLIAMS #1 - Wellbore #1 - Wellbore #1	3,937.0	3,812.5	1,347.2	1,330.7	81.508	ES
EXIST VERT WILLIAMS #1 - Wellbore #1 - Wellbore #1	11,882.7	6,565.7	5,360.1	5,214.3	36.769	SF
WACKER 10F-204 - ORIGINAL WELLBORE - PROPOS	1,000.0	1,000.0	59.8	55.5	14.090	CC, ES
WACKER 10F-204 - ORIGINAL WELLBORE - PROPOS	6,850.0	7,443.5	530.5	479.6	10.410	SF
WACKER 10F-234 - ORIGINAL WELLBORE - PROPOS	1,300.0	1,300.0	15.0	9.4	2.675	CC, ES
WACKER 10F-234 - ORIGINAL WELLBORE - PROPOS	7,302.5	6,970.6	61.9	14.8	1.314	Level 3, SF
WACKER 10F-302 - ORIGINAL WELLBORE - PROPOS	1,200.0	1,200.0	29.9	24.8	5.815	CC
WACKER 10F-302 - ORIGINAL WELLBORE - PROPOS	11,883.5	11,987.5	252.1	-25.1	0.910	Level 1, ES, SF
WACKER 10F-304 - ORIGINAL WELLBORE - PROPOS	1,100.0	1,100.0	44.8	40.1	9.557	CC, ES
WACKER 10F-304 - ORIGINAL WELLBORE - PROPOS	7,578.7	6,777.1	293.6	245.1	6.059	SF
WACKER 10G-212 - ORIGINAL WELLBORE - PROPOS	1,200.0	1,200.0	60.1	55.0	11.691	CC
WACKER 10G-212 - ORIGINAL WELLBORE - PROPOS	1,300.0	1,299.8	60.3	54.7	10.817	ES
WACKER 10G-212 - ORIGINAL WELLBORE - PROPOS	11,883.5	11,859.3	453.4	165.7	1.576	SF
WACKER 10G-214 - ORIGINAL WELLBORE - PROPOS	1,300.0	1,300.0	45.2	39.6	8.079	CC, ES
WACKER 10G-214 - ORIGINAL WELLBORE - PROPOS	1,476.4	1,474.8	48.3	41.9	7.630	SF
WACKER 10G-302 - ORIGINAL WELLBORE - PROPOS	1,000.0	1,000.0	90.0	85.7	21.214	CC, ES
WACKER 10G-302 - ORIGINAL WELLBORE - PROPOS	11,883.5	11,955.0	766.1	479.9	2.677	SF
WACKER 10G-304 - ORIGINAL WELLBORE - PROPOS	1,100.0	1,100.0	75.0	70.3	15.996	CC, ES
WACKER 10G-304 - ORIGINAL WELLBORE - PROPOS	6,692.9	7,615.1	762.7	708.2	14.015	SF
WACKER 10G-312 - ORIGINAL WELLBORE - PROPOS	1,400.0	1,400.0	30.2	24.2	5.004	CC
WACKER 10G-312 - ORIGINAL WELLBORE - PROPOS	11,883.5	11,969.5	214.7	-59.8	0.782	Level 1, ES, SF
WACKER 10G-314 - ORIGINAL WELLBORE - PROPOS	1,400.0	1,400.0	15.3	9.2	2.531	CC
WACKER 10G-314 - ORIGINAL WELLBORE - PROPOS	1,476.4	1,476.4	15.6	9.2	2.441	ES
WACKER 10G-314 - ORIGINAL WELLBORE - PROPOS	1,500.0	1,500.0	15.8	9.3	2.438	SF

Offset Design										SW NW SEC. 10 T5N R64W 6th P.M. - ABDN VERT BLOSKAS #13-9 - Wellbore #1 - Design #1				Offset Site Error:		0.0 usft
Survey Program: 0-INC														Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	-104.19	-1,242.9	-4,915.0	5,069.9							
98.4	98.4	65.4	65.4	0.1	0.1	-104.19	-1,242.9	-4,915.0	5,069.8	5,069.6	0.17	N/A				
100.0	100.0	67.0	67.0	0.1	0.1	-104.19	-1,242.9	-4,915.0	5,069.8	5,069.6	0.18	N/A				
196.8	196.8	163.8	163.8	0.3	1.8	-104.19	-1,242.9	-4,915.0	5,069.8	5,067.6	2.10	2,409.937				

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	
200.0	200.0	167.0	167.0	0.3	1.9	-104.19	-1,242.9	-4,915.0	5,069.8	5,067.6	2.19	2,311.708	
295.3	295.3	262.3	262.3	0.5	4.0	-104.19	-1,242.9	-4,915.0	5,069.8	5,065.2	4.55	1,113.032	
300.0	300.0	267.0	267.0	0.5	4.1	-104.19	-1,242.9	-4,915.0	5,069.8	5,065.1	4.66	1,087.218	
393.7	393.7	360.7	360.7	0.8	6.0	-104.19	-1,242.9	-4,915.0	5,069.8	5,063.0	6.79	746.817	
400.0	400.0	367.0	367.0	0.8	6.2	-104.19	-1,242.9	-4,915.0	5,069.8	5,062.8	6.93	731.494	
492.1	492.1	459.1	459.1	1.0	8.0	-104.19	-1,242.9	-4,915.0	5,069.8	5,060.7	9.00	563.035	
500.0	500.0	467.0	467.0	1.0	8.2	-104.19	-1,242.9	-4,915.0	5,069.8	5,060.6	9.18	552.182	
590.5	590.5	557.5	557.5	1.2	10.0	-104.19	-1,242.9	-4,915.0	5,069.8	5,058.5	11.21	452.099	
600.0	600.0	567.0	567.0	1.2	10.2	-104.19	-1,242.9	-4,915.0	5,069.8	5,058.3	11.43	443.711	
689.0	689.0	656.0	656.0	1.4	12.0	-104.19	-1,242.9	-4,915.0	5,069.8	5,056.3	13.42	377.769	
700.0	700.0	667.0	667.0	1.4	12.2	-104.19	-1,242.9	-4,915.0	5,069.8	5,056.1	13.67	370.940	
787.4	787.4	754.4	754.4	1.6	14.0	-104.19	-1,242.9	-4,915.0	5,069.8	5,054.1	15.62	324.465	
800.0	800.0	767.0	767.0	1.7	14.2	-104.19	-1,242.9	-4,915.0	5,069.8	5,053.8	15.91	318.709	
885.8	885.8	852.8	852.8	1.9	16.0	-104.19	-1,242.9	-4,915.0	5,069.8	5,051.9	17.83	284.360	
900.0	900.0	867.0	867.0	1.9	16.3	-104.19	-1,242.9	-4,915.0	5,069.8	5,051.6	18.15	279.388	
984.2	984.2	951.2	951.2	2.1	17.9	-104.19	-1,242.9	-4,915.0	5,069.8	5,049.7	20.03	253.088	
1,000.0	1,000.0	967.0	967.0	2.1	18.3	-104.19	-1,242.9	-4,915.0	5,069.8	5,049.4	20.38	248.712	
1,082.7	1,082.7	1,049.7	1,049.7	2.3	19.9	-104.19	-1,242.9	-4,915.0	5,069.8	5,047.5	22.23	228.018	
1,100.0	1,100.0	1,067.0	1,067.0	2.3	20.3	-104.19	-1,242.9	-4,915.0	5,069.8	5,047.1	22.62	224.110	
1,181.1	1,181.1	1,148.1	1,148.1	2.5	21.9	-104.19	-1,242.9	-4,915.0	5,069.8	5,045.3	24.44	207.469	
1,200.0	1,200.0	1,167.0	1,167.0	2.6	22.3	-104.19	-1,242.9	-4,915.0	5,069.8	5,044.9	24.86	203.941	
1,279.5	1,279.5	1,246.5	1,246.5	2.7	23.9	-104.19	-1,242.9	-4,915.0	5,069.8	5,043.1	26.64	190.321	
1,300.0	1,300.0	1,267.0	1,267.0	2.8	24.3	-104.19	-1,242.9	-4,915.0	5,069.8	5,042.7	27.10	187.103	
1,377.9	1,377.9	1,344.9	1,344.9	3.0	25.9	-104.19	-1,242.9	-4,915.0	5,069.8	5,040.9	28.84	175.791	
1,400.0	1,400.0	1,367.0	1,367.0	3.0	26.3	-104.19	-1,242.9	-4,915.0	5,069.8	5,040.4	29.33	172.836	
1,476.4	1,476.4	1,443.4	1,443.4	3.2	27.8	-29.08	-1,242.9	-4,915.0	5,068.9	5,037.8	31.02	163.381	
1,500.0	1,500.0	1,467.0	1,467.0	3.2	28.3	-29.09	-1,242.9	-4,915.0	5,068.2	5,036.7	31.54	160.670	
1,574.8	1,574.7	1,541.7	1,541.7	3.4	29.8	-29.14	-1,242.9	-4,915.0	5,065.1	5,031.9	33.17	152.699	
1,600.0	1,599.8	1,566.8	1,566.8	3.4	30.3	-29.16	-1,242.9	-4,915.0	5,063.7	5,029.9	33.71	150.199	
1,673.2	1,672.8	1,639.8	1,639.8	3.6	31.8	-29.25	-1,242.9	-4,915.0	5,058.4	5,023.1	35.28	143.391	
1,700.0	1,699.5	1,666.5	1,666.5	3.7	32.3	-29.29	-1,242.9	-4,915.0	5,056.0	5,020.2	35.84	141.063	
1,771.6	1,770.6	1,737.6	1,737.6	3.8	33.8	-29.40	-1,242.9	-4,915.0	5,048.7	5,011.4	37.34	135.203	
1,800.0	1,798.7	1,765.7	1,765.7	3.9	34.3	-29.46	-1,242.9	-4,915.0	5,045.4	5,007.5	37.93	133.028	
1,870.1	1,868.0	1,835.0	1,835.0	4.1	35.7	-29.61	-1,242.9	-4,915.0	5,036.2	4,996.8	39.36	127.948	
1,900.0	1,897.5	1,864.5	1,864.5	4.2	36.3	-29.68	-1,242.9	-4,915.0	5,031.8	4,991.8	39.96	125.907	
1,968.5	1,964.8	1,931.8	1,931.8	4.4	37.7	-29.86	-1,242.9	-4,915.0	5,020.7	4,979.4	41.33	121.474	
2,000.0	1,995.6	1,962.6	1,962.6	4.5	38.3	-29.96	-1,242.9	-4,915.0	5,015.1	4,973.2	41.95	119.551	
2,066.9	2,060.9	2,027.9	2,027.9	4.7	39.6	-30.17	-1,242.9	-4,915.0	5,002.3	4,959.1	43.25	115.657	
2,100.0	2,093.1	2,060.1	2,060.1	4.8	40.3	-30.29	-1,242.9	-4,915.0	4,995.5	4,951.7	43.88	113.837	
2,165.3	2,156.3	2,123.3	2,123.3	5.1	41.5	-30.53	-1,242.9	-4,915.0	4,981.2	4,936.0	45.12	110.394	
2,200.0	2,189.6	2,156.6	2,156.6	5.2	42.2	-30.67	-1,242.9	-4,915.0	4,973.0	4,927.3	45.77	108.664	
2,263.8	2,250.7	2,217.7	2,217.7	5.5	43.4	-30.94	-1,242.9	-4,915.0	4,957.2	4,910.2	46.94	105.603	
2,280.0	2,266.2	2,233.2	2,233.2	5.6	43.7	-31.02	-1,242.9	-4,915.0	4,953.0	4,905.7	47.24	104.856	
2,300.0	2,285.3	2,252.3	2,252.3	5.7	44.1	-31.05	-1,242.9	-4,915.0	4,947.7	4,900.1	47.67	103.793	
2,362.2	2,344.6	2,311.6	2,311.6	6.0	45.3	-31.16	-1,242.9	-4,915.0	4,931.4	4,882.4	49.02	100.605	
2,400.0	2,380.6	2,347.6	2,347.6	6.2	46.0	-31.23	-1,242.9	-4,915.0	4,921.5	4,871.7	49.85	98.731	
2,460.6	2,438.4	2,405.4	2,405.4	6.5	47.2	-31.34	-1,242.9	-4,915.0	4,905.7	4,854.5	51.18	95.857	
2,500.0	2,475.9	2,442.9	2,442.9	6.7	48.0	-31.41	-1,242.9	-4,915.0	4,895.4	4,843.3	52.04	94.065	
2,559.0	2,532.2	2,499.2	2,499.2	7.0	49.1	-31.52	-1,242.9	-4,915.0	4,879.9	4,826.6	53.34	91.479	
2,600.0	2,571.2	2,538.2	2,538.2	7.2	49.9	-31.60	-1,242.9	-4,915.0	4,869.3	4,815.0	54.25	89.756	
2,657.5	2,626.0	2,593.0	2,593.0	7.5	51.0	-31.70	-1,242.9	-4,915.0	4,854.3	4,798.7	55.53	87.425	
2,700.0	2,666.6	2,633.6	2,633.6	7.8	51.8	-31.78	-1,242.9	-4,915.0	4,843.2	4,786.7	56.47	85.766	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	
2,755.9	2,719.8	2,686.8	2,686.8	8.1	52.9	-31.89	-1,242.9	-4,915.0	4,828.6	4,770.9	57.72	83.662	
2,800.0	2,761.9	2,728.9	2,728.9	8.3	53.7	-31.97	-1,242.9	-4,915.0	4,817.2	4,758.5	58.70	82.064	
2,854.3	2,813.7	2,780.7	2,780.7	8.7	54.7	-32.07	-1,242.9	-4,915.0	4,803.1	4,743.2	59.92	80.163	
2,900.0	2,857.2	2,824.2	2,824.2	8.9	55.6	-32.16	-1,242.9	-4,915.0	4,791.2	4,730.3	60.94	78.622	
2,952.7	2,907.5	2,874.5	2,874.5	9.2	56.6	-32.26	-1,242.9	-4,915.0	4,777.5	4,715.4	62.13	76.902	
3,000.0	2,952.5	2,919.5	2,919.5	9.5	57.5	-32.35	-1,242.9	-4,915.0	4,765.3	4,702.1	63.19	75.414	
3,051.2	3,001.3	2,968.3	2,968.3	9.8	58.5	-32.45	-1,242.9	-4,915.0	4,752.1	4,687.7	64.34	73.856	
3,100.0	3,047.8	3,014.8	3,014.8	10.1	59.5	-32.54	-1,242.9	-4,915.0	4,739.4	4,674.0	65.44	72.419	
3,149.6	3,095.1	3,062.1	3,062.1	10.4	60.4	-32.64	-1,242.9	-4,915.0	4,726.6	4,660.1	66.57	71.006	
3,200.0	3,143.2	3,110.2	3,110.2	10.7	61.4	-32.74	-1,242.9	-4,915.0	4,713.6	4,645.9	67.71	69.617	
3,248.0	3,188.9	3,155.9	3,155.9	11.0	62.3	-32.83	-1,242.9	-4,915.0	4,701.3	4,632.5	68.80	68.335	
3,300.0	3,238.5	3,205.5	3,205.5	11.3	63.3	-32.93	-1,242.9	-4,915.0	4,687.9	4,617.9	69.98	66.991	
3,346.4	3,282.8	3,249.8	3,249.8	11.6	64.2	-33.03	-1,242.9	-4,915.0	4,675.9	4,604.9	71.04	65.826	
3,400.0	3,333.8	3,300.8	3,300.8	11.9	65.2	-33.13	-1,242.9	-4,915.0	4,662.2	4,589.9	72.25	64.524	
3,444.9	3,376.6	3,343.6	3,343.6	12.2	66.1	-33.22	-1,242.9	-4,915.0	4,650.7	4,577.4	73.28	63.466	
3,500.0	3,429.1	3,396.1	3,396.1	12.6	67.1	-33.33	-1,242.9	-4,915.0	4,636.5	4,562.0	74.54	62.204	
3,543.3	3,470.4	3,437.4	3,437.4	12.8	68.0	-33.42	-1,242.9	-4,915.0	4,625.4	4,549.9	75.53	61.242	
3,600.0	3,524.4	3,491.4	3,491.4	13.2	69.0	-33.54	-1,242.9	-4,915.0	4,610.9	4,534.1	76.83	60.018	
3,641.7	3,564.2	3,531.2	3,531.2	13.4	69.8	-33.62	-1,242.9	-4,915.0	4,600.3	4,522.5	77.78	59.143	
3,700.0	3,619.8	3,586.8	3,586.8	13.8	71.0	-33.74	-1,242.9	-4,915.0	4,585.4	4,506.3	79.12	57.955	
3,740.1	3,658.0	3,625.0	3,625.0	14.0	71.7	-33.83	-1,242.9	-4,915.0	4,575.2	4,495.1	80.04	57.160	
3,800.0	3,715.1	3,682.1	3,682.1	14.4	72.9	-33.95	-1,242.9	-4,915.0	4,559.9	4,478.5	81.42	56.006	
3,838.6	3,751.8	3,718.8	3,718.8	14.7	73.6	-34.03	-1,242.9	-4,915.0	4,550.1	4,467.8	82.31	55.282	
3,900.0	3,810.4	3,777.4	3,777.4	15.0	74.8	-34.16	-1,242.9	-4,915.0	4,534.5	4,450.8	83.72	54.161	
3,937.0	3,845.7	3,812.7	3,812.7	15.3	75.5	-34.24	-1,242.9	-4,915.0	4,525.1	4,440.5	84.58	53.503	
4,000.0	3,905.7	3,872.7	3,872.7	15.7	76.7	-34.38	-1,242.9	-4,915.0	4,509.2	4,423.1	86.03	52.412	
4,035.4	3,939.5	3,906.5	3,906.5	15.9	77.4	-34.45	-1,242.9	-4,915.0	4,500.2	4,413.3	86.85	51.814	
4,100.0	4,001.0	3,968.0	3,968.0	16.3	78.6	-34.59	-1,242.9	-4,915.0	4,483.9	4,395.5	88.35	50.753	
4,133.8	4,033.3	4,000.3	4,000.3	16.5	79.3	-34.66	-1,242.9	-4,915.0	4,475.3	4,386.2	89.13	50.210	
4,200.0	4,096.3	4,063.3	4,063.3	16.9	80.5	-34.81	-1,242.9	-4,915.0	4,458.6	4,368.0	90.67	49.176	
4,232.3	4,127.1	4,094.1	4,094.1	17.1	81.2	-34.88	-1,242.9	-4,915.0	4,450.5	4,359.1	91.42	48.684	
4,300.0	4,191.7	4,158.7	4,158.7	17.6	82.5	-35.03	-1,242.9	-4,915.0	4,433.4	4,340.5	92.99	47.676	
4,330.7	4,220.9	4,187.9	4,187.9	17.8	83.0	-35.09	-1,242.9	-4,915.0	4,425.7	4,332.0	93.71	47.230	
4,400.0	4,287.0	4,254.0	4,254.0	18.2	84.4	-35.25	-1,242.9	-4,915.0	4,408.3	4,313.0	95.32	46.248	
4,429.1	4,314.7	4,281.7	4,281.7	18.4	84.9	-35.31	-1,242.9	-4,915.0	4,401.0	4,305.0	96.00	45.845	
4,500.0	4,382.3	4,349.3	4,349.3	18.8	86.3	-35.47	-1,242.9	-4,915.0	4,383.3	4,285.6	97.65	44.886	
4,527.5	4,408.6	4,375.6	4,375.6	19.0	86.8	-35.54	-1,242.9	-4,915.0	4,376.4	4,278.1	98.30	44.522	
4,600.0	4,477.6	4,444.6	4,444.6	19.5	88.2	-35.70	-1,242.9	-4,915.0	4,358.3	4,258.3	99.99	43.586	
4,626.0	4,502.4	4,469.4	4,469.4	19.6	88.7	-35.76	-1,242.9	-4,915.0	4,351.8	4,251.2	100.60	43.259	
4,700.0	4,572.9	4,539.9	4,539.9	20.1	90.1	-35.93	-1,242.9	-4,915.0	4,333.4	4,231.1	102.34	42.345	
4,724.4	4,596.2	4,563.2	4,563.2	20.3	90.6	-35.99	-1,242.9	-4,915.0	4,327.3	4,224.4	102.91	42.050	
4,800.0	4,668.3	4,635.3	4,635.3	20.7	92.0	-36.16	-1,242.9	-4,915.0	4,308.6	4,203.9	104.68	41.158	
4,822.8	4,690.0	4,657.0	4,657.0	20.9	92.5	-36.22	-1,242.9	-4,915.0	4,302.9	4,197.7	105.22	40.894	
4,900.0	4,763.6	4,730.6	4,730.6	21.4	94.0	-36.40	-1,242.9	-4,915.0	4,283.8	4,176.7	107.04	40.022	
4,921.2	4,783.8	4,750.8	4,750.8	21.5	94.4	-36.45	-1,242.9	-4,915.0	4,278.5	4,171.0	107.54	39.786	
5,000.0	4,858.9	4,825.9	4,825.9	22.0	95.9	-36.63	-1,242.9	-4,915.0	4,259.1	4,149.7	109.39	38.933	
5,019.7	4,877.7	4,844.7	4,844.7	22.1	96.3	-36.68	-1,242.9	-4,915.0	4,254.2	4,144.4	109.86	38.724	
5,100.0	4,954.2	4,921.2	4,921.2	22.6	97.8	-36.87	-1,242.9	-4,915.0	4,234.4	4,122.7	111.76	37.890	
5,118.1	4,971.5	4,938.5	4,938.5	22.8	98.1	-36.92	-1,242.9	-4,915.0	4,230.0	4,117.8	112.18	37.706	
5,171.8	5,022.7	4,989.7	4,989.7	23.1	99.2	-37.05	-1,242.9	-4,915.0	4,216.8	4,103.3	113.46	37.167	
5,200.0	5,049.6	5,016.6	5,016.6	23.3	99.7	-37.03	-1,242.9	-4,915.0	4,210.0	4,095.7	114.28	36.840	
5,216.5	5,065.4	5,032.4	5,032.4	23.3	100.0	-37.02	-1,242.9	-4,915.0	4,206.1	4,091.3	114.75	36.654	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	
5,300.0	5,145.7	5,112.7	5,112.7	23.7	101.6	-36.98	-1,242.9	-4,915.0	4,187.6	4,070.5	117.12	35.754	
5,314.9	5,160.1	5,127.1	5,127.1	23.8	101.9	-36.97	-1,242.9	-4,915.0	4,184.5	4,067.0	117.54	35.600	
5,400.0	5,242.7	5,209.7	5,209.7	24.1	103.6	-36.94	-1,242.9	-4,915.0	4,168.0	4,048.1	119.90	34.761	
5,413.4	5,255.7	5,222.7	5,222.7	24.2	103.9	-36.93	-1,242.9	-4,915.0	4,165.6	4,045.3	120.27	34.636	
5,500.0	5,340.5	5,307.5	5,307.5	24.5	105.6	-36.90	-1,242.9	-4,915.0	4,151.2	4,028.6	122.61	33.857	
5,511.8	5,352.1	5,319.1	5,319.1	24.5	105.8	-36.90	-1,242.9	-4,915.0	4,149.4	4,026.5	122.92	33.757	
5,600.0	5,439.0	5,406.0	5,406.0	24.8	107.5	-36.88	-1,242.9	-4,915.0	4,137.2	4,012.0	125.23	33.037	
5,610.2	5,449.1	5,416.1	5,416.1	24.8	107.7	-36.87	-1,242.9	-4,915.0	4,135.9	4,010.4	125.49	32.958	
5,700.0	5,538.0	5,505.0	5,505.0	25.1	109.5	-36.86	-1,242.9	-4,915.0	4,126.0	3,998.2	127.76	32.295	
5,708.6	5,546.6	5,513.6	5,513.6	25.1	109.7	-36.86	-1,242.9	-4,915.0	4,125.1	3,997.2	127.97	32.234	
5,800.0	5,637.4	5,604.4	5,604.4	25.3	111.5	-36.84	-1,242.9	-4,915.0	4,117.5	3,987.4	130.19	31.627	
5,807.1	5,644.5	5,611.5	5,611.5	25.3	111.7	-36.84	-1,242.9	-4,915.0	4,117.1	3,986.7	130.36	31.583	
5,900.0	5,737.2	5,704.2	5,704.2	25.5	113.5	-36.83	-1,242.9	-4,915.0	4,111.9	3,979.4	132.51	31.030	
5,905.5	5,742.6	5,709.6	5,709.6	25.5	113.7	-36.83	-1,242.9	-4,915.0	4,111.7	3,979.0	132.64	30.999	
6,000.0	5,837.1	5,804.1	5,804.1	25.6	115.6	-36.83	-1,242.9	-4,915.0	4,109.1	3,974.3	134.73	30.500	
6,003.9	5,841.0	5,808.0	5,808.0	25.6	115.6	-36.83	-1,242.9	-4,915.0	4,109.0	3,974.2	134.81	30.480	
6,051.8	5,888.9	5,855.9	5,855.9	25.7	116.6	-111.96	-1,242.9	-4,915.0	4,108.7	3,969.6	139.08	29.542	
6,081.8	5,918.9	5,885.9	5,885.9	25.7	117.2	-111.96	-1,242.9	-4,915.0	4,108.7	3,969.0	139.72	29.407	CC, ES, SF
6,100.0	5,937.1	5,904.1	5,904.1	25.7	117.6	158.04	-1,242.9	-4,915.0	4,108.9	3,972.1	136.78	30.040	
6,102.3	5,939.4	5,906.4	5,906.4	25.7	117.6	158.04	-1,242.9	-4,915.0	4,109.0	3,972.1	136.81	30.033	
6,150.0	5,987.0	5,954.0	5,954.0	25.7	118.6	157.97	-1,242.9	-4,915.0	4,111.7	3,974.4	137.26	29.955	
6,200.0	6,036.5	6,003.5	6,003.5	25.7	119.6	157.82	-1,242.9	-4,915.0	4,117.7	3,980.5	137.18	30.016	
6,200.8	6,037.3	6,004.3	6,004.3	25.7	119.6	157.82	-1,242.9	-4,915.0	4,117.8	3,980.7	137.18	30.018	
6,250.0	6,085.5	6,052.5	6,052.5	25.7	120.5	157.59	-1,242.9	-4,915.0	4,126.9	3,990.4	136.55	30.224	
6,299.2	6,133.0	6,100.0	6,100.0	25.6	121.5	157.27	-1,242.9	-4,915.0	4,139.1	4,003.7	135.38	30.573	
6,300.0	6,133.7	6,100.7	6,100.7	25.6	121.5	157.27	-1,242.9	-4,915.0	4,139.3	4,003.9	135.36	30.579	
6,350.0	6,180.9	6,147.9	6,147.9	25.5	122.5	156.85	-1,242.9	-4,915.0	4,154.8	4,021.1	133.66	31.085	
6,397.6	6,224.6	6,191.6	6,191.6	25.4	123.3	156.35	-1,242.9	-4,915.0	4,172.3	4,040.7	131.59	31.708	
6,400.0	6,226.7	6,193.7	6,193.7	25.4	123.4	156.32	-1,242.9	-4,915.0	4,173.3	4,041.8	131.47	31.743	
6,450.0	6,271.1	6,238.1	6,238.1	25.2	124.3	155.68	-1,242.9	-4,915.0	4,194.7	4,065.8	128.86	32.551	
6,496.0	6,310.4	6,277.4	6,277.4	25.1	125.1	154.96	-1,242.9	-4,915.0	4,217.0	4,090.8	126.16	33.426	
6,500.0	6,313.7	6,280.7	6,280.7	25.1	125.1	154.89	-1,242.9	-4,915.0	4,219.0	4,093.1	125.92	33.506	
6,550.0	6,354.4	6,321.4	6,321.4	25.0	126.0	153.95	-1,242.9	-4,915.0	4,246.0	4,123.3	122.74	34.594	
6,594.5	6,388.9	6,355.9	6,355.9	24.9	126.6	152.95	-1,242.9	-4,915.0	4,272.2	4,152.4	119.84	35.649	
6,600.0	6,393.0	6,360.0	6,360.0	24.9	126.7	152.81	-1,242.9	-4,915.0	4,275.6	4,156.1	119.48	35.784	
6,650.0	6,429.3	6,396.3	6,396.3	24.8	127.5	151.45	-1,242.9	-4,915.0	4,307.7	4,191.4	116.35	37.025	
6,692.9	6,458.5	6,425.5	6,425.5	24.7	128.0	150.06	-1,242.9	-4,915.0	4,337.1	4,223.2	113.94	38.064	
6,700.0	6,463.1	6,430.1	6,430.1	24.7	128.1	149.80	-1,242.9	-4,915.0	4,342.2	4,228.6	113.59	38.228	
6,750.0	6,494.3	6,461.3	6,461.3	24.7	128.8	147.82	-1,242.9	-4,915.0	4,378.8	4,267.2	111.53	39.263	
6,791.3	6,517.9	6,484.9	6,484.9	24.7	129.2	145.87	-1,242.9	-4,915.0	4,410.5	4,299.9	110.64	39.865	
6,800.0	6,522.6	6,489.6	6,489.6	24.7	129.3	145.41	-1,242.9	-4,915.0	4,417.3	4,306.8	110.57	39.952	
6,850.0	6,548.0	6,515.0	6,515.0	24.7	129.8	142.46	-1,242.9	-4,915.0	4,457.7	4,346.6	111.16	40.103	
6,889.7	6,566.0	6,533.0	6,533.0	24.8	130.2	139.64	-1,242.9	-4,915.0	4,491.0	4,378.0	113.04	39.729	
6,900.0	6,570.4	6,537.4	6,537.4	24.9	130.3	138.83	-1,242.9	-4,915.0	4,499.7	4,386.0	113.76	39.556	
6,950.0	6,589.5	6,556.5	6,556.5	25.1	130.7	134.32	-1,242.9	-4,915.0	4,543.2	4,424.5	118.71	38.272	
6,988.2	6,602.0	6,569.0	6,569.0	25.3	130.9	130.14	-1,242.9	-4,915.0	4,577.1	4,453.0	124.14	36.870	
7,000.0	6,605.4	6,572.4	6,572.4	25.3	131.0	128.70	-1,242.9	-4,915.0	4,587.8	4,461.7	126.09	36.384	
7,050.0	6,618.0	6,585.0	6,585.0	25.6	131.3	121.71	-1,242.9	-4,915.0	4,633.4	4,498.0	135.47	34.203	
7,086.6	6,625.0	6,592.0	6,592.0	25.9	131.4	115.60	-1,242.9	-4,915.0	4,667.3	4,524.4	142.91	32.660	
7,100.0	6,627.1	6,594.1	6,594.1	26.0	131.4	113.14	-1,242.9	-4,915.0	4,679.8	4,534.2	145.57	32.148	
7,150.0	6,632.8	6,599.8	6,599.8	26.5	131.6	102.97	-1,242.9	-4,915.0	4,726.8	4,572.6	154.12	30.668	
7,185.0	6,634.7	6,601.7	6,601.7	26.8	131.6	95.09	-1,242.9	-4,915.0	4,759.8	4,602.2	157.68	30.187	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	
7,200.0	6,635.0	6,602.0	6,602.0	27.0	131.6	91.59	-1,242.9	-4,915.0	4,774.0	4,615.7	158.33	30.153	
7,215.9	6,635.0	6,602.0	6,602.0	27.1	131.6	87.84	-1,242.9	-4,915.0	4,789.1	4,630.7	158.39	30.236	
7,283.4	6,634.1	6,601.1	6,601.1	27.9	131.6	87.81	-1,242.9	-4,915.0	4,853.1	4,693.9	159.20	30.484	
7,300.0	6,633.9	6,600.9	6,600.9	28.1	131.6	87.80	-1,242.9	-4,915.0	4,868.8	4,709.4	159.40	30.544	
7,381.9	6,632.9	6,599.9	6,599.9	29.3	131.6	87.76	-1,242.9	-4,915.0	4,946.5	4,786.0	160.55	30.810	
7,400.0	6,632.6	6,599.6	6,599.6	29.5	131.5	87.75	-1,242.9	-4,915.0	4,963.8	4,803.0	160.80	30.869	
7,480.3	6,631.6	6,598.6	6,598.6	30.8	131.5	87.71	-1,242.9	-4,915.0	5,040.2	4,878.1	162.08	31.097	
7,500.0	6,631.4	6,598.4	6,598.4	31.1	131.5	87.70	-1,242.9	-4,915.0	5,059.0	4,896.6	162.39	31.152	
7,578.7	6,630.4	6,597.4	6,597.4	32.5	131.5	87.67	-1,242.9	-4,915.0	5,134.0	4,970.2	163.77	31.349	
7,600.0	6,630.1	6,597.1	6,597.1	32.9	131.5	87.66	-1,242.9	-4,915.0	5,154.3	4,990.2	164.14	31.401	
7,677.1	6,629.1	6,596.1	6,596.1	34.3	131.5	87.62	-1,242.9	-4,915.0	5,228.0	5,062.4	165.60	31.570	
7,700.0	6,628.8	6,595.8	6,595.8	34.8	131.5	87.61	-1,242.9	-4,915.0	5,249.8	5,083.8	166.03	31.620	
7,775.6	6,627.8	6,594.8	6,594.8	36.3	131.5	87.57	-1,242.9	-4,915.0	5,322.2	5,154.6	167.54	31.766	
7,800.0	6,627.5	6,594.5	6,594.5	36.8	131.4	87.56	-1,242.9	-4,915.0	5,345.5	5,177.5	168.03	31.813	
7,874.0	6,626.6	6,593.6	6,593.6	38.4	131.4	87.52	-1,242.9	-4,915.0	5,416.5	5,246.9	169.58	31.940	
7,900.0	6,626.3	6,593.3	6,593.3	38.9	131.4	87.51	-1,242.9	-4,915.0	5,441.4	5,271.3	170.13	31.984	
7,972.4	6,625.3	6,592.3	6,592.3	40.5	131.4	87.48	-1,242.9	-4,915.0	5,510.9	5,339.2	171.71	32.095	
8,000.0	6,625.0	6,592.0	6,592.0	41.1	131.4	87.46	-1,242.9	-4,915.0	5,537.4	5,365.1	172.31	32.137	
8,070.8	6,624.1	6,591.1	6,591.1	42.7	131.4	87.43	-1,242.9	-4,915.0	5,605.5	5,431.6	173.90	32.234	
8,100.0	6,623.7	6,590.7	6,590.7	43.4	131.4	87.41	-1,242.9	-4,915.0	5,633.5	5,459.0	174.56	32.273	
8,169.3	6,622.8	6,589.8	6,589.8	45.0	131.4	87.38	-1,242.9	-4,915.0	5,700.2	5,524.0	176.15	32.359	
8,200.0	6,622.4	6,589.4	6,589.4	45.7	131.3	87.37	-1,242.9	-4,915.0	5,729.8	5,552.9	176.86	32.397	
8,267.7	6,621.6	6,588.6	6,588.6	47.4	131.3	87.33	-1,242.9	-4,915.0	5,795.0	5,616.6	178.46	32.473	
8,300.0	6,621.1	6,588.1	6,588.1	48.1	131.3	87.32	-1,242.9	-4,915.0	5,826.2	5,647.0	179.22	32.509	
8,366.1	6,620.3	6,587.3	6,587.3	49.7	131.3	87.29	-1,242.9	-4,915.0	5,890.0	5,709.2	180.80	32.577	
8,400.0	6,619.9	6,586.9	6,586.9	50.6	131.3	87.27	-1,242.9	-4,915.0	5,922.7	5,741.1	181.62	32.611	
8,464.5	6,619.0	6,586.0	6,586.0	52.2	131.3	87.24	-1,242.9	-4,915.0	5,985.1	5,801.9	183.19	32.671	
8,500.0	6,618.6	6,585.6	6,585.6	53.0	131.3	87.22	-1,242.9	-4,915.0	6,019.3	5,835.3	184.05	32.704	
8,563.0	6,617.8	6,584.8	6,584.8	54.6	131.2	87.19	-1,242.9	-4,915.0	6,080.2	5,894.6	185.61	32.759	
8,600.0	6,617.3	6,584.3	6,584.3	55.5	131.2	87.17	-1,242.9	-4,915.0	6,116.1	5,929.5	186.52	32.790	
8,661.4	6,616.5	6,583.5	6,583.5	57.1	131.2	87.14	-1,242.9	-4,915.0	6,175.5	5,987.4	188.05	32.839	
8,700.0	6,616.0	6,583.0	6,583.0	58.1	131.2	87.12	-1,242.9	-4,915.0	6,212.9	6,023.9	189.02	32.870	
8,759.8	6,615.2	6,582.2	6,582.2	59.6	131.2	87.09	-1,242.9	-4,915.0	6,270.9	6,080.4	190.52	32.914	
8,800.0	6,614.7	6,581.7	6,581.7	60.6	131.2	87.07	-1,242.9	-4,915.0	6,309.8	6,118.3	191.53	32.944	
8,858.2	6,614.0	6,581.0	6,581.0	62.1	131.2	87.05	-1,242.9	-4,915.0	6,366.3	6,173.3	193.01	32.984	
8,900.0	6,613.4	6,580.4	6,580.4	63.2	131.2	87.03	-1,242.9	-4,915.0	6,406.9	6,212.8	194.07	33.012	
8,956.7	6,612.7	6,579.7	6,579.7	64.7	131.1	87.00	-1,242.9	-4,915.0	6,461.9	6,266.4	195.53	33.049	
9,000.0	6,612.2	6,579.2	6,579.2	65.8	131.1	86.98	-1,242.9	-4,915.0	6,504.0	6,307.3	196.63	33.077	
9,055.1	6,611.5	6,578.5	6,578.5	67.3	131.1	86.95	-1,242.9	-4,915.0	6,557.5	6,359.5	198.05	33.110	
9,100.0	6,610.9	6,577.9	6,577.9	68.4	131.1	86.93	-1,242.9	-4,915.0	6,601.2	6,402.0	199.21	33.137	
9,153.5	6,610.2	6,577.2	6,577.2	69.8	131.1	86.90	-1,242.9	-4,915.0	6,653.2	6,452.6	200.60	33.167	
9,200.0	6,609.6	6,576.6	6,576.6	71.1	131.1	86.88	-1,242.9	-4,915.0	6,698.5	6,496.7	201.80	33.194	
9,251.9	6,608.9	6,575.9	6,575.9	72.4	131.1	86.86	-1,242.9	-4,915.0	6,749.0	6,545.9	203.15	33.222	
9,300.0	6,608.3	6,575.3	6,575.3	73.7	131.1	86.83	-1,242.9	-4,915.0	6,795.8	6,591.4	204.40	33.247	
9,350.4	6,607.7	6,574.7	6,574.7	75.0	131.0	86.81	-1,242.9	-4,915.0	6,844.9	6,639.2	205.72	33.273	
9,400.0	6,607.0	6,574.0	6,574.0	76.4	131.0	86.78	-1,242.9	-4,915.0	6,893.3	6,686.3	207.02	33.298	
9,448.8	6,606.4	6,573.4	6,573.4	77.7	131.0	86.76	-1,242.9	-4,915.0	6,940.9	6,732.6	208.30	33.322	
9,500.0	6,605.7	6,572.7	6,572.7	79.0	131.0	86.73	-1,242.9	-4,915.0	6,990.8	6,781.1	209.64	33.346	
9,547.2	6,605.1	6,572.1	6,572.1	80.3	131.0	86.71	-1,242.9	-4,915.0	7,036.9	6,826.0	210.89	33.368	
9,600.0	6,604.5	6,571.5	6,571.5	81.7	131.0	86.68	-1,242.9	-4,915.0	7,088.4	6,876.1	212.28	33.392	
9,645.6	6,603.9	6,570.9	6,570.9	82.9	131.0	86.66	-1,242.9	-4,915.0	7,132.9	6,919.5	213.48	33.412	
9,700.0	6,603.2	6,570.2	6,570.2	84.4	131.0	86.64	-1,242.9	-4,915.0	7,186.0	6,971.1	214.92	33.436	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - ABDN VERT BLOSKAS #13-9 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	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
9,744.1	6,602.6	6,569.6	6,569.6	85.6	130.9	86.62	-1,242.9	-4,915.0	7,229.1	7,013.0	216.09	33.454	
9,800.0	6,601.9	6,568.9	6,568.9	87.1	130.9	86.59	-1,242.9	-4,915.0	7,283.7	7,066.2	217.57	33.478	
9,842.5	6,601.3	6,568.3	6,568.3	88.2	130.9	86.57	-1,242.9	-4,915.0	7,325.3	7,106.6	218.70	33.495	
9,900.0	6,600.6	6,567.6	6,567.6	89.8	130.9	86.54	-1,242.9	-4,915.0	7,381.5	7,161.3	220.23	33.518	
9,940.9	6,600.1	6,567.1	6,567.1	90.9	130.9	86.52	-1,242.9	-4,915.0	7,421.5	7,200.2	221.32	33.534	
10,000.0	6,599.3	6,566.3	6,566.3	92.5	130.9	86.49	-1,242.9	-4,915.0	7,479.3	7,256.4	222.89	33.556	
10,039.3	6,598.8	6,565.8	6,565.8	93.5	130.9	86.47	-1,242.9	-4,915.0	7,517.8	7,293.9	223.94	33.571	
10,100.0	6,598.0	6,565.0	6,565.0	95.2	130.9	86.44	-1,242.9	-4,915.0	7,577.2	7,351.7	225.56	33.593	
10,137.8	6,597.5	6,564.5	6,564.5	96.2	130.8	86.42	-1,242.9	-4,915.0	7,614.2	7,387.6	226.57	33.607	
10,200.0	6,596.7	6,563.7	6,563.7	97.9	130.8	86.39	-1,242.9	-4,915.0	7,675.2	7,446.9	228.23	33.629	
10,236.2	6,596.3	6,563.3	6,563.3	98.9	130.8	86.37	-1,242.9	-4,915.0	7,710.6	7,481.4	229.20	33.641	
10,300.0	6,595.4	6,562.4	6,562.4	100.6	130.8	86.34	-1,242.9	-4,915.0	7,773.2	7,542.2	230.91	33.663	
10,334.6	6,595.0	6,562.0	6,562.0	101.6	130.8	86.33	-1,242.9	-4,915.0	7,807.1	7,575.3	231.84	33.674	
10,400.0	6,594.2	6,561.2	6,561.2	103.4	130.8	86.29	-1,242.9	-4,915.0	7,871.2	7,637.6	233.59	33.696	
10,433.0	6,593.7	6,560.7	6,560.7	104.3	130.8	86.28	-1,242.9	-4,915.0	7,903.6	7,669.1	234.48	33.707	
10,500.0	6,592.9	6,559.9	6,559.9	106.1	130.7	86.24	-1,242.9	-4,915.0	7,969.3	7,733.0	236.28	33.728	
10,531.5	6,592.5	6,559.5	6,559.5	106.9	130.7	86.23	-1,242.9	-4,915.0	8,000.2	7,763.1	237.13	33.738	
10,600.0	6,591.6	6,558.6	6,558.6	108.8	130.7	86.20	-1,242.9	-4,915.0	8,067.4	7,828.5	238.97	33.759	
10,629.9	6,591.2	6,558.2	6,558.2	109.6	130.7	86.18	-1,242.9	-4,915.0	8,096.8	7,857.0	239.78	33.768	
10,700.0	6,590.3	6,557.3	6,557.3	111.6	130.7	86.15	-1,242.9	-4,915.0	8,165.6	7,924.0	241.66	33.789	
10,728.3	6,589.9	6,556.9	6,556.9	112.3	130.7	86.13	-1,242.9	-4,915.0	8,193.4	7,951.0	242.43	33.797	
10,800.0	6,589.0	6,556.0	6,556.0	114.3	130.7	86.10	-1,242.9	-4,915.0	8,263.8	8,019.5	244.36	33.818	
10,826.7	6,588.7	6,555.7	6,555.7	115.0	130.7	86.08	-1,242.9	-4,915.0	8,290.1	8,045.0	245.08	33.826	
10,900.0	6,587.7	6,554.7	6,554.7	117.1	130.6	86.05	-1,242.9	-4,915.0	8,362.1	8,115.1	247.06	33.846	
10,925.2	6,587.4	6,554.4	6,554.4	117.7	130.6	86.04	-1,242.9	-4,915.0	8,386.9	8,139.1	247.74	33.853	
11,000.0	6,586.4	6,553.4	6,553.4	119.8	130.6	86.00	-1,242.9	-4,915.0	8,460.4	8,210.7	249.76	33.874	
11,023.6	6,586.1	6,553.1	6,553.1	120.4	130.6	85.99	-1,242.9	-4,915.0	8,483.6	8,233.2	250.40	33.880	
11,100.0	6,585.1	6,552.1	6,552.1	122.6	130.6	85.95	-1,242.9	-4,915.0	8,558.8	8,306.3	252.47	33.901	
11,122.0	6,584.8	6,551.8	6,551.8	123.2	130.6	85.94	-1,242.9	-4,915.0	8,580.4	8,327.4	253.06	33.906	
11,200.0	6,583.8	6,550.8	6,550.8	125.3	130.6	85.90	-1,242.9	-4,915.0	8,657.2	8,402.0	255.17	33.927	
11,220.4	6,583.6	6,550.6	6,550.6	125.9	130.6	85.89	-1,242.9	-4,915.0	8,677.3	8,421.6	255.73	33.932	
11,300.0	6,582.5	6,549.5	6,549.5	128.1	130.5	85.85	-1,242.9	-4,915.0	8,755.6	8,497.7	257.88	33.952	
11,318.9	6,582.3	6,549.3	6,549.3	128.6	130.5	85.84	-1,242.9	-4,915.0	8,774.2	8,515.8	258.39	33.957	
11,400.0	6,581.2	6,548.2	6,548.2	130.8	130.5	85.80	-1,242.9	-4,915.0	8,854.0	8,593.5	260.59	33.977	
11,417.3	6,581.0	6,548.0	6,548.0	131.3	130.5	85.79	-1,242.9	-4,915.0	8,871.1	8,610.0	261.06	33.981	
11,500.0	6,580.0	6,547.0	6,547.0	133.6	130.5	85.75	-1,242.9	-4,915.0	8,952.5	8,689.2	263.30	34.001	
11,515.7	6,579.7	6,546.7	6,546.7	134.0	130.5	85.75	-1,242.9	-4,915.0	8,968.0	8,704.3	263.73	34.005	
11,600.0	6,578.7	6,545.7	6,545.7	136.3	130.5	85.70	-1,242.9	-4,915.0	9,051.1	8,785.0	266.01	34.025	
11,614.1	6,578.5	6,545.5	6,545.5	136.7	130.5	85.70	-1,242.9	-4,915.0	9,065.0	8,798.6	266.40	34.028	
11,700.0	6,577.4	6,544.4	6,544.4	139.1	130.4	85.65	-1,242.9	-4,915.0	9,149.6	8,880.9	268.73	34.048	
11,712.6	6,577.2	6,544.2	6,544.2	139.5	130.4	85.65	-1,242.9	-4,915.0	9,162.0	8,892.9	269.07	34.051	
11,800.0	6,576.1	6,543.1	6,543.1	141.9	130.4	85.61	-1,242.9	-4,915.0	9,248.2	8,976.8	271.44	34.070	
11,811.0	6,575.9	6,542.9	6,542.9	142.2	130.4	85.60	-1,242.9	-4,915.0	9,259.0	8,987.3	271.74	34.073	
11,882.7	6,575.0	6,542.0	6,542.0	144.2	130.4	85.56	-1,242.9	-4,915.0	9,329.7	9,056.1	273.69	34.089	
11,883.5	6,575.0	6,542.0	6,542.0	144.2	130.4	85.56	-1,242.9	-4,915.0	9,330.5	9,056.8	273.70	34.090	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-86.31	80.9	-1,254.5	1,257.2				
98.4	98.4	77.4	77.4	0.1	0.0	-86.31	80.9	-1,254.5	1,257.1	1,257.0	0.10	N/A	
100.0	100.0	79.0	79.0	0.1	0.0	-86.31	80.9	-1,254.5	1,257.1	1,257.0	0.10	N/A	
196.8	196.8	175.8	175.8	0.3	1.0	-86.31	80.9	-1,254.5	1,257.1	1,255.8	1.29	970.702	
200.0	200.0	179.0	179.0	0.3	1.0	-86.31	80.9	-1,254.5	1,257.1	1,255.7	1.34	936.176	
295.3	295.3	274.3	274.3	0.5	3.0	-86.31	80.9	-1,254.5	1,257.1	1,253.5	3.51	357.749	
300.0	300.0	279.0	279.0	0.5	3.1	-86.31	80.9	-1,254.5	1,257.1	1,253.4	3.63	346.140	
393.7	393.7	372.7	372.7	0.8	5.1	-86.31	80.9	-1,254.5	1,257.1	1,251.2	5.83	215.676	
400.0	400.0	379.0	379.0	0.8	5.2	-86.31	80.9	-1,254.5	1,257.1	1,251.1	5.97	210.441	
492.1	492.1	471.1	471.1	1.0	7.1	-86.31	80.9	-1,254.5	1,257.1	1,249.0	8.07	155.794	
500.0	500.0	479.0	479.0	1.0	7.3	-86.31	80.9	-1,254.5	1,257.1	1,248.8	8.25	152.423	
590.5	590.5	569.5	569.5	1.2	9.1	-86.31	80.9	-1,254.5	1,257.1	1,246.8	10.29	122.157	
600.0	600.0	579.0	579.0	1.2	9.3	-86.31	80.9	-1,254.5	1,257.1	1,246.6	10.50	119.680	
689.0	689.0	668.0	668.0	1.4	11.1	-86.31	80.9	-1,254.5	1,257.1	1,244.6	12.50	100.529	
700.0	700.0	679.0	679.0	1.4	11.3	-86.31	80.9	-1,254.5	1,257.1	1,244.3	12.75	98.575	
787.4	787.4	766.4	766.4	1.6	13.1	-86.31	80.9	-1,254.5	1,257.1	1,242.3	14.71	85.431	
800.0	800.0	779.0	779.0	1.7	13.3	-86.31	80.9	-1,254.5	1,257.1	1,242.1	15.00	83.821	
885.8	885.8	864.8	864.8	1.9	15.1	-86.31	80.9	-1,254.5	1,257.1	1,240.1	16.92	74.288	
900.0	900.0	879.0	879.0	1.9	15.3	-86.31	80.9	-1,254.5	1,257.1	1,239.8	17.24	72.918	
984.2	984.2	963.2	963.2	2.1	17.0	-86.31	80.9	-1,254.5	1,257.1	1,237.9	19.13	65.721	
1,000.0	1,000.0	979.0	979.0	2.1	17.4	-86.31	80.9	-1,254.5	1,257.1	1,237.6	19.48	64.530	
1,082.7	1,082.7	1,061.7	1,061.7	2.3	19.0	-86.31	80.9	-1,254.5	1,257.1	1,235.7	21.33	58.929	
1,100.0	1,100.0	1,079.0	1,079.0	2.3	19.4	-86.31	80.9	-1,254.5	1,257.1	1,235.3	21.72	57.876	
1,181.1	1,181.1	1,160.1	1,160.1	2.5	21.0	-86.31	80.9	-1,254.5	1,257.1	1,233.5	23.54	53.411	
1,200.0	1,200.0	1,179.0	1,179.0	2.6	21.4	-86.31	80.9	-1,254.5	1,257.1	1,233.1	23.96	52.468	
1,279.5	1,279.5	1,258.5	1,258.5	2.7	23.0	-86.31	80.9	-1,254.5	1,257.1	1,231.3	25.74	48.839	
1,300.0	1,300.0	1,279.0	1,279.0	2.8	23.4	-86.31	80.9	-1,254.5	1,257.1	1,230.9	26.20	47.985	
1,377.9	1,377.9	1,356.9	1,356.9	3.0	25.0	-86.31	80.9	-1,254.5	1,257.1	1,229.1	27.94	44.989	
1,400.0	1,400.0	1,379.0	1,379.0	3.0	25.4	-86.31	80.9	-1,254.5	1,257.1	1,228.6	28.44	44.208	
1,476.4	1,476.4	1,455.4	1,455.4	3.2	27.0	-11.20	80.9	-1,254.5	1,256.1	1,225.9	30.13	41.693	
1,500.0	1,500.0	1,479.0	1,479.0	3.2	27.4	-11.20	80.9	-1,254.5	1,255.3	1,224.7	30.64	40.965	
1,574.8	1,574.7	1,553.7	1,553.7	3.4	28.9	-11.25	80.9	-1,254.5	1,251.8	1,219.6	32.26	38.800	
1,600.0	1,599.8	1,578.8	1,578.8	3.4	29.4	-11.27	80.9	-1,254.5	1,250.2	1,217.4	32.80	38.113	
1,673.2	1,672.8	1,651.8	1,651.8	3.6	30.9	-11.35	80.9	-1,254.5	1,244.3	1,209.9	34.35	36.221	
1,700.0	1,699.5	1,678.5	1,678.5	3.7	31.4	-11.38	80.9	-1,254.5	1,241.7	1,206.8	34.91	35.566	
1,771.6	1,770.6	1,749.6	1,749.6	3.8	32.9	-11.49	80.9	-1,254.5	1,233.5	1,197.1	36.39	33.898	
1,800.0	1,798.7	1,777.7	1,777.7	3.9	33.4	-11.54	80.9	-1,254.5	1,229.7	1,192.8	36.96	33.270	
1,870.1	1,868.0	1,847.0	1,847.0	4.1	34.8	-11.69	80.9	-1,254.5	1,219.3	1,181.0	38.36	31.786	
1,900.0	1,897.5	1,876.5	1,876.5	4.2	35.4	-11.75	80.9	-1,254.5	1,214.4	1,175.4	38.95	31.181	
1,968.5	1,964.8	1,943.8	1,943.8	4.4	36.8	-11.93	80.9	-1,254.5	1,202.0	1,161.7	40.27	29.851	
2,000.0	1,995.6	1,974.6	1,974.6	4.5	37.4	-12.02	80.9	-1,254.5	1,195.7	1,154.8	40.86	29.264	
2,066.9	2,060.9	2,039.9	2,039.9	4.7	38.7	-12.23	80.9	-1,254.5	1,181.3	1,139.2	42.10	28.063	
2,100.0	2,093.1	2,072.1	2,072.1	4.8	39.4	-12.34	80.9	-1,254.5	1,173.7	1,131.0	42.69	27.492	
2,165.3	2,156.3	2,135.3	2,135.3	5.1	40.6	-12.59	80.9	-1,254.5	1,157.5	1,113.7	43.85	26.399	
2,200.0	2,189.6	2,168.6	2,168.6	5.2	41.3	-12.73	80.9	-1,254.5	1,148.4	1,103.9	44.44	25.839	
2,263.8	2,250.7	2,229.7	2,229.7	5.5	42.5	-13.02	80.9	-1,254.5	1,130.6	1,085.0	45.52	24.838	
2,280.0	2,266.2	2,245.2	2,245.2	5.6	42.8	-13.10	80.9	-1,254.5	1,125.8	1,080.0	45.78	24.590	
2,300.0	2,285.3	2,264.3	2,264.3	5.7	43.2	-13.17	80.9	-1,254.5	1,119.9	1,073.7	46.20	24.240	
2,362.2	2,344.6	2,323.6	2,323.6	6.0	44.4	-13.39	80.9	-1,254.5	1,101.6	1,054.1	47.50	23.189	
2,400.0	2,380.6	2,359.6	2,359.6	6.2	45.1	-13.53	80.9	-1,254.5	1,090.4	1,042.1	48.31	22.573	
2,460.6	2,438.4	2,417.4	2,417.4	6.5	46.3	-13.76	80.9	-1,254.5	1,072.6	1,023.0	49.59	21.630	
2,500.0	2,475.9	2,454.9	2,454.9	6.7	47.1	-13.91	80.9	-1,254.5	1,061.0	1,010.5	50.42	21.042	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,511.2	2,511.2	7.0	48.2	-14.15	80.9	-1,254.5	1,043.6	991.9	51.68	20.195	
2,600.0	2,571.2	2,550.2	2,550.2	7.2	49.0	-14.31	80.9	-1,254.5	1,031.6	979.0	52.55	19.631	
2,657.5	2,626.0	2,605.0	2,605.0	7.5	50.1	-14.56	80.9	-1,254.5	1,014.7	960.9	53.77	18.870	
2,700.0	2,666.6	2,645.6	2,645.6	7.8	50.9	-14.74	80.9	-1,254.5	1,002.2	947.5	54.68	18.328	
2,755.9	2,719.8	2,698.8	2,698.8	8.1	52.0	-14.99	80.9	-1,254.5	985.8	929.9	55.88	17.642	
2,800.0	2,761.9	2,740.9	2,740.9	8.3	52.8	-15.19	80.9	-1,254.5	972.9	916.1	56.83	17.121	
2,854.3	2,813.7	2,792.7	2,792.7	8.7	53.9	-15.45	80.9	-1,254.5	957.0	899.0	58.00	16.501	
2,900.0	2,857.2	2,836.2	2,836.2	8.9	54.7	-15.67	80.9	-1,254.5	943.7	884.7	58.98	15.999	
2,952.7	2,907.5	2,886.5	2,886.5	9.2	55.7	-15.94	80.9	-1,254.5	928.3	868.1	60.12	15.440	
3,000.0	2,952.5	2,931.5	2,931.5	9.5	56.7	-16.18	80.9	-1,254.5	914.5	853.3	61.15	14.956	
3,051.2	3,001.3	2,980.3	2,980.3	9.8	57.6	-16.46	80.9	-1,254.5	899.6	837.3	62.26	14.449	
3,100.0	3,047.8	3,026.8	3,026.8	10.1	58.6	-16.73	80.9	-1,254.5	885.4	822.0	63.32	13.982	
3,149.6	3,095.1	3,074.1	3,074.1	10.4	59.5	-17.01	80.9	-1,254.5	871.0	806.6	64.40	13.523	
3,200.0	3,143.2	3,122.2	3,122.2	10.7	60.5	-17.31	80.9	-1,254.5	856.3	790.8	65.51	13.072	
3,248.0	3,188.9	3,167.9	3,167.9	11.0	61.4	-17.60	80.9	-1,254.5	842.4	775.9	66.56	12.656	
3,300.0	3,238.5	3,217.5	3,217.5	11.3	62.4	-17.93	80.9	-1,254.5	827.4	759.7	67.71	12.220	
3,346.4	3,282.8	3,261.8	3,261.8	11.6	63.3	-18.23	80.9	-1,254.5	814.0	745.3	68.73	11.843	
3,400.0	3,333.8	3,312.8	3,312.8	11.9	64.3	-18.59	80.9	-1,254.5	798.6	728.6	69.92	11.421	
3,444.9	3,376.6	3,355.6	3,355.6	12.2	65.2	-18.90	80.9	-1,254.5	785.6	714.7	70.92	11.078	
3,500.0	3,429.1	3,408.1	3,408.1	12.6	66.2	-19.30	80.9	-1,254.5	769.8	697.7	72.15	10.670	
3,543.3	3,470.4	3,449.4	3,449.4	12.8	67.1	-19.63	80.9	-1,254.5	757.4	684.3	73.12	10.359	
3,600.0	3,524.4	3,503.4	3,503.4	13.2	68.2	-20.07	80.9	-1,254.5	741.2	666.8	74.39	9.964	
3,641.7	3,564.2	3,543.2	3,543.2	13.4	69.0	-20.41	80.9	-1,254.5	729.3	654.0	75.33	9.681	
3,700.0	3,619.8	3,598.8	3,598.8	13.8	70.1	-20.90	80.9	-1,254.5	712.7	636.1	76.65	9.298	
3,740.1	3,658.0	3,637.0	3,637.0	14.0	70.8	-21.25	80.9	-1,254.5	701.3	623.7	77.57	9.041	
3,800.0	3,715.1	3,694.1	3,694.1	14.4	72.0	-21.80	80.9	-1,254.5	684.4	605.4	78.94	8.670	
3,838.6	3,751.8	3,730.8	3,730.8	14.7	72.7	-22.17	80.9	-1,254.5	673.5	593.7	79.83	8.437	
3,900.0	3,810.4	3,789.4	3,789.4	15.0	73.9	-22.77	80.9	-1,254.5	656.2	575.0	81.25	8.077	
3,937.0	3,845.7	3,824.7	3,824.7	15.3	74.6	-23.15	80.9	-1,254.5	645.8	563.7	82.11	7.865	
4,000.0	3,905.7	3,884.7	3,884.7	15.7	75.8	-23.83	80.9	-1,254.5	628.2	544.6	83.59	7.516	
4,035.4	3,939.5	3,918.5	3,918.5	15.9	76.5	-24.23	80.9	-1,254.5	618.4	534.0	84.42	7.325	
4,100.0	4,001.0	3,980.0	3,980.0	16.3	77.7	-24.99	80.9	-1,254.5	600.5	514.5	85.96	6.986	
4,133.8	4,033.3	4,012.3	4,012.3	16.5	78.4	-25.40	80.9	-1,254.5	591.1	504.4	86.77	6.813	
4,200.0	4,096.3	4,075.3	4,075.3	16.9	79.7	-26.25	80.9	-1,254.5	573.0	484.6	88.37	6.484	
4,232.3	4,127.1	4,106.1	4,106.1	17.1	80.3	-26.69	80.9	-1,254.5	564.2	475.0	89.15	6.328	
4,300.0	4,191.7	4,170.7	4,170.7	17.6	81.6	-27.65	80.9	-1,254.5	545.8	454.9	90.82	6.009	
4,330.7	4,220.9	4,199.9	4,199.9	17.8	82.2	-28.10	80.9	-1,254.5	537.5	445.9	91.58	5.869	
4,400.0	4,287.0	4,266.0	4,266.0	18.2	83.5	-29.18	80.9	-1,254.5	518.9	425.6	93.32	5.560	
4,429.1	4,314.7	4,293.7	4,293.7	18.4	84.0	-29.65	80.9	-1,254.5	511.1	417.1	94.07	5.434	
4,500.0	4,382.3	4,361.3	4,361.3	18.8	85.4	-30.87	80.9	-1,254.5	492.4	396.5	95.89	5.135	
4,527.5	4,408.6	4,387.6	4,387.6	19.0	85.9	-31.37	80.9	-1,254.5	485.2	388.6	96.61	5.022	
4,600.0	4,477.6	4,456.6	4,456.6	19.5	87.3	-32.75	80.9	-1,254.5	466.4	367.8	98.53	4.733	
4,626.0	4,502.4	4,481.4	4,481.4	19.6	87.8	-33.28	80.9	-1,254.5	459.7	360.5	99.22	4.633	
4,700.0	4,572.9	4,551.9	4,551.9	20.1	89.2	-34.85	80.9	-1,254.5	440.9	339.6	101.24	4.355	
4,724.4	4,596.2	4,575.2	4,575.2	20.3	89.7	-35.40	80.9	-1,254.5	434.7	332.8	101.92	4.266	
4,800.0	4,668.3	4,647.3	4,647.3	20.7	91.2	-37.19	80.9	-1,254.5	416.0	312.0	104.05	3.998	
4,822.8	4,690.0	4,669.0	4,669.0	20.9	91.6	-37.76	80.9	-1,254.5	410.4	305.7	104.71	3.920	
4,900.0	4,763.6	4,742.6	4,742.6	21.4	93.1	-39.81	80.9	-1,254.5	391.9	284.9	106.97	3.664	
4,921.2	4,783.8	4,762.8	4,762.8	21.5	93.5	-40.41	80.9	-1,254.5	386.9	279.3	107.60	3.596	
5,000.0	4,858.9	4,837.9	4,837.9	22.0	95.0	-42.76	80.9	-1,254.5	368.7	258.7	110.00	3.352	
5,019.7	4,877.7	4,856.7	4,856.7	22.1	95.4	-43.38	80.9	-1,254.5	364.3	253.7	110.61	3.293	
5,100.0	4,954.2	4,933.2	4,933.2	22.6	96.9	-46.07	80.9	-1,254.5	346.6	233.5	113.16	3.063	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,950.5	4,950.5	22.8	97.3	-46.71	80.9	-1,254.5	342.7	229.0	113.75	3.013	
5,171.8	5,022.7	5,001.7	5,001.7	23.1	98.3	-48.70	80.9	-1,254.5	331.5	216.0	115.51	2.870	
5,200.0	5,049.6	5,028.6	5,028.6	23.3	98.8	-49.69	80.9	-1,254.5	325.9	209.4	116.53	2.797	
5,216.5	5,065.4	5,044.4	5,044.4	23.3	99.1	-50.28	80.9	-1,254.5	322.7	205.6	117.12	2.756	
5,300.0	5,145.7	5,124.7	5,124.7	23.7	100.8	-53.23	80.9	-1,254.5	308.3	188.3	120.01	2.569	
5,314.9	5,160.1	5,139.1	5,139.1	23.8	101.0	-53.75	80.9	-1,254.5	305.9	185.4	120.51	2.539	
5,400.0	5,242.7	5,221.7	5,221.7	24.1	102.7	-56.70	80.9	-1,254.5	294.0	170.8	123.30	2.385	
5,413.4	5,255.7	5,234.7	5,234.7	24.2	103.0	-57.15	80.9	-1,254.5	292.4	168.7	123.72	2.363	
5,500.0	5,340.5	5,319.5	5,319.5	24.5	104.7	-59.97	80.9	-1,254.5	282.9	156.5	126.39	2.239	
5,511.8	5,352.1	5,331.1	5,331.1	24.5	104.9	-60.34	80.9	-1,254.5	281.8	155.1	126.73	2.223	
5,600.0	5,439.0	5,418.0	5,418.0	24.8	106.7	-62.94	80.9	-1,254.5	274.5	145.2	129.28	2.123	
5,610.2	5,449.1	5,428.1	5,428.1	24.8	106.9	-63.22	80.9	-1,254.5	273.8	144.2	129.56	2.113	
5,700.0	5,538.0	5,517.0	5,517.0	25.1	108.6	-65.46	80.9	-1,254.5	268.3	136.4	131.98	2.033	
5,708.6	5,546.6	5,525.6	5,525.6	25.1	108.8	-65.66	80.9	-1,254.5	267.9	135.7	132.20	2.027	
5,800.0	5,637.4	5,616.4	5,616.4	25.3	110.6	-67.45	80.9	-1,254.5	264.1	129.6	134.51	1.964	
5,807.1	5,644.5	5,623.5	5,623.5	25.3	110.8	-67.57	80.9	-1,254.5	263.9	129.2	134.68	1.959	
5,900.0	5,737.2	5,716.2	5,716.2	25.5	112.7	-68.82	80.9	-1,254.5	261.5	124.6	136.88	1.910	
5,905.5	5,742.6	5,721.6	5,721.6	25.5	112.8	-68.88	80.9	-1,254.5	261.4	124.4	137.01	1.908	
6,000.0	5,837.1	5,816.1	5,816.1	25.6	114.7	-69.53	80.9	-1,254.5	260.2	121.1	139.12	1.871	
6,003.9	5,841.0	5,820.0	5,820.0	25.6	114.7	-69.54	80.9	-1,254.5	260.2	121.0	139.20	1.869	
6,051.8	5,888.9	5,867.9	5,867.9	25.7	115.7	-144.75	80.9	-1,254.5	260.1	127.8	132.27	1.966	
6,081.8	5,918.9	5,897.9	5,897.9	25.7	116.3	-144.75	80.9	-1,254.5	260.1	127.2	132.92	1.957 CC	
6,100.0	5,937.1	5,916.1	5,916.1	25.7	116.7	125.29	80.9	-1,254.5	260.2	119.0	141.22	1.843	
6,102.3	5,939.4	5,918.4	5,918.4	25.7	116.7	125.30	80.9	-1,254.5	260.2	119.0	141.26	1.842 ES, SF	
6,150.0	5,987.0	5,966.0	5,966.0	25.7	117.7	125.71	80.9	-1,254.5	262.0	120.0	141.99	1.845	
6,200.0	6,036.5	6,015.5	6,015.5	25.7	118.7	126.59	80.9	-1,254.5	265.8	123.4	142.42	1.866	
6,200.8	6,037.3	6,016.3	6,016.3	25.7	118.7	126.61	80.9	-1,254.5	265.9	123.5	142.43	1.867	
6,250.0	6,085.5	6,064.5	6,064.5	25.7	119.7	127.86	80.9	-1,254.5	271.9	129.4	142.47	1.908	
6,299.2	6,133.0	6,112.0	6,112.0	25.6	120.6	129.41	80.9	-1,254.5	280.2	138.2	142.09	1.972	
6,300.0	6,133.7	6,112.7	6,112.7	25.6	120.6	129.43	80.9	-1,254.5	280.4	138.3	142.08	1.974	
6,350.0	6,180.9	6,159.9	6,159.9	25.5	121.6	131.20	80.9	-1,254.5	291.5	150.4	141.18	2.065	
6,397.6	6,224.6	6,203.6	6,203.6	25.4	122.5	132.95	80.9	-1,254.5	304.8	165.0	139.83	2.180	
6,400.0	6,226.7	6,205.7	6,205.7	25.4	122.5	133.04	80.9	-1,254.5	305.5	165.8	139.75	2.186	
6,450.0	6,271.1	6,250.1	6,250.1	25.2	123.4	134.86	80.9	-1,254.5	322.5	184.7	137.77	2.341	
6,496.0	6,310.4	6,289.4	6,289.4	25.1	124.2	136.43	80.9	-1,254.5	340.9	205.4	135.48	2.516	
6,500.0	6,313.7	6,292.7	6,292.7	25.1	124.2	136.56	80.9	-1,254.5	342.6	207.3	135.27	2.532	
6,550.0	6,354.4	6,333.4	6,333.4	25.0	125.1	138.06	80.9	-1,254.5	365.8	233.4	132.31	2.764	
6,594.5	6,388.9	6,367.9	6,367.9	24.9	125.8	139.18	80.9	-1,254.5	389.0	259.6	129.38	3.007	
6,600.0	6,393.0	6,372.0	6,372.0	24.9	125.8	139.31	80.9	-1,254.5	392.0	263.0	129.00	3.039	
6,650.0	6,429.3	6,408.3	6,408.3	24.8	126.6	140.24	80.9	-1,254.5	421.4	295.9	125.50	3.358	
6,692.9	6,458.5	6,437.5	6,437.5	24.7	127.2	140.75	80.9	-1,254.5	448.8	326.3	122.48	3.664	
6,700.0	6,463.1	6,442.1	6,442.1	24.7	127.3	140.81	80.9	-1,254.5	453.6	331.6	121.99	3.718	
6,750.0	6,494.3	6,473.3	6,473.3	24.7	127.9	140.96	80.9	-1,254.5	488.4	369.7	118.75	4.113	
6,791.3	6,517.9	6,496.9	6,496.9	24.7	128.4	140.72	80.9	-1,254.5	519.2	402.7	116.49	4.457	
6,800.0	6,522.6	6,501.6	6,501.6	24.7	128.4	140.62	80.9	-1,254.5	525.8	409.7	116.09	4.530	
6,850.0	6,548.0	6,527.0	6,527.0	24.7	129.0	139.70	80.9	-1,254.5	565.5	451.0	114.43	4.942	
6,889.7	6,566.0	6,545.0	6,545.0	24.8	129.3	138.45	80.9	-1,254.5	598.5	484.3	114.18	5.242	
6,900.0	6,570.4	6,549.4	6,549.4	24.9	129.4	138.05	80.9	-1,254.5	607.2	492.9	114.30	5.312	
6,950.0	6,589.5	6,568.5	6,568.5	25.1	129.8	135.46	80.9	-1,254.5	650.6	534.4	116.27	5.596	
6,988.2	6,602.0	6,581.0	6,581.0	25.3	130.0	132.65	80.9	-1,254.5	684.8	565.3	119.57	5.728	
7,000.0	6,605.4	6,584.4	6,584.4	25.3	130.1	131.60	80.9	-1,254.5	695.6	574.6	120.94	5.751	
7,050.0	6,618.0	6,597.0	6,597.0	25.6	130.4	126.01	80.9	-1,254.5	741.8	613.1	128.75	5.762	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,625.0	6,604.0	6,604.0	25.9	130.5	120.42	80.9	-1,254.5	776.3	640.0	136.33	5.694	
7,100.0	6,627.1	6,606.1	6,606.1	26.0	130.6	117.99	80.9	-1,254.5	789.0	649.6	139.39	5.661	
7,150.0	6,632.8	6,611.8	6,611.8	26.5	130.7	106.79	80.9	-1,254.5	837.0	686.2	150.72	5.553	
7,185.0	6,634.7	6,613.7	6,613.7	26.8	130.7	96.88	80.9	-1,254.5	870.8	714.5	156.32	5.571	
7,200.0	6,635.0	6,614.0	6,614.0	27.0	130.7	92.19	80.9	-1,254.5	885.4	728.0	157.40	5.625	
7,215.9	6,635.0	6,614.0	6,614.0	27.1	130.7	86.99	80.9	-1,254.5	900.8	743.4	157.39	5.724	
7,283.4	6,634.1	6,613.1	6,613.1	27.9	130.7	86.76	80.9	-1,254.5	966.6	808.4	158.16	6.111	
7,300.0	6,633.9	6,612.9	6,612.9	28.1	130.7	86.70	80.9	-1,254.5	982.7	824.4	158.35	6.206	
7,381.9	6,632.9	6,611.9	6,611.9	29.3	130.7	86.42	80.9	-1,254.5	1,062.8	903.4	159.45	6.665	
7,400.0	6,632.6	6,611.6	6,611.6	29.5	130.7	86.35	80.9	-1,254.5	1,080.6	920.9	159.70	6.766	
7,480.3	6,631.6	6,610.6	6,610.6	30.8	130.6	86.08	80.9	-1,254.5	1,159.4	998.5	160.92	7.205	
7,500.0	6,631.4	6,610.4	6,610.4	31.1	130.6	86.01	80.9	-1,254.5	1,178.8	1,017.6	161.22	7.311	
7,578.7	6,630.4	6,609.4	6,609.4	32.5	130.6	85.74	80.9	-1,254.5	1,256.3	1,093.7	162.55	7.729	
7,600.0	6,630.1	6,609.1	6,609.1	32.9	130.6	85.67	80.9	-1,254.5	1,277.3	1,114.4	162.90	7.841	
7,677.1	6,629.1	6,608.1	6,608.1	34.3	130.6	85.40	80.9	-1,254.5	1,353.4	1,189.1	164.30	8.237	
7,700.0	6,628.8	6,607.8	6,607.8	34.8	130.6	85.32	80.9	-1,254.5	1,376.0	1,211.3	164.71	8.354	
7,775.6	6,627.8	6,606.8	6,606.8	36.3	130.6	85.06	80.9	-1,254.5	1,450.7	1,284.5	166.16	8.731	
7,800.0	6,627.5	6,606.5	6,606.5	36.8	130.6	84.98	80.9	-1,254.5	1,474.8	1,308.2	166.62	8.851	
7,874.0	6,626.6	6,605.6	6,605.6	38.4	130.5	84.72	80.9	-1,254.5	1,548.1	1,380.0	168.11	9.209	
7,900.0	6,626.3	6,605.3	6,605.3	38.9	130.5	84.63	80.9	-1,254.5	1,573.9	1,405.2	168.63	9.333	
7,972.4	6,625.3	6,604.3	6,604.3	40.5	130.5	84.39	80.9	-1,254.5	1,645.6	1,475.5	170.13	9.673	
8,000.0	6,625.0	6,604.0	6,604.0	41.1	130.5	84.29	80.9	-1,254.5	1,673.0	1,502.3	170.71	9.800	
8,070.8	6,624.1	6,603.1	6,603.1	42.7	130.5	84.05	80.9	-1,254.5	1,743.3	1,571.1	172.22	10.122	
8,100.0	6,623.7	6,602.7	6,602.7	43.4	130.5	83.95	80.9	-1,254.5	1,772.2	1,599.4	172.84	10.253	
8,169.3	6,622.8	6,601.8	6,601.8	45.0	130.5	83.71	80.9	-1,254.5	1,841.0	1,666.6	174.36	10.559	
8,200.0	6,622.4	6,601.4	6,601.4	45.7	130.5	83.60	80.9	-1,254.5	1,871.5	1,696.5	175.03	10.693	
8,267.7	6,621.6	6,600.6	6,600.6	47.4	130.4	83.37	80.9	-1,254.5	1,938.8	1,762.3	176.54	10.982	
8,300.0	6,621.1	6,600.1	6,600.1	48.1	130.4	83.26	80.9	-1,254.5	1,970.9	1,793.6	177.26	11.119	
8,366.1	6,620.3	6,599.3	6,599.3	49.7	130.4	83.04	80.9	-1,254.5	2,036.6	1,857.9	178.76	11.393	
8,400.0	6,619.9	6,598.9	6,598.9	50.6	130.4	82.92	80.9	-1,254.5	2,070.3	1,890.8	179.52	11.533	
8,464.5	6,619.0	6,598.0	6,598.0	52.2	130.4	82.70	80.9	-1,254.5	2,134.6	1,953.6	181.00	11.793	
8,500.0	6,618.6	6,597.6	6,597.6	53.0	130.4	82.58	80.9	-1,254.5	2,169.8	1,988.0	181.81	11.935	
8,563.0	6,617.8	6,596.8	6,596.8	54.6	130.4	82.36	80.9	-1,254.5	2,232.5	2,049.2	183.27	12.182	
8,600.0	6,617.3	6,596.3	6,596.3	55.5	130.4	82.23	80.9	-1,254.5	2,269.4	2,085.2	184.12	12.325	
8,661.4	6,616.5	6,595.5	6,595.5	57.1	130.3	82.03	80.9	-1,254.5	2,330.5	2,144.9	185.56	12.560	
8,700.0	6,616.0	6,595.0	6,595.0	58.1	130.3	81.89	80.9	-1,254.5	2,368.9	2,182.5	186.45	12.705	
8,759.8	6,615.2	6,594.2	6,594.2	59.6	130.3	81.69	80.9	-1,254.5	2,428.5	2,240.7	187.86	12.927	
8,800.0	6,614.7	6,593.7	6,593.7	60.6	130.3	81.55	80.9	-1,254.5	2,468.5	2,279.7	188.80	13.075	
8,858.2	6,614.0	6,593.0	6,593.0	62.1	130.3	81.35	80.9	-1,254.5	2,526.6	2,336.4	190.17	13.286	
8,900.0	6,613.4	6,592.4	6,592.4	63.2	130.3	81.21	80.9	-1,254.5	2,568.2	2,377.0	191.15	13.435	
8,956.7	6,612.7	6,591.7	6,591.7	64.7	130.3	81.02	80.9	-1,254.5	2,624.7	2,432.2	192.49	13.635	
9,000.0	6,612.2	6,591.2	6,591.2	65.8	130.2	80.87	80.9	-1,254.5	2,667.8	2,474.3	193.51	13.786	
9,055.1	6,611.5	6,590.5	6,590.5	67.3	130.2	80.68	80.9	-1,254.5	2,722.8	2,527.9	194.82	13.976	
9,100.0	6,610.9	6,589.9	6,589.9	68.4	130.2	80.53	80.9	-1,254.5	2,767.5	2,571.6	195.88	14.128	
9,153.5	6,610.2	6,589.2	6,589.2	69.8	130.2	80.35	80.9	-1,254.5	2,820.9	2,623.7	197.16	14.308	
9,200.0	6,609.6	6,588.6	6,588.6	71.1	130.2	80.19	80.9	-1,254.5	2,867.2	2,669.0	198.26	14.462	
9,251.9	6,608.9	6,587.9	6,587.9	72.4	130.2	80.02	80.9	-1,254.5	2,919.0	2,719.5	199.49	14.632	
9,300.0	6,608.3	6,587.3	6,587.3	73.7	130.2	79.85	80.9	-1,254.5	2,967.0	2,766.3	200.63	14.788	
9,350.4	6,607.7	6,586.7	6,586.7	75.0	130.2	79.68	80.9	-1,254.5	3,017.2	2,815.4	201.83	14.949	
9,400.0	6,607.0	6,586.0	6,586.0	76.4	130.1	79.51	80.9	-1,254.5	3,066.7	2,863.7	203.00	15.107	
9,448.8	6,606.4	6,585.4	6,585.4	77.7	130.1	79.35	80.9	-1,254.5	3,115.4	2,911.2	204.17	15.259	
9,500.0	6,605.7	6,584.7	6,584.7	79.0	130.1	79.17	80.9	-1,254.5	3,166.5	2,961.1	205.38	15.418	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.1	6,584.1	6,584.1	80.3	130.1	79.02	80.9	-1,254.5	3,213.6	3,007.1	206.50	15.562	
9,600.0	6,604.5	6,583.5	6,583.5	81.7	130.1	78.84	80.9	-1,254.5	3,266.2	3,058.5	207.75	15.722	
9,645.6	6,603.9	6,582.9	6,582.9	82.9	130.1	78.68	80.9	-1,254.5	3,311.8	3,102.9	208.83	15.859	
9,700.0	6,603.2	6,582.2	6,582.2	84.4	130.1	78.50	80.9	-1,254.5	3,366.0	3,155.9	210.12	16.020	
9,744.1	6,602.6	6,581.6	6,581.6	85.6	130.1	78.35	80.9	-1,254.5	3,410.0	3,198.8	211.16	16.149	
9,800.0	6,601.9	6,580.9	6,580.9	87.1	130.0	78.16	80.9	-1,254.5	3,465.8	3,253.3	212.48	16.311	
9,842.5	6,601.3	6,580.3	6,580.3	88.2	130.0	78.02	80.9	-1,254.5	3,508.2	3,294.7	213.48	16.433	
9,900.0	6,600.6	6,579.6	6,579.6	89.8	130.0	77.83	80.9	-1,254.5	3,565.6	3,350.8	214.84	16.597	
9,940.9	6,600.1	6,579.1	6,579.1	90.9	130.0	77.69	80.9	-1,254.5	3,606.5	3,390.7	215.80	16.712	
10,000.0	6,599.3	6,578.3	6,578.3	92.5	130.0	77.49	80.9	-1,254.5	3,665.4	3,448.3	217.19	16.877	
10,039.3	6,598.8	6,577.8	6,577.8	93.5	130.0	77.36	80.9	-1,254.5	3,704.7	3,486.6	218.11	16.985	
10,100.0	6,598.0	6,577.0	6,577.0	95.2	130.0	77.16	80.9	-1,254.5	3,765.3	3,545.7	219.53	17.151	
10,137.8	6,597.5	6,576.5	6,576.5	96.2	130.0	77.03	80.9	-1,254.5	3,803.0	3,582.6	220.42	17.253	
10,200.0	6,596.7	6,575.7	6,575.7	97.9	129.9	76.82	80.9	-1,254.5	3,865.1	3,643.2	221.87	17.421	
10,236.2	6,596.3	6,575.3	6,575.3	98.9	129.9	76.71	80.9	-1,254.5	3,901.3	3,678.5	222.71	17.517	
10,300.0	6,595.4	6,574.4	6,574.4	100.6	129.9	76.49	80.9	-1,254.5	3,965.0	3,740.8	224.20	17.685	
10,334.6	6,595.0	6,574.0	6,574.0	101.6	129.9	76.38	80.9	-1,254.5	3,999.5	3,774.5	225.00	17.775	
10,400.0	6,594.2	6,573.2	6,573.2	103.4	129.9	76.16	80.9	-1,254.5	4,064.8	3,838.3	226.52	17.945	
10,433.0	6,593.7	6,572.7	6,572.7	104.3	129.9	76.05	80.9	-1,254.5	4,097.8	3,870.5	227.28	18.029	
10,500.0	6,592.9	6,571.9	6,571.9	106.1	129.9	75.83	80.9	-1,254.5	4,164.7	3,935.8	228.83	18.200	
10,531.5	6,592.5	6,571.5	6,571.5	106.9	129.9	75.72	80.9	-1,254.5	4,196.1	3,966.5	229.55	18.279	
10,600.0	6,591.6	6,570.6	6,570.6	108.8	129.8	75.50	80.9	-1,254.5	4,264.5	4,033.4	231.13	18.451	
10,629.9	6,591.2	6,570.2	6,570.2	109.6	129.8	75.40	80.9	-1,254.5	4,294.4	4,062.6	231.82	18.525	
10,700.0	6,590.3	6,569.3	6,569.3	111.6	129.8	75.17	80.9	-1,254.5	4,364.4	4,131.0	233.42	18.698	
10,728.3	6,589.9	6,568.9	6,568.9	112.3	129.8	75.07	80.9	-1,254.5	4,392.7	4,158.6	234.07	18.767	
10,800.0	6,589.0	6,568.0	6,568.0	114.3	129.8	74.84	80.9	-1,254.5	4,464.3	4,228.6	235.70	18.941	
10,826.7	6,588.7	6,567.7	6,567.7	115.0	129.8	74.75	80.9	-1,254.5	4,491.0	4,254.7	236.31	19.005	
10,900.0	6,587.7	6,566.7	6,566.7	117.1	129.8	74.51	80.9	-1,254.5	4,564.2	4,326.2	237.97	19.180	
10,925.2	6,587.4	6,566.4	6,566.4	117.7	129.8	74.43	80.9	-1,254.5	4,589.3	4,350.8	238.54	19.239	
11,000.0	6,586.4	6,565.4	6,565.4	119.8	129.7	74.18	80.9	-1,254.5	4,664.0	4,423.8	240.22	19.415	
11,023.6	6,586.1	6,565.1	6,565.1	120.4	129.7	74.11	80.9	-1,254.5	4,687.6	4,446.9	240.75	19.470	
11,100.0	6,585.1	6,564.1	6,564.1	122.6	129.7	73.86	80.9	-1,254.5	4,763.9	4,521.5	242.47	19.648	
11,122.0	6,584.8	6,563.8	6,563.8	123.2	129.7	73.78	80.9	-1,254.5	4,785.9	4,543.0	242.96	19.698	
11,200.0	6,583.8	6,562.8	6,562.8	125.3	129.7	73.53	80.9	-1,254.5	4,863.8	4,619.1	244.70	19.877	
11,220.4	6,583.6	6,562.6	6,562.6	125.9	129.7	73.46	80.9	-1,254.5	4,884.3	4,639.1	245.16	19.923	
11,300.0	6,582.5	6,561.5	6,561.5	128.1	129.7	73.20	80.9	-1,254.5	4,963.7	4,716.8	246.92	20.102	
11,318.9	6,582.3	6,561.3	6,561.3	128.6	129.6	73.14	80.9	-1,254.5	4,982.6	4,735.2	247.34	20.145	
11,400.0	6,581.2	6,560.2	6,560.2	130.8	129.6	72.88	80.9	-1,254.5	5,063.6	4,814.5	249.13	20.325	
11,417.3	6,581.0	6,560.0	6,560.0	131.3	129.6	72.83	80.9	-1,254.5	5,080.9	4,831.4	249.51	20.363	
11,500.0	6,580.0	6,559.0	6,559.0	133.6	129.6	72.56	80.9	-1,254.5	5,163.5	4,912.2	251.33	20.545	
11,515.7	6,579.7	6,558.7	6,558.7	134.0	129.6	72.51	80.9	-1,254.5	5,179.2	4,927.6	251.67	20.579	
11,600.0	6,578.7	6,557.7	6,557.7	136.3	129.6	72.24	80.9	-1,254.5	5,263.4	5,009.9	253.51	20.762	
11,614.1	6,578.5	6,557.5	6,557.5	136.7	129.6	72.19	80.9	-1,254.5	5,277.6	5,023.8	253.82	20.793	
11,700.0	6,577.4	6,556.4	6,556.4	139.1	129.6	71.91	80.9	-1,254.5	5,363.4	5,107.7	255.68	20.977	
11,712.6	6,577.2	6,556.2	6,556.2	139.5	129.5	71.87	80.9	-1,254.5	5,375.9	5,120.0	255.95	21.004	
11,800.0	6,576.1	6,555.1	6,555.1	141.9	129.5	71.59	80.9	-1,254.5	5,463.3	5,205.4	257.83	21.189	
11,811.0	6,575.9	6,554.9	6,554.9	142.2	129.5	71.56	80.9	-1,254.5	5,474.3	5,216.2	258.07	21.212	
11,882.7	6,575.0	6,554.0	6,554.0	144.2	129.5	71.33	80.9	-1,254.5	5,545.9	5,286.3	259.61	21.363	
11,883.5	6,575.0	6,554.0	6,554.0	144.2	129.5	71.33	80.9	-1,254.5	5,546.7	5,287.1	259.62	21.365	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	5.0	5.0	0.0	0.0	-59.72	1,392.5	-2,384.9	2,761.7				
98.4	98.4	103.4	103.4	0.1	0.0	-59.72	1,392.5	-2,384.9	2,761.7	2,761.5	0.13	N/A	
100.0	100.0	105.0	105.0	0.1	0.0	-59.72	1,392.5	-2,384.9	2,761.7	2,761.5	0.15	N/A	
196.8	196.8	201.8	201.8	0.3	1.0	-59.72	1,392.5	-2,384.9	2,761.7	2,760.3	1.30	2,117.526	
200.0	200.0	205.0	205.0	0.3	1.1	-59.72	1,392.5	-2,384.9	2,761.7	2,760.3	1.39	1,993.579	
295.3	295.3	300.3	300.3	0.5	3.3	-59.72	1,392.5	-2,384.9	2,761.7	2,757.8	3.84	719.731	
300.0	300.0	305.0	305.0	0.5	3.4	-59.72	1,392.5	-2,384.9	2,761.7	2,757.7	3.95	699.855	
393.7	393.7	398.7	398.7	0.8	5.3	-59.72	1,392.5	-2,384.9	2,761.7	2,755.5	6.11	452.206	
400.0	400.0	405.0	405.0	0.8	5.5	-59.72	1,392.5	-2,384.9	2,761.7	2,755.4	6.25	441.835	
492.1	492.1	497.1	497.1	1.0	7.4	-59.72	1,392.5	-2,384.9	2,761.7	2,753.3	8.34	331.160	
500.0	500.0	505.0	505.0	1.0	7.5	-59.72	1,392.5	-2,384.9	2,761.7	2,753.1	8.52	324.244	
590.5	590.5	595.5	595.5	1.2	9.4	-59.72	1,392.5	-2,384.9	2,761.7	2,751.1	10.56	261.568	
600.0	600.0	605.0	605.0	1.2	9.5	-59.72	1,392.5	-2,384.9	2,761.7	2,750.9	10.77	256.403	
689.0	689.0	694.0	694.0	1.4	11.3	-59.72	1,392.5	-2,384.9	2,761.7	2,748.9	12.77	216.254	
700.0	700.0	705.0	705.0	1.4	11.6	-59.72	1,392.5	-2,384.9	2,761.7	2,748.6	13.02	212.141	
787.4	787.4	792.4	792.4	1.6	13.3	-59.72	1,392.5	-2,384.9	2,761.7	2,746.7	14.98	184.365	
800.0	800.0	805.0	805.0	1.7	13.6	-59.72	1,392.5	-2,384.9	2,761.7	2,746.4	15.26	180.951	
885.8	885.8	890.8	890.8	1.9	15.3	-59.72	1,392.5	-2,384.9	2,761.7	2,744.5	17.19	160.693	
900.0	900.0	905.0	905.0	1.9	15.6	-59.72	1,392.5	-2,384.9	2,761.7	2,744.1	17.50	157.776	
984.2	984.2	989.2	989.2	2.1	17.3	-59.72	1,392.5	-2,384.9	2,761.7	2,742.3	19.39	142.418	
1,000.0	1,000.0	1,005.0	1,005.0	2.1	17.6	-59.72	1,392.5	-2,384.9	2,761.7	2,741.9	19.74	139.873	
1,082.7	1,082.7	1,087.7	1,087.7	2.3	19.3	-59.72	1,392.5	-2,384.9	2,761.7	2,740.1	21.60	127.881	
1,100.0	1,100.0	1,105.0	1,105.0	2.3	19.6	-59.72	1,392.5	-2,384.9	2,761.7	2,739.7	21.98	125.625	
1,181.1	1,181.1	1,186.1	1,186.1	2.5	21.3	-59.72	1,392.5	-2,384.9	2,761.7	2,737.9	23.80	116.041	
1,200.0	1,200.0	1,205.0	1,205.0	2.6	21.7	-59.72	1,392.5	-2,384.9	2,761.7	2,737.4	24.22	114.014	
1,279.5	1,279.5	1,284.5	1,284.5	2.7	23.3	-59.72	1,392.5	-2,384.9	2,761.7	2,735.6	26.00	106.209	
1,300.0	1,300.0	1,305.0	1,305.0	2.8	23.7	-59.72	1,392.5	-2,384.9	2,761.7	2,735.2	26.46	104.370	
1,377.9	1,377.9	1,382.9	1,382.9	3.0	25.2	-59.72	1,392.5	-2,384.9	2,761.7	2,733.4	28.20	97.915	
1,400.0	1,400.0	1,405.0	1,405.0	3.0	25.7	-59.72	1,392.5	-2,384.9	2,761.7	2,733.0	28.70	96.231	
1,476.4	1,476.4	1,481.4	1,481.4	3.2	27.2	15.42	1,392.5	-2,384.9	2,760.7	2,730.3	30.39	90.843	
1,500.0	1,500.0	1,505.0	1,505.0	3.2	27.7	15.43	1,392.5	-2,384.9	2,760.0	2,729.1	30.91	89.296	
1,574.8	1,574.7	1,579.7	1,579.7	3.4	29.2	15.46	1,392.5	-2,384.9	2,756.5	2,724.0	32.53	84.741	
1,600.0	1,599.8	1,604.8	1,604.8	3.4	29.7	15.48	1,392.5	-2,384.9	2,754.9	2,721.9	33.07	83.310	
1,673.2	1,672.8	1,677.8	1,677.8	3.6	31.2	15.55	1,392.5	-2,384.9	2,749.1	2,714.5	34.62	79.404	
1,700.0	1,699.5	1,704.5	1,704.5	3.7	31.7	15.58	1,392.5	-2,384.9	2,746.5	2,711.3	35.18	78.067	
1,771.6	1,770.6	1,775.6	1,775.6	3.8	33.1	15.67	1,392.5	-2,384.9	2,738.4	2,701.8	36.66	74.692	
1,800.0	1,798.7	1,803.7	1,803.7	3.9	33.7	15.71	1,392.5	-2,384.9	2,734.8	2,697.5	37.24	73.437	
1,870.1	1,868.0	1,873.0	1,873.0	4.1	35.1	15.82	1,392.5	-2,384.9	2,724.6	2,685.9	38.65	70.499	
1,900.0	1,897.5	1,902.5	1,902.5	4.2	35.7	15.88	1,392.5	-2,384.9	2,719.7	2,680.5	39.24	69.317	
1,968.5	1,964.8	1,969.8	1,969.8	4.4	37.0	16.02	1,392.5	-2,384.9	2,707.5	2,666.9	40.57	66.743	
2,000.0	1,995.6	2,000.6	2,000.6	4.5	37.7	16.09	1,392.5	-2,384.9	2,701.3	2,660.2	41.16	65.624	
2,066.9	2,060.9	2,065.9	2,065.9	4.7	39.0	16.26	1,392.5	-2,384.9	2,687.2	2,644.8	42.42	63.355	
2,100.0	2,093.1	2,098.1	2,098.1	4.8	39.6	16.35	1,392.5	-2,384.9	2,679.7	2,636.7	43.02	62.292	
2,165.3	2,156.3	2,161.3	2,161.3	5.1	40.9	16.54	1,392.5	-2,384.9	2,663.8	2,619.6	44.19	60.280	
2,200.0	2,189.6	2,194.6	2,194.6	5.2	41.6	16.65	1,392.5	-2,384.9	2,654.8	2,610.0	44.80	59.265	
2,263.8	2,250.7	2,255.7	2,255.7	5.5	42.8	16.87	1,392.5	-2,384.9	2,637.3	2,591.4	45.89	57.471	
2,280.0	2,266.2	2,271.2	2,271.2	5.6	43.1	16.93	1,392.5	-2,384.9	2,632.6	2,586.4	46.16	57.032	
2,300.0	2,285.3	2,290.3	2,290.3	5.7	43.5	16.97	1,392.5	-2,384.9	2,626.8	2,580.2	46.58	56.390	
2,362.2	2,344.6	2,349.6	2,349.6	6.0	44.7	17.09	1,392.5	-2,384.9	2,608.8	2,560.9	47.90	54.465	
2,400.0	2,380.6	2,385.6	2,385.6	6.2	45.4	17.16	1,392.5	-2,384.9	2,597.8	2,549.1	48.71	53.337	
2,460.6	2,438.4	2,443.4	2,443.4	6.5	46.6	17.28	1,392.5	-2,384.9	2,580.2	2,530.2	50.00	51.606	
2,500.0	2,475.9	2,480.9	2,480.9	6.7	47.3	17.36	1,392.5	-2,384.9	2,568.8	2,518.0	50.84	50.528	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,537.2	2,537.2	7.0	48.5	17.48	1,392.5	-2,384.9	2,551.7	2,499.6	52.10	48.973	
2,600.0	2,571.2	2,576.2	2,576.2	7.2	49.2	17.57	1,392.5	-2,384.9	2,539.8	2,486.8	52.98	47.938	
2,657.5	2,626.0	2,631.0	2,631.0	7.5	50.3	17.68	1,392.5	-2,384.9	2,523.2	2,469.0	54.22	46.538	
2,700.0	2,666.6	2,671.6	2,671.6	7.8	51.2	17.77	1,392.5	-2,384.9	2,510.9	2,455.8	55.13	45.543	
2,755.9	2,719.8	2,724.8	2,724.8	8.1	52.2	17.89	1,392.5	-2,384.9	2,494.7	2,438.4	56.34	44.280	
2,800.0	2,761.9	2,766.9	2,766.9	8.3	53.1	17.99	1,392.5	-2,384.9	2,482.0	2,424.7	57.29	43.322	
2,854.3	2,813.7	2,818.7	2,818.7	8.7	54.1	18.10	1,392.5	-2,384.9	2,466.3	2,407.8	58.47	42.181	
2,900.0	2,857.2	2,862.2	2,862.2	8.9	55.0	18.20	1,392.5	-2,384.9	2,453.1	2,393.7	59.46	41.257	
2,952.7	2,907.5	2,912.5	2,912.5	9.2	56.0	18.32	1,392.5	-2,384.9	2,437.9	2,377.3	60.61	40.226	
3,000.0	2,952.5	2,957.5	2,957.5	9.5	56.9	18.42	1,392.5	-2,384.9	2,424.3	2,362.7	61.63	39.335	
3,051.2	3,001.3	3,006.3	3,006.3	9.8	57.9	18.54	1,392.5	-2,384.9	2,409.5	2,346.8	62.75	38.400	
3,100.0	3,047.8	3,052.8	3,052.8	10.1	58.8	18.65	1,392.5	-2,384.9	2,395.5	2,331.7	63.81	37.539	
3,149.6	3,095.1	3,100.1	3,100.1	10.4	59.8	18.77	1,392.5	-2,384.9	2,381.2	2,316.3	64.90	36.692	
3,200.0	3,143.2	3,148.2	3,148.2	10.7	60.7	18.89	1,392.5	-2,384.9	2,366.7	2,300.7	66.00	35.860	
3,248.0	3,188.9	3,193.9	3,193.9	11.0	61.7	19.00	1,392.5	-2,384.9	2,352.9	2,285.9	67.05	35.091	
3,300.0	3,238.5	3,243.5	3,243.5	11.3	62.7	19.12	1,392.5	-2,384.9	2,338.0	2,269.8	68.19	34.286	
3,346.4	3,282.8	3,287.8	3,287.8	11.6	63.6	19.24	1,392.5	-2,384.9	2,324.7	2,255.4	69.21	33.588	
3,400.0	3,333.8	3,338.8	3,338.8	11.9	64.6	19.37	1,392.5	-2,384.9	2,309.3	2,238.9	70.39	32.807	
3,444.9	3,376.6	3,381.6	3,381.6	12.2	65.4	19.48	1,392.5	-2,384.9	2,296.4	2,225.1	71.38	32.173	
3,500.0	3,429.1	3,434.1	3,434.1	12.6	66.5	19.62	1,392.5	-2,384.9	2,280.6	2,208.1	72.59	31.417	
3,543.3	3,470.4	3,475.4	3,475.4	12.8	67.3	19.73	1,392.5	-2,384.9	2,268.3	2,194.7	73.55	30.840	
3,600.0	3,524.4	3,529.4	3,529.4	13.2	68.4	19.88	1,392.5	-2,384.9	2,252.0	2,177.2	74.80	30.106	
3,641.7	3,564.2	3,569.2	3,569.2	13.4	69.2	19.99	1,392.5	-2,384.9	2,240.1	2,164.4	75.73	29.581	
3,700.0	3,619.8	3,624.8	3,624.8	13.8	70.3	20.14	1,392.5	-2,384.9	2,223.5	2,146.5	77.02	28.869	
3,740.1	3,658.0	3,663.0	3,663.0	14.0	71.1	20.25	1,392.5	-2,384.9	2,212.0	2,134.1	77.91	28.392	
3,800.0	3,715.1	3,720.1	3,720.1	14.4	72.2	20.41	1,392.5	-2,384.9	2,194.9	2,115.7	79.24	27.700	
3,838.6	3,751.8	3,756.8	3,756.8	14.7	73.0	20.52	1,392.5	-2,384.9	2,184.0	2,103.9	80.10	27.266	
3,900.0	3,810.4	3,815.4	3,815.4	15.0	74.2	20.69	1,392.5	-2,384.9	2,166.5	2,085.0	81.47	26.593	
3,937.0	3,845.7	3,850.7	3,850.7	15.3	74.9	20.79	1,392.5	-2,384.9	2,156.0	2,073.7	82.29	26.199	
4,000.0	3,905.7	3,910.7	3,910.7	15.7	76.1	20.97	1,392.5	-2,384.9	2,138.0	2,054.3	83.70	25.544	
4,035.4	3,939.5	3,944.5	3,944.5	15.9	76.8	21.07	1,392.5	-2,384.9	2,128.0	2,043.5	84.49	25.186	
4,100.0	4,001.0	4,006.0	4,006.0	16.3	78.0	21.26	1,392.5	-2,384.9	2,109.7	2,023.7	85.94	24.549	
4,133.8	4,033.3	4,038.3	4,038.3	16.5	78.6	21.36	1,392.5	-2,384.9	2,100.1	2,013.4	86.70	24.223	
4,200.0	4,096.3	4,101.3	4,101.3	16.9	79.9	21.56	1,392.5	-2,384.9	2,081.3	1,993.2	88.18	23.602	
4,232.3	4,127.1	4,132.1	4,132.1	17.1	80.5	21.66	1,392.5	-2,384.9	2,072.2	1,983.3	88.91	23.307	
4,300.0	4,191.7	4,196.7	4,196.7	17.6	81.8	21.87	1,392.5	-2,384.9	2,053.1	1,962.6	90.44	22.702	
4,330.7	4,220.9	4,225.9	4,225.9	17.8	82.4	21.97	1,392.5	-2,384.9	2,044.4	1,953.3	91.13	22.435	
4,400.0	4,287.0	4,292.0	4,292.0	18.2	83.8	22.19	1,392.5	-2,384.9	2,024.9	1,932.2	92.69	21.845	
4,429.1	4,314.7	4,319.7	4,319.7	18.4	84.3	22.28	1,392.5	-2,384.9	2,016.7	1,923.3	93.35	21.603	
4,500.0	4,382.3	4,387.3	4,387.3	18.8	85.7	22.51	1,392.5	-2,384.9	1,996.7	1,901.8	94.96	21.027	
4,527.5	4,408.6	4,413.6	4,413.6	19.0	86.2	22.61	1,392.5	-2,384.9	1,989.0	1,893.4	95.58	20.809	
4,600.0	4,477.6	4,482.6	4,482.6	19.5	87.6	22.85	1,392.5	-2,384.9	1,968.6	1,871.4	97.23	20.247	
4,626.0	4,502.4	4,507.4	4,507.4	19.6	88.1	22.94	1,392.5	-2,384.9	1,961.3	1,863.5	97.82	20.050	
4,700.0	4,572.9	4,577.9	4,577.9	20.1	89.5	23.19	1,392.5	-2,384.9	1,940.6	1,841.1	99.51	19.502	
4,724.4	4,596.2	4,601.2	4,601.2	20.3	90.0	23.28	1,392.5	-2,384.9	1,933.8	1,833.7	100.07	19.325	
4,800.0	4,668.3	4,673.3	4,673.3	20.7	91.4	23.55	1,392.5	-2,384.9	1,912.6	1,810.8	101.80	18.789	
4,822.8	4,690.0	4,695.0	4,695.0	20.9	91.9	23.63	1,392.5	-2,384.9	1,906.3	1,803.9	102.32	18.631	
4,900.0	4,763.6	4,768.6	4,768.6	21.4	93.3	23.91	1,392.5	-2,384.9	1,884.7	1,780.7	104.09	18.107	
4,921.2	4,783.8	4,788.8	4,788.8	21.5	93.7	23.99	1,392.5	-2,384.9	1,878.8	1,774.3	104.58	17.966	
5,000.0	4,858.9	4,863.9	4,863.9	22.0	95.3	24.29	1,392.5	-2,384.9	1,856.9	1,750.5	106.39	17.454	
5,019.7	4,877.7	4,882.7	4,882.7	22.1	95.6	24.36	1,392.5	-2,384.9	1,851.5	1,744.6	106.85	17.328	
5,100.0	4,954.2	4,959.2	4,959.2	22.6	97.2	24.67	1,392.5	-2,384.9	1,829.2	1,720.5	108.70	16.827	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,976.5	4,976.5	22.8	97.5	24.74	1,392.5	-2,384.9	1,824.2	1,715.1	109.12	16.717	
5,171.8	5,022.7	5,027.7	5,027.7	23.1	98.5	24.96	1,392.5	-2,384.9	1,809.3	1,699.0	110.37	16.393	
5,200.0	5,049.6	5,054.6	5,054.6	23.3	99.1	25.00	1,392.5	-2,384.9	1,801.7	1,690.4	111.24	16.196	
5,216.5	5,065.4	5,070.4	5,070.4	23.3	99.4	25.03	1,392.5	-2,384.9	1,797.3	1,685.5	111.74	16.085	
5,300.0	5,145.7	5,150.7	5,150.7	23.7	101.0	25.15	1,392.5	-2,384.9	1,776.5	1,662.2	114.23	15.551	
5,314.9	5,160.1	5,165.1	5,165.1	23.8	101.3	25.18	1,392.5	-2,384.9	1,773.0	1,658.3	114.67	15.461	
5,400.0	5,242.7	5,247.7	5,247.7	24.1	103.0	25.29	1,392.5	-2,384.9	1,754.4	1,637.3	117.15	14.976	
5,413.4	5,255.7	5,260.7	5,260.7	24.2	103.2	25.31	1,392.5	-2,384.9	1,751.7	1,634.2	117.53	14.905	
5,500.0	5,340.5	5,345.5	5,345.5	24.5	104.9	25.42	1,392.5	-2,384.9	1,735.5	1,615.5	119.96	14.467	
5,511.8	5,352.1	5,357.1	5,357.1	24.5	105.2	25.44	1,392.5	-2,384.9	1,733.5	1,613.2	120.29	14.411	
5,600.0	5,439.0	5,444.0	5,444.0	24.8	106.9	25.53	1,392.5	-2,384.9	1,719.7	1,597.0	122.68	14.018	
5,610.2	5,449.1	5,454.1	5,454.1	24.8	107.1	25.54	1,392.5	-2,384.9	1,718.3	1,595.3	122.95	13.975	
5,700.0	5,538.0	5,543.0	5,543.0	25.1	108.9	25.62	1,392.5	-2,384.9	1,707.1	1,581.8	125.28	13.626	
5,708.6	5,546.6	5,551.6	5,551.6	25.1	109.1	25.63	1,392.5	-2,384.9	1,706.1	1,580.6	125.50	13.594	
5,800.0	5,637.4	5,642.4	5,642.4	25.3	110.9	25.69	1,392.5	-2,384.9	1,697.6	1,569.8	127.77	13.287	
5,807.1	5,644.5	5,649.5	5,649.5	25.3	111.1	25.70	1,392.5	-2,384.9	1,697.0	1,569.1	127.94	13.265	
5,900.0	5,737.2	5,742.2	5,742.2	25.5	112.9	25.74	1,392.5	-2,384.9	1,691.2	1,561.1	130.12	12.998	
5,905.5	5,742.6	5,747.6	5,747.6	25.5	113.0	25.74	1,392.5	-2,384.9	1,691.0	1,560.7	130.25	12.983	
6,000.0	5,837.1	5,842.1	5,842.1	25.6	114.9	25.77	1,392.5	-2,384.9	1,688.0	1,555.7	132.34	12.756	
6,003.9	5,841.0	5,846.0	5,846.0	25.6	115.0	25.77	1,392.5	-2,384.9	1,688.0	1,555.6	132.42	12.747	
6,051.8	5,888.9	5,893.9	5,893.9	25.7	116.0	-49.36	1,392.5	-2,384.9	1,687.6	1,547.8	139.85	12.067	
6,081.8	5,918.9	5,923.9	5,923.9	25.7	116.6	-49.36	1,392.5	-2,384.9	1,687.6	1,547.1	140.49	12.013 CC, ES, SF	
6,100.0	5,937.1	5,942.1	5,942.1	25.7	116.9	-139.35	1,392.5	-2,384.9	1,687.8	1,553.4	134.40	12.558	
6,102.3	5,939.4	5,944.4	5,944.4	25.7	117.0	-139.35	1,392.5	-2,384.9	1,687.8	1,553.4	134.44	12.554	
6,150.0	5,987.0	5,992.0	5,992.0	25.7	117.9	-139.30	1,392.5	-2,384.9	1,690.1	1,555.0	135.04	12.515	
6,200.0	6,036.5	6,041.5	6,041.5	25.7	118.9	-139.18	1,392.5	-2,384.9	1,695.0	1,559.7	135.32	12.526	
6,200.8	6,037.3	6,042.3	6,042.3	25.7	119.0	-139.18	1,392.5	-2,384.9	1,695.1	1,559.8	135.32	12.526	
6,250.0	6,085.5	6,090.5	6,090.5	25.7	119.9	-139.00	1,392.5	-2,384.9	1,702.6	1,567.3	135.24	12.589	
6,299.2	6,133.0	6,138.0	6,138.0	25.6	120.9	-138.75	1,392.5	-2,384.9	1,712.6	1,577.8	134.83	12.702	
6,300.0	6,133.7	6,138.7	6,138.7	25.6	120.9	-138.74	1,392.5	-2,384.9	1,712.8	1,578.0	134.82	12.704	
6,350.0	6,180.9	6,185.9	6,185.9	25.5	121.8	-138.40	1,392.5	-2,384.9	1,725.6	1,591.5	134.10	12.868	
6,397.6	6,224.6	6,229.6	6,229.6	25.4	122.7	-137.98	1,392.5	-2,384.9	1,740.2	1,607.0	133.17	13.067	
6,400.0	6,226.7	6,231.7	6,231.7	25.4	122.8	-137.96	1,392.5	-2,384.9	1,741.0	1,607.8	133.12	13.078	
6,450.0	6,271.1	6,276.1	6,276.1	25.2	123.7	-137.40	1,392.5	-2,384.9	1,758.9	1,627.0	131.94	13.331	
6,496.0	6,310.4	6,315.4	6,315.4	25.1	124.4	-136.78	1,392.5	-2,384.9	1,777.6	1,646.9	130.75	13.595	
6,500.0	6,313.7	6,318.7	6,318.7	25.1	124.5	-136.72	1,392.5	-2,384.9	1,779.3	1,648.7	130.65	13.619	
6,550.0	6,354.4	6,359.4	6,359.4	25.0	125.3	-135.88	1,392.5	-2,384.9	1,802.2	1,672.9	129.35	13.933	
6,594.5	6,388.9	6,393.9	6,393.9	24.9	126.0	-134.99	1,392.5	-2,384.9	1,824.6	1,696.3	128.30	14.221	
6,600.0	6,393.0	6,398.0	6,398.0	24.9	126.1	-134.87	1,392.5	-2,384.9	1,827.5	1,699.3	128.18	14.257	
6,650.0	6,429.3	6,434.3	6,434.3	24.8	126.8	-133.64	1,392.5	-2,384.9	1,855.1	1,727.8	127.29	14.574	
6,692.9	6,458.5	6,463.5	6,463.5	24.7	127.4	-132.39	1,392.5	-2,384.9	1,880.5	1,753.7	126.87	14.823	
6,700.0	6,463.1	6,468.1	6,468.1	24.7	127.5	-132.16	1,392.5	-2,384.9	1,884.9	1,758.1	126.83	14.861	
6,750.0	6,494.3	6,499.3	6,499.3	24.7	128.1	-130.38	1,392.5	-2,384.9	1,916.8	1,789.8	127.01	15.092	
6,791.3	6,517.9	6,522.9	6,522.9	24.7	128.6	-128.65	1,392.5	-2,384.9	1,944.6	1,816.9	127.75	15.223	
6,800.0	6,522.6	6,527.6	6,527.6	24.7	128.7	-128.26	1,392.5	-2,384.9	1,950.7	1,822.7	127.98	15.242	
6,850.0	6,548.0	6,553.0	6,553.0	24.7	129.2	-125.72	1,392.5	-2,384.9	1,986.4	1,856.5	129.89	15.293	
6,889.7	6,566.0	6,571.0	6,571.0	24.8	129.6	-123.37	1,392.5	-2,384.9	2,016.0	1,883.8	132.13	15.257	
6,900.0	6,570.4	6,575.4	6,575.4	24.9	129.7	-122.70	1,392.5	-2,384.9	2,023.8	1,891.0	132.81	15.238	
6,950.0	6,589.5	6,594.5	6,594.5	25.1	130.1	-119.12	1,392.5	-2,384.9	2,062.7	1,926.0	136.73	15.086	
6,988.2	6,602.0	6,607.0	6,607.0	25.3	130.3	-115.97	1,392.5	-2,384.9	2,093.3	1,953.0	140.29	14.922	
7,000.0	6,605.4	6,610.4	6,610.4	25.3	130.4	-114.91	1,392.5	-2,384.9	2,102.9	1,961.5	141.45	14.867	
7,050.0	6,618.0	6,623.0	6,623.0	25.6	130.6	-109.99	1,392.5	-2,384.9	2,144.3	1,997.8	146.59	14.628	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,625.0	6,630.0	6,630.0	25.9	130.8	-105.92	1,392.5	-2,384.9	2,175.3	2,025.0	150.29	14.474	
7,100.0	6,627.1	6,632.1	6,632.1	26.0	130.8	-104.33	1,392.5	-2,384.9	2,186.7	2,035.1	151.55	14.429	
7,150.0	6,632.8	6,637.8	6,637.8	26.5	130.9	-97.95	1,392.5	-2,384.9	2,229.8	2,074.2	155.52	14.337	
7,185.0	6,634.7	6,639.7	6,639.7	26.8	131.0	-93.12	1,392.5	-2,384.9	2,260.3	2,103.0	157.28	14.371	
7,200.0	6,635.0	6,640.0	6,640.0	27.0	131.0	-90.98	1,392.5	-2,384.9	2,273.3	2,115.7	157.69	14.416	
7,215.9	6,635.0	6,640.0	6,640.0	27.1	131.0	-88.67	1,392.5	-2,384.9	2,287.3	2,129.4	157.89	14.486	
7,283.4	6,634.1	6,639.1	6,639.1	27.9	131.0	-88.62	1,392.5	-2,384.9	2,346.7	2,188.0	158.71	14.787	
7,300.0	6,633.9	6,638.9	6,638.9	28.1	130.9	-88.61	1,392.5	-2,384.9	2,361.4	2,202.5	158.90	14.860	
7,381.9	6,632.9	6,637.9	6,637.9	29.3	130.9	-88.55	1,392.5	-2,384.9	2,434.1	2,274.1	160.06	15.208	
7,400.0	6,632.6	6,637.6	6,637.6	29.5	130.9	-88.54	1,392.5	-2,384.9	2,450.3	2,290.0	160.31	15.285	
7,480.3	6,631.6	6,636.6	6,636.6	30.8	130.9	-88.49	1,392.5	-2,384.9	2,522.3	2,360.7	161.59	15.609	
7,500.0	6,631.4	6,636.4	6,636.4	31.1	130.9	-88.48	1,392.5	-2,384.9	2,540.1	2,378.2	161.90	15.689	
7,578.7	6,630.4	6,635.4	6,635.4	32.5	130.9	-88.42	1,392.5	-2,384.9	2,611.3	2,448.0	163.29	15.992	
7,600.0	6,630.1	6,635.1	6,635.1	32.9	130.9	-88.41	1,392.5	-2,384.9	2,630.6	2,466.9	163.66	16.073	
7,677.1	6,629.1	6,634.1	6,634.1	34.3	130.9	-88.36	1,392.5	-2,384.9	2,700.8	2,535.7	165.12	16.357	
7,700.0	6,628.8	6,633.8	6,633.8	34.8	130.8	-88.34	1,392.5	-2,384.9	2,721.7	2,556.2	165.55	16.441	
7,775.6	6,627.8	6,632.8	6,632.8	36.3	130.8	-88.29	1,392.5	-2,384.9	2,791.0	2,624.0	167.06	16.706	
7,800.0	6,627.5	6,632.5	6,632.5	36.8	130.8	-88.27	1,392.5	-2,384.9	2,813.5	2,645.9	167.55	16.792	
7,874.0	6,626.6	6,631.6	6,631.6	38.4	130.8	-88.22	1,392.5	-2,384.9	2,881.8	2,712.7	169.11	17.041	
7,900.0	6,626.3	6,631.3	6,631.3	38.9	130.8	-88.21	1,392.5	-2,384.9	2,905.8	2,736.2	169.65	17.128	
7,972.4	6,625.3	6,630.3	6,630.3	40.5	130.8	-88.16	1,392.5	-2,384.9	2,973.0	2,801.7	171.23	17.362	
8,000.0	6,625.0	6,630.0	6,630.0	41.1	130.8	-88.14	1,392.5	-2,384.9	2,998.6	2,826.8	171.83	17.451	
8,070.8	6,624.1	6,629.1	6,629.1	42.7	130.8	-88.09	1,392.5	-2,384.9	3,064.6	2,891.2	173.43	17.671	
8,100.0	6,623.7	6,628.7	6,628.7	43.4	130.7	-88.07	1,392.5	-2,384.9	3,091.9	2,917.8	174.08	17.761	
8,169.3	6,622.8	6,627.8	6,627.8	45.0	130.7	-88.03	1,392.5	-2,384.9	3,156.7	2,981.0	175.68	17.968	
8,200.0	6,622.4	6,627.4	6,627.4	45.7	130.7	-88.01	1,392.5	-2,384.9	3,185.5	3,009.1	176.39	18.059	
8,267.7	6,621.6	6,626.6	6,626.6	47.4	130.7	-87.96	1,392.5	-2,384.9	3,249.1	3,071.1	177.99	18.255	
8,300.0	6,621.1	6,626.1	6,626.1	48.1	130.7	-87.94	1,392.5	-2,384.9	3,279.5	3,100.8	178.75	18.347	
8,366.1	6,620.3	6,625.3	6,625.3	49.7	130.7	-87.89	1,392.5	-2,384.9	3,341.9	3,161.6	180.34	18.531	
8,400.0	6,619.9	6,624.9	6,624.9	50.6	130.7	-87.87	1,392.5	-2,384.9	3,373.9	3,192.8	181.15	18.625	
8,464.5	6,619.0	6,624.0	6,624.0	52.2	130.6	-87.83	1,392.5	-2,384.9	3,435.0	3,252.3	182.73	18.799	
8,500.0	6,618.6	6,623.6	6,623.6	53.0	130.6	-87.80	1,392.5	-2,384.9	3,468.6	3,285.0	183.59	18.893	
8,563.0	6,617.8	6,622.8	6,622.8	54.6	130.6	-87.76	1,392.5	-2,384.9	3,528.4	3,343.2	185.15	19.057	
8,600.0	6,617.3	6,622.3	6,622.3	55.5	130.6	-87.74	1,392.5	-2,384.9	3,563.6	3,377.5	186.06	19.153	
8,661.4	6,616.5	6,621.5	6,621.5	57.1	130.6	-87.70	1,392.5	-2,384.9	3,622.0	3,434.4	187.59	19.308	
8,700.0	6,616.0	6,621.0	6,621.0	58.1	130.6	-87.67	1,392.5	-2,384.9	3,658.8	3,470.3	188.56	19.404	
8,759.8	6,615.2	6,620.2	6,620.2	59.6	130.6	-87.63	1,392.5	-2,384.9	3,715.9	3,525.9	190.06	19.551	
8,800.0	6,614.7	6,619.7	6,619.7	60.6	130.6	-87.60	1,392.5	-2,384.9	3,754.3	3,563.2	191.08	19.648	
8,858.2	6,614.0	6,619.0	6,619.0	62.1	130.5	-87.56	1,392.5	-2,384.9	3,810.1	3,617.5	192.56	19.786	
8,900.0	6,613.4	6,618.4	6,618.4	63.2	130.5	-87.53	1,392.5	-2,384.9	3,850.0	3,656.4	193.62	19.885	
8,956.7	6,612.7	6,617.7	6,617.7	64.7	130.5	-87.50	1,392.5	-2,384.9	3,904.4	3,709.3	195.07	20.015	
9,000.0	6,612.2	6,617.2	6,617.2	65.8	130.5	-87.47	1,392.5	-2,384.9	3,946.0	3,749.8	196.18	20.114	
9,055.1	6,611.5	6,616.5	6,616.5	67.3	130.5	-87.43	1,392.5	-2,384.9	3,998.9	3,801.3	197.60	20.237	
9,100.0	6,610.9	6,615.9	6,615.9	68.4	130.5	-87.40	1,392.5	-2,384.9	4,042.1	3,843.4	198.76	20.337	
9,153.5	6,610.2	6,615.2	6,615.2	69.8	130.5	-87.36	1,392.5	-2,384.9	4,093.6	3,893.5	200.14	20.453	
9,200.0	6,609.6	6,614.6	6,614.6	71.1	130.5	-87.33	1,392.5	-2,384.9	4,138.4	3,937.1	201.35	20.554	
9,251.9	6,608.9	6,613.9	6,613.9	72.4	130.4	-87.30	1,392.5	-2,384.9	4,188.5	3,985.8	202.70	20.664	
9,300.0	6,608.3	6,613.3	6,613.3	73.7	130.4	-87.26	1,392.5	-2,384.9	4,234.9	4,031.0	203.95	20.764	
9,350.4	6,607.7	6,612.7	6,612.7	75.0	130.4	-87.23	1,392.5	-2,384.9	4,283.6	4,078.3	205.27	20.868	
9,400.0	6,607.0	6,612.0	6,612.0	76.4	130.4	-87.20	1,392.5	-2,384.9	4,331.5	4,125.0	206.57	20.969	
9,448.8	6,606.4	6,611.4	6,611.4	77.7	130.4	-87.16	1,392.5	-2,384.9	4,378.8	4,170.9	207.85	21.067	
9,500.0	6,605.7	6,610.7	6,610.7	79.0	130.4	-87.13	1,392.5	-2,384.9	4,428.3	4,219.1	209.19	21.169	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.1	6,610.1	6,610.1	80.3	130.4	-87.10	1,392.5	-2,384.9	4,474.1	4,263.7	210.44	21.261	
9,600.0	6,604.5	6,609.5	6,609.5	81.7	130.4	-87.06	1,392.5	-2,384.9	4,525.3	4,313.4	211.83	21.363	
9,645.6	6,603.9	6,608.9	6,608.9	82.9	130.3	-87.03	1,392.5	-2,384.9	4,569.6	4,356.5	213.04	21.450	
9,700.0	6,603.2	6,608.2	6,608.2	84.4	130.3	-86.99	1,392.5	-2,384.9	4,622.3	4,407.9	214.47	21.552	
9,744.1	6,602.6	6,607.6	6,607.6	85.6	130.3	-86.96	1,392.5	-2,384.9	4,665.1	4,449.5	215.64	21.634	
9,800.0	6,601.9	6,606.9	6,606.9	87.1	130.3	-86.92	1,392.5	-2,384.9	4,719.5	4,502.4	217.12	21.737	
9,842.5	6,601.3	6,606.3	6,606.3	88.2	130.3	-86.90	1,392.5	-2,384.9	4,760.8	4,542.6	218.25	21.814	
9,900.0	6,600.6	6,605.6	6,605.6	89.8	130.3	-86.86	1,392.5	-2,384.9	4,816.8	4,597.0	219.78	21.917	
9,940.9	6,600.1	6,605.1	6,605.1	90.9	130.3	-86.83	1,392.5	-2,384.9	4,856.7	4,635.8	220.87	21.989	
10,000.0	6,599.3	6,604.3	6,604.3	92.5	130.3	-86.79	1,392.5	-2,384.9	4,914.2	4,691.8	222.44	22.092	
10,039.3	6,598.8	6,603.8	6,603.8	93.5	130.2	-86.76	1,392.5	-2,384.9	4,952.6	4,729.1	223.49	22.160	
10,100.0	6,598.0	6,603.0	6,603.0	95.2	130.2	-86.72	1,392.5	-2,384.9	5,011.7	4,786.6	225.11	22.263	
10,137.8	6,597.5	6,602.5	6,602.5	96.2	130.2	-86.70	1,392.5	-2,384.9	5,048.6	4,822.5	226.12	22.327	
10,200.0	6,596.7	6,601.7	6,601.7	97.9	130.2	-86.65	1,392.5	-2,384.9	5,109.3	4,881.5	227.79	22.430	
10,236.2	6,596.3	6,601.3	6,601.3	98.9	130.2	-86.63	1,392.5	-2,384.9	5,144.7	4,915.9	228.75	22.490	
10,300.0	6,595.4	6,600.4	6,600.4	100.6	130.2	-86.59	1,392.5	-2,384.9	5,207.0	4,976.6	230.46	22.594	
10,334.6	6,595.0	6,600.0	6,600.0	101.6	130.2	-86.56	1,392.5	-2,384.9	5,240.9	5,009.5	231.39	22.649	
10,400.0	6,594.2	6,599.2	6,599.2	103.4	130.1	-86.52	1,392.5	-2,384.9	5,304.8	5,071.7	233.15	22.753	
10,433.0	6,593.7	6,598.7	6,598.7	104.3	130.1	-86.50	1,392.5	-2,384.9	5,337.1	5,103.1	234.03	22.805	
10,500.0	6,592.9	6,597.9	6,597.9	106.1	130.1	-86.45	1,392.5	-2,384.9	5,402.7	5,166.8	235.83	22.909	
10,531.5	6,592.5	6,597.5	6,597.5	106.9	130.1	-86.43	1,392.5	-2,384.9	5,433.5	5,196.8	236.68	22.957	
10,600.0	6,591.6	6,596.6	6,596.6	108.8	130.1	-86.38	1,392.5	-2,384.9	5,500.6	5,262.1	238.52	23.061	
10,629.9	6,591.2	6,596.2	6,596.2	109.6	130.1	-86.36	1,392.5	-2,384.9	5,529.9	5,290.6	239.33	23.106	
10,700.0	6,590.3	6,595.3	6,595.3	111.6	130.1	-86.31	1,392.5	-2,384.9	5,598.6	5,357.4	241.21	23.210	
10,728.3	6,589.9	6,594.9	6,594.9	112.3	130.1	-86.29	1,392.5	-2,384.9	5,626.4	5,384.4	241.98	23.252	
10,800.0	6,589.0	6,594.0	6,594.0	114.3	130.0	-86.25	1,392.5	-2,384.9	5,696.7	5,452.8	243.91	23.356	
10,826.7	6,588.7	6,593.7	6,593.7	115.0	130.0	-86.23	1,392.5	-2,384.9	5,722.9	5,478.3	244.63	23.394	
10,900.0	6,587.7	6,592.7	6,592.7	117.1	130.0	-86.18	1,392.5	-2,384.9	5,794.8	5,548.2	246.60	23.499	
10,925.2	6,587.4	6,592.4	6,592.4	117.7	130.0	-86.16	1,392.5	-2,384.9	5,819.6	5,572.3	247.28	23.534	
11,000.0	6,586.4	6,591.4	6,591.4	119.8	130.0	-86.11	1,392.5	-2,384.9	5,893.0	5,643.7	249.30	23.638	
11,023.6	6,586.1	6,591.1	6,591.1	120.4	130.0	-86.09	1,392.5	-2,384.9	5,916.2	5,666.3	249.94	23.670	
11,100.0	6,585.1	6,590.1	6,590.1	122.6	130.0	-86.04	1,392.5	-2,384.9	5,991.3	5,739.3	252.01	23.775	
11,122.0	6,584.8	6,589.8	6,589.8	123.2	130.0	-86.03	1,392.5	-2,384.9	6,013.0	5,760.4	252.60	23.804	
11,200.0	6,583.8	6,588.8	6,588.8	125.3	129.9	-85.97	1,392.5	-2,384.9	6,089.6	5,834.9	254.71	23.908	
11,220.4	6,583.6	6,588.6	6,588.6	125.9	129.9	-85.96	1,392.5	-2,384.9	6,109.7	5,854.5	255.26	23.935	
11,300.0	6,582.5	6,587.5	6,587.5	128.1	129.9	-85.90	1,392.5	-2,384.9	6,188.0	5,930.6	257.41	24.039	
11,318.9	6,582.3	6,587.3	6,587.3	128.6	129.9	-85.89	1,392.5	-2,384.9	6,206.6	5,948.7	257.92	24.064	
11,400.0	6,581.2	6,586.2	6,586.2	130.8	129.9	-85.84	1,392.5	-2,384.9	6,286.4	6,026.3	260.12	24.167	
11,417.3	6,581.0	6,586.0	6,586.0	131.3	129.9	-85.82	1,392.5	-2,384.9	6,303.5	6,042.9	260.59	24.189	
11,500.0	6,580.0	6,585.0	6,585.0	133.6	129.9	-85.77	1,392.5	-2,384.9	6,384.9	6,122.1	262.83	24.293	
11,515.7	6,579.7	6,584.7	6,584.7	134.0	129.9	-85.76	1,392.5	-2,384.9	6,400.4	6,137.1	263.25	24.313	
11,600.0	6,578.7	6,583.7	6,583.7	136.3	129.8	-85.70	1,392.5	-2,384.9	6,483.4	6,217.9	265.54	24.416	
11,614.1	6,578.5	6,583.5	6,583.5	136.7	129.8	-85.69	1,392.5	-2,384.9	6,497.4	6,231.5	265.92	24.433	
11,700.0	6,577.4	6,582.4	6,582.4	139.1	129.8	-85.63	1,392.5	-2,384.9	6,582.0	6,313.7	268.25	24.537	
11,712.6	6,577.2	6,582.2	6,582.2	139.5	129.8	-85.62	1,392.5	-2,384.9	6,594.4	6,325.8	268.59	24.552	
11,800.0	6,576.1	6,581.1	6,581.1	141.9	129.8	-85.56	1,392.5	-2,384.9	6,680.6	6,409.6	270.96	24.655	
11,811.0	6,575.9	6,580.9	6,580.9	142.2	129.8	-85.56	1,392.5	-2,384.9	6,691.5	6,420.2	271.26	24.668	
11,882.7	6,575.0	6,580.0	6,580.0	144.2	129.8	-85.51	1,392.5	-2,384.9	6,762.2	6,489.0	273.20	24.752	
11,883.5	6,575.0	6,580.0	6,580.0	144.2	129.8	-85.51	1,392.5	-2,384.9	6,763.0	6,489.7	273.21	24.753	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-81.76	1,308.1	-9,029.1	9,123.4				
98.4	98.4	73.4	73.4	0.1	0.0	-81.76	1,308.1	-9,029.1	9,123.4	9,123.2	0.11	N/A	
100.0	100.0	75.0	75.0	0.1	0.0	-81.76	1,308.1	-9,029.1	9,123.4	9,123.2	0.11	N/A	
196.8	196.8	171.8	171.8	0.3	1.9	-81.76	1,308.1	-9,029.1	9,123.4	9,121.1	2.24	4,076.859	
200.0	200.0	175.0	175.0	0.3	2.0	-81.76	1,308.1	-9,029.1	9,123.4	9,121.0	2.33	3,917.931	
295.3	295.3	270.3	270.3	0.5	4.1	-81.76	1,308.1	-9,029.1	9,123.4	9,118.7	4.65	1,960.889	
300.0	300.0	275.0	275.0	0.5	4.2	-81.76	1,308.1	-9,029.1	9,123.4	9,118.6	4.76	1,916.477	
393.7	393.7	368.7	368.7	0.8	6.1	-81.76	1,308.1	-9,029.1	9,123.4	9,116.5	6.88	1,326.155	
400.0	400.0	375.0	375.0	0.8	6.2	-81.76	1,308.1	-9,029.1	9,123.4	9,116.3	7.02	1,299.334	
492.1	492.1	467.1	467.1	1.0	8.1	-81.76	1,308.1	-9,029.1	9,123.4	9,114.3	9.09	1,003.394	
500.0	500.0	475.0	475.0	1.0	8.3	-81.76	1,308.1	-9,029.1	9,123.4	9,114.1	9.27	984.251	
590.5	590.5	565.5	565.5	1.2	10.1	-81.76	1,308.1	-9,029.1	9,123.4	9,112.1	11.30	807.352	
600.0	600.0	575.0	575.0	1.2	10.3	-81.76	1,308.1	-9,029.1	9,123.4	9,111.8	11.51	792.494	
689.0	689.0	664.0	664.0	1.4	12.1	-81.76	1,308.1	-9,029.1	9,123.4	9,109.8	13.51	675.518	
700.0	700.0	675.0	675.0	1.4	12.3	-81.76	1,308.1	-9,029.1	9,123.4	9,109.6	13.75	663.387	
787.4	787.4	762.4	762.4	1.6	14.1	-81.76	1,308.1	-9,029.1	9,123.4	9,107.6	15.71	580.747	
800.0	800.0	775.0	775.0	1.7	14.3	-81.76	1,308.1	-9,029.1	9,123.4	9,107.4	15.99	570.502	
885.8	885.8	860.8	860.8	1.9	16.0	-81.76	1,308.1	-9,029.1	9,123.4	9,105.4	17.91	509.320	
900.0	900.0	875.0	875.0	1.9	16.3	-81.76	1,308.1	-9,029.1	9,123.4	9,105.1	18.23	500.457	
984.2	984.2	959.2	959.2	2.1	18.0	-81.76	1,308.1	-9,029.1	9,123.4	9,103.2	20.12	453.552	
1,000.0	1,000.0	975.0	975.0	2.1	18.3	-81.76	1,308.1	-9,029.1	9,123.4	9,102.9	20.47	445.743	
1,082.7	1,082.7	1,057.7	1,057.7	2.3	20.0	-81.76	1,308.1	-9,029.1	9,123.4	9,101.0	22.32	408.799	
1,100.0	1,100.0	1,075.0	1,075.0	2.3	20.4	-81.76	1,308.1	-9,029.1	9,123.4	9,100.6	22.71	401.821	
1,181.1	1,181.1	1,156.1	1,156.1	2.5	22.0	-81.76	1,308.1	-9,029.1	9,123.4	9,098.8	24.52	372.089	
1,200.0	1,200.0	1,175.0	1,175.0	2.6	22.4	-81.76	1,308.1	-9,029.1	9,123.4	9,098.4	24.94	365.782	
1,279.5	1,279.5	1,254.5	1,254.5	2.7	24.0	-81.76	1,308.1	-9,029.1	9,123.4	9,096.6	26.72	341.432	
1,300.0	1,300.0	1,275.0	1,275.0	2.8	24.4	-81.76	1,308.1	-9,029.1	9,123.4	9,096.2	27.18	335.679	
1,377.9	1,377.9	1,352.9	1,352.9	3.0	26.0	-81.76	1,308.1	-9,029.1	9,123.4	9,094.4	28.92	315.444	
1,400.0	1,400.0	1,375.0	1,375.0	3.0	26.4	-81.76	1,308.1	-9,029.1	9,123.4	9,093.9	29.42	310.155	
1,476.4	1,476.4	1,451.4	1,451.4	3.2	27.9	-6.63	1,308.1	-9,029.1	9,122.3	9,091.2	31.10	293.276	
1,500.0	1,500.0	1,475.0	1,475.0	3.2	28.4	-6.64	1,308.1	-9,029.1	9,121.6	9,090.0	31.62	288.453	
1,574.8	1,574.7	1,549.7	1,549.7	3.4	29.9	-6.65	1,308.1	-9,029.1	9,118.1	9,084.8	33.24	274.320	
1,600.0	1,599.8	1,574.8	1,574.8	3.4	30.4	-6.65	1,308.1	-9,029.1	9,116.4	9,082.6	33.78	269.904	
1,673.2	1,672.8	1,647.8	1,647.8	3.6	31.9	-6.67	1,308.1	-9,029.1	9,110.4	9,075.1	35.32	257.926	
1,700.0	1,699.5	1,674.5	1,674.5	3.7	32.4	-6.68	1,308.1	-9,029.1	9,107.8	9,071.9	35.88	253.851	
1,771.6	1,770.6	1,745.6	1,745.6	3.8	33.9	-6.70	1,308.1	-9,029.1	9,099.4	9,062.1	37.35	243.639	
1,800.0	1,798.7	1,773.7	1,773.7	3.9	34.4	-6.72	1,308.1	-9,029.1	9,095.7	9,057.7	37.92	239.869	
1,870.1	1,868.0	1,843.0	1,843.0	4.1	35.8	-6.75	1,308.1	-9,029.1	9,085.1	9,045.8	39.31	231.120	
1,900.0	1,897.5	1,872.5	1,872.5	4.2	36.4	-6.76	1,308.1	-9,029.1	9,080.1	9,040.2	39.89	227.626	
1,968.5	1,964.8	1,939.8	1,939.8	4.4	37.8	-6.80	1,308.1	-9,029.1	9,067.5	9,026.3	41.20	220.098	
2,000.0	1,995.6	1,970.6	1,970.6	4.5	38.4	-6.82	1,308.1	-9,029.1	9,061.2	9,019.4	41.78	216.856	
2,066.9	2,060.9	2,035.9	2,035.9	4.7	39.7	-6.87	1,308.1	-9,029.1	9,046.6	9,003.6	43.01	210.356	
2,100.0	2,093.1	2,068.1	2,068.1	4.8	40.3	-6.90	1,308.1	-9,029.1	9,038.8	8,995.2	43.59	207.345	
2,165.3	2,156.3	2,131.3	2,131.3	5.1	41.6	-6.95	1,308.1	-9,029.1	9,022.4	8,977.7	44.73	201.719	
2,200.0	2,189.6	2,164.6	2,164.6	5.2	42.3	-6.98	1,308.1	-9,029.1	9,013.1	8,967.8	45.31	198.920	
2,263.8	2,250.7	2,225.7	2,225.7	5.5	43.5	-7.04	1,308.1	-9,029.1	8,995.0	8,948.6	46.36	194.043	
2,280.0	2,266.2	2,241.2	2,241.2	5.6	43.8	-7.06	1,308.1	-9,029.1	8,990.2	8,943.5	46.61	192.865	
2,300.0	2,285.3	2,260.3	2,260.3	5.7	44.2	-7.06	1,308.1	-9,029.1	8,984.2	8,937.1	47.03	191.034	
2,362.2	2,344.6	2,319.6	2,319.6	6.0	45.4	-7.08	1,308.1	-9,029.1	8,965.5	8,917.2	48.32	185.552	
2,400.0	2,380.6	2,355.6	2,355.6	6.2	46.1	-7.08	1,308.1	-9,029.1	8,954.1	8,905.0	49.11	182.318	
2,460.6	2,438.4	2,413.4	2,413.4	6.5	47.3	-7.10	1,308.1	-9,029.1	8,935.9	8,885.5	50.38	177.374	
2,500.0	2,475.9	2,450.9	2,450.9	6.7	48.0	-7.11	1,308.1	-9,029.1	8,924.1	8,872.9	51.20	174.289	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		SW NW SEC. 10 T5N R64W 6th P.M. - ABDN VERT PLUMB #2 - Wellbore #1 - Design #1											Offset Site Error:		0.0 usft
Survey Program: 0-INC													Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
2,559.0	2,532.2	2,507.2	2,507.2	7.0	49.2	-7.12	1,308.1	-9,029.1	8,906.4	8,853.9	52.44	169.839			
2,600.0	2,571.2	2,546.2	2,546.2	7.2	50.0	-7.13	1,308.1	-9,029.1	8,894.1	8,840.8	53.30	166.872			
2,657.5	2,626.0	2,601.0	2,601.0	7.5	51.1	-7.15	1,308.1	-9,029.1	8,876.8	8,822.3	54.51	162.859			
2,700.0	2,666.6	2,641.6	2,641.6	7.8	51.9	-7.16	1,308.1	-9,029.1	8,864.1	8,808.7	55.40	160.001			
2,755.9	2,719.8	2,694.8	2,694.8	8.1	52.9	-7.17	1,308.1	-9,029.1	8,847.3	8,790.7	56.58	156.377			
2,800.0	2,761.9	2,736.9	2,736.9	8.3	53.8	-7.18	1,308.1	-9,029.1	8,834.0	8,776.5	57.51	153.622			
2,854.3	2,813.7	2,788.7	2,788.7	8.7	54.8	-7.19	1,308.1	-9,029.1	8,817.7	8,759.1	58.65	150.343			
2,900.0	2,857.2	2,832.2	2,832.2	8.9	55.7	-7.21	1,308.1	-9,029.1	8,804.0	8,744.4	59.61	147.683			
2,952.7	2,907.5	2,882.5	2,882.5	9.2	56.7	-7.22	1,308.1	-9,029.1	8,788.2	8,727.4	60.73	144.712			
3,000.0	2,952.5	2,927.5	2,927.5	9.5	57.6	-7.23	1,308.1	-9,029.1	8,774.0	8,712.3	61.73	142.142			
3,051.2	3,001.3	2,976.3	2,976.3	9.8	58.6	-7.24	1,308.1	-9,029.1	8,758.6	8,695.8	62.81	139.448			
3,100.0	3,047.8	3,022.8	3,022.8	10.1	59.5	-7.26	1,308.1	-9,029.1	8,744.0	8,680.1	63.84	136.962			
3,149.6	3,095.1	3,070.1	3,070.1	10.4	60.5	-7.27	1,308.1	-9,029.1	8,729.1	8,664.2	64.89	134.516			
3,200.0	3,143.2	3,118.2	3,118.2	10.7	61.5	-7.28	1,308.1	-9,029.1	8,714.0	8,648.0	65.96	132.109			
3,248.0	3,188.9	3,163.9	3,163.9	11.0	62.4	-7.29	1,308.1	-9,029.1	8,699.5	8,632.6	66.98	129.885			
3,300.0	3,238.5	3,213.5	3,213.5	11.3	63.4	-7.31	1,308.1	-9,029.1	8,683.9	8,615.9	68.08	127.554			
3,346.4	3,282.8	3,257.8	3,257.8	11.6	64.3	-7.32	1,308.1	-9,029.1	8,670.0	8,600.9	69.07	125.531			
3,400.0	3,333.8	3,308.8	3,308.8	11.9	65.3	-7.33	1,308.1	-9,029.1	8,653.9	8,583.7	70.20	123.269			
3,444.9	3,376.6	3,351.6	3,351.6	12.2	66.2	-7.34	1,308.1	-9,029.1	8,640.5	8,569.3	71.16	121.429			
3,500.0	3,429.1	3,404.1	3,404.1	12.6	67.2	-7.36	1,308.1	-9,029.1	8,623.9	8,551.6	72.33	119.234			
3,543.3	3,470.4	3,445.4	3,445.4	12.8	68.0	-7.37	1,308.1	-9,029.1	8,610.9	8,537.7	73.25	117.558			
3,600.0	3,524.4	3,499.4	3,499.4	13.2	69.1	-7.38	1,308.1	-9,029.1	8,593.9	8,519.4	74.45	115.426			
3,641.7	3,564.2	3,539.2	3,539.2	13.4	69.9	-7.39	1,308.1	-9,029.1	8,581.4	8,506.0	75.34	113.899			
3,700.0	3,619.8	3,594.8	3,594.8	13.8	71.0	-7.41	1,308.1	-9,029.1	8,563.9	8,487.3	76.58	111.827			
3,740.1	3,658.0	3,633.0	3,633.0	14.0	71.8	-7.42	1,308.1	-9,029.1	8,551.8	8,474.4	77.44	110.437			
3,800.0	3,715.1	3,690.1	3,690.1	14.4	73.0	-7.44	1,308.1	-9,029.1	8,533.9	8,455.2	78.71	108.421			
3,838.6	3,751.8	3,726.8	3,726.8	14.7	73.7	-7.45	1,308.1	-9,029.1	8,522.3	8,442.8	79.53	107.155			
3,900.0	3,810.4	3,785.4	3,785.4	15.0	74.9	-7.46	1,308.1	-9,029.1	8,503.9	8,423.0	80.84	105.192			
3,937.0	3,845.7	3,820.7	3,820.7	15.3	75.6	-7.47	1,308.1	-9,029.1	8,492.8	8,411.1	81.63	104.040			
4,000.0	3,905.7	3,880.7	3,880.7	15.7	76.8	-7.49	1,308.1	-9,029.1	8,473.9	8,390.9	82.97	102.128			
4,035.4	3,939.5	3,914.5	3,914.5	15.9	77.5	-7.50	1,308.1	-9,029.1	8,463.2	8,379.5	83.73	101.079			
4,100.0	4,001.0	3,976.0	3,976.0	16.3	78.7	-7.51	1,308.1	-9,029.1	8,443.9	8,358.8	85.11	99.216			
4,133.8	4,033.3	4,008.3	4,008.3	16.5	79.4	-7.52	1,308.1	-9,029.1	8,433.7	8,347.9	85.83	98.263			
4,200.0	4,096.3	4,071.3	4,071.3	16.9	80.6	-7.54	1,308.1	-9,029.1	8,413.9	8,326.6	87.24	96.445			
4,232.3	4,127.1	4,102.1	4,102.1	17.1	81.2	-7.55	1,308.1	-9,029.1	8,404.2	8,316.3	87.93	95.580			
4,300.0	4,191.7	4,166.7	4,166.7	17.6	82.5	-7.57	1,308.1	-9,029.1	8,383.9	8,294.5	89.37	93.806			
4,330.7	4,220.9	4,195.9	4,195.9	17.8	83.1	-7.58	1,308.1	-9,029.1	8,374.7	8,284.6	90.03	93.021			
4,400.0	4,287.0	4,262.0	4,262.0	18.2	84.5	-7.60	1,308.1	-9,029.1	8,353.9	8,262.4	91.51	91.289			
4,429.1	4,314.7	4,289.7	4,289.7	18.4	85.0	-7.60	1,308.1	-9,029.1	8,345.1	8,253.0	92.13	90.578			
4,500.0	4,382.3	4,357.3	4,357.3	18.8	86.4	-7.62	1,308.1	-9,029.1	8,323.9	8,230.2	93.65	88.886			
4,527.5	4,408.6	4,383.6	4,383.6	19.0	86.9	-7.63	1,308.1	-9,029.1	8,315.6	8,221.4	94.24	88.243			
4,600.0	4,477.6	4,452.6	4,452.6	19.5	88.3	-7.65	1,308.1	-9,029.1	8,293.9	8,198.1	95.78	86.589			
4,626.0	4,502.4	4,477.4	4,477.4	19.6	88.8	-7.66	1,308.1	-9,029.1	8,286.1	8,189.8	96.34	86.009			
4,700.0	4,572.9	4,547.9	4,547.9	20.1	90.2	-7.68	1,308.1	-9,029.1	8,263.9	8,166.0	97.92	84.393			
4,724.4	4,596.2	4,571.2	4,571.2	20.3	90.7	-7.69	1,308.1	-9,029.1	8,256.6	8,158.1	98.44	83.871			
4,800.0	4,668.3	4,643.3	4,643.3	20.7	92.1	-7.71	1,308.1	-9,029.1	8,233.9	8,133.8	100.06	82.289			
4,822.8	4,690.0	4,665.0	4,665.0	20.9	92.6	-7.71	1,308.1	-9,029.1	8,227.1	8,126.5	100.55	81.821			
4,900.0	4,763.6	4,738.6	4,738.6	21.4	94.0	-7.74	1,308.1	-9,029.1	8,203.9	8,101.7	102.20	80.273			
4,921.2	4,783.8	4,758.8	4,758.8	21.5	94.5	-7.74	1,308.1	-9,029.1	8,197.5	8,094.9	102.65	79.855			
5,000.0	4,858.9	4,833.9	4,833.9	22.0	96.0	-7.76	1,308.1	-9,029.1	8,173.9	8,069.6	104.34	78.339			
5,019.7	4,877.7	4,852.7	4,852.7	22.1	96.3	-7.77	1,308.1	-9,029.1	8,168.0	8,063.3	104.76	77.968			
5,100.0	4,954.2	4,929.2	4,929.2	22.6	97.9	-7.79	1,308.1	-9,029.1	8,143.9	8,037.5	106.48	76.483			

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,946.5	4,946.5	22.8	98.2	-7.80	1,308.1	-9,029.1	8,138.5	8,031.7	106.87	76.155	
5,171.8	5,022.7	4,997.7	4,997.7	23.1	99.3	-7.81	1,308.1	-9,029.1	8,122.4	8,014.4	108.02	75.195	
5,200.0	5,049.6	5,024.6	5,024.6	23.3	99.8	-7.80	1,308.1	-9,029.1	8,114.1	8,005.2	108.91	74.503	
5,216.5	5,065.4	5,040.4	5,040.4	23.3	100.1	-7.79	1,308.1	-9,029.1	8,109.3	7,999.9	109.43	74.108	
5,300.0	5,145.7	5,120.7	5,120.7	23.7	101.7	-7.75	1,308.1	-9,029.1	8,086.7	7,974.7	112.00	72.201	
5,314.9	5,160.1	5,135.1	5,135.1	23.8	102.0	-7.74	1,308.1	-9,029.1	8,082.9	7,970.4	112.46	71.876	
5,400.0	5,242.7	5,217.7	5,217.7	24.1	103.7	-7.70	1,308.1	-9,029.1	8,062.7	7,947.7	115.00	70.108	
5,413.4	5,255.7	5,230.7	5,230.7	24.2	103.9	-7.70	1,308.1	-9,029.1	8,059.7	7,944.3	115.40	69.844	
5,500.0	5,340.5	5,315.5	5,315.5	24.5	105.6	-7.67	1,308.1	-9,029.1	8,042.0	7,924.1	117.90	68.209	
5,511.8	5,352.1	5,327.1	5,327.1	24.5	105.9	-7.66	1,308.1	-9,029.1	8,039.8	7,921.5	118.24	67.998	
5,600.0	5,439.0	5,414.0	5,414.0	24.8	107.6	-7.64	1,308.1	-9,029.1	8,024.7	7,904.0	120.69	66.491	
5,610.2	5,449.1	5,424.1	5,424.1	24.8	107.8	-7.63	1,308.1	-9,029.1	8,023.1	7,902.2	120.97	66.326	
5,700.0	5,538.0	5,513.0	5,513.0	25.1	109.6	-7.61	1,308.1	-9,029.1	8,010.9	7,887.5	123.35	64.943	
5,708.6	5,546.6	5,521.6	5,521.6	25.1	109.8	-7.61	1,308.1	-9,029.1	8,009.8	7,886.2	123.58	64.817	
5,800.0	5,637.4	5,612.4	5,612.4	25.3	111.6	-7.60	1,308.1	-9,029.1	8,000.4	7,874.5	125.88	63.555	
5,807.1	5,644.5	5,619.5	5,619.5	25.3	111.8	-7.59	1,308.1	-9,029.1	7,999.8	7,873.8	126.06	63.462	
5,900.0	5,737.2	5,712.2	5,712.2	25.5	113.6	-7.58	1,308.1	-9,029.1	7,993.5	7,865.2	128.27	62.317	
5,905.5	5,742.6	5,717.6	5,717.6	25.5	113.7	-7.58	1,308.1	-9,029.1	7,993.2	7,864.8	128.40	62.253	
6,000.0	5,837.1	5,812.1	5,812.1	25.6	115.6	-7.58	1,308.1	-9,029.1	7,989.9	7,859.4	130.51	61.223	
6,003.9	5,841.0	5,816.0	5,816.0	25.6	115.7	-7.58	1,308.1	-9,029.1	7,989.9	7,859.3	130.59	61.182	
6,051.8	5,888.9	5,863.9	5,863.9	25.7	116.7	-82.70	1,308.1	-9,029.1	7,989.5	7,847.2	142.22	56.176	
6,081.8	5,918.9	5,893.9	5,893.9	25.7	117.3	-82.70	1,308.1	-9,029.1	7,989.5	7,846.6	142.86	55.927 CC, ES	
6,100.0	5,937.1	5,912.1	5,912.1	25.7	117.6	-172.70	1,308.1	-9,029.1	7,989.7	7,857.2	132.54	60.281	
6,102.3	5,939.4	5,914.4	5,914.4	25.7	117.7	-172.70	1,308.1	-9,029.1	7,989.8	7,857.2	132.57	60.268	
6,150.0	5,987.0	5,962.0	5,962.0	25.7	118.6	-172.67	1,308.1	-9,029.1	7,992.7	7,859.8	132.88	60.151	
6,200.0	6,036.5	6,011.5	6,011.5	25.7	119.6	-172.61	1,308.1	-9,029.1	7,999.1	7,866.6	132.56	60.345	
6,200.8	6,037.3	6,012.3	6,012.3	25.7	119.7	-172.61	1,308.1	-9,029.1	7,999.2	7,866.7	132.55	60.351	
6,250.0	6,085.5	6,060.5	6,060.5	25.7	120.6	-172.52	1,308.1	-9,029.1	8,009.0	7,877.4	131.57	60.873	
6,299.2	6,133.0	6,108.0	6,108.0	25.6	121.6	-172.39	1,308.1	-9,029.1	8,021.9	7,892.0	129.94	61.736	
6,300.0	6,133.7	6,108.7	6,108.7	25.6	121.6	-172.39	1,308.1	-9,029.1	8,022.2	7,892.3	129.91	61.753	
6,350.0	6,180.9	6,155.9	6,155.9	25.5	122.5	-172.21	1,308.1	-9,029.1	8,038.7	7,911.1	127.58	63.009	
6,397.6	6,224.6	6,199.6	6,199.6	25.4	123.4	-172.01	1,308.1	-9,029.1	8,057.4	7,932.7	124.75	64.588	
6,400.0	6,226.7	6,201.7	6,201.7	25.4	123.5	-172.00	1,308.1	-9,029.1	8,058.4	7,933.8	124.59	64.677	
6,450.0	6,271.1	6,246.1	6,246.1	25.2	124.4	-171.73	1,308.1	-9,029.1	8,081.3	7,960.3	120.97	66.806	
6,496.0	6,310.4	6,285.4	6,285.4	25.1	125.1	-171.43	1,308.1	-9,029.1	8,105.0	7,987.9	117.08	69.224	
6,500.0	6,313.7	6,288.7	6,288.7	25.1	125.2	-171.40	1,308.1	-9,029.1	8,107.2	7,990.5	116.73	69.454	
6,550.0	6,354.4	6,329.4	6,329.4	25.0	126.0	-171.00	1,308.1	-9,029.1	8,136.0	8,024.0	111.92	72.695	
6,594.5	6,388.9	6,363.9	6,363.9	24.9	126.7	-170.57	1,308.1	-9,029.1	8,163.9	8,056.6	107.21	76.149	
6,600.0	6,393.0	6,368.0	6,368.0	24.9	126.8	-170.51	1,308.1	-9,029.1	8,167.5	8,060.9	106.60	76.619	
6,650.0	6,429.3	6,404.3	6,404.3	24.8	127.5	-169.92	1,308.1	-9,029.1	8,201.6	8,100.7	100.85	81.326	
6,692.9	6,458.5	6,433.5	6,433.5	24.7	128.1	-169.30	1,308.1	-9,029.1	8,232.8	8,137.1	95.66	86.061	
6,700.0	6,463.1	6,438.1	6,438.1	24.7	128.2	-169.19	1,308.1	-9,029.1	8,238.1	8,143.4	94.79	86.910	
6,750.0	6,494.3	6,469.3	6,469.3	24.7	128.8	-168.28	1,308.1	-9,029.1	8,276.9	8,188.4	88.59	93.428	
6,791.3	6,517.9	6,492.9	6,492.9	24.7	129.3	-167.35	1,308.1	-9,029.1	8,310.6	8,227.0	83.55	99.477	
6,800.0	6,522.6	6,497.6	6,497.6	24.7	129.4	-167.13	1,308.1	-9,029.1	8,317.8	8,235.3	82.52	100.802	
6,850.0	6,548.0	6,523.0	6,523.0	24.7	129.9	-165.64	1,308.1	-9,029.1	8,360.5	8,283.6	76.97	108.619	
6,889.7	6,566.0	6,541.0	6,541.0	24.8	130.3	-164.13	1,308.1	-9,029.1	8,395.7	8,322.3	73.37	114.434	
6,900.0	6,570.4	6,545.4	6,545.4	24.9	130.4	-163.68	1,308.1	-9,029.1	8,404.9	8,332.3	72.61	115.748	
6,950.0	6,589.5	6,564.5	6,564.5	25.1	130.8	-160.98	1,308.1	-9,029.1	8,450.8	8,380.2	70.54	119.806	
6,988.2	6,602.0	6,577.0	6,577.0	25.3	131.0	-158.16	1,308.1	-9,029.1	8,486.6	8,415.0	71.56	118.601	
7,000.0	6,605.4	6,580.4	6,580.4	25.3	131.1	-157.10	1,308.1	-9,029.1	8,497.8	8,425.3	72.51	117.193	
7,050.0	6,618.0	6,593.0	6,593.0	25.6	131.3	-151.16	1,308.1	-9,029.1	8,545.9	8,464.7	81.20	105.247	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - ABDN VERT PLUMB #2 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,625.0	6,600.0	6,600.0	25.9	131.5	-144.51	1,308.1	-9,029.1	8,581.5	8,487.7	93.83	91.455	
7,100.0	6,627.1	6,602.1	6,602.1	26.0	131.5	-141.32	1,308.1	-9,029.1	8,594.7	8,494.6	100.11	85.851	
7,150.0	6,632.8	6,607.8	6,607.8	26.5	131.6	-123.81	1,308.1	-9,029.1	8,644.0	8,512.7	131.29	65.840	
7,185.0	6,634.7	6,609.7	6,609.7	26.8	131.7	-104.45	1,308.1	-9,029.1	8,678.7	8,525.6	153.12	56.677	
7,200.0	6,635.0	6,610.0	6,610.0	27.0	131.7	-94.59	1,308.1	-9,029.1	8,693.6	8,535.7	157.86	55.070	
7,215.9	6,635.0	6,610.0	6,610.0	27.1	131.7	-83.79	1,308.1	-9,029.1	8,709.4	8,551.6	157.81	55.189	
7,283.4	6,634.1	6,609.1	6,609.1	27.9	131.7	-83.74	1,308.1	-9,029.1	8,776.5	8,617.9	158.61	55.333	
7,300.0	6,633.9	6,608.9	6,608.9	28.1	131.7	-83.73	1,308.1	-9,029.1	8,792.9	8,634.1	158.81	55.369	
7,381.9	6,632.9	6,607.9	6,607.9	29.3	131.6	-83.67	1,308.1	-9,029.1	8,874.2	8,714.3	159.94	55.485	
7,400.0	6,632.6	6,607.6	6,607.6	29.5	131.6	-83.66	1,308.1	-9,029.1	8,892.2	8,732.0	160.19	55.511	
7,480.3	6,631.6	6,606.6	6,606.6	30.8	131.6	-83.60	1,308.1	-9,029.1	8,972.0	8,810.6	161.45	55.571	
7,500.0	6,631.4	6,606.4	6,606.4	31.1	131.6	-83.58	1,308.1	-9,029.1	8,991.6	8,829.8	161.76	55.586	
7,578.7	6,630.4	6,605.4	6,605.4	32.5	131.6	-83.53	1,308.1	-9,029.1	9,069.8	8,906.7	163.12	55.602	
7,600.0	6,630.1	6,605.1	6,605.1	32.9	131.6	-83.51	1,308.1	-9,029.1	9,090.9	8,927.5	163.49	55.607	
7,677.1	6,629.1	6,604.1	6,604.1	34.3	131.6	-83.45	1,308.1	-9,029.1	9,167.6	9,002.7	164.92	55.587	
7,700.0	6,628.8	6,603.8	6,603.8	34.8	131.6	-83.44	1,308.1	-9,029.1	9,190.3	9,025.0	165.35	55.582	
7,775.6	6,627.8	6,602.8	6,602.8	36.3	131.5	-83.38	1,308.1	-9,029.1	9,265.4	9,098.6	166.84	55.535	
7,800.0	6,627.5	6,602.5	6,602.5	36.8	131.5	-83.36	1,308.1	-9,029.1	9,289.7	9,122.4	167.32	55.520	
7,874.0	6,626.6	6,601.6	6,601.6	38.4	131.5	-83.31	1,308.1	-9,029.1	9,363.3	9,194.4	168.85	55.452	
7,900.0	6,626.3	6,601.3	6,601.3	38.9	131.5	-83.29	1,308.1	-9,029.1	9,389.1	9,219.7	169.39	55.428	
7,972.4	6,625.3	6,600.3	6,600.3	40.5	131.5	-83.24	1,308.1	-9,029.1	9,461.1	9,290.1	170.95	55.344	
8,000.0	6,625.0	6,600.0	6,600.0	41.1	131.5	-83.22	1,308.1	-9,029.1	9,488.5	9,317.0	171.54	55.313	
8,070.8	6,624.1	6,599.1	6,599.1	42.7	131.5	-83.17	1,308.1	-9,029.1	9,559.0	9,385.8	173.11	55.218	
8,100.0	6,623.7	6,598.7	6,598.7	43.4	131.4	-83.14	1,308.1	-9,029.1	9,587.9	9,414.2	173.76	55.180	
8,169.3	6,622.8	6,597.8	6,597.8	45.0	131.4	-83.09	1,308.1	-9,029.1	9,656.8	9,481.5	175.34	55.076	
8,200.0	6,622.4	6,597.4	6,597.4	45.7	131.4	-83.07	1,308.1	-9,029.1	9,687.4	9,511.3	176.03	55.031	
8,267.7	6,621.6	6,596.6	6,596.6	47.4	131.4	-83.02	1,308.1	-9,029.1	9,754.7	9,577.1	177.61	54.923	
8,300.0	6,621.1	6,596.1	6,596.1	48.1	131.4	-83.00	1,308.1	-9,029.1	9,786.8	9,608.5	178.36	54.872	
8,366.1	6,620.3	6,595.3	6,595.3	49.7	131.4	-82.95	1,308.1	-9,029.1	9,852.6	9,672.7	179.92	54.760	
8,400.0	6,619.9	6,594.9	6,594.9	50.6	131.4	-82.92	1,308.1	-9,029.1	9,886.3	9,705.6	180.72	54.704	
8,464.5	6,619.0	6,594.0	6,594.0	52.2	131.4	-82.88	1,308.1	-9,029.1	9,950.5	9,768.2	182.27	54.591	
8,500.0	6,618.6	6,593.6	6,593.6	53.0	131.3	-82.85	1,308.1	-9,029.1	9,985.7	9,802.6	183.12	54.530 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-104.84	-1,879.5	-7,092.3	7,337.2				
98.4	98.4	46.2	46.2	0.1	0.0	-104.84	-1,879.5	-7,092.4	7,337.2	7,337.1	0.11	N/A	
100.0	100.0	47.3	47.3	0.1	0.0	-104.84	-1,879.5	-7,092.4	7,337.2	7,337.1	0.12	N/A	
196.8	196.8	115.6	115.6	0.3	0.0	-104.84	-1,879.5	-7,092.7	7,337.7	7,337.3	0.36	N/A	
200.0	200.0	137.0	137.0	0.3	0.1	-104.84	-1,879.4	-7,092.9	7,337.7	7,337.4	0.38	N/A	
295.3	295.3	340.1	340.1	0.5	0.5	-104.83	-1,878.2	-7,093.2	7,338.1	7,337.1	1.02	7,198.664	
300.0	300.0	344.0	344.0	0.5	0.5	-104.83	-1,878.1	-7,093.2	7,338.0	7,337.0	1.04	7,068.065	
393.7	393.7	424.0	424.0	0.8	0.7	-104.82	-1,877.2	-7,092.7	7,337.2	7,335.7	1.42	5,170.614	
400.0	400.0	431.9	431.9	0.8	0.7	-104.82	-1,877.1	-7,092.6	7,337.1	7,335.6	1.45	5,060.178	
492.1	492.1	589.6	589.6	1.0	1.0	-104.81	-1,874.8	-7,091.2	7,336.0	7,334.0	2.00	3,673.887	
500.0	500.0	607.0	607.0	1.0	1.1	-104.81	-1,874.5	-7,091.0	7,335.9	7,333.8	2.05	3,574.231	
590.5	590.5	1,401.0	1,391.2	1.2	3.4	-104.12	-1,777.1	-7,064.6	7,332.2	7,327.9	4.35	1,685.808	
600.0	600.0	1,428.1	1,417.2	1.2	3.5	-104.06	-1,769.5	-7,063.3	7,331.0	7,326.6	4.46	1,642.300	
689.0	689.0	1,482.0	1,468.9	1.4	3.7	-103.95	-1,754.3	-7,061.2	7,321.1	7,316.2	4.85	1,509.456	
700.0	700.0	1,482.0	1,468.9	1.4	3.7	-103.95	-1,754.3	-7,061.2	7,319.9	7,315.0	4.87	1,501.534	
787.4	787.4	1,564.3	1,547.7	1.6	4.1	-103.78	-1,730.8	-7,058.2	7,310.5	7,305.2	5.35	1,365.514	
800.0	800.0	1,577.8	1,560.6	1.7	4.2	-103.75	-1,726.9	-7,057.7	7,309.2	7,303.7	5.43	1,345.815	
885.8	885.8	1,659.9	1,639.1	1.9	4.6	-103.57	-1,703.1	-7,054.7	7,299.8	7,293.9	5.92	1,233.142	
900.0	900.0	1,668.9	1,647.7	1.9	4.7	-103.55	-1,700.4	-7,054.4	7,298.3	7,292.3	5.98	1,219.983	
984.2	984.2	1,728.0	1,704.3	2.1	5.0	-103.43	-1,683.5	-7,052.4	7,289.5	7,283.1	6.37	1,143.650	
1,000.0	1,000.0	1,737.0	1,712.9	2.1	5.0	-103.41	-1,680.9	-7,052.1	7,287.9	7,281.4	6.44	1,131.826	
1,082.7	1,082.7	1,828.4	1,800.5	2.3	5.4	-103.21	-1,655.0	-7,048.8	7,279.3	7,272.4	6.93	1,050.340	
1,100.0	1,100.0	1,841.1	1,812.7	2.3	5.5	-103.19	-1,651.4	-7,048.4	7,277.6	7,270.5	7.01	1,037.719	
1,181.1	1,181.1	1,902.0	1,871.1	2.5	5.8	-103.06	-1,634.2	-7,046.3	7,269.4	7,262.0	7.40	982.047	
1,200.0	1,200.0	1,917.7	1,886.1	2.6	5.9	-103.02	-1,629.8	-7,045.8	7,267.5	7,260.0	7.50	969.475	
1,279.5	1,279.5	2,218.0	2,174.5	2.7	7.4	-102.41	-1,547.6	-7,030.3	7,258.2	7,249.4	8.75	829.152	
1,300.0	1,300.0	2,218.0	2,174.5	2.8	7.4	-102.41	-1,547.6	-7,030.3	7,255.6	7,246.8	8.80	824.522	
1,377.9	1,377.9	2,261.5	2,216.3	3.0	7.6	-102.33	-1,535.9	-7,027.5	7,246.0	7,236.8	9.13	793.388	
1,400.0	1,400.0	2,271.0	2,225.4	3.0	7.7	-102.31	-1,533.3	-7,027.0	7,243.3	7,234.1	9.22	785.877	
1,476.4	1,476.4	2,311.4	2,264.3	3.2	7.9	-27.19	-1,522.4	-7,024.7	7,233.6	7,222.9	10.70	676.300	
1,500.0	1,500.0	2,341.8	2,293.6	3.2	8.0	-27.17	-1,514.2	-7,023.1	7,230.3	7,219.4	10.89	663.869	
1,574.8	1,574.7	2,408.8	2,357.9	3.4	8.4	-27.15	-1,495.7	-7,019.4	7,218.6	7,207.2	11.36	635.327	
1,600.0	1,599.8	2,424.3	2,372.7	3.4	8.5	-27.16	-1,491.4	-7,018.6	7,214.3	7,202.8	11.49	628.117	
1,673.2	1,672.8	2,463.0	2,409.7	3.6	8.7	-27.21	-1,480.3	-7,016.8	7,200.9	7,189.1	11.81	609.698	
1,700.0	1,699.5	2,484.8	2,430.5	3.7	8.8	-27.22	-1,474.1	-7,015.8	7,195.7	7,183.7	11.96	601.530	
1,771.6	1,770.6	2,527.1	2,471.2	3.8	9.0	-27.28	-1,462.4	-7,013.9	7,180.8	7,168.5	12.29	584.350	
1,800.0	1,798.7	2,769.4	2,703.1	3.9	10.3	-26.93	-1,393.5	-7,000.3	7,174.2	7,160.6	13.56	528.973	
1,870.1	1,868.0	2,791.0	2,723.7	4.1	10.4	-27.07	-1,387.3	-6,998.8	7,155.8	7,142.1	13.78	519.376	
1,900.0	1,897.5	2,822.5	2,753.8	4.2	10.6	-27.10	-1,378.3	-6,996.7	7,147.6	7,133.6	13.97	511.668	
1,968.5	1,964.8	2,872.0	2,801.3	4.4	10.8	-27.21	-1,364.8	-6,993.5	7,128.1	7,113.8	14.30	498.450	
2,000.0	1,995.6	2,954.0	2,879.7	4.5	11.3	-27.18	-1,341.5	-6,988.0	7,118.6	7,103.8	14.75	482.612	
2,066.9	2,060.9	2,995.8	2,919.5	4.7	11.5	-27.32	-1,328.8	-6,985.2	7,097.1	7,082.0	15.06	471.220	
2,100.0	2,093.1	3,009.4	2,932.4	4.8	11.6	-27.41	-1,324.7	-6,984.4	7,086.1	7,071.0	15.17	466.982	
2,165.3	2,156.3	3,035.0	2,956.7	5.1	11.8	-27.59	-1,316.9	-6,982.8	7,063.7	7,048.3	15.40	458.757	
2,200.0	2,189.6	3,035.0	2,956.7	5.2	11.8	-27.71	-1,316.9	-6,982.8	7,051.5	7,036.1	15.44	456.634	
2,263.8	2,250.7	3,076.8	2,996.6	5.5	12.0	-27.89	-1,304.6	-6,980.6	7,028.3	7,012.5	15.73	446.680	
2,280.0	2,266.2	3,083.5	3,003.1	5.6	12.0	-27.94	-1,302.7	-6,980.2	7,022.2	7,006.4	15.79	444.778	
2,300.0	2,285.3	3,091.8	3,011.0	5.7	12.1	-27.93	-1,300.3	-6,979.8	7,014.7	6,998.8	15.89	441.535	
2,362.2	2,344.6	3,119.1	3,037.2	6.0	12.2	-27.91	-1,292.8	-6,978.4	6,991.6	6,975.4	16.20	431.560	
2,400.0	2,380.6	3,168.7	3,084.9	6.2	12.5	-27.85	-1,279.3	-6,975.9	6,977.6	6,961.1	16.55	421.632	
2,460.6	2,438.4	3,281.0	3,192.9	6.5	13.0	-27.74	-1,249.5	-6,969.6	6,954.9	6,937.7	17.25	403.069	
2,500.0	2,475.9	3,303.1	3,214.2	6.7	13.2	-27.72	-1,243.5	-6,968.3	6,940.0	6,922.5	17.49	396.899	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellbore #1										Offset Site Error:		0.0 usft			
Survey Program: 137-MWD														Offset Well Error:		0.0 usft	
Reference		Offset		Semi Major Axis				Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
2,559.0	2,532.2	3,332.4	3,242.4	7.0	13.3	-27.69	-1,235.5	-6,966.6	6,917.9	6,900.1	17.82	388.273					
2,600.0	2,571.2	3,362.0	3,270.7	7.2	13.5	-27.66	-1,227.4	-6,965.1	6,902.7	6,884.6	18.09	381.538					
2,657.5	2,626.0	3,433.1	3,339.0	7.5	13.8	-27.58	-1,207.9	-6,961.4	6,881.3	6,862.7	18.62	369.577					
2,700.0	2,666.6	3,482.0	3,386.0	7.8	14.1	-27.53	-1,194.6	-6,958.7	6,865.3	6,846.3	18.99	361.467					
2,755.9	2,719.8	3,667.9	3,564.1	8.1	15.1	-27.32	-1,142.5	-6,946.5	6,843.7	6,823.6	20.09	340.656					
2,800.0	2,761.9	3,705.3	3,599.6	8.3	15.3	-27.27	-1,131.6	-6,943.8	6,826.3	6,805.9	20.43	334.143					
2,854.3	2,813.7	3,742.6	3,635.2	8.7	15.5	-27.22	-1,120.5	-6,941.2	6,805.0	6,784.2	20.81	327.031					
2,900.0	2,857.2	3,775.7	3,666.7	8.9	15.7	-27.18	-1,110.5	-6,939.0	6,787.2	6,766.1	21.14	321.096					
2,952.7	2,907.5	3,833.8	3,721.9	9.2	16.1	-27.10	-1,092.9	-6,935.1	6,766.6	6,745.0	21.63	312.877					
3,000.0	2,952.5	3,878.8	3,764.6	9.5	16.3	-27.03	-1,079.0	-6,932.1	6,748.1	6,726.1	22.03	306.259					
3,051.2	3,001.3	3,923.0	3,806.5	9.8	16.6	-26.96	-1,065.0	-6,929.2	6,728.1	6,705.6	22.46	299.612					
3,100.0	3,047.8	3,935.0	3,817.8	10.1	16.7	-26.95	-1,061.2	-6,928.4	6,709.1	6,686.4	22.69	295.621					
3,149.6	3,095.1	3,967.5	3,848.5	10.4	16.9	-26.90	-1,050.9	-6,926.4	6,689.9	6,666.8	23.04	290.345					
3,200.0	3,143.2	3,987.0	3,867.0	10.7	17.0	-26.87	-1,044.9	-6,925.3	6,670.6	6,647.3	23.32	286.005					
3,248.0	3,188.9	4,098.0	3,972.8	11.0	17.6	-26.71	-1,011.7	-6,918.6	6,652.3	6,628.2	24.06	276.439					
3,300.0	3,238.5	4,098.0	3,972.8	11.3	17.6	-26.71	-1,011.7	-6,918.6	6,632.2	6,608.0	24.25	273.465					
3,346.4	3,282.8	4,137.9	4,010.6	11.6	17.9	-26.65	-999.3	-6,916.0	6,614.2	6,589.5	24.64	268.484					
3,400.0	3,333.8	4,180.0	4,050.5	11.9	18.1	-26.59	-986.1	-6,913.9	6,594.0	6,568.9	25.06	263.177					
3,444.9	3,376.6	4,180.0	4,050.5	12.2	18.1	-26.59	-986.1	-6,913.9	6,577.0	6,551.8	25.22	260.786					
3,500.0	3,429.1	4,187.1	4,057.2	12.6	18.2	-26.57	-983.9	-6,913.6	6,556.5	6,531.0	25.46	257.531					
3,543.3	3,470.4	4,255.6	4,122.3	12.8	18.5	-26.47	-962.6	-6,910.4	6,540.4	6,514.4	25.98	251.793					
3,600.0	3,524.4	4,334.9	4,197.8	13.2	19.0	-26.35	-939.0	-6,906.2	6,519.1	6,492.6	26.58	245.252					
3,641.7	3,564.2	4,363.7	4,225.3	13.4	19.1	-26.31	-930.6	-6,904.6	6,503.4	6,476.6	26.88	241.972					
3,700.0	3,619.8	4,397.4	4,257.6	13.8	19.3	-26.27	-920.9	-6,902.8	6,481.6	6,454.4	27.26	237.804					
3,740.1	3,658.0	4,425.0	4,284.0	14.0	19.5	-26.23	-913.0	-6,901.3	6,466.7	6,439.2	27.54	234.815					
3,800.0	3,715.1	4,507.0	4,362.5	14.4	19.9	-26.12	-889.7	-6,896.7	6,444.2	6,416.0	28.16	228.838					
3,838.6	3,751.8	4,536.7	4,390.9	14.7	20.1	-26.08	-881.3	-6,894.9	6,429.6	6,401.2	28.45	226.012					
3,900.0	3,810.4	4,558.2	4,411.5	15.0	20.2	-26.05	-875.2	-6,893.8	6,406.8	6,378.0	28.78	222.608					
3,937.0	3,845.7	4,589.0	4,441.0	15.3	20.4	-26.01	-866.6	-6,892.3	6,393.3	6,364.2	29.07	219.942					
4,000.0	3,905.7	4,602.9	4,454.3	15.7	20.4	-25.99	-862.7	-6,891.7	6,370.4	6,341.0	29.37	216.913					
4,035.4	3,939.5	4,642.8	4,492.7	15.9	20.6	-25.94	-851.8	-6,889.9	6,357.5	6,327.8	29.69	214.142					
4,100.0	4,001.0	4,670.0	4,518.9	16.3	20.8	-25.91	-844.5	-6,888.7	6,334.2	6,304.1	30.06	210.736					
4,133.8	4,033.3	4,705.0	4,552.5	16.5	21.0	-25.87	-835.2	-6,887.1	6,322.0	6,291.6	30.35	208.322					
4,200.0	4,096.3	4,752.0	4,597.8	16.9	21.2	-25.81	-822.6	-6,885.3	6,298.5	6,267.7	30.81	204.404					
4,232.3	4,127.1	4,752.0	4,597.8	17.1	21.2	-25.81	-822.6	-6,885.3	6,287.1	6,256.1	30.93	203.234					
4,300.0	4,191.7	4,807.6	4,651.5	17.6	21.5	-25.74	-808.1	-6,883.3	6,263.3	6,231.9	31.44	199.214					
4,330.7	4,220.9	4,834.0	4,677.0	17.8	21.6	-25.71	-801.6	-6,882.4	6,252.6	6,220.9	31.67	197.402					
4,400.0	4,287.0	4,902.9	4,744.0	18.2	21.9	-25.65	-785.9	-6,879.5	6,228.3	6,196.1	32.21	193.349					
4,429.1	4,314.7	4,941.0	4,781.3	18.4	22.1	-25.63	-778.0	-6,877.8	6,218.1	6,185.6	32.47	191.498					
4,500.0	4,382.3	5,032.4	4,870.5	18.8	22.5	-25.57	-759.0	-6,873.3	6,193.0	6,159.9	33.09	187.163					
4,527.5	4,408.6	5,061.0	4,898.5	19.0	22.6	-25.55	-753.1	-6,871.9	6,183.1	6,149.8	33.30	185.661					
4,600.0	4,477.6	5,106.3	4,942.8	19.5	22.8	-25.52	-743.7	-6,869.6	6,157.4	6,123.7	33.75	182.464					
4,626.0	4,502.4	5,119.2	4,955.4	19.6	22.8	-25.51	-741.2	-6,869.0	6,148.3	6,114.4	33.89	181.413					
4,700.0	4,572.9	5,161.0	4,996.4	20.1	23.0	-25.49	-733.1	-6,867.1	6,122.5	6,088.2	34.32	178.374					
4,724.4	4,596.2	5,161.0	4,996.4	20.3	23.0	-25.49	-733.1	-6,867.1	6,114.1	6,079.7	34.42	177.652					
4,800.0	4,668.3	5,199.3	5,034.1	20.7	23.1	-25.48	-726.4	-6,865.5	6,088.3	6,053.4	34.82	174.828					
4,822.8	4,690.0	5,209.1	5,043.7	20.9	23.2	-25.47	-724.8	-6,865.1	6,080.6	6,045.6	34.94	174.019					
4,900.0	4,763.6	5,242.0	5,076.2	21.4	23.3	-25.47	-719.8	-6,863.9	6,054.8	6,019.5	35.34	171.334					
4,921.2	4,783.8	5,242.0	5,076.2	21.5	23.3	-25.47	-719.8	-6,863.9	6,047.9	6,012.4	35.42	170.747					
5,000.0	4,858.9	5,292.0	5,125.7	22.0	23.4	-25.47	-712.9	-6,862.4	6,022.2	5,986.3	35.86	167.945					
5,019.7	4,877.7	5,301.8	5,135.5	22.1	23.5	-25.47	-711.6	-6,862.1	6,015.8	5,979.9	35.96	167.292					
5,100.0	4,954.2	5,324.0	5,157.5	22.6	23.5	-25.47	-708.9	-6,861.5	5,990.2	5,953.9	36.33	164.898					

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	5,324.0	5,157.5	22.8	23.5	-25.47	-708.9	-6,861.5	5,984.6	5,948.2	36.40	164.432		
5,171.8	5,022.7	5,368.9	5,202.1	23.1	23.7	-25.48	-703.7	-6,860.5	5,967.7	5,931.0	36.71	162.559		
5,200.0	5,049.6	5,380.8	5,213.8	23.3	23.7	-25.41	-702.4	-6,860.3	5,959.2	5,922.3	36.90	161.476		
5,216.5	5,065.4	5,406.0	5,239.0	23.3	23.8	-25.37	-699.9	-6,859.9	5,954.3	5,917.3	37.06	160.686		
5,300.0	5,145.7	5,406.0	5,239.0	23.7	23.8	-25.16	-699.9	-6,859.9	5,931.3	5,893.8	37.49	158.211		
5,314.9	5,160.1	5,432.0	5,264.9	23.8	23.8	-25.14	-697.7	-6,859.6	5,927.4	5,889.8	37.61	157.585		
5,400.0	5,242.7	5,488.0	5,320.7	24.1	23.9	-24.98	-694.1	-6,859.2	5,907.2	5,869.1	38.12	154.948		
5,413.4	5,255.7	5,488.0	5,320.7	24.2	23.9	-24.96	-694.1	-6,859.2	5,904.2	5,866.1	38.18	154.637		
5,500.0	5,340.5	5,527.0	5,359.7	24.5	24.0	-24.83	-692.5	-6,859.0	5,887.0	5,848.4	38.60	152.512		
5,511.8	5,352.1	5,533.9	5,366.6	24.5	24.0	-24.81	-692.3	-6,859.0	5,884.8	5,846.2	38.65	152.241		
5,600.0	5,439.0	5,667.7	5,500.4	24.8	24.2	-24.76	-689.8	-6,858.1	5,870.2	5,831.1	39.15	149.947		
5,610.2	5,449.1	5,676.1	5,508.7	24.8	24.2	-24.75	-689.7	-6,857.9	5,868.6	5,829.4	39.19	149.745		
5,700.0	5,538.0	5,733.0	5,565.7	25.1	24.2	-24.67	-689.4	-6,857.1	5,856.1	5,816.5	39.53	148.147		
5,708.6	5,546.6	5,750.2	5,582.8	25.1	24.3	-24.67	-689.3	-6,856.9	5,855.0	5,815.4	39.57	147.961		
5,800.0	5,637.4	5,815.0	5,647.7	25.3	24.3	-24.62	-689.0	-6,856.5	5,845.6	5,805.7	39.87	146.606		
5,807.1	5,644.5	5,815.0	5,647.7	25.3	24.3	-24.61	-689.0	-6,856.5	5,845.0	5,805.1	39.89	146.535		
5,900.0	5,737.2	5,910.6	5,743.3	25.5	24.4	-24.58	-688.6	-6,855.9	5,838.6	5,798.4	40.18	145.319		
5,905.5	5,742.6	5,915.7	5,748.3	25.5	24.4	-24.58	-688.6	-6,855.9	5,838.3	5,798.1	40.19	145.260		
6,000.0	5,837.1	5,996.1	5,828.7	25.6	24.5	-24.56	-688.2	-6,855.5	5,834.8	5,794.4	40.42	144.359		
6,003.9	5,841.0	5,998.7	5,831.4	25.6	24.5	-24.56	-688.2	-6,855.5	5,834.7	5,794.3	40.43	144.330		
6,051.8	5,888.9	6,031.2	5,863.8	25.7	24.6	-99.68	-688.0	-6,855.4	5,834.2	5,793.8	40.46	144.187		
6,081.8	5,918.9	6,060.0	5,892.6	25.7	24.6	-99.68	-687.7	-6,855.5	5,834.2	5,793.7	40.54	143.914		
6,082.5	5,919.6	6,060.0	5,892.6	25.7	24.6	170.32	-687.7	-6,855.5	5,834.2	5,793.6	40.59	143.728 CC, ES		
6,100.0	5,937.1	6,069.6	5,902.2	25.7	24.6	170.32	-687.5	-6,855.5	5,834.4	5,793.9	40.58	143.772		
6,102.3	5,939.4	6,073.5	5,906.1	25.7	24.6	170.32	-687.5	-6,855.5	5,834.5	5,793.9	40.58	143.775		
6,150.0	5,987.0	6,142.0	5,974.6	25.7	24.7	170.29	-686.9	-6,855.5	5,837.3	5,796.8	40.48	144.205		
6,200.0	6,036.5	6,185.7	6,018.3	25.7	24.7	170.22	-686.6	-6,855.4	5,843.5	5,803.3	40.17	145.483		
6,200.8	6,037.3	6,186.3	6,018.9	25.7	24.7	170.22	-686.6	-6,855.4	5,843.6	5,803.5	40.16	145.509		
6,250.0	6,085.5	6,223.0	6,055.6	25.7	24.8	170.10	-686.2	-6,855.4	5,853.2	5,813.5	39.67	147.532		
6,299.2	6,133.0	6,256.3	6,088.9	25.6	24.8	169.94	-685.8	-6,855.5	5,866.1	5,827.1	39.03	150.304		
6,300.0	6,133.7	6,256.8	6,089.4	25.6	24.8	169.93	-685.8	-6,855.5	5,866.4	5,827.4	39.02	150.355		
6,350.0	6,180.9	6,289.2	6,121.8	25.5	24.9	169.71	-685.4	-6,855.6	5,883.0	5,844.7	38.20	153.988		
6,397.6	6,224.6	6,325.6	6,158.3	25.4	24.9	169.44	-684.9	-6,855.9	5,901.8	5,864.5	37.31	158.199		
6,400.0	6,226.7	6,327.8	6,160.4	25.4	24.9	169.43	-684.8	-6,855.9	5,902.8	5,865.6	37.26	158.427		
6,450.0	6,271.1	6,372.2	6,204.8	25.2	25.0	169.09	-684.0	-6,856.3	5,925.8	5,889.6	36.20	163.717		
6,496.0	6,310.4	6,427.6	6,260.2	25.1	25.0	168.74	-683.0	-6,856.7	5,949.6	5,914.4	35.14	169.333		
6,500.0	6,313.7	6,433.1	6,265.7	25.1	25.1	168.71	-682.9	-6,856.8	5,951.7	5,916.7	35.04	169.847		
6,550.0	6,354.4	6,504.7	6,337.3	25.0	25.1	168.26	-682.0	-6,856.9	5,980.3	5,946.5	33.81	176.867		
6,594.5	6,388.9	6,565.3	6,397.9	24.9	25.2	167.78	-681.1	-6,856.8	6,007.9	5,975.3	32.67	183.919		
6,600.0	6,393.0	6,571.5	6,404.1	24.9	25.2	167.72	-681.0	-6,856.7	6,011.5	5,979.0	32.52	184.851		
6,650.0	6,429.3	6,626.0	6,458.6	24.8	25.3	167.04	-680.0	-6,856.4	6,045.1	6,013.9	31.20	193.768		
6,692.9	6,458.5	6,667.2	6,499.8	24.7	25.4	166.33	-679.2	-6,856.1	6,075.8	6,045.7	30.08	202.015		
6,700.0	6,463.1	6,673.7	6,506.2	24.7	25.4	166.20	-679.1	-6,856.0	6,081.1	6,051.2	29.89	203.421		
6,750.0	6,494.3	6,714.0	6,546.6	24.7	25.4	165.15	-678.3	-6,855.6	6,119.2	6,090.6	28.67	213.439		
6,791.3	6,517.9	6,714.0	6,546.6	24.7	25.4	163.97	-678.3	-6,855.6	6,152.4	6,124.6	27.77	221.569		
6,800.0	6,522.6	6,714.0	6,546.6	24.7	25.4	163.69	-678.3	-6,855.6	6,159.6	6,132.0	27.60	223.189		
6,850.0	6,548.0	6,740.7	6,573.3	24.7	25.5	161.94	-677.9	-6,855.4	6,201.8	6,175.0	26.81	231.350		
6,889.7	6,566.0	6,749.3	6,581.9	24.8	25.5	160.10	-677.7	-6,855.3	6,236.6	6,210.1	26.47	235.628		
6,900.0	6,570.4	6,751.4	6,583.9	24.9	25.5	159.56	-677.7	-6,855.3	6,245.8	6,219.3	26.43	236.288		
6,950.0	6,589.5	6,760.5	6,593.0	25.1	25.5	156.34	-677.5	-6,855.3	6,291.2	6,264.6	26.68	235.796		
6,988.2	6,602.0	6,766.3	6,598.9	25.3	25.5	153.03	-677.4	-6,855.2	6,326.8	6,299.4	27.47	230.329		
7,000.0	6,605.4	6,768.0	6,600.5	25.3	25.5	151.80	-677.4	-6,855.2	6,338.0	6,310.2	27.84	227.631		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	
7,050.0	6,618.0	6,795.0	6,627.5	25.6	25.5	145.51	-676.9	-6,855.3	6,385.8	6,355.7	30.19	211.550	
7,086.6	6,625.0	6,795.0	6,627.5	25.9	25.5	138.46	-676.9	-6,855.3	6,421.3	6,388.2	33.07	194.201	
7,100.0	6,627.1	6,795.0	6,627.5	26.0	25.5	135.22	-676.9	-6,855.3	6,434.4	6,400.0	34.36	187.261	
7,150.0	6,632.8	6,795.0	6,627.5	26.5	25.5	118.88	-676.9	-6,855.3	6,483.4	6,443.5	39.91	162.438	
7,185.0	6,634.7	6,795.0	6,627.5	26.8	25.5	102.85	-676.9	-6,855.3	6,518.0	6,475.1	42.94	151.787	
7,200.0	6,635.0	6,795.0	6,627.5	27.0	25.5	95.09	-676.9	-6,855.3	6,532.8	6,489.4	43.39	150.576	
7,215.9	6,635.0	6,795.0	6,627.5	27.1	25.5	86.63	-676.9	-6,855.3	6,548.5	6,505.4	43.09	151.956	
7,283.4	6,634.1	6,795.0	6,627.5	27.9	25.5	86.63	-676.9	-6,855.3	6,615.3	6,571.4	43.93	150.600	
7,300.0	6,633.9	6,795.0	6,627.5	28.1	25.5	86.63	-676.9	-6,855.3	6,631.7	6,587.6	44.13	150.275	
7,381.9	6,632.9	6,795.0	6,627.5	29.3	25.5	86.63	-676.9	-6,855.3	6,712.7	6,667.4	45.30	148.175	
7,400.0	6,632.6	6,795.0	6,627.5	29.5	25.5	86.63	-676.9	-6,855.3	6,730.7	6,685.1	45.56	147.726	
7,480.3	6,631.6	6,795.0	6,627.5	30.8	25.5	86.63	-676.9	-6,855.3	6,810.1	6,763.3	46.86	145.320	
7,500.0	6,631.4	6,795.0	6,627.5	31.1	25.5	86.63	-676.9	-6,855.3	6,829.6	6,782.4	47.18	144.750	
7,578.7	6,630.4	6,795.0	6,627.5	32.5	25.5	86.63	-676.9	-6,855.3	6,907.6	6,859.0	48.58	142.176	
7,600.0	6,630.1	6,795.0	6,627.5	32.9	25.5	86.62	-676.9	-6,855.3	6,928.6	6,879.7	48.96	141.507	
7,677.1	6,629.1	6,795.0	6,627.5	34.3	25.5	86.62	-676.9	-6,855.3	7,005.0	6,954.6	50.44	138.872	
7,700.0	6,628.8	6,795.0	6,627.5	34.8	25.5	86.62	-676.9	-6,855.3	7,027.6	6,976.8	50.88	138.122	
7,775.6	6,627.8	6,795.0	6,627.5	36.3	25.5	86.62	-676.9	-6,855.3	7,102.5	7,050.1	52.42	135.504	
7,800.0	6,627.5	6,795.0	6,627.5	36.8	25.5	86.62	-676.9	-6,855.3	7,126.7	7,073.8	52.91	134.690	
7,874.0	6,626.6	6,795.0	6,627.5	38.4	25.5	86.62	-676.9	-6,855.3	7,200.0	7,145.5	54.49	132.143	
7,900.0	6,626.3	6,795.0	6,627.5	38.9	25.5	86.62	-676.9	-6,855.3	7,225.8	7,170.7	55.04	131.283	
7,972.4	6,625.3	6,795.0	6,627.5	40.5	25.5	86.62	-676.9	-6,855.3	7,297.6	7,240.9	56.64	128.840	
8,000.0	6,625.0	6,795.0	6,627.5	41.1	25.5	86.62	-676.9	-6,855.3	7,324.9	7,267.6	57.25	127.946	
8,070.8	6,624.1	6,795.0	6,627.5	42.7	25.5	86.62	-676.9	-6,855.3	7,395.1	7,336.2	58.86	125.630	
8,100.0	6,623.7	6,795.0	6,627.5	43.4	25.5	86.62	-676.9	-6,855.3	7,424.0	7,364.5	59.53	124.713	
8,169.3	6,622.8	6,795.0	6,627.5	45.0	25.5	86.62	-676.9	-6,855.3	7,492.7	7,431.5	61.15	122.534	
8,200.0	6,622.4	6,795.0	6,627.5	45.7	25.5	86.61	-676.9	-6,855.3	7,523.2	7,461.3	61.87	121.604	
8,267.7	6,621.6	6,795.0	6,627.5	47.4	25.5	86.61	-676.9	-6,855.3	7,590.3	7,526.8	63.48	119.565	
8,300.0	6,621.1	6,795.0	6,627.5	48.1	25.5	86.61	-676.9	-6,855.3	7,622.3	7,558.1	64.25	118.629	
8,366.1	6,620.3	6,795.0	6,627.5	49.7	25.5	86.61	-676.9	-6,855.3	7,687.9	7,622.1	65.86	116.729	
8,400.0	6,619.9	6,795.0	6,627.5	50.6	25.5	86.61	-676.9	-6,855.3	7,721.5	7,654.8	66.68	115.792	
8,464.5	6,619.0	6,795.0	6,627.5	52.2	25.5	86.61	-676.9	-6,855.3	7,785.6	7,717.3	68.28	114.028	
8,500.0	6,618.6	6,795.0	6,627.5	53.0	25.5	86.61	-676.9	-6,855.3	7,820.7	7,751.6	69.15	113.094	
8,563.0	6,617.8	6,795.0	6,627.5	54.6	25.5	86.61	-676.9	-6,855.3	7,883.2	7,812.5	70.73	111.460	
8,600.0	6,617.3	6,795.0	6,627.5	55.5	25.5	86.61	-676.9	-6,855.3	7,920.0	7,848.3	71.65	110.533	
8,661.4	6,616.5	6,795.0	6,627.5	57.1	25.5	86.61	-676.9	-6,855.3	7,980.9	7,907.7	73.20	109.022	
8,700.0	6,616.0	6,795.0	6,627.5	58.1	25.5	86.61	-676.9	-6,855.3	8,019.2	7,945.0	74.18	108.105	
8,759.8	6,615.2	6,795.0	6,627.5	59.6	25.5	86.61	-676.9	-6,855.3	8,078.6	8,002.9	75.71	106.709	
8,800.0	6,614.7	6,795.0	6,627.5	60.6	25.5	86.60	-676.9	-6,855.3	8,118.5	8,041.8	76.73	105.803	
8,858.2	6,614.0	6,795.0	6,627.5	62.1	25.5	86.60	-676.9	-6,855.3	8,176.3	8,098.1	78.23	104.514	
8,900.0	6,613.4	6,795.0	6,627.5	63.2	25.5	86.60	-676.9	-6,855.3	8,217.8	8,138.5	79.31	103.621	
8,956.7	6,612.7	6,795.0	6,627.5	64.7	25.5	86.60	-676.9	-6,855.3	8,274.1	8,193.3	80.78	102.432	
9,000.0	6,612.2	6,795.0	6,627.5	65.8	25.5	86.60	-676.9	-6,855.3	8,317.1	8,235.2	81.90	101.553	
9,055.1	6,611.5	6,795.0	6,627.5	67.3	25.5	86.60	-676.9	-6,855.3	8,371.8	8,288.5	83.34	100.457	
9,100.0	6,610.9	6,795.0	6,627.5	68.4	25.5	86.60	-676.9	-6,855.3	8,416.4	8,331.9	84.51	99.592	
9,153.5	6,610.2	6,795.0	6,627.5	69.8	25.5	86.60	-676.9	-6,855.3	8,469.6	8,383.7	85.91	98.582	
9,200.0	6,609.6	6,795.0	6,627.5	71.1	25.5	86.60	-676.9	-6,855.3	8,515.8	8,428.6	87.13	97.733	
9,251.9	6,608.9	6,795.0	6,627.5	72.4	25.5	86.60	-676.9	-6,855.3	8,567.4	8,478.9	88.50	96.802	
9,300.0	6,608.3	6,795.0	6,627.5	73.7	25.5	86.59	-676.9	-6,855.3	8,615.1	8,525.3	89.77	95.967	
9,350.4	6,607.7	6,795.0	6,627.5	75.0	25.5	86.59	-676.9	-6,855.3	8,665.2	8,574.1	91.11	95.111	
9,400.0	6,607.0	6,770.1	6,602.6	76.4	25.5	85.13	-677.3	-6,855.2	8,714.4	8,622.3	92.13	94.588	
9,448.8	6,606.4	6,769.9	6,602.4	77.7	25.5	85.12	-677.3	-6,855.2	8,762.9	8,669.5	93.42	93.798	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 137-MWD												<b>Offset Well Error:</b>	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	6,605.7	6,769.7	6,602.2	79.0	25.5	85.10	-677.3	-6,855.2	8,813.8	8,719.0	94.78	92.992	
9,547.2	6,605.1	6,769.4	6,602.0	80.3	25.5	85.09	-677.3	-6,855.2	8,860.7	8,764.7	96.04	92.264	
9,600.0	6,604.5	6,769.2	6,601.8	81.7	25.5	85.08	-677.3	-6,855.2	8,913.2	8,815.7	97.44	91.474	
9,645.6	6,603.9	6,769.0	6,601.6	82.9	25.5	85.06	-677.4	-6,855.2	8,958.5	8,859.9	98.66	90.804	
9,700.0	6,603.2	6,768.8	6,601.3	84.4	25.5	85.05	-677.4	-6,855.2	9,012.6	8,912.5	100.11	90.029	
9,744.1	6,602.6	6,768.6	6,601.1	85.6	25.5	85.04	-677.4	-6,855.2	9,056.4	8,955.1	101.29	89.413	
9,800.0	6,601.9	6,768.3	6,600.9	87.1	25.5	85.02	-677.4	-6,855.2	9,112.0	9,009.2	102.78	88.652	
9,842.5	6,601.3	6,768.2	6,600.7	88.2	25.5	85.01	-677.4	-6,855.2	9,154.3	9,050.3	103.92	88.086	
9,900.0	6,600.6	6,767.9	6,600.5	89.8	25.5	84.99	-677.4	-6,855.2	9,211.4	9,106.0	105.47	87.340	
9,940.9	6,600.1	6,767.8	6,600.3	90.9	25.5	84.98	-677.4	-6,855.2	9,252.1	9,145.6	106.57	86.819	
10,000.0	6,599.3	6,767.5	6,600.1	92.5	25.5	84.97	-677.4	-6,855.2	9,310.9	9,202.7	108.16	86.087	
10,039.3	6,598.8	6,767.3	6,599.9	93.5	25.5	84.96	-677.4	-6,855.2	9,350.0	9,240.8	109.22	85.609	
10,100.0	6,598.0	6,767.1	6,599.6	95.2	25.5	84.94	-677.4	-6,855.2	9,410.3	9,299.5	110.85	84.891	
10,137.8	6,597.5	6,766.9	6,599.5	96.2	25.5	84.93	-677.4	-6,855.2	9,447.9	9,336.0	111.87	84.453	
10,200.0	6,596.7	6,766.7	6,599.2	97.9	25.5	84.92	-677.4	-6,855.2	9,509.8	9,396.2	113.55	83.748	
10,236.2	6,596.3	6,766.5	6,599.1	98.9	25.5	84.91	-677.4	-6,855.2	9,545.8	9,431.3	114.53	83.346	
10,300.0	6,595.4	6,766.3	6,598.8	100.6	25.5	84.89	-677.4	-6,855.2	9,609.3	9,493.0	116.26	82.654	
10,334.6	6,595.0	6,766.2	6,598.7	101.6	25.5	84.88	-677.4	-6,855.2	9,643.7	9,526.5	117.20	82.286	
10,400.0	6,594.2	6,765.9	6,598.4	103.4	25.5	84.86	-677.4	-6,855.2	9,708.8	9,589.8	118.97	81.608	
10,433.0	6,593.7	6,765.8	6,598.3	104.3	25.5	84.86	-677.4	-6,855.2	9,741.6	9,621.8	119.87	81.271	
10,500.0	6,592.9	6,765.5	6,598.1	106.1	25.5	84.84	-677.4	-6,855.2	9,808.3	9,686.6	121.68	80.605	
10,531.5	6,592.5	6,765.4	6,597.9	106.9	25.5	84.83	-677.4	-6,855.2	9,839.6	9,717.0	122.54	80.298	
10,600.0	6,591.6	6,765.1	6,597.7	108.8	25.5	84.81	-677.4	-6,855.2	9,907.8	9,783.4	124.40	79.643	
10,629.9	6,591.2	6,765.0	6,597.6	109.6	25.5	84.81	-677.4	-6,855.2	9,937.5	9,812.3	125.22	79.363 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 75-MWVD												<b>Offset Well Error:</b>	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	-105.19	-1,925.8	-7,092.1	7,348.9				
98.4	98.4	39.1	39.1	0.1	0.0	-105.19	-1,925.9	-7,092.1	7,349.1	7,349.0	0.10	N/A	
100.0	100.0	39.9	39.9	0.1	0.0	-105.19	-1,925.9	-7,092.1	7,349.1	7,349.0	0.10	N/A	
196.8	196.8	94.6	94.6	0.3	0.0	-105.19	-1,926.2	-7,092.6	7,349.9	7,349.6	0.33	N/A	
200.0	200.0	96.9	96.9	0.3	0.0	-105.19	-1,926.2	-7,092.6	7,349.9	7,349.6	0.34	N/A	
295.3	295.3	168.0	168.0	0.5	0.1	-105.20	-1,927.1	-7,093.3	7,351.2	7,350.6	0.61	N/A	
300.0	300.0	169.2	169.2	0.5	0.1	-105.20	-1,927.1	-7,093.3	7,351.2	7,350.6	0.63	N/A	
393.7	393.7	284.4	284.3	0.8	0.3	-105.21	-1,929.4	-7,094.2	7,352.4	7,351.3	1.08	6,781.202	
400.0	400.0	288.7	288.7	0.8	0.3	-105.22	-1,929.5	-7,094.2	7,352.5	7,351.4	1.11	6,638.366	
492.1	492.1	352.0	352.0	1.0	0.5	-105.22	-1,930.8	-7,094.8	7,353.8	7,352.3	1.45	5,074.713	
500.0	500.0	367.9	367.9	1.0	0.5	-105.23	-1,931.2	-7,094.9	7,353.9	7,352.4	1.50	4,901.661	
590.5	590.5	469.3	469.3	1.2	0.7	-105.24	-1,933.4	-7,095.6	7,355.0	7,353.1	1.92	3,836.884	
600.0	600.0	473.9	473.8	1.2	0.7	-105.24	-1,933.5	-7,095.7	7,355.1	7,353.2	1.95	3,776.510	
689.0	689.0	535.0	534.9	1.4	0.9	-105.25	-1,934.7	-7,096.5	7,356.7	7,354.4	2.27	3,233.876	
700.0	700.0	535.0	534.9	1.4	0.9	-105.25	-1,934.7	-7,096.5	7,356.9	7,354.6	2.30	3,199.120	
787.4	787.4	579.4	579.3	1.6	1.0	-105.25	-1,935.4	-7,097.4	7,359.0	7,356.4	2.59	2,839.847	
800.0	800.0	588.8	588.7	1.7	1.0	-105.25	-1,935.6	-7,097.6	7,359.3	7,356.7	2.64	2,787.965	
885.8	885.8	654.2	654.0	1.9	1.1	-105.26	-1,936.7	-7,099.2	7,361.7	7,358.7	2.97	2,475.828	
900.0	900.0	665.8	665.7	1.9	1.1	-105.26	-1,936.9	-7,099.5	7,362.1	7,359.0	3.03	2,429.199	
984.2	984.2	735.0	734.8	2.1	1.3	-105.26	-1,937.6	-7,101.4	7,364.6	7,361.2	3.37	2,184.736	
1,000.0	1,000.0	747.0	746.8	2.1	1.3	-105.26	-1,937.7	-7,101.8	7,365.1	7,361.6	3.43	2,145.611	
1,082.7	1,082.7	820.2	820.0	2.3	1.5	-105.26	-1,938.2	-7,104.1	7,367.7	7,364.0	3.78	1,948.984	
1,100.0	1,100.0	828.0	827.8	2.3	1.5	-105.26	-1,938.2	-7,104.4	7,368.3	7,364.5	3.84	1,920.647	
1,181.1	1,181.1	880.7	880.5	2.5	1.6	-105.25	-1,938.1	-7,106.4	7,371.2	7,367.1	4.14	1,781.681	
1,200.0	1,200.0	891.9	891.6	2.6	1.6	-105.25	-1,937.9	-7,106.8	7,371.9	7,367.7	4.20	1,753.256	
1,279.5	1,279.5	935.9	935.5	2.7	1.7	-105.24	-1,937.2	-7,108.9	7,375.2	7,370.7	4.48	1,644.898	
1,300.0	1,300.0	946.7	946.4	2.8	1.8	-105.24	-1,936.9	-7,109.5	7,376.1	7,371.6	4.55	1,619.452	
1,377.9	1,377.9	992.0	991.6	3.0	1.9	-105.23	-1,935.9	-7,112.0	7,379.8	7,375.0	4.83	1,526.636	
1,400.0	1,400.0	992.0	991.6	3.0	1.9	-105.23	-1,935.9	-7,112.0	7,381.0	7,376.1	4.88	1,511.373	
1,476.4	1,476.4	1,025.3	1,024.8	3.2	1.9	-30.06	-1,935.0	-7,114.1	7,384.3	7,379.2	5.08	1,453.053	
1,500.0	1,500.0	1,034.0	1,033.4	3.2	2.0	-30.05	-1,934.8	-7,114.7	7,385.0	7,379.9	5.15	1,433.838	
1,574.8	1,574.7	1,073.0	1,072.3	3.4	2.1	-30.03	-1,933.9	-7,117.6	7,386.7	7,381.3	5.39	1,371.194	
1,600.0	1,599.8	1,073.0	1,072.3	3.4	2.1	-30.02	-1,933.9	-7,117.6	7,387.0	7,381.5	5.44	1,358.610	
1,673.2	1,672.8	1,073.0	1,072.3	3.6	2.1	-30.02	-1,933.9	-7,117.6	7,387.1	7,381.5	5.59	1,322.538	
1,700.0	1,699.5	1,105.1	1,104.3	3.7	2.1	-30.03	-1,933.0	-7,120.3	7,386.8	7,381.1	5.71	1,293.391	
1,771.6	1,770.6	1,155.0	1,154.0	3.8	2.3	-30.04	-1,931.5	-7,125.0	7,385.4	7,379.5	5.97	1,237.214	
1,800.0	1,798.7	1,155.0	1,154.0	3.9	2.3	-30.05	-1,931.5	-7,125.0	7,384.5	7,378.4	6.03	1,225.234	
1,870.1	1,868.0	1,155.0	1,154.0	4.1	2.3	-30.08	-1,931.5	-7,125.0	7,381.5	7,375.3	6.17	1,195.496	
1,900.0	1,897.5	1,155.0	1,154.0	4.2	2.3	-30.10	-1,931.5	-7,125.0	7,380.0	7,373.8	6.24	1,183.245	
1,968.5	1,964.8	1,155.0	1,154.0	4.4	2.3	-30.14	-1,931.5	-7,125.0	7,376.0	7,369.6	6.39	1,154.753	
2,000.0	1,995.6	1,187.1	1,185.9	4.5	2.4	-30.17	-1,930.5	-7,128.6	7,373.5	7,367.0	6.53	1,129.425	
2,066.9	2,060.9	1,201.0	1,199.7	4.7	2.4	-30.23	-1,930.0	-7,130.3	7,368.2	7,361.4	6.71	1,097.376	
2,100.0	2,093.1	1,236.0	1,234.3	4.8	2.5	-30.27	-1,928.8	-7,135.1	7,365.4	7,358.6	6.87	1,072.439	
2,165.3	2,156.3	1,236.0	1,234.3	5.1	2.5	-30.34	-1,928.8	-7,135.1	7,358.7	7,351.7	7.03	1,046.818	
2,200.0	2,189.6	1,236.0	1,234.3	5.2	2.5	-30.38	-1,928.8	-7,135.1	7,354.9	7,347.8	7.11	1,033.768	
2,263.8	2,250.7	1,236.0	1,234.3	5.5	2.5	-30.46	-1,928.8	-7,135.1	7,347.3	7,340.0	7.28	1,008.591	
2,280.0	2,266.2	1,236.0	1,234.3	5.6	2.5	-30.48	-1,928.8	-7,135.1	7,345.3	7,338.0	7.33	1,002.426	
2,300.0	2,285.3	1,236.0	1,234.3	5.7	2.5	-30.48	-1,928.8	-7,135.1	7,342.8	7,335.4	7.39	993.765	
2,362.2	2,344.6	1,267.6	1,265.5	6.0	2.6	-30.50	-1,927.9	-7,139.9	7,335.0	7,327.4	7.65	958.762	
2,400.0	2,380.6	1,277.1	1,274.9	6.2	2.6	-30.51	-1,927.6	-7,141.4	7,330.6	7,322.8	7.80	940.083	
2,460.6	2,438.4	1,318.0	1,315.2	6.5	2.7	-30.54	-1,926.7	-7,148.3	7,323.9	7,315.8	8.09	905.402	
2,500.0	2,475.9	1,318.0	1,315.2	6.7	2.7	-30.54	-1,926.7	-7,148.3	7,319.5	7,311.3	8.22	890.456	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	1,318.0	1,315.2	7.0	2.7	-30.54	-1,926.7	-7,148.3	7,313.4	7,305.0	8.42	868.547	
2,600.0	2,571.2	1,318.0	1,315.2	7.2	2.7	-30.54	-1,926.7	-7,148.3	7,309.4	7,300.8	8.56	853.861	
2,657.5	2,626.0	1,347.6	1,344.3	7.5	2.8	-30.56	-1,926.2	-7,153.6	7,304.0	7,295.1	8.83	827.073	
2,700.0	2,666.6	1,361.0	1,357.4	7.8	2.9	-30.57	-1,926.0	-7,156.1	7,300.2	7,291.2	9.01	810.023	
2,755.9	2,719.8	1,400.0	1,395.7	8.1	3.0	-30.60	-1,925.7	-7,163.5	7,295.6	7,286.3	9.31	784.032	
2,800.0	2,761.9	1,400.0	1,395.7	8.3	3.0	-30.60	-1,925.7	-7,163.5	7,292.0	7,282.5	9.46	770.546	
2,854.3	2,813.7	1,400.0	1,395.7	8.7	3.0	-30.60	-1,925.7	-7,163.5	7,287.9	7,278.2	9.66	754.365	
2,900.0	2,857.2	1,428.5	1,423.6	8.9	3.1	-30.62	-1,925.6	-7,169.2	7,284.6	7,274.7	9.90	735.899	
2,952.7	2,907.5	1,448.2	1,443.0	9.2	3.2	-30.63	-1,925.6	-7,173.3	7,281.1	7,271.0	10.14	717.795	
3,000.0	2,952.5	1,481.0	1,475.0	9.5	3.3	-30.66	-1,925.5	-7,180.2	7,278.2	7,267.8	10.40	699.716	
3,051.2	3,001.3	1,481.0	1,475.0	9.8	3.3	-30.66	-1,925.5	-7,180.2	7,275.2	7,264.6	10.59	686.764	
3,100.0	3,047.8	1,481.0	1,475.0	10.1	3.3	-30.66	-1,925.5	-7,180.2	7,272.7	7,261.9	10.78	674.840	
3,149.6	3,095.1	1,524.8	1,517.8	10.4	3.5	-30.69	-1,925.4	-7,189.8	7,270.1	7,259.0	11.08	656.068	
3,200.0	3,143.2	1,563.0	1,554.9	10.7	3.7	-30.72	-1,925.2	-7,198.5	7,267.8	7,256.5	11.37	638.992	
3,248.0	3,188.9	1,563.0	1,554.9	11.0	3.7	-30.72	-1,925.2	-7,198.5	7,265.8	7,254.2	11.56	628.644	
3,300.0	3,238.5	1,563.0	1,554.9	11.3	3.7	-30.72	-1,925.2	-7,198.5	7,263.9	7,252.1	11.76	617.823	
3,346.4	3,282.8	1,593.1	1,584.2	11.6	3.8	-30.74	-1,925.1	-7,205.6	7,262.3	7,250.3	12.02	604.160	
3,400.0	3,333.8	1,609.0	1,599.6	11.9	3.9	-30.75	-1,925.0	-7,209.5	7,260.8	7,248.6	12.27	591.669	
3,444.9	3,376.6	1,645.0	1,634.4	12.2	4.0	-30.77	-1,924.7	-7,218.6	7,259.9	7,247.4	12.55	578.647	
3,500.0	3,429.1	1,645.0	1,634.4	12.6	4.0	-30.77	-1,924.7	-7,218.6	7,258.8	7,246.1	12.76	568.817	
3,543.3	3,470.4	1,645.0	1,634.4	12.8	4.0	-30.77	-1,924.7	-7,218.6	7,258.3	7,245.3	12.93	561.309	
3,600.0	3,524.4	1,645.0	1,634.4	13.2	4.0	-30.77	-1,924.7	-7,218.6	7,257.9	7,244.8	13.15	551.791	
3,641.7	3,564.2	1,678.6	1,666.8	13.4	4.2	-30.79	-1,924.5	-7,227.6	7,257.7	7,244.2	13.42	540.952	
3,654.6	3,576.4	1,682.2	1,670.3	13.5	4.2	-30.79	-1,924.4	-7,228.6	7,257.6	7,244.2	13.48	538.497 CC	
3,700.0	3,619.8	1,694.9	1,682.5	13.8	4.3	-30.80	-1,924.4	-7,232.1	7,257.7	7,244.1	13.69	529.994 ES	
3,740.1	3,658.0	1,726.0	1,712.3	14.0	4.5	-30.82	-1,924.2	-7,240.8	7,258.1	7,244.2	13.94	520.529	
3,800.0	3,715.1	1,726.0	1,712.3	14.4	4.5	-30.82	-1,924.2	-7,240.8	7,258.7	7,244.5	14.18	511.859	
3,838.6	3,751.8	1,726.0	1,712.3	14.7	4.5	-30.82	-1,924.2	-7,240.8	7,259.3	7,245.0	14.33	506.422	
3,900.0	3,810.4	1,757.0	1,742.0	15.0	4.6	-30.84	-1,924.1	-7,249.9	7,260.6	7,245.9	14.68	494.652	
3,937.0	3,845.7	1,769.9	1,754.3	15.3	4.7	-30.84	-1,924.0	-7,253.7	7,261.5	7,246.7	14.87	488.493	
4,000.0	3,905.7	1,808.0	1,790.6	15.7	4.9	-30.86	-1,923.6	-7,265.3	7,263.5	7,248.2	15.23	476.881	
4,035.4	3,939.5	1,808.0	1,790.6	15.9	4.9	-30.86	-1,923.6	-7,265.3	7,264.6	7,249.2	15.37	472.548	
4,100.0	4,001.0	1,925.8	1,902.7	16.3	5.5	-30.92	-1,922.3	-7,301.4	7,266.7	7,250.7	15.98	454.713	
4,133.8	4,033.3	1,971.0	1,945.8	16.5	5.7	-30.94	-1,921.8	-7,314.9	7,267.6	7,251.3	16.25	447.248	
4,200.0	4,096.3	1,999.3	1,972.8	16.9	5.9	-30.95	-1,921.5	-7,323.5	7,269.5	7,252.9	16.60	437.789	
4,232.3	4,127.1	2,012.6	1,985.5	17.1	6.0	-30.96	-1,921.4	-7,327.6	7,270.5	7,253.8	16.78	433.357	
4,300.0	4,191.7	2,053.0	2,023.8	17.6	6.2	-30.98	-1,920.7	-7,340.2	7,273.1	7,255.9	17.18	423.376	
4,330.7	4,220.9	2,053.6	2,024.4	17.8	6.2	-30.98	-1,920.7	-7,340.4	7,274.3	7,257.0	17.30	420.358	
4,400.0	4,287.0	2,146.2	2,112.3	18.2	6.7	-31.02	-1,919.8	-7,369.5	7,277.1	7,259.2	17.88	406.911	
4,429.1	4,314.7	2,197.2	2,160.9	18.4	7.0	-31.05	-1,919.9	-7,385.2	7,278.2	7,260.0	18.16	400.793	
4,500.0	4,382.3	2,251.0	2,212.1	18.8	7.3	-31.08	-1,920.4	-7,401.5	7,280.8	7,262.1	18.62	391.064	
4,527.5	4,408.6	2,267.0	2,227.3	19.0	7.4	-31.09	-1,920.5	-7,406.4	7,281.8	7,263.1	18.78	387.715	
4,600.0	4,477.6	2,313.5	2,271.5	19.5	7.7	-31.12	-1,920.7	-7,420.9	7,284.9	7,265.6	19.23	378.873	
4,626.0	4,502.4	2,334.4	2,291.4	19.6	7.8	-31.13	-1,920.8	-7,427.4	7,286.0	7,266.6	19.40	375.496	
4,700.0	4,572.9	2,379.0	2,333.7	20.1	8.1	-31.16	-1,921.0	-7,441.4	7,289.4	7,269.5	19.86	367.128	
4,724.4	4,596.2	2,379.0	2,333.7	20.3	8.1	-31.16	-1,921.0	-7,441.4	7,290.6	7,270.6	19.96	365.350	
4,800.0	4,668.3	2,422.5	2,375.0	20.7	8.4	-31.18	-1,921.4	-7,455.3	7,294.5	7,274.1	20.41	357.372	
4,822.8	4,690.0	2,430.9	2,382.9	20.9	8.4	-31.19	-1,921.6	-7,458.0	7,295.8	7,275.3	20.53	355.313	
4,900.0	4,763.6	2,594.4	2,537.4	21.4	9.4	-31.27	-1,921.1	-7,511.3	7,300.4	7,279.0	21.41	341.012	
4,921.2	4,783.8	2,625.0	2,566.4	21.5	9.6	-31.28	-1,920.5	-7,521.1	7,301.3	7,279.7	21.60	338.028	
5,000.0	4,858.9	2,680.5	2,618.9	22.0	10.0	-31.29	-1,919.2	-7,539.0	7,304.9	7,282.8	22.12	330.237	
5,019.7	4,877.7	2,706.0	2,643.0	22.1	10.1	-31.30	-1,918.6	-7,547.4	7,305.9	7,283.6	22.29	327.738	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	
5,100.0	4,954.2	2,895.1	2,822.4	22.6	11.3	-31.37	-1,914.6	-7,607.2	7,309.2	7,285.9	23.29	313.896	
5,118.1	4,971.5	2,902.8	2,829.6	22.8	11.3	-31.37	-1,914.4	-7,609.6	7,309.8	7,286.4	23.39	312.547	
5,171.8	5,022.7	2,925.4	2,851.1	23.1	11.5	-31.38	-1,913.5	-7,616.7	7,311.7	7,288.0	23.69	308.621	
5,200.0	5,049.6	2,951.0	2,875.3	23.3	11.6	-31.40	-1,912.4	-7,625.0	7,312.9	7,289.0	23.90	305.988	
5,216.5	5,065.4	2,951.0	2,875.3	23.3	11.6	-31.41	-1,912.4	-7,625.0	7,313.8	7,289.8	23.96	305.254	
5,300.0	5,145.7	3,464.0	3,366.6	23.7	14.5	-31.60	-1,900.9	-7,771.6	7,315.8	7,289.8	25.98	281.572	
5,314.9	5,160.1	3,472.2	3,374.5	23.8	14.5	-31.60	-1,900.8	-7,773.7	7,316.2	7,290.1	26.06	280.787	
5,400.0	5,242.7	3,522.0	3,422.6	24.1	14.8	-31.65	-1,899.7	-7,786.8	7,319.6	7,293.1	26.49	276.364	
5,413.4	5,255.7	3,522.0	3,422.6	24.2	14.8	-31.66	-1,899.7	-7,786.8	7,320.4	7,293.9	26.52	275.994	
5,500.0	5,340.5	3,590.1	3,488.2	24.5	15.2	-31.73	-1,898.3	-7,804.9	7,326.9	7,299.9	26.99	271.419	
5,511.8	5,352.1	3,604.0	3,501.6	24.5	15.2	-31.74	-1,898.0	-7,808.6	7,328.0	7,300.9	27.07	270.698	
5,600.0	5,439.0	3,640.5	3,536.7	24.8	15.5	-31.84	-1,897.3	-7,818.5	7,337.6	7,310.2	27.42	267.650	
5,610.2	5,449.1	3,645.1	3,541.1	24.8	15.5	-31.86	-1,897.2	-7,819.8	7,338.9	7,311.5	27.45	267.324	
5,700.0	5,538.0	3,686.0	3,580.4	25.1	15.7	-31.99	-1,896.6	-7,831.1	7,352.0	7,324.2	27.79	264.566	
5,708.6	5,546.6	3,686.0	3,580.4	25.1	15.7	-32.00	-1,896.6	-7,831.1	7,353.4	7,325.6	27.81	264.453	
5,800.0	5,637.4	3,717.6	3,610.7	25.3	15.9	-32.17	-1,896.2	-7,840.1	7,370.1	7,342.0	28.09	262.376	
5,807.1	5,644.5	3,719.8	3,612.9	25.3	15.9	-32.19	-1,896.2	-7,840.7	7,371.6	7,343.5	28.11	262.245	
5,900.0	5,737.2	5,871.2	5,723.4	25.5	22.9	-32.15	-1,891.9	-8,140.2	7,370.7	7,337.5	33.21	221.946	
5,905.5	5,742.6	5,874.8	5,727.0	25.5	22.9	-32.15	-1,891.9	-8,140.1	7,370.5	7,337.3	33.22	221.886	
6,000.0	5,837.1	5,942.3	5,794.5	25.6	23.0	-32.14	-1,893.0	-8,139.9	7,367.8	7,334.5	33.36	220.849	
6,003.9	5,841.0	5,945.2	5,797.4	25.6	23.0	-32.14	-1,893.1	-8,139.9	7,367.8	7,334.4	33.37	220.813	
6,038.1	5,875.1	5,972.0	5,824.2	25.7	23.0	-32.14	-1,893.6	-8,139.8	7,367.6	7,334.2	33.41	220.491	
6,051.8	5,888.9	5,982.0	5,834.1	25.7	23.0	-107.27	-1,893.8	-8,139.8	7,367.6	7,322.2	45.46	162.076	
6,081.8	5,918.9	6,008.2	5,860.3	25.7	23.1	-107.27	-1,894.4	-8,139.7	7,367.8	7,322.3	45.52	161.856	
6,100.0	5,937.1	6,024.0	5,876.2	25.7	23.1	162.72	-1,894.7	-8,139.7	7,368.1	7,334.6	33.46	220.209	
6,102.3	5,939.4	6,026.1	5,878.2	25.7	23.1	162.72	-1,894.8	-8,139.7	7,368.2	7,334.7	33.45	220.268	
6,150.0	5,987.0	6,053.0	5,905.2	25.7	23.1	162.64	-1,895.4	-8,139.7	7,371.3	7,338.1	33.22	221.904	
6,200.0	6,036.5	6,092.5	5,944.6	25.7	23.1	162.49	-1,896.1	-8,139.8	7,377.9	7,345.0	32.91	224.207	
6,200.8	6,037.3	6,093.0	5,945.1	25.7	23.1	162.48	-1,896.1	-8,139.8	7,378.0	7,345.1	32.90	224.251	
6,250.0	6,085.5	6,135.0	5,987.1	25.7	23.2	162.26	-1,896.3	-8,140.2	7,387.9	7,355.4	32.52	227.207	
6,299.2	6,133.0	6,168.9	6,021.0	25.6	23.2	161.95	-1,896.3	-8,140.7	7,401.0	7,368.9	32.06	230.874	
6,300.0	6,133.7	6,169.9	6,022.0	25.6	23.2	161.94	-1,896.3	-8,140.7	7,401.2	7,369.2	32.05	230.933	
6,350.0	6,180.9	6,233.0	6,085.1	25.5	23.3	161.56	-1,896.2	-8,141.5	7,417.7	7,386.1	31.57	234.988	
6,397.6	6,224.6	6,289.0	6,141.1	25.4	23.4	161.11	-1,896.3	-8,142.0	7,436.1	7,405.1	31.06	239.381	
6,400.0	6,226.7	6,291.7	6,143.8	25.4	23.4	161.09	-1,896.3	-8,142.0	7,437.1	7,406.1	31.04	239.609	
6,450.0	6,271.1	6,322.2	6,174.4	25.2	23.4	160.46	-1,896.5	-8,142.2	7,459.5	7,429.1	30.47	244.833	
6,496.0	6,310.4	6,346.3	6,198.4	25.1	23.5	159.77	-1,896.7	-8,142.5	7,482.8	7,452.9	29.96	249.768	
6,500.0	6,313.7	6,348.3	6,200.5	25.1	23.5	159.70	-1,896.7	-8,142.5	7,485.0	7,455.0	29.92	250.185	
6,550.0	6,354.4	6,380.0	6,232.1	25.0	23.5	158.79	-1,896.9	-8,142.9	7,513.2	7,483.8	29.43	255.249	
6,594.5	6,388.9	6,483.4	6,335.6	24.9	23.6	158.00	-1,897.6	-8,143.6	7,540.4	7,511.3	29.12	258.933	
6,600.0	6,393.0	6,487.2	6,339.4	24.9	23.6	157.87	-1,897.6	-8,143.6	7,543.9	7,514.8	29.08	259.384	
6,650.0	6,429.3	6,520.4	6,372.5	24.8	23.7	156.60	-1,897.6	-8,143.7	7,577.0	7,548.1	28.84	262.690	
6,692.9	6,458.5	6,543.0	6,395.1	24.7	23.7	155.28	-1,897.5	-8,143.9	7,607.2	7,578.4	28.81	264.036	
6,700.0	6,463.1	6,543.0	6,395.1	24.7	23.7	155.02	-1,897.5	-8,143.9	7,612.4	7,583.6	28.83	264.082	
6,750.0	6,494.3	6,569.6	6,421.7	24.7	23.7	153.12	-1,897.5	-8,144.1	7,650.0	7,620.9	29.11	262.835	
6,791.3	6,517.9	6,585.2	6,437.4	24.7	23.8	151.21	-1,897.5	-8,144.2	7,682.7	7,653.1	29.63	259.289	
6,800.0	6,522.6	6,588.3	6,440.5	24.7	23.8	150.76	-1,897.5	-8,144.2	7,689.7	7,659.9	29.78	258.247	
6,850.0	6,548.0	6,605.1	6,457.2	24.7	23.8	147.82	-1,897.5	-8,144.3	7,731.2	7,700.3	30.93	249.950	
6,889.7	6,566.0	6,625.0	6,477.1	24.8	23.8	145.01	-1,897.6	-8,144.5	7,765.4	7,733.1	32.24	240.879	
6,900.0	6,570.4	6,625.0	6,477.1	24.9	23.8	144.15	-1,897.6	-8,144.5	7,774.3	7,741.7	32.65	238.106	
6,950.0	6,589.5	6,637.3	6,489.5	25.1	23.8	139.44	-1,897.6	-8,144.6	7,818.8	7,783.8	35.05	223.045	
6,988.2	6,602.0	6,651.8	6,503.9	25.3	23.8	135.02	-1,897.7	-8,144.8	7,853.6	7,816.2	37.34	210.301	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 75-MWD												<b>Offset Well Error:</b>	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	6,605.4	6,655.8	6,507.9	25.3	23.9	133.47	-1,897.7	-8,144.8	7,864.5	7,826.3	38.13	206.253	
7,050.0	6,618.0	6,670.4	6,522.5	25.6	23.9	125.76	-1,897.8	-8,144.9	7,911.1	7,869.2	41.83	189.122	
7,086.6	6,625.0	6,678.5	6,530.6	25.9	23.9	118.77	-1,897.8	-8,145.0	7,945.7	7,900.9	44.74	177.584	
7,100.0	6,627.1	6,680.9	6,533.0	26.0	23.9	115.90	-1,897.8	-8,145.0	7,958.4	7,912.6	45.78	173.829	
7,150.0	6,632.8	6,687.3	6,539.4	26.5	23.9	103.78	-1,897.8	-8,145.1	8,006.2	7,957.1	49.12	162.976	
7,185.0	6,634.7	6,689.2	6,541.3	26.8	23.9	94.24	-1,897.8	-8,145.1	8,039.9	7,989.4	50.45	159.354	
7,200.0	6,635.0	6,689.4	6,541.5	27.0	23.9	90.02	-1,897.8	-8,145.1	8,054.3	8,003.6	50.65	159.009	
7,215.9	6,635.0	6,689.2	6,541.3	27.1	23.9	85.52	-1,897.8	-8,145.1	8,069.6	8,019.0	50.62	159.429	
7,283.4	6,634.1	6,687.5	6,539.6	27.9	23.9	85.47	-1,897.8	-8,145.1	8,134.6	8,083.1	51.44	158.137	
7,300.0	6,633.9	6,687.0	6,539.1	28.1	23.9	85.46	-1,897.8	-8,145.1	8,150.5	8,098.9	51.64	157.827	
7,381.9	6,632.9	6,684.9	6,537.0	29.3	23.9	85.40	-1,897.8	-8,145.1	8,229.4	8,176.6	52.81	155.845	
7,400.0	6,632.6	6,684.4	6,536.5	29.5	23.9	85.39	-1,897.8	-8,145.1	8,246.9	8,193.8	53.06	155.418	
7,480.3	6,631.6	6,682.3	6,534.4	30.8	23.9	85.34	-1,897.8	-8,145.0	8,324.3	8,269.9	54.35	153.149	
7,500.0	6,631.4	6,681.8	6,533.9	31.1	23.9	85.32	-1,897.8	-8,145.0	8,343.3	8,288.6	54.67	152.609	
7,578.7	6,630.4	6,679.7	6,531.8	32.5	23.9	85.27	-1,897.8	-8,145.0	8,419.3	8,363.2	56.06	150.173	
7,600.0	6,630.1	6,679.1	6,531.3	32.9	23.9	85.25	-1,897.8	-8,145.0	8,439.8	8,383.4	56.44	149.536	
7,677.1	6,629.1	6,677.1	6,529.2	34.3	23.9	85.20	-1,897.8	-8,145.0	8,514.3	8,456.4	57.91	147.028	
7,700.0	6,628.8	6,676.5	6,528.6	34.8	23.9	85.18	-1,897.8	-8,145.0	8,536.4	8,478.0	58.34	146.311	
7,775.6	6,627.8	6,674.5	6,526.6	36.3	23.9	85.13	-1,897.8	-8,145.0	8,609.4	8,549.6	59.87	143.803	
7,800.0	6,627.5	6,673.9	6,526.0	36.8	23.9	85.11	-1,897.8	-8,145.0	8,633.0	8,572.7	60.36	143.020	
7,874.0	6,626.6	6,671.9	6,524.0	38.4	23.9	85.06	-1,897.8	-8,144.9	8,704.6	8,642.7	61.93	140.562	
7,900.0	6,626.3	6,671.2	6,523.3	38.9	23.9	85.04	-1,897.8	-8,144.9	8,729.8	8,667.3	62.48	139.729	
7,972.4	6,625.3	6,669.3	6,521.4	40.5	23.9	84.99	-1,897.7	-8,144.9	8,799.9	8,735.8	64.07	137.355	
8,000.0	6,625.0	6,668.5	6,520.7	41.1	23.9	84.97	-1,897.7	-8,144.9	8,826.6	8,761.9	64.67	136.483	
8,070.8	6,624.1	6,666.7	6,518.8	42.7	23.9	84.92	-1,897.7	-8,144.9	8,895.2	8,828.9	66.28	134.215	
8,100.0	6,623.7	6,665.9	6,518.0	43.4	23.9	84.90	-1,897.7	-8,144.9	8,923.5	8,856.5	66.94	133.315	
8,169.3	6,622.8	6,664.0	6,516.1	45.0	23.9	84.86	-1,897.7	-8,144.9	8,990.6	8,922.1	68.54	131.166	
8,200.0	6,622.4	6,663.2	6,515.3	45.7	23.9	84.83	-1,897.7	-8,144.9	9,020.4	8,951.2	69.26	130.246	
8,267.7	6,621.6	6,661.4	6,513.5	47.4	23.9	84.79	-1,897.7	-8,144.9	9,086.1	9,015.2	70.86	128.222	
8,300.0	6,621.1	6,660.5	6,512.6	48.1	23.9	84.76	-1,897.7	-8,144.8	9,117.4	9,045.8	71.63	127.289	
8,366.1	6,620.3	6,658.7	6,510.9	49.7	23.9	84.72	-1,897.7	-8,144.8	9,181.6	9,108.4	73.22	125.391	
8,400.0	6,619.9	6,657.8	6,509.9	50.6	23.9	84.69	-1,897.7	-8,144.8	9,214.5	9,140.5	74.04	124.451	
8,464.5	6,619.0	6,656.1	6,508.2	52.2	23.9	84.65	-1,897.7	-8,144.8	9,277.2	9,201.6	75.62	122.677	
8,500.0	6,618.6	6,655.1	6,507.2	53.0	23.9	84.62	-1,897.7	-8,144.8	9,311.6	9,235.2	76.49	121.735	
8,563.0	6,617.8	6,653.4	6,505.5	54.6	23.8	84.58	-1,897.7	-8,144.8	9,372.8	9,294.8	78.05	120.082	
8,600.0	6,617.3	6,652.4	6,504.5	55.5	23.8	84.55	-1,897.7	-8,144.8	9,408.8	9,329.9	78.97	119.141	
8,661.4	6,616.5	6,650.8	6,502.9	57.1	23.8	84.51	-1,897.7	-8,144.8	9,468.5	9,388.0	80.51	117.604	
8,700.0	6,616.0	6,649.7	6,501.8	58.1	23.8	84.48	-1,897.7	-8,144.7	9,506.1	9,424.6	81.48	116.667	
8,759.8	6,615.2	6,648.1	6,500.2	59.6	23.8	84.44	-1,897.7	-8,144.7	9,564.3	9,481.3	83.00	115.239	
8,800.0	6,614.7	6,647.0	6,499.1	60.6	23.8	84.41	-1,897.7	-8,144.7	9,603.4	9,519.4	84.01	114.310	
8,858.2	6,614.0	6,645.4	6,497.5	62.1	23.8	84.37	-1,897.7	-8,144.7	9,660.1	9,574.6	85.50	112.985	
8,900.0	6,613.4	6,644.3	6,496.4	63.2	23.8	84.34	-1,897.7	-8,144.7	9,700.8	9,614.2	86.56	112.064	
8,956.7	6,612.7	6,642.7	6,494.8	64.7	23.8	84.30	-1,897.7	-8,144.7	9,756.0	9,667.9	88.02	110.836	
9,000.0	6,612.2	6,641.5	6,493.6	65.8	23.8	84.26	-1,897.7	-8,144.7	9,798.2	9,709.0	89.14	109.925	
9,055.1	6,611.5	6,640.1	6,492.2	67.3	23.8	84.23	-1,897.7	-8,144.7	9,851.9	9,761.3	90.56	108.787	
9,100.0	6,610.9	6,638.9	6,491.0	68.4	23.8	84.20	-1,897.6	-8,144.6	9,895.7	9,803.9	91.72	107.886	
9,153.5	6,610.2	6,637.5	6,489.6	69.8	23.8	84.16	-1,897.6	-8,144.6	9,947.8	9,854.7	93.12	106.833	
9,200.0	6,609.6	6,636.3	6,488.4	71.1	23.8	84.13	-1,897.6	-8,144.6	9,993.2	9,898.8	94.32	105.944 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 75-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-105.35	-1,947.3	-7,091.5	7,354.0					
98.4	98.4	50.9	50.9	0.1	0.0	-105.35	-1,947.3	-7,091.6	7,354.2	7,354.1	0.10	N/A		
100.0	100.0	52.0	52.0	0.1	0.0	-105.35	-1,947.3	-7,091.6	7,354.2	7,354.1	0.10	N/A		
196.8	196.8	153.2	153.2	0.3	0.1	-105.36	-1,947.5	-7,092.0	7,354.6	7,354.2	0.39	N/A		
200.0	200.0	157.2	157.2	0.3	0.1	-105.36	-1,947.5	-7,092.0	7,354.6	7,354.2	0.40	N/A		
295.3	295.3	1,109.9	1,095.3	0.5	3.5	-106.40	-2,060.7	-7,003.5	7,346.2	7,343.3	2.96	2,478.934		
300.0	300.0	1,111.9	1,097.3	0.5	3.5	-106.40	-2,061.1	-7,003.1	7,345.7	7,342.7	2.98	2,465.248		
393.7	393.7	1,592.5	1,549.8	0.8	6.5	-107.57	-2,184.7	-6,899.5	7,332.1	7,327.5	4.57	1,605.718		
400.0	400.0	1,596.1	1,553.2	0.8	6.6	-107.58	-2,185.7	-6,898.6	7,331.1	7,326.5	4.59	1,596.518		
492.1	492.1	1,645.0	1,598.8	1.0	6.9	-107.71	-2,198.8	-6,886.8	7,316.6	7,311.6	4.95	1,477.576		
500.0	500.0	1,655.7	1,608.8	1.0	7.0	-107.74	-2,201.8	-6,884.2	7,315.3	7,310.3	5.00	1,462.074		
590.5	590.5	1,726.0	1,674.0	1.2	7.5	-107.93	-2,221.7	-6,867.3	7,301.6	7,296.1	5.43	1,345.210		
600.0	600.0	1,726.0	1,674.0	1.2	7.5	-107.93	-2,221.7	-6,867.3	7,300.1	7,294.7	5.45	1,339.705		
689.0	689.0	1,760.7	1,706.1	1.4	7.8	-108.02	-2,231.8	-6,859.0	7,287.2	7,281.4	5.75	1,266.245		
700.0	700.0	1,765.2	1,710.3	1.4	7.8	-108.04	-2,233.1	-6,858.0	7,285.6	7,279.8	5.79	1,257.604		
787.4	787.4	1,808.0	1,749.9	1.6	8.1	-108.16	-2,245.9	-6,848.0	7,273.6	7,267.4	6.12	1,188.560		
800.0	800.0	1,808.0	1,749.9	1.7	8.1	-108.16	-2,245.9	-6,848.0	7,271.9	7,265.7	6.15	1,182.810		
885.8	885.8	2,088.9	2,007.9	1.9	10.2	-108.99	-2,333.4	-6,779.8	7,260.5	7,253.3	7.20	1,007.838		
900.0	900.0	2,095.0	2,013.5	1.9	10.3	-109.01	-2,335.3	-6,778.2	7,258.2	7,251.0	7.25	1,000.453		
984.2	984.2	2,135.0	2,050.1	2.1	10.6	-109.13	-2,347.8	-6,767.9	7,245.4	7,237.8	7.57	957.351		
1,000.0	1,000.0	2,216.0	2,124.4	2.1	11.2	-109.37	-2,372.3	-6,747.1	7,243.0	7,235.1	7.84	923.396		
1,082.7	1,082.7	2,216.0	2,124.4	2.3	11.2	-109.37	-2,372.3	-6,747.1	7,230.4	7,222.3	8.03	900.457		
1,100.0	1,100.0	2,216.0	2,124.4	2.3	11.2	-109.37	-2,372.3	-6,747.1	7,227.8	7,219.8	8.07	895.798		
1,181.1	1,181.1	3,051.9	2,901.6	2.5	17.0	-111.52	-2,568.5	-6,514.8	7,215.9	7,205.1	10.85	664.910		
1,200.0	1,200.0	3,066.0	2,914.5	2.6	17.1	-111.55	-2,571.3	-6,510.3	7,211.4	7,200.4	10.94	659.012		
1,279.5	1,279.5	3,114.0	2,959.0	2.7	17.4	-111.67	-2,580.7	-6,494.7	7,192.4	7,181.1	11.28	637.364		
1,300.0	1,300.0	3,114.0	2,959.0	2.8	17.4	-111.67	-2,580.7	-6,494.7	7,187.6	7,176.2	11.33	634.351		
1,377.9	1,377.9	3,153.8	2,996.1	3.0	17.7	-111.77	-2,588.2	-6,482.2	7,169.5	7,157.8	11.63	616.197		
1,400.0	1,400.0	3,161.6	3,003.3	3.0	17.7	-111.78	-2,589.7	-6,479.8	7,164.4	7,152.7	11.71	611.835		
1,476.4	1,476.4	3,196.0	3,035.5	3.2	18.0	-36.96	-2,596.0	-6,469.3	7,146.6	7,126.4	20.18	354.125		
1,500.0	1,500.0	3,196.0	3,035.5	3.2	18.0	-37.03	-2,596.0	-6,469.3	7,140.8	7,120.6	20.23	352.942		
1,574.8	1,574.7	3,227.6	3,065.0	3.4	18.2	-37.35	-2,601.9	-6,460.0	7,122.0	7,101.4	20.58	346.080		
1,600.0	1,599.8	3,237.8	3,074.6	3.4	18.3	-37.46	-2,603.8	-6,456.9	7,115.4	7,094.7	20.69	343.867		
1,673.2	1,672.8	3,277.0	3,111.3	3.6	18.5	-37.83	-2,611.5	-6,445.5	7,095.6	7,074.5	21.08	336.587		
1,700.0	1,699.5	3,680.1	3,487.1	3.7	21.4	-39.12	-2,683.4	-6,318.9	7,087.1	7,063.4	23.70	299.083		
1,771.6	1,770.6	3,726.1	3,529.1	3.8	21.7	-39.60	-2,693.0	-6,302.8	7,062.7	7,038.5	24.19	291.913		
1,800.0	1,798.7	3,742.6	3,544.2	3.9	21.9	-39.80	-2,696.6	-6,297.0	7,052.7	7,028.4	24.38	289.279		
1,870.1	1,868.0	4,026.0	3,797.8	4.1	24.4	-41.33	-2,765.5	-6,191.4	7,027.1	7,000.1	26.95	260.757		
1,900.0	1,897.5	4,060.2	3,828.1	4.2	24.8	-41.65	-2,774.2	-6,177.9	7,015.1	6,987.8	27.32	256.739		
1,968.5	1,964.8	4,120.3	3,881.2	4.4	25.3	-42.34	-2,789.0	-6,154.2	6,987.0	6,959.0	28.01	249.426		
2,000.0	1,995.6	4,141.7	3,900.4	4.5	25.5	-42.63	-2,794.0	-6,145.9	6,973.7	6,945.4	28.27	246.702		
2,066.9	2,060.9	4,176.0	3,931.2	4.7	25.8	-43.22	-2,801.4	-6,132.7	6,944.9	6,916.2	28.73	241.714		
2,100.0	2,093.1	4,176.0	3,931.2	4.8	25.8	-43.44	-2,801.4	-6,132.7	6,930.5	6,901.7	28.82	240.462		
2,165.3	2,156.3	4,176.0	3,931.2	5.1	25.8	-43.89	-2,801.4	-6,132.7	6,901.6	6,872.5	29.02	237.856		
2,200.0	2,189.6	4,210.4	3,962.2	5.2	26.1	-44.30	-2,808.6	-6,119.9	6,885.7	6,856.3	29.39	234.268		
2,263.8	2,250.7	4,224.6	3,975.1	5.5	26.2	-44.83	-2,811.6	-6,114.6	6,856.5	6,826.8	29.72	230.716		
2,280.0	2,266.2	4,228.2	3,978.3	5.6	26.2	-44.97	-2,812.4	-6,113.3	6,849.0	6,819.2	29.80	229.821		
2,300.0	2,285.3	4,257.0	4,004.4	5.7	26.5	-45.12	-2,818.8	-6,102.9	6,839.9	6,809.8	30.11	227.186		
2,362.2	2,344.6	4,257.0	4,004.4	6.0	26.5	-45.12	-2,818.8	-6,102.9	6,811.2	6,780.9	30.34	224.520		
2,400.0	2,380.6	4,257.0	4,004.4	6.2	26.5	-45.12	-2,818.8	-6,102.9	6,794.0	6,763.5	30.48	222.868		
2,460.6	2,438.4	4,282.0	4,027.0	6.5	26.7	-45.25	-2,824.4	-6,093.9	6,766.7	6,735.7	30.93	218.778		
2,500.0	2,475.9	4,301.4	4,044.6	6.7	26.8	-45.35	-2,828.9	-6,087.0	6,749.0	6,717.8	31.25	215.987		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	4,339.0	4,078.7	7.0	27.1	-45.55	-2,837.5	-6,073.7	6,722.8	6,691.0	31.80	211.392	
2,600.0	2,571.2	4,339.0	4,078.7	7.2	27.1	-45.55	-2,837.5	-6,073.7	6,704.7	6,672.7	31.97	209.705	
2,657.5	2,626.0	4,339.0	4,078.7	7.5	27.1	-45.55	-2,837.5	-6,073.7	6,679.7	6,647.5	32.22	207.342	
2,700.0	2,666.6	4,371.4	4,108.1	7.8	27.4	-45.73	-2,845.1	-6,062.3	6,661.2	6,628.6	32.67	203.875	
2,755.9	2,719.8	4,386.1	4,121.4	8.1	27.5	-45.81	-2,848.6	-6,057.2	6,637.3	6,604.3	33.04	200.877	
2,800.0	2,761.9	4,420.0	4,152.2	8.3	27.8	-45.99	-2,857.0	-6,045.6	6,618.8	6,585.3	33.53	197.424	
2,854.3	2,813.7	4,420.0	4,152.2	8.7	27.8	-45.99	-2,857.0	-6,045.6	6,596.0	6,562.2	33.77	195.334	
2,900.0	2,857.2	4,420.0	4,152.2	8.9	27.8	-45.99	-2,857.0	-6,045.6	6,577.1	6,543.1	33.97	193.605	
2,952.7	2,907.5	4,420.0	4,152.2	9.2	27.8	-45.99	-2,857.0	-6,045.6	6,555.6	6,521.4	34.21	191.626	
3,000.0	2,952.5	4,454.0	4,183.0	9.5	28.1	-46.18	-2,865.5	-6,034.3	6,536.4	6,501.7	34.71	188.305	
3,051.2	3,001.3	4,469.2	4,196.9	9.8	28.2	-46.26	-2,869.3	-6,029.3	6,516.0	6,480.9	35.08	185.765	
3,100.0	3,047.8	4,502.0	4,226.9	10.1	28.5	-46.44	-2,877.4	-6,018.8	6,496.8	6,461.2	35.58	182.597	
3,149.6	3,095.1	4,502.0	4,226.9	10.4	28.5	-46.44	-2,877.4	-6,018.8	6,477.4	6,441.6	35.81	180.876	
3,200.0	3,143.2	4,577.3	4,295.9	10.7	29.1	-46.85	-2,895.8	-5,994.7	6,457.8	6,421.1	36.68	176.066	
3,248.0	3,188.9	4,584.0	4,302.0	11.0	29.1	-46.88	-2,897.4	-5,992.6	6,439.2	6,402.2	36.96	174.214	
3,300.0	3,238.5	4,615.8	4,331.1	11.3	29.4	-47.06	-2,905.1	-5,982.5	6,419.2	6,381.7	37.47	171.301	
3,346.4	3,282.8	4,631.2	4,345.2	11.6	29.5	-47.14	-2,908.8	-5,977.7	6,401.6	6,363.7	37.82	169.245	
3,400.0	3,333.8	4,665.0	4,376.4	11.9	29.8	-47.32	-2,917.1	-5,967.2	6,381.6	6,343.2	38.37	166.337	
3,444.9	3,376.6	4,665.0	4,376.4	12.2	29.8	-47.32	-2,917.1	-5,967.2	6,364.9	6,326.3	38.58	164.971	
3,500.0	3,429.1	4,665.0	4,376.4	12.6	29.8	-47.32	-2,917.1	-5,967.2	6,344.8	6,306.0	38.85	163.324	
3,543.3	3,470.4	4,698.4	4,407.2	12.8	30.0	-47.50	-2,925.1	-5,957.2	6,329.1	6,289.8	39.33	160.941	
3,600.0	3,524.4	4,718.6	4,425.9	13.2	30.1	-47.61	-2,929.9	-5,951.3	6,309.0	6,269.2	39.76	158.662	
3,641.7	3,564.2	4,747.0	4,452.3	13.4	30.4	-47.76	-2,936.4	-5,943.2	6,294.3	6,254.1	40.20	156.593	
3,700.0	3,619.8	4,787.8	4,490.4	13.8	30.6	-47.98	-2,945.7	-5,931.7	6,274.1	6,233.3	40.80	153.765	
3,740.1	3,658.0	4,843.1	4,541.8	14.0	31.0	-48.27	-2,958.1	-5,915.9	6,260.0	6,218.6	41.44	151.076	
3,800.0	3,715.1	4,888.6	4,584.3	14.4	31.4	-48.51	-2,968.1	-5,902.9	6,239.2	6,197.1	42.09	148.230	
3,838.6	3,751.8	4,910.0	4,604.3	14.7	31.5	-48.62	-2,972.8	-5,896.9	6,225.9	6,183.4	42.45	146.655	
3,900.0	3,810.4	4,910.0	4,604.3	15.0	31.5	-48.62	-2,972.8	-5,896.9	6,205.0	6,162.3	42.76	145.115	
3,937.0	3,845.7	4,940.0	4,632.4	15.3	31.7	-48.78	-2,979.1	-5,888.6	6,192.5	6,149.3	43.16	143.467	
4,000.0	3,905.7	4,957.7	4,649.1	15.7	31.8	-48.87	-2,982.8	-5,883.9	6,171.7	6,128.1	43.61	141.524	
4,035.4	3,939.5	4,992.0	4,681.7	15.9	32.0	-49.04	-2,989.5	-5,875.4	6,160.3	6,116.3	44.04	139.890	
4,100.0	4,001.0	4,992.0	4,681.7	16.3	32.0	-49.04	-2,989.5	-5,875.4	6,139.5	6,095.2	44.36	138.393	
4,133.8	4,033.3	5,155.0	4,836.6	16.5	33.0	-49.85	-3,019.0	-5,834.2	6,128.2	6,082.6	45.67	134.177	
4,200.0	4,096.3	5,184.7	4,864.9	16.9	33.2	-49.99	-3,023.9	-5,826.7	6,106.3	6,060.1	46.21	132.157	
4,232.3	4,127.1	5,196.6	4,876.2	17.1	33.3	-50.05	-3,025.8	-5,823.8	6,095.8	6,049.3	46.45	131.239	
4,300.0	4,191.7	5,237.0	4,915.0	17.6	33.5	-50.24	-3,032.3	-5,814.1	6,074.0	6,027.0	47.06	129.069	
4,330.7	4,220.9	5,237.0	4,915.0	17.8	33.5	-50.24	-3,032.3	-5,814.1	6,064.3	6,017.0	47.22	128.430	
4,400.0	4,287.0	5,259.8	4,936.9	18.2	33.6	-50.35	-3,035.7	-5,809.0	6,042.6	5,994.9	47.71	126.666	
4,429.1	4,314.7	5,271.3	4,948.0	18.4	33.7	-50.40	-3,037.3	-5,806.5	6,033.7	5,985.7	47.92	125.909	
4,500.0	4,382.3	5,318.0	4,993.4	18.8	33.9	-50.60	-3,043.0	-5,797.2	6,012.3	5,963.7	48.55	123.834	
4,527.5	4,408.6	5,318.0	4,993.4	19.0	33.9	-50.60	-3,043.0	-5,797.2	6,004.0	5,955.3	48.69	123.301	
4,600.0	4,477.6	5,318.0	4,993.4	19.5	33.9	-50.60	-3,043.0	-5,797.2	5,982.8	5,933.8	49.07	121.925	
4,626.0	4,502.4	5,318.0	4,993.4	19.6	33.9	-50.60	-3,043.0	-5,797.2	5,975.4	5,926.2	49.20	121.440	
4,700.0	4,572.9	5,353.2	5,027.9	20.1	34.0	-50.75	-3,046.8	-5,791.0	5,954.5	5,904.8	49.75	119.677	
4,724.4	4,596.2	5,358.8	5,033.4	20.3	34.1	-50.77	-3,047.4	-5,790.1	5,947.8	5,897.9	49.91	119.175	
4,800.0	4,668.3	5,400.0	5,073.9	20.7	34.2	-50.94	-3,051.7	-5,784.0	5,927.6	5,877.1	50.50	117.390	
4,822.8	4,690.0	5,400.0	5,073.9	20.9	34.2	-50.94	-3,051.7	-5,784.0	5,921.6	5,871.0	50.61	116.993	
4,900.0	4,763.6	5,400.0	5,073.9	21.4	34.2	-50.94	-3,051.7	-5,784.0	5,901.6	5,850.6	51.02	115.677	
4,921.2	4,783.8	5,400.0	5,073.9	21.5	34.2	-50.94	-3,051.7	-5,784.0	5,896.3	5,845.2	51.13	115.322	
5,000.0	4,858.9	5,451.8	5,124.9	22.0	34.4	-51.13	-3,056.9	-5,777.3	5,876.8	5,825.1	51.76	113.540	
5,019.7	4,877.7	5,462.2	5,135.3	22.1	34.4	-51.17	-3,057.9	-5,776.0	5,872.0	5,820.1	51.91	113.126	
5,100.0	4,954.2	5,482.0	5,154.8	22.6	34.5	-51.25	-3,059.8	-5,773.6	5,852.9	5,800.5	52.41	111.670	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	5,509.7	5,182.2	22.8	34.6	-51.35	-3,062.4	-5,770.4	5,848.6	5,796.0	52.62	111.154	
5,171.8	5,022.7	5,534.2	5,206.5	23.1	34.6	-51.44	-3,064.6	-5,767.8	5,836.1	5,783.1	53.00	110.124	
5,200.0	5,049.6	5,563.0	5,235.0	23.3	34.7	-51.45	-3,067.3	-5,764.8	5,829.8	5,776.6	53.24	109.492	
5,216.5	5,065.4	5,563.0	5,235.0	23.3	34.7	-51.39	-3,067.3	-5,764.8	5,826.2	5,772.9	53.31	109.284	
5,300.0	5,145.7	5,563.0	5,235.0	23.7	34.7	-51.12	-3,067.3	-5,764.8	5,809.4	5,755.8	53.66	108.270	
5,314.9	5,160.1	5,563.0	5,235.0	23.8	34.7	-51.08	-3,067.3	-5,764.8	5,806.7	5,753.0	53.71	108.105	
5,400.0	5,242.7	5,617.0	5,288.6	24.1	34.9	-51.02	-3,071.9	-5,760.2	5,792.1	5,737.9	54.22	106.833	
5,413.4	5,255.7	5,645.0	5,316.4	24.2	34.9	-51.06	-3,074.2	-5,758.3	5,790.2	5,735.8	54.35	106.528	
5,500.0	5,340.5	5,645.0	5,316.4	24.5	34.9	-50.87	-3,074.2	-5,758.3	5,778.2	5,723.6	54.65	105.734	
5,511.8	5,352.1	5,662.8	5,334.2	24.5	35.0	-50.90	-3,075.7	-5,757.3	5,776.8	5,722.0	54.74	105.535	
5,600.0	5,439.0	5,727.0	5,398.0	24.8	35.1	-50.90	-3,081.2	-5,753.6	5,767.3	5,712.1	55.20	104.489	
5,610.2	5,449.1	5,817.9	5,488.5	24.8	35.3	-51.08	-3,088.2	-5,748.1	5,766.3	5,710.8	55.48	103.932	
5,700.0	5,538.0	5,890.0	5,560.3	25.1	35.4	-51.08	-3,092.6	-5,744.2	5,757.7	5,701.8	55.89	103.011	
5,708.6	5,546.6	5,897.4	5,567.7	25.1	35.5	-51.08	-3,093.0	-5,743.8	5,757.0	5,701.0	55.93	102.934	
5,800.0	5,637.4	6,018.5	5,688.6	25.3	35.6	-51.14	-3,097.8	-5,738.7	5,749.9	5,693.6	56.36	102.013	
5,807.1	5,644.5	6,025.1	5,695.1	25.3	35.7	-51.14	-3,098.0	-5,738.4	5,749.5	5,693.1	56.39	101.962	
5,900.0	5,737.2	6,117.4	5,787.4	25.5	35.8	-51.14	-3,100.3	-5,735.4	5,744.3	5,687.6	56.69	101.320	
5,905.5	5,742.6	6,123.0	5,793.0	25.5	35.8	-51.14	-3,100.4	-5,735.3	5,744.1	5,687.4	56.71	101.287	
6,000.0	5,837.1	6,229.9	5,899.9	25.6	35.9	-51.15	-3,101.6	-5,732.6	5,740.8	5,683.8	56.97	100.768	
6,003.9	5,841.0	6,234.6	5,904.6	25.6	35.9	-51.15	-3,101.7	-5,732.5	5,740.7	5,683.7	56.98	100.750	
6,051.8	5,888.9	6,292.6	5,962.6	25.7	36.0	-126.27	-3,102.1	-5,731.1	5,739.7	5,701.2	38.44	149.302	
6,081.8	5,918.9	6,321.0	5,990.9	25.7	36.0	-126.28	-3,102.3	-5,730.3	5,739.2	5,700.7	38.52	148.983	
6,095.8	5,932.9	6,333.6	6,003.6	25.7	36.0	143.72	-3,102.4	-5,730.0	5,739.1	5,681.9	57.18	100.376 CC, ES	
6,100.0	5,937.1	6,337.4	6,007.3	25.7	36.0	143.72	-3,102.4	-5,729.9	5,739.1	5,681.9	57.18	100.370	
6,102.3	5,939.4	6,339.5	6,009.4	25.7	36.0	143.72	-3,102.5	-5,729.8	5,739.1	5,681.9	57.18	100.370	
6,150.0	5,987.0	6,382.7	6,052.6	25.7	36.1	143.65	-3,103.0	-5,728.6	5,740.8	5,683.6	57.14	100.461	
6,200.0	6,036.5	6,433.9	6,103.7	25.7	36.1	143.46	-3,103.6	-5,727.2	5,745.2	5,688.2	56.99	100.803	
6,200.8	6,037.3	6,434.6	6,104.5	25.7	36.1	143.46	-3,103.6	-5,727.2	5,745.3	5,688.3	56.99	100.810	
6,250.0	6,085.5	6,461.0	6,130.9	25.7	36.2	143.13	-3,103.9	-5,726.5	5,752.5	5,695.8	56.71	101.437	
6,299.2	6,133.0	6,502.9	6,172.7	25.6	36.2	142.69	-3,104.3	-5,725.5	5,762.5	5,706.2	56.34	102.279	
6,300.0	6,133.7	6,503.3	6,173.2	25.6	36.2	142.69	-3,104.4	-5,725.5	5,762.7	5,706.4	56.33	102.295	
6,350.0	6,180.9	6,543.0	6,212.8	25.5	36.3	142.10	-3,104.9	-5,724.7	5,775.8	5,719.9	55.86	103.388	
6,397.6	6,224.6	6,593.6	6,263.5	25.4	36.3	141.45	-3,105.5	-5,723.8	5,790.7	5,735.3	55.35	104.619	
6,400.0	6,226.7	6,598.1	6,267.9	25.4	36.3	141.42	-3,105.6	-5,723.7	5,791.5	5,736.2	55.32	104.684	
6,450.0	6,271.1	6,676.7	6,346.5	25.2	36.4	140.67	-3,106.1	-5,721.9	5,809.6	5,754.8	54.72	106.162	
6,496.0	6,310.4	6,725.0	6,394.8	25.1	36.5	139.78	-3,106.4	-5,720.7	5,828.3	5,774.1	54.13	107.667	
6,500.0	6,313.7	6,727.9	6,397.7	25.1	36.5	139.69	-3,106.4	-5,720.6	5,830.0	5,775.9	54.08	107.801	
6,550.0	6,354.4	6,763.7	6,433.5	25.0	36.5	138.49	-3,106.6	-5,719.7	5,852.8	5,799.4	53.43	109.535	
6,594.5	6,388.9	6,795.0	6,464.7	24.9	36.5	137.24	-3,107.0	-5,718.8	5,875.2	5,822.3	52.88	111.105	
6,600.0	6,393.0	6,799.1	6,468.9	24.9	36.5	137.08	-3,107.0	-5,718.7	5,878.1	5,825.3	52.81	111.300	
6,650.0	6,429.3	6,835.5	6,505.2	24.8	36.6	135.45	-3,107.3	-5,717.7	5,905.6	5,853.3	52.25	113.018	
6,692.9	6,458.5	6,864.7	6,534.4	24.7	36.6	133.84	-3,107.6	-5,717.0	5,930.8	5,879.0	51.85	114.380	
6,700.0	6,463.1	6,870.0	6,539.7	24.7	36.6	133.56	-3,107.6	-5,716.9	5,935.2	5,883.4	51.79	114.596	
6,750.0	6,494.3	6,889.6	6,559.4	24.7	36.6	131.29	-3,107.8	-5,716.4	5,966.8	5,915.3	51.49	115.889	
6,791.3	6,517.9	6,904.9	6,574.6	24.7	36.7	129.15	-3,108.0	-5,716.0	5,994.3	5,942.9	51.38	116.676	
6,800.0	6,522.6	6,907.9	6,577.6	24.7	36.7	128.67	-3,108.0	-5,716.0	6,000.3	5,948.9	51.37	116.812	
6,850.0	6,548.0	6,924.4	6,594.1	24.7	36.7	125.65	-3,108.2	-5,715.6	6,035.5	5,984.0	51.47	117.271	
6,889.7	6,566.0	6,951.0	6,620.7	24.8	36.7	123.10	-3,108.5	-5,715.0	6,064.6	6,012.9	51.69	117.329	
6,900.0	6,570.4	6,951.0	6,620.7	24.9	36.7	122.33	-3,108.5	-5,715.0	6,072.3	6,020.5	51.78	117.269	
6,950.0	6,589.5	6,951.6	6,621.3	25.1	36.7	118.27	-3,108.5	-5,715.0	6,110.4	6,058.0	52.40	116.620	
6,988.2	6,602.0	6,968.3	6,638.0	25.3	36.7	115.04	-3,108.8	-5,714.7	6,140.3	6,087.3	52.98	115.889	
7,000.0	6,605.4	6,973.0	6,642.7	25.3	36.7	113.98	-3,108.8	-5,714.6	6,149.6	6,096.5	53.18	115.629	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD JURGENS STATE #B16-30D - Wellbore #1 - Wellbo												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 75-MWD												<b>Offset Well Error:</b>	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	6,618.0	6,990.0	6,659.7	25.6	36.8	109.17	-3,109.0	-5,714.3	6,189.9	6,135.7	54.15	114.302	
7,086.6	6,625.0	6,999.8	6,669.5	25.9	36.8	105.33	-3,109.1	-5,714.1	6,219.8	6,164.9	54.94	113.218	
7,100.0	6,627.1	7,002.8	6,672.4	26.0	36.8	103.86	-3,109.1	-5,714.0	6,230.9	6,175.7	55.22	112.837	
7,150.0	6,632.8	7,011.1	6,680.8	26.5	36.8	98.11	-3,109.2	-5,713.9	6,272.5	6,216.2	56.27	111.475	
7,185.0	6,634.7	7,014.3	6,684.0	26.8	36.8	93.87	-3,109.2	-5,713.8	6,301.9	6,245.0	56.93	110.699	
7,200.0	6,635.0	7,015.1	6,684.8	27.0	36.8	92.02	-3,109.2	-5,713.8	6,314.5	6,257.3	57.17	110.449	
7,215.9	6,635.0	7,015.4	6,685.1	27.1	36.8	90.03	-3,109.3	-5,713.8	6,327.9	6,270.5	57.41	110.225	
7,283.4	6,634.1	7,015.9	6,685.6	27.9	36.8	90.04	-3,109.3	-5,713.8	6,384.9	6,326.7	58.24	109.625	
7,300.0	6,633.9	7,016.0	6,685.7	28.1	36.8	90.04	-3,109.3	-5,713.8	6,398.9	6,340.5	58.45	109.482	
7,381.9	6,632.9	7,016.6	6,686.3	29.3	36.8	90.05	-3,109.3	-5,713.8	6,468.4	6,408.8	59.62	108.489	
7,400.0	6,632.6	7,016.7	6,686.4	29.5	36.8	90.05	-3,109.3	-5,713.8	6,483.9	6,424.0	59.88	108.275	
7,480.3	6,631.6	7,017.3	6,687.0	30.8	36.8	90.06	-3,109.3	-5,713.8	6,552.3	6,491.2	61.19	107.087	
7,500.0	6,631.4	7,017.4	6,687.1	31.1	36.8	90.07	-3,109.3	-5,713.8	6,569.2	6,507.7	61.51	106.804	
7,578.7	6,630.4	7,018.0	6,687.6	32.5	36.8	90.08	-3,109.3	-5,713.8	6,636.7	6,573.7	62.91	105.490	
7,600.0	6,630.1	7,018.1	6,687.8	32.9	36.8	90.08	-3,109.3	-5,713.8	6,654.9	6,591.6	63.29	105.146	
7,677.1	6,629.1	7,018.6	6,688.3	34.3	36.8	90.09	-3,109.3	-5,713.8	6,721.4	6,656.6	64.77	103.766	
7,700.0	6,628.8	7,018.8	6,688.5	34.8	36.8	90.09	-3,109.3	-5,713.7	6,741.1	6,675.9	65.21	103.370	
7,775.6	6,627.8	7,019.3	6,689.0	36.3	36.8	90.10	-3,109.3	-5,713.7	6,806.4	6,739.7	66.75	101.967	
7,800.0	6,627.5	7,019.5	6,689.2	36.8	36.8	90.10	-3,109.3	-5,713.7	6,827.6	6,760.3	67.25	101.528	
7,874.0	6,626.6	7,020.0	6,689.7	38.4	36.8	90.11	-3,109.3	-5,713.7	6,891.8	6,823.0	68.83	100.134	
7,900.0	6,626.3	7,020.2	6,689.8	38.9	36.8	90.11	-3,109.3	-5,713.7	6,914.5	6,845.1	69.38	99.659	
7,972.4	6,625.3	7,020.7	6,690.3	40.5	36.8	90.12	-3,109.3	-5,713.7	6,977.6	6,906.6	70.98	98.298	
8,000.0	6,625.0	7,020.8	6,690.5	41.1	36.8	90.12	-3,109.3	-5,713.7	7,001.7	6,930.1	71.59	97.796	
8,070.8	6,624.1	7,021.3	6,691.0	42.7	36.8	90.13	-3,109.3	-5,713.7	7,063.7	6,990.5	73.21	96.482	
8,100.0	6,623.7	7,021.5	6,691.2	43.4	36.8	90.13	-3,109.3	-5,713.7	7,089.2	7,015.4	73.88	95.959	
8,169.3	6,622.8	7,022.0	6,691.7	45.0	36.8	90.14	-3,109.3	-5,713.7	7,150.1	7,074.6	75.50	94.703	
8,200.0	6,622.4	7,022.2	6,691.9	45.7	36.8	90.14	-3,109.3	-5,713.7	7,177.1	7,100.9	76.22	94.164	
8,267.7	6,621.6	7,022.6	6,692.3	47.4	36.8	90.15	-3,109.3	-5,713.7	7,236.8	7,159.0	77.84	92.971	
8,300.0	6,621.1	7,022.9	6,692.5	48.1	36.8	90.15	-3,109.3	-5,713.7	7,265.3	7,186.7	78.61	92.420	
8,366.1	6,620.3	7,023.3	6,693.0	49.7	36.8	90.16	-3,109.3	-5,713.7	7,323.8	7,243.6	80.22	91.294	
8,400.0	6,619.9	7,023.5	6,693.2	50.6	36.8	90.17	-3,109.3	-5,713.7	7,353.8	7,272.8	81.05	90.736	
8,464.5	6,619.0	7,023.9	6,693.6	52.2	36.8	90.17	-3,109.3	-5,713.7	7,411.1	7,328.5	82.64	89.677	
8,500.0	6,618.6	7,024.2	6,693.9	53.0	36.8	90.18	-3,109.3	-5,713.7	7,442.6	7,359.1	83.52	89.113	
8,563.0	6,617.8	7,024.6	6,694.3	54.6	36.8	90.18	-3,109.3	-5,713.6	7,498.7	7,413.6	85.10	88.120	
8,600.0	6,617.3	7,024.8	6,694.5	55.5	36.8	90.19	-3,109.3	-5,713.6	7,531.7	7,445.7	86.02	87.554	
8,661.4	6,616.5	7,025.2	6,694.9	57.1	36.8	90.19	-3,109.3	-5,713.6	7,586.5	7,499.0	87.58	86.625	
8,700.0	6,616.0	7,025.5	6,695.2	58.1	36.8	90.20	-3,109.3	-5,713.6	7,621.1	7,532.5	88.56	86.059	
8,759.8	6,615.2	7,025.9	6,695.6	59.6	36.8	90.20	-3,109.3	-5,713.6	7,674.6	7,584.6	90.09	85.192	
8,800.0	6,614.7	7,026.1	6,695.8	60.6	36.8	90.21	-3,109.3	-5,713.6	7,710.7	7,619.6	91.11	84.627	
8,858.2	6,614.0	7,026.5	6,696.2	62.1	36.8	90.21	-3,109.3	-5,713.6	7,763.0	7,670.4	92.62	83.819	
8,900.0	6,613.4	7,026.8	6,696.5	63.2	36.8	90.22	-3,109.3	-5,713.6	7,800.5	7,706.8	93.69	83.257	
8,956.7	6,612.7	7,027.1	6,696.8	64.7	36.8	90.22	-3,109.3	-5,713.6	7,851.6	7,756.4	95.16	82.505	
9,000.0	6,612.2	7,027.4	6,697.1	65.8	36.8	90.23	-3,109.3	-5,713.6	7,890.6	7,794.3	96.29	81.946	
9,055.1	6,611.5	7,027.8	6,697.5	67.3	36.8	90.23	-3,109.3	-5,713.6	7,940.4	7,842.7	97.73	81.248	
9,100.0	6,610.9	7,028.1	6,697.7	68.4	36.8	90.24	-3,109.3	-5,713.6	7,981.0	7,882.1	98.90	80.694	
9,153.5	6,610.2	7,028.4	6,698.1	69.8	36.8	90.24	-3,109.4	-5,713.6	8,029.4	7,929.1	100.31	80.044	
9,200.0	6,609.6	7,028.7	6,698.4	71.1	36.8	90.25	-3,109.4	-5,713.6	8,071.5	7,970.0	101.53	79.496	
9,251.9	6,608.9	7,029.0	6,698.7	72.4	36.8	90.25	-3,109.4	-5,713.6	8,118.7	8,015.8	102.91	78.893	
9,300.0	6,608.3	7,029.3	6,699.0	73.7	36.8	90.26	-3,109.4	-5,713.6	8,162.3	8,058.2	104.18	78.351	
9,350.4	6,607.7	7,029.6	6,699.3	75.0	36.8	90.26	-3,109.4	-5,713.6	8,208.2	8,102.6	105.51	77.792	
9,400.0	6,607.0	7,029.9	6,699.6	76.4	36.8	90.27	-3,109.4	-5,713.5	8,253.3	8,146.5	106.83	77.255	
9,448.8	6,606.4	7,030.2	6,699.9	77.7	36.8	90.27	-3,109.4	-5,713.5	8,297.8	8,189.7	108.13	76.737	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD JURGENS STATE #B16-30D - Wellbore #1 - Wellbo												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 75-MWD												<b>Offset Well Error:</b>	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	6,605.7	7,030.6	6,700.2	79.0	36.8	90.28	-3,109.4	-5,713.5	8,344.5	8,235.0	109.50	76.207	
9,547.2	6,605.1	7,030.9	6,700.5	80.3	36.8	90.28	-3,109.4	-5,713.5	8,387.7	8,276.9	110.76	75.728	
9,600.0	6,604.5	7,031.2	6,700.9	81.7	36.8	90.29	-3,109.4	-5,713.5	8,436.0	8,323.8	112.17	75.205	
9,645.6	6,603.9	7,031.5	6,701.1	82.9	36.8	90.29	-3,109.4	-5,713.5	8,477.7	8,364.3	113.40	74.761	
9,700.0	6,603.2	7,031.8	6,701.5	84.4	36.8	90.30	-3,109.4	-5,713.5	8,527.6	8,412.7	114.86	74.245	
9,744.1	6,602.6	7,032.1	6,701.7	85.6	36.8	90.30	-3,109.4	-5,713.5	8,568.0	8,451.9	116.04	73.834	
9,800.0	6,601.9	7,032.4	6,702.1	87.1	36.8	90.31	-3,109.4	-5,713.5	8,619.3	8,501.8	117.55	73.325	
9,842.5	6,601.3	7,032.7	6,702.3	88.2	36.8	90.31	-3,109.4	-5,713.5	8,658.4	8,539.7	118.70	72.945	
9,900.0	6,600.6	7,033.0	6,702.7	89.8	36.8	90.32	-3,109.4	-5,713.5	8,711.3	8,591.1	120.25	72.444	
9,940.9	6,600.1	7,033.3	6,702.9	90.9	36.8	90.32	-3,109.4	-5,713.5	8,749.0	8,627.6	121.36	72.093	
10,000.0	6,599.3	7,033.6	6,703.3	92.5	36.8	90.33	-3,109.4	-5,713.5	8,803.4	8,680.5	122.96	71.599	
10,039.3	6,598.8	7,033.8	6,703.5	93.5	36.8	90.33	-3,109.4	-5,713.5	8,839.8	8,715.7	124.02	71.275	
10,100.0	6,598.0	7,034.2	6,703.9	95.2	36.8	90.34	-3,109.4	-5,713.5	8,895.8	8,770.1	125.67	70.788	
10,137.8	6,597.5	7,034.4	6,704.1	96.2	36.8	90.34	-3,109.4	-5,713.5	8,930.7	8,804.0	126.69	70.490	
10,200.0	6,596.7	7,034.8	6,704.5	97.9	36.8	90.35	-3,109.4	-5,713.5	8,988.2	8,859.9	128.39	70.010	
10,236.2	6,596.3	7,035.0	6,704.7	98.9	36.8	90.35	-3,109.4	-5,713.5	9,021.8	8,892.4	129.37	69.736	
10,300.0	6,595.4	7,035.4	6,705.1	100.6	36.8	90.36	-3,109.4	-5,713.4	9,080.9	8,949.8	131.11	69.263	
10,334.6	6,595.0	7,035.6	6,705.3	101.6	36.8	90.36	-3,109.4	-5,713.4	9,113.0	8,980.9	132.05	69.010	
10,400.0	6,594.2	7,036.0	6,705.7	103.4	36.8	90.37	-3,109.4	-5,713.4	9,173.7	9,039.8	133.84	68.544	
10,433.0	6,593.7	7,036.2	6,705.9	104.3	36.8	90.37	-3,109.4	-5,713.4	9,204.4	9,069.6	134.74	68.313	
10,500.0	6,592.9	7,036.6	6,706.3	106.1	36.8	90.38	-3,109.4	-5,713.4	9,266.6	9,130.0	136.57	67.854	
10,531.5	6,592.5	7,036.8	6,706.5	106.9	36.8	90.38	-3,109.4	-5,713.4	9,295.9	9,158.5	137.43	67.642	
10,600.0	6,591.6	7,037.2	6,706.9	108.8	36.8	90.38	-3,109.4	-5,713.4	9,359.7	9,220.4	139.30	67.189	
10,629.9	6,591.2	7,037.4	6,707.1	109.6	36.8	90.39	-3,109.4	-5,713.4	9,387.5	9,247.4	140.12	66.995	
10,700.0	6,590.3	7,037.8	6,707.5	111.6	36.8	90.39	-3,109.4	-5,713.4	9,452.9	9,310.9	142.04	66.550	
10,728.3	6,589.9	7,038.0	6,707.7	112.3	36.8	90.40	-3,109.4	-5,713.4	9,479.3	9,336.5	142.82	66.373	
10,800.0	6,589.0	7,038.4	6,708.1	114.3	36.8	90.40	-3,109.4	-5,713.4	9,546.3	9,401.5	144.79	65.934	
10,826.7	6,588.7	7,038.6	6,708.3	115.0	36.8	90.41	-3,109.4	-5,713.4	9,571.3	9,425.8	145.52	65.773	
10,900.0	6,587.7	7,039.0	6,708.7	117.1	36.8	90.41	-3,109.4	-5,713.4	9,639.8	9,492.2	147.53	65.340	
10,925.2	6,587.4	7,039.2	6,708.9	117.7	36.8	90.42	-3,109.4	-5,713.4	9,663.3	9,515.1	148.22	65.194	
11,000.0	6,586.4	7,039.6	6,709.3	119.8	36.8	90.42	-3,109.4	-5,713.4	9,733.4	9,583.1	150.28	64.768	
11,023.6	6,586.1	7,039.8	6,709.4	120.4	36.8	90.43	-3,109.4	-5,713.4	9,755.5	9,604.6	150.93	64.636	
11,100.0	6,585.1	7,040.2	6,709.9	122.6	36.8	90.43	-3,109.4	-5,713.4	9,827.2	9,674.1	153.03	64.216	
11,122.0	6,584.8	7,040.4	6,710.0	123.2	36.8	90.43	-3,109.4	-5,713.4	9,847.8	9,694.2	153.64	64.097	
11,200.0	6,583.8	7,040.8	6,710.5	125.3	36.8	90.44	-3,109.4	-5,713.3	9,921.0	9,765.2	155.79	63.683	
11,220.4	6,583.6	7,041.0	6,710.6	125.9	36.8	90.44	-3,109.4	-5,713.3	9,940.2	9,783.9	156.35	63.576 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	119.75	-1,150.4	2,012.8	2,318.4				
98.4	98.4	93.6	93.6	0.1	0.1	119.75	-1,150.4	2,012.8	2,318.3	2,318.1	0.18	N/A	
100.0	100.0	95.2	95.2	0.1	0.1	119.75	-1,150.4	2,012.8	2,318.3	2,318.1	0.19	N/A	
196.8	196.8	194.4	194.4	0.3	0.2	119.75	-1,150.3	2,012.6	2,318.2	2,317.7	0.50	4,666.702	
200.0	200.0	197.6	197.6	0.3	0.2	119.75	-1,150.3	2,012.6	2,318.2	2,317.7	0.51	4,573.804	
295.3	295.3	295.2	295.2	0.5	0.3	119.75	-1,150.1	2,012.4	2,317.9	2,317.1	0.81	2,854.735	
300.0	300.0	300.0	300.0	0.5	0.3	119.75	-1,150.1	2,012.4	2,317.9	2,317.1	0.83	2,802.489	
393.7	393.7	396.0	396.0	0.8	0.4	119.75	-1,149.9	2,012.2	2,317.6	2,316.4	1.13	2,056.109	
400.0	400.0	402.4	402.4	0.8	0.4	119.75	-1,149.9	2,012.1	2,317.6	2,316.4	1.15	2,019.930	
492.1	492.1	496.8	496.8	1.0	0.5	119.75	-1,149.6	2,011.8	2,317.1	2,315.7	1.44	1,606.470	
500.0	500.0	504.8	504.8	1.0	0.5	119.74	-1,149.6	2,011.8	2,317.1	2,315.6	1.47	1,578.836	
590.5	590.5	597.5	597.5	1.2	0.6	119.74	-1,149.3	2,011.4	2,316.6	2,314.8	1.76	1,318.053	
600.0	600.0	607.2	607.2	1.2	0.6	119.74	-1,149.2	2,011.3	2,316.5	2,314.7	1.79	1,295.709	
689.0	689.0	701.1	701.1	1.4	0.7	119.74	-1,148.9	2,010.8	2,315.9	2,313.8	2.10	1,104.207	
700.0	700.0	714.4	714.4	1.4	0.7	119.75	-1,148.9	2,010.6	2,315.8	2,313.7	2.15	1,076.747	
787.4	787.4	795.7	795.6	1.6	0.9	119.81	-1,150.6	2,008.6	2,314.9	2,312.4	2.52	918.314	
800.0	800.0	803.7	803.7	1.7	0.9	119.82	-1,151.0	2,008.4	2,314.8	2,312.3	2.57	902.046	
829.7	829.7	822.8	822.7	1.7	0.9	119.84	-1,151.8	2,007.9	2,314.8	2,312.1	2.67	865.944	
885.8	885.8	854.0	853.8	1.9	1.0	119.89	-1,153.6	2,007.0	2,315.0	2,312.2	2.87	808.023	
900.0	900.0	854.0	853.8	1.9	1.0	119.89	-1,153.6	2,007.0	2,315.2	2,312.3	2.90	799.204	
984.2	984.2	915.7	915.4	2.1	1.1	120.01	-1,158.2	2,005.5	2,316.8	2,313.6	3.22	720.291	
1,000.0	1,000.0	939.0	938.6	2.1	1.2	120.06	-1,160.3	2,005.1	2,317.3	2,314.0	3.30	702.280	
1,082.7	1,082.7	971.5	970.9	2.3	1.3	120.13	-1,163.6	2,004.7	2,320.3	2,316.7	3.55	652.802	
1,100.0	1,100.0	981.2	980.5	2.3	1.3	120.15	-1,164.6	2,004.6	2,321.1	2,317.5	3.61	642.317	
1,181.1	1,181.1	1,025.0	1,024.0	2.5	1.4	120.27	-1,169.7	2,004.5	2,325.7	2,321.8	3.89	598.149	
1,200.0	1,200.0	1,041.1	1,040.0	2.6	1.4	120.31	-1,171.7	2,004.5	2,326.9	2,322.9	3.97	586.754	
1,279.5	1,279.5	1,110.0	1,108.3	2.7	1.6	120.50	-1,180.8	2,004.8	2,332.5	2,328.2	4.29	543.146	
1,300.0	1,300.0	1,110.0	1,108.3	2.8	1.6	120.50	-1,180.8	2,004.8	2,334.0	2,329.7	4.34	537.739	
1,377.9	1,377.9	1,164.7	1,162.5	3.0	1.8	120.66	-1,188.7	2,005.3	2,340.4	2,335.8	4.64	504.482	
1,400.0	1,400.0	1,178.4	1,176.0	3.0	1.8	120.70	-1,190.7	2,005.5	2,342.4	2,337.7	4.72	496.291	
1,476.4	1,476.4	1,226.7	1,223.6	3.2	2.0	-163.98	-1,198.4	2,006.4	2,350.9	2,345.8	5.15	456.061	
1,500.0	1,500.0	1,241.7	1,238.4	3.2	2.0	-163.92	-1,200.9	2,006.8	2,354.2	2,348.9	5.25	448.103	
1,574.8	1,574.7	1,281.0	1,277.1	3.4	2.2	-163.73	-1,207.8	2,007.8	2,366.1	2,360.6	5.53	427.560	
1,600.0	1,599.8	1,303.3	1,299.0	3.4	2.3	-163.64	-1,211.9	2,008.4	2,370.7	2,365.1	5.66	418.758	
1,673.2	1,672.8	1,346.0	1,340.9	3.6	2.4	-163.42	-1,220.2	2,009.8	2,386.0	2,380.0	5.96	400.374	
1,700.0	1,699.5	1,367.0	1,361.4	3.7	2.5	-163.31	-1,224.5	2,010.6	2,392.2	2,386.1	6.08	393.134	
1,771.6	1,770.6	1,408.4	1,401.9	3.8	2.7	-163.08	-1,233.2	2,012.3	2,410.5	2,404.1	6.38	378.022	
1,800.0	1,798.7	1,427.1	1,420.2	3.9	2.8	-162.97	-1,237.2	2,013.2	2,418.4	2,411.9	6.50	372.074	
1,870.1	1,868.0	1,484.1	1,475.7	4.1	3.0	-162.68	-1,249.5	2,016.0	2,439.3	2,432.4	6.84	356.808	
1,900.0	1,897.5	1,513.7	1,504.6	4.2	3.1	-162.55	-1,255.9	2,017.5	2,448.7	2,441.7	6.99	350.452	
1,968.5	1,964.8	1,581.0	1,570.2	4.4	3.3	-162.24	-1,270.2	2,020.9	2,471.3	2,464.0	7.32	337.712	
2,000.0	1,995.6	1,611.7	1,600.2	4.5	3.4	-162.10	-1,276.7	2,022.5	2,482.1	2,474.7	7.46	332.518	
2,066.9	2,060.9	1,692.7	1,679.3	4.7	3.8	-161.78	-1,293.6	2,026.4	2,506.0	2,498.2	7.84	319.771	
2,100.0	2,093.1	1,728.6	1,714.4	4.8	3.9	-161.62	-1,301.2	2,027.9	2,518.2	2,510.2	8.01	314.359	
2,165.3	2,156.3	1,792.1	1,776.4	5.1	4.2	-161.32	-1,314.9	2,030.2	2,543.1	2,534.7	8.35	304.637	
2,200.0	2,189.6	1,826.8	1,810.2	5.2	4.3	-161.16	-1,322.3	2,031.4	2,556.8	2,548.3	8.53	299.913	
2,263.8	2,250.7	1,891.7	1,873.7	5.5	4.6	-160.88	-1,335.9	2,033.8	2,582.9	2,574.0	8.86	291.622	
2,280.0	2,266.2	1,909.7	1,891.3	5.6	4.6	-160.80	-1,339.6	2,034.4	2,589.7	2,580.7	8.94	289.615	
2,300.0	2,285.3	1,931.8	1,912.9	5.7	4.7	-160.77	-1,344.1	2,035.2	2,598.1	2,589.0	9.06	286.712	
2,362.2	2,344.6	2,006.2	1,985.7	6.0	5.0	-160.68	-1,359.1	2,037.7	2,624.0	2,614.5	9.46	277.487	
2,400.0	2,380.6	2,051.0	2,029.6	6.2	5.2	-160.62	-1,368.1	2,038.8	2,639.5	2,629.8	9.70	272.009	
2,460.6	2,438.4	2,105.5	2,082.9	6.5	5.4	-160.55	-1,379.1	2,040.1	2,664.4	2,654.3	10.06	264.924	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,475.9	2,140.1	2,116.8	6.7	5.6	-160.50	-1,386.2	2,040.9	2,680.5	2,670.2	10.28	260.652	
2,559.0	2,532.2	2,203.4	2,178.8	7.0	5.8	-160.43	-1,398.7	2,042.5	2,704.7	2,694.0	10.66	253.732	
2,600.0	2,571.2	2,242.6	2,217.3	7.2	6.0	-160.39	-1,406.2	2,043.5	2,721.3	2,710.4	10.90	249.584	
2,657.5	2,626.0	2,292.7	2,266.4	7.5	6.1	-160.34	-1,415.7	2,044.9	2,744.7	2,733.5	11.23	244.360	
2,700.0	2,666.6	2,337.2	2,310.1	7.8	6.3	-160.29	-1,424.2	2,046.1	2,762.0	2,750.5	11.50	240.236	
2,755.9	2,719.8	2,393.0	2,364.9	8.1	6.5	-160.25	-1,434.4	2,047.7	2,784.6	2,772.7	11.84	235.168	
2,800.0	2,761.9	2,429.8	2,401.2	8.3	6.7	-160.22	-1,441.1	2,048.7	2,802.4	2,790.3	12.09	231.759	
2,854.3	2,813.7	2,467.9	2,438.5	8.7	6.8	-160.19	-1,448.1	2,050.0	2,824.5	2,812.1	12.38	228.113	
2,900.0	2,857.2	2,503.9	2,473.9	8.9	7.0	-160.16	-1,454.8	2,051.2	2,843.2	2,830.6	12.64	224.910	
2,952.7	2,907.5	2,547.9	2,517.0	9.2	7.1	-160.13	-1,463.3	2,052.6	2,865.0	2,852.0	12.95	221.169	
3,000.0	2,952.5	2,585.0	2,553.4	9.5	7.3	-160.09	-1,470.6	2,053.7	2,884.5	2,871.2	13.23	218.092	
3,051.2	3,001.3	2,623.4	2,591.0	9.8	7.4	-160.05	-1,478.1	2,055.1	2,905.7	2,892.2	13.52	214.962	
3,100.0	3,047.8	2,661.2	2,628.0	10.1	7.6	-160.02	-1,485.5	2,056.5	2,926.1	2,912.3	13.80	212.050	
3,149.6	3,095.1	2,703.0	2,669.0	10.4	7.8	-159.99	-1,493.7	2,058.1	2,946.9	2,932.8	14.10	209.027	
3,200.0	3,143.2	2,796.1	2,760.3	10.7	8.1	-159.92	-1,511.6	2,061.6	2,968.0	2,953.5	14.55	203.994	
3,248.0	3,188.9	2,844.9	2,808.4	11.0	8.3	-159.89	-1,520.0	2,063.1	2,987.3	2,972.4	14.86	201.059	
3,300.0	3,238.5	2,873.6	2,836.6	11.3	8.4	-159.88	-1,525.2	2,064.1	3,008.4	2,993.3	15.12	198.964	
3,346.4	3,282.8	2,906.0	2,868.4	11.6	8.6	-159.85	-1,531.4	2,065.2	3,027.6	3,012.2	15.38	196.897	
3,400.0	3,333.8	2,943.8	2,905.4	11.9	8.7	-159.83	-1,538.6	2,066.6	3,049.8	3,034.1	15.68	194.537	
3,444.9	3,376.6	2,985.1	2,945.9	12.2	8.9	-159.80	-1,546.5	2,068.2	3,068.5	3,052.5	15.96	192.256	
3,500.0	3,429.1	3,049.0	3,008.7	12.6	9.1	-159.76	-1,558.2	2,070.8	3,091.3	3,075.0	16.34	189.238	
3,543.3	3,470.4	3,134.6	3,093.0	12.8	9.4	-159.74	-1,572.6	2,074.3	3,108.9	3,092.2	16.72	185.931	
3,600.0	3,524.4	3,277.6	3,234.5	13.2	9.9	-159.73	-1,593.7	2,077.6	3,130.2	3,112.9	17.30	180.971	
3,641.7	3,564.2	3,308.3	3,264.8	13.4	10.0	-159.73	-1,598.1	2,078.0	3,145.8	3,128.2	17.53	179.489	
3,700.0	3,619.8	3,334.0	3,290.2	13.8	10.1	-159.72	-1,601.8	2,078.4	3,167.7	3,149.9	17.80	177.959	
3,740.1	3,658.0	3,359.0	3,314.9	14.0	10.2	-159.72	-1,605.6	2,078.9	3,183.0	3,165.0	18.02	176.676	
3,800.0	3,715.1	3,382.3	3,337.9	14.4	10.3	-159.71	-1,609.4	2,079.4	3,206.3	3,188.0	18.30	175.241	
3,838.6	3,751.8	3,419.0	3,374.0	14.7	10.4	-159.69	-1,615.8	2,080.5	3,221.8	3,203.3	18.54	173.750	
3,900.0	3,810.4	3,419.0	3,374.0	15.0	10.4	-159.69	-1,615.8	2,080.5	3,246.6	3,227.8	18.76	173.053	
3,937.0	3,845.7	3,446.3	3,400.8	15.3	10.5	-159.68	-1,620.9	2,081.5	3,261.7	3,242.8	18.98	171.861	
4,000.0	3,905.7	3,487.2	3,441.0	15.7	10.7	-159.65	-1,628.7	2,083.0	3,287.8	3,268.5	19.33	170.060	
4,035.4	3,939.5	3,505.0	3,458.4	15.9	10.8	-159.64	-1,632.1	2,083.7	3,302.6	3,283.1	19.52	169.223	
4,100.0	4,001.0	3,547.0	3,499.6	16.3	10.9	-159.61	-1,640.5	2,085.4	3,329.9	3,310.0	19.89	167.449	
4,133.8	4,033.3	3,566.5	3,518.6	16.5	11.0	-159.59	-1,644.5	2,086.2	3,344.3	3,324.3	20.07	166.617	
4,200.0	4,096.3	3,607.5	3,558.6	16.9	11.2	-159.55	-1,653.4	2,087.8	3,372.8	3,352.4	20.45	164.954	
4,232.3	4,127.1	3,629.9	3,580.4	17.1	11.3	-159.53	-1,658.3	2,088.8	3,386.8	3,366.2	20.64	164.089	
4,300.0	4,191.7	3,677.0	3,626.3	17.6	11.5	-159.48	-1,668.7	2,090.9	3,416.4	3,395.4	21.05	162.333	
4,330.7	4,220.9	3,706.0	3,654.6	17.8	11.6	-159.46	-1,675.1	2,092.2	3,429.9	3,408.6	21.25	161.380	
4,400.0	4,287.0	3,771.8	3,718.6	18.2	11.9	-159.39	-1,689.6	2,095.3	3,460.2	3,438.5	21.72	159.300	
4,429.1	4,314.7	3,799.8	3,746.0	18.4	12.1	-159.37	-1,695.7	2,096.6	3,472.9	3,451.0	21.92	158.462	
4,500.0	4,382.3	3,871.4	3,815.9	18.8	12.4	-159.32	-1,710.9	2,100.2	3,503.8	3,481.4	22.40	156.439	
4,527.5	4,408.6	3,902.3	3,846.0	19.0	12.5	-159.30	-1,717.1	2,101.9	3,515.8	3,493.2	22.59	155.635	
4,600.0	4,477.6	3,962.0	3,904.6	19.5	12.7	-159.28	-1,728.5	2,105.6	3,547.1	3,524.1	23.03	154.010	
4,626.0	4,502.4	3,979.0	3,921.2	19.6	12.8	-159.28	-1,731.8	2,106.6	3,558.5	3,535.3	23.18	153.532	
4,700.0	4,572.9	4,018.0	3,959.3	20.1	13.0	-159.26	-1,739.7	2,108.9	3,590.9	3,567.4	23.56	152.390	
4,724.4	4,596.2	4,043.4	3,984.1	20.3	13.1	-159.24	-1,745.1	2,110.4	3,601.7	3,578.0	23.74	151.734	
4,800.0	4,668.3	4,103.0	4,042.1	20.7	13.3	-159.19	-1,758.3	2,113.7	3,635.3	3,611.1	24.21	150.158	
4,822.8	4,690.0	4,161.8	4,099.3	20.9	13.6	-159.13	-1,772.0	2,116.1	3,645.5	3,621.0	24.50	148.790	
4,900.0	4,763.6	4,258.3	4,192.9	21.4	14.0	-159.00	-1,795.0	2,118.3	3,678.6	3,653.4	25.13	146.391	
4,921.2	4,783.8	4,279.6	4,213.6	21.5	14.1	-158.97	-1,800.0	2,118.8	3,687.7	3,662.4	25.28	145.854	
5,000.0	4,858.9	4,408.1	4,338.5	22.0	14.7	-158.80	-1,830.4	2,120.7	3,721.1	3,695.0	26.04	142.902	
5,019.7	4,877.7	4,458.8	4,387.9	22.1	14.9	-158.75	-1,841.4	2,121.2	3,729.1	3,702.8	26.29	141.855	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,954.2	4,604.4	4,531.0	22.6	15.5	-158.68	-1,868.2	2,124.1	3,761.2	3,734.2	27.03	139.142		
5,118.1	4,971.5	4,898.6	4,823.1	22.8	16.3	-158.78	-1,902.2	2,127.2	3,768.0	3,740.2	27.81	135.500		
5,171.8	5,022.7	5,121.1	5,045.4	23.1	16.7	-159.01	-1,911.8	2,123.7	3,783.2	3,754.8	28.41	133.158		
5,200.0	5,049.6	5,151.2	5,075.4	23.3	16.8	-159.11	-1,911.7	2,123.4	3,790.9	3,762.3	28.59	132.576		
5,216.5	5,065.4	5,167.8	5,092.0	23.3	16.8	-159.17	-1,911.7	2,123.3	3,795.2	3,766.5	28.69	132.283		
5,300.0	5,145.7	5,247.9	5,172.1	23.7	16.9	-159.44	-1,911.5	2,122.4	3,815.9	3,786.8	29.16	130.844		
5,314.9	5,160.1	5,261.4	5,185.6	23.8	16.9	-159.48	-1,911.5	2,122.3	3,819.4	3,790.2	29.24	130.606		
5,400.0	5,242.7	5,330.4	5,254.6	24.1	17.0	-159.69	-1,911.7	2,121.6	3,838.0	3,808.3	29.68	129.327		
5,413.4	5,255.7	5,339.9	5,264.1	24.2	17.0	-159.72	-1,911.8	2,121.5	3,840.8	3,811.0	29.74	129.148		
5,500.0	5,340.5	5,405.1	5,329.3	24.5	17.1	-159.91	-1,911.9	2,121.3	3,857.5	3,827.3	30.14	128.002		
5,511.8	5,352.1	5,415.3	5,339.5	24.5	17.1	-159.93	-1,911.9	2,121.3	3,859.6	3,829.4	30.19	127.851		
5,600.0	5,439.0	5,499.1	5,423.3	24.8	17.2	-160.10	-1,912.1	2,121.5	3,874.1	3,843.5	30.58	126.695		
5,610.2	5,449.1	5,511.3	5,435.5	24.8	17.2	-160.12	-1,912.1	2,121.5	3,875.6	3,845.0	30.62	126.556		
5,700.0	5,538.0	5,608.5	5,532.7	25.1	17.3	-160.27	-1,912.3	2,121.4	3,887.3	3,856.3	31.00	125.393		
5,708.6	5,546.6	5,617.1	5,541.3	25.1	17.4	-160.28	-1,912.3	2,121.3	3,888.3	3,857.3	31.03	125.292		
5,800.0	5,637.4	5,726.0	5,650.2	25.3	17.5	-160.39	-1,912.4	2,121.0	3,897.0	3,865.6	31.39	124.130		
5,807.1	5,644.5	5,733.8	5,658.0	25.3	17.5	-160.40	-1,912.4	2,120.9	3,897.6	3,866.1	31.42	124.050		
5,900.0	5,737.2	5,828.5	5,752.7	25.5	17.6	-160.47	-1,911.9	2,120.6	3,903.1	3,871.4	31.72	123.052		
5,905.5	5,742.6	5,833.3	5,757.5	25.5	17.6	-160.47	-1,911.9	2,120.6	3,903.3	3,871.6	31.73	123.001		
6,000.0	5,837.1	5,915.3	5,839.5	25.6	17.7	-160.51	-1,911.5	2,120.5	3,906.0	3,874.0	31.98	122.152		
6,003.9	5,841.0	5,918.5	5,842.7	25.6	17.7	-160.51	-1,911.4	2,120.5	3,906.1	3,874.1	31.99	122.119		
6,051.8	5,888.9	5,957.9	5,882.0	25.7	17.8	124.36	-1,911.3	2,120.5	3,906.4	3,866.6	39.83	98.070		
6,052.6	5,889.7	5,958.5	5,882.7	25.7	17.8	124.36	-1,911.3	2,120.5	3,906.4	3,866.6	39.83	98.065		
6,081.8	5,918.9	5,985.0	5,909.2	25.7	17.8	124.36	-1,911.3	2,120.5	3,906.4	3,866.5	39.91	97.891		
6,100.0	5,937.1	5,999.9	5,924.1	25.7	17.9	34.37	-1,911.3	2,120.6	3,906.2	3,874.1	32.19	121.354		
6,102.3	5,939.4	6,002.2	5,926.4	25.7	17.9	34.37	-1,911.3	2,120.6	3,906.2	3,874.0	32.19	121.351		
6,150.0	5,987.0	6,048.9	5,973.1	25.7	17.9	34.50	-1,911.3	2,120.7	3,903.8	3,871.7	32.16	121.373		
6,200.0	6,036.5	6,096.6	6,020.8	25.7	18.0	34.79	-1,911.2	2,120.8	3,898.6	3,866.5	32.05	121.630		
6,200.8	6,037.3	6,097.3	6,021.5	25.7	18.0	34.79	-1,911.2	2,120.8	3,898.5	3,866.4	32.05	121.636		
6,250.0	6,085.5	6,143.1	6,067.3	25.7	18.0	35.24	-1,911.1	2,121.0	3,890.5	3,858.7	31.87	122.088		
6,299.2	6,133.0	6,192.2	6,116.4	25.6	18.1	35.86	-1,911.0	2,121.3	3,879.9	3,848.3	31.63	122.654		
6,300.0	6,133.7	6,193.1	6,117.3	25.6	18.1	35.87	-1,911.0	2,121.3	3,879.7	3,848.1	31.63	122.663		
6,350.0	6,180.9	6,243.7	6,167.9	25.5	18.2	36.69	-1,910.8	2,121.6	3,866.1	3,834.7	31.36	123.294		
6,397.6	6,224.6	6,294.1	6,218.3	25.4	18.3	37.66	-1,910.4	2,121.9	3,850.6	3,819.5	31.09	123.844		
6,400.0	6,226.7	6,296.6	6,220.8	25.4	18.3	37.71	-1,910.4	2,121.9	3,849.8	3,818.7	31.08	123.868		
6,450.0	6,271.1	6,342.7	6,266.9	25.2	18.3	38.93	-1,910.0	2,122.1	3,830.9	3,800.1	30.81	124.331		
6,496.0	6,310.4	6,377.0	6,301.2	25.1	18.4	40.22	-1,909.7	2,122.3	3,811.3	3,780.7	30.59	124.574		
6,500.0	6,313.7	6,379.9	6,304.1	25.1	18.4	40.34	-1,909.7	2,122.3	3,809.6	3,779.0	30.58	124.580		
6,550.0	6,354.4	6,416.9	6,341.0	25.0	18.4	41.98	-1,909.5	2,122.5	3,786.0	3,755.6	30.44	124.383		
6,594.5	6,388.9	6,458.3	6,382.5	24.9	18.5	43.74	-1,909.3	2,122.7	3,763.2	3,732.7	30.45	123.571		
6,600.0	6,393.0	6,463.3	6,387.5	24.9	18.5	43.97	-1,909.2	2,122.8	3,760.2	3,729.8	30.46	123.434		
6,650.0	6,429.3	6,504.5	6,428.6	24.8	18.5	46.23	-1,908.8	2,123.0	3,732.4	3,701.7	30.65	121.774		
6,692.9	6,458.5	6,529.6	6,453.7	24.7	18.6	48.34	-1,908.5	2,123.2	3,707.0	3,676.0	30.94	119.830		
6,700.0	6,463.1	6,533.6	6,457.7	24.7	18.6	48.71	-1,908.5	2,123.2	3,702.7	3,671.7	31.00	119.459		
6,750.0	6,494.3	6,559.0	6,483.2	24.7	18.6	51.48	-1,908.2	2,123.4	3,671.3	3,639.8	31.55	116.378		
6,791.3	6,517.9	6,581.1	6,505.3	24.7	18.6	54.05	-1,908.0	2,123.6	3,644.3	3,612.1	32.18	113.229		
6,800.0	6,522.6	6,584.0	6,508.2	24.7	18.6	54.59	-1,907.9	2,123.7	3,638.5	3,606.1	32.32	112.560		
6,850.0	6,548.0	6,605.4	6,529.6	24.7	18.7	58.03	-1,907.7	2,123.9	3,604.3	3,571.0	33.30	108.238		
6,889.7	6,566.0	6,619.8	6,544.0	24.8	18.7	60.98	-1,907.6	2,124.0	3,576.4	3,542.2	34.20	104.584		
6,900.0	6,570.4	6,623.3	6,547.5	24.9	18.7	61.77	-1,907.6	2,124.1	3,569.1	3,534.7	34.44	103.647		
6,950.0	6,589.5	6,638.8	6,562.9	25.1	18.7	65.82	-1,907.5	2,124.3	3,533.0	3,497.3	35.68	99.020		
6,988.2	6,602.0	6,648.9	6,573.0	25.3	18.7	69.09	-1,907.4	2,124.4	3,504.9	3,468.2	36.66	95.599		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 683-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,000.0	6,605.4	6,651.7	6,575.9	25.3	18.7	70.14	-1,907.4	2,124.4	3,496.1	3,459.2	36.96	94.598	
7,050.0	6,618.0	6,669.0	6,593.2	25.6	18.8	74.83	-1,907.3	2,124.6	3,458.8	3,420.5	38.23	90.481	
7,086.6	6,625.0	6,669.0	6,593.2	25.9	18.8	78.09	-1,907.3	2,124.6	3,431.2	3,392.1	39.02	87.926	
7,100.0	6,627.1	6,669.0	6,593.2	26.0	18.8	79.30	-1,907.3	2,124.6	3,421.0	3,381.8	39.29	87.074	
7,150.0	6,632.8	6,669.0	6,593.2	26.5	18.8	83.88	-1,907.3	2,124.6	3,383.2	3,343.0	40.19	84.181	
7,185.0	6,634.7	6,669.0	6,593.2	26.8	18.8	87.10	-1,907.3	2,124.6	3,356.8	3,316.0	40.71	82.461	
7,200.0	6,635.0	6,669.0	6,593.2	27.0	18.8	88.47	-1,907.3	2,124.6	3,345.5	3,304.6	40.89	81.819	
7,215.9	6,635.0	6,669.0	6,593.2	27.1	18.8	89.93	-1,907.3	2,124.6	3,333.5	3,292.4	41.07	81.175	
7,283.4	6,634.1	6,669.0	6,593.2	27.9	18.8	89.93	-1,907.3	2,124.6	3,283.1	3,241.2	41.90	78.355	
7,300.0	6,633.9	6,669.0	6,593.2	28.1	18.8	89.93	-1,907.3	2,124.6	3,270.8	3,228.7	42.10	77.684	
7,381.9	6,632.9	6,669.0	6,593.2	29.3	18.8	89.93	-1,907.3	2,124.6	3,210.7	3,167.4	43.28	74.187	
7,400.0	6,632.6	6,669.0	6,593.2	29.5	18.8	89.93	-1,907.3	2,124.6	3,197.5	3,154.0	43.54	73.441	
7,480.3	6,631.6	6,669.0	6,593.2	30.8	18.8	89.93	-1,907.3	2,124.6	3,139.8	3,094.9	44.84	70.018	
7,500.0	6,631.4	6,669.0	6,593.2	31.1	18.8	89.93	-1,907.3	2,124.6	3,125.7	3,080.6	45.16	69.211	
7,578.7	6,630.4	6,669.0	6,593.2	32.5	18.8	89.93	-1,907.3	2,124.6	3,070.3	3,023.8	46.57	65.934	
7,600.0	6,630.1	6,669.0	6,593.2	32.9	18.8	89.93	-1,907.3	2,124.6	3,055.5	3,008.6	46.95	65.085	
7,677.1	6,629.1	6,669.0	6,593.2	34.3	18.8	89.93	-1,907.3	2,124.6	3,002.5	2,954.1	48.43	62.000	
7,700.0	6,628.8	6,669.0	6,593.2	34.8	18.8	89.93	-1,907.3	2,124.6	2,987.0	2,938.2	48.87	61.126	
7,775.6	6,627.8	6,669.0	6,593.2	36.3	18.8	89.93	-1,907.3	2,124.6	2,936.5	2,886.1	50.40	58.257	
7,800.0	6,627.5	6,669.0	6,593.2	36.8	18.8	89.93	-1,907.3	2,124.6	2,920.3	2,869.4	50.90	57.372	
7,874.0	6,626.6	6,669.0	6,593.2	38.4	18.8	89.93	-1,907.3	2,124.6	2,872.2	2,819.8	52.48	54.731	
7,900.0	6,626.3	6,669.0	6,593.2	38.9	18.8	89.93	-1,907.3	2,124.6	2,855.6	2,802.6	53.03	53.845	
7,972.4	6,625.3	6,669.0	6,593.2	40.5	18.8	89.93	-1,907.3	2,124.6	2,810.0	2,755.4	54.64	51.431	
8,000.0	6,625.0	6,669.0	6,593.2	41.1	18.8	89.93	-1,907.3	2,124.6	2,792.9	2,737.7	55.25	50.554	
8,070.8	6,624.1	6,669.0	6,593.2	42.7	18.8	89.93	-1,907.3	2,124.6	2,749.9	2,693.0	56.86	48.359	
8,100.0	6,623.7	6,669.0	6,593.2	43.4	18.8	89.93	-1,907.3	2,124.6	2,732.5	2,675.0	57.53	47.497	
8,169.3	6,622.8	6,669.0	6,593.2	45.0	18.8	89.93	-1,907.3	2,124.6	2,692.0	2,632.9	59.15	45.510	
8,200.0	6,622.4	6,669.0	6,593.2	45.7	18.8	89.93	-1,907.3	2,124.6	2,674.4	2,614.6	59.87	44.670	
8,267.7	6,621.6	6,669.0	6,593.2	47.4	18.8	89.93	-1,907.3	2,124.6	2,636.5	2,575.1	61.49	42.878	
8,300.0	6,621.1	6,669.0	6,593.2	48.1	18.8	89.93	-1,907.3	2,124.6	2,618.9	2,556.6	62.26	42.062	
8,366.1	6,620.3	6,669.0	6,593.2	49.7	18.8	89.93	-1,907.3	2,124.6	2,583.6	2,519.8	63.87	40.450	
8,400.0	6,619.9	6,669.0	6,593.2	50.6	18.8	89.93	-1,907.3	2,124.6	2,566.1	2,501.4	64.70	39.663	
8,464.5	6,619.0	6,669.0	6,593.2	52.2	18.8	89.93	-1,907.3	2,124.6	2,533.5	2,467.2	66.29	38.216	
8,500.0	6,618.6	6,669.0	6,593.2	53.0	18.8	89.93	-1,907.3	2,124.6	2,516.1	2,448.9	67.17	37.459	
8,563.0	6,617.8	6,669.0	6,593.2	54.6	18.8	89.93	-1,907.3	2,124.6	2,486.2	2,417.4	68.75	36.165	
8,600.0	6,617.3	6,669.0	6,593.2	55.5	18.8	89.93	-1,907.3	2,124.6	2,469.2	2,399.5	69.67	35.439	
8,661.4	6,616.5	6,669.0	6,593.2	57.1	18.8	89.93	-1,907.3	2,124.6	2,441.9	2,370.7	71.23	34.283	
8,700.0	6,616.0	6,669.0	6,593.2	58.1	18.8	89.93	-1,907.3	2,124.6	2,425.4	2,353.2	72.21	33.591	
8,759.8	6,615.2	6,669.0	6,593.2	59.6	18.8	89.93	-1,907.3	2,124.6	2,400.9	2,327.2	73.73	32.561	
8,800.0	6,614.7	6,669.0	6,593.2	60.6	18.8	89.93	-1,907.3	2,124.6	2,385.1	2,310.4	74.76	31.903	
8,858.2	6,614.0	6,669.0	6,593.2	62.1	18.8	89.93	-1,907.3	2,124.6	2,363.3	2,287.0	76.26	30.988	
8,900.0	6,613.4	6,669.0	6,593.2	63.2	18.8	89.93	-1,907.3	2,124.6	2,348.4	2,271.0	77.34	30.364	
8,956.7	6,612.7	6,669.0	6,593.2	64.7	18.8	89.93	-1,907.3	2,124.6	2,329.2	2,250.4	78.81	29.554	
9,000.0	6,612.2	6,669.0	6,593.2	65.8	18.8	89.93	-1,907.3	2,124.6	2,315.4	2,235.4	79.94	28.965	
9,055.1	6,611.5	6,669.0	6,593.2	67.3	18.8	89.93	-1,907.3	2,124.6	2,298.8	2,217.5	81.38	28.249	
9,100.0	6,610.9	6,669.0	6,593.2	68.4	18.8	89.93	-1,907.3	2,124.6	2,286.3	2,203.7	82.55	27.695	
9,153.5	6,610.2	6,669.0	6,593.2	69.8	18.8	89.93	-1,907.3	2,124.6	2,272.3	2,188.4	83.96	27.065	
9,200.0	6,609.6	6,669.0	6,593.2	71.1	18.8	89.93	-1,907.3	2,124.6	2,261.2	2,176.0	85.18	26.546	
9,251.9	6,608.9	6,669.0	6,593.2	72.4	18.8	89.93	-1,907.3	2,124.6	2,249.8	2,163.3	86.55	25.993	
9,300.0	6,608.3	6,669.0	6,593.2	73.7	18.8	89.93	-1,907.3	2,124.6	2,240.3	2,152.5	87.82	25.509	
9,350.4	6,607.7	6,669.0	6,593.2	75.0	18.8	89.93	-1,907.3	2,124.6	2,231.4	2,142.3	89.16	25.027	
9,400.0	6,607.0	6,669.0	6,593.2	76.4	18.8	89.93	-1,907.3	2,124.6	2,223.7	2,133.3	90.48	24.578	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 683-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,448.8	6,606.4	6,669.0	6,593.2	77.7	18.8	89.93	-1,907.3	2,124.6	2,217.3	2,125.5	91.78	24.159		
9,500.0	6,605.7	6,669.0	6,593.2	79.0	18.8	89.93	-1,907.3	2,124.6	2,211.6	2,118.4	93.14	23.744		
9,547.2	6,605.1	6,669.0	6,593.2	80.3	18.8	89.93	-1,907.3	2,124.6	2,207.4	2,113.0	94.41	23.382		
9,600.0	6,604.5	6,669.0	6,593.2	81.7	18.8	89.93	-1,907.3	2,124.6	2,203.9	2,108.1	95.82	23.001		
9,645.6	6,603.9	6,669.0	6,593.2	82.9	18.8	89.93	-1,907.3	2,124.6	2,201.9	2,104.8	97.04	22.690		
9,700.0	6,603.2	6,669.0	6,593.2	84.4	18.8	89.93	-1,907.3	2,124.6	2,200.7	2,102.2	98.50	22.342		
9,719.8	6,602.9	6,669.0	6,593.2	84.9	18.8	89.93	-1,907.3	2,124.6	2,200.6	2,101.6	99.03	22.221 CC		
9,744.1	6,602.6	6,669.0	6,593.2	85.6	18.8	89.93	-1,907.3	2,124.6	2,200.8	2,101.1	99.69	22.077		
9,800.0	6,601.9	6,669.0	6,593.2	87.1	18.8	89.93	-1,907.3	2,124.6	2,202.1	2,100.9	101.19	21.761 ES		
9,842.5	6,601.3	6,669.0	6,593.2	88.2	18.8	89.93	-1,907.3	2,124.6	2,204.1	2,101.7	102.34	21.536		
9,900.0	6,600.6	6,669.0	6,593.2	89.8	18.8	89.93	-1,907.3	2,124.6	2,208.0	2,104.1	103.89	21.253		
9,940.9	6,600.1	6,669.0	6,593.2	90.9	18.8	89.93	-1,907.3	2,124.6	2,211.7	2,106.7	105.00	21.064		
10,000.0	6,599.3	6,669.0	6,593.2	92.5	18.8	89.93	-1,907.3	2,124.6	2,218.4	2,111.8	106.60	20.811		
10,039.3	6,598.8	6,669.0	6,593.2	93.5	18.8	89.93	-1,907.3	2,124.6	2,223.7	2,116.0	107.67	20.654		
10,100.0	6,598.0	6,669.0	6,593.2	95.2	18.8	89.93	-1,907.3	2,124.6	2,233.2	2,123.9	109.31	20.430		
10,137.8	6,597.5	6,669.0	6,593.2	96.2	18.8	89.93	-1,907.3	2,124.6	2,240.0	2,129.6	110.34	20.301		
10,200.0	6,596.7	6,669.0	6,593.2	97.9	18.8	89.93	-1,907.3	2,124.6	2,252.4	2,140.4	112.03	20.106		
10,236.2	6,596.3	6,669.0	6,593.2	98.9	18.8	89.93	-1,907.3	2,124.6	2,260.4	2,147.4	113.01	20.001		
10,300.0	6,595.4	6,669.0	6,593.2	100.6	18.8	89.93	-1,907.3	2,124.6	2,275.8	2,161.1	114.75	19.833		
10,334.6	6,595.0	6,669.0	6,593.2	101.6	18.8	89.93	-1,907.3	2,124.6	2,284.9	2,169.2	115.69	19.750		
10,400.0	6,594.2	6,669.0	6,593.2	103.4	18.8	89.93	-1,907.3	2,124.6	2,303.4	2,185.9	117.48	19.607		
10,433.0	6,593.7	6,669.0	6,593.2	104.3	18.8	89.93	-1,907.3	2,124.6	2,313.3	2,195.0	118.38	19.542		
10,500.0	6,592.9	6,669.0	6,593.2	106.1	18.8	89.93	-1,907.3	2,124.6	2,334.8	2,214.6	120.21	19.423		
10,531.5	6,592.5	6,669.0	6,593.2	106.9	18.8	89.93	-1,907.3	2,124.6	2,345.6	2,224.5	121.07	19.374		
10,600.0	6,591.6	6,669.0	6,593.2	108.8	18.8	89.93	-1,907.3	2,124.6	2,370.1	2,247.2	122.94	19.278		
10,629.9	6,591.2	6,669.0	6,593.2	109.6	18.8	89.93	-1,907.3	2,124.6	2,381.4	2,257.6	123.76	19.242		
10,700.0	6,590.3	6,669.0	6,593.2	111.6	18.8	89.93	-1,907.3	2,124.6	2,409.1	2,283.4	125.68	19.168		
10,728.3	6,589.9	6,669.0	6,593.2	112.3	18.8	89.93	-1,907.3	2,124.6	2,420.7	2,294.3	126.46	19.142		
10,800.0	6,589.0	6,669.0	6,593.2	114.3	18.8	89.93	-1,907.3	2,124.6	2,451.5	2,323.0	128.43	19.088		
10,826.7	6,588.7	6,669.0	6,593.2	115.0	18.8	89.93	-1,907.3	2,124.6	2,463.4	2,334.2	129.16	19.072		
10,900.0	6,587.7	6,669.0	6,593.2	117.1	18.8	89.93	-1,907.3	2,124.6	2,497.1	2,366.0	131.17	19.037		
10,925.2	6,587.4	6,669.0	6,593.2	117.7	18.8	89.93	-1,907.3	2,124.6	2,509.1	2,377.3	131.86	19.028		
11,000.0	6,586.4	6,669.0	6,593.2	119.8	18.8	89.93	-1,907.3	2,124.6	2,545.9	2,412.0	133.92	19.011		
11,023.6	6,586.1	6,669.0	6,593.2	120.4	18.8	89.93	-1,907.3	2,124.6	2,557.9	2,423.3	134.57	19.008		
11,100.0	6,585.1	6,669.0	6,593.2	122.6	18.8	89.93	-1,907.3	2,124.6	2,597.6	2,461.0	136.67	19.006 SF		
11,122.0	6,584.8	6,669.0	6,593.2	123.2	18.8	89.93	-1,907.3	2,124.6	2,609.4	2,472.1	137.28	19.008		
11,200.0	6,583.8	6,669.0	6,593.2	125.3	18.8	89.93	-1,907.3	2,124.6	2,652.1	2,512.7	139.43	19.022		
11,220.4	6,583.6	6,669.0	6,593.2	125.9	18.8	89.93	-1,907.3	2,124.6	2,663.6	2,523.6	139.99	19.027		
11,300.0	6,582.5	6,669.0	6,593.2	128.1	18.8	89.93	-1,907.3	2,124.6	2,709.2	2,567.0	142.18	19.054		
11,318.9	6,582.3	6,669.0	6,593.2	128.6	18.8	89.93	-1,907.3	2,124.6	2,720.3	2,577.6	142.70	19.062		
11,400.0	6,581.2	6,669.0	6,593.2	130.8	18.8	89.93	-1,907.3	2,124.6	2,768.7	2,623.8	144.94	19.102		
11,417.3	6,581.0	6,669.0	6,593.2	131.3	18.8	89.93	-1,907.3	2,124.6	2,779.3	2,633.8	145.42	19.112		
11,500.0	6,580.0	6,669.0	6,593.2	133.6	18.8	89.93	-1,907.3	2,124.6	2,830.5	2,682.8	147.70	19.164		
11,515.7	6,579.7	6,669.0	6,593.2	134.0	18.8	89.93	-1,907.3	2,124.6	2,840.4	2,692.3	148.14	19.174		
11,600.0	6,578.7	6,669.0	6,593.2	136.3	18.8	89.93	-1,907.3	2,124.6	2,894.5	2,744.0	150.47	19.237		
11,614.1	6,578.5	6,669.0	6,593.2	136.7	18.8	89.93	-1,907.3	2,124.6	2,903.7	2,752.8	150.86	19.248		
11,700.0	6,577.4	6,669.0	6,593.2	139.1	18.8	89.93	-1,907.3	2,124.6	2,960.4	2,807.2	153.23	19.320		
11,712.6	6,577.2	6,669.0	6,593.2	139.5	18.8	89.93	-1,907.3	2,124.6	2,968.8	2,815.3	153.58	19.331		
11,800.0	6,576.1	6,669.0	6,593.2	141.9	18.8	89.93	-1,907.3	2,124.6	3,028.2	2,872.2	156.00	19.412		
11,811.0	6,575.9	6,669.0	6,593.2	142.2	18.8	89.93	-1,907.3	2,124.6	3,035.8	2,879.5	156.30	19.422		
11,882.7	6,575.0	6,669.0	6,593.2	144.2	18.8	89.93	-1,907.3	2,124.6	3,085.6	2,927.3	158.29	19.493		
11,883.5	6,575.0	6,669.0	6,593.2	144.2	18.8	89.93	-1,907.3	2,124.6	3,086.2	2,927.9	158.30	19.495		

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

## Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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		
2,263.8	2,250.7	4,046.9	3,998.2	5.5	11.9	-18.69	-316.6	-9,937.1	9,977.0	9,962.5	14.50	688.036		
2,280.0	2,266.2	4,062.7	4,013.5	5.6	12.0	-18.77	-319.0	-9,934.3	9,969.7	9,955.1	14.58	683.680		
2,300.0	2,285.3	4,070.0	4,020.6	5.7	12.0	-18.78	-320.1	-9,933.0	9,960.6	9,945.9	14.66	679.350		
2,362.2	2,344.6	4,115.5	4,064.8	6.0	12.3	-18.86	-327.0	-9,924.8	9,932.4	9,917.4	14.99	662.719		
2,400.0	2,380.6	4,138.5	4,087.2	6.2	12.4	-18.90	-330.5	-9,920.7	9,915.3	9,900.2	15.18	653.161		
2,460.6	2,438.4	4,164.0	4,112.0	6.5	12.5	-18.94	-334.3	-9,916.1	9,888.1	9,872.6	15.44	640.287		
2,500.0	2,475.9	4,164.0	4,112.0	6.7	12.5	-18.94	-334.3	-9,916.1	9,870.5	9,854.9	15.56	634.477		
2,559.0	2,532.2	4,210.7	4,157.4	7.0	12.7	-19.01	-341.2	-9,908.0	9,844.1	9,828.2	15.89	619.646		
2,600.0	2,571.2	4,227.0	4,173.3	7.2	12.7	-19.04	-343.6	-9,905.2	9,825.9	9,809.9	16.06	611.723		
2,657.5	2,626.0	4,258.0	4,203.5	7.5	12.9	-19.09	-348.2	-9,900.0	9,800.6	9,784.2	16.34	599.797		
2,700.0	2,666.6	4,258.0	4,203.5	7.8	12.9	-19.09	-348.2	-9,900.0	9,781.9	9,765.5	16.47	593.984		
2,755.9	2,719.8	4,289.9	4,234.6	8.1	13.0	-19.14	-352.9	-9,894.8	9,757.5	9,740.8	16.75	582.635		
2,800.0	2,761.9	4,307.8	4,252.2	8.3	13.1	-19.17	-355.5	-9,891.9	9,738.4	9,721.4	16.94	574.750		
2,854.3	2,813.7	4,353.0	4,296.2	8.7	13.3	-19.25	-362.2	-9,884.7	9,715.0	9,697.7	17.27	562.663		
2,900.0	2,857.2	4,353.0	4,296.2	8.9	13.3	-19.25	-362.2	-9,884.7	9,695.3	9,677.9	17.41	556.911		
2,952.7	2,907.5	4,412.9	4,354.7	9.2	13.5	-19.35	-370.9	-9,875.4	9,672.7	9,654.9	17.78	543.983		
3,000.0	2,952.5	4,461.8	4,402.6	9.5	13.7	-19.43	-377.6	-9,867.6	9,652.3	9,634.2	18.10	533.308		
3,051.2	3,001.3	4,493.2	4,433.3	9.8	13.8	-19.48	-382.0	-9,862.7	9,630.3	9,612.0	18.37	524.224		
3,100.0	3,047.8	4,523.2	4,462.6	10.1	14.0	-19.53	-386.1	-9,858.0	9,609.4	9,590.8	18.63	515.788		
3,149.6	3,095.1	4,619.9	4,557.2	10.4	14.4	-19.68	-399.2	-9,842.8	9,588.2	9,569.1	19.12	501.402		
3,200.0	3,143.2	4,661.7	4,598.1	10.7	14.5	-19.75	-404.5	-9,836.1	9,566.4	9,547.0	19.43	492.393		
3,248.0	3,188.9	4,691.3	4,627.1	11.0	14.7	-19.79	-408.2	-9,831.4	9,545.7	9,526.0	19.69	484.892		
3,300.0	3,238.5	4,727.0	4,662.1	11.3	14.8	-19.85	-412.6	-9,825.7	9,523.4	9,503.4	19.98	476.692		
3,346.4	3,282.8	4,794.9	4,728.7	11.6	15.1	-19.95	-420.3	-9,814.9	9,503.4	9,483.1	20.35	466.996		
3,400.0	3,333.8	4,865.2	4,797.7	11.9	15.4	-20.05	-427.3	-9,803.6	9,480.3	9,459.5	20.75	456.833		
3,444.9	3,376.6	4,916.8	4,848.3	12.2	15.6	-20.13	-432.7	-9,795.2	9,460.8	9,439.8	21.07	449.076		
3,500.0	3,429.1	4,949.4	4,880.3	12.6	15.7	-20.17	-436.2	-9,789.9	9,436.9	9,415.6	21.36	441.841		
3,543.3	3,470.4	4,974.9	4,905.3	12.8	15.8	-20.21	-439.0	-9,785.8	9,418.2	9,396.7	21.59	436.281		
3,600.0	3,524.4	5,011.0	4,940.7	13.2	15.9	-20.27	-443.0	-9,780.0	9,393.8	9,371.9	21.90	429.002		
3,641.7	3,564.2	5,011.0	4,940.7	13.4	15.9	-20.27	-443.0	-9,780.0	9,376.0	9,354.0	22.04	425.431		
3,700.0	3,619.8	5,011.0	4,940.7	13.8	15.9	-20.27	-443.0	-9,780.0	9,351.3	9,329.1	22.24	420.530		
3,740.1	3,658.0	5,011.0	4,940.7	14.0	15.9	-20.27	-443.0	-9,780.0	9,334.5	9,312.1	22.37	417.201		
3,800.0	3,715.1	5,055.3	4,984.3	14.4	16.1	-20.33	-447.8	-9,773.3	9,309.3	9,286.6	22.72	409.799		
3,838.6	3,751.8	5,064.1	4,992.9	14.7	16.1	-20.35	-448.7	-9,772.0	9,293.3	9,270.4	22.88	406.235		
3,900.0	3,810.4	5,103.0	5,031.2	15.0	16.3	-20.40	-452.5	-9,766.7	9,268.1	9,244.9	23.21	399.338		
3,937.0	3,845.7	5,103.0	5,031.2	15.3	16.3	-20.40	-452.5	-9,766.7	9,252.9	9,229.6	23.34	396.503		
4,000.0	3,905.7	5,103.0	5,031.2	15.7	16.3	-20.40	-452.5	-9,766.7	9,227.4	9,203.8	23.55	391.758		
4,035.4	3,939.5	5,103.0	5,031.2	15.9	16.3	-20.40	-452.5	-9,766.7	9,213.2	9,189.5	23.68	389.129		
4,100.0	4,001.0	5,155.5	5,083.1	16.3	16.5	-20.48	-457.5	-9,760.0	9,187.3	9,163.3	24.06	381.912		
4,133.8	4,033.3	5,174.7	5,102.0	16.5	16.5	-20.50	-459.2	-9,757.6	9,173.8	9,149.6	24.23	378.603		
4,200.0	4,096.3	5,197.0	5,124.1	16.9	16.6	-20.54	-461.1	-9,754.8	9,147.6	9,123.1	24.53	372.957		
4,232.3	4,127.1	5,224.0	5,150.7	17.1	16.7	-20.57	-463.5	-9,751.5	9,134.9	9,110.2	24.72	369.543		
4,300.0	4,191.7	5,254.9	5,181.4	17.6	16.8	-20.62	-466.3	-9,747.8	9,108.4	9,083.3	25.05	363.643		
4,330.7	4,220.9	5,290.0	5,216.1	17.8	16.9	-20.66	-469.5	-9,743.8	9,096.5	9,071.2	25.26	360.127		
4,400.0	4,287.0	5,318.4	5,244.2	18.2	17.0	-20.70	-472.1	-9,740.5	9,069.6	9,044.0	25.59	354.447		
4,429.1	4,314.7	5,353.7	5,279.1	18.4	17.1	-20.75	-475.3	-9,736.4	9,058.3	9,032.5	25.80	351.135		
4,500.0	4,382.3	5,418.0	5,342.6	18.8	17.3	-20.85	-481.1	-9,729.0	9,030.8	9,004.5	26.24	344.126		
4,527.5	4,408.6	5,438.2	5,362.6	19.0	17.4	-20.87	-483.0	-9,726.6	9,020.1	8,993.7	26.40	341.646		
4,600.0	4,477.6	5,481.0	5,405.0	19.5	17.6	-20.94	-487.0	-9,721.7	8,992.1	8,965.3	26.79	335.655		
4,626.0	4,502.4	5,481.0	5,405.0	19.6	17.6	-20.94	-487.0	-9,721.7	8,982.2	8,955.3	26.88	334.137		
4,700.0	4,572.9	5,481.0	5,405.0	20.1	17.6	-20.94	-487.0	-9,721.7	8,954.1	8,927.0	27.14	329.878		
4,724.4	4,596.2	5,524.7	5,448.3	20.3	17.7	-21.00	-491.0	-9,716.9	8,944.7	8,917.4	27.36	326.937		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD PJ #8I - Wellbore #1 - Wellbore #1		Offset Site Error:		0.0 usft
Survey Program: 510-MWD													Offset Well Error:		0.0 usft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
4,800.0	4,668.3	5,548.8	5,472.1	20.7	17.8	-21.03	-493.1	-9,714.5	8,916.4	8,888.7	27.70	321.909					
4,822.8	4,690.0	5,556.1	5,479.4	20.9	17.8	-21.04	-493.7	-9,713.7	8,907.9	8,880.1	27.80	320.415					
4,900.0	4,763.6	5,605.0	5,527.9	21.4	17.9	-21.11	-497.7	-9,709.2	8,879.6	8,851.4	28.22	314.657					
4,921.2	4,783.8	5,605.0	5,527.9	21.5	17.9	-21.11	-497.7	-9,709.2	8,871.8	8,843.5	28.30	313.538					
5,000.0	4,858.9	5,605.0	5,527.9	22.0	17.9	-21.11	-497.7	-9,709.2	8,843.3	8,814.7	28.58	309.458					
5,019.7	4,877.7	5,627.9	5,550.6	22.1	18.0	-21.14	-499.5	-9,707.2	8,836.2	8,807.5	28.71	307.757					
5,100.0	4,954.2	5,678.0	5,600.4	22.6	18.1	-21.21	-503.5	-9,703.0	8,807.5	8,778.3	29.14	302.247					
5,118.1	4,971.5	5,678.0	5,600.4	22.8	18.1	-21.21	-503.5	-9,703.0	8,801.1	8,771.9	29.20	301.357					
5,171.8	5,022.7	5,678.0	5,600.4	23.1	18.1	-21.21	-503.5	-9,703.0	8,782.2	8,752.8	29.40	298.743					
5,200.0	5,049.6	5,678.0	5,600.4	23.3	18.1	-21.13	-503.5	-9,703.0	8,772.5	8,743.0	29.51	297.224					
5,216.5	5,065.4	5,712.7	5,634.9	23.3	18.2	-21.14	-506.1	-9,700.3	8,766.8	8,737.1	29.67	295.474					
5,300.0	5,145.7	5,742.5	5,664.5	23.7	18.3	-20.97	-508.0	-9,698.2	8,740.2	8,710.1	30.06	290.747					
5,314.9	5,160.1	5,773.0	5,694.9	23.8	18.4	-20.97	-509.8	-9,696.3	8,735.8	8,705.6	30.19	289.328					
5,400.0	5,242.7	5,773.0	5,694.9	24.1	18.4	-20.79	-509.8	-9,696.3	8,711.7	8,681.2	30.48	285.782					
5,413.4	5,255.7	5,773.0	5,694.9	24.2	18.4	-20.76	-509.8	-9,696.3	8,708.2	8,677.7	30.53	285.272					
5,500.0	5,340.5	5,814.9	5,736.6	24.5	18.5	-20.65	-512.1	-9,693.9	8,687.1	8,656.2	30.89	281.189					
5,511.8	5,352.1	5,819.2	5,740.9	24.5	18.5	-20.63	-512.3	-9,693.6	8,684.4	8,653.5	30.94	280.707					
5,600.0	5,439.0	5,854.0	5,775.7	24.8	18.6	-20.53	-514.1	-9,691.9	8,666.3	8,635.1	31.26	277.207					
5,610.2	5,449.1	5,854.0	5,775.7	24.8	18.6	-20.52	-514.1	-9,691.9	8,664.4	8,633.1	31.29	276.922					
5,700.0	5,538.0	5,906.0	5,827.5	25.1	18.7	-20.44	-516.6	-9,689.7	8,649.4	8,617.8	31.62	273.560					
5,708.6	5,546.6	5,910.8	5,832.4	25.1	18.7	-20.44	-516.7	-9,689.5	8,648.1	8,616.4	31.65	273.269					
5,800.0	5,637.4	5,952.0	5,873.5	25.3	18.8	-20.37	-518.1	-9,687.9	8,636.2	8,604.3	31.92	270.538					
5,807.1	5,644.5	5,952.0	5,873.5	25.3	18.8	-20.37	-518.1	-9,687.9	8,635.4	8,603.5	31.93	270.407					
5,900.0	5,737.2	6,016.4	5,937.8	25.5	18.9	-20.33	-519.9	-9,685.9	8,626.7	8,594.5	32.22	267.763					
5,905.5	5,742.6	6,019.4	5,940.8	25.5	18.9	-20.33	-520.0	-9,685.8	8,626.3	8,594.1	32.23	267.637					
6,000.0	5,837.1	6,071.1	5,992.5	25.6	19.0	-20.31	-521.4	-9,684.5	8,621.0	8,588.6	32.46	265.614					
6,003.9	5,841.0	6,073.2	5,994.6	25.6	19.0	-20.31	-521.4	-9,684.4	8,620.9	8,588.4	32.47	265.540					
6,051.8	5,888.9	6,110.0	6,031.4	25.7	19.1	-95.43	-522.4	-9,683.6	8,619.6	8,578.3	41.29	208.765					
6,081.8	5,918.9	6,110.0	6,031.4	25.7	19.1	-95.43	-522.4	-9,683.6	8,619.1	8,577.8	41.32	208.595 ES					
6,094.6	5,931.7	6,128.2	6,049.6	25.7	19.1	174.57	-522.8	-9,683.3	8,619.0	8,586.3	32.66	263.924 CC					
6,100.0	5,937.1	6,132.3	6,053.7	25.7	19.1	174.57	-522.9	-9,683.2	8,619.0	8,586.3	32.66	263.915					
6,102.3	5,939.4	6,134.1	6,055.5	25.7	19.1	174.57	-522.9	-9,683.2	8,619.0	8,586.4	32.66	263.920					
6,150.0	5,987.0	6,170.8	6,092.2	25.7	19.2	174.54	-523.7	-9,682.5	8,621.2	8,588.6	32.59	264.543					
6,200.0	6,036.5	6,209.1	6,130.4	25.7	19.2	174.50	-524.5	-9,681.9	8,627.0	8,594.6	32.39	266.380					
6,200.8	6,037.3	6,209.6	6,131.0	25.7	19.2	174.50	-524.5	-9,681.9	8,627.1	8,594.7	32.38	266.419					
6,250.0	6,085.5	6,246.9	6,168.3	25.7	19.3	174.43	-525.1	-9,681.4	8,636.2	8,604.2	32.05	269.449					
6,299.2	6,133.0	6,266.0	6,187.4	25.6	19.3	174.33	-525.4	-9,681.1	8,648.7	8,617.1	31.57	273.971					
6,300.0	6,133.7	6,266.0	6,187.4	25.6	19.3	174.32	-525.4	-9,681.1	8,648.9	8,617.4	31.56	274.059					
6,350.0	6,180.9	6,315.9	6,237.2	25.5	19.4	174.19	-526.0	-9,680.5	8,665.0	8,634.0	31.00	279.554					
6,397.6	6,224.6	6,346.7	6,268.1	25.4	19.4	174.04	-526.3	-9,680.2	8,683.4	8,653.1	30.33	286.296					
6,400.0	6,226.7	6,348.2	6,269.6	25.4	19.5	174.03	-526.3	-9,680.2	8,684.4	8,654.1	30.29	286.664					
6,450.0	6,271.1	6,379.5	6,300.9	25.2	19.5	173.82	-526.6	-9,680.0	8,707.1	8,677.6	29.49	295.218					
6,496.0	6,310.4	6,424.0	6,345.3	25.1	19.6	173.60	-526.9	-9,679.7	8,730.7	8,702.0	28.70	304.167					
6,500.0	6,313.7	6,424.0	6,345.3	25.1	19.6	173.58	-526.9	-9,679.7	8,732.8	8,704.2	28.63	305.050					
6,550.0	6,354.4	6,444.5	6,365.8	25.0	19.6	173.26	-527.0	-9,679.6	8,761.5	8,733.8	27.66	316.776					
6,594.5	6,388.9	6,479.3	6,400.7	24.9	19.6	172.94	-527.2	-9,679.5	8,789.4	8,762.6	26.78	328.206					
6,600.0	6,393.0	6,483.5	6,404.9	24.9	19.7	172.90	-527.2	-9,679.4	8,793.0	8,766.3	26.67	329.705					
6,650.0	6,429.3	6,520.3	6,441.6	24.8	19.7	172.45	-527.4	-9,679.3	8,827.1	8,801.4	25.66	344.042					
6,692.9	6,458.5	6,549.9	6,471.2	24.7	19.8	171.98	-527.6	-9,679.1	8,858.3	8,833.5	24.79	357.264					
6,700.0	6,463.1	6,554.6	6,475.9	24.7	19.8	171.90	-527.6	-9,679.1	8,863.6	8,838.9	24.65	359.516					
6,750.0	6,494.3	6,581.0	6,502.3	24.7	19.8	171.20	-527.7	-9,679.0	8,902.4	8,878.7	23.70	375.681					
6,791.3	6,517.9	6,607.9	6,529.2	24.7	19.8	170.50	-527.8	-9,678.9	8,936.0	8,913.1	22.99	388.736					

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD PJ #81 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 510-MWD												<b>Offset Well Error:</b>	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
6,800.0	6,522.6	6,612.3	6,533.6	24.7	19.8	170.33	-527.9	-9,678.8	8,943.3	8,920.4	22.85	391.407	
6,850.0	6,548.0	6,636.1	6,557.4	24.7	19.9	169.20	-527.9	-9,678.7	8,986.0	8,963.9	22.17	405.410	
6,889.7	6,566.0	6,652.9	6,574.3	24.8	19.9	168.04	-527.9	-9,678.7	9,021.3	8,999.5	21.80	413.811	
6,900.0	6,570.4	6,657.0	6,578.3	24.9	19.9	167.69	-527.9	-9,678.7	9,030.5	9,008.8	21.74	415.423	
6,950.0	6,589.5	6,674.9	6,596.2	25.1	19.9	165.61	-527.9	-9,678.6	9,076.4	9,054.7	21.70	418.358	
6,988.2	6,602.0	6,686.5	6,607.9	25.3	19.9	163.41	-527.9	-9,678.6	9,112.3	9,090.3	22.05	413.240	
7,000.0	6,605.4	6,689.8	6,611.1	25.3	20.0	162.57	-527.8	-9,678.6	9,123.6	9,101.3	22.25	410.002	
7,050.0	6,618.0	6,701.5	6,622.9	25.6	20.0	157.80	-527.8	-9,678.5	9,171.7	9,147.9	23.84	384.748	
7,086.6	6,625.0	6,708.1	6,629.5	25.9	20.0	152.23	-527.8	-9,678.5	9,207.5	9,181.3	26.17	351.786	
7,100.0	6,627.1	6,710.1	6,631.4	26.0	20.0	149.47	-527.8	-9,678.5	9,220.6	9,193.2	27.42	336.297	
7,150.0	6,632.8	6,715.5	6,636.8	26.5	20.0	132.75	-527.7	-9,678.5	9,270.1	9,235.1	34.95	265.257	
7,185.0	6,634.7	6,717.4	6,638.7	26.8	20.0	110.64	-527.7	-9,678.5	9,304.9	9,262.5	42.39	219.495	
7,200.0	6,635.0	6,717.7	6,639.0	27.0	20.0	98.01	-527.7	-9,678.5	9,319.8	9,275.3	44.52	209.331	
7,215.9	6,635.0	6,717.7	6,639.0	27.1	20.0	83.70	-527.7	-9,678.5	9,335.7	9,290.9	44.80	208.401	
7,283.4	6,634.1	6,717.1	6,638.4	27.9	20.0	83.65	-527.7	-9,678.5	9,403.0	9,357.3	45.62	206.114	
7,300.0	6,633.9	6,716.9	6,638.2	28.1	20.0	83.64	-527.7	-9,678.5	9,419.4	9,373.6	45.82	205.567	
7,381.9	6,632.9	6,716.1	6,637.5	29.3	20.0	83.59	-527.7	-9,678.5	9,501.0	9,454.0	46.98	202.221	
7,400.0	6,632.6	6,716.0	6,637.3	29.5	20.0	83.57	-527.7	-9,678.5	9,519.1	9,471.8	47.24	201.504	
7,480.3	6,631.6	6,715.2	6,636.5	30.8	20.0	83.52	-527.7	-9,678.5	9,599.1	9,550.5	48.53	197.796	
7,500.0	6,631.4	6,715.0	6,636.4	31.1	20.0	83.51	-527.7	-9,678.5	9,618.7	9,569.8	48.85	196.917	
7,578.7	6,630.4	6,714.3	6,635.6	32.5	20.0	83.46	-527.8	-9,678.5	9,697.1	9,646.9	50.24	193.028	
7,600.0	6,630.1	6,714.1	6,635.4	32.9	20.0	83.44	-527.8	-9,678.5	9,718.3	9,667.7	50.61	192.015	
7,677.1	6,629.1	6,713.4	6,634.7	34.3	20.0	83.39	-527.8	-9,678.5	9,795.2	9,743.1	52.08	188.083	
7,700.0	6,628.8	6,713.2	6,634.5	34.8	20.0	83.37	-527.8	-9,678.5	9,818.0	9,765.4	52.51	186.962	
7,775.6	6,627.8	6,712.5	6,633.8	36.3	20.0	83.32	-527.8	-9,678.5	9,893.3	9,839.2	54.04	183.087	
7,800.0	6,627.5	6,712.2	6,633.6	36.8	20.0	83.31	-527.8	-9,678.5	9,917.6	9,863.1	54.53	181.882	
7,874.0	6,626.6	6,711.5	6,632.9	38.4	20.0	83.26	-527.8	-9,678.5	9,991.4	9,935.3	56.09	178.132 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 223-MWD												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	119.54	-1,151.9	2,032.8	2,336.5				
98.4	98.4	94.1	94.1	0.1	0.1	119.55	-1,152.4	2,032.5	2,336.4	2,336.3	0.16	N/A	
100.0	100.0	95.7	95.7	0.1	0.1	119.55	-1,152.4	2,032.4	2,336.4	2,336.3	0.16	N/A	
196.8	196.8	196.5	196.4	0.3	0.1	119.61	-1,154.2	2,031.2	2,336.2	2,335.7	0.44	5,317.599	
200.0	200.0	199.8	199.7	0.3	0.1	119.61	-1,154.3	2,031.1	2,336.2	2,335.7	0.45	5,209.137	
295.3	295.3	296.7	296.6	0.5	0.3	119.68	-1,156.7	2,029.2	2,335.8	2,335.0	0.82	2,853.709	
300.0	300.0	300.9	300.9	0.5	0.3	119.69	-1,156.8	2,029.2	2,335.8	2,334.9	0.84	2,788.558	
378.9	378.9	371.0	370.9	0.7	0.4	119.73	-1,158.1	2,028.2	2,335.6	2,334.5	1.15	2,022.617	
393.7	393.7	383.4	383.3	0.8	0.5	119.73	-1,158.3	2,028.1	2,335.6	2,334.4	1.21	1,923.629	
400.0	400.0	388.4	388.3	0.8	0.5	119.73	-1,158.4	2,028.1	2,335.6	2,334.4	1.24	1,885.496	
492.1	492.1	461.1	461.0	1.0	0.6	119.76	-1,159.4	2,028.0	2,336.2	2,334.6	1.60	1,460.934	
500.0	500.0	468.0	467.9	1.0	0.6	119.76	-1,159.5	2,028.0	2,336.2	2,334.6	1.63	1,432.047	
590.5	590.5	549.1	548.9	1.2	0.8	119.78	-1,160.8	2,028.5	2,337.4	2,335.4	2.01	1,164.472	
600.0	600.0	557.9	557.8	1.2	0.8	119.78	-1,160.9	2,028.6	2,337.5	2,335.5	2.05	1,141.677	
689.0	689.0	641.6	641.5	1.4	1.0	119.81	-1,162.6	2,029.1	2,338.9	2,336.5	2.43	964.186	
700.0	700.0	652.0	651.9	1.4	1.0	119.81	-1,162.8	2,029.2	2,339.1	2,336.6	2.47	945.985	
787.4	787.4	733.5	733.3	1.6	1.2	119.84	-1,164.6	2,029.9	2,340.7	2,337.9	2.84	823.325	
800.0	800.0	745.2	745.0	1.7	1.2	119.85	-1,164.8	2,030.0	2,341.0	2,338.1	2.90	808.268	
885.8	885.8	837.7	837.5	1.9	1.4	119.86	-1,166.0	2,031.4	2,342.6	2,339.3	3.28	713.147	
900.0	900.0	853.8	853.6	1.9	1.5	119.85	-1,166.0	2,031.7	2,342.9	2,339.5	3.35	699.181	
984.2	984.2	1,110.5	1,110.1	2.1	2.0	119.65	-1,156.8	2,032.0	2,342.0	2,337.9	4.07	574.773	
1,000.0	1,000.0	1,140.8	1,140.3	2.1	2.1	119.61	-1,154.5	2,031.2	2,341.1	2,336.9	4.17	560.779	
1,082.7	1,082.7	1,366.6	1,364.9	2.3	2.6	119.37	-1,135.6	2,017.8	2,333.5	2,328.7	4.86	480.502	
1,100.0	1,100.0	1,401.2	1,399.2	2.3	2.6	119.35	-1,132.8	2,014.3	2,331.3	2,326.3	4.98	468.170	
1,181.1	1,181.1	1,560.6	1,556.7	2.5	3.1	119.34	-1,120.8	1,993.8	2,319.2	2,313.6	5.59	415.182	
1,200.0	1,200.0	1,591.6	1,587.3	2.6	3.2	119.35	-1,118.5	1,989.1	2,316.0	2,310.3	5.72	404.844	
1,279.5	1,279.5	1,953.8	1,939.6	2.7	4.6	119.62	-1,087.2	1,912.3	2,299.0	2,291.7	7.31	314.417	
1,300.0	1,300.0	2,044.8	2,026.2	2.8	5.1	119.70	-1,076.1	1,886.7	2,292.7	2,284.9	7.84	292.508	
1,377.9	1,377.9	2,116.6	2,094.1	3.0	5.5	119.77	-1,067.0	1,865.4	2,267.7	2,259.3	8.40	270.090	
1,400.0	1,400.0	2,136.0	2,112.5	3.0	5.6	119.79	-1,064.5	1,859.6	2,260.7	2,252.1	8.55	264.419	
1,476.4	1,476.4	2,194.2	2,167.7	3.2	5.9	-165.15	-1,057.4	1,842.6	2,237.5	2,229.8	7.70	290.466	
1,500.0	1,500.0	2,212.5	2,185.1	3.2	6.0	-165.17	-1,055.3	1,837.2	2,230.8	2,223.0	7.80	286.075	
1,574.8	1,574.7	2,284.0	2,253.0	3.4	6.3	-165.23	-1,046.7	1,816.6	2,211.0	2,202.8	8.13	271.885	
1,600.0	1,599.8	2,309.4	2,277.1	3.4	6.5	-165.25	-1,043.5	1,809.4	2,204.7	2,196.4	8.25	267.311	
1,673.2	1,672.8	2,401.6	2,364.6	3.6	7.0	-165.31	-1,031.7	1,782.6	2,187.1	2,178.4	8.65	252.878	
1,700.0	1,699.5	2,423.3	2,385.1	3.7	7.1	-165.34	-1,028.9	1,776.2	2,181.0	2,172.3	8.76	248.925	
1,771.6	1,770.6	2,479.0	2,437.9	3.8	7.5	-165.40	-1,022.0	1,759.9	2,166.3	2,157.2	9.06	239.091	
1,800.0	1,798.7	2,504.9	2,462.6	3.9	7.6	-165.43	-1,018.8	1,752.3	2,161.0	2,151.8	9.19	235.238	
1,870.1	1,868.0	2,564.0	2,518.7	4.1	7.9	-165.49	-1,011.6	1,735.5	2,149.4	2,139.9	9.49	226.541	
1,900.0	1,897.5	2,587.9	2,541.5	4.2	8.1	-165.52	-1,008.6	1,728.8	2,145.0	2,135.4	9.61	223.169	
1,968.5	1,964.8	2,650.0	2,600.6	4.4	8.4	-165.59	-1,001.0	1,711.6	2,136.4	2,126.5	9.92	215.369	
2,000.0	1,995.6	2,680.8	2,630.0	4.5	8.6	-165.63	-997.2	1,703.1	2,133.0	2,123.0	10.07	211.853	
2,066.9	2,060.9	2,749.8	2,695.7	4.7	9.0	-165.71	-988.6	1,684.0	2,126.8	2,116.4	10.40	204.486	
2,100.0	2,093.1	2,774.7	2,719.5	4.8	9.1	-165.75	-985.4	1,677.2	2,124.3	2,113.8	10.54	201.623	
2,165.3	2,156.3	2,826.5	2,769.0	5.1	9.4	-165.83	-978.7	1,663.4	2,120.9	2,110.1	10.82	196.062	
2,200.0	2,189.6	2,873.9	2,814.2	5.2	9.7	-165.91	-972.2	1,651.0	2,119.7	2,108.7	11.02	192.352	
2,263.8	2,250.7	2,948.0	2,884.9	5.5	10.1	-166.05	-961.5	1,631.4	2,118.1	2,106.7	11.36	186.389	
2,280.0	2,266.2	2,964.9	2,901.0	5.6	10.2	-166.09	-959.0	1,626.9	2,117.9	2,106.4	11.44	185.056	
2,300.0	2,285.3	2,985.8	2,920.9	5.7	10.3	-166.13	-955.9	1,621.4	2,117.6	2,106.1	11.56	183.236	
2,354.0	2,336.7	3,016.8	2,950.5	5.9	10.5	-166.19	-951.4	1,613.3	2,117.3	2,105.5	11.78	179.674	
2,362.2	2,344.6	3,021.0	2,954.5	6.0	10.5	-166.20	-950.8	1,612.2	2,117.3	2,105.5	11.82	179.152	
2,400.0	2,380.6	3,040.6	2,973.2	6.2	10.7	-166.23	-948.2	1,607.2	2,117.6	2,105.6	11.98	176.743	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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		
2,460.6	2,438.4	3,077.0	3,008.2	6.5	10.9	-166.29	-943.7	1,598.1	2,118.6	2,106.4	12.25	172.936		
2,500.0	2,475.9	3,102.2	3,032.6	6.7	11.0	-166.33	-940.8	1,592.0	2,119.7	2,107.3	12.43	170.542		
2,559.0	2,532.2	3,152.6	3,081.1	7.0	11.2	-166.41	-935.1	1,579.9	2,121.5	2,108.8	12.73	166.613		
2,600.0	2,571.2	3,210.3	3,136.8	7.2	11.5	-166.50	-928.6	1,566.1	2,122.7	2,109.7	13.01	163.190		
2,657.5	2,626.0	3,282.8	3,206.5	7.5	11.9	-166.61	-919.9	1,548.1	2,123.9	2,110.5	13.38	158.784		
2,700.0	2,666.6	3,325.7	3,247.6	7.8	12.2	-166.69	-914.4	1,537.5	2,124.6	2,111.0	13.62	156.006		
2,755.9	2,719.8	3,370.2	3,290.5	8.1	12.4	-166.77	-908.7	1,526.7	2,125.7	2,111.8	13.91	152.868		
2,800.0	2,761.9	3,403.8	3,322.8	8.3	12.6	-166.83	-904.7	1,518.6	2,126.9	2,112.7	14.13	150.552		
2,854.3	2,813.7	3,444.2	3,361.7	8.7	12.8	-166.89	-900.0	1,509.0	2,128.6	2,114.2	14.40	147.834		
2,900.0	2,857.2	3,477.7	3,394.1	8.9	13.0	-166.94	-896.3	1,501.1	2,130.3	2,115.7	14.62	145.668		
2,952.7	2,907.5	3,538.2	3,452.6	9.2	13.3	-167.03	-890.0	1,487.0	2,132.5	2,117.6	14.95	142.672		
3,000.0	2,952.5	3,627.6	3,538.6	9.5	13.8	-167.15	-879.9	1,465.1	2,133.7	2,118.4	15.34	139.127		
3,051.2	3,001.3	3,703.4	3,611.3	9.8	14.2	-167.26	-870.8	1,445.5	2,134.2	2,118.5	15.71	135.870		
3,100.0	3,047.8	3,764.6	3,669.8	10.1	14.6	-167.35	-863.4	1,429.2	2,134.4	2,118.3	16.03	133.129		
3,149.6	3,095.1	3,818.2	3,721.0	10.4	14.9	-167.41	-857.0	1,414.6	2,134.3	2,118.0	16.34	130.622		
3,200.0	3,143.2	3,872.8	3,773.2	10.7	15.2	-167.48	-850.6	1,399.6	2,134.2	2,117.5	16.65	128.156		
3,248.0	3,188.9	3,925.1	3,823.0	11.0	15.5	-167.53	-844.5	1,385.1	2,133.9	2,117.0	16.95	125.868		
3,300.0	3,238.5	3,970.0	3,865.9	11.3	15.8	-167.58	-839.3	1,372.6	2,133.7	2,116.5	17.24	123.735		
3,333.3	3,270.2	3,997.8	3,892.4	11.5	15.9	-167.62	-835.9	1,365.0	2,133.7	2,116.2	17.43	122.430		
3,346.4	3,282.8	4,008.8	3,902.9	11.6	16.0	-167.63	-834.6	1,362.1	2,133.7	2,116.2	17.50	121.924		
3,400.0	3,333.8	4,103.0	3,992.6	11.9	16.6	-167.74	-823.3	1,335.9	2,133.3	2,115.4	17.94	118.921		
3,444.9	3,376.6	4,134.1	4,022.3	12.2	16.8	-167.78	-819.4	1,327.0	2,132.7	2,114.5	18.17	117.375		
3,500.0	3,429.1	4,172.1	4,058.4	12.6	17.0	-167.85	-814.2	1,316.8	2,132.3	2,113.8	18.45	115.565		
3,543.3	3,470.4	4,221.1	4,105.2	12.8	17.3	-167.95	-806.8	1,304.1	2,132.2	2,113.4	18.72	113.867		
3,600.0	3,524.4	4,300.0	4,180.3	13.2	17.8	-168.14	-794.1	1,283.4	2,131.4	2,112.3	19.12	111.450		
3,641.7	3,564.2	4,341.7	4,219.8	13.4	18.0	-168.24	-787.2	1,272.3	2,130.7	2,111.3	19.37	109.981		
3,700.0	3,619.8	4,450.6	4,323.0	13.8	18.7	-168.47	-770.0	1,241.8	2,129.3	2,109.4	19.87	107.149		
3,740.1	3,658.0	4,495.9	4,365.6	14.0	19.0	-168.53	-763.4	1,228.1	2,127.6	2,107.5	20.13	105.668		
3,800.0	3,715.1	4,531.0	4,398.7	14.4	19.2	-168.58	-758.6	1,217.3	2,125.2	2,104.8	20.43	104.024		
3,838.6	3,751.8	4,566.2	4,431.9	14.7	19.5	-168.62	-754.0	1,206.6	2,123.8	2,103.1	20.66	102.820		
3,900.0	3,810.4	4,617.0	4,480.1	15.0	19.8	-168.67	-747.7	1,191.9	2,122.6	2,101.6	21.00	101.081		
3,937.0	3,845.7	4,617.0	4,480.1	15.3	19.8	-168.67	-747.7	1,191.9	2,122.0	2,100.9	21.12	100.492		
4,000.0	3,905.7	4,668.7	4,529.4	15.7	20.1	-168.74	-741.5	1,177.7	2,121.8	2,100.3	21.46	98.861		
4,010.4	3,915.6	4,677.0	4,537.3	15.7	20.1	-168.75	-740.4	1,175.4	2,121.8	2,100.2	21.52	98.602		
4,035.4	3,939.5	4,702.0	4,561.2	15.9	20.3	-168.79	-737.3	1,168.8	2,121.8	2,100.1	21.67	97.921		
4,100.0	4,001.0	4,788.0	4,643.2	16.3	20.8	-168.92	-725.9	1,145.4	2,121.5	2,099.3	22.12	95.911		
4,121.7	4,021.7	4,788.0	4,643.2	16.4	20.8	-168.92	-725.9	1,145.4	2,121.4	2,099.2	22.19	95.607		
4,133.8	4,033.3	4,788.0	4,643.2	16.5	20.8	-168.92	-725.9	1,145.4	2,121.4	2,099.2	22.23	95.442		
4,200.0	4,096.3	4,836.2	4,689.2	16.9	21.1	-169.01	-719.4	1,132.7	2,121.6	2,099.0	22.57	93.997		
4,232.3	4,127.1	4,873.0	4,724.6	17.1	21.3	-169.08	-714.5	1,123.9	2,122.4	2,099.7	22.78	93.192		
4,300.0	4,191.7	4,902.4	4,753.0	17.6	21.4	-169.14	-710.6	1,117.1	2,124.2	2,101.1	23.07	92.078		
4,330.7	4,220.9	4,950.0	4,798.8	17.8	21.7	-169.23	-704.3	1,105.8	2,125.0	2,101.7	23.30	91.221		
4,400.0	4,287.0	5,078.7	4,921.6	18.2	22.5	-169.47	-686.4	1,071.9	2,124.5	2,100.6	23.88	88.968		
4,427.4	4,313.1	5,094.5	4,936.7	18.4	22.6	-169.50	-684.3	1,067.7	2,124.4	2,100.4	24.01	88.475		
4,429.1	4,314.7	5,095.5	4,937.6	18.4	22.6	-169.50	-684.2	1,067.4	2,124.4	2,100.4	24.02	88.444		
4,500.0	4,382.3	5,130.0	4,970.7	18.8	22.8	-169.55	-679.8	1,058.4	2,124.9	2,100.6	24.34	87.288		
4,527.5	4,408.6	5,154.6	4,994.3	19.0	22.9	-169.58	-676.9	1,052.1	2,125.4	2,100.9	24.50	86.755		
4,600.0	4,477.6	5,215.0	5,052.4	19.5	23.2	-169.67	-670.0	1,037.2	2,127.3	2,102.4	24.89	85.455		
4,626.0	4,502.4	5,215.0	5,052.4	19.6	23.2	-169.67	-670.0	1,037.2	2,128.1	2,103.1	24.98	85.203		
4,700.0	4,572.9	5,246.9	5,083.3	20.1	23.4	-169.72	-666.6	1,029.8	2,131.5	2,106.2	25.29	84.268		
4,724.4	4,596.2	5,256.9	5,093.0	20.3	23.4	-169.73	-665.6	1,027.7	2,132.9	2,107.5	25.40	83.982		
4,800.0	4,668.3	5,301.0	5,136.0	20.7	23.6	-169.80	-661.3	1,018.8	2,138.6	2,112.9	25.75	83.048		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	
4,822.8	4,690.0	5,301.0	5,136.0	20.9	23.6	-169.80	-661.3	1,018.8	2,140.5	2,114.7	25.82	82.887	
4,900.0	4,763.6	5,335.1	5,169.3	21.4	23.8	-169.85	-658.3	1,012.7	2,148.2	2,122.0	26.15	82.145	
4,921.2	4,783.8	5,345.7	5,179.7	21.5	23.8	-169.87	-657.3	1,010.9	2,150.5	2,124.3	26.24	81.944	
5,000.0	4,858.9	5,386.0	5,219.4	22.0	24.0	-169.94	-653.9	1,004.6	2,160.2	2,133.6	26.59	81.240	
5,019.7	4,877.7	5,403.3	5,236.5	22.1	24.0	-169.97	-652.4	1,002.1	2,162.7	2,136.1	26.69	81.028	
5,100.0	4,954.2	5,472.0	5,304.2	22.6	24.3	-170.10	-646.6	991.9	2,173.4	2,146.3	27.10	80.192	
5,118.1	4,971.5	5,491.3	5,323.2	22.8	24.3	-170.13	-645.0	989.1	2,175.8	2,148.6	27.20	79.985	
5,171.8	5,022.7	5,527.1	5,358.5	23.1	24.5	-170.19	-642.1	984.0	2,183.3	2,155.9	27.45	79.530	
5,200.0	5,049.6	5,557.0	5,388.1	23.3	24.6	-170.26	-639.9	980.0	2,187.3	2,159.7	27.61	79.212	
5,216.5	5,065.4	5,557.0	5,388.1	23.3	24.6	-170.26	-639.9	980.0	2,189.6	2,161.9	27.66	79.151	
5,300.0	5,145.7	5,609.5	5,440.0	23.7	24.7	-170.37	-636.4	973.3	2,200.3	2,172.2	28.01	78.542	
5,314.9	5,160.1	5,618.9	5,449.4	23.8	24.7	-170.39	-635.8	972.1	2,202.0	2,174.0	28.07	78.440	
5,400.0	5,242.7	5,677.9	5,507.8	24.1	24.9	-170.48	-632.7	965.2	2,211.4	2,183.0	28.41	77.844	
5,413.4	5,255.7	5,687.8	5,517.7	24.2	24.9	-170.50	-632.3	964.1	2,212.7	2,184.2	28.46	77.753	
5,500.0	5,340.5	5,753.3	5,582.7	24.5	25.1	-170.56	-629.8	956.8	2,220.3	2,191.5	28.77	77.160	
5,511.8	5,352.1	5,762.5	5,591.8	24.5	25.2	-170.57	-629.5	955.8	2,221.1	2,192.3	28.81	77.084	
5,600.0	5,439.0	5,814.0	5,643.0	24.8	25.3	-170.60	-627.9	950.4	2,226.8	2,197.7	29.07	76.607	
5,610.2	5,449.1	5,833.5	5,662.5	24.8	25.3	-170.61	-627.4	948.4	2,227.3	2,198.2	29.12	76.483	
5,700.0	5,538.0	5,899.0	5,727.7	25.1	25.5	-170.63	-625.9	942.7	2,231.4	2,202.0	29.36	75.988	
5,708.6	5,546.6	5,899.0	5,727.7	25.1	25.5	-170.64	-625.9	942.7	2,231.7	2,202.3	29.37	75.976	
5,800.0	5,637.4	5,955.0	5,783.5	25.3	25.6	-170.64	-625.0	938.5	2,234.1	2,204.5	29.56	75.586	
5,807.1	5,644.5	5,959.8	5,788.3	25.3	25.6	-170.64	-624.9	938.1	2,234.2	2,204.6	29.57	75.557	
5,900.0	5,737.2	6,012.7	5,841.1	25.5	25.7	-170.63	-624.6	934.7	2,235.0	2,205.3	29.71	75.235	
5,905.5	5,742.6	6,015.4	5,843.7	25.5	25.7	-170.63	-624.6	934.6	2,235.0	2,205.3	29.71	75.221	
6,000.0	5,837.1	6,070.0	5,898.3	25.6	25.8	-170.60	-625.4	932.1	2,234.7	2,204.9	29.81	74.959	
6,003.9	5,841.0	6,070.0	5,898.3	25.6	25.8	-170.59	-625.4	932.1	2,234.6	2,204.8	29.81	74.960	
6,051.8	5,888.9	6,070.0	5,898.3	25.7	25.8	114.28	-625.4	932.1	2,234.1	2,182.9	51.19	43.644	
6,081.8	5,918.9	6,099.9	5,928.2	25.7	25.8	114.31	-626.1	931.3	2,233.7	2,182.4	51.25	43.585	
6,100.0	5,937.1	6,108.5	5,936.8	25.7	25.8	24.32	-626.3	931.1	2,233.4	2,203.6	29.80	74.938	
6,102.3	5,939.4	6,109.6	5,937.9	25.7	25.8	24.33	-626.3	931.1	2,233.3	2,203.5	29.79	74.971	
6,150.0	5,987.0	6,132.1	5,960.4	25.7	25.9	24.44	-626.8	931.0	2,230.7	2,201.3	29.47	75.687	
6,200.0	6,036.5	6,156.0	5,984.3	25.7	25.9	24.66	-627.3	931.1	2,225.5	2,196.5	29.05	76.602	
6,200.8	6,037.3	6,156.0	5,984.3	25.7	25.9	24.66	-627.3	931.1	2,225.4	2,196.4	29.05	76.619	
6,250.0	6,085.5	6,208.9	6,037.1	25.7	25.9	25.06	-628.0	931.9	2,217.4	2,188.8	28.61	77.507	
6,299.2	6,133.0	6,260.6	6,088.8	25.6	26.0	25.59	-628.0	932.9	2,206.4	2,178.2	28.12	78.455	
6,300.0	6,133.7	6,261.4	6,089.6	25.6	26.0	25.60	-628.0	932.9	2,206.2	2,178.1	28.11	78.470	
6,350.0	6,180.9	6,312.1	6,140.3	25.5	26.0	26.31	-627.9	933.8	2,191.8	2,164.2	27.60	79.416	
6,397.6	6,224.6	6,350.9	6,179.2	25.4	26.0	27.13	-627.9	934.5	2,175.3	2,148.2	27.10	80.263	
6,400.0	6,226.7	6,352.7	6,180.9	25.4	26.0	27.18	-627.9	934.5	2,174.5	2,147.4	27.08	80.302	
6,450.0	6,271.1	6,388.3	6,216.6	25.2	26.1	28.21	-628.1	935.2	2,154.5	2,127.9	26.61	80.963	
6,496.0	6,310.4	6,421.6	6,249.8	25.1	26.1	29.35	-628.5	935.9	2,133.8	2,107.5	26.29	81.162	
6,500.0	6,313.7	6,424.7	6,252.9	25.1	26.1	29.46	-628.6	935.9	2,131.9	2,105.7	26.27	81.150	
6,550.0	6,354.4	6,463.6	6,291.8	25.0	26.1	30.98	-629.2	936.7	2,106.9	2,080.7	26.15	80.573	
6,594.5	6,388.9	6,498.0	6,326.2	24.9	26.1	32.60	-629.9	937.4	2,082.5	2,056.3	26.28	79.231	
6,600.0	6,393.0	6,500.5	6,328.7	24.9	26.1	32.79	-629.9	937.4	2,079.4	2,053.1	26.31	79.039	
6,650.0	6,429.3	6,537.1	6,365.3	24.8	26.2	34.94	-630.8	938.1	2,049.6	2,022.8	26.85	76.340	
6,692.9	6,458.5	6,566.6	6,394.7	24.7	26.2	37.08	-631.6	938.6	2,022.4	1,994.8	27.66	73.117	
6,700.0	6,463.1	6,571.2	6,399.4	24.7	26.2	37.46	-631.8	938.7	2,017.8	1,990.0	27.83	72.514	
6,750.0	6,494.3	6,602.9	6,431.0	24.7	26.2	40.38	-632.7	939.2	1,984.0	1,954.7	29.29	67.739	
6,791.3	6,517.9	6,627.1	6,455.2	24.7	26.2	43.15	-633.4	939.6	1,954.8	1,923.9	30.87	63.316	
6,800.0	6,522.6	6,631.9	6,460.0	24.7	26.2	43.77	-633.5	939.6	1,948.5	1,917.2	31.24	62.365	
6,850.0	6,548.0	6,658.0	6,486.1	24.7	26.2	47.65	-634.3	940.0	1,911.5	1,877.8	33.65	56.803	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	
6,889.7	6,566.0	6,677.0	6,505.1	24.8	26.2	51.13	-634.9	940.3	1,881.1	1,845.2	35.85	52.477	
6,900.0	6,570.4	6,681.8	6,509.9	24.9	26.2	52.08	-635.1	940.4	1,873.1	1,836.7	36.44	51.403	
6,950.0	6,589.5	6,702.9	6,530.9	25.1	26.3	57.07	-635.8	940.7	1,833.7	1,794.3	39.47	46.457	
6,988.2	6,602.0	6,716.6	6,544.6	25.3	26.3	61.20	-636.2	940.8	1,803.1	1,761.2	41.83	43.106	
7,000.0	6,605.4	6,720.4	6,548.5	25.3	26.3	62.53	-636.3	940.9	1,793.5	1,751.0	42.54	42.159	
7,050.0	6,618.0	6,734.3	6,562.4	25.6	26.3	68.37	-636.8	941.1	1,752.7	1,707.2	45.43	38.575	
7,086.6	6,625.0	6,742.2	6,570.2	25.9	26.3	72.80	-637.1	941.1	1,722.5	1,675.2	47.33	36.397	
7,100.0	6,627.1	6,744.6	6,572.6	26.0	26.3	74.43	-637.1	941.2	1,711.5	1,663.5	47.95	35.696	
7,150.0	6,632.8	6,751.1	6,579.2	26.5	26.3	80.53	-637.4	941.2	1,670.2	1,620.3	49.92	33.457	
7,185.0	6,634.7	6,753.5	6,581.6	26.8	26.3	84.71	-637.4	941.3	1,641.3	1,590.4	50.95	32.216	
7,200.0	6,635.0	6,754.0	6,582.1	27.0	26.3	86.46	-637.5	941.3	1,629.0	1,577.8	51.29	31.762	
7,215.9	6,635.0	6,754.2	6,582.2	27.1	26.3	88.28	-637.5	941.3	1,616.0	1,564.4	51.60	31.319	
7,283.4	6,634.1	6,754.0	6,582.0	27.9	26.3	88.27	-637.5	941.3	1,561.3	1,508.9	52.43	29.778	
7,300.0	6,633.9	6,754.0	6,582.0	28.1	26.3	88.27	-637.4	941.3	1,548.0	1,495.4	52.64	29.411	
7,381.9	6,632.9	6,753.8	6,581.8	29.3	26.3	88.26	-637.4	941.3	1,483.5	1,429.6	53.81	27.569	
7,400.0	6,632.6	6,753.7	6,581.8	29.5	26.3	88.25	-637.4	941.3	1,469.4	1,415.3	54.07	27.177	
7,480.3	6,631.6	6,753.5	6,581.6	30.8	26.3	88.24	-637.4	941.3	1,408.2	1,352.8	55.37	25.432	
7,500.0	6,631.4	6,753.5	6,581.5	31.1	26.3	88.24	-637.4	941.3	1,393.5	1,337.8	55.69	25.022	
7,578.7	6,630.4	6,753.3	6,581.3	32.5	26.3	88.23	-637.4	941.3	1,335.9	1,278.9	57.09	23.399	
7,600.0	6,630.1	6,753.2	6,581.3	32.9	26.3	88.23	-637.4	941.3	1,320.8	1,263.3	57.47	22.981	
7,677.1	6,629.1	6,753.1	6,581.1	34.3	26.3	88.21	-637.4	941.3	1,267.2	1,208.3	58.95	21.496	
7,700.0	6,628.8	6,753.0	6,581.1	34.8	26.3	88.21	-637.4	941.3	1,251.8	1,192.5	59.39	21.078	
7,775.6	6,627.8	6,752.8	6,580.9	36.3	26.3	88.20	-637.4	941.3	1,202.6	1,141.7	60.93	19.739	
7,800.0	6,627.5	6,752.8	6,580.8	36.8	26.3	88.20	-637.4	941.3	1,187.3	1,125.9	61.42	19.330	
7,874.0	6,626.6	6,752.6	6,580.6	38.4	26.3	88.19	-637.4	941.3	1,142.9	1,079.9	63.00	18.141	
7,900.0	6,626.3	6,752.5	6,580.6	38.9	26.3	88.18	-637.4	941.3	1,128.0	1,064.5	63.55	17.749	
7,972.4	6,625.3	6,752.4	6,580.4	40.5	26.3	88.17	-637.4	941.3	1,088.8	1,023.6	65.15	16.711	
8,000.0	6,625.0	6,752.3	6,580.4	41.1	26.3	88.17	-637.4	941.3	1,074.8	1,009.0	65.76	16.342	
8,070.8	6,624.1	6,752.2	6,580.2	42.7	26.3	88.16	-637.4	941.3	1,041.2	973.8	67.38	15.452	
8,100.0	6,623.7	6,752.1	6,580.1	43.4	26.3	88.15	-637.4	941.3	1,028.5	960.4	68.05	15.115	
8,169.3	6,622.8	6,751.9	6,580.0	45.0	26.3	88.15	-637.4	941.3	1,001.0	931.4	69.67	14.369	
8,200.0	6,622.4	6,751.9	6,579.9	45.7	26.3	88.14	-637.4	941.2	990.2	919.8	70.38	14.068	
8,267.7	6,621.6	6,751.7	6,579.7	47.4	26.3	88.13	-637.4	941.2	969.2	897.2	72.00	13.461	
8,300.0	6,621.1	6,751.6	6,579.7	48.1	26.3	88.13	-637.4	941.2	960.8	888.0	72.77	13.202	
8,366.1	6,620.3	6,751.5	6,579.5	49.7	26.3	88.12	-637.4	941.2	946.7	872.3	74.38	12.727	
8,400.0	6,619.9	6,751.4	6,579.5	50.6	26.3	88.11	-637.4	941.2	941.1	865.9	75.21	12.514	
8,464.5	6,619.0	6,751.3	6,579.3	52.2	26.3	88.10	-637.4	941.2	934.0	857.2	76.80	12.161	
8,500.0	6,618.6	6,751.2	6,579.2	53.0	26.3	88.10	-637.4	941.2	931.9	854.2	77.68	11.997	
8,536.7	6,618.1	6,751.1	6,579.2	54.0	26.3	88.09	-637.4	941.2	931.2	852.6	78.59	11.848 CC	
8,563.0	6,617.8	6,751.1	6,579.1	54.6	26.3	88.09	-637.4	941.2	931.5	852.3	79.25	11.754 ES	
8,600.0	6,617.3	6,751.0	6,579.0	55.5	26.3	88.09	-637.3	941.2	933.3	853.1	80.18	11.641	
8,661.4	6,616.5	6,750.8	6,578.9	57.1	26.3	88.08	-637.3	941.2	939.5	857.8	81.73	11.495	
8,700.0	6,616.0	6,750.8	6,578.8	58.1	26.3	88.07	-637.3	941.2	945.4	862.7	82.71	11.430	
8,759.8	6,615.2	6,750.6	6,578.7	59.6	26.3	88.06	-637.3	941.2	957.5	873.3	84.24	11.367	
8,800.0	6,614.7	6,750.5	6,578.6	60.6	26.3	88.06	-637.3	941.2	967.7	882.4	85.26	11.350 SF	
8,858.2	6,614.0	6,750.4	6,578.5	62.1	26.3	88.05	-637.3	941.2	985.1	898.4	86.76	11.354	
8,900.0	6,613.4	6,750.3	6,578.4	63.2	26.3	88.05	-637.3	941.2	999.5	911.7	87.84	11.379	
8,956.7	6,612.7	6,750.2	6,578.2	64.7	26.3	88.04	-637.3	941.2	1,021.5	932.2	89.31	11.438	
9,000.0	6,612.2	6,750.1	6,578.2	65.8	26.3	88.03	-637.3	941.2	1,040.1	949.6	90.43	11.501	
9,055.1	6,611.5	6,750.0	6,578.0	67.3	26.3	88.03	-637.3	941.2	1,065.8	973.9	91.87	11.601	
9,100.0	6,610.9	6,749.9	6,577.9	68.4	26.3	88.02	-637.3	941.2	1,088.3	995.3	93.04	11.697	
9,153.5	6,610.2	6,749.8	6,577.8	69.8	26.3	88.01	-637.3	941.2	1,116.9	1,022.5	94.45	11.826	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	
9,200.0	6,609.6	6,749.7	6,577.7	71.1	26.3	88.01	-637.3	941.2	1,143.3	1,047.6	95.67	11.950	
9,251.9	6,608.9	6,749.6	6,577.6	72.4	26.3	88.00	-637.3	941.2	1,174.2	1,077.1	97.04	12.100	
9,300.0	6,608.3	6,749.5	6,577.5	73.7	26.3	87.99	-637.3	941.2	1,204.0	1,105.7	98.31	12.248	
9,350.4	6,607.7	6,749.4	6,577.4	75.0	26.3	87.99	-637.3	941.2	1,236.6	1,136.9	99.65	12.410	
9,400.0	6,607.0	6,749.3	6,577.3	76.4	26.3	87.98	-637.3	941.2	1,269.8	1,168.8	100.96	12.577	
9,448.8	6,606.4	6,749.2	6,577.2	77.7	26.3	87.98	-637.3	941.2	1,303.5	1,201.2	102.26	12.747	
9,500.0	6,605.7	6,749.1	6,577.1	79.0	26.3	87.97	-637.3	941.2	1,339.8	1,236.2	103.62	12.929	
9,547.2	6,605.1	6,749.0	6,577.0	80.3	26.3	87.96	-637.3	941.2	1,374.1	1,269.3	104.89	13.101	
9,600.0	6,604.5	6,748.9	6,576.9	81.7	26.3	87.96	-637.3	941.2	1,413.4	1,307.1	106.30	13.297	
9,645.6	6,603.9	6,748.8	6,576.8	82.9	26.3	87.95	-637.3	941.2	1,448.1	1,340.5	107.52	13.468	
9,700.0	6,603.2	6,748.7	6,576.7	84.4	26.3	87.94	-637.3	941.2	1,490.1	1,381.1	108.98	13.674	
9,744.1	6,602.6	6,748.6	6,576.6	85.6	26.3	87.94	-637.3	941.2	1,524.7	1,414.6	110.16	13.841	
9,800.0	6,601.9	6,748.5	6,576.5	87.1	26.3	87.93	-637.3	941.2	1,569.4	1,457.7	111.67	14.055	
9,842.5	6,601.3	6,748.4	6,576.4	88.2	26.3	87.93	-637.3	941.2	1,603.8	1,491.0	112.81	14.217	
9,900.0	6,600.6	6,748.3	6,576.3	89.8	26.3	87.92	-637.3	941.2	1,651.0	1,536.6	114.36	14.436	
9,940.9	6,600.1	6,748.2	6,576.2	90.9	26.3	87.91	-637.3	941.2	1,684.9	1,569.5	115.47	14.592	
10,000.0	6,599.3	6,748.1	6,576.1	92.5	26.3	87.91	-637.3	941.2	1,734.5	1,617.4	117.06	14.816	
10,039.3	6,598.8	6,748.0	6,576.0	93.5	26.3	87.90	-637.3	941.2	1,767.8	1,649.7	118.13	14.965	
10,100.0	6,598.0	6,747.9	6,575.9	95.2	26.3	87.89	-637.2	941.2	1,819.6	1,699.8	119.77	15.192	
10,137.8	6,597.5	6,747.8	6,575.9	96.2	26.3	87.89	-637.2	941.2	1,852.2	1,731.4	120.80	15.333	
10,200.0	6,596.7	6,747.7	6,575.7	97.9	26.3	87.88	-637.2	941.2	1,906.2	1,783.7	122.49	15.563	
10,236.2	6,596.3	6,747.6	6,575.7	98.9	26.3	87.88	-637.2	941.2	1,937.9	1,814.4	123.47	15.695	
10,300.0	6,595.4	6,747.5	6,575.5	100.6	26.3	87.87	-637.2	941.2	1,994.1	1,868.9	125.21	15.926	
10,334.6	6,595.0	6,747.4	6,575.5	101.6	26.3	87.86	-637.2	941.2	2,024.8	1,898.6	126.15	16.051	
10,400.0	6,594.2	6,747.3	6,575.3	103.4	26.3	87.86	-637.2	941.2	2,083.0	1,955.1	127.93	16.283	
10,433.0	6,593.7	6,747.2	6,575.3	104.3	26.3	87.85	-637.2	941.2	2,112.6	1,983.8	128.83	16.398	
10,500.0	6,592.9	6,747.1	6,575.2	106.1	26.3	87.84	-637.2	941.2	2,172.9	2,042.3	130.66	16.631	
10,531.5	6,592.5	6,747.1	6,575.1	106.9	26.3	87.84	-637.2	941.2	2,201.4	2,069.9	131.52	16.739	
10,600.0	6,591.6	6,746.9	6,575.0	108.8	26.3	87.83	-637.2	941.2	2,263.7	2,130.3	133.39	16.970	
10,629.9	6,591.2	6,746.9	6,574.9	109.6	26.3	87.83	-637.2	941.2	2,291.0	2,156.8	134.21	17.070	
10,700.0	6,590.3	6,746.7	6,574.8	111.6	26.3	87.82	-637.2	941.2	2,355.2	2,219.1	136.13	17.302	
10,728.3	6,589.9	6,746.7	6,574.7	112.3	26.3	87.82	-637.2	941.2	2,381.2	2,244.3	136.90	17.394	
10,800.0	6,589.0	6,746.6	6,574.6	114.3	26.3	87.81	-637.2	941.2	2,447.4	2,308.5	138.87	17.624	
10,826.7	6,588.7	6,746.5	6,574.5	115.0	26.3	87.81	-637.2	941.2	2,472.1	2,332.5	139.60	17.709	
10,900.0	6,587.7	6,746.4	6,574.4	117.1	26.3	87.80	-637.2	941.2	2,540.1	2,398.5	141.61	17.938	
10,925.2	6,587.4	6,746.3	6,574.4	117.7	26.3	87.79	-637.2	941.2	2,563.6	2,421.3	142.30	18.015	
11,000.0	6,586.4	6,746.2	6,574.2	119.8	26.3	87.78	-637.2	941.2	2,633.4	2,489.1	144.35	18.243	
11,023.6	6,586.1	6,746.1	6,574.2	120.4	26.3	87.78	-637.2	941.2	2,655.5	2,510.5	145.00	18.314	
11,100.0	6,585.1	6,746.0	6,574.0	122.6	26.3	87.77	-637.2	941.2	2,727.2	2,580.1	147.10	18.540	
11,122.0	6,584.8	6,746.0	6,574.0	123.2	26.3	87.77	-637.2	941.2	2,747.9	2,600.2	147.71	18.604	
11,200.0	6,583.8	6,745.8	6,573.9	125.3	26.3	87.76	-637.2	941.2	2,821.4	2,671.5	149.85	18.828	
11,220.4	6,583.6	6,745.8	6,573.8	125.9	26.3	87.76	-637.2	941.2	2,840.7	2,690.3	150.42	18.886	
11,300.0	6,582.5	6,745.6	6,573.7	128.1	26.3	87.75	-637.2	941.2	2,916.0	2,763.4	152.61	19.108	
11,318.9	6,582.3	6,745.6	6,573.7	128.6	26.3	87.75	-637.2	941.2	2,933.9	2,780.7	153.13	19.160	
11,400.0	6,581.2	6,745.5	6,573.5	130.8	26.3	87.74	-637.2	941.2	3,010.9	2,855.6	155.36	19.380	
11,417.3	6,581.0	6,745.4	6,573.5	131.3	26.3	87.74	-637.2	941.2	3,027.4	2,871.5	155.84	19.426	
11,500.0	6,580.0	6,745.3	6,573.3	133.6	26.3	87.73	-637.2	941.2	3,106.2	2,948.0	158.12	19.645	
11,515.7	6,579.7	6,745.3	6,573.3	134.0	26.3	87.72	-637.2	941.2	3,121.2	2,962.6	158.55	19.686	
11,600.0	6,578.7	6,745.1	6,573.2	136.3	26.3	87.71	-637.2	941.2	3,201.7	3,040.8	160.88	19.902	
11,614.1	6,578.5	6,745.1	6,573.1	136.7	26.3	87.71	-637.2	941.2	3,215.2	3,054.0	161.27	19.937	
11,700.0	6,577.4	6,744.9	6,573.0	139.1	26.3	87.70	-637.1	941.2	3,297.5	3,133.9	163.64	20.151	
11,712.6	6,577.2	6,744.9	6,573.0	139.5	26.3	87.70	-637.1	941.2	3,309.6	3,145.6	163.99	20.182	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD WACKER B #10-20D - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 223-MWD												<b>Offset Well Error:</b>	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
11,800.0	6,576.1	6,744.8	6,572.8	141.9	26.3	87.69	-637.1	941.2	3,393.6	3,227.2	166.40	20.394	
11,811.0	6,575.9	6,744.7	6,572.8	142.2	26.3	87.69	-637.1	941.2	3,404.1	3,237.4	166.71	20.420	
11,882.7	6,575.0	6,744.6	6,572.7	144.2	26.3	87.68	-637.1	941.2	3,473.1	3,304.5	168.69	20.589	
11,883.5	6,575.0	6,744.6	6,572.7	144.2	26.3	87.68	-637.1	941.2	3,473.9	3,305.2	168.70	20.592	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 655-MWD												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	109.65	-1,382.2	3,871.3	4,110.7				
98.4	98.4	90.4	90.4	0.1	0.1	109.65	-1,382.2	3,871.3	4,110.7	4,110.5	0.18	N/A	
100.0	100.0	92.0	92.0	0.1	0.1	109.65	-1,382.2	3,871.3	4,110.7	4,110.5	0.18	N/A	
196.8	196.8	188.8	188.8	0.3	0.2	109.65	-1,382.2	3,871.3	4,110.7	4,110.2	0.49	8,387.354	
200.0	200.0	192.0	192.0	0.3	0.2	109.65	-1,382.2	3,871.3	4,110.7	4,110.2	0.50	8,219.754	
295.3	295.3	287.3	287.3	0.5	0.3	109.65	-1,382.2	3,871.3	4,110.7	4,109.9	0.80	5,123.289	
300.0	300.0	292.0	292.0	0.5	0.3	109.65	-1,382.2	3,871.3	4,110.7	4,109.9	0.82	5,029.329	
393.7	393.7	385.7	385.7	0.8	0.4	109.65	-1,382.2	3,871.3	4,110.7	4,109.6	1.11	3,688.034	
400.0	400.0	392.0	392.0	0.8	0.4	109.65	-1,382.2	3,871.3	4,110.7	4,109.6	1.13	3,623.067	
492.1	492.1	484.1	484.1	1.0	0.4	109.65	-1,382.2	3,871.3	4,110.7	4,109.3	1.43	2,880.955	
500.0	500.0	492.0	492.0	1.0	0.5	109.65	-1,382.2	3,871.3	4,110.7	4,109.3	1.45	2,831.379	
590.5	590.5	582.5	582.5	1.2	0.5	109.65	-1,382.2	3,871.3	4,110.7	4,109.0	1.74	2,363.691	
600.0	600.0	592.0	592.0	1.2	0.5	109.65	-1,382.2	3,871.3	4,110.7	4,108.9	1.77	2,323.635	
689.0	689.0	700.4	700.4	1.4	0.7	109.65	-1,382.1	3,871.3	4,110.6	4,108.5	2.13	1,930.410	
700.0	700.0	719.7	719.7	1.4	0.8	109.64	-1,381.9	3,871.3	4,110.6	4,108.4	2.20	1,870.556	
787.4	787.4	802.1	802.1	1.6	0.9	109.64	-1,381.1	3,870.9	4,110.0	4,107.4	2.56	1,604.121	
800.0	800.0	812.6	812.6	1.7	0.9	109.64	-1,381.1	3,870.8	4,109.9	4,107.3	2.61	1,573.922	
885.8	885.8	899.1	899.1	1.9	1.1	109.65	-1,381.6	3,870.2	4,109.5	4,106.5	2.97	1,384.110	
900.0	900.0	914.4	914.3	1.9	1.1	109.65	-1,381.8	3,870.1	4,109.4	4,106.4	3.03	1,356.436	
933.0	933.0	925.0	925.0	2.0	1.2	109.65	-1,381.8	3,870.0	4,109.3	4,106.2	3.12	1,315.483	
984.2	984.2	925.0	925.0	2.1	1.2	109.65	-1,381.8	3,870.0	4,109.6	4,106.4	3.24	1,268.789	
993.3	993.3	957.1	957.0	2.1	1.2	109.66	-1,382.2	3,869.9	4,109.4	4,106.1	3.32	1,236.657	
1,000.0	1,000.0	959.6	959.6	2.1	1.2	109.66	-1,382.3	3,869.9	4,109.5	4,106.1	3.34	1,229.181	
1,082.7	1,082.7	1,018.0	1,018.0	2.3	1.3	109.67	-1,383.7	3,870.6	4,110.9	4,107.2	3.65	1,127.784	
1,100.0	1,100.0	1,018.0	1,018.0	2.3	1.3	109.67	-1,383.7	3,870.6	4,111.1	4,107.4	3.68	1,115.938	
1,181.1	1,181.1	1,018.0	1,018.0	2.5	1.3	109.67	-1,383.7	3,870.6	4,113.4	4,109.5	3.87	1,063.909	
1,200.0	1,200.0	1,047.1	1,047.0	2.6	1.4	109.68	-1,384.7	3,871.2	4,114.0	4,110.0	3.97	1,036.725	
1,279.5	1,279.5	1,111.0	1,110.9	2.7	1.5	109.71	-1,387.5	3,873.0	4,117.1	4,112.9	4.28	962.486	
1,300.0	1,300.0	1,111.0	1,110.9	2.8	1.5	109.71	-1,387.5	3,873.0	4,118.0	4,113.7	4.32	952.438	
1,377.9	1,377.9	1,154.5	1,154.3	3.0	1.6	109.73	-1,389.8	3,874.4	4,121.8	4,117.2	4.59	897.726	
1,400.0	1,400.0	1,167.8	1,167.5	3.0	1.7	109.74	-1,390.6	3,874.9	4,122.9	4,118.3	4.67	883.026	
1,476.4	1,476.4	1,215.4	1,214.9	3.2	1.8	-175.09	-1,393.8	3,876.6	4,128.4	4,123.5	4.94	835.575	
1,500.0	1,500.0	1,238.1	1,237.6	3.2	1.8	-175.07	-1,395.5	3,877.5	4,130.6	4,125.5	5.04	819.029	
1,574.8	1,574.7	1,316.8	1,316.0	3.4	2.0	-174.98	-1,402.2	3,880.3	4,138.8	4,133.4	5.38	769.797	
1,600.0	1,599.8	1,386.2	1,385.0	3.4	2.2	-174.89	-1,409.7	3,881.6	4,141.8	4,136.2	5.59	740.789	
1,673.2	1,672.8	1,441.6	1,439.9	3.6	2.3	-174.79	-1,416.7	3,882.0	4,151.5	4,145.6	5.88	706.201	
1,700.0	1,699.5	1,457.5	1,455.7	3.7	2.4	-174.76	-1,418.8	3,882.2	4,155.6	4,149.7	5.97	695.778	
1,771.6	1,770.6	1,505.8	1,503.5	3.8	2.5	-174.66	-1,425.1	3,882.9	4,168.2	4,162.0	6.24	667.783	
1,800.0	1,798.7	1,538.4	1,535.8	3.9	2.6	-174.60	-1,429.6	3,883.4	4,173.8	4,167.4	6.39	653.659	
1,870.1	1,868.0	1,637.8	1,634.1	4.1	2.9	-174.41	-1,444.1	3,884.2	4,188.4	4,181.6	6.80	616.052	
1,900.0	1,897.5	1,684.0	1,679.8	4.2	3.0	-174.31	-1,451.2	3,884.1	4,194.9	4,187.9	6.99	600.540	
1,968.5	1,964.8	1,709.8	1,705.3	4.4	3.1	-174.23	-1,455.4	3,884.0	4,211.2	4,204.0	7.20	585.158	
2,000.0	1,995.6	1,720.7	1,716.1	4.5	3.1	-174.19	-1,457.1	3,884.1	4,219.4	4,212.1	7.29	578.870	
2,066.9	2,060.9	1,763.0	1,757.7	4.7	3.3	-174.07	-1,464.2	3,884.7	4,238.6	4,231.1	7.55	561.780	
2,100.0	2,093.1	1,763.0	1,757.7	4.8	3.3	-174.05	-1,464.2	3,884.7	4,248.8	4,241.2	7.61	558.469	
2,165.3	2,156.3	1,785.3	1,779.7	5.1	3.4	-173.96	-1,468.1	3,885.2	4,270.4	4,262.6	7.81	546.812	
2,200.0	2,189.6	1,803.7	1,797.7	5.2	3.4	-173.90	-1,471.4	3,885.7	4,282.6	4,274.6	7.93	539.750	
2,263.8	2,250.7	1,837.1	1,830.5	5.5	3.5	-173.78	-1,477.9	3,886.5	4,306.3	4,298.2	8.17	527.365	
2,280.0	2,266.2	1,858.0	1,851.0	5.6	3.6	-173.72	-1,482.1	3,887.1	4,312.7	4,304.4	8.26	521.981	
2,300.0	2,285.3	1,858.0	1,851.0	5.7	3.6	-173.72	-1,482.1	3,887.1	4,320.5	4,312.2	8.31	519.747	
2,362.2	2,344.6	1,915.7	1,907.4	6.0	3.8	-173.59	-1,494.0	3,888.6	4,345.0	4,336.4	8.65	502.224	
2,400.0	2,380.6	1,953.9	1,944.8	6.2	4.0	-173.51	-1,501.9	3,889.5	4,359.9	4,351.0	8.88	491.045	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 655-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,460.6	2,438.4	2,061.3	2,049.5	6.5	4.4	-173.25	-1,525.6	3,890.7	4,383.2	4,373.8	9.41	466.017	
2,500.0	2,475.9	2,087.0	2,074.6	6.7	4.5	-173.19	-1,531.6	3,890.7	4,398.3	4,388.7	9.61	457.875	
2,559.0	2,532.2	2,125.5	2,112.0	7.0	4.7	-173.09	-1,540.7	3,890.9	4,421.1	4,411.2	9.91	446.277	
2,600.0	2,571.2	2,237.0	2,220.5	7.2	5.1	-172.81	-1,566.1	3,891.0	4,436.8	4,426.4	10.40	426.420	
2,657.5	2,626.0	2,285.1	2,267.3	7.5	5.3	-172.70	-1,577.0	3,890.5	4,458.2	4,447.4	10.74	415.040	
2,700.0	2,666.6	2,313.4	2,294.9	7.8	5.5	-172.62	-1,583.7	3,890.2	4,474.2	4,463.2	10.96	408.072	
2,755.9	2,719.8	2,332.0	2,312.9	8.1	5.5	-172.58	-1,588.2	3,890.0	4,495.4	4,484.2	11.19	401.731	
2,800.0	2,761.9	2,369.2	2,348.9	8.3	5.7	-172.47	-1,597.6	3,889.6	4,512.2	4,500.7	11.48	393.169	
2,854.3	2,813.7	2,397.1	2,375.8	8.7	5.9	-172.39	-1,604.9	3,889.4	4,533.2	4,521.4	11.75	385.708	
2,900.0	2,857.2	2,427.0	2,404.6	8.9	6.0	-172.31	-1,613.0	3,889.2	4,551.1	4,539.1	12.01	378.826	
2,952.7	2,907.5	2,473.9	2,449.6	9.2	6.2	-172.17	-1,625.9	3,888.8	4,571.8	4,559.4	12.36	369.777	
3,000.0	2,952.5	2,522.0	2,496.0	9.5	6.5	-172.03	-1,639.0	3,888.4	4,590.3	4,577.6	12.70	361.352	
3,051.2	3,001.3	2,565.0	2,537.4	9.8	6.6	-171.90	-1,650.4	3,888.1	4,610.3	4,597.3	13.02	354.141	
3,100.0	3,047.8	2,601.3	2,572.5	10.1	6.8	-171.81	-1,659.9	3,888.0	4,629.6	4,616.3	13.30	348.055	
3,149.6	3,095.1	2,642.8	2,612.6	10.4	7.0	-171.70	-1,670.5	3,888.0	4,649.1	4,635.5	13.61	341.670	
3,200.0	3,143.2	2,688.0	2,656.3	10.7	7.2	-171.58	-1,682.0	3,888.1	4,669.1	4,655.2	13.93	335.199	
3,248.0	3,188.9	2,726.9	2,694.0	11.0	7.3	-171.48	-1,691.9	3,888.2	4,688.1	4,673.9	14.22	329.625	
3,300.0	3,238.5	2,764.0	2,729.8	11.3	7.5	-171.39	-1,701.2	3,888.4	4,708.8	4,694.3	14.52	324.266	
3,346.4	3,282.8	2,806.0	2,770.5	11.6	7.7	-171.29	-1,711.6	3,888.8	4,727.4	4,712.6	14.82	318.898	
3,400.0	3,333.8	2,848.0	2,811.2	11.9	7.9	-171.19	-1,722.1	3,889.2	4,748.9	4,733.7	15.16	313.253	
3,444.9	3,376.6	2,893.9	2,855.5	12.2	8.1	-171.08	-1,733.9	3,889.4	4,766.8	4,751.4	15.49	307.812	
3,500.0	3,429.1	2,957.4	2,916.8	12.6	8.4	-170.92	-1,750.7	3,889.3	4,788.8	4,772.9	15.92	300.748	
3,543.3	3,470.4	3,005.4	2,963.1	12.8	8.7	-170.79	-1,763.2	3,889.2	4,806.0	4,789.8	16.26	295.619	
3,600.0	3,524.4	3,056.5	3,012.6	13.2	8.9	-170.67	-1,776.2	3,889.3	4,828.5	4,811.9	16.64	290.233	
3,641.7	3,564.2	3,091.0	3,046.0	13.4	9.0	-170.59	-1,784.7	3,889.4	4,845.1	4,828.2	16.90	286.627	
3,700.0	3,619.8	3,142.0	3,095.5	13.8	9.3	-170.48	-1,797.0	3,889.8	4,868.3	4,851.0	17.29	281.619	
3,740.1	3,658.0	3,175.1	3,127.6	14.0	9.4	-170.41	-1,805.0	3,890.0	4,884.3	4,866.7	17.54	278.419	
3,800.0	3,715.1	3,275.7	3,225.2	14.4	9.9	-170.20	-1,829.2	3,890.4	4,908.0	4,889.8	18.13	270.659	
3,838.6	3,751.8	3,312.2	3,260.6	14.7	10.1	-170.12	-1,837.9	3,890.3	4,923.0	4,904.6	18.40	267.621	
3,900.0	3,810.4	3,365.9	3,313.0	15.0	10.3	-170.02	-1,849.9	3,890.6	4,947.0	4,928.2	18.79	263.221	
3,937.0	3,845.7	3,376.0	3,322.9	15.3	10.3	-170.00	-1,852.1	3,890.7	4,961.6	4,942.6	18.95	261.835	
4,000.0	3,905.7	3,428.0	3,373.6	15.7	10.6	-169.91	-1,863.4	3,891.4	4,986.4	4,967.1	19.34	257.809	
4,035.4	3,939.5	3,448.8	3,393.9	15.9	10.6	-169.87	-1,867.9	3,891.7	5,000.5	4,981.0	19.53	256.033	
4,100.0	4,001.0	3,492.4	3,436.4	16.3	10.8	-169.79	-1,877.6	3,892.5	5,026.4	5,006.5	19.90	252.553	
4,133.8	4,033.3	3,519.2	3,462.5	16.5	11.0	-169.74	-1,883.7	3,893.0	5,040.0	5,019.9	20.12	250.553	
4,200.0	4,096.3	3,709.8	3,647.4	16.9	11.9	-169.35	-1,930.2	3,892.0	5,065.9	5,044.8	21.12	239.891	
4,232.3	4,127.1	3,738.3	3,674.9	17.1	12.0	-169.28	-1,937.3	3,891.4	5,078.2	5,056.9	21.34	237.930	
4,300.0	4,191.7	3,786.3	3,721.3	17.6	12.2	-169.18	-1,949.4	3,890.4	5,104.0	5,082.2	21.77	234.477	
4,330.7	4,220.9	3,805.9	3,740.4	17.8	12.3	-169.13	-1,954.3	3,890.0	5,115.8	5,093.8	21.95	233.049	
4,400.0	4,287.0	3,850.0	3,783.0	18.2	12.5	-169.04	-1,965.4	3,889.3	5,142.6	5,120.2	22.37	229.934	
4,429.1	4,314.7	3,874.8	3,807.0	18.4	12.7	-168.99	-1,971.6	3,889.0	5,153.9	5,131.3	22.56	228.420	
4,500.0	4,382.3	3,934.6	3,865.0	18.8	12.9	-168.86	-1,986.3	3,888.4	5,181.5	5,158.4	23.04	224.875	
4,527.5	4,408.6	3,994.7	3,923.3	19.0	13.2	-168.75	-2,000.7	3,887.8	5,192.2	5,168.8	23.38	222.124	
4,600.0	4,477.6	4,119.8	4,045.1	19.5	13.8	-168.52	-2,029.3	3,885.8	5,219.5	5,195.4	24.11	216.514	
4,626.0	4,502.4	4,151.5	4,076.1	19.6	13.9	-168.46	-2,036.3	3,885.2	5,229.1	5,204.8	24.31	215.075	
4,700.0	4,572.9	4,233.5	4,156.2	20.1	14.2	-168.33	-2,053.2	3,884.1	5,256.6	5,231.8	24.86	211.437	
4,724.4	4,596.2	4,256.1	4,178.4	20.3	14.3	-168.30	-2,057.7	3,883.9	5,265.7	5,240.6	25.02	210.445	
4,800.0	4,668.3	4,326.5	4,247.5	20.7	14.6	-168.21	-2,071.1	3,883.4	5,293.6	5,268.1	25.52	207.445	
4,822.8	4,690.0	4,348.9	4,269.5	20.9	14.7	-168.18	-2,075.2	3,883.3	5,302.1	5,276.4	25.67	206.553	
4,900.0	4,763.6	4,424.7	4,344.1	21.4	15.0	-168.09	-2,088.8	3,883.1	5,330.6	5,304.5	26.18	203.619	
4,921.2	4,783.8	4,444.5	4,363.6	21.5	15.0	-168.07	-2,092.2	3,883.1	5,338.5	5,312.2	26.31	202.872	
5,000.0	4,858.9	4,521.8	4,439.7	22.0	15.3	-167.99	-2,105.3	3,883.3	5,367.6	5,340.7	26.83	200.096	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 655-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,019.7	4,877.7	4,559.3	4,476.8	22.1	15.5	-167.96	-2,111.3	3,883.5	5,374.8	5,347.8	27.00	199.030		
5,100.0	4,954.2	4,832.8	4,748.2	22.6	16.3	-167.82	-2,145.1	3,884.2	5,403.4	5,375.4	28.01	192.901		
5,118.1	4,971.5	4,852.1	4,767.3	22.8	16.3	-167.81	-2,146.9	3,884.1	5,409.4	5,381.3	28.12	192.386		
5,171.8	5,022.7	4,908.7	4,823.7	23.1	16.5	-167.80	-2,152.1	3,883.7	5,427.2	5,398.7	28.43	190.895		
5,200.0	5,049.6	4,937.7	4,852.7	23.3	16.5	-167.83	-2,154.7	3,883.6	5,436.3	5,407.7	28.64	189.846		
5,216.5	5,065.4	4,954.8	4,869.7	23.3	16.6	-167.85	-2,156.2	3,883.5	5,441.6	5,412.8	28.75	189.278		
5,300.0	5,145.7	5,091.8	5,006.3	23.7	16.9	-167.94	-2,166.6	3,883.0	5,466.4	5,437.0	29.42	185.831		
5,314.9	5,160.1	5,108.0	5,022.4	23.8	16.9	-167.96	-2,167.6	3,882.9	5,470.5	5,441.0	29.51	185.378		
5,400.0	5,242.7	5,204.2	5,118.5	24.1	17.1	-168.05	-2,173.3	3,882.5	5,492.4	5,462.3	30.04	182.834		
5,413.4	5,255.7	5,221.6	5,135.8	24.2	17.2	-168.06	-2,174.2	3,882.4	5,495.6	5,465.4	30.12	182.438		
5,500.0	5,340.5	5,319.0	5,233.1	24.5	17.4	-168.14	-2,178.7	3,882.2	5,514.6	5,484.0	30.61	180.161		
5,511.8	5,352.1	5,330.4	5,244.5	24.5	17.4	-168.15	-2,179.1	3,882.2	5,517.0	5,486.4	30.67	179.896		
5,600.0	5,439.0	5,516.5	5,430.5	24.8	17.7	-168.24	-2,183.4	3,881.4	5,532.2	5,501.0	31.24	177.073		
5,610.2	5,449.1	5,523.2	5,437.3	24.8	17.7	-168.25	-2,183.5	3,881.4	5,533.8	5,502.5	31.28	176.905		
5,700.0	5,538.0	5,595.4	5,509.5	25.1	17.8	-168.31	-2,184.7	3,881.1	5,546.2	5,514.6	31.62	175.375		
5,708.6	5,546.6	5,604.3	5,518.3	25.1	17.8	-168.31	-2,184.8	3,881.0	5,547.2	5,515.6	31.66	175.224		
5,800.0	5,637.4	5,701.9	5,615.9	25.3	18.0	-168.37	-2,185.7	3,880.9	5,556.8	5,524.8	32.00	173.653		
5,807.1	5,644.5	5,709.8	5,623.8	25.3	18.0	-168.37	-2,185.8	3,880.9	5,557.4	5,525.4	32.02	173.538		
5,900.0	5,737.2	5,824.2	5,738.2	25.5	18.1	-168.40	-2,186.4	3,880.7	5,563.8	5,531.4	32.35	172.000		
5,905.5	5,742.6	5,831.3	5,745.3	25.5	18.1	-168.41	-2,186.4	3,880.7	5,564.0	5,531.7	32.37	171.913		
6,000.0	5,837.1	5,874.2	5,788.3	25.6	18.2	-168.42	-2,186.5	3,880.7	5,567.4	5,534.9	32.54	171.109		
6,003.9	5,841.0	5,875.6	5,789.7	25.6	18.2	-168.42	-2,186.5	3,880.7	5,567.5	5,535.0	32.54	171.082		
6,051.8	5,888.9	5,892.7	5,806.8	25.7	18.2	116.45	-2,186.5	3,880.9	5,568.4	5,529.2	39.28	141.775		
6,081.8	5,918.9	5,903.4	5,817.5	25.7	18.2	116.45	-2,186.5	3,881.1	5,568.9	5,529.6	39.33	141.609		
6,100.0	5,937.1	5,938.0	5,852.0	25.7	18.3	26.44	-2,186.2	3,882.1	5,569.2	5,536.5	32.69	170.382		
6,102.3	5,939.4	5,938.0	5,852.0	25.7	18.3	26.44	-2,186.2	3,882.1	5,569.2	5,536.5	32.68	170.409		
6,150.0	5,987.0	5,938.0	5,852.0	25.7	18.3	26.50	-2,186.2	3,882.1	5,567.4	5,534.9	32.53	171.164		
6,200.0	6,036.5	5,938.0	5,852.0	25.7	18.3	26.66	-2,186.2	3,882.1	5,563.0	5,530.7	32.25	172.478		
6,200.8	6,037.3	5,938.0	5,852.0	25.7	18.3	26.66	-2,186.2	3,882.1	5,562.9	5,530.6	32.25	172.503		
6,250.0	6,085.5	5,938.0	5,852.0	25.7	18.3	26.92	-2,186.2	3,882.1	5,555.9	5,524.0	31.87	174.306		
6,299.2	6,133.0	5,938.0	5,852.0	25.6	18.3	27.28	-2,186.2	3,882.1	5,546.3	5,514.9	31.41	176.582		
6,300.0	6,133.7	5,938.0	5,852.0	25.6	18.3	27.28	-2,186.2	3,882.1	5,546.1	5,514.7	31.40	176.622		
6,350.0	6,180.9	5,938.0	5,852.0	25.5	18.3	27.75	-2,186.2	3,882.1	5,533.8	5,502.9	30.85	179.379		
6,397.6	6,224.6	5,938.0	5,852.0	25.4	18.3	28.31	-2,186.2	3,882.1	5,519.7	5,489.4	30.27	182.352		
6,400.0	6,226.7	5,938.0	5,852.0	25.4	18.3	28.34	-2,186.2	3,882.1	5,518.9	5,488.7	30.24	182.507		
6,450.0	6,271.1	5,938.0	5,852.0	25.2	18.3	29.05	-2,186.2	3,882.1	5,501.5	5,471.9	29.59	185.894		
6,496.0	6,310.4	5,938.0	5,852.0	25.1	18.3	29.83	-2,186.2	3,882.1	5,483.3	5,454.3	29.00	189.106		
6,500.0	6,313.7	5,938.0	5,852.0	25.1	18.3	29.90	-2,186.2	3,882.1	5,481.7	5,452.7	28.95	189.380		
6,550.0	6,354.4	5,938.0	5,852.0	25.0	18.3	30.91	-2,186.2	3,882.1	5,459.5	5,431.2	28.33	192.736		
6,594.5	6,388.9	5,938.0	5,852.0	24.9	18.3	31.94	-2,186.2	3,882.1	5,437.8	5,410.0	27.83	195.369		
6,600.0	6,393.0	5,938.0	5,852.0	24.9	18.3	32.08	-2,186.2	3,882.1	5,435.0	5,407.2	27.78	195.663		
6,650.0	6,429.3	5,983.8	5,897.6	24.8	18.3	33.65	-2,185.1	3,885.9	5,406.5	5,379.1	27.41	197.221		
6,692.9	6,458.5	5,987.4	5,901.2	24.7	18.3	35.04	-2,184.9	3,886.3	5,381.7	5,354.5	27.19	197.922		
6,700.0	6,463.1	5,988.0	5,901.8	24.7	18.3	35.29	-2,184.9	3,886.4	5,377.4	5,350.2	27.17	197.944		
6,750.0	6,494.3	6,033.0	5,946.0	24.7	18.4	37.40	-2,182.6	3,894.5	5,347.7	5,320.5	27.22	196.455		
6,791.3	6,517.9	6,033.0	5,946.0	24.7	18.4	39.21	-2,182.6	3,894.5	5,320.3	5,292.9	27.40	194.170		
6,800.0	6,522.6	6,033.0	5,946.0	24.7	18.4	39.62	-2,182.6	3,894.5	5,314.4	5,287.0	27.46	193.540		
6,850.0	6,548.0	6,033.0	5,946.0	24.7	18.4	42.19	-2,182.6	3,894.5	5,279.5	5,251.5	27.99	188.611		
6,889.7	6,566.0	6,033.0	5,946.0	24.8	18.4	44.51	-2,182.6	3,894.5	5,250.5	5,221.9	28.64	183.307		
6,900.0	6,570.4	6,033.0	5,946.0	24.9	18.4	45.15	-2,182.6	3,894.5	5,242.9	5,214.1	28.84	181.798		
6,950.0	6,589.5	6,033.0	5,946.0	25.1	18.4	48.56	-2,182.6	3,894.5	5,204.9	5,174.9	30.01	173.464		
6,988.2	6,602.0	6,033.0	5,946.0	25.3	18.4	51.50	-2,182.6	3,894.5	5,175.1	5,144.0	31.10	166.387		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 655-MWD												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,605.4	6,033.0	5,946.0	25.3	18.4	52.47	-2,182.6	3,894.5	5,165.7	5,134.2	31.47	164.160	
7,050.0	6,618.0	6,033.0	5,946.0	25.6	18.4	56.93	-2,182.6	3,894.5	5,125.3	5,092.1	33.17	154.529	
7,086.6	6,625.0	6,033.0	5,946.0	25.9	18.4	60.57	-2,182.6	3,894.5	5,095.2	5,060.6	34.51	147.624	
7,100.0	6,627.1	6,033.0	5,946.0	26.0	18.4	61.98	-2,182.6	3,894.5	5,084.0	5,049.0	35.01	145.217	
7,150.0	6,632.8	6,033.0	5,946.0	26.5	18.4	67.60	-2,182.6	3,894.5	5,042.0	5,005.1	36.86	136.785	
7,185.0	6,634.7	6,033.0	5,946.0	26.8	18.4	71.86	-2,182.6	3,894.5	5,012.2	4,974.1	38.08	131.620	
7,200.0	6,635.0	6,033.0	5,946.0	27.0	18.4	73.75	-2,182.6	3,894.5	4,999.3	4,960.8	38.56	129.657	
7,215.9	6,635.0	6,033.0	5,946.0	27.1	18.4	75.80	-2,182.6	3,894.5	4,985.7	4,946.7	39.04	127.710	
7,283.4	6,634.1	6,033.0	5,946.0	27.9	18.4	75.80	-2,182.6	3,894.5	4,927.8	4,888.0	39.85	123.665	
7,300.0	6,633.9	6,033.0	5,946.0	28.1	18.4	75.80	-2,182.6	3,894.5	4,913.7	4,873.6	40.05	122.699	
7,381.9	6,632.9	6,033.0	5,946.0	29.3	18.4	75.80	-2,182.6	3,894.5	4,843.9	4,802.7	41.19	117.608	
7,400.0	6,632.6	6,033.0	5,946.0	29.5	18.4	75.80	-2,182.6	3,894.5	4,828.5	4,787.1	41.44	116.520	
7,480.3	6,631.6	6,033.0	5,946.0	30.8	18.4	75.80	-2,182.6	3,894.5	4,760.6	4,717.8	42.71	111.473	
7,500.0	6,631.4	6,033.0	5,946.0	31.1	18.4	75.80	-2,182.6	3,894.5	4,743.9	4,700.9	43.02	110.281	
7,578.7	6,630.4	6,033.0	5,946.0	32.5	18.4	75.80	-2,182.6	3,894.5	4,677.8	4,633.4	44.38	105.398	
7,600.0	6,630.1	6,033.0	5,946.0	32.9	18.4	75.80	-2,182.6	3,894.5	4,660.0	4,615.2	44.75	104.131	
7,677.1	6,629.1	6,033.0	5,946.0	34.3	18.4	75.80	-2,182.6	3,894.5	4,595.6	4,549.4	46.19	99.491	
7,700.0	6,628.8	6,033.0	5,946.0	34.8	18.4	75.80	-2,182.6	3,894.5	4,576.7	4,530.0	46.62	98.174	
7,775.6	6,627.8	6,033.0	5,946.0	36.3	18.4	75.80	-2,182.6	3,894.5	4,514.1	4,466.0	48.11	93.824	
7,800.0	6,627.5	6,033.0	5,946.0	36.8	18.4	75.80	-2,182.6	3,894.5	4,494.0	4,445.4	48.60	92.476	
7,874.0	6,626.6	6,033.0	5,946.0	38.4	18.4	75.80	-2,182.6	3,894.5	4,433.3	4,383.2	50.13	88.437	
7,900.0	6,626.3	6,033.0	5,946.0	38.9	18.4	75.80	-2,182.6	3,894.5	4,412.1	4,361.4	50.67	87.077	
7,972.4	6,625.3	6,033.0	5,946.0	40.5	18.4	75.80	-2,182.6	3,894.5	4,353.2	4,301.0	52.23	83.352	
8,000.0	6,625.0	6,033.0	5,946.0	41.1	18.4	75.80	-2,182.6	3,894.5	4,330.9	4,278.1	52.82	81.993	
8,070.8	6,624.1	6,033.0	5,946.0	42.7	18.4	75.80	-2,182.6	3,894.5	4,273.9	4,219.5	54.39	78.575	
8,100.0	6,623.7	6,033.0	5,946.0	43.4	18.4	75.80	-2,182.6	3,894.5	4,250.6	4,195.6	55.04	77.227	
8,169.3	6,622.8	6,033.0	5,946.0	45.0	18.4	75.80	-2,182.6	3,894.5	4,195.4	4,138.8	56.62	74.102	
8,200.0	6,622.4	6,033.0	5,946.0	45.7	18.4	75.80	-2,182.6	3,894.5	4,171.1	4,113.8	57.32	72.773	
8,267.7	6,621.6	6,033.0	5,946.0	47.4	18.4	75.80	-2,182.6	3,894.5	4,117.8	4,058.9	58.89	69.923	
8,300.0	6,621.1	6,033.0	5,946.0	48.1	18.4	75.80	-2,182.6	3,894.5	4,092.5	4,032.8	59.64	68.619	
8,366.1	6,620.3	6,033.0	5,946.0	49.7	18.4	75.80	-2,182.6	3,894.5	4,041.0	3,979.8	61.21	66.023	
8,400.0	6,619.9	6,033.0	5,946.0	50.6	18.4	75.81	-2,182.6	3,894.5	4,014.8	3,952.8	62.01	64.747	
8,464.5	6,619.0	6,033.0	5,946.0	52.2	18.4	75.81	-2,182.6	3,894.5	3,965.2	3,901.7	63.56	62.387	
8,500.0	6,618.6	6,033.0	5,946.0	53.0	18.4	75.81	-2,182.6	3,894.5	3,938.2	3,873.8	64.41	61.142	
8,563.0	6,617.8	6,033.0	5,946.0	54.6	18.4	75.81	-2,182.6	3,894.5	3,890.5	3,824.5	65.94	58.997	
8,600.0	6,617.3	6,033.0	5,946.0	55.5	18.4	75.81	-2,182.6	3,894.5	3,862.6	3,795.8	66.84	57.785	
8,661.4	6,616.5	6,072.0	5,983.5	57.1	18.4	76.61	-2,179.6	3,904.5	3,815.9	3,747.3	68.62	55.606	
8,700.0	6,616.0	6,074.5	5,985.9	58.1	18.4	76.66	-2,179.4	3,905.2	3,787.2	3,717.6	69.59	54.419	
8,759.8	6,615.2	6,078.5	5,989.7	59.6	18.4	76.75	-2,179.0	3,906.4	3,743.0	3,671.9	71.11	52.636	
8,800.0	6,614.7	6,081.2	5,992.3	60.6	18.4	76.80	-2,178.8	3,907.2	3,713.6	3,641.5	72.13	51.483	
8,858.2	6,614.0	6,085.4	5,996.3	62.1	18.4	76.89	-2,178.4	3,908.5	3,671.3	3,597.7	73.63	49.864	
8,900.0	6,613.4	6,088.5	5,999.2	63.2	18.4	76.95	-2,178.1	3,909.5	3,641.3	3,566.6	74.70	48.745	
8,956.7	6,612.7	6,092.9	6,003.4	64.7	18.4	77.04	-2,177.6	3,910.8	3,600.8	3,524.6	76.17	47.275	
9,000.0	6,612.2	6,129.0	6,037.0	65.8	18.4	77.77	-2,173.6	3,923.4	3,570.7	3,493.2	77.52	46.064	
9,055.1	6,611.5	6,129.0	6,037.0	67.3	18.4	77.77	-2,173.6	3,923.4	3,532.0	3,453.1	78.93	44.750	
9,100.0	6,610.9	6,129.0	6,037.0	68.4	18.4	77.77	-2,173.6	3,923.4	3,500.7	3,420.6	80.08	43.718	
9,153.5	6,610.2	6,129.0	6,037.0	69.8	18.4	77.77	-2,173.6	3,923.4	3,463.9	3,382.4	81.45	42.526	
9,200.0	6,609.6	6,129.0	6,037.0	71.1	18.4	77.77	-2,173.6	3,923.4	3,432.2	3,349.5	82.65	41.527	
9,251.9	6,608.9	6,129.0	6,037.0	72.4	18.4	77.77	-2,173.6	3,923.4	3,397.2	3,313.2	83.99	40.446	
9,300.0	6,608.3	6,129.0	6,037.0	73.7	18.4	77.77	-2,173.6	3,923.4	3,365.2	3,280.0	85.24	39.481	
9,350.4	6,607.7	6,129.0	6,037.0	75.0	18.4	77.77	-2,173.6	3,923.4	3,332.1	3,245.6	86.54	38.502	
9,400.0	6,607.0	6,129.0	6,037.0	76.4	18.4	77.77	-2,173.6	3,923.4	3,300.0	3,212.1	87.83	37.570	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	
9,448.8	6,606.4	6,129.0	6,037.0	77.7	18.4	77.77	-2,173.6	3,923.4	3,268.7	3,179.6	89.11	36.683	
9,500.0	6,605.7	6,129.0	6,037.0	79.0	18.4	77.77	-2,173.6	3,923.4	3,236.5	3,146.0	90.44	35.784	
9,547.2	6,605.1	6,129.0	6,037.0	80.3	18.4	77.77	-2,173.6	3,923.4	3,207.1	3,115.4	91.68	34.982	
9,600.0	6,604.5	6,129.0	6,037.0	81.7	18.4	77.77	-2,173.6	3,923.4	3,174.8	3,081.8	93.06	34.115	
9,645.6	6,603.9	6,129.0	6,037.0	82.9	18.4	77.77	-2,173.6	3,923.4	3,147.3	3,053.1	94.26	33.390	
9,700.0	6,603.2	6,129.0	6,037.0	84.4	18.4	77.77	-2,173.6	3,923.4	3,115.2	3,019.5	95.69	32.555	
9,744.1	6,602.6	6,167.8	6,072.4	85.6	18.4	78.54	-2,169.3	3,938.6	3,088.6	2,991.5	97.17	31.785	
9,800.0	6,601.9	6,173.7	6,077.8	87.1	18.4	78.66	-2,168.7	3,941.0	3,056.4	2,957.7	98.70	30.967	
9,842.5	6,601.3	6,178.4	6,082.0	88.2	18.4	78.75	-2,168.2	3,942.9	3,032.4	2,932.5	99.86	30.365	
9,900.0	6,600.6	6,184.8	6,087.8	89.8	18.4	78.88	-2,167.6	3,945.6	3,000.5	2,899.0	101.44	29.579	
9,940.9	6,600.1	6,223.0	6,121.9	90.9	18.4	79.64	-2,164.2	3,962.4	2,978.9	2,876.0	102.84	28.967	
10,000.0	6,599.3	6,223.0	6,121.9	92.5	18.4	79.64	-2,164.2	3,962.4	2,947.1	2,842.7	104.41	28.226	
10,039.3	6,598.8	6,223.0	6,121.9	93.5	18.4	79.64	-2,164.2	3,962.4	2,926.4	2,821.0	105.46	27.749	
10,100.0	6,598.0	6,223.0	6,121.9	95.2	18.4	79.64	-2,164.2	3,962.4	2,895.3	2,788.2	107.08	27.039	
10,137.8	6,597.5	6,223.0	6,121.9	96.2	18.4	79.64	-2,164.2	3,962.4	2,876.4	2,768.3	108.09	26.611	
10,200.0	6,596.7	6,223.0	6,121.9	97.9	18.4	79.64	-2,164.2	3,962.4	2,846.1	2,736.3	109.76	25.931	
10,236.2	6,596.3	6,223.0	6,121.9	98.9	18.4	79.64	-2,164.2	3,962.4	2,828.9	2,718.2	110.73	25.548	
10,300.0	6,595.4	6,223.0	6,121.9	100.6	18.4	79.64	-2,164.2	3,962.4	2,799.5	2,687.1	112.44	24.899	
10,334.6	6,595.0	6,223.0	6,121.9	101.6	18.4	79.64	-2,164.2	3,962.4	2,784.1	2,670.7	113.37	24.558	
10,400.0	6,594.2	6,223.0	6,121.9	103.4	18.4	79.64	-2,164.2	3,962.4	2,755.8	2,640.7	115.12	23.938	
10,433.0	6,593.7	6,223.0	6,121.9	104.3	18.4	79.64	-2,164.2	3,962.4	2,742.1	2,626.0	116.01	23.636	
10,500.0	6,592.9	6,223.0	6,121.9	106.1	18.4	79.64	-2,164.2	3,962.4	2,715.1	2,597.3	117.81	23.046	
10,531.5	6,592.5	6,223.0	6,121.9	106.9	18.4	79.64	-2,164.2	3,962.4	2,703.0	2,584.3	118.66	22.779	
10,600.0	6,591.6	6,223.0	6,121.9	108.8	18.4	79.64	-2,164.2	3,962.4	2,677.6	2,557.0	120.51	22.219	
10,629.9	6,591.2	6,261.7	6,155.9	109.6	18.5	80.40	-2,161.8	3,980.9	2,665.6	2,543.9	121.69	21.905	
10,700.0	6,590.3	6,269.0	6,162.2	111.6	18.5	80.55	-2,161.5	3,984.6	2,641.3	2,517.7	123.65	21.361	
10,728.3	6,589.9	6,272.1	6,164.8	112.3	18.5	80.61	-2,161.4	3,986.1	2,632.0	2,507.5	124.45	21.149	
10,800.0	6,589.0	6,279.9	6,171.5	114.3	18.5	80.76	-2,161.2	3,990.2	2,609.4	2,483.0	126.46	20.634	
10,826.7	6,588.7	6,318.0	6,203.5	115.0	18.6	81.49	-2,161.0	4,010.8	2,602.5	2,475.0	127.54	20.406	
10,900.0	6,587.7	6,318.0	6,203.5	117.1	18.6	81.49	-2,161.0	4,010.8	2,581.4	2,451.9	129.53	19.929	
10,925.2	6,587.4	6,318.0	6,203.5	117.7	18.6	81.49	-2,161.0	4,010.8	2,574.6	2,444.4	130.21	19.772	
11,000.0	6,586.4	6,318.0	6,203.5	119.8	18.6	81.49	-2,161.0	4,010.8	2,555.7	2,423.4	132.25	19.325	
11,023.6	6,586.1	6,318.0	6,203.5	120.4	18.6	81.49	-2,161.0	4,010.8	2,550.1	2,417.2	132.89	19.190	
11,100.0	6,585.1	6,318.0	6,203.5	122.6	18.6	81.49	-2,161.0	4,010.8	2,533.6	2,398.7	134.97	18.772	
11,122.0	6,584.8	6,318.0	6,203.5	123.2	18.6	81.49	-2,161.0	4,010.8	2,529.3	2,393.7	135.57	18.656	
11,200.0	6,583.8	6,318.0	6,203.5	125.3	18.6	81.49	-2,161.0	4,010.8	2,515.4	2,377.7	137.70	18.267	
11,220.4	6,583.6	6,318.0	6,203.5	125.9	18.6	81.49	-2,161.0	4,010.8	2,512.1	2,373.9	138.25	18.170	
11,300.0	6,582.5	6,360.7	6,238.2	128.1	18.7	82.30	-2,161.9	4,035.6	2,500.1	2,359.2	140.88	17.746	
11,318.9	6,582.3	6,365.4	6,242.0	128.6	18.7	82.39	-2,162.0	4,038.4	2,497.6	2,356.2	141.45	17.658	
11,400.0	6,581.2	6,413.0	6,279.2	130.8	18.9	83.25	-2,163.9	4,068.1	2,488.7	2,344.6	144.14	17.266	
11,417.3	6,581.0	6,413.0	6,279.2	131.3	18.9	83.25	-2,163.9	4,068.1	2,486.9	2,342.3	144.62	17.196	
11,500.0	6,580.0	6,508.0	6,348.3	133.6	19.3	84.87	-2,165.1	4,133.1	2,479.1	2,331.2	147.90	16.761	
11,515.7	6,579.7	6,534.9	6,366.6	134.0	19.4	85.30	-2,164.6	4,152.9	2,477.4	2,328.7	148.67	16.664	
11,600.0	6,578.7	6,567.5	6,387.6	136.3	19.5	85.79	-2,164.2	4,177.8	2,470.4	2,319.0	151.37	16.320	
11,614.1	6,578.5	6,573.2	6,391.1	136.7	19.6	85.88	-2,164.2	4,182.3	2,469.4	2,317.6	151.83	16.264	
11,700.0	6,577.4	6,603.0	6,409.1	139.1	19.7	86.30	-2,164.1	4,206.0	2,464.7	2,310.1	154.54	15.949	
11,712.6	6,577.2	6,603.0	6,409.1	139.5	19.7	86.30	-2,164.1	4,206.0	2,464.2	2,309.3	154.89	15.910	
11,800.0	6,576.1	6,634.4	6,427.1	141.9	20.0	86.73	-2,164.4	4,231.7	2,461.9	2,304.2	157.74	15.607	
11,811.0	6,575.9	6,637.5	6,428.8	142.2	20.0	86.77	-2,164.5	4,234.3	2,461.8	2,303.7	158.09	15.572	
11,837.6	6,575.6	6,645.0	6,432.9	142.9	20.0	86.86	-2,164.7	4,240.6	2,461.7	2,302.8	158.93	15.489 CC	
11,882.7	6,575.0	6,657.9	6,439.9	144.2	20.1	87.03	-2,165.2	4,251.4	2,462.0	2,301.7	160.35	15.354	
11,883.5	6,575.0	6,658.1	6,440.0	144.2	20.1	87.03	-2,165.2	4,251.6	2,462.0	2,301.7	160.37	15.352 ES, SF	

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

## Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	109.35	-1,359.7	3,871.6	4,103.4				
98.4	98.4	91.4	91.4	0.1	0.1	109.35	-1,359.7	3,871.6	4,103.4	4,103.2	0.18	N/A	
100.0	100.0	93.0	93.0	0.1	0.1	109.35	-1,359.7	3,871.6	4,103.4	4,103.2	0.18	N/A	
196.8	196.8	189.8	189.8	0.3	0.2	109.35	-1,359.7	3,871.6	4,103.4	4,102.9	0.49	8,372.356	
200.0	200.0	193.0	193.0	0.3	0.2	109.35	-1,359.7	3,871.6	4,103.4	4,102.9	0.50	8,205.308	
295.3	295.3	288.3	288.3	0.5	0.3	109.35	-1,359.7	3,871.6	4,103.4	4,102.6	0.80	5,117.191	
300.0	300.0	293.0	293.0	0.5	0.3	109.35	-1,359.7	3,871.6	4,103.4	4,102.6	0.82	5,023.430	
393.7	393.7	386.7	386.7	0.8	0.4	109.35	-1,359.7	3,871.6	4,103.4	4,102.3	1.11	3,684.616	
400.0	400.0	393.0	393.0	0.8	0.4	109.35	-1,359.7	3,871.6	4,103.4	4,102.3	1.13	3,619.752	
492.1	492.1	485.1	485.1	1.0	0.4	109.35	-1,359.7	3,871.6	4,103.4	4,102.0	1.43	2,878.711	
500.0	500.0	493.0	493.0	1.0	0.5	109.35	-1,359.7	3,871.6	4,103.4	4,102.0	1.45	2,829.200	
590.5	590.5	583.5	583.5	1.2	0.5	109.35	-1,359.7	3,871.6	4,103.4	4,101.7	1.74	2,362.074	
600.0	600.0	593.0	593.0	1.2	0.5	109.35	-1,359.7	3,871.6	4,103.4	4,101.7	1.77	2,322.062	
638.2	638.2	631.2	631.2	1.3	0.6	109.35	-1,359.7	3,871.6	4,103.4	4,101.5	1.89	2,173.144	
689.0	689.0	672.6	672.6	1.4	0.6	109.35	-1,359.8	3,871.6	4,103.5	4,101.4	2.07	1,982.289	
700.0	700.0	680.9	680.9	1.4	0.7	109.35	-1,359.8	3,871.6	4,103.5	4,101.4	2.11	1,943.613	
787.4	787.4	754.8	754.8	1.6	0.8	109.37	-1,361.2	3,871.6	4,104.0	4,101.5	2.46	1,670.893	
800.0	800.0	767.9	767.9	1.7	0.8	109.37	-1,361.4	3,871.6	4,104.0	4,101.5	2.51	1,634.438	
885.8	885.8	854.1	854.0	1.9	1.0	109.39	-1,362.5	3,871.7	4,104.5	4,101.7	2.88	1,425.602	
900.0	900.0	867.7	867.6	1.9	1.0	109.39	-1,362.6	3,871.8	4,104.6	4,101.7	2.94	1,396.678	
984.2	984.2	1,018.0	1,018.0	2.1	1.4	109.40	-1,363.4	3,871.5	4,104.7	4,101.3	3.44	1,194.060	
1,000.0	1,000.0	1,032.1	1,032.1	2.1	1.4	109.40	-1,363.3	3,871.3	4,104.6	4,101.1	3.50	1,171.639	
1,082.7	1,082.7	1,108.0	1,108.0	2.3	1.5	109.40	-1,362.8	3,870.8	4,103.9	4,100.0	3.85	1,065.259	
1,100.0	1,100.0	1,127.1	1,127.0	2.3	1.6	109.39	-1,362.7	3,870.7	4,103.7	4,099.8	3.93	1,043.515	
1,181.1	1,181.1	1,215.8	1,215.8	2.5	1.8	109.39	-1,361.9	3,870.1	4,103.0	4,098.7	4.31	952.587	
1,200.0	1,200.0	1,236.3	1,236.2	2.6	1.8	109.38	-1,361.7	3,870.0	4,102.8	4,098.4	4.39	933.719	
1,279.5	1,279.5	1,315.7	1,315.6	2.7	2.0	109.38	-1,360.8	3,869.4	4,101.9	4,097.2	4.74	864.973	
1,300.0	1,300.0	1,333.0	1,333.0	2.8	2.0	109.37	-1,360.6	3,869.2	4,101.7	4,096.9	4.82	850.314	
1,377.9	1,377.9	1,400.1	1,400.0	3.0	2.2	109.37	-1,360.1	3,868.8	4,101.0	4,095.9	5.13	798.663	
1,400.0	1,400.0	1,420.2	1,420.1	3.0	2.2	109.37	-1,360.0	3,868.7	4,100.9	4,095.7	5.22	785.019	
1,417.9	1,417.9	1,436.6	1,436.5	3.1	2.2	-175.51	-1,359.9	3,868.6	4,100.8	4,095.5	5.29	774.813	
1,476.4	1,476.4	1,490.1	1,490.0	3.2	2.3	-175.51	-1,359.8	3,868.4	4,101.5	4,095.9	5.52	742.616	
1,500.0	1,500.0	1,512.0	1,512.0	3.2	2.4	-175.51	-1,359.8	3,868.3	4,102.1	4,096.5	5.62	730.267	
1,574.8	1,574.7	1,581.3	1,581.2	3.4	2.5	-175.50	-1,359.7	3,868.0	4,105.3	4,099.4	5.91	694.823	
1,600.0	1,599.8	1,604.1	1,604.1	3.4	2.6	-175.50	-1,359.7	3,867.9	4,106.9	4,100.9	6.01	683.874	
1,673.2	1,672.8	1,670.5	1,670.4	3.6	2.7	-175.50	-1,359.8	3,867.7	4,112.8	4,106.5	6.29	654.064	
1,700.0	1,699.5	1,698.8	1,698.7	3.7	2.8	-175.49	-1,359.9	3,867.7	4,115.4	4,109.0	6.40	643.236	
1,771.6	1,770.6	1,764.0	1,763.9	3.8	2.9	-175.49	-1,360.2	3,867.4	4,123.6	4,117.0	6.67	618.020	
1,800.0	1,798.7	1,792.4	1,792.3	3.9	3.0	-175.48	-1,360.5	3,867.3	4,127.4	4,120.6	6.79	608.293	
1,870.1	1,868.0	1,844.3	1,844.2	4.1	3.1	-175.46	-1,361.4	3,867.1	4,138.1	4,131.1	7.03	588.729	
1,900.0	1,897.5	1,867.4	1,867.3	4.2	3.1	-175.44	-1,362.1	3,866.9	4,143.3	4,136.1	7.13	580.820	
1,968.5	1,964.8	1,924.5	1,924.4	4.4	3.2	-175.41	-1,364.1	3,866.7	4,156.4	4,149.0	7.39	562.749	
2,000.0	1,995.6	1,954.0	1,953.9	4.5	3.3	-175.38	-1,365.4	3,866.5	4,163.0	4,155.5	7.51	554.593	
2,066.9	2,060.9	1,993.5	1,993.3	4.7	3.4	-175.34	-1,367.3	3,866.3	4,178.4	4,170.7	7.72	541.226	
2,100.0	2,093.1	2,014.1	2,013.9	4.8	3.4	-175.32	-1,368.4	3,866.3	4,186.7	4,178.9	7.83	534.989	
2,165.3	2,156.3	2,048.0	2,047.7	5.1	3.5	-175.27	-1,370.4	3,866.2	4,204.5	4,196.4	8.02	523.936	
2,200.0	2,189.6	2,081.4	2,081.1	5.2	3.6	-175.24	-1,372.6	3,866.3	4,214.5	4,206.4	8.16	516.376	
2,263.8	2,250.7	2,128.2	2,127.7	5.5	3.7	-175.17	-1,375.9	3,866.4	4,234.3	4,225.9	8.39	504.889	
2,280.0	2,266.2	2,144.0	2,143.5	5.6	3.7	-175.15	-1,377.1	3,866.4	4,239.6	4,231.2	8.45	501.705	
2,300.0	2,285.3	2,144.0	2,143.5	5.7	3.7	-175.15	-1,377.1	3,866.4	4,246.2	4,237.7	8.50	499.514	
2,362.2	2,344.6	2,195.8	2,195.1	6.0	3.8	-175.12	-1,381.2	3,866.7	4,266.8	4,258.0	8.77	486.766	
2,400.0	2,380.6	2,221.2	2,220.4	6.2	3.9	-175.10	-1,383.4	3,866.9	4,279.4	4,270.5	8.92	479.546	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,438.4	2,259.9	2,259.0	6.5	4.0	-175.07	-1,386.8	3,867.2	4,299.8	4,290.7	9.17	468.996	
2,500.0	2,475.9	2,284.0	2,283.0	6.7	4.0	-175.05	-1,389.0	3,867.5	4,313.3	4,303.9	9.33	462.480	
2,559.0	2,532.2	2,333.0	2,331.7	7.0	4.2	-175.00	-1,394.0	3,868.1	4,333.6	4,324.0	9.59	451.659	
2,600.0	2,571.2	2,333.0	2,331.7	7.2	4.2	-175.00	-1,394.0	3,868.1	4,347.9	4,338.2	9.70	448.013	
2,657.5	2,626.0	2,378.3	2,376.8	7.5	4.3	-174.96	-1,399.1	3,868.8	4,368.1	4,358.1	9.97	438.176	
2,700.0	2,666.6	2,403.2	2,401.4	7.8	4.3	-174.93	-1,402.0	3,869.2	4,383.2	4,373.0	10.14	432.114	
2,755.9	2,719.8	2,428.0	2,426.0	8.1	4.4	-174.90	-1,405.1	3,869.7	4,403.2	4,392.9	10.36	425.134	
2,800.0	2,761.9	2,466.2	2,463.9	8.3	4.5	-174.85	-1,410.1	3,870.5	4,419.2	4,408.6	10.57	417.944	
2,854.3	2,813.7	2,502.3	2,499.7	8.7	4.6	-174.81	-1,415.1	3,871.3	4,439.0	4,428.2	10.82	410.401	
2,900.0	2,857.2	2,538.9	2,535.9	8.9	4.7	-174.75	-1,420.4	3,872.1	4,455.8	4,444.8	11.04	403.715	
2,952.7	2,907.5	2,597.0	2,593.3	9.2	4.9	-174.66	-1,429.5	3,873.1	4,475.2	4,463.8	11.34	394.732	
3,000.0	2,952.5	2,650.7	2,646.1	9.5	5.0	-174.56	-1,438.8	3,873.5	4,492.4	4,480.8	11.62	386.749	
3,051.2	3,001.3	2,709.8	2,704.1	9.8	5.2	-174.44	-1,450.1	3,873.5	4,511.0	4,499.1	11.93	378.148	
3,100.0	3,047.8	2,744.8	2,738.4	10.1	5.3	-174.37	-1,457.1	3,873.3	4,528.7	4,516.5	12.17	372.186	
3,149.6	3,095.1	2,779.4	2,772.3	10.4	5.4	-174.29	-1,463.9	3,873.3	4,546.8	4,534.4	12.41	366.388	
3,200.0	3,143.2	2,838.9	2,830.7	10.7	5.6	-174.17	-1,475.4	3,873.4	4,565.3	4,552.6	12.72	358.907	
3,248.0	3,188.9	2,902.0	2,892.7	11.0	5.8	-174.05	-1,487.4	3,873.1	4,582.6	4,569.5	13.03	351.636	
3,300.0	3,238.5	2,937.1	2,927.1	11.3	5.9	-173.98	-1,494.1	3,872.8	4,601.3	4,588.0	13.29	346.224	
3,346.4	3,282.8	2,957.7	2,947.3	11.6	6.0	-173.93	-1,498.1	3,872.8	4,618.3	4,604.8	13.49	342.377	
3,400.0	3,333.8	2,997.0	2,985.8	11.9	6.1	-173.85	-1,506.0	3,873.0	4,638.2	4,624.4	13.77	336.952	
3,444.9	3,376.6	3,005.8	2,994.4	12.2	6.1	-173.84	-1,507.8	3,873.1	4,655.0	4,641.0	13.93	334.286	
3,500.0	3,429.1	3,059.1	3,046.7	12.6	6.3	-173.73	-1,518.2	3,873.6	4,675.7	4,661.5	14.25	328.138	
3,543.3	3,470.4	3,106.5	3,093.3	12.8	6.5	-173.65	-1,527.1	3,874.3	4,692.0	4,677.5	14.52	323.183	
3,600.0	3,524.4	3,191.4	3,176.8	13.2	6.7	-173.50	-1,542.2	3,875.3	4,713.1	4,698.2	14.92	315.832	
3,641.7	3,564.2	3,227.2	3,212.1	13.4	6.8	-173.45	-1,548.3	3,875.7	4,728.5	4,713.3	15.15	312.158	
3,700.0	3,619.8	3,277.3	3,261.5	13.8	7.0	-173.37	-1,556.5	3,876.4	4,750.0	4,734.6	15.46	307.208	
3,740.1	3,658.0	3,305.4	3,289.2	14.0	7.1	-173.33	-1,561.0	3,876.9	4,764.9	4,749.3	15.66	304.292	
3,800.0	3,715.1	3,345.8	3,329.2	14.4	7.2	-173.29	-1,566.8	3,878.0	4,787.3	4,771.3	15.95	300.178	
3,838.6	3,751.8	3,377.0	3,360.1	14.7	7.3	-173.26	-1,571.0	3,879.1	4,801.8	4,785.6	16.15	297.347	
3,900.0	3,810.4	3,551.8	3,533.9	15.0	7.8	-173.14	-1,589.3	3,884.1	4,823.7	4,806.9	16.75	288.013	
3,937.0	3,845.7	3,729.8	3,711.5	15.3	8.2	-173.13	-1,598.7	3,888.0	4,836.0	4,818.8	17.22	280.856	
4,000.0	3,905.7	3,877.5	3,859.2	15.7	8.4	-173.20	-1,599.4	3,890.3	4,855.8	4,838.1	17.67	274.854	
4,035.4	3,939.5	3,914.2	3,895.9	15.9	8.5	-173.22	-1,599.3	3,890.7	4,866.7	4,848.9	17.84	272.833	
4,100.0	4,001.0	3,975.6	3,957.3	16.3	8.6	-173.24	-1,599.4	3,891.1	4,886.6	4,868.4	18.14	269.345	
4,133.8	4,033.3	4,005.1	3,986.8	16.5	8.7	-173.26	-1,599.5	3,891.3	4,897.0	4,878.7	18.30	267.607	
4,200.0	4,096.3	4,072.7	4,054.4	16.9	8.8	-173.28	-1,599.8	3,891.8	4,917.4	4,898.8	18.62	264.033	
4,232.3	4,127.1	4,113.7	4,095.4	17.1	8.9	-173.30	-1,600.1	3,892.0	4,927.3	4,908.5	18.80	262.114	
4,300.0	4,191.7	4,175.9	4,157.6	17.6	9.0	-173.32	-1,600.6	3,892.0	4,947.9	4,928.8	19.12	258.748	
4,330.7	4,220.9	4,200.3	4,182.0	17.8	9.0	-173.33	-1,601.0	3,892.1	4,957.3	4,938.1	19.26	257.345	
4,400.0	4,287.0	4,297.5	4,279.2	18.2	9.2	-173.35	-1,602.4	3,892.0	4,978.5	4,958.9	19.66	253.206	
4,429.1	4,314.7	4,338.0	4,319.7	18.4	9.3	-173.36	-1,602.9	3,891.7	4,987.2	4,967.4	19.83	251.502	
4,500.0	4,382.3	4,391.3	4,372.9	18.8	9.4	-173.37	-1,603.7	3,891.4	5,008.4	4,988.3	20.15	248.536	
4,527.5	4,408.6	4,421.0	4,402.7	19.0	9.5	-173.38	-1,604.3	3,891.2	5,016.8	4,996.5	20.29	247.196	
4,600.0	4,477.6	4,487.1	4,468.8	19.5	9.6	-173.40	-1,604.9	3,891.1	5,038.6	5,018.0	20.64	244.096	
4,626.0	4,502.4	4,515.6	4,497.2	19.6	9.7	-173.41	-1,604.8	3,891.1	5,046.4	5,025.6	20.78	242.906	
4,700.0	4,572.9	4,585.9	4,567.6	20.1	9.8	-173.45	-1,604.4	3,891.2	5,068.6	5,047.5	21.13	239.868	
4,724.4	4,596.2	4,609.1	4,590.8	20.3	9.8	-173.46	-1,604.4	3,891.2	5,076.0	5,054.7	21.25	238.887	
4,800.0	4,668.3	4,771.5	4,753.1	20.7	10.1	-173.52	-1,604.1	3,889.2	5,097.5	5,075.8	21.78	234.021	
4,822.8	4,690.0	4,794.6	4,776.3	20.9	10.2	-173.52	-1,604.1	3,888.7	5,104.0	5,082.1	21.90	233.099	
4,900.0	4,763.6	4,875.9	4,857.5	21.4	10.3	-173.55	-1,604.1	3,887.1	5,125.8	5,103.5	22.29	229.941	
4,921.2	4,783.8	4,896.0	4,877.6	21.5	10.4	-173.55	-1,604.1	3,886.6	5,131.8	5,109.4	22.40	229.133	
5,000.0	4,858.9	4,960.8	4,942.4	22.0	10.5	-173.57	-1,604.3	3,885.3	5,154.0	5,131.3	22.77	226.381	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,877.7	4,976.5	4,958.1	22.1	10.5	-173.58	-1,604.4	3,885.0	5,159.6	5,136.8	22.86	225.717	
5,100.0	4,954.2	5,043.6	5,025.2	22.6	10.7	-173.60	-1,604.5	3,883.8	5,182.6	5,159.3	23.24	223.037	
5,118.1	4,971.5	5,058.9	5,040.5	22.8	10.7	-173.60	-1,604.5	3,883.5	5,187.7	5,164.4	23.32	222.444	
5,171.8	5,022.7	5,086.0	5,067.6	23.1	10.7	-173.61	-1,604.4	3,883.2	5,203.2	5,179.7	23.54	221.038	
5,200.0	5,049.6	5,112.9	5,094.5	23.3	10.8	-173.64	-1,604.2	3,882.9	5,211.2	5,187.5	23.70	219.844	
5,216.5	5,065.4	5,121.8	5,103.4	23.3	10.8	-173.65	-1,604.2	3,882.8	5,215.9	5,192.1	23.78	219.318	
5,300.0	5,145.7	5,180.0	5,161.6	23.7	10.9	-173.73	-1,604.1	3,882.5	5,238.2	5,214.0	24.19	216.539	
5,314.9	5,160.1	5,180.0	5,161.6	23.8	10.9	-173.73	-1,604.1	3,882.5	5,241.9	5,217.7	24.24	216.246	
5,400.0	5,242.7	5,238.8	5,220.4	24.1	11.0	-173.80	-1,604.2	3,882.6	5,262.3	5,237.7	24.63	213.665	
5,413.4	5,255.7	5,249.2	5,230.8	24.2	11.0	-173.81	-1,604.2	3,882.6	5,265.3	5,240.7	24.69	213.268	
5,500.0	5,340.5	5,324.1	5,305.7	24.5	11.2	-173.86	-1,604.4	3,882.9	5,283.5	5,258.4	25.08	210.654	
5,511.8	5,352.1	5,335.0	5,316.6	24.5	11.2	-173.87	-1,604.4	3,883.0	5,285.8	5,260.7	25.13	210.311	
5,600.0	5,439.0	5,424.5	5,406.1	24.8	11.4	-173.93	-1,603.9	3,883.7	5,301.4	5,275.8	25.52	207.714	
5,610.2	5,449.1	5,435.6	5,417.2	24.8	11.4	-173.94	-1,603.8	3,883.8	5,303.0	5,277.4	25.57	207.423	
5,700.0	5,538.0	5,591.8	5,573.4	25.1	11.7	-174.01	-1,601.9	3,884.3	5,315.2	5,289.1	26.05	204.058	
5,708.6	5,546.6	5,601.7	5,583.3	25.1	11.7	-174.01	-1,601.7	3,884.2	5,316.1	5,290.1	26.08	203.823	
5,800.0	5,637.4	5,723.2	5,704.7	25.3	11.9	-174.06	-1,600.3	3,883.4	5,324.6	5,298.2	26.48	201.115	
5,807.1	5,644.5	5,733.9	5,715.5	25.3	12.0	-174.06	-1,600.2	3,883.3	5,325.1	5,298.6	26.51	200.894	
5,900.0	5,737.2	5,801.8	5,783.4	25.5	12.1	-174.07	-1,599.9	3,882.4	5,330.3	5,303.5	26.77	199.109	
5,905.5	5,742.6	5,805.3	5,786.8	25.5	12.1	-174.08	-1,599.9	3,882.4	5,330.5	5,303.8	26.78	199.020	
6,000.0	5,837.1	5,842.0	5,823.5	25.6	12.2	-174.08	-1,600.0	3,882.1	5,333.3	5,306.3	26.95	197.881	
6,003.9	5,841.0	5,842.0	5,823.5	25.6	12.2	-174.08	-1,600.0	3,882.1	5,333.3	5,306.4	26.96	197.861	
6,051.8	5,888.9	5,842.0	5,823.5	25.7	12.2	110.79	-1,600.0	3,882.1	5,334.1	5,296.9	37.16	143.530	
6,081.8	5,918.9	5,842.0	5,823.5	25.7	12.2	110.79	-1,600.0	3,882.1	5,334.5	5,297.3	37.19	143.425	
6,100.0	5,937.1	5,842.0	5,823.5	25.7	12.2	20.79	-1,600.0	3,882.1	5,334.6	5,307.6	27.00	197.569	
6,102.3	5,939.4	5,842.0	5,823.5	25.7	12.2	20.79	-1,600.0	3,882.1	5,334.6	5,307.6	26.99	197.617	
6,150.0	5,987.0	5,883.4	5,864.9	25.7	12.3	20.85	-1,600.1	3,882.4	5,332.3	5,305.4	26.90	198.198	
6,200.0	6,036.5	5,894.4	5,876.0	25.7	12.3	20.99	-1,600.2	3,882.6	5,327.5	5,300.8	26.65	199.890	
6,200.8	6,037.3	5,894.6	5,876.1	25.7	12.3	20.99	-1,600.2	3,882.6	5,327.4	5,300.7	26.65	199.921	
6,250.0	6,085.5	5,937.0	5,918.5	25.7	12.4	21.25	-1,600.6	3,884.4	5,320.2	5,293.8	26.38	201.714	
6,299.2	6,133.0	5,937.0	5,918.5	25.6	12.4	21.57	-1,600.6	3,884.4	5,309.6	5,283.7	25.94	204.670	
6,300.0	6,133.7	5,937.0	5,918.5	25.6	12.4	21.57	-1,600.6	3,884.4	5,309.4	5,283.5	25.93	204.721	
6,350.0	6,180.9	5,937.0	5,918.5	25.5	12.4	21.99	-1,600.6	3,884.4	5,296.0	5,270.5	25.43	208.265	
6,397.6	6,224.6	5,937.0	5,918.5	25.4	12.4	22.48	-1,600.6	3,884.4	5,280.7	5,255.7	24.90	212.068	
6,400.0	6,226.7	5,937.0	5,918.5	25.4	12.4	22.50	-1,600.6	3,884.4	5,279.8	5,255.0	24.87	212.265	
6,450.0	6,271.1	5,937.0	5,918.5	25.2	12.4	23.13	-1,600.6	3,884.4	5,261.1	5,236.8	24.29	216.592	
6,496.0	6,310.4	5,937.0	5,918.5	25.1	12.4	23.82	-1,600.6	3,884.4	5,241.6	5,217.8	23.75	220.693	
6,500.0	6,313.7	5,937.0	5,918.5	25.1	12.4	23.88	-1,600.6	3,884.4	5,239.8	5,216.1	23.71	221.042	
6,550.0	6,354.4	5,937.0	5,918.5	25.0	12.4	24.77	-1,600.6	3,884.4	5,216.1	5,192.9	23.15	225.311	
6,594.5	6,388.9	5,937.0	5,918.5	24.9	12.4	25.70	-1,600.6	3,884.4	5,192.9	5,170.2	22.71	228.616	
6,600.0	6,393.0	5,937.0	5,918.5	24.9	12.4	25.82	-1,600.6	3,884.4	5,189.9	5,167.2	22.67	228.978	
6,650.0	6,429.3	5,937.0	5,918.5	24.8	12.4	27.05	-1,600.6	3,884.4	5,161.5	5,139.2	22.30	231.505	
6,692.9	6,458.5	5,937.0	5,918.5	24.7	12.4	28.28	-1,600.6	3,884.4	5,135.3	5,113.2	22.11	232.284	
6,700.0	6,463.1	5,937.0	5,918.5	24.7	12.4	28.50	-1,600.6	3,884.4	5,130.9	5,108.8	22.09	232.274	
6,750.0	6,494.3	5,937.0	5,918.5	24.7	12.4	30.19	-1,600.6	3,884.4	5,098.2	5,076.1	22.10	230.680	
6,791.3	6,517.9	5,937.0	5,918.5	24.7	12.4	31.82	-1,600.6	3,884.4	5,069.6	5,047.3	22.31	227.227	
6,800.0	6,522.6	5,937.0	5,918.5	24.7	12.4	32.19	-1,600.6	3,884.4	5,063.5	5,041.1	22.38	226.272	
6,850.0	6,548.0	5,937.0	5,918.5	24.7	12.4	34.54	-1,600.6	3,884.4	5,027.0	5,004.0	22.97	218.892	
6,889.7	6,566.0	5,937.0	5,918.5	24.8	12.4	36.71	-1,600.6	3,884.4	4,996.8	4,973.1	23.68	210.999	
6,900.0	6,570.4	5,937.0	5,918.5	24.9	12.4	37.31	-1,600.6	3,884.4	4,988.8	4,964.9	23.90	208.750	
6,950.0	6,589.5	5,937.0	5,918.5	25.1	12.4	40.61	-1,600.6	3,884.4	4,949.1	4,923.9	25.20	196.407	
6,988.2	6,602.0	5,980.0	5,961.2	25.3	12.5	44.11	-1,601.4	3,888.4	4,916.1	4,889.3	26.73	183.903	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.4	5,980.5	5,961.8	25.3	12.5	45.13	-1,601.4	3,888.5	4,906.2	4,879.0	27.17	180.594	
7,050.0	6,618.0	5,982.5	5,963.8	25.6	12.5	49.92	-1,601.5	3,888.8	4,863.7	4,834.5	29.23	166.377	
7,086.6	6,625.0	5,983.8	5,965.0	25.9	12.5	53.97	-1,601.5	3,888.9	4,831.9	4,801.0	30.93	156.233	
7,100.0	6,627.1	5,984.2	5,965.5	26.0	12.5	55.58	-1,601.5	3,889.0	4,820.2	4,788.6	31.57	152.692	
7,150.0	6,632.8	5,985.6	5,966.8	26.5	12.5	62.18	-1,601.5	3,889.2	4,775.8	4,741.8	34.03	140.351	
7,185.0	6,634.7	5,986.3	5,967.5	26.8	12.5	67.36	-1,601.6	3,889.3	4,744.4	4,708.7	35.71	132.849	
7,200.0	6,635.0	5,986.6	5,967.8	27.0	12.5	69.71	-1,601.6	3,889.3	4,730.9	4,694.5	36.39	130.012	
7,215.9	6,635.0	5,986.8	5,968.0	27.1	12.5	72.28	-1,601.6	3,889.3	4,716.5	4,679.4	37.07	127.222	
7,283.4	6,634.1	5,987.8	5,969.0	27.9	12.5	72.31	-1,601.6	3,889.5	4,655.3	4,617.4	37.88	122.910	
7,300.0	6,633.9	5,988.0	5,969.2	28.1	12.5	72.32	-1,601.6	3,889.5	4,640.4	4,602.3	38.07	121.881	
7,381.9	6,632.9	5,989.3	5,970.5	29.3	12.5	72.35	-1,601.7	3,889.7	4,566.5	4,527.3	39.20	116.479	
7,400.0	6,632.6	5,989.5	5,970.7	29.5	12.5	72.36	-1,601.7	3,889.7	4,550.2	4,510.8	39.46	115.326	
7,480.3	6,631.6	6,032.0	6,012.5	30.8	12.6	73.53	-1,603.3	3,897.4	4,479.7	4,438.7	41.01	109.227	
7,500.0	6,631.4	6,032.0	6,012.5	31.1	12.6	73.53	-1,603.3	3,897.4	4,462.1	4,420.7	41.32	107.986	
7,578.7	6,630.4	6,032.0	6,012.5	32.5	12.6	73.53	-1,603.3	3,897.4	4,391.6	4,349.0	42.67	102.915	
7,600.0	6,630.1	6,032.0	6,012.5	32.9	12.6	73.53	-1,603.3	3,897.4	4,372.7	4,329.6	43.04	101.600	
7,677.1	6,629.1	6,032.0	6,012.5	34.3	12.6	73.53	-1,603.3	3,897.4	4,304.0	4,259.5	44.46	96.797	
7,700.0	6,628.8	6,032.0	6,012.5	34.8	12.6	73.53	-1,603.3	3,897.4	4,283.7	4,238.8	44.89	95.434	
7,775.6	6,627.8	6,032.0	6,012.5	36.3	12.6	73.53	-1,603.3	3,897.4	4,216.8	4,170.4	46.37	90.944	
7,800.0	6,627.5	6,032.0	6,012.5	36.8	12.6	73.53	-1,603.3	3,897.4	4,195.3	4,148.4	46.85	89.555	
7,874.0	6,626.6	6,032.0	6,012.5	38.4	12.6	73.53	-1,603.3	3,897.4	4,130.1	4,081.8	48.36	85.396	
7,900.0	6,626.3	6,032.0	6,012.5	38.9	12.6	73.53	-1,603.3	3,897.4	4,107.3	4,058.4	48.90	83.998	
7,972.4	6,625.3	6,032.0	6,012.5	40.5	12.6	73.53	-1,603.3	3,897.4	4,044.0	3,993.6	50.44	80.173	
8,000.0	6,625.0	6,032.0	6,012.5	41.1	12.6	73.53	-1,603.3	3,897.4	4,020.0	3,969.0	51.03	78.779	
8,070.8	6,624.1	6,032.0	6,012.5	42.7	12.6	73.53	-1,603.3	3,897.4	3,958.5	3,905.9	52.59	75.277	
8,100.0	6,623.7	6,032.0	6,012.5	43.4	12.6	73.53	-1,603.3	3,897.4	3,933.2	3,880.0	53.23	73.897	
8,169.3	6,622.8	6,032.0	6,012.5	45.0	12.6	73.53	-1,603.3	3,897.4	3,873.5	3,818.7	54.79	70.701	
8,200.0	6,622.4	6,032.0	6,012.5	45.7	12.6	73.53	-1,603.3	3,897.4	3,847.1	3,791.6	55.48	69.343	
8,267.7	6,621.6	6,032.0	6,012.5	47.4	12.6	73.53	-1,603.3	3,897.4	3,789.2	3,732.2	57.04	66.433	
8,300.0	6,621.1	6,032.0	6,012.5	48.1	12.6	73.53	-1,603.3	3,897.4	3,761.7	3,703.9	57.78	65.102	
8,366.1	6,620.3	6,032.0	6,012.5	49.7	12.6	73.53	-1,603.3	3,897.4	3,705.6	3,646.3	59.33	62.457	
8,400.0	6,619.9	6,032.0	6,012.5	50.6	12.6	73.53	-1,603.3	3,897.4	3,677.0	3,616.9	60.12	61.157	
8,464.5	6,619.0	6,032.0	6,012.5	52.2	12.6	73.53	-1,603.3	3,897.4	3,622.8	3,561.1	61.66	58.754	
8,500.0	6,618.6	6,032.0	6,012.5	53.0	12.6	73.53	-1,603.3	3,897.4	3,593.1	3,530.6	62.50	57.487	
8,563.0	6,617.8	6,032.0	6,012.5	54.6	12.6	73.53	-1,603.3	3,897.4	3,540.7	3,476.7	64.02	55.306	
8,600.0	6,617.3	6,032.0	6,012.5	55.5	12.6	73.53	-1,603.3	3,897.4	3,510.0	3,445.1	64.91	54.073	
8,661.4	6,616.5	6,032.0	6,012.5	57.1	12.6	73.53	-1,603.3	3,897.4	3,459.5	3,393.1	66.41	52.094	
8,700.0	6,616.0	6,032.0	6,012.5	58.1	12.6	73.53	-1,603.3	3,897.4	3,427.9	3,360.5	67.35	50.897	
8,759.8	6,615.2	6,032.0	6,012.5	59.6	12.6	73.53	-1,603.3	3,897.4	3,379.2	3,310.4	68.82	49.102	
8,800.0	6,614.7	6,032.0	6,012.5	60.6	12.6	73.53	-1,603.3	3,897.4	3,346.7	3,276.9	69.81	47.941	
8,858.2	6,614.0	6,032.0	6,012.5	62.1	12.6	73.53	-1,603.3	3,897.4	3,299.9	3,228.6	71.25	46.312	
8,900.0	6,613.4	6,032.0	6,012.5	63.2	12.6	73.53	-1,603.3	3,897.4	3,266.6	3,194.3	72.29	45.187	
8,956.7	6,612.7	6,032.0	6,012.5	64.7	12.6	73.53	-1,603.3	3,897.4	3,221.7	3,147.9	73.71	43.710	
9,000.0	6,612.2	6,032.0	6,012.5	65.8	12.6	73.53	-1,603.3	3,897.4	3,187.6	3,112.8	74.79	42.621	
9,055.1	6,611.5	6,032.0	6,012.5	67.3	12.6	73.53	-1,603.3	3,897.4	3,144.5	3,068.4	76.17	41.281	
9,100.0	6,610.9	6,032.0	6,012.5	68.4	12.6	73.53	-1,603.3	3,897.4	3,109.8	3,032.5	77.30	40.228	
9,153.5	6,610.2	6,032.0	6,012.5	69.8	12.6	73.53	-1,603.3	3,897.4	3,068.6	2,990.0	78.66	39.013	
9,200.0	6,609.6	6,032.0	6,012.5	71.1	12.6	73.53	-1,603.3	3,897.4	3,033.2	2,953.4	79.83	37.995	
9,251.9	6,608.9	6,032.0	6,012.5	72.4	12.6	73.53	-1,603.3	3,897.4	2,994.1	2,912.9	81.15	36.894	
9,300.0	6,608.3	6,032.0	6,012.5	73.7	12.6	73.53	-1,603.3	3,897.4	2,958.1	2,875.8	82.37	35.911	
9,350.4	6,607.7	6,032.0	6,012.5	75.0	12.6	73.53	-1,603.3	3,897.4	2,920.9	2,837.2	83.66	34.914	
9,400.0	6,607.0	6,032.0	6,012.5	76.4	12.6	73.53	-1,603.3	3,897.4	2,884.6	2,799.6	84.93	33.965	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,606.4	6,056.3	6,036.1	77.7	12.6	74.20	-1,604.1	3,902.9	2,849.0	2,762.5	86.49	32.939	
9,500.0	6,605.7	6,062.4	6,042.0	79.0	12.6	74.37	-1,604.3	3,904.4	2,812.3	2,724.4	87.89	31.998	
9,547.2	6,605.1	6,068.4	6,047.8	80.3	12.7	74.53	-1,604.4	3,905.9	2,778.8	2,689.6	89.19	31.157	
9,600.0	6,604.5	6,075.5	6,054.6	81.7	12.7	74.73	-1,604.5	3,907.7	2,741.8	2,651.1	90.64	30.248	
9,645.6	6,603.9	6,081.9	6,060.9	82.9	12.7	74.90	-1,604.6	3,909.4	2,710.2	2,618.2	91.91	29.487	
9,700.0	6,603.2	6,090.1	6,068.7	84.4	12.7	75.12	-1,604.7	3,911.6	2,673.0	2,579.6	93.43	28.610	
9,744.1	6,602.6	6,097.1	6,075.5	85.6	12.7	75.32	-1,604.7	3,913.6	2,643.3	2,548.6	94.67	27.921	
9,800.0	6,601.9	6,106.6	6,084.6	87.1	12.7	75.57	-1,604.7	3,916.3	2,606.1	2,509.9	96.25	27.076	
9,842.5	6,601.3	6,127.0	6,104.0	88.2	12.8	76.13	-1,604.4	3,922.5	2,578.3	2,480.7	97.63	26.410	
9,900.0	6,600.6	6,127.0	6,104.0	89.8	12.8	76.13	-1,604.4	3,922.5	2,541.2	2,442.1	99.14	25.634	
9,940.9	6,600.1	6,127.0	6,104.0	90.9	12.8	76.13	-1,604.4	3,922.5	2,515.3	2,415.1	100.21	25.099	
10,000.0	6,599.3	6,127.0	6,104.0	92.5	12.8	76.13	-1,604.4	3,922.5	2,478.5	2,376.7	101.77	24.355	
10,039.3	6,598.8	6,127.0	6,104.0	93.5	12.8	76.13	-1,604.4	3,922.5	2,454.5	2,351.7	102.81	23.875	
10,100.0	6,598.0	6,127.0	6,104.0	95.2	12.8	76.13	-1,604.4	3,922.5	2,418.3	2,313.9	104.41	23.163	
10,137.8	6,597.5	6,127.0	6,104.0	96.2	12.8	76.13	-1,604.4	3,922.5	2,396.3	2,290.9	105.40	22.734	
10,200.0	6,596.7	6,127.0	6,104.0	97.9	12.8	76.13	-1,604.4	3,922.5	2,360.8	2,253.8	107.05	22.054	
10,236.2	6,596.3	6,159.2	6,134.4	98.9	12.9	76.99	-1,603.9	3,933.2	2,340.0	2,231.6	108.45	21.577	
10,300.0	6,595.4	6,166.4	6,141.1	100.6	12.9	77.19	-1,603.8	3,935.7	2,305.2	2,195.0	110.24	20.911	
10,334.6	6,595.0	6,170.4	6,144.9	101.6	12.9	77.30	-1,603.7	3,937.1	2,286.8	2,175.6	111.22	20.562	
10,400.0	6,594.2	6,178.3	6,152.2	103.4	12.9	77.51	-1,603.7	3,940.0	2,253.1	2,140.0	113.06	19.927	
10,433.0	6,593.7	6,182.4	6,156.1	104.3	12.9	77.62	-1,603.6	3,941.6	2,236.5	2,122.5	114.00	19.618	
10,500.0	6,592.9	6,191.2	6,164.1	106.1	12.9	77.85	-1,603.6	3,944.9	2,204.0	2,088.1	115.91	19.015	
10,531.5	6,592.5	6,222.0	6,192.4	106.9	13.0	78.68	-1,603.5	3,957.2	2,189.7	2,072.6	117.15	18.691	
10,600.0	6,591.6	6,222.0	6,192.4	108.8	13.0	78.68	-1,603.5	3,957.2	2,158.4	2,039.5	118.99	18.139	
10,629.9	6,591.2	6,222.0	6,192.4	109.6	13.0	78.68	-1,603.5	3,957.2	2,145.4	2,025.6	119.80	17.908	
10,700.0	6,590.3	6,222.0	6,192.4	111.6	13.0	78.68	-1,603.5	3,957.2	2,116.0	1,994.3	121.68	17.390	
10,728.3	6,589.9	6,222.0	6,192.4	112.3	13.0	78.68	-1,603.5	3,957.2	2,104.7	1,982.2	122.44	17.189	
10,800.0	6,589.0	6,222.0	6,192.4	114.3	13.0	78.68	-1,603.5	3,957.2	2,077.5	1,953.1	124.37	16.703	
10,826.7	6,588.7	6,222.0	6,192.4	115.0	13.0	78.68	-1,603.5	3,957.2	2,067.9	1,942.8	125.10	16.530	
10,900.0	6,587.7	6,254.7	6,221.9	117.1	13.1	79.54	-1,603.8	3,971.3	2,042.5	1,915.0	127.52	16.017	
10,925.2	6,587.4	6,259.4	6,226.1	117.7	13.1	79.67	-1,603.8	3,973.4	2,034.4	1,906.1	128.27	15.861	
11,000.0	6,586.4	6,274.1	6,239.2	119.8	13.2	80.05	-1,604.1	3,980.2	2,011.7	1,881.2	130.49	15.417	
11,023.6	6,586.1	6,279.0	6,243.5	120.4	13.2	80.18	-1,604.2	3,982.4	2,005.0	1,873.8	131.19	15.283	
11,100.0	6,585.1	6,317.0	6,276.7	122.6	13.3	81.17	-1,605.1	4,000.9	1,985.2	1,851.5	133.74	14.843	
11,122.0	6,584.8	6,317.0	6,276.7	123.2	13.3	81.17	-1,605.1	4,000.9	1,979.8	1,845.4	134.34	14.737	
11,200.0	6,583.8	6,317.0	6,276.7	125.3	13.3	81.17	-1,605.1	4,000.9	1,962.4	1,825.9	136.47	14.380	
11,220.4	6,583.6	6,317.0	6,276.7	125.9	13.3	81.17	-1,605.1	4,000.9	1,958.3	1,821.3	137.02	14.292	
11,300.0	6,582.5	6,348.6	6,303.5	128.1	13.4	81.97	-1,606.0	4,017.7	1,944.1	1,804.5	139.61	13.925	
11,318.9	6,582.3	6,355.2	6,308.9	128.6	13.5	82.13	-1,606.2	4,021.4	1,941.1	1,800.9	140.21	13.844	
11,400.0	6,581.2	6,386.7	6,334.0	130.8	13.6	82.89	-1,606.9	4,040.4	1,929.8	1,787.0	142.82	13.512	
11,417.3	6,581.0	6,394.3	6,339.9	131.3	13.7	83.06	-1,607.1	4,045.2	1,927.7	1,784.3	143.38	13.445	
11,500.0	6,580.0	6,436.6	6,371.2	133.6	13.9	84.01	-1,607.8	4,073.6	1,919.2	1,773.0	146.17	13.130	
11,515.7	6,579.7	6,445.6	6,377.7	134.0	13.9	84.20	-1,607.9	4,079.8	1,917.8	1,771.1	146.71	13.072	
11,600.0	6,578.7	6,497.3	6,413.6	136.3	14.3	85.29	-1,608.6	4,117.1	1,911.7	1,762.1	149.65	12.775	
11,614.1	6,578.5	6,507.0	6,420.0	136.7	14.4	85.49	-1,608.7	4,124.3	1,910.9	1,760.8	150.15	12.727	
11,700.0	6,577.4	6,602.0	6,478.5	139.1	15.2	87.27	-1,608.1	4,199.1	1,906.0	1,752.3	153.75	12.397	
11,712.6	6,577.2	6,602.0	6,478.5	139.5	15.2	87.27	-1,608.1	4,199.1	1,905.4	1,751.3	154.09	12.365	
11,800.0	6,576.1	6,652.9	6,506.3	141.9	15.8	88.12	-1,607.6	4,241.7	1,902.3	1,745.0	157.25	12.097	
11,811.0	6,575.9	6,657.6	6,508.7	142.2	15.9	88.20	-1,607.6	4,245.8	1,902.1	1,744.5	157.62	12.067	
11,858.8	6,575.3	6,696.0	6,528.2	143.5	16.4	88.80	-1,608.1	4,278.8	1,901.8	1,742.4	159.48	11.925	
11,882.7	6,575.0	6,696.0	6,528.2	144.2	16.4	88.80	-1,608.1	4,278.8	1,901.8	1,741.6	160.14	11.876 CC	
11,883.5	6,575.0	6,696.0	6,528.2	144.2	16.4	88.80	-1,608.1	4,278.8	1,901.8	1,741.6	160.16	11.875 ES, SF	

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

## Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 290-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	173.00	-977.4	120.0	984.9				
98.4	98.4	87.7	87.7	0.1	0.1	173.01	-977.3	119.8	984.6	984.5	0.16	6,239.643	
100.0	100.0	89.3	89.3	0.1	0.1	173.01	-977.3	119.8	984.6	984.5	0.16	6,126.138	
196.8	196.8	189.9	189.9	0.3	0.1	173.05	-976.9	119.1	984.1	983.7	0.45	2,190.331	
200.0	200.0	193.1	193.1	0.3	0.1	173.05	-976.8	119.1	984.1	983.6	0.46	2,145.463	
295.3	295.3	290.0	290.0	0.5	0.2	173.11	-976.1	117.9	983.2	982.5	0.74	1,326.677	
300.0	300.0	296.2	296.2	0.5	0.2	173.12	-976.1	117.8	983.2	982.4	0.76	1,286.139	
393.7	393.7	384.0	384.0	0.8	0.4	173.15	-975.5	117.1	982.5	981.4	1.15	852.754	
400.0	400.0	389.3	389.3	0.8	0.4	173.15	-975.5	117.1	982.5	981.3	1.18	834.468	
492.1	492.1	479.3	479.2	1.0	0.6	173.15	-975.3	117.2	982.3	980.7	1.57	624.757	
500.0	500.0	487.0	486.9	1.0	0.6	173.15	-975.3	117.2	982.3	980.7	1.61	611.621	
539.9	539.9	525.9	525.9	1.1	0.7	173.14	-975.3	117.3	982.3	980.5	1.78	552.777 CC	
590.5	590.5	575.4	575.4	1.2	0.8	173.13	-975.3	117.5	982.3	980.3	1.99	492.584	
600.0	600.0	584.6	584.6	1.2	0.8	173.13	-975.3	117.5	982.3	980.3	2.03	482.784	
689.0	689.0	666.7	666.7	1.4	1.0	173.16	-975.8	117.0	982.8	980.4	2.41	408.226	
700.0	700.0	677.5	677.5	1.4	1.0	173.18	-975.9	116.8	982.9	980.4	2.46	400.332	
787.4	787.4	763.1	763.0	1.6	1.2	173.26	-976.9	115.5	983.7	980.9	2.83	347.147	
800.0	800.0	775.4	775.4	1.7	1.2	173.27	-977.0	115.3	983.9	981.0	2.89	340.631	
885.8	885.8	859.5	859.4	1.9	1.4	173.35	-978.2	114.0	984.9	981.6	3.26	302.101	
900.0	900.0	873.3	873.3	1.9	1.4	173.36	-978.4	113.8	985.0	981.7	3.32	296.574	
984.2	984.2	956.8	956.7	2.1	1.6	173.44	-979.6	112.7	986.2	982.5	3.69	267.425	
1,000.0	1,000.0	972.7	972.7	2.1	1.6	173.45	-979.9	112.5	986.4	982.7	3.76	262.557	
1,082.7	1,082.7	1,056.6	1,056.5	2.3	1.8	173.52	-981.1	111.5	987.5	983.4	4.12	239.672	
1,100.0	1,100.0	1,074.2	1,074.1	2.3	1.9	173.53	-981.3	111.3	987.7	983.5	4.20	235.376	
1,181.1	1,181.1	1,161.2	1,161.1	2.5	2.0	173.60	-982.3	110.2	988.5	984.0	4.56	216.814	
1,200.0	1,200.0	1,182.8	1,182.7	2.6	2.1	173.63	-982.5	109.7	988.6	984.0	4.65	212.790	
1,279.5	1,279.5	1,287.4	1,287.1	2.7	2.3	173.91	-982.2	104.9	988.1	983.0	5.04	196.038	
1,300.0	1,300.0	1,314.2	1,313.9	2.8	2.4	174.01	-981.8	102.9	987.5	982.4	5.14	192.058	
1,377.9	1,377.9	1,394.7	1,394.2	3.0	2.5	174.34	-980.0	97.2	985.2	979.8	5.49	179.561	
1,400.0	1,400.0	1,415.5	1,414.9	3.0	2.6	174.42	-979.5	95.8	984.6	979.0	5.58	176.417	
1,476.4	1,476.4	1,484.3	1,483.5	3.2	2.7	-110.26	-978.2	90.8	983.0	977.1	5.92	165.945	
1,500.0	1,500.0	1,505.9	1,505.1	3.2	2.8	-110.21	-977.9	89.2	982.8	976.7	6.02	163.136	
1,539.3	1,539.2	1,542.6	1,541.6	3.3	2.9	-110.12	-977.5	86.2	982.6	976.4	6.19	158.658	
1,574.8	1,574.7	1,575.8	1,574.7	3.4	3.0	-110.05	-977.3	83.3	982.7	976.4	6.35	154.853 ES	
1,600.0	1,599.8	1,599.4	1,598.2	3.4	3.0	-110.01	-977.2	81.1	983.0	976.5	6.46	152.276	
1,673.2	1,672.8	1,668.0	1,666.5	3.6	3.2	-109.94	-977.0	75.1	984.3	977.5	6.78	145.154	
1,700.0	1,699.5	1,683.0	1,681.5	3.7	3.2	-109.93	-977.0	73.8	985.1	978.2	6.88	143.267	
1,771.6	1,770.6	1,747.0	1,745.3	3.8	3.4	-109.97	-977.6	68.5	988.2	981.0	7.20	137.238	
1,800.0	1,798.7	1,777.0	1,775.1	3.9	3.4	-110.01	-978.3	66.0	989.9	982.6	7.34	134.861	
1,870.1	1,868.0	1,829.9	1,827.8	4.1	3.6	-110.08	-980.0	61.4	995.1	987.5	7.65	130.000	
1,900.0	1,897.5	1,856.4	1,854.2	4.2	3.6	-110.13	-981.0	59.0	997.7	989.9	7.80	127.932	
1,968.5	1,964.8	1,912.3	1,909.8	4.4	3.8	-110.26	-983.5	53.9	1,004.6	996.4	8.14	123.415	
2,000.0	1,995.6	1,937.3	1,934.6	4.5	3.9	-110.33	-984.8	51.7	1,008.2	999.9	8.29	121.555	
2,066.9	2,060.9	1,990.5	1,987.6	4.7	4.0	-110.51	-988.1	47.2	1,017.0	1,008.4	8.65	117.561	
2,100.0	2,093.1	2,017.1	2,013.9	4.8	4.1	-110.61	-990.0	44.9	1,021.9	1,013.1	8.83	115.760	
2,165.3	2,156.3	2,062.0	2,058.6	5.1	4.2	-110.77	-993.6	41.1	1,032.6	1,023.4	9.19	112.370	
2,200.0	2,189.6	2,092.9	2,089.2	5.2	4.3	-110.93	-996.4	38.5	1,038.8	1,029.4	9.40	110.526	
2,263.8	2,250.7	2,137.4	2,133.4	5.5	4.4	-111.13	-1,001.0	35.1	1,051.5	1,041.8	9.78	107.478	
2,280.0	2,266.2	2,157.0	2,152.8	5.6	4.4	-111.28	-1,003.2	33.6	1,055.1	1,045.2	9.90	106.546	
2,300.0	2,285.3	2,164.7	2,160.4	5.7	4.5	-111.36	-1,004.1	33.1	1,059.5	1,049.4	10.01	105.814	
2,362.2	2,344.6	2,225.0	2,220.1	6.0	4.6	-112.00	-1,011.2	28.5	1,073.3	1,062.9	10.45	102.670	
2,400.0	2,380.6	2,262.1	2,256.8	6.2	4.7	-112.37	-1,015.5	25.5	1,081.8	1,071.1	10.72	100.881	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,438.4	2,322.9	2,317.0	6.5	4.9	-112.94	-1,022.7	20.1	1,095.4	1,084.2	11.17	98.043		
2,500.0	2,475.9	2,358.6	2,352.3	6.7	5.0	-113.26	-1,026.9	16.7	1,104.2	1,092.7	11.46	96.373		
2,559.0	2,532.2	2,404.7	2,397.8	7.0	5.1	-113.63	-1,032.7	11.9	1,117.9	1,106.0	11.88	94.070		
2,600.0	2,571.2	2,439.0	2,431.5	7.2	5.3	-113.90	-1,037.3	8.1	1,127.7	1,115.5	12.18	92.550		
2,657.5	2,626.0	2,483.3	2,475.1	7.5	5.4	-114.22	-1,043.6	3.1	1,141.9	1,129.3	12.61	90.527		
2,700.0	2,666.6	2,517.9	2,509.0	7.8	5.5	-114.46	-1,048.8	-0.9	1,152.8	1,139.8	12.94	89.100		
2,755.9	2,719.8	2,560.1	2,550.5	8.1	5.7	-114.74	-1,055.4	-5.9	1,167.4	1,154.0	13.36	87.359		
2,800.0	2,761.9	2,592.1	2,581.7	8.3	5.8	-114.94	-1,060.8	-9.7	1,179.4	1,165.7	13.70	86.113		
2,854.3	2,813.7	2,632.1	2,620.8	8.7	5.9	-115.18	-1,067.9	-14.7	1,194.7	1,180.6	14.11	84.653		
2,900.0	2,857.2	2,674.1	2,661.8	8.9	6.1	-115.42	-1,075.6	-19.9	1,207.8	1,193.3	14.49	83.374		
2,952.7	2,907.5	2,722.0	2,708.5	9.2	6.3	-115.69	-1,084.4	-25.7	1,223.1	1,208.1	14.92	81.971		
3,000.0	2,952.5	2,766.5	2,751.9	9.5	6.4	-115.95	-1,092.6	-30.9	1,236.8	1,221.5	15.30	80.814		
3,051.2	3,001.3	2,814.0	2,798.3	9.8	6.6	-116.24	-1,101.3	-36.1	1,251.7	1,236.0	15.72	79.624		
3,100.0	3,047.8	2,858.4	2,841.7	10.1	6.8	-116.51	-1,109.4	-40.6	1,266.1	1,249.9	16.11	78.590		
3,149.6	3,095.1	2,903.2	2,885.6	10.4	6.9	-116.80	-1,117.6	-44.9	1,280.7	1,264.2	16.51	77.590		
3,200.0	3,143.2	2,953.9	2,935.2	10.7	7.1	-117.13	-1,126.8	-49.5	1,295.7	1,278.7	16.92	76.569		
3,248.0	3,188.9	3,003.4	2,983.7	11.0	7.3	-117.43	-1,135.7	-54.3	1,309.8	1,292.5	17.32	75.612		
3,300.0	3,238.5	3,065.9	3,044.9	11.3	7.5	-117.80	-1,146.5	-60.4	1,324.8	1,307.0	17.78	74.526		
3,346.4	3,282.8	3,120.0	3,098.1	11.6	7.7	-118.12	-1,155.4	-65.6	1,337.8	1,319.6	18.18	73.599		
3,400.0	3,333.8	3,177.6	3,154.7	11.9	7.9	-118.47	-1,164.4	-71.1	1,352.6	1,333.9	18.62	72.628		
3,444.9	3,376.6	3,222.9	3,199.2	12.2	8.0	-118.73	-1,171.4	-75.4	1,364.8	1,345.8	18.99	71.859		
3,500.0	3,429.1	3,276.2	3,251.7	12.6	8.2	-119.04	-1,179.5	-80.5	1,379.8	1,360.4	19.44	70.971		
3,543.3	3,470.4	3,318.8	3,293.5	12.8	8.3	-119.28	-1,186.0	-84.7	1,391.6	1,371.8	19.80	70.277		
3,600.0	3,524.4	3,375.1	3,348.9	13.2	8.5	-119.58	-1,194.6	-90.4	1,407.0	1,386.7	20.28	69.388		
3,641.7	3,564.2	3,407.9	3,381.1	13.4	8.7	-119.74	-1,199.7	-93.9	1,418.4	1,397.8	20.61	68.824		
3,700.0	3,619.8	3,449.2	3,421.6	13.8	8.8	-119.93	-1,206.5	-98.4	1,434.8	1,413.7	21.06	68.121		
3,740.1	3,658.0	3,481.0	3,452.7	14.0	8.9	-120.07	-1,212.0	-101.9	1,446.4	1,425.0	21.39	67.635		
3,800.0	3,715.1	3,533.8	3,504.3	14.4	9.1	-120.30	-1,221.4	-107.9	1,464.0	1,442.1	21.88	66.898		
3,838.6	3,751.8	3,570.8	3,540.5	14.7	9.3	-120.45	-1,228.0	-112.0	1,475.3	1,453.1	22.22	66.412		
3,900.0	3,810.4	3,622.0	3,590.6	15.0	9.5	-120.66	-1,237.3	-117.7	1,493.5	1,470.8	22.72	65.739		
3,937.0	3,845.7	3,652.4	3,620.2	15.3	9.6	-120.78	-1,242.9	-121.2	1,504.7	1,481.6	23.02	65.357		
4,000.0	3,905.7	3,704.7	3,671.2	15.7	9.8	-120.98	-1,252.7	-127.0	1,523.9	1,500.3	23.54	64.726		
4,035.4	3,939.5	3,734.2	3,700.0	15.9	10.0	-121.09	-1,258.4	-130.3	1,534.8	1,510.9	23.84	64.384		
4,100.0	4,001.0	3,789.1	3,753.5	16.3	10.2	-121.29	-1,269.1	-136.2	1,554.9	1,530.6	24.38	63.788		
4,133.8	4,033.3	3,818.8	3,782.4	16.5	10.3	-121.40	-1,274.9	-139.3	1,565.6	1,540.9	24.66	63.486		
4,200.0	4,096.3	3,903.7	3,865.4	16.9	10.7	-121.74	-1,291.3	-147.7	1,586.4	1,561.1	25.28	62.743		
4,232.3	4,127.1	3,971.4	3,931.9	17.1	10.9	-122.05	-1,302.4	-153.7	1,595.8	1,570.1	25.65	62.211		
4,300.0	4,191.7	4,067.2	4,026.3	17.6	11.2	-122.49	-1,315.9	-162.6	1,614.0	1,587.7	26.28	61.410		
4,330.7	4,220.9	4,094.4	4,053.2	17.8	11.3	-122.61	-1,319.6	-165.2	1,622.1	1,595.5	26.53	61.141		
4,400.0	4,287.0	4,155.3	4,113.1	18.2	11.5	-122.87	-1,328.0	-171.2	1,640.5	1,613.4	27.09	60.559		
4,429.1	4,314.7	4,179.7	4,137.2	18.4	11.6	-122.97	-1,331.5	-173.6	1,648.4	1,621.0	27.33	60.322		
4,500.0	4,382.3	4,239.0	4,195.5	18.8	11.9	-123.20	-1,340.2	-179.8	1,667.7	1,639.8	27.90	59.771		
4,527.5	4,408.6	4,263.9	4,220.0	19.0	12.0	-123.29	-1,344.0	-182.5	1,675.3	1,647.2	28.13	59.547		
4,600.0	4,477.6	4,329.2	4,284.1	19.5	12.2	-123.51	-1,354.1	-189.8	1,695.5	1,666.7	28.75	58.981		
4,626.0	4,502.4	4,351.3	4,305.7	19.6	12.3	-123.58	-1,357.6	-192.3	1,702.7	1,673.8	28.96	58.788		
4,700.0	4,572.9	4,413.2	4,366.3	20.1	12.6	-123.75	-1,367.8	-199.8	1,723.7	1,694.1	29.59	58.261		
4,724.4	4,596.2	4,435.0	4,387.6	20.3	12.7	-123.81	-1,371.5	-202.6	1,730.7	1,700.9	29.80	58.086		
4,800.0	4,668.3	4,517.0	4,467.9	20.7	13.0	-124.03	-1,385.1	-212.7	1,752.2	1,721.7	30.49	57.475		
4,822.8	4,690.0	4,538.8	4,489.2	20.9	13.1	-124.09	-1,388.6	-215.3	1,758.6	1,728.0	30.68	57.315		
4,900.0	4,763.6	4,608.1	4,557.2	21.4	13.4	-124.28	-1,399.8	-223.4	1,780.5	1,749.2	31.34	56.819		
4,921.2	4,783.8	4,629.7	4,578.3	21.5	13.4	-124.34	-1,403.4	-226.0	1,786.6	1,755.0	31.52	56.673		
5,000.0	4,858.9	4,714.0	4,660.9	22.0	13.8	-124.57	-1,416.7	-236.0	1,808.6	1,776.4	32.23	56.111		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,877.7	4,734.9	4,681.3	22.1	13.9	-124.63	-1,420.0	-238.5	1,814.1	1,781.6	32.41	55.974	
5,100.0	4,954.2	4,797.2	4,742.4	22.6	14.1	-124.80	-1,430.0	-245.8	1,836.7	1,803.7	33.05	55.567	
5,118.1	4,971.5	4,808.0	4,753.0	22.8	14.1	-124.82	-1,431.7	-247.1	1,841.9	1,808.8	33.19	55.497	
5,171.8	5,022.7	4,855.9	4,799.9	23.1	14.4	-124.94	-1,439.9	-252.9	1,857.5	1,823.9	33.66	55.190	
5,200.0	5,049.6	4,879.3	4,822.7	23.3	14.5	-125.12	-1,444.0	-255.9	1,865.7	1,831.8	33.88	55.063	
5,216.5	5,065.4	4,893.0	4,836.1	23.3	14.5	-125.23	-1,446.4	-257.7	1,870.4	1,836.4	34.00	55.011	
5,300.0	5,145.7	4,964.9	4,906.2	23.7	14.8	-125.71	-1,459.3	-266.8	1,893.8	1,859.2	34.60	54.729	
5,314.9	5,160.1	4,977.9	4,918.9	23.8	14.9	-125.79	-1,461.6	-268.4	1,897.9	1,863.2	34.71	54.685	
5,400.0	5,242.7	5,061.9	5,001.3	24.1	15.2	-126.26	-1,476.1	-276.8	1,920.3	1,885.0	35.29	54.416	
5,413.4	5,255.7	5,075.8	5,014.9	24.2	15.2	-126.33	-1,478.3	-277.8	1,923.7	1,888.3	35.38	54.378	
5,500.0	5,340.5	5,183.2	5,121.0	24.5	15.6	-126.86	-1,494.1	-284.0	1,944.2	1,908.3	35.94	54.095	
5,511.8	5,352.1	5,197.8	5,135.5	24.5	15.6	-126.93	-1,496.0	-284.6	1,946.8	1,910.8	36.01	54.066	
5,600.0	5,439.0	5,314.9	5,251.7	24.8	16.0	-127.47	-1,509.5	-287.1	1,964.7	1,928.2	36.50	53.830	
5,610.2	5,449.1	5,332.7	5,269.4	24.8	16.0	-127.54	-1,511.3	-287.3	1,966.6	1,930.0	36.56	53.795	
5,700.0	5,538.0	5,471.3	5,407.5	25.1	16.3	-128.02	-1,522.8	-289.3	1,980.5	1,943.5	37.04	53.477	
5,708.6	5,546.6	5,497.5	5,433.6	25.1	16.4	-128.07	-1,524.7	-289.9	1,981.7	1,944.6	37.10	53.408	
5,800.0	5,637.4	5,671.8	5,607.7	25.3	16.7	-128.38	-1,532.0	-295.8	1,989.5	1,951.9	37.63	52.868	
5,807.1	5,644.5	5,681.4	5,617.3	25.3	16.8	-128.39	-1,532.2	-296.1	1,990.0	1,952.3	37.66	52.838	
5,900.0	5,737.2	5,789.7	5,725.5	25.5	16.9	-128.52	-1,533.8	-299.6	1,994.0	1,956.0	38.02	52.452	
5,905.5	5,742.6	5,794.5	5,730.3	25.5	17.0	-128.52	-1,533.9	-299.7	1,994.1	1,956.1	38.03	52.435	
6,000.0	5,837.1	5,871.1	5,806.8	25.6	17.1	-128.59	-1,534.4	-300.5	1,996.4	1,958.2	38.28	52.158	
6,003.9	5,841.0	5,873.7	5,809.5	25.6	17.1	-128.59	-1,534.4	-300.5	1,996.5	1,958.2	38.28	52.150	
6,051.8	5,888.9	5,905.6	5,841.4	25.7	17.1	156.26	-1,534.8	-300.3	1,997.4	1,963.8	33.53	59.570	
6,081.8	5,918.9	5,925.6	5,861.4	25.7	17.2	156.26	-1,535.1	-300.1	1,997.9	1,964.3	33.61	59.452	
6,100.0	5,937.1	5,946.0	5,881.8	25.7	17.2	66.24	-1,535.5	-299.8	1,998.3	1,959.8	38.48	51.928	
6,102.3	5,939.4	5,946.0	5,881.8	25.7	17.2	66.24	-1,535.5	-299.8	1,998.3	1,959.8	38.48	51.925	
6,150.0	5,987.0	5,946.0	5,881.8	25.7	17.2	66.21	-1,535.5	-299.8	1,998.7	1,960.3	38.47	51.961	
6,200.0	6,036.5	5,994.0	5,929.7	25.7	17.2	66.34	-1,536.3	-297.3	1,998.0	1,959.5	38.46	51.954	
6,200.8	6,037.3	5,994.4	5,930.1	25.7	17.2	66.34	-1,536.3	-297.2	1,998.0	1,959.5	38.46	51.955	
6,250.0	6,085.5	6,041.0	5,976.3	25.7	17.3	66.55	-1,536.7	-291.4	1,996.8	1,958.3	38.42	51.978	
6,299.2	6,133.0	6,041.0	5,976.3	25.6	17.3	66.73	-1,536.7	-291.4	1,994.4	1,956.1	38.30	52.074	
6,300.0	6,133.7	6,041.0	5,976.3	25.6	17.3	66.73	-1,536.7	-291.4	1,994.4	1,956.1	38.30	52.075	
6,350.0	6,180.9	6,071.7	6,006.5	25.5	17.3	67.08	-1,536.8	-286.2	1,991.4	1,953.2	38.17	52.177	
6,397.6	6,224.6	6,094.2	6,028.7	25.4	17.3	67.46	-1,537.1	-281.8	1,987.9	1,949.9	38.03	52.273	
6,400.0	6,226.7	6,095.4	6,029.8	25.4	17.3	67.49	-1,537.1	-281.6	1,987.8	1,949.7	38.02	52.277	
6,450.0	6,271.1	6,136.0	6,069.4	25.2	17.3	68.11	-1,537.9	-272.6	1,983.6	1,945.7	37.90	52.343	
6,496.0	6,310.4	6,136.0	6,069.4	25.1	17.3	68.46	-1,537.9	-272.6	1,978.9	1,941.2	37.75	52.416	
6,500.0	6,313.7	6,136.0	6,069.4	25.1	17.3	68.49	-1,537.9	-272.6	1,978.5	1,940.8	37.74	52.422	
6,550.0	6,354.4	6,136.0	6,069.4	25.0	17.3	68.87	-1,537.9	-272.6	1,973.4	1,935.8	37.60	52.492	
6,594.5	6,388.9	6,177.0	6,108.9	24.9	17.3	69.70	-1,539.0	-261.7	1,967.9	1,930.4	37.52	52.450	
6,600.0	6,393.0	6,179.1	6,110.9	24.9	17.3	69.78	-1,539.0	-261.1	1,967.2	1,929.7	37.51	52.448	
6,650.0	6,429.3	6,197.9	6,128.8	24.8	17.3	70.48	-1,539.6	-255.2	1,961.0	1,923.5	37.44	52.373	
6,692.9	6,458.5	6,230.0	6,158.8	24.7	17.3	71.34	-1,540.9	-244.1	1,955.5	1,918.1	37.45	52.223	
6,700.0	6,463.1	6,230.0	6,158.8	24.7	17.3	71.41	-1,540.9	-244.1	1,954.5	1,917.1	37.44	52.202	
6,750.0	6,494.3	6,239.7	6,167.8	24.7	17.3	72.09	-1,541.3	-240.4	1,947.5	1,910.1	37.46	51.986	
6,791.3	6,517.9	6,268.6	6,194.3	24.7	17.2	72.99	-1,542.2	-228.9	1,941.5	1,904.0	37.55	51.701	
6,800.0	6,522.6	6,274.7	6,199.9	24.7	17.2	73.19	-1,542.4	-226.4	1,940.2	1,902.6	37.57	51.638	
6,850.0	6,548.0	6,310.2	6,231.7	24.7	17.2	74.37	-1,543.1	-210.6	1,932.3	1,894.6	37.76	51.177	
6,889.7	6,566.0	6,325.0	6,244.7	24.8	17.2	75.11	-1,543.3	-203.6	1,925.9	1,887.9	37.95	50.750	
6,900.0	6,570.4	6,325.0	6,244.7	24.9	17.2	75.24	-1,543.3	-203.6	1,924.2	1,886.2	37.99	50.647	
6,950.0	6,589.5	6,359.6	6,274.7	25.1	17.2	76.51	-1,543.7	-186.4	1,915.8	1,877.5	38.33	49.982	
6,988.2	6,602.0	6,375.9	6,288.6	25.3	17.1	77.32	-1,543.9	-177.9	1,909.5	1,870.8	38.63	49.433	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.4	6,380.9	6,292.8	25.3	17.1	77.57	-1,544.0	-175.3	1,907.5	1,868.8	38.72	49.264	
7,050.0	6,618.0	6,420.0	6,325.5	25.6	17.1	79.02	-1,544.8	-153.8	1,899.5	1,860.3	39.20	48.452	
7,086.6	6,625.0	6,420.0	6,325.5	25.9	17.1	79.50	-1,544.8	-153.8	1,893.5	1,853.9	39.56	47.867	
7,100.0	6,627.1	6,420.0	6,325.5	26.0	17.1	79.67	-1,544.8	-153.8	1,891.4	1,851.7	39.69	47.658	
7,150.0	6,632.8	6,420.0	6,325.5	26.5	17.1	80.26	-1,544.8	-153.8	1,884.0	1,843.7	40.22	46.842	
7,185.0	6,634.7	6,448.4	6,348.5	26.8	17.1	81.33	-1,545.5	-137.2	1,878.7	1,838.0	40.69	46.168	
7,200.0	6,635.0	6,452.9	6,352.1	27.0	17.1	81.61	-1,545.6	-134.5	1,876.6	1,835.8	40.88	45.911	
7,215.9	6,635.0	6,457.7	6,355.9	27.1	17.1	81.90	-1,545.8	-131.6	1,874.5	1,833.4	41.08	45.632	
7,283.4	6,634.1	6,478.7	6,372.4	27.9	17.0	82.41	-1,546.5	-118.5	1,866.4	1,824.5	41.95	44.491	
7,300.0	6,633.9	6,484.1	6,376.6	28.1	17.0	82.54	-1,546.7	-115.1	1,864.7	1,822.6	42.16	44.226	
7,381.9	6,632.9	6,514.0	6,399.2	29.3	17.0	83.24	-1,548.0	-95.6	1,858.1	1,814.7	43.39	42.824	
7,400.0	6,632.6	6,514.0	6,399.2	29.5	17.0	83.24	-1,548.0	-95.6	1,857.0	1,813.4	43.65	42.546	
7,480.3	6,631.6	6,565.2	6,435.7	30.8	16.9	84.39	-1,550.4	-59.8	1,853.5	1,808.4	45.12	41.078	
7,500.0	6,631.4	6,577.3	6,443.8	31.1	16.9	84.64	-1,551.0	-51.0	1,852.9	1,807.5	45.48	40.743	
7,578.7	6,630.4	6,625.2	6,474.3	32.5	16.9	85.60	-1,553.1	-14.1	1,851.9	1,804.8	47.07	39.343	
7,585.7	6,630.3	6,629.0	6,476.7	32.6	16.9	85.68	-1,553.3	-11.0	1,851.9	1,804.6	47.22	39.221	
7,600.0	6,630.1	6,637.0	6,481.4	32.9	16.9	85.83	-1,553.7	-4.6	1,851.9	1,804.4	47.51	38.975	
7,677.1	6,629.1	6,683.4	6,507.0	34.3	16.8	86.64	-1,556.0	34.0	1,853.0	1,803.8	49.25	37.627	
7,700.0	6,628.8	6,704.0	6,517.4	34.8	16.8	86.97	-1,557.1	51.8	1,853.7	1,803.9	49.80	37.226	
7,775.6	6,627.8	6,803.6	6,557.3	36.3	16.8	88.24	-1,561.2	142.8	1,855.8	1,803.6	52.21	35.542	
7,800.0	6,627.5	6,910.7	6,585.9	36.8	17.6	89.16	-1,562.1	245.9	1,856.0	1,802.0	54.06	34.335	
7,874.0	6,626.6	7,017.0	6,602.0	38.4	19.3	89.70	-1,559.4	350.9	1,854.2	1,796.9	57.31	32.355	
7,900.0	6,626.3	7,034.2	6,603.5	38.9	19.6	89.75	-1,558.8	368.0	1,853.2	1,795.0	58.17	31.859	
7,972.4	6,625.3	7,104.7	6,608.1	40.5	20.9	89.93	-1,557.0	438.3	1,851.3	1,790.2	61.08	30.311	
8,000.0	6,625.0	7,133.1	6,609.4	41.1	21.5	89.98	-1,556.0	466.6	1,850.3	1,788.1	62.24	29.729	
8,070.8	6,624.1	7,200.3	6,612.6	42.7	22.8	90.10	-1,553.9	533.8	1,848.1	1,782.9	65.21	28.338	
8,100.0	6,623.7	7,233.3	6,613.9	43.4	23.5	90.15	-1,552.8	566.7	1,847.1	1,780.6	66.57	27.745	
8,169.3	6,622.8	7,292.2	6,614.0	45.0	24.8	90.18	-1,550.9	625.6	1,844.9	1,775.4	69.48	26.555	
8,200.0	6,622.4	7,323.9	6,613.3	45.7	25.5	90.17	-1,550.0	657.2	1,844.1	1,773.2	70.91	26.007	
8,267.7	6,621.6	7,404.8	6,612.8	47.4	27.3	90.19	-1,547.4	738.1	1,841.9	1,767.5	74.37	24.767	
8,300.0	6,621.1	7,442.1	6,613.1	48.1	28.2	90.21	-1,546.1	775.4	1,840.7	1,764.7	76.02	24.214	
8,366.1	6,620.3	7,507.2	6,613.6	49.7	29.7	90.25	-1,543.5	840.4	1,838.1	1,758.9	79.17	23.218	
8,400.0	6,619.9	7,530.2	6,613.5	50.6	30.3	90.26	-1,542.7	863.4	1,836.9	1,756.4	80.55	22.804	
8,464.5	6,619.0	7,586.0	6,612.7	52.2	31.6	90.26	-1,541.3	919.2	1,835.3	1,751.8	83.50	21.979	
8,500.0	6,618.6	7,604.0	6,612.3	53.0	32.1	90.25	-1,541.0	937.2	1,834.6	1,749.7	84.83	21.627	
8,563.0	6,617.8	7,667.0	6,610.4	54.6	33.6	90.22	-1,539.9	1,000.2	1,833.5	1,745.5	87.97	20.842	
8,600.0	6,617.3	7,720.3	6,608.6	55.5	35.0	90.19	-1,538.8	1,053.4	1,832.7	1,742.5	90.24	20.310	
8,661.4	6,616.5	7,803.7	6,606.5	57.1	37.1	90.15	-1,535.9	1,136.7	1,830.6	1,736.6	93.91	19.493	
8,700.0	6,616.0	7,842.3	6,605.5	58.1	38.0	90.14	-1,534.4	1,175.3	1,829.1	1,733.2	95.87	19.079	
8,759.8	6,615.2	7,898.3	6,603.9	59.6	39.5	90.11	-1,532.3	1,231.2	1,826.8	1,728.0	98.84	18.483	
8,800.0	6,614.7	7,933.6	6,603.2	60.6	40.4	90.10	-1,531.1	1,266.5	1,825.4	1,724.6	100.78	18.112	
8,858.2	6,614.0	7,989.3	6,602.4	62.1	41.8	90.10	-1,529.3	1,322.1	1,823.5	1,719.8	103.73	17.580	
8,900.0	6,613.4	8,034.0	6,601.5	63.2	43.0	90.09	-1,527.8	1,366.8	1,822.1	1,716.2	105.97	17.194	
8,956.7	6,612.7	8,092.4	6,600.0	64.7	44.5	90.07	-1,525.8	1,425.2	1,820.2	1,711.2	108.98	16.702	
9,000.0	6,612.2	8,135.7	6,598.5	65.8	45.6	90.04	-1,524.2	1,468.4	1,818.7	1,707.4	111.24	16.348	
9,055.1	6,611.5	8,187.4	6,596.7	67.3	47.0	90.00	-1,522.5	1,520.1	1,816.8	1,702.7	114.05	15.929	
9,100.0	6,610.9	8,228.2	6,595.4	68.4	48.1	89.98	-1,521.2	1,560.8	1,815.3	1,699.0	116.31	15.608	
9,153.5	6,610.2	8,276.0	6,594.2	69.8	49.3	89.96	-1,519.8	1,608.6	1,813.8	1,694.8	118.99	15.243	
9,200.0	6,609.6	8,317.0	6,593.2	71.1	50.4	89.94	-1,518.7	1,649.6	1,812.5	1,691.2	121.30	14.942	
9,251.9	6,608.9	8,344.0	6,592.6	72.4	51.1	89.94	-1,518.1	1,676.5	1,811.5	1,688.1	123.40	14.680	
9,300.0	6,608.3	8,389.2	6,592.3	73.7	52.3	89.94	-1,517.3	1,721.7	1,810.7	1,684.8	125.88	14.384	
9,350.4	6,607.7	8,438.0	6,593.4	75.0	53.7	90.00	-1,517.2	1,770.5	1,810.6	1,682.1	128.53	14.087	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	
9,365.6	6,607.5	8,438.0	6,593.4	75.4	53.7	90.00	-1,517.2	1,770.5	1,810.5	1,681.6	128.93	14.042	
9,400.0	6,607.0	8,458.2	6,594.2	76.4	54.2	90.03	-1,517.4	1,790.7	1,810.7	1,680.3	130.39	13.887	
9,448.8	6,606.4	8,497.7	6,596.1	77.7	55.3	90.11	-1,517.8	1,830.1	1,811.2	1,678.5	132.76	13.643	
9,500.0	6,605.7	8,542.3	6,598.8	79.0	56.5	90.21	-1,518.5	1,874.7	1,812.0	1,676.7	135.33	13.390	
9,547.2	6,605.1	8,601.0	6,602.7	80.3	58.1	90.36	-1,519.2	1,933.2	1,812.7	1,674.5	138.18	13.119	
9,600.0	6,604.5	8,649.2	6,606.1	81.7	59.4	90.48	-1,519.7	1,981.3	1,813.2	1,672.3	140.89	12.869	
9,645.6	6,603.9	8,680.5	6,607.7	82.9	60.2	90.55	-1,520.2	2,012.5	1,814.0	1,671.0	142.97	12.688	
9,700.0	6,603.2	8,723.0	6,609.1	84.4	61.4	90.61	-1,521.3	2,055.0	1,815.4	1,669.8	145.58	12.470	
9,744.1	6,602.6	8,763.9	6,609.7	85.6	62.5	90.64	-1,522.5	2,095.8	1,816.7	1,668.8	147.88	12.285	
9,800.0	6,601.9	8,827.9	6,609.3	87.1	64.2	90.66	-1,524.3	2,159.9	1,818.3	1,667.1	151.14	12.031	
9,842.5	6,601.3	8,883.4	6,608.5	88.2	65.8	90.65	-1,525.5	2,215.3	1,819.2	1,665.4	153.80	11.828	
9,900.0	6,600.6	8,941.3	6,607.6	89.8	67.3	90.65	-1,526.4	2,273.2	1,820.1	1,663.1	156.94	11.597	
9,940.9	6,600.1	8,974.6	6,606.7	90.9	68.2	90.63	-1,527.0	2,306.5	1,820.9	1,661.9	158.96	11.455	
10,000.0	6,599.3	9,030.1	6,604.3	92.5	69.8	90.58	-1,528.4	2,361.9	1,822.3	1,660.2	162.08	11.243	
10,039.3	6,598.8	9,077.5	6,601.8	93.5	71.1	90.52	-1,529.4	2,409.3	1,823.1	1,658.7	164.45	11.087	
10,100.0	6,598.0	9,154.2	6,597.5	95.2	73.2	90.42	-1,530.6	2,485.9	1,824.1	1,655.9	168.20	10.845	
10,137.8	6,597.5	9,202.6	6,595.7	96.2	74.5	90.38	-1,531.0	2,534.2	1,824.3	1,653.8	170.55	10.697	
10,200.0	6,596.7	9,274.5	6,593.3	97.9	76.5	90.33	-1,531.1	2,606.0	1,824.5	1,650.3	174.22	10.472	
10,236.2	6,596.3	9,317.3	6,591.7	98.9	77.6	90.30	-1,531.1	2,648.9	1,824.4	1,648.0	176.38	10.343	
10,300.0	6,595.4	9,394.1	6,588.6	100.6	79.7	90.23	-1,530.5	2,725.6	1,823.9	1,643.7	180.23	10.120	
10,334.6	6,595.0	9,435.6	6,587.0	101.6	80.9	90.20	-1,529.9	2,767.1	1,823.4	1,641.1	182.32	10.001	
10,400.0	6,594.2	9,508.5	6,584.8	103.4	82.9	90.16	-1,528.6	2,839.9	1,822.3	1,636.2	186.11	9.791	
10,433.0	6,593.7	9,541.6	6,583.9	104.3	83.8	90.15	-1,528.0	2,872.9	1,821.6	1,633.7	187.92	9.694	
10,500.0	6,592.9	9,641.2	6,581.7	106.1	86.5	90.12	-1,525.5	2,972.5	1,820.0	1,627.6	192.49	9.455	
10,531.5	6,592.5	9,671.0	6,581.0	106.9	87.3	90.11	-1,524.3	3,002.3	1,818.8	1,624.6	194.17	9.367	
10,600.0	6,591.6	9,722.0	6,579.9	108.8	88.8	90.09	-1,522.4	3,053.2	1,816.4	1,618.9	197.45	9.199	
10,629.9	6,591.2	9,739.9	6,579.5	109.6	89.2	90.09	-1,522.0	3,071.1	1,815.7	1,616.9	198.77	9.135	
10,700.0	6,590.3	9,790.9	6,578.7	111.6	90.7	90.08	-1,521.4	3,122.1	1,814.7	1,612.6	202.10	8.980	
10,728.3	6,589.9	9,817.5	6,578.2	112.3	91.4	90.08	-1,521.1	3,148.7	1,814.5	1,610.9	203.61	8.912	
10,800.0	6,589.0	9,883.9	6,576.9	114.3	93.2	90.07	-1,520.6	3,215.1	1,814.0	1,606.5	207.41	8.746	
10,826.7	6,588.7	9,908.2	6,576.7	115.0	93.9	90.07	-1,520.5	3,239.4	1,813.8	1,605.0	208.82	8.686	
10,879.6	6,588.0	9,955.0	6,576.5	116.5	95.2	90.08	-1,520.4	3,286.2	1,813.7	1,602.1	211.57	8.572	
10,900.0	6,587.7	9,955.0	6,576.5	117.1	95.2	90.08	-1,520.4	3,286.2	1,813.8	1,601.6	212.13	8.550	
10,925.2	6,587.4	9,984.3	6,576.5	117.7	96.0	90.09	-1,520.5	3,315.5	1,813.8	1,600.2	213.64	8.490	
11,000.0	6,586.4	10,031.1	6,575.7	119.8	97.3	90.09	-1,521.2	3,362.3	1,815.0	1,598.0	216.99	8.364	
11,023.6	6,586.1	10,050.0	6,575.1	120.4	97.8	90.08	-1,521.7	3,381.2	1,815.6	1,597.4	218.17	8.322	
11,100.0	6,585.1	10,137.3	6,572.0	122.6	100.3	90.01	-1,523.9	3,468.3	1,817.5	1,594.8	222.69	8.162	
11,122.0	6,584.8	10,159.8	6,571.1	123.2	100.9	89.99	-1,524.3	3,490.9	1,818.0	1,594.0	223.93	8.119	
11,200.0	6,583.8	10,232.9	6,568.3	125.3	102.9	89.93	-1,525.8	3,563.9	1,819.6	1,591.5	228.10	7.977	
11,220.4	6,583.6	10,275.3	6,566.8	125.9	104.1	89.91	-1,526.6	3,606.3	1,820.0	1,590.1	229.84	7.918	
11,300.0	6,582.5	10,404.5	6,563.7	128.1	107.7	89.86	-1,525.6	3,735.4	1,819.2	1,583.6	235.62	7.721	
11,318.9	6,582.3	10,427.2	6,563.0	128.6	108.3	89.85	-1,525.2	3,758.1	1,818.9	1,582.1	236.77	7.682	
11,400.0	6,581.2	10,548.0	6,557.8	130.8	111.6	89.73	-1,521.3	3,878.7	1,816.1	1,573.8	242.35	7.494	
11,417.3	6,581.0	10,564.1	6,557.0	131.3	112.1	89.71	-1,520.6	3,894.8	1,815.4	1,572.1	243.28	7.462	
11,500.0	6,580.0	10,642.9	6,552.2	133.6	114.2	89.59	-1,517.6	3,973.4	1,812.2	1,564.5	247.73	7.315	
11,515.7	6,579.7	10,658.5	6,551.2	134.0	114.7	89.57	-1,517.0	3,988.9	1,811.6	1,563.0	248.60	7.287	
11,600.0	6,578.7	10,742.4	6,544.5	136.3	117.0	89.39	-1,513.8	4,072.5	1,808.4	1,555.2	253.23	7.141	
11,614.1	6,578.5	10,756.5	6,543.4	136.7	117.4	89.36	-1,513.2	4,086.5	1,807.9	1,553.9	254.01	7.117	
11,683.6	6,577.6	10,758.0	6,543.3	138.7	117.4	89.36	-1,513.2	4,088.0	1,806.6	1,550.6	255.97	7.058	
11,700.0	6,577.4	10,758.0	6,543.3	139.1	117.4	89.36	-1,513.2	4,088.0	1,806.6	1,550.2	256.43	7.045	
11,712.6	6,577.2	10,758.0	6,543.3	139.5	117.4	89.36	-1,513.2	4,088.0	1,806.8	1,550.0	256.78	7.037	
11,800.0	6,576.1	10,758.0	6,543.3	141.9	117.4	89.36	-1,513.2	4,088.0	1,810.3	1,551.1	259.19	6.984	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST HZ SEYLOR #B10-64-1HN - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 290-MWD												<b>Offset Well Error:</b>	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	6,575.9	10,758.0	6,543.3	142.2	117.4	89.36	-1,513.2	4,088.0	1,811.1	1,551.6	259.50	6.979	
11,882.7	6,575.0	10,758.0	6,543.3	144.2	117.4	89.36	-1,513.2	4,088.0	1,817.5	1,556.0	261.48	6.951	
11,883.5	6,575.0	10,758.0	6,543.3	144.2	117.4	89.36	-1,513.2	4,088.0	1,817.6	1,556.1	261.50	6.951 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	172.95	-956.3	118.3	963.7				
98.4	98.4	85.4	85.4	0.1	0.1	172.95	-956.3	118.3	963.6	963.4	0.17	5,532.940	
100.0	100.0	87.0	87.0	0.1	0.1	172.95	-956.3	118.3	963.6	963.4	0.18	5,432.775	
196.8	196.8	183.8	183.8	0.3	0.2	172.95	-956.3	118.3	963.6	963.1	0.48	1,992.308	
200.0	200.0	187.0	187.0	0.3	0.2	172.95	-956.3	118.3	963.6	963.1	0.49	1,952.100	
295.3	295.3	282.3	282.3	0.5	0.3	172.95	-956.3	118.3	963.6	962.8	0.79	1,212.177	
300.0	300.0	287.0	287.0	0.5	0.3	172.95	-956.3	118.3	963.6	962.8	0.81	1,189.811	
393.7	393.7	380.7	380.7	0.8	0.3	172.95	-956.3	118.3	963.6	962.5	1.11	871.085	
400.0	400.0	387.0	387.0	0.8	0.4	172.95	-956.3	118.3	963.6	962.5	1.13	855.673	
492.1	492.1	479.1	479.1	1.0	0.4	172.95	-956.3	118.3	963.6	962.2	1.42	679.798	
500.0	500.0	487.0	487.0	1.0	0.4	172.95	-956.3	118.3	963.6	962.2	1.44	668.060	
590.5	590.5	577.5	577.5	1.2	0.5	172.95	-956.3	118.3	963.6	961.9	1.73	557.396	
600.0	600.0	587.0	587.0	1.2	0.5	172.95	-956.3	118.3	963.6	961.8	1.76	547.924	
689.0	689.0	682.7	682.7	1.4	0.7	172.91	-955.8	118.8	963.2	961.0	2.15	446.997	
700.0	700.0	693.8	693.8	1.4	0.8	172.91	-955.7	118.9	963.1	960.9	2.20	437.102	
787.4	787.4	784.1	784.1	1.6	1.0	172.84	-954.9	120.0	962.4	959.8	2.59	370.885	
800.0	800.0	797.5	797.5	1.7	1.0	172.82	-954.7	120.2	962.3	959.6	2.65	362.804	
885.8	885.8	883.8	883.7	1.9	1.2	172.76	-953.5	121.2	961.3	958.2	3.02	317.821	
900.0	900.0	897.4	897.4	1.9	1.2	172.75	-953.3	121.3	961.1	958.0	3.08	311.662	
984.2	984.2	995.6	995.6	2.1	1.4	172.72	-951.8	121.6	959.9	956.4	3.47	276.672	
1,000.0	1,000.0	1,016.1	1,016.0	2.1	1.4	172.74	-951.3	121.3	959.4	955.9	3.55	270.599	
1,082.7	1,082.7	1,115.0	1,114.8	2.3	1.6	172.91	-947.8	117.9	956.2	952.3	3.95	242.295	
1,100.0	1,100.0	1,136.3	1,136.1	2.3	1.7	172.97	-946.9	116.8	955.3	951.3	4.03	236.814	
1,181.1	1,181.1	1,235.4	1,234.8	2.5	1.9	173.28	-941.5	110.9	950.3	945.9	4.45	213.723	
1,200.0	1,200.0	1,256.9	1,256.2	2.6	2.0	173.36	-940.1	109.4	949.0	944.5	4.54	208.977	
1,279.5	1,279.5	1,344.1	1,342.9	2.7	2.2	173.74	-934.1	102.4	942.8	937.9	4.94	191.026	
1,300.0	1,300.0	1,365.3	1,364.1	2.8	2.2	173.85	-932.6	100.4	941.1	936.1	5.04	186.901	
1,377.9	1,377.9	1,434.8	1,432.9	3.0	2.4	174.29	-927.8	92.8	934.9	929.5	5.39	173.486	
1,400.0	1,400.0	1,451.4	1,449.4	3.0	2.5	174.42	-926.8	90.6	933.3	927.9	5.48	170.270	
1,476.4	1,476.4	1,499.0	1,496.4	3.2	2.6	-110.13	-924.8	83.4	929.4	923.7	5.74	161.956	
1,500.0	1,500.0	1,522.9	1,519.9	3.2	2.7	-109.95	-924.1	79.5	928.7	922.8	5.85	158.625	
1,547.3	1,547.2	1,553.7	1,550.3	3.3	2.8	-109.72	-923.7	74.4	928.1	922.1	6.04	153.732 CC, ES	
1,574.8	1,574.7	1,571.7	1,568.0	3.4	2.8	-109.60	-923.8	71.5	928.3	922.2	6.14	151.089	
1,600.0	1,599.8	1,594.0	1,590.1	3.4	2.9	-109.45	-924.1	67.9	928.9	922.6	6.26	148.413	
1,673.2	1,672.8	1,649.6	1,644.9	3.6	3.0	-109.12	-925.4	59.1	931.6	925.0	6.57	141.744	
1,700.0	1,699.5	1,672.7	1,667.8	3.7	3.1	-109.01	-926.0	55.5	932.9	926.2	6.69	139.351	
1,771.6	1,770.6	1,732.9	1,727.3	3.8	3.2	-108.78	-928.3	46.7	937.5	930.5	7.03	133.371	
1,800.0	1,798.7	1,756.5	1,750.6	3.9	3.3	-108.72	-929.3	43.5	939.8	932.6	7.16	131.234	
1,870.1	1,868.0	1,814.4	1,807.9	4.1	3.5	-108.63	-932.4	35.9	946.3	938.8	7.50	126.156	
1,900.0	1,897.5	1,839.0	1,832.3	4.2	3.5	-108.62	-933.9	32.9	949.5	941.8	7.64	124.197	
1,968.5	1,964.8	1,901.5	1,894.2	4.4	3.7	-108.68	-938.2	25.8	957.8	949.7	8.01	119.505	
2,000.0	1,995.6	1,936.5	1,928.9	4.5	3.8	-108.76	-940.6	21.8	961.7	953.5	8.20	117.256	
2,066.9	2,060.9	2,012.8	2,004.6	4.7	4.0	-108.99	-945.2	12.7	970.0	961.4	8.64	112.314	
2,100.0	2,093.1	2,051.4	2,042.8	4.8	4.1	-109.14	-947.3	8.0	974.0	965.2	8.85	109.997	
2,165.3	2,156.3	2,130.2	2,121.0	5.1	4.3	-109.52	-950.6	-1.7	981.7	972.4	9.32	105.288	
2,200.0	2,189.6	2,171.7	2,162.1	5.2	4.4	-109.77	-951.9	-6.7	985.6	976.0	9.57	102.985	
2,263.8	2,250.7	2,245.3	2,235.2	5.5	4.6	-110.30	-953.4	-15.2	992.7	982.6	10.04	98.834	
2,280.0	2,266.2	2,263.2	2,253.0	5.6	4.7	-110.44	-953.7	-17.3	994.5	984.3	10.16	97.856	
2,300.0	2,285.3	2,284.2	2,273.9	5.7	4.8	-110.65	-953.9	-19.7	996.7	986.4	10.31	96.639	
2,362.2	2,344.6	2,350.0	2,339.2	6.0	4.9	-111.26	-954.6	-27.8	1,003.4	992.6	10.79	92.969	
2,400.0	2,380.6	2,395.4	2,384.2	6.2	5.1	-111.66	-954.9	-33.8	1,007.3	996.2	11.11	90.678	
2,460.6	2,438.4	2,463.9	2,452.0	6.5	5.3	-112.22	-954.6	-43.5	1,013.0	1,001.4	11.62	87.191	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,475.9	2,502.6	2,490.2	6.7	5.4	-112.51	-954.4	-49.4	1,016.6	1,004.7	11.94	85.179	
2,559.0	2,532.2	2,562.2	2,549.0	7.0	5.6	-112.93	-954.2	-58.9	1,022.1	1,009.7	12.43	82.218	
2,600.0	2,571.2	2,605.5	2,591.7	7.2	5.8	-113.20	-954.0	-66.4	1,025.9	1,013.1	12.79	80.217	
2,657.5	2,626.0	2,663.8	2,649.0	7.5	6.0	-113.52	-953.7	-77.1	1,031.0	1,017.7	13.29	77.570	
2,700.0	2,666.6	2,705.2	2,689.7	7.8	6.2	-113.75	-953.5	-84.8	1,034.8	1,021.2	13.66	75.767	
2,755.9	2,719.8	2,756.8	2,740.4	8.1	6.4	-114.02	-953.3	-94.3	1,040.0	1,025.8	14.13	73.580	
2,800.0	2,761.9	2,795.8	2,778.7	8.3	6.5	-114.23	-953.4	-101.5	1,044.3	1,029.8	14.50	72.013	
2,854.3	2,813.7	2,844.6	2,826.7	8.7	6.7	-114.49	-953.7	-110.5	1,049.8	1,034.9	14.96	70.174	
2,900.0	2,857.2	2,886.7	2,868.1	8.9	6.8	-114.71	-954.1	-118.1	1,054.7	1,039.3	15.35	68.717	
2,952.7	2,907.5	2,934.1	2,914.7	9.2	7.0	-114.97	-954.7	-126.6	1,060.5	1,044.7	15.80	67.141	
3,000.0	2,952.5	2,974.4	2,954.3	9.5	7.1	-115.19	-955.4	-133.6	1,066.0	1,049.8	16.19	65.861	
3,051.2	3,001.3	3,013.0	2,992.4	9.8	7.3	-115.41	-956.3	-140.2	1,072.3	1,055.7	16.59	64.622	
3,100.0	3,047.8	3,060.0	3,038.7	10.1	7.4	-115.68	-957.6	-148.0	1,078.6	1,061.6	17.01	63.407	
3,149.6	3,095.1	3,108.0	3,086.1	10.4	7.6	-115.97	-959.2	-155.6	1,085.3	1,067.9	17.44	62.239	
3,200.0	3,143.2	3,155.6	3,133.1	10.7	7.7	-116.27	-960.7	-162.9	1,092.3	1,074.4	17.86	61.163	
3,248.0	3,188.9	3,207.1	3,184.0	11.0	7.9	-116.60	-962.2	-170.4	1,098.7	1,080.5	18.28	60.116	
3,300.0	3,238.5	3,259.1	3,235.5	11.3	8.1	-116.96	-963.4	-177.7	1,105.7	1,087.0	18.71	59.100	
3,346.4	3,282.8	3,307.3	3,283.3	11.6	8.2	-117.31	-964.4	-184.1	1,111.8	1,092.7	19.10	58.217	
3,400.0	3,333.8	3,373.7	3,349.1	11.9	8.4	-117.78	-965.3	-193.0	1,118.6	1,099.0	19.57	57.145	
3,444.9	3,376.6	3,425.9	3,400.8	12.2	8.6	-118.15	-965.4	-200.1	1,123.8	1,103.8	19.96	56.293	
3,500.0	3,429.1	3,487.0	3,461.4	12.6	8.8	-118.59	-965.1	-208.1	1,129.9	1,109.5	20.43	55.308	
3,543.3	3,470.4	3,527.9	3,501.9	12.8	8.9	-118.89	-964.8	-213.4	1,134.7	1,113.9	20.78	54.615	
3,600.0	3,524.4	3,582.0	3,555.6	13.2	9.1	-119.28	-964.6	-220.5	1,141.1	1,119.9	21.23	53.752	
3,641.7	3,564.2	3,621.2	3,594.4	13.4	9.2	-119.55	-964.5	-225.8	1,145.9	1,124.3	21.57	53.136	
3,700.0	3,619.8	3,678.1	3,650.7	13.8	9.4	-119.93	-964.4	-233.6	1,152.7	1,130.6	22.04	52.299	
3,740.1	3,658.0	3,717.0	3,689.3	14.0	9.5	-120.18	-964.5	-239.1	1,157.4	1,135.0	22.37	51.741	
3,800.0	3,715.1	3,775.0	3,746.6	14.4	9.7	-120.55	-964.5	-247.3	1,164.5	1,141.7	22.86	50.949	
3,838.6	3,751.8	3,810.8	3,782.1	14.7	9.8	-120.77	-964.6	-252.3	1,169.2	1,146.0	23.16	50.475	
3,900.0	3,810.4	3,868.7	3,839.5	15.0	10.0	-121.15	-964.8	-260.1	1,176.8	1,153.2	23.65	49.756	
3,937.0	3,845.7	3,920.5	3,890.9	15.3	10.1	-121.49	-964.6	-266.9	1,181.2	1,157.3	23.98	49.255	
4,000.0	3,905.7	3,990.2	3,960.0	15.7	10.4	-121.96	-963.4	-276.1	1,188.0	1,163.5	24.49	48.498	
4,035.4	3,939.5	4,020.5	3,989.9	15.9	10.5	-122.17	-962.9	-280.1	1,191.8	1,167.1	24.76	48.133	
4,100.0	4,001.0	4,083.2	4,052.2	16.3	10.7	-122.59	-962.2	-288.1	1,199.3	1,174.0	25.26	47.472	
4,133.8	4,033.3	4,123.4	4,092.0	16.5	10.8	-122.86	-961.5	-293.3	1,203.0	1,177.5	25.54	47.104	
4,200.0	4,096.3	4,192.5	4,160.5	16.9	11.0	-123.33	-959.9	-302.1	1,210.0	1,184.0	26.05	46.448	
4,232.3	4,127.1	4,223.6	4,191.4	17.1	11.1	-123.55	-959.1	-305.8	1,213.5	1,187.2	26.29	46.152	
4,300.0	4,191.7	4,290.5	4,257.8	17.6	11.3	-124.02	-957.4	-313.9	1,220.8	1,194.0	26.80	45.551	
4,330.7	4,220.9	4,321.3	4,288.3	17.8	11.4	-124.23	-956.7	-317.8	1,224.2	1,197.1	27.03	45.282	
4,400.0	4,287.0	4,383.9	4,350.3	18.2	11.6	-124.62	-955.4	-326.2	1,231.8	1,204.3	27.56	44.704	
4,429.1	4,314.7	4,409.1	4,375.3	18.4	11.7	-124.76	-955.1	-329.8	1,235.2	1,207.4	27.77	44.472	
4,500.0	4,382.3	4,468.6	4,434.2	18.8	11.8	-125.09	-954.8	-338.3	1,243.8	1,215.5	28.30	43.946	
4,527.5	4,408.6	4,491.1	4,456.5	19.0	11.9	-125.22	-954.7	-341.4	1,247.3	1,218.8	28.50	43.759	
4,600.0	4,477.6	4,555.8	4,520.6	19.5	12.1	-125.61	-954.7	-349.3	1,257.1	1,228.0	29.04	43.293	
4,626.0	4,502.4	4,582.9	4,547.5	19.6	12.2	-125.78	-954.7	-352.6	1,260.6	1,231.4	29.23	43.125	
4,700.0	4,572.9	4,660.2	4,624.3	20.1	12.4	-126.26	-954.4	-362.0	1,270.5	1,240.7	29.79	42.654	
4,724.4	4,596.2	4,685.7	4,649.6	20.3	12.5	-126.41	-954.3	-365.2	1,273.8	1,243.8	29.97	42.499	
4,800.0	4,668.3	4,757.7	4,721.0	20.7	12.7	-126.82	-954.1	-374.7	1,283.7	1,253.2	30.54	42.042	
4,822.8	4,690.0	4,777.9	4,740.9	20.9	12.8	-126.93	-954.2	-377.4	1,286.8	1,256.1	30.70	41.912	
4,900.0	4,763.6	4,858.3	4,820.6	21.4	13.1	-127.33	-954.6	-388.7	1,297.5	1,266.2	31.31	41.440	
4,921.2	4,783.8	4,884.4	4,846.4	21.5	13.2	-127.44	-954.8	-392.6	1,300.3	1,268.8	31.49	41.292	
5,000.0	4,858.9	4,965.1	4,926.1	22.0	13.4	-127.77	-955.0	-405.6	1,310.4	1,278.2	32.13	40.789	
5,019.7	4,877.7	4,983.9	4,944.6	22.1	13.5	-127.85	-955.1	-408.6	1,312.9	1,280.6	32.28	40.672	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	
5,100.0	4,954.2	5,049.5	5,009.4	22.6	13.7	-128.14	-955.4	-418.6	1,323.6	1,290.7	32.87	40.268	
5,118.1	4,971.5	5,063.3	5,023.1	22.8	13.8	-128.20	-955.5	-420.6	1,326.2	1,293.2	33.00	40.188	
5,171.8	5,022.7	5,099.0	5,058.4	23.1	13.9	-128.37	-955.9	-425.5	1,334.1	1,300.7	33.37	39.981	
5,200.0	5,049.6	5,127.5	5,086.7	23.3	14.0	-128.58	-956.4	-429.1	1,338.4	1,304.8	33.55	39.887	
5,216.5	5,065.4	5,140.9	5,100.1	23.3	14.0	-128.68	-956.6	-430.7	1,340.8	1,307.2	33.64	39.855	
5,300.0	5,145.7	5,212.8	5,171.4	23.7	14.2	-129.19	-957.9	-438.8	1,352.9	1,318.8	34.09	39.685	
5,314.9	5,160.1	5,228.3	5,186.9	23.8	14.2	-129.29	-958.1	-440.4	1,354.9	1,320.8	34.17	39.655	
5,400.0	5,242.7	5,319.4	5,277.6	24.1	14.5	-129.85	-958.8	-448.6	1,365.5	1,330.9	34.61	39.458	
5,413.4	5,255.7	5,334.7	5,292.8	24.2	14.5	-129.93	-958.8	-449.9	1,366.9	1,332.2	34.67	39.426	
5,500.0	5,340.5	5,418.9	5,376.7	24.5	14.7	-130.34	-958.7	-457.2	1,375.2	1,340.1	35.07	39.210	
5,511.8	5,352.1	5,428.5	5,386.2	24.5	14.8	-130.39	-958.7	-458.0	1,376.2	1,341.1	35.12	39.187	
5,600.0	5,439.0	5,502.9	5,460.4	24.8	14.9	-130.70	-959.0	-463.4	1,383.7	1,348.2	35.48	39.001	
5,610.2	5,449.1	5,512.2	5,469.8	24.8	15.0	-130.73	-959.0	-464.0	1,384.4	1,348.9	35.52	38.981	
5,700.0	5,538.0	5,595.1	5,552.5	25.1	15.1	-131.00	-959.4	-469.0	1,390.6	1,354.8	35.85	38.784	
5,708.6	5,546.6	5,603.2	5,560.6	25.1	15.2	-131.02	-959.4	-469.4	1,391.1	1,355.2	35.88	38.767	
5,800.0	5,637.4	5,690.1	5,647.4	25.3	15.3	-131.22	-959.6	-473.2	1,395.8	1,359.6	36.19	38.565	
5,807.1	5,644.5	5,697.1	5,654.4	25.3	15.4	-131.24	-959.6	-473.4	1,396.1	1,359.8	36.21	38.551	
5,900.0	5,737.2	5,791.1	5,748.3	25.5	15.5	-131.40	-959.0	-475.8	1,398.8	1,362.3	36.49	38.335	
5,905.5	5,742.6	5,796.8	5,754.0	25.5	15.5	-131.41	-959.0	-475.9	1,398.9	1,362.4	36.50	38.323	
6,000.0	5,837.1	5,878.3	5,835.5	25.6	15.7	-131.49	-957.9	-476.9	1,399.5	1,362.7	36.72	38.107	
6,003.9	5,841.0	5,880.6	5,837.8	25.6	15.7	-131.49	-957.9	-476.9	1,399.5	1,362.8	36.73	38.101	
6,051.8	5,888.9	5,908.4	5,865.7	25.7	15.7	153.38	-958.1	-477.2	1,399.8	1,366.6	33.16	42.217	
6,081.8	5,918.9	5,925.8	5,883.1	25.7	15.8	153.39	-958.4	-477.4	1,400.1	1,366.9	33.22	42.143	
6,100.0	5,937.1	5,952.0	5,909.2	25.7	15.8	63.42	-959.2	-477.6	1,400.5	1,363.6	36.93	37.921	
6,102.3	5,939.4	5,952.0	5,909.2	25.7	15.8	63.42	-959.2	-477.6	1,400.5	1,363.6	36.93	37.922	
6,108.6	5,945.6	5,952.0	5,909.2	25.7	15.8	63.42	-959.2	-477.6	1,400.5	1,363.6	36.93	37.926	
6,150.0	5,987.0	5,952.0	5,909.2	25.7	15.8	63.41	-959.2	-477.6	1,400.6	1,363.7	36.89	37.962	
6,200.0	6,036.5	5,983.5	5,940.7	25.7	15.8	63.62	-960.9	-477.9	1,400.1	1,363.1	36.93	37.911	
6,200.8	6,037.3	5,983.9	5,941.1	25.7	15.8	63.63	-960.9	-477.9	1,400.0	1,363.1	36.93	37.911	
6,250.0	6,085.5	6,004.7	5,961.8	25.7	15.9	63.88	-962.6	-478.1	1,399.1	1,362.2	36.93	37.890	
6,299.2	6,133.0	6,046.0	6,002.8	25.6	16.0	64.52	-967.4	-478.6	1,398.1	1,361.0	37.03	37.760	
6,300.0	6,133.7	6,046.0	6,002.8	25.6	16.0	64.52	-967.4	-478.6	1,398.0	1,361.0	37.02	37.761	
6,350.0	6,180.9	6,046.0	6,002.8	25.5	16.0	64.68	-967.4	-478.6	1,395.8	1,358.9	36.91	37.820	
6,397.6	6,224.6	6,046.0	6,002.8	25.4	16.0	64.81	-967.4	-478.6	1,394.0	1,357.2	36.78	37.903	
6,400.0	6,226.7	6,046.0	6,002.8	25.4	16.0	64.81	-967.4	-478.6	1,393.9	1,357.2	36.77	37.908	
6,450.0	6,271.1	6,087.5	6,043.8	25.2	16.0	65.82	-973.9	-479.4	1,391.0	1,354.1	36.94	37.656	
6,496.0	6,310.4	6,105.4	6,061.4	25.1	16.1	66.43	-977.2	-479.9	1,388.5	1,351.5	36.98	37.551	
6,500.0	6,313.7	6,106.9	6,062.8	25.1	16.1	66.48	-977.5	-480.0	1,388.2	1,351.3	36.98	37.541	
6,550.0	6,354.4	6,141.0	6,096.2	25.0	16.1	67.60	-984.7	-481.2	1,385.5	1,348.3	37.18	37.267	
6,594.5	6,388.9	6,141.0	6,096.2	24.9	16.1	67.82	-984.7	-481.2	1,382.6	1,345.5	37.11	37.259	
6,600.0	6,393.0	6,141.0	6,096.2	24.9	16.1	67.84	-984.7	-481.2	1,382.3	1,345.2	37.10	37.259	
6,650.0	6,429.3	6,141.0	6,096.2	24.8	16.1	68.04	-984.7	-481.2	1,379.6	1,342.6	37.05	37.241	
6,692.9	6,458.5	6,141.0	6,096.2	24.7	16.1	68.18	-984.7	-481.2	1,377.7	1,340.7	37.02	37.211	
6,700.0	6,463.1	6,141.0	6,096.2	24.7	16.1	68.20	-984.7	-481.2	1,377.4	1,340.4	37.02	37.207	
6,750.0	6,494.3	6,173.9	6,128.0	24.7	16.2	69.48	-993.0	-482.6	1,374.6	1,337.2	37.40	36.750	
6,791.3	6,517.9	6,181.2	6,134.9	24.7	16.2	69.85	-995.0	-482.9	1,373.1	1,335.5	37.55	36.568	
6,800.0	6,522.6	6,182.6	6,136.3	24.7	16.2	69.93	-995.4	-483.0	1,372.8	1,335.2	37.58	36.532	
6,850.0	6,548.0	6,190.1	6,143.5	24.7	16.2	70.31	-997.6	-483.3	1,371.4	1,333.7	37.80	36.286	
6,889.7	6,566.0	6,195.3	6,148.4	24.8	16.3	70.56	-999.2	-483.6	1,370.8	1,332.7	38.01	36.066	
6,900.0	6,570.4	6,196.6	6,149.6	24.9	16.3	70.62	-999.6	-483.6	1,370.6	1,332.6	38.06	36.012	
6,943.2	6,587.1	6,201.2	6,154.0	25.0	16.3	70.82	-1,001.0	-483.9	1,370.4	1,332.1	38.33	35.751	
6,950.0	6,589.5	6,201.9	6,154.7	25.1	16.3	70.85	-1,001.3	-483.9	1,370.4	1,332.0	38.37	35.712	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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		
6,988.2	6,602.0	6,236.0	6,186.7	25.3	16.4	72.21	-1,012.8	-485.7	1,371.7	1,332.7	39.01	35.165		
7,000.0	6,605.4	6,236.0	6,186.7	25.3	16.4	72.21	-1,012.8	-485.7	1,371.8	1,332.7	39.08	35.101		
7,050.0	6,618.0	6,236.0	6,186.7	25.6	16.4	72.14	-1,012.8	-485.7	1,372.7	1,333.2	39.45	34.791		
7,086.6	6,625.0	6,236.0	6,186.7	25.9	16.4	72.05	-1,012.8	-485.7	1,373.8	1,334.0	39.77	34.544		
7,100.0	6,627.1	6,236.0	6,186.7	26.0	16.4	72.02	-1,012.8	-485.7	1,374.3	1,334.4	39.88	34.458		
7,150.0	6,632.8	6,236.0	6,186.7	26.5	16.4	71.84	-1,012.8	-485.7	1,376.6	1,336.3	40.36	34.110		
7,185.0	6,634.7	6,236.0	6,186.7	26.8	16.4	71.68	-1,012.8	-485.7	1,378.7	1,338.0	40.72	33.857		
7,200.0	6,635.0	6,236.0	6,186.7	27.0	16.4	71.60	-1,012.8	-485.7	1,379.7	1,338.8	40.88	33.753		
7,215.9	6,635.0	6,236.0	6,186.7	27.1	16.4	71.52	-1,012.8	-485.7	1,380.9	1,339.8	41.05	33.639		
7,283.4	6,634.1	6,236.0	6,186.7	27.9	16.4	71.52	-1,012.8	-485.7	1,387.4	1,345.6	41.84	33.159		
7,300.0	6,633.9	6,236.0	6,186.7	28.1	16.4	71.52	-1,012.8	-485.7	1,389.5	1,347.5	42.04	33.056		
7,381.9	6,632.9	6,236.0	6,186.7	29.3	16.4	71.52	-1,012.8	-485.7	1,402.8	1,359.7	43.16	32.506		
7,400.0	6,632.6	6,236.0	6,186.7	29.5	16.4	71.52	-1,012.8	-485.7	1,406.4	1,363.0	43.40	32.403		
7,480.3	6,631.6	6,236.0	6,186.7	30.8	16.4	71.52	-1,012.8	-485.7	1,424.8	1,380.2	44.64	31.915		
7,500.0	6,631.4	6,236.0	6,186.7	31.1	16.4	71.52	-1,012.8	-485.7	1,430.0	1,385.1	44.95	31.814		
7,578.7	6,630.4	6,236.0	6,186.7	32.5	16.4	71.52	-1,012.8	-485.7	1,453.2	1,406.9	46.29	31.395		
7,600.0	6,630.1	6,236.0	6,186.7	32.9	16.4	71.52	-1,012.8	-485.7	1,460.1	1,413.5	46.65	31.300		
7,677.1	6,629.1	6,202.4	6,155.1	34.3	16.3	70.12	-1,001.4	-483.9	1,486.3	1,438.7	47.62	31.211		
7,700.0	6,628.8	6,201.9	6,154.7	34.8	16.3	70.10	-1,001.3	-483.9	1,495.1	1,447.1	48.03	31.127		
7,775.6	6,627.8	6,200.4	6,153.3	36.3	16.3	70.04	-1,000.8	-483.8	1,526.2	1,476.7	49.47	30.853		
7,800.0	6,627.5	6,199.9	6,152.8	36.8	16.3	70.02	-1,000.6	-483.8	1,536.9	1,486.9	49.93	30.781		
7,874.0	6,626.6	6,198.5	6,151.4	38.4	16.3	69.96	-1,000.2	-483.7	1,571.1	1,519.7	51.40	30.567		
7,900.0	6,626.3	6,198.0	6,151.0	38.9	16.3	69.94	-1,000.0	-483.7	1,583.8	1,531.9	51.92	30.508		
7,972.4	6,625.3	6,196.6	6,149.6	40.5	16.3	69.88	-999.6	-483.6	1,620.8	1,567.4	53.41	30.348		
8,000.0	6,625.0	6,196.0	6,149.1	41.1	16.3	69.86	-999.4	-483.6	1,635.5	1,581.6	53.98	30.301		
8,070.8	6,624.1	6,194.7	6,147.8	42.7	16.3	69.80	-999.0	-483.5	1,674.8	1,619.4	55.48	30.186		
8,100.0	6,623.7	6,194.1	6,147.3	43.4	16.3	69.78	-998.9	-483.5	1,691.6	1,635.5	56.10	30.152		
8,169.3	6,622.8	6,192.8	6,146.1	45.0	16.3	69.72	-998.5	-483.4	1,732.8	1,675.1	57.61	30.076		
8,200.0	6,622.4	6,192.2	6,145.5	45.7	16.3	69.70	-998.3	-483.4	1,751.6	1,693.3	58.28	30.054		
8,267.7	6,621.6	6,191.0	6,144.3	47.4	16.2	69.65	-997.9	-483.4	1,794.2	1,734.4	59.79	30.010		
8,300.0	6,621.1	6,190.4	6,143.7	48.1	16.2	69.62	-997.7	-483.3	1,815.1	1,754.6	60.50	29.999		
8,366.1	6,620.3	6,189.1	6,142.5	49.7	16.2	69.57	-997.3	-483.3	1,858.8	1,796.8	62.00	29.980		
8,400.0	6,619.9	6,188.5	6,141.9	50.6	16.2	69.54	-997.2	-483.2	1,881.7	1,819.0	62.77	29.980 SF		
8,464.5	6,619.0	6,187.3	6,140.8	52.2	16.2	69.49	-996.8	-483.2	1,926.3	1,862.0	64.25	29.982		
8,500.0	6,618.6	6,186.7	6,140.2	53.0	16.2	69.47	-996.6	-483.2	1,951.2	1,886.2	65.06	29.990		
8,563.0	6,617.8	6,185.5	6,139.1	54.6	16.2	69.42	-996.3	-483.1	1,996.3	1,929.8	66.53	30.009		
8,600.0	6,617.3	6,184.8	6,138.4	55.5	16.2	69.39	-996.1	-483.1	2,023.3	1,955.9	67.39	30.026		
8,661.4	6,616.5	6,183.7	6,137.4	57.1	16.2	69.34	-995.8	-483.0	2,068.7	1,999.9	68.83	30.056		
8,700.0	6,616.0	6,183.0	6,136.7	58.1	16.2	69.32	-995.6	-483.0	2,097.6	2,027.9	69.73	30.081		
8,759.8	6,615.2	6,181.9	6,135.7	59.6	16.2	69.27	-995.3	-482.9	2,143.1	2,072.0	71.15	30.121		
8,800.0	6,614.7	6,181.2	6,135.0	60.6	16.2	69.24	-995.1	-482.9	2,174.0	2,101.9	72.10	30.152		
8,858.2	6,614.0	6,180.2	6,134.0	62.1	16.2	69.20	-994.8	-482.9	2,219.4	2,145.9	73.49	30.199		
8,900.0	6,613.4	6,179.5	6,133.3	63.2	16.2	69.17	-994.5	-482.8	2,252.3	2,177.8	74.49	30.237		
8,956.7	6,612.7	6,178.5	6,132.3	64.7	16.2	69.13	-994.3	-482.8	2,297.4	2,221.5	75.85	30.288		
9,000.0	6,612.2	6,177.7	6,131.6	65.8	16.2	69.09	-994.1	-482.7	2,332.2	2,255.3	76.89	30.331		
9,055.1	6,611.5	6,176.7	6,130.7	67.3	16.2	69.05	-993.8	-482.7	2,376.9	2,298.6	78.22	30.386		
9,100.0	6,610.9	6,176.0	6,130.0	68.4	16.2	69.02	-993.6	-482.7	2,413.6	2,334.3	79.31	30.433		
9,153.5	6,610.2	6,175.0	6,129.1	69.8	16.2	68.98	-993.3	-482.6	2,457.7	2,377.1	80.61	30.490		
9,200.0	6,609.6	6,141.0	6,096.2	71.1	16.1	67.58	-984.7	-481.2	2,497.1	2,416.1	80.97	30.841		
9,251.9	6,608.9	6,141.0	6,096.2	72.4	16.1	67.58	-984.7	-481.2	2,540.5	2,458.3	82.24	30.890		
9,300.0	6,608.3	6,141.0	6,096.2	73.7	16.1	67.58	-984.7	-481.2	2,580.9	2,497.5	83.42	30.938		
9,350.4	6,607.7	6,141.0	6,096.2	75.0	16.1	67.58	-984.7	-481.2	2,623.6	2,539.0	84.67	30.988		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 597-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
9,400.0	6,607.0	6,141.0	6,096.2	76.4	16.1	67.58	-984.7	-481.2	2,665.9	2,580.0	85.89	31.038	
9,448.8	6,606.4	6,141.0	6,096.2	77.7	16.1	67.58	-984.7	-481.2	2,707.8	2,620.7	87.10	31.088	
9,500.0	6,605.7	6,141.0	6,096.2	79.0	16.1	67.58	-984.7	-481.2	2,751.9	2,663.6	88.37	31.141	
9,547.2	6,605.1	6,141.0	6,096.2	80.3	16.1	67.58	-984.7	-481.2	2,792.9	2,703.3	89.54	31.190	
9,600.0	6,604.5	6,141.0	6,096.2	81.7	16.1	67.58	-984.7	-481.2	2,838.8	2,748.0	90.86	31.245	
9,645.6	6,603.9	6,141.0	6,096.2	82.9	16.1	67.58	-984.7	-481.2	2,878.8	2,786.8	91.99	31.293	
9,700.0	6,603.2	6,141.0	6,096.2	84.4	16.1	67.58	-984.7	-481.2	2,926.6	2,833.2	93.35	31.350	
9,744.1	6,602.6	6,141.0	6,096.2	85.6	16.1	67.58	-984.7	-481.2	2,965.5	2,871.0	94.45	31.396	
9,800.0	6,601.9	6,141.0	6,096.2	87.1	16.1	67.58	-984.7	-481.2	3,015.1	2,919.2	95.85	31.455	
9,842.5	6,601.3	6,141.0	6,096.2	88.2	16.1	67.58	-984.7	-481.2	3,052.9	2,956.0	96.92	31.500	
9,900.0	6,600.6	6,141.0	6,096.2	89.8	16.1	67.58	-984.7	-481.2	3,104.3	3,005.9	98.36	31.560	
9,940.9	6,600.1	6,141.0	6,096.2	90.9	16.1	67.58	-984.7	-481.2	3,141.0	3,041.6	99.39	31.602	
10,000.0	6,599.3	6,141.0	6,096.2	92.5	16.1	67.58	-984.7	-481.2	3,194.1	3,093.3	100.88	31.664	
10,039.3	6,598.8	6,141.0	6,096.2	93.5	16.1	67.58	-984.7	-481.2	3,229.7	3,127.8	101.87	31.704	
10,100.0	6,598.0	6,141.0	6,096.2	95.2	16.1	67.58	-984.7	-481.2	3,284.6	3,181.2	103.40	31.767	
10,137.8	6,597.5	6,141.0	6,096.2	96.2	16.1	67.58	-984.7	-481.2	3,318.9	3,214.5	104.35	31.805	
10,200.0	6,596.7	6,141.0	6,096.2	97.9	16.1	67.58	-984.7	-481.2	3,375.5	3,269.6	105.92	31.868	
10,236.2	6,596.3	6,141.0	6,096.2	98.9	16.1	67.58	-984.7	-481.2	3,408.6	3,301.8	106.84	31.904	
10,300.0	6,595.4	6,141.0	6,096.2	100.6	16.1	67.58	-984.7	-481.2	3,467.0	3,358.6	108.45	31.968	
10,334.6	6,595.0	6,141.0	6,096.2	101.6	16.1	67.58	-984.7	-481.2	3,498.8	3,389.5	109.33	32.002	
10,400.0	6,594.2	6,141.0	6,096.2	103.4	16.1	67.58	-984.7	-481.2	3,558.9	3,448.0	110.99	32.067	
10,433.0	6,593.7	6,141.0	6,096.2	104.3	16.1	67.58	-984.7	-481.2	3,589.4	3,477.6	111.83	32.098	
10,500.0	6,592.9	6,141.0	6,096.2	106.1	16.1	67.58	-984.7	-481.2	3,651.3	3,537.8	113.52	32.163	
10,531.5	6,592.5	6,141.0	6,096.2	106.9	16.1	67.58	-984.7	-481.2	3,680.4	3,566.1	114.32	32.193	
10,600.0	6,591.6	6,141.0	6,096.2	108.8	16.1	67.58	-984.7	-481.2	3,744.0	3,628.0	116.07	32.258	
10,629.9	6,591.2	6,141.0	6,096.2	109.6	16.1	67.58	-984.7	-481.2	3,771.8	3,655.0	116.83	32.286	
10,700.0	6,590.3	6,141.0	6,096.2	111.6	16.1	67.58	-984.7	-481.2	3,837.2	3,718.5	118.61	32.350	
10,728.3	6,589.9	6,141.0	6,096.2	112.3	16.1	67.58	-984.7	-481.2	3,863.6	3,744.3	119.33	32.376	
10,800.0	6,589.0	6,141.0	6,096.2	114.3	16.1	67.58	-984.7	-481.2	3,930.6	3,809.4	121.16	32.441	
10,826.7	6,588.7	6,141.0	6,096.2	115.0	16.1	67.58	-984.7	-481.2	3,955.7	3,833.8	121.84	32.465	
10,900.0	6,587.7	6,141.0	6,096.2	117.1	16.1	67.58	-984.7	-481.2	4,024.4	3,900.7	123.71	32.530	
10,925.2	6,587.4	6,141.0	6,096.2	117.7	16.1	67.58	-984.7	-481.2	4,048.0	3,923.7	124.35	32.552	
11,000.0	6,586.4	6,141.0	6,096.2	119.8	16.1	67.58	-984.7	-481.2	4,118.4	3,992.2	126.27	32.617	
11,023.6	6,586.1	6,141.0	6,096.2	120.4	16.1	67.58	-984.7	-481.2	4,140.7	4,013.8	126.87	32.637	
11,100.0	6,585.1	6,141.0	6,096.2	122.6	16.1	67.58	-984.7	-481.2	4,212.8	4,083.9	128.82	32.702	
11,122.0	6,584.8	6,141.0	6,096.2	123.2	16.1	67.58	-984.7	-481.2	4,233.6	4,104.2	129.39	32.720	
11,200.0	6,583.8	6,141.0	6,096.2	125.3	16.1	67.57	-984.7	-481.2	4,307.3	4,176.0	131.38	32.785	
11,220.4	6,583.6	6,141.0	6,096.2	125.9	16.1	67.57	-984.7	-481.2	4,326.7	4,194.8	131.91	32.802	
11,300.0	6,582.5	6,141.0	6,096.2	128.1	16.1	67.57	-984.7	-481.2	4,402.2	4,268.2	133.94	32.866	
11,318.9	6,582.3	6,141.0	6,096.2	128.6	16.1	67.57	-984.7	-481.2	4,420.1	4,285.7	134.43	32.881	
11,400.0	6,581.2	6,141.0	6,096.2	130.8	16.1	67.57	-984.7	-481.2	4,497.2	4,360.7	136.51	32.945	
11,417.3	6,581.0	6,141.0	6,096.2	131.3	16.1	67.57	-984.7	-481.2	4,513.7	4,376.7	136.95	32.959	
11,500.0	6,580.0	6,141.0	6,096.2	133.6	16.1	67.57	-984.7	-481.2	4,592.5	4,453.4	139.07	33.022	
11,515.7	6,579.7	6,141.0	6,096.2	134.0	16.1	67.57	-984.7	-481.2	4,607.5	4,468.0	139.47	33.034	
11,600.0	6,578.7	6,141.0	6,096.2	136.3	16.1	67.57	-984.7	-481.2	4,687.9	4,546.3	141.64	33.098	
11,614.1	6,578.5	6,141.0	6,096.2	136.7	16.1	67.57	-984.7	-481.2	4,701.5	4,559.5	142.00	33.108	
11,700.0	6,577.4	6,141.0	6,096.2	139.1	16.1	67.57	-984.7	-481.2	4,783.6	4,639.4	144.21	33.172	
11,712.6	6,577.2	6,141.0	6,096.2	139.5	16.1	67.57	-984.7	-481.2	4,795.6	4,651.1	144.53	33.181	
11,800.0	6,576.1	6,141.0	6,096.2	141.9	16.1	67.57	-984.7	-481.2	4,879.4	4,732.6	146.78	33.244	
11,811.0	6,575.9	6,141.0	6,096.2	142.2	16.1	67.57	-984.7	-481.2	4,889.9	4,742.9	147.06	33.251	
11,882.7	6,575.0	6,141.0	6,096.2	144.2	16.1	67.57	-984.7	-481.2	4,958.7	4,809.8	148.90	33.302	
11,883.5	6,575.0	6,141.0	6,096.2	144.2	16.1	67.57	-984.7	-481.2	4,959.5	4,810.6	148.92	33.304	

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

## Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-118.53	-1,363.1	-2,507.1	2,854.0				
98.4	98.4	49.3	49.3	0.1	0.0	-118.54	-1,363.3	-2,507.1	2,853.8	2,853.7	0.11	N/A	
100.0	100.0	50.6	50.6	0.1	0.0	-118.54	-1,363.3	-2,507.1	2,853.8	2,853.7	0.11	N/A	
196.8	196.8	140.2	140.2	0.3	0.1	-118.55	-1,364.2	-2,507.1	2,854.3	2,853.8	0.42	6,849.846	
200.0	200.0	143.5	143.5	0.3	0.1	-118.55	-1,364.2	-2,507.1	2,854.3	2,853.8	0.43	6,641.497	
295.3	295.3	238.9	238.9	0.5	0.2	-118.57	-1,365.2	-2,507.2	2,854.8	2,854.0	0.78	3,646.310	
300.0	300.0	243.5	243.4	0.5	0.3	-118.57	-1,365.2	-2,507.2	2,854.8	2,854.0	0.80	3,579.629	
393.7	393.7	336.4	336.4	0.8	0.3	-118.58	-1,366.0	-2,507.4	2,855.3	2,854.3	1.08	2,639.206	
400.0	400.0	342.9	342.9	0.8	0.3	-118.58	-1,366.0	-2,507.4	2,855.4	2,854.3	1.10	2,594.677	
492.1	492.1	436.6	436.6	1.0	0.4	-118.59	-1,366.7	-2,507.6	2,855.9	2,854.5	1.37	2,087.659	
500.0	500.0	444.5	444.5	1.0	0.4	-118.59	-1,366.8	-2,507.6	2,855.9	2,854.5	1.39	2,054.158	
590.5	590.5	537.5	537.5	1.2	0.5	-118.60	-1,367.5	-2,507.7	2,856.4	2,854.7	1.65	1,735.346	
600.0	600.0	547.6	547.5	1.2	0.5	-118.60	-1,367.5	-2,507.7	2,856.4	2,854.7	1.67	1,707.860	
689.0	689.0	641.1	641.1	1.4	0.5	-118.61	-1,368.1	-2,507.8	2,856.7	2,854.7	1.92	1,488.011	
700.0	700.0	652.5	652.4	1.4	0.5	-118.62	-1,368.2	-2,507.7	2,856.7	2,854.7	1.95	1,464.916	
787.4	787.4	744.5	744.4	1.6	0.6	-118.63	-1,368.9	-2,507.5	2,856.8	2,854.6	2.19	1,304.115	
800.0	800.0	758.0	758.0	1.7	0.6	-118.63	-1,369.0	-2,507.5	2,856.8	2,854.6	2.23	1,283.778	
860.4	860.4	819.5	819.4	1.8	0.6	-118.64	-1,369.4	-2,507.2	2,856.8	2,854.4	2.39	1,195.357	
885.8	885.8	842.6	842.6	1.9	0.6	-118.65	-1,369.6	-2,507.1	2,856.8	2,854.4	2.46	1,162.533	
900.0	900.0	855.6	855.5	1.9	0.6	-118.65	-1,369.7	-2,507.1	2,856.9	2,854.4	2.49	1,145.085	
984.2	984.2	936.7	936.7	2.1	0.7	-118.66	-1,370.4	-2,506.9	2,857.0	2,854.3	2.72	1,050.749	
1,000.0	1,000.0	953.0	953.0	2.1	0.7	-118.66	-1,370.5	-2,506.9	2,857.1	2,854.3	2.76	1,034.614	
1,082.7	1,082.7	1,040.0	1,040.0	2.3	0.7	-118.68	-1,371.2	-2,506.7	2,857.2	2,854.2	2.98	957.330	
1,100.0	1,100.0	1,058.7	1,058.6	2.3	0.7	-118.68	-1,371.4	-2,506.6	2,857.2	2,854.2	3.03	942.548	
1,173.9	1,173.9	1,132.9	1,132.9	2.5	0.7	-118.70	-1,371.9	-2,506.2	2,857.2	2,853.9	3.23	885.046	
1,181.1	1,181.1	1,139.6	1,139.6	2.5	0.7	-118.70	-1,372.0	-2,506.2	2,857.2	2,853.9	3.25	879.862	
1,200.0	1,200.0	1,157.2	1,157.1	2.6	0.8	-118.70	-1,372.1	-2,506.2	2,857.2	2,853.9	3.30	866.625	
1,279.5	1,279.5	1,236.5	1,236.4	2.7	0.8	-118.71	-1,372.7	-2,506.0	2,857.3	2,853.8	3.51	814.636	
1,300.0	1,300.0	1,258.8	1,258.8	2.8	0.8	-118.72	-1,372.8	-2,505.9	2,857.3	2,853.7	3.56	802.101	
1,377.9	1,377.9	1,338.0	1,338.0	3.0	0.8	-118.73	-1,373.2	-2,505.6	2,857.2	2,853.5	3.77	758.145	
1,396.3	1,396.3	1,355.3	1,355.3	3.0	0.8	-118.73	-1,373.3	-2,505.5	2,857.2	2,853.4	3.82	748.610	
1,400.0	1,400.0	1,358.8	1,358.8	3.0	0.8	-118.73	-1,373.4	-2,505.5	2,857.2	2,853.4	3.83	746.692	
1,476.4	1,476.4	1,433.7	1,433.6	3.2	0.9	-43.64	-1,373.8	-2,505.3	2,856.5	2,852.6	3.96	722.235	
1,500.0	1,500.0	1,457.9	1,457.8	3.2	0.9	-43.66	-1,374.0	-2,505.3	2,856.0	2,852.0	4.01	711.655	
1,574.8	1,574.7	1,533.4	1,533.3	3.4	0.9	-43.75	-1,374.4	-2,505.1	2,853.4	2,849.3	4.19	680.650	
1,600.0	1,599.8	1,558.4	1,558.3	3.4	0.9	-43.79	-1,374.5	-2,505.0	2,852.3	2,848.0	4.25	670.754	
1,673.2	1,672.8	1,632.7	1,632.7	3.6	0.9	-43.95	-1,374.9	-2,504.8	2,847.9	2,843.5	4.43	642.560	
1,700.0	1,699.5	1,660.8	1,660.8	3.7	1.0	-44.02	-1,375.1	-2,504.7	2,846.0	2,841.5	4.50	632.684	
1,771.6	1,770.6	1,733.7	1,733.7	3.8	1.0	-44.24	-1,375.5	-2,504.3	2,839.8	2,835.2	4.68	606.673	
1,800.0	1,798.7	1,761.6	1,761.6	3.9	1.0	-44.33	-1,375.7	-2,504.2	2,837.1	2,832.3	4.75	596.860	
1,870.1	1,868.0	1,826.8	1,826.7	4.1	1.0	-44.59	-1,376.2	-2,503.8	2,829.4	2,824.4	4.94	572.778	
1,900.0	1,897.5	1,852.6	1,852.6	4.2	1.0	-44.71	-1,376.4	-2,503.7	2,825.8	2,820.8	5.02	563.023	
1,968.5	1,964.8	1,912.5	1,912.4	4.4	1.1	-45.01	-1,376.9	-2,503.6	2,816.9	2,811.7	5.21	540.337	
2,000.0	1,995.6	1,941.6	1,941.6	4.5	1.1	-45.16	-1,377.2	-2,503.6	2,812.5	2,807.2	5.30	530.240	
2,066.9	2,060.9	2,003.4	2,003.3	4.7	1.1	-45.52	-1,377.9	-2,503.6	2,802.4	2,796.9	5.51	508.257	
2,100.0	2,093.1	2,033.6	2,033.6	4.8	1.1	-45.71	-1,378.3	-2,503.6	2,797.1	2,791.4	5.62	497.803	
2,165.3	2,156.3	2,093.2	2,093.1	5.1	1.1	-46.11	-1,379.0	-2,503.6	2,785.8	2,780.0	5.85	476.431	
2,200.0	2,189.6	2,125.1	2,125.1	5.2	1.1	-46.34	-1,379.5	-2,503.7	2,779.5	2,773.6	5.97	465.621	
2,263.8	2,250.7	2,184.0	2,183.9	5.5	1.2	-46.79	-1,380.3	-2,503.8	2,767.3	2,761.0	6.22	445.043	
2,280.0	2,266.2	2,200.0	2,199.9	5.6	1.2	-46.92	-1,380.6	-2,503.8	2,764.0	2,757.7	6.28	439.993	
2,300.0	2,285.3	2,216.7	2,216.6	5.7	1.2	-47.00	-1,380.8	-2,503.9	2,760.0	2,753.6	6.36	433.857	
2,362.2	2,344.6	2,272.0	2,271.9	6.0	1.2	-47.28	-1,381.7	-2,504.0	2,747.5	2,740.9	6.61	415.367	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,400.0	2,380.6	2,306.1	2,306.0	6.2	1.2	-47.45	-1,382.3	-2,504.2	2,740.0	2,733.3	6.78	404.310	
2,460.6	2,438.4	2,364.3	2,364.2	6.5	1.2	-47.74	-1,383.3	-2,504.4	2,728.1	2,721.1	7.04	387.316	
2,500.0	2,475.9	2,400.0	2,399.9	6.7	1.2	-47.92	-1,383.9	-2,504.5	2,720.4	2,713.2	7.22	376.852	
2,559.0	2,532.2	2,455.1	2,455.0	7.0	1.3	-48.20	-1,384.8	-2,504.8	2,708.9	2,701.4	7.49	361.651	
2,600.0	2,571.2	2,492.0	2,491.8	7.2	1.3	-48.39	-1,385.4	-2,505.0	2,701.0	2,693.3	7.68	351.673	
2,657.5	2,626.0	2,548.8	2,548.7	7.5	1.3	-48.68	-1,386.4	-2,505.3	2,690.0	2,682.0	7.96	338.068	
2,700.0	2,666.6	2,591.5	2,591.4	7.8	1.3	-48.90	-1,387.1	-2,505.5	2,681.9	2,673.7	8.16	328.493	
2,755.9	2,719.8	2,643.5	2,643.4	8.1	1.3	-49.18	-1,388.0	-2,505.7	2,671.2	2,662.8	8.44	316.462	
2,800.0	2,761.9	2,684.0	2,683.8	8.3	1.3	-49.39	-1,388.7	-2,505.9	2,662.9	2,654.2	8.66	307.460	
2,854.3	2,813.7	2,736.1	2,735.9	8.7	1.4	-49.67	-1,389.7	-2,506.2	2,652.7	2,643.8	8.94	296.778	
2,900.0	2,857.2	2,780.8	2,780.6	8.9	1.4	-49.91	-1,390.5	-2,506.4	2,644.2	2,635.0	9.17	288.225	
2,952.7	2,907.5	2,832.2	2,832.0	9.2	1.4	-50.18	-1,391.4	-2,506.6	2,634.3	2,624.9	9.45	278.741	
3,000.0	2,952.5	2,878.2	2,878.0	9.5	1.4	-50.43	-1,392.2	-2,506.7	2,625.6	2,615.9	9.70	270.654	
3,051.2	3,001.3	2,933.7	2,933.5	9.8	1.4	-50.74	-1,393.2	-2,506.8	2,616.1	2,606.1	9.98	262.153	
3,100.0	3,047.8	2,991.0	2,990.8	10.1	1.4	-51.06	-1,394.1	-2,506.8	2,606.9	2,596.7	10.25	254.359	
3,149.6	3,095.1	3,036.8	3,036.6	10.4	1.5	-51.31	-1,394.7	-2,506.7	2,597.5	2,587.0	10.52	246.949	
3,200.0	3,143.2	3,081.1	3,080.9	10.7	1.5	-51.56	-1,395.4	-2,506.6	2,588.1	2,577.3	10.79	239.794	
3,248.0	3,188.9	3,125.7	3,125.5	11.0	1.5	-51.81	-1,396.2	-2,506.5	2,579.3	2,568.2	11.06	233.226	
3,300.0	3,238.5	3,176.0	3,175.8	11.3	1.5	-52.10	-1,397.1	-2,506.4	2,569.8	2,558.4	11.35	226.419	
3,346.4	3,282.8	3,218.0	3,217.7	11.6	1.5	-52.34	-1,397.8	-2,506.4	2,561.3	2,549.7	11.61	220.613	
3,400.0	3,333.8	3,262.4	3,262.1	11.9	1.5	-52.60	-1,398.6	-2,506.4	2,551.7	2,539.8	11.91	214.257	
3,444.9	3,376.6	3,300.0	3,299.7	12.2	1.6	-52.82	-1,399.3	-2,506.4	2,543.9	2,531.7	12.16	209.136	
3,500.0	3,429.1	3,347.8	3,347.6	12.6	1.6	-53.10	-1,400.3	-2,506.6	2,534.4	2,521.9	12.48	203.092	
3,543.3	3,470.4	3,385.8	3,385.5	12.8	1.6	-53.32	-1,401.1	-2,506.7	2,527.0	2,514.3	12.73	198.531	
3,600.0	3,524.4	3,436.1	3,435.9	13.2	1.6	-53.62	-1,402.2	-2,507.1	2,517.5	2,504.5	13.06	192.785	
3,641.7	3,564.2	3,473.5	3,473.2	13.4	1.6	-53.84	-1,403.0	-2,507.3	2,510.7	2,497.4	13.30	188.712	
3,700.0	3,619.8	3,526.6	3,526.3	13.8	1.6	-54.15	-1,404.2	-2,507.8	2,501.2	2,487.5	13.65	183.237	
3,740.1	3,658.0	3,564.0	3,563.7	14.0	1.6	-54.38	-1,405.0	-2,508.2	2,494.7	2,480.8	13.89	179.593	
3,800.0	3,715.1	3,621.2	3,620.9	14.4	1.7	-54.72	-1,406.3	-2,508.7	2,485.2	2,471.0	14.25	174.356	
3,838.6	3,751.8	3,659.8	3,659.4	14.7	1.7	-54.95	-1,407.2	-2,509.1	2,479.1	2,464.6	14.49	171.080	
3,900.0	3,810.4	3,719.4	3,719.1	15.0	1.7	-55.32	-1,408.5	-2,509.6	2,469.4	2,454.6	14.87	166.075	
3,937.0	3,845.7	3,753.5	3,753.1	15.3	1.7	-55.53	-1,409.3	-2,509.9	2,463.7	2,448.6	15.10	163.185	
4,000.0	3,905.7	3,813.0	3,812.6	15.7	1.7	-55.89	-1,410.6	-2,510.4	2,453.9	2,438.4	15.49	158.434	
4,035.4	3,939.5	3,850.1	3,849.7	15.9	1.7	-56.12	-1,411.4	-2,510.7	2,448.5	2,432.8	15.71	155.817	
4,100.0	4,001.0	3,917.4	3,916.9	16.3	1.8	-56.54	-1,412.8	-2,511.2	2,438.5	2,422.4	16.13	151.216	
4,133.8	4,033.3	3,951.9	3,951.5	16.5	1.8	-56.75	-1,413.4	-2,511.5	2,433.3	2,417.0	16.34	148.887	
4,200.0	4,096.3	4,018.0	4,017.5	16.9	1.8	-57.16	-1,414.4	-2,512.0	2,423.1	2,406.4	16.77	144.499	
4,232.3	4,127.1	4,048.5	4,048.0	17.1	1.8	-57.35	-1,414.8	-2,512.3	2,418.2	2,401.2	16.98	142.442	
4,300.0	4,191.7	4,112.9	4,112.4	17.6	1.8	-57.75	-1,415.7	-2,512.9	2,407.9	2,390.5	17.41	138.306	
4,330.7	4,220.9	4,142.7	4,142.3	17.8	1.8	-57.94	-1,416.1	-2,513.1	2,403.3	2,385.7	17.61	136.483	
4,400.0	4,287.0	4,210.9	4,210.4	18.2	1.9	-58.37	-1,416.9	-2,513.8	2,392.9	2,374.9	18.06	132.478	
4,429.1	4,314.7	4,241.0	4,240.5	18.4	1.9	-58.56	-1,417.2	-2,514.1	2,388.6	2,370.4	18.26	130.841	
4,500.0	4,382.3	4,313.5	4,313.0	18.8	1.9	-59.01	-1,417.9	-2,514.7	2,378.0	2,359.3	18.73	126.982	
4,527.5	4,408.6	4,340.5	4,340.0	19.0	1.9	-59.18	-1,418.1	-2,514.9	2,373.9	2,355.0	18.91	125.538	
4,600.0	4,477.6	4,411.6	4,411.1	19.5	1.9	-59.64	-1,418.7	-2,515.5	2,363.2	2,343.8	19.39	121.858	
4,626.0	4,502.4	4,437.5	4,437.0	19.6	1.9	-59.80	-1,418.9	-2,515.7	2,359.4	2,339.8	19.57	120.578	
4,700.0	4,572.9	4,509.6	4,509.1	20.1	1.9	-60.26	-1,419.3	-2,516.3	2,348.6	2,328.5	20.06	117.051	
4,724.4	4,596.2	4,530.4	4,529.9	20.3	1.9	-60.40	-1,419.4	-2,516.5	2,345.0	2,324.8	20.23	115.946	
4,800.0	4,668.3	4,600.0	4,599.5	20.7	2.0	-60.85	-1,419.9	-2,517.2	2,334.4	2,313.6	20.73	112.599	
4,822.8	4,690.0	4,617.5	4,617.0	20.9	2.0	-60.96	-1,420.1	-2,517.4	2,331.2	2,310.3	20.88	111.641	
4,900.0	4,763.6	4,698.5	4,698.0	21.4	2.0	-61.49	-1,420.7	-2,518.2	2,320.5	2,299.1	21.41	108.365	
4,921.2	4,783.8	4,718.0	4,717.5	21.5	2.0	-61.62	-1,420.8	-2,518.4	2,317.6	2,296.0	21.56	107.505	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,858.9	4,789.3	4,788.8	22.0	2.0	-62.09	-1,421.2	-2,519.1	2,306.9	2,284.8	22.09	104.418	
5,019.7	4,877.7	4,807.5	4,807.0	22.1	2.0	-62.21	-1,421.4	-2,519.3	2,304.3	2,282.0	22.23	103.668	
5,100.0	4,954.2	4,883.4	4,882.9	22.6	2.0	-62.72	-1,421.9	-2,520.2	2,293.7	2,270.9	22.78	100.690	
5,118.1	4,971.5	4,900.7	4,900.2	22.8	2.0	-62.83	-1,422.0	-2,520.4	2,291.3	2,268.4	22.90	100.037	
5,171.8	5,022.7	4,961.3	4,960.8	23.1	2.0	-63.24	-1,422.3	-2,521.1	2,284.3	2,261.0	23.29	98.095	
5,200.0	5,049.6	4,993.2	4,992.7	23.3	2.1	-63.38	-1,422.4	-2,521.4	2,280.6	2,257.2	23.46	97.227	
5,216.5	5,065.4	5,010.7	5,010.2	23.3	2.1	-63.46	-1,422.4	-2,521.6	2,278.5	2,255.0	23.54	96.792	
5,300.0	5,145.7	5,095.9	5,095.3	23.7	2.1	-63.79	-1,422.4	-2,522.2	2,268.5	2,244.5	23.96	94.692	
5,314.9	5,160.1	5,110.8	5,110.3	23.8	2.1	-63.85	-1,422.4	-2,522.3	2,266.8	2,242.8	24.02	94.358	
5,400.0	5,242.7	5,195.2	5,194.6	24.1	2.1	-64.14	-1,422.3	-2,522.9	2,258.0	2,233.6	24.40	92.533	
5,413.4	5,255.7	5,208.1	5,207.6	24.2	2.1	-64.18	-1,422.2	-2,523.0	2,256.7	2,232.2	24.45	92.280	
5,500.0	5,340.5	5,290.6	5,290.1	24.5	2.1	-64.42	-1,422.1	-2,523.5	2,249.1	2,224.3	24.79	90.711	
5,511.8	5,352.1	5,302.0	5,301.4	24.5	2.1	-64.45	-1,422.1	-2,523.6	2,248.2	2,223.3	24.84	90.524	
5,600.0	5,439.0	5,388.9	5,388.4	24.8	2.1	-64.67	-1,422.0	-2,524.4	2,241.9	2,216.8	25.14	89.178	
5,610.2	5,449.1	5,399.1	5,398.5	24.8	2.1	-64.69	-1,422.0	-2,524.4	2,241.3	2,216.1	25.17	89.044	
5,700.0	5,538.0	5,477.2	5,476.7	25.1	2.1	-64.84	-1,421.9	-2,525.3	2,236.6	2,211.1	25.43	87.941	
5,708.6	5,546.6	5,484.8	5,484.3	25.1	2.1	-64.85	-1,421.9	-2,525.4	2,236.2	2,210.8	25.45	87.852	
5,800.0	5,637.4	5,566.1	5,565.6	25.3	2.1	-64.98	-1,422.3	-2,526.5	2,233.3	2,207.6	25.68	86.951	
5,807.1	5,644.5	5,572.5	5,571.9	25.3	2.1	-64.99	-1,422.3	-2,526.6	2,233.1	2,207.4	25.70	86.894	
5,900.0	5,737.2	5,656.9	5,656.4	25.5	2.2	-65.09	-1,423.0	-2,527.9	2,231.9	2,206.0	25.89	86.190	
5,905.5	5,742.6	5,662.0	5,661.4	25.5	2.2	-65.09	-1,423.0	-2,528.0	2,231.9	2,205.9	25.90	86.158	
5,924.3	5,761.4	5,679.2	5,678.6	25.5	2.2	-65.11	-1,423.2	-2,528.3	2,231.8	2,205.9	25.94	86.051 CC, ES	
6,000.0	5,837.1	5,749.7	5,749.1	25.6	2.2	-65.16	-1,424.0	-2,529.5	2,232.3	2,206.3	26.06	85.648	
6,003.9	5,841.0	5,753.4	5,752.8	25.6	2.2	-65.16	-1,424.0	-2,529.6	2,232.4	2,206.3	26.07	85.633	
6,051.8	5,888.9	5,800.0	5,799.4	25.7	2.2	-140.30	-1,424.6	-2,530.5	2,233.3	2,214.3	18.97	117.724	
6,081.8	5,918.9	5,834.0	5,833.4	25.7	2.2	-140.29	-1,424.9	-2,531.2	2,233.9	2,214.9	19.02	117.463	
6,100.0	5,937.1	5,855.9	5,855.3	25.7	2.2	129.69	-1,425.1	-2,531.7	2,234.4	2,208.2	26.19	85.300	
6,102.3	5,939.4	5,858.7	5,858.1	25.7	2.2	129.69	-1,425.1	-2,531.7	2,234.5	2,208.3	26.20	85.298	
6,150.0	5,987.0	5,915.3	5,914.7	25.7	2.2	129.61	-1,425.4	-2,532.8	2,237.1	2,210.9	26.23	85.298	
6,200.0	6,036.5	5,972.1	5,971.5	25.7	2.2	129.48	-1,425.5	-2,533.8	2,241.9	2,215.7	26.24	85.451	
6,200.8	6,037.3	5,973.0	5,972.3	25.7	2.2	129.47	-1,425.5	-2,533.8	2,242.0	2,215.7	26.24	85.455	
6,250.0	6,085.5	6,026.3	6,025.7	25.7	2.2	129.28	-1,425.5	-2,534.6	2,248.7	2,222.5	26.23	85.741	
6,299.2	6,133.0	6,076.9	6,076.2	25.6	2.3	129.01	-1,425.3	-2,535.4	2,257.6	2,231.4	26.20	86.152	
6,300.0	6,133.7	6,077.7	6,077.1	25.6	2.3	129.01	-1,425.3	-2,535.4	2,257.7	2,231.5	26.20	86.159	
6,350.0	6,180.9	6,126.1	6,125.4	25.5	2.3	128.63	-1,425.1	-2,536.1	2,268.9	2,242.7	26.17	86.689	
6,397.6	6,224.6	6,169.6	6,168.9	25.4	2.3	128.18	-1,425.0	-2,536.7	2,281.5	2,255.4	26.14	87.289	
6,400.0	6,226.7	6,171.7	6,171.1	25.4	2.3	128.15	-1,425.0	-2,536.7	2,282.2	2,256.1	26.14	87.320	
6,450.0	6,271.1	6,216.0	6,215.3	25.2	2.3	127.56	-1,424.9	-2,537.3	2,297.7	2,271.6	26.10	88.040	
6,496.0	6,310.4	6,255.4	6,254.7	25.1	2.3	126.90	-1,424.8	-2,537.7	2,313.9	2,287.9	26.07	88.764	
6,500.0	6,313.7	6,258.7	6,258.1	25.1	2.3	126.83	-1,424.8	-2,537.8	2,315.4	2,289.3	26.07	88.829	
6,550.0	6,354.4	6,299.5	6,298.9	25.0	2.3	125.96	-1,424.7	-2,538.2	2,335.2	2,309.1	26.04	89.663	
6,594.5	6,388.9	6,333.7	6,333.1	24.9	2.3	125.05	-1,424.7	-2,538.6	2,354.5	2,328.5	26.04	90.418	
6,600.0	6,393.0	6,337.8	6,337.2	24.9	2.3	124.93	-1,424.6	-2,538.7	2,357.1	2,331.0	26.04	90.514	
6,650.0	6,429.3	6,373.7	6,373.1	24.8	2.3	123.70	-1,424.5	-2,539.1	2,381.0	2,354.9	26.06	91.348	
6,692.9	6,458.5	6,402.5	6,401.8	24.7	2.3	122.47	-1,424.4	-2,539.5	2,403.0	2,376.9	26.11	92.020	
6,700.0	6,463.1	6,407.2	6,406.5	24.7	2.3	122.25	-1,424.4	-2,539.5	2,406.8	2,380.7	26.12	92.134	
6,750.0	6,494.3	6,438.5	6,437.9	24.7	2.3	120.58	-1,424.3	-2,539.9	2,434.6	2,408.4	26.22	92.839	
6,791.3	6,517.9	6,462.3	6,461.7	24.7	2.3	118.99	-1,424.2	-2,540.2	2,458.9	2,432.5	26.35	93.331	
6,800.0	6,522.6	6,467.1	6,466.4	24.7	2.3	118.63	-1,424.2	-2,540.3	2,464.1	2,437.7	26.37	93.438	
6,850.0	6,548.0	6,492.6	6,491.9	24.7	2.3	116.38	-1,424.1	-2,540.6	2,495.3	2,468.8	26.57	93.915	
6,889.7	6,566.0	6,511.7	6,511.1	24.8	2.3	114.37	-1,424.1	-2,540.8	2,521.3	2,494.5	26.77	94.196	
6,900.0	6,570.4	6,516.5	6,515.8	24.9	2.3	113.82	-1,424.0	-2,540.8	2,528.1	2,501.3	26.82	94.277	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,950.0	6,589.5	6,537.6	6,536.9	25.1	2.3	110.92	-1,424.0	-2,541.0	2,562.3	2,535.2	27.10	94.532	
6,988.2	6,602.0	6,551.3	6,550.7	25.3	2.3	108.44	-1,423.9	-2,541.2	2,589.2	2,561.9	27.36	94.650	
7,000.0	6,605.4	6,555.1	6,554.5	25.3	2.3	107.62	-1,423.9	-2,541.2	2,597.7	2,570.3	27.43	94.705	
7,050.0	6,618.0	6,569.0	6,568.3	25.6	2.3	103.91	-1,423.9	-2,541.3	2,634.2	2,606.5	27.78	94.829	
7,086.6	6,625.0	6,576.7	6,576.0	25.9	2.3	100.93	-1,423.8	-2,541.4	2,661.6	2,633.5	28.05	94.878	
7,100.0	6,627.1	6,579.0	6,578.3	26.0	2.3	99.79	-1,423.8	-2,541.4	2,671.7	2,643.6	28.15	94.918	
7,150.0	6,632.8	6,585.1	6,584.4	26.5	2.3	95.28	-1,423.8	-2,541.4	2,710.0	2,681.4	28.54	94.953	
7,185.0	6,634.7	6,587.0	6,586.4	26.8	2.3	91.91	-1,423.8	-2,541.4	2,737.1	2,708.3	28.84	94.899	
7,200.0	6,635.0	6,587.3	6,586.6	27.0	2.3	90.43	-1,423.8	-2,541.4	2,748.8	2,719.8	28.97	94.879	
7,215.9	6,635.0	6,587.1	6,586.4	27.1	2.3	88.83	-1,423.8	-2,541.4	2,761.2	2,732.1	29.12	94.825	
7,283.4	6,634.1	6,585.6	6,585.0	27.9	2.3	88.78	-1,423.8	-2,541.4	2,814.4	2,784.5	29.95	93.966	
7,300.0	6,633.9	6,585.3	6,584.6	28.1	2.3	88.76	-1,423.8	-2,541.4	2,827.6	2,797.4	30.16	93.765	
7,381.9	6,632.9	6,583.4	6,582.8	29.3	2.3	88.70	-1,423.8	-2,541.4	2,893.0	2,861.7	31.33	92.345	
7,400.0	6,632.6	6,583.0	6,582.4	29.5	2.3	88.69	-1,423.8	-2,541.4	2,907.6	2,876.1	31.59	92.048	
7,480.3	6,631.6	6,581.2	6,580.5	30.8	2.3	88.63	-1,423.8	-2,541.4	2,972.8	2,939.9	32.89	90.386	
7,500.0	6,631.4	6,580.8	6,580.1	31.1	2.3	88.61	-1,423.8	-2,541.4	2,988.9	2,955.7	33.21	90.002	
7,578.7	6,630.4	6,579.0	6,578.3	32.5	2.3	88.55	-1,423.8	-2,541.4	3,053.7	3,019.1	34.61	88.225	
7,600.0	6,630.1	6,578.5	6,577.8	32.9	2.3	88.54	-1,423.8	-2,541.4	3,071.3	3,036.3	34.99	87.773	
7,677.1	6,629.1	6,576.7	6,576.0	34.3	2.3	88.48	-1,423.8	-2,541.4	3,135.5	3,099.1	36.47	85.974	
7,700.0	6,628.8	6,576.2	6,575.5	34.8	2.3	88.46	-1,423.8	-2,541.4	3,154.7	3,117.8	36.91	85.471	
7,775.6	6,627.8	6,574.4	6,573.7	36.3	2.3	88.40	-1,423.9	-2,541.3	3,218.3	3,179.9	38.45	83.712	
7,800.0	6,627.5	6,573.8	6,573.1	36.8	2.3	88.38	-1,423.9	-2,541.3	3,239.0	3,200.1	38.94	83.176	
7,874.0	6,626.6	6,572.1	6,571.4	38.4	2.3	88.32	-1,423.9	-2,541.3	3,302.0	3,261.5	40.52	81.497	
7,900.0	6,626.3	6,571.4	6,570.8	38.9	2.3	88.30	-1,423.9	-2,541.3	3,324.2	3,283.2	41.07	80.940	
7,972.4	6,625.3	6,569.7	6,569.0	40.5	2.3	88.24	-1,423.9	-2,541.3	3,386.4	3,343.8	42.67	79.361	
8,000.0	6,625.0	6,569.0	6,568.4	41.1	2.3	88.22	-1,423.9	-2,541.3	3,410.2	3,366.9	43.28	78.793	
8,070.8	6,624.1	6,567.3	6,566.6	42.7	2.3	88.16	-1,423.9	-2,541.3	3,471.6	3,426.7	44.90	77.327	
8,100.0	6,623.7	6,566.6	6,565.9	43.4	2.3	88.14	-1,423.9	-2,541.3	3,497.0	3,451.4	45.56	76.756	
8,169.3	6,622.8	6,564.9	6,564.2	45.0	2.3	88.08	-1,423.9	-2,541.3	3,557.5	3,510.3	47.18	75.403	
8,200.0	6,622.4	6,564.1	6,563.4	45.7	2.3	88.06	-1,423.9	-2,541.3	3,584.4	3,536.5	47.90	74.835	
8,267.7	6,621.6	6,562.4	6,561.8	47.4	2.3	88.00	-1,423.9	-2,541.3	3,644.0	3,594.4	49.51	73.595	
8,300.0	6,621.1	6,561.6	6,560.9	48.1	2.3	87.97	-1,423.9	-2,541.2	3,672.5	3,622.2	50.29	73.033	
8,366.1	6,620.3	6,559.9	6,559.3	49.7	2.3	87.92	-1,423.9	-2,541.2	3,731.0	3,679.2	51.89	71.900	
8,400.0	6,619.9	6,559.1	6,558.4	50.6	2.3	87.89	-1,423.9	-2,541.2	3,761.1	3,708.4	52.72	71.348	
8,464.5	6,619.0	6,557.4	6,556.7	52.2	2.3	87.83	-1,423.9	-2,541.2	3,818.7	3,764.4	54.31	70.315	
8,500.0	6,618.6	6,556.5	6,555.8	53.0	2.3	87.80	-1,423.9	-2,541.2	3,850.4	3,795.2	55.18	69.775	
8,563.0	6,617.8	6,554.9	6,554.2	54.6	2.3	87.75	-1,423.9	-2,541.2	3,906.8	3,850.1	56.76	68.835	
8,600.0	6,617.3	6,553.9	6,553.2	55.5	2.3	87.71	-1,423.9	-2,541.2	3,940.1	3,882.4	57.68	68.308	
8,661.4	6,616.5	6,552.3	6,551.6	57.1	2.3	87.66	-1,423.9	-2,541.2	3,995.5	3,936.2	59.23	67.453	
8,700.0	6,616.0	6,551.3	6,550.6	58.1	2.3	87.63	-1,423.9	-2,541.2	4,030.3	3,970.1	60.21	66.940	
8,759.8	6,615.2	6,549.7	6,549.0	59.6	2.3	87.57	-1,423.9	-2,541.2	4,084.5	4,022.8	61.73	66.163	
8,800.0	6,614.7	6,548.6	6,547.9	60.6	2.3	87.54	-1,423.9	-2,541.1	4,121.0	4,058.2	62.76	65.664	
8,858.2	6,614.0	6,547.0	6,546.3	62.1	2.3	87.48	-1,423.9	-2,541.1	4,174.0	4,109.8	64.26	64.958	
8,900.0	6,613.4	6,545.9	6,545.2	63.2	2.3	87.45	-1,424.0	-2,541.1	4,212.1	4,146.8	65.33	64.473	
8,956.7	6,612.7	6,544.3	6,543.6	64.7	2.3	87.39	-1,424.0	-2,541.1	4,263.9	4,197.1	66.80	63.832	
9,000.0	6,612.2	6,543.1	6,542.4	65.8	2.3	87.35	-1,424.0	-2,541.1	4,303.6	4,235.7	67.92	63.362	
9,055.1	6,611.5	6,541.6	6,540.9	67.3	2.3	87.30	-1,424.0	-2,541.1	4,354.2	4,284.8	69.36	62.779	
9,100.0	6,610.9	6,540.3	6,539.7	68.4	2.3	87.26	-1,424.0	-2,541.1	4,395.4	4,324.9	70.53	62.322	
9,153.5	6,610.2	6,538.8	6,538.1	69.8	2.3	87.21	-1,424.0	-2,541.1	4,444.7	4,372.8	71.93	61.792	
9,200.0	6,609.6	6,537.5	6,536.8	71.1	2.3	87.17	-1,424.0	-2,541.0	4,487.6	4,414.5	73.15	61.350	
9,251.9	6,608.9	6,536.0	6,535.3	72.4	2.3	87.12	-1,424.0	-2,541.0	4,535.7	4,461.2	74.52	60.868	
9,300.0	6,608.3	6,534.6	6,534.0	73.7	2.3	87.07	-1,424.0	-2,541.0	4,580.2	4,504.4	75.78	60.439	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,350.4	6,607.7	6,533.2	6,532.5	75.0	2.3	87.02	-1,424.0	-2,541.0	4,626.9	4,549.8	77.11	60.000		
9,400.0	6,607.0	6,531.7	6,531.1	76.4	2.3	86.97	-1,424.0	-2,541.0	4,673.0	4,594.6	78.43	59.584		
9,448.8	6,606.4	6,530.3	6,529.6	77.7	2.3	86.92	-1,424.0	-2,541.0	4,718.4	4,638.7	79.72	59.185		
9,500.0	6,605.7	6,528.8	6,528.1	79.0	2.3	86.87	-1,424.0	-2,541.0	4,766.1	4,685.0	81.08	58.781		
9,547.2	6,605.1	6,527.4	6,526.7	80.3	2.3	86.83	-1,424.0	-2,541.0	4,810.2	4,727.9	82.34	58.419		
9,600.0	6,604.5	6,525.8	6,525.1	81.7	2.3	86.77	-1,424.0	-2,540.9	4,859.5	4,775.8	83.75	58.027		
9,645.6	6,603.9	6,524.4	6,523.7	82.9	2.3	86.73	-1,424.0	-2,540.9	4,902.2	4,817.3	84.97	57.696		
9,700.0	6,603.2	6,522.7	6,522.1	84.4	2.3	86.67	-1,424.0	-2,540.9	4,953.2	4,866.8	86.42	57.316		
9,744.1	6,602.6	6,521.4	6,520.7	85.6	2.3	86.63	-1,424.0	-2,540.9	4,994.5	4,906.9	87.60	57.016		
9,800.0	6,601.9	6,519.7	6,519.0	87.1	2.3	86.57	-1,424.0	-2,540.9	5,047.1	4,958.0	89.10	56.647		
9,842.5	6,601.3	6,518.3	6,517.7	88.2	2.3	86.53	-1,424.0	-2,540.9	5,087.0	4,996.8	90.24	56.373		
9,900.0	6,600.6	6,516.5	6,515.9	89.8	2.3	86.47	-1,424.0	-2,540.8	5,141.2	5,049.4	91.78	56.015		
9,940.9	6,600.1	6,515.3	6,514.6	90.9	2.3	86.42	-1,424.0	-2,540.8	5,179.8	5,086.9	92.88	55.766		
10,000.0	6,599.3	6,513.4	6,512.7	92.5	2.3	86.36	-1,424.1	-2,540.8	5,235.5	5,141.1	94.47	55.418		
10,039.3	6,598.8	6,512.1	6,511.4	93.5	2.3	86.32	-1,424.1	-2,540.8	5,272.7	5,177.2	95.54	55.191		
10,100.0	6,598.0	6,510.2	6,509.5	95.2	2.3	86.25	-1,424.1	-2,540.8	5,330.1	5,232.9	97.17	54.853		
10,137.8	6,597.5	6,508.9	6,508.3	96.2	2.3	86.21	-1,424.1	-2,540.8	5,365.8	5,267.7	98.19	54.647		
10,200.0	6,596.7	6,506.9	6,506.2	97.9	2.3	86.14	-1,424.1	-2,540.7	5,424.8	5,324.9	99.87	54.318		
10,236.2	6,596.3	6,505.7	6,505.0	98.9	2.3	86.10	-1,424.1	-2,540.7	5,459.2	5,358.3	100.85	54.131		
10,300.0	6,595.4	6,503.6	6,502.9	100.6	2.3	86.03	-1,424.1	-2,540.7	5,519.7	5,417.2	102.58	53.811		
10,334.6	6,595.0	6,502.4	6,501.7	101.6	2.3	85.99	-1,424.1	-2,540.7	5,552.7	5,449.1	103.51	53.641		
10,400.0	6,594.2	6,500.2	6,499.5	103.4	2.3	85.92	-1,424.1	-2,540.7	5,614.8	5,509.6	105.28	53.330		
10,433.0	6,593.7	6,499.3	6,498.6	104.3	2.3	85.89	-1,424.1	-2,540.7	5,646.3	5,540.1	106.18	53.176		
10,500.0	6,592.9	6,497.5	6,496.8	106.1	2.3	85.83	-1,424.1	-2,540.6	5,710.1	5,602.1	108.00	52.872		
10,531.5	6,592.5	6,496.6	6,495.9	106.9	2.3	85.80	-1,424.1	-2,540.6	5,740.1	5,631.3	108.85	52.732		
10,600.0	6,591.6	6,494.7	6,494.1	108.8	2.3	85.74	-1,424.1	-2,540.6	5,805.5	5,694.8	110.72	52.436		
10,629.9	6,591.2	6,493.9	6,493.3	109.6	2.3	85.71	-1,424.1	-2,540.6	5,834.1	5,722.6	111.53	52.310		
10,700.0	6,590.3	6,492.0	6,491.3	111.6	2.3	85.65	-1,424.1	-2,540.6	5,901.1	5,787.7	113.44	52.021		
10,728.3	6,589.9	6,491.2	6,490.6	112.3	2.3	85.62	-1,424.1	-2,540.6	5,928.2	5,814.0	114.21	51.907		
10,800.0	6,589.0	6,489.2	6,488.6	114.3	2.3	85.55	-1,424.1	-2,540.6	5,996.8	5,880.7	116.16	51.626		
10,826.7	6,588.7	6,488.5	6,487.8	115.0	2.3	85.53	-1,424.1	-2,540.5	6,022.4	5,905.6	116.89	51.523		
10,900.0	6,587.7	6,486.5	6,485.8	117.1	2.3	85.46	-1,424.1	-2,540.5	6,092.7	5,973.8	118.88	51.249		
10,925.2	6,587.4	6,485.8	6,485.1	117.7	2.3	85.44	-1,424.1	-2,540.5	6,116.8	5,997.2	119.57	51.157		
11,000.0	6,586.4	6,483.7	6,483.0	119.8	2.3	85.37	-1,424.1	-2,540.5	6,188.7	6,067.0	121.61	50.889		
11,023.6	6,586.1	6,483.0	6,482.4	120.4	2.3	85.35	-1,424.1	-2,540.5	6,211.3	6,089.1	122.25	50.806		
11,100.0	6,585.1	6,480.9	6,480.2	122.6	2.3	85.27	-1,424.2	-2,540.5	6,284.8	6,160.4	124.34	50.545		
11,122.0	6,584.8	6,480.3	6,479.6	123.2	2.3	85.25	-1,424.2	-2,540.5	6,305.9	6,181.0	124.94	50.471		
11,200.0	6,583.8	6,478.1	6,477.4	125.3	2.3	85.18	-1,424.2	-2,540.4	6,381.0	6,253.9	127.07	50.216		
11,220.4	6,583.6	6,477.5	6,476.8	125.9	2.3	85.16	-1,424.2	-2,540.4	6,400.7	6,273.0	127.63	50.151		
11,300.0	6,582.5	6,475.2	6,474.5	128.1	2.3	85.08	-1,424.2	-2,540.4	6,477.3	6,347.5	129.80	49.902		
11,318.9	6,582.3	6,474.7	6,474.0	128.6	2.3	85.07	-1,424.2	-2,540.4	6,495.5	6,365.2	130.32	49.844		
11,400.0	6,581.2	6,472.4	6,471.7	130.8	2.3	84.99	-1,424.2	-2,540.4	6,573.8	6,441.2	132.53	49.601		
11,417.3	6,581.0	6,471.9	6,471.2	131.3	2.3	84.97	-1,424.2	-2,540.4	6,590.5	6,457.5	133.01	49.550		
11,500.0	6,580.0	6,469.5	6,468.8	133.6	2.3	84.89	-1,424.2	-2,540.3	6,670.3	6,535.1	135.27	49.312		
11,515.7	6,579.7	6,469.0	6,468.4	134.0	2.3	84.88	-1,424.2	-2,540.3	6,685.5	6,549.8	135.70	49.268		
11,600.0	6,578.7	6,466.6	6,465.9	136.3	2.3	84.80	-1,424.2	-2,540.3	6,767.0	6,629.0	138.00	49.035		
11,614.1	6,578.5	6,466.2	6,465.5	136.7	2.3	84.78	-1,424.2	-2,540.3	6,780.7	6,642.3	138.39	48.997		
11,700.0	6,577.4	6,463.7	6,463.0	139.1	2.3	84.70	-1,424.2	-2,540.3	6,863.7	6,723.0	140.74	48.770		
11,712.6	6,577.2	6,463.3	6,462.6	139.5	2.3	84.69	-1,424.2	-2,540.3	6,875.9	6,734.8	141.08	48.737		
11,800.0	6,576.1	6,460.7	6,460.1	141.9	2.3	84.60	-1,424.2	-2,540.2	6,960.5	6,817.1	143.47	48.515		
11,811.0	6,575.9	6,460.4	6,459.8	142.2	2.3	84.59	-1,424.2	-2,540.2	6,971.2	6,827.4	143.77	48.487		
11,882.7	6,575.0	6,458.3	6,457.6	144.2	2.3	84.52	-1,424.2	-2,540.2	7,040.7	6,894.9	145.73	48.312 SF		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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
11,883.5	6,575.0	6,458.3	6,457.6	144.2	2.3	84.52	-1,424.2	-2,540.2	7,041.5	6,895.7	145.75	48.312	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-74.97	1,343.7	-5,003.9	5,181.2				
98.4	98.4	76.4	76.4	0.1	0.0	-74.97	1,343.7	-5,003.9	5,181.2	5,181.1	0.10	N/A	
100.0	100.0	78.0	78.0	0.1	0.0	-74.97	1,343.7	-5,003.9	5,181.2	5,181.1	0.10	N/A	
196.8	196.8	174.8	174.8	0.3	1.0	-74.97	1,343.7	-5,003.9	5,181.2	5,179.9	1.29	4,010.051	
200.0	200.0	178.0	178.0	0.3	1.0	-74.97	1,343.7	-5,003.9	5,181.2	5,179.8	1.34	3,865.895	
295.3	295.3	273.3	273.3	0.5	3.0	-74.97	1,343.7	-5,003.9	5,181.2	5,177.7	3.50	1,479.340	
300.0	300.0	278.0	278.0	0.5	3.1	-74.97	1,343.7	-5,003.9	5,181.2	5,177.6	3.62	1,431.232	
393.7	393.7	371.7	371.7	0.8	5.1	-74.97	1,343.7	-5,003.9	5,181.2	5,175.4	5.82	890.543	
400.0	400.0	378.0	378.0	0.8	5.2	-74.97	1,343.7	-5,003.9	5,181.2	5,175.2	5.96	868.893	
492.1	492.1	470.1	470.1	1.0	7.1	-74.97	1,343.7	-5,003.9	5,181.2	5,173.1	8.06	642.949	
500.0	500.0	478.0	478.0	1.0	7.2	-74.97	1,343.7	-5,003.9	5,181.2	5,172.9	8.24	629.018	
590.5	590.5	568.5	568.5	1.2	9.1	-74.97	1,343.7	-5,003.9	5,181.2	5,170.9	10.28	503.988	
600.0	600.0	578.0	578.0	1.2	9.3	-74.97	1,343.7	-5,003.9	5,181.2	5,170.7	10.49	493.760	
689.0	689.0	667.0	667.0	1.4	11.1	-74.97	1,343.7	-5,003.9	5,181.2	5,168.7	12.49	414.683	
700.0	700.0	678.0	678.0	1.4	11.3	-74.97	1,343.7	-5,003.9	5,181.2	5,168.4	12.74	406.619	
787.4	787.4	765.4	765.4	1.6	13.1	-74.97	1,343.7	-5,003.9	5,181.2	5,166.5	14.70	352.363	
800.0	800.0	778.0	778.0	1.7	13.3	-74.97	1,343.7	-5,003.9	5,181.2	5,166.2	14.99	345.715	
885.8	885.8	863.8	863.8	1.9	15.0	-74.97	1,343.7	-5,003.9	5,181.2	5,164.3	16.91	306.372	
900.0	900.0	878.0	878.0	1.9	15.3	-74.97	1,343.7	-5,003.9	5,181.2	5,164.0	17.23	300.721	
984.2	984.2	962.2	962.2	2.1	17.0	-74.97	1,343.7	-5,003.9	5,181.2	5,162.1	19.12	271.023	
1,000.0	1,000.0	978.0	978.0	2.1	17.3	-74.97	1,343.7	-5,003.9	5,181.2	5,161.7	19.47	266.111	
1,082.7	1,082.7	1,060.7	1,060.7	2.3	19.0	-74.97	1,343.7	-5,003.9	5,181.2	5,159.9	21.32	243.000	
1,100.0	1,100.0	1,078.0	1,078.0	2.3	19.4	-74.97	1,343.7	-5,003.9	5,181.2	5,159.5	21.71	238.658	
1,181.1	1,181.1	1,159.1	1,159.1	2.5	21.0	-74.97	1,343.7	-5,003.9	5,181.2	5,157.7	23.53	220.237	
1,200.0	1,200.0	1,178.0	1,178.0	2.6	21.4	-74.97	1,343.7	-5,003.9	5,181.2	5,157.2	23.95	216.345	
1,279.5	1,279.5	1,257.5	1,257.5	2.7	23.0	-74.97	1,343.7	-5,003.9	5,181.2	5,155.5	25.73	201.377	
1,300.0	1,300.0	1,278.0	1,278.0	2.8	23.4	-74.97	1,343.7	-5,003.9	5,181.2	5,155.0	26.19	197.853	
1,377.9	1,377.9	1,355.9	1,355.9	3.0	25.0	-74.97	1,343.7	-5,003.9	5,181.2	5,153.3	27.93	185.496	
1,400.0	1,400.0	1,378.0	1,378.0	3.0	25.4	-74.97	1,343.7	-5,003.9	5,181.2	5,152.8	28.43	182.275	
1,476.4	1,476.4	1,454.4	1,454.4	3.2	26.9	0.16	1,343.7	-5,003.9	5,180.2	5,150.1	30.12	172.009	
1,500.0	1,500.0	1,478.0	1,478.0	3.2	27.4	0.16	1,343.7	-5,003.9	5,179.4	5,148.8	30.63	169.077	
1,574.8	1,574.7	1,552.7	1,552.7	3.4	28.9	0.16	1,343.7	-5,003.9	5,175.9	5,143.6	32.25	160.484	
1,600.0	1,599.8	1,577.8	1,577.8	3.4	29.4	0.16	1,343.7	-5,003.9	5,174.2	5,141.4	32.79	157.800	
1,673.2	1,672.8	1,650.8	1,650.8	3.6	30.9	0.16	1,343.7	-5,003.9	5,168.2	5,133.8	34.34	150.513	
1,700.0	1,699.5	1,677.5	1,677.5	3.7	31.4	0.16	1,343.7	-5,003.9	5,165.5	5,130.6	34.89	148.033	
1,771.6	1,770.6	1,748.6	1,748.6	3.8	32.9	0.16	1,343.7	-5,003.9	5,157.1	5,120.7	36.37	141.812	
1,800.0	1,798.7	1,776.7	1,776.7	3.9	33.4	0.16	1,343.7	-5,003.9	5,153.3	5,116.4	36.94	139.513	
1,870.1	1,868.0	1,846.0	1,846.0	4.1	34.8	0.16	1,343.7	-5,003.9	5,142.7	5,104.4	38.33	134.170	
1,900.0	1,897.5	1,875.5	1,875.5	4.2	35.4	0.16	1,343.7	-5,003.9	5,137.7	5,098.8	38.91	132.033	
1,968.5	1,964.8	1,942.8	1,942.8	4.4	36.8	0.16	1,343.7	-5,003.9	5,125.0	5,084.7	40.22	127.420	
2,000.0	1,995.6	1,973.6	1,973.6	4.5	37.4	0.16	1,343.7	-5,003.9	5,118.6	5,077.8	40.81	125.430	
2,066.9	2,060.9	2,038.9	2,038.9	4.7	38.7	0.16	1,343.7	-5,003.9	5,103.9	5,061.9	42.03	121.430	
2,100.0	2,093.1	2,071.1	2,071.1	4.8	39.4	0.17	1,343.7	-5,003.9	5,096.1	5,053.5	42.62	119.573	
2,165.3	2,156.3	2,134.3	2,134.3	5.1	40.6	0.17	1,343.7	-5,003.9	5,079.6	5,035.8	43.75	116.093	
2,200.0	2,189.6	2,167.6	2,167.6	5.2	41.3	0.17	1,343.7	-5,003.9	5,070.2	5,025.9	44.34	114.356	
2,263.8	2,250.7	2,228.7	2,228.7	5.5	42.5	0.17	1,343.7	-5,003.9	5,051.9	5,006.6	45.38	111.320	
2,280.0	2,266.2	2,244.2	2,244.2	5.6	42.8	0.17	1,343.7	-5,003.9	5,047.1	5,001.4	45.64	110.584	
2,300.0	2,285.3	2,263.3	2,263.3	5.7	43.2	0.17	1,343.7	-5,003.9	5,041.0	4,995.0	46.05	109.458	
2,362.2	2,344.6	2,322.6	2,322.6	6.0	44.4	0.17	1,343.7	-5,003.9	5,022.2	4,974.9	47.34	106.085	
2,400.0	2,380.6	2,358.6	2,358.6	6.2	45.1	0.17	1,343.7	-5,003.9	5,010.8	4,962.7	48.13	104.100	
2,460.6	2,438.4	2,416.4	2,416.4	6.5	46.3	0.17	1,343.7	-5,003.9	4,992.5	4,943.1	49.40	101.065	
2,500.0	2,475.9	2,453.9	2,453.9	6.7	47.1	0.17	1,343.7	-5,003.9	4,980.6	4,930.3	50.22	99.173	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,510.2	2,510.2	7.0	48.2	0.17	1,343.7	-5,003.9	4,962.7	4,911.3	51.46	96.446	
2,600.0	2,571.2	2,549.2	2,549.2	7.2	49.0	0.17	1,343.7	-5,003.9	4,950.3	4,898.0	52.31	94.630	
2,657.5	2,626.0	2,604.0	2,604.0	7.5	50.1	0.17	1,343.7	-5,003.9	4,932.9	4,879.4	53.52	92.176	
2,700.0	2,666.6	2,644.6	2,644.6	7.8	50.9	0.17	1,343.7	-5,003.9	4,920.1	4,865.7	54.41	90.429	
2,755.9	2,719.8	2,697.8	2,697.8	8.1	52.0	0.17	1,343.7	-5,003.9	4,903.2	4,847.6	55.58	88.215	
2,800.0	2,761.9	2,739.9	2,739.9	8.3	52.8	0.18	1,343.7	-5,003.9	4,889.9	4,833.3	56.51	86.533	
2,854.3	2,813.7	2,791.7	2,791.7	8.7	53.8	0.18	1,343.7	-5,003.9	4,873.4	4,815.8	57.65	84.533	
2,900.0	2,857.2	2,835.2	2,835.2	8.9	54.7	0.18	1,343.7	-5,003.9	4,859.6	4,801.0	58.61	82.912	
2,952.7	2,907.5	2,885.5	2,885.5	9.2	55.7	0.18	1,343.7	-5,003.9	4,843.7	4,783.9	59.72	81.102	
3,000.0	2,952.5	2,930.5	2,930.5	9.5	56.6	0.18	1,343.7	-5,003.9	4,829.4	4,768.7	60.72	79.537	
3,051.2	3,001.3	2,979.3	2,979.3	9.8	57.6	0.18	1,343.7	-5,003.9	4,813.9	4,752.1	61.80	77.898	
3,100.0	3,047.8	3,025.8	3,025.8	10.1	58.6	0.18	1,343.7	-5,003.9	4,799.1	4,736.3	62.83	76.386	
3,149.6	3,095.1	3,073.1	3,073.1	10.4	59.5	0.18	1,343.7	-5,003.9	4,784.1	4,720.3	63.87	74.899	
3,200.0	3,143.2	3,121.2	3,121.2	10.7	60.5	0.18	1,343.7	-5,003.9	4,768.9	4,704.0	64.94	73.436	
3,248.0	3,188.9	3,166.9	3,166.9	11.0	61.4	0.18	1,343.7	-5,003.9	4,754.4	4,688.4	65.95	72.086	
3,300.0	3,238.5	3,216.5	3,216.5	11.3	62.4	0.18	1,343.7	-5,003.9	4,738.7	4,671.6	67.05	70.671	
3,346.4	3,282.8	3,260.8	3,260.8	11.6	63.3	0.18	1,343.7	-5,003.9	4,724.6	4,656.6	68.04	69.443	
3,400.0	3,333.8	3,311.8	3,311.8	11.9	64.3	0.18	1,343.7	-5,003.9	4,708.4	4,639.3	69.17	68.072	
3,444.9	3,376.6	3,354.6	3,354.6	12.2	65.2	0.18	1,343.7	-5,003.9	4,694.9	4,624.7	70.12	66.956	
3,500.0	3,429.1	3,407.1	3,407.1	12.6	66.2	0.18	1,343.7	-5,003.9	4,678.2	4,606.9	71.29	65.626	
3,543.3	3,470.4	3,448.4	3,448.4	12.8	67.1	0.18	1,343.7	-5,003.9	4,665.1	4,592.9	72.20	64.611	
3,600.0	3,524.4	3,502.4	3,502.4	13.2	68.1	0.18	1,343.7	-5,003.9	4,648.0	4,574.5	73.40	63.320	
3,641.7	3,564.2	3,542.2	3,542.2	13.4	68.9	0.18	1,343.7	-5,003.9	4,635.3	4,561.0	74.29	62.396	
3,700.0	3,619.8	3,597.8	3,597.8	13.8	70.1	0.19	1,343.7	-5,003.9	4,617.7	4,542.2	75.52	61.142	
3,740.1	3,658.0	3,636.0	3,636.0	14.0	70.8	0.19	1,343.7	-5,003.9	4,605.6	4,529.2	76.38	60.301	
3,800.0	3,715.1	3,693.1	3,693.1	14.4	72.0	0.19	1,343.7	-5,003.9	4,587.5	4,509.8	77.65	59.082	
3,838.6	3,751.8	3,729.8	3,729.8	14.7	72.7	0.19	1,343.7	-5,003.9	4,575.8	4,497.3	78.46	58.317	
3,900.0	3,810.4	3,788.4	3,788.4	15.0	73.9	0.19	1,343.7	-5,003.9	4,557.2	4,477.5	79.77	57.131	
3,937.0	3,845.7	3,823.7	3,823.7	15.3	74.6	0.19	1,343.7	-5,003.9	4,546.0	4,465.5	80.55	56.434	
4,000.0	3,905.7	3,883.7	3,883.7	15.7	75.8	0.19	1,343.7	-5,003.9	4,527.0	4,445.1	81.89	55.280	
4,035.4	3,939.5	3,917.5	3,917.5	15.9	76.5	0.19	1,343.7	-5,003.9	4,516.3	4,433.6	82.64	54.647	
4,100.0	4,001.0	3,979.0	3,979.0	16.3	77.7	0.19	1,343.7	-5,003.9	4,496.8	4,412.7	84.02	53.522	
4,133.8	4,033.3	4,011.3	4,011.3	16.5	78.4	0.19	1,343.7	-5,003.9	4,486.5	4,401.8	84.74	52.947	
4,200.0	4,096.3	4,074.3	4,074.3	16.9	79.6	0.19	1,343.7	-5,003.9	4,466.5	4,380.4	86.14	51.851	
4,232.3	4,127.1	4,105.1	4,105.1	17.1	80.3	0.19	1,343.7	-5,003.9	4,456.8	4,369.9	86.83	51.329	
4,300.0	4,191.7	4,169.7	4,169.7	17.6	81.6	0.19	1,343.7	-5,003.9	4,436.3	4,348.0	88.27	50.259	
4,330.7	4,220.9	4,198.9	4,198.9	17.8	82.2	0.19	1,343.7	-5,003.9	4,427.0	4,338.1	88.92	49.786	
4,400.0	4,287.0	4,265.0	4,265.0	18.2	83.5	0.19	1,343.7	-5,003.9	4,406.0	4,315.7	90.39	48.742	
4,429.1	4,314.7	4,292.7	4,292.7	18.4	84.0	0.19	1,343.7	-5,003.9	4,397.2	4,306.2	91.01	48.314	
4,500.0	4,382.3	4,360.3	4,360.3	18.8	85.4	0.20	1,343.7	-5,003.9	4,375.8	4,283.3	92.52	47.295	
4,527.5	4,408.6	4,386.6	4,386.6	19.0	85.9	0.20	1,343.7	-5,003.9	4,367.5	4,274.4	93.11	46.907	
4,600.0	4,477.6	4,455.6	4,455.6	19.5	87.3	0.20	1,343.7	-5,003.9	4,345.6	4,250.9	94.65	45.912	
4,626.0	4,502.4	4,480.4	4,480.4	19.6	87.8	0.20	1,343.7	-5,003.9	4,337.7	4,242.5	95.20	45.563	
4,700.0	4,572.9	4,550.9	4,550.9	20.1	89.2	0.20	1,343.7	-5,003.9	4,315.3	4,218.6	96.78	44.590	
4,724.4	4,596.2	4,574.2	4,574.2	20.3	89.7	0.20	1,343.7	-5,003.9	4,308.0	4,210.7	97.30	44.276	
4,800.0	4,668.3	4,646.3	4,646.3	20.7	91.1	0.20	1,343.7	-5,003.9	4,285.1	4,186.2	98.91	43.324	
4,822.8	4,690.0	4,668.0	4,668.0	20.9	91.6	0.20	1,343.7	-5,003.9	4,278.2	4,178.8	99.39	43.043	
4,900.0	4,763.6	4,741.6	4,741.6	21.4	93.1	0.20	1,343.7	-5,003.9	4,254.9	4,153.8	101.04	42.112	
4,921.2	4,783.8	4,761.8	4,761.8	21.5	93.5	0.20	1,343.7	-5,003.9	4,248.4	4,146.9	101.49	41.861	
5,000.0	4,858.9	4,836.9	4,836.9	22.0	95.0	0.20	1,343.7	-5,003.9	4,224.6	4,121.5	103.17	40.949	
5,019.7	4,877.7	4,855.7	4,855.7	22.1	95.4	0.20	1,343.7	-5,003.9	4,218.7	4,115.1	103.59	40.726	
5,100.0	4,954.2	4,932.2	4,932.2	22.6	96.9	0.20	1,343.7	-5,003.9	4,194.4	4,089.1	105.30	39.833	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,949.5	4,949.5	22.8	97.2	0.20	1,343.7	-5,003.9	4,188.9	4,083.2	105.68	39.636	
5,171.8	5,022.7	5,000.7	5,000.7	23.1	98.3	0.21	1,343.7	-5,003.9	4,172.7	4,065.8	106.83	39.060	
5,200.0	5,049.6	5,027.6	5,027.6	23.3	98.8	0.21	1,343.7	-5,003.9	4,164.3	4,056.6	107.72	38.658	
5,216.5	5,065.4	5,043.4	5,043.4	23.3	99.1	0.21	1,343.7	-5,003.9	4,159.5	4,051.2	108.24	38.429	
5,300.0	5,145.7	5,123.7	5,123.7	23.7	100.7	0.20	1,343.7	-5,003.9	4,136.7	4,025.8	110.82	37.329	
5,314.9	5,160.1	5,138.1	5,138.1	23.8	101.0	0.20	1,343.7	-5,003.9	4,132.8	4,021.5	111.27	37.142	
5,400.0	5,242.7	5,220.7	5,220.7	24.1	102.7	0.20	1,343.7	-5,003.9	4,112.4	3,998.6	113.82	36.131	
5,413.4	5,255.7	5,233.7	5,233.7	24.2	103.0	0.20	1,343.7	-5,003.9	4,109.4	3,995.2	114.21	35.980	
5,500.0	5,340.5	5,318.5	5,318.5	24.5	104.7	0.20	1,343.7	-5,003.9	4,091.6	3,974.8	116.72	35.054	
5,511.8	5,352.1	5,330.1	5,330.1	24.5	104.9	0.20	1,343.7	-5,003.9	4,089.3	3,972.3	117.05	34.935	
5,600.0	5,439.0	5,417.0	5,417.0	24.8	106.6	0.20	1,343.7	-5,003.9	4,074.1	3,954.6	119.51	34.091	
5,610.2	5,449.1	5,427.1	5,427.1	24.8	106.8	0.20	1,343.7	-5,003.9	4,072.5	3,952.8	119.79	33.999	
5,700.0	5,538.0	5,516.0	5,516.0	25.1	108.6	0.20	1,343.7	-5,003.9	4,060.1	3,938.0	122.17	33.233	
5,708.6	5,546.6	5,524.6	5,524.6	25.1	108.8	0.20	1,343.7	-5,003.9	4,059.1	3,936.7	122.40	33.164	
5,800.0	5,637.4	5,615.4	5,615.4	25.3	110.6	0.20	1,343.7	-5,003.9	4,049.6	3,924.9	124.70	32.474	
5,807.1	5,644.5	5,622.5	5,622.5	25.3	110.8	0.20	1,343.7	-5,003.9	4,049.0	3,924.1	124.88	32.424	
5,900.0	5,737.2	5,715.2	5,715.2	25.5	112.6	0.20	1,343.7	-5,003.9	4,042.6	3,915.5	127.09	31.809	
5,905.5	5,742.6	5,720.6	5,720.6	25.5	112.8	0.20	1,343.7	-5,003.9	4,042.3	3,915.1	127.22	31.775	
6,000.0	5,837.1	5,815.1	5,815.1	25.6	114.7	0.20	1,343.7	-5,003.9	4,039.0	3,909.7	129.32	31.232	
6,003.9	5,841.0	5,819.0	5,819.0	25.6	114.7	0.20	1,343.7	-5,003.9	4,039.0	3,909.6	129.41	31.211	
6,051.8	5,888.9	5,866.9	5,866.9	25.7	115.7	-74.92	1,343.7	-5,003.9	4,038.6	3,897.2	141.36	28.569	
6,081.8	5,918.9	5,896.9	5,896.9	25.7	116.3	-74.92	1,343.7	-5,003.9	4,038.6	3,896.6	141.99	28.442 CC, ES, SF	
6,100.0	5,937.1	5,915.1	5,915.1	25.7	116.7	-164.92	1,343.7	-5,003.9	4,038.8	3,907.4	131.36	30.746	
6,102.3	5,939.4	5,917.4	5,917.4	25.7	116.7	-164.92	1,343.7	-5,003.9	4,038.9	3,907.5	131.39	30.739	
6,150.0	5,987.0	5,965.0	5,965.0	25.7	117.7	-164.87	1,343.7	-5,003.9	4,041.7	3,910.0	131.73	30.681	
6,200.0	6,036.5	6,014.5	6,014.5	25.7	118.7	-164.76	1,343.7	-5,003.9	4,048.0	3,916.5	131.50	30.784	
6,200.8	6,037.3	6,015.3	6,015.3	25.7	118.7	-164.76	1,343.7	-5,003.9	4,048.1	3,916.6	131.49	30.787	
6,250.0	6,085.5	6,063.5	6,063.5	25.7	119.6	-164.59	1,343.7	-5,003.9	4,057.6	3,926.9	130.64	31.059	
6,299.2	6,133.0	6,111.0	6,111.0	25.6	120.6	-164.36	1,343.7	-5,003.9	4,070.2	3,941.0	129.20	31.503	
6,300.0	6,133.7	6,111.7	6,111.7	25.6	120.6	-164.36	1,343.7	-5,003.9	4,070.4	3,941.3	129.17	31.512	
6,350.0	6,180.9	6,158.9	6,158.9	25.5	121.6	-164.05	1,343.7	-5,003.9	4,086.5	3,959.4	127.10	32.151	
6,397.6	6,224.6	6,202.6	6,202.6	25.4	122.4	-163.68	1,343.7	-5,003.9	4,104.8	3,980.2	124.60	32.944	
6,400.0	6,226.7	6,204.7	6,204.7	25.4	122.5	-163.66	1,343.7	-5,003.9	4,105.7	3,981.3	124.46	32.989	
6,450.0	6,271.1	6,249.1	6,249.1	25.2	123.4	-163.19	1,343.7	-5,003.9	4,128.0	4,006.7	121.28	34.037	
6,496.0	6,310.4	6,288.4	6,288.4	25.1	124.2	-162.65	1,343.7	-5,003.9	4,151.2	4,033.2	117.93	35.200	
6,500.0	6,313.7	6,291.7	6,291.7	25.1	124.2	-162.60	1,343.7	-5,003.9	4,153.3	4,035.6	117.63	35.308	
6,550.0	6,354.4	6,332.4	6,332.4	25.0	125.1	-161.89	1,343.7	-5,003.9	4,181.3	4,067.7	113.58	36.813	
6,594.5	6,388.9	6,366.9	6,366.9	24.9	125.7	-161.14	1,343.7	-5,003.9	4,208.6	4,098.8	109.75	38.347	
6,600.0	6,393.0	6,371.0	6,371.0	24.9	125.8	-161.04	1,343.7	-5,003.9	4,212.1	4,102.8	109.26	38.550	
6,650.0	6,429.3	6,407.3	6,407.3	24.8	126.6	-160.00	1,343.7	-5,003.9	4,245.4	4,140.6	104.83	40.496	
6,692.9	6,458.5	6,436.5	6,436.5	24.7	127.1	-158.92	1,343.7	-5,003.9	4,275.9	4,174.8	101.12	42.286	
6,700.0	6,463.1	6,441.1	6,441.1	24.7	127.2	-158.72	1,343.7	-5,003.9	4,281.1	4,180.6	100.52	42.588	
6,750.0	6,494.3	6,472.3	6,472.3	24.7	127.9	-157.16	1,343.7	-5,003.9	4,319.0	4,222.4	96.65	44.688	
6,791.3	6,517.9	6,495.9	6,495.9	24.7	128.3	-155.59	1,343.7	-5,003.9	4,351.9	4,257.8	94.08	46.259	
6,800.0	6,522.6	6,500.6	6,500.6	24.7	128.4	-155.22	1,343.7	-5,003.9	4,359.0	4,265.3	93.64	46.551	
6,850.0	6,548.0	6,526.0	6,526.0	24.7	128.9	-152.78	1,343.7	-5,003.9	4,400.7	4,308.7	92.08	47.793	
6,889.7	6,566.0	6,544.0	6,544.0	24.8	129.3	-150.35	1,343.7	-5,003.9	4,435.2	4,342.8	92.37	48.015	
6,900.0	6,570.4	6,548.4	6,548.4	24.9	129.4	-149.64	1,343.7	-5,003.9	4,444.2	4,351.5	92.72	47.932	
6,950.0	6,589.5	6,567.5	6,567.5	25.1	129.8	-145.55	1,343.7	-5,003.9	4,489.1	4,392.6	96.43	46.550	
6,988.2	6,602.0	6,580.0	6,580.0	25.3	130.0	-141.54	1,343.7	-5,003.9	4,524.2	4,422.3	101.89	44.401	
7,000.0	6,605.4	6,583.4	6,583.4	25.3	130.1	-140.10	1,343.7	-5,003.9	4,535.2	4,431.1	104.09	43.568	
7,050.0	6,618.0	6,596.0	6,596.0	25.6	130.4	-132.68	1,343.7	-5,003.9	4,582.2	4,466.0	116.20	39.436	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,625.0	6,603.0	6,603.0	25.9	130.5	-125.56	1,343.7	-5,003.9	4,617.2	4,489.6	127.58	36.192	
7,100.0	6,627.1	6,605.1	6,605.1	26.0	130.5	-122.52	1,343.7	-5,003.9	4,630.1	4,498.0	132.07	35.058	
7,150.0	6,632.8	6,610.8	6,610.8	26.5	130.7	-108.96	1,343.7	-5,003.9	4,678.5	4,530.3	148.22	31.564	
7,185.0	6,634.7	6,612.7	6,612.7	26.8	130.7	-97.56	1,343.7	-5,003.9	4,712.6	4,556.7	155.82	30.243	
7,200.0	6,635.0	6,613.0	6,613.0	27.0	130.7	-92.37	1,343.7	-5,003.9	4,727.2	4,569.9	157.29	30.054	
7,215.9	6,635.0	6,613.0	6,613.0	27.1	130.7	-86.78	1,343.7	-5,003.9	4,742.7	4,585.2	157.45	30.122	
7,283.4	6,634.1	6,612.1	6,612.1	27.9	130.7	-86.74	1,343.7	-5,003.9	4,808.5	4,650.3	158.26	30.384	
7,300.0	6,633.9	6,611.9	6,611.9	28.1	130.7	-86.72	1,343.7	-5,003.9	4,824.7	4,666.2	158.46	30.448	
7,381.9	6,632.9	6,610.9	6,610.9	29.3	130.7	-86.67	1,343.7	-5,003.9	4,904.6	4,745.0	159.60	30.730	
7,400.0	6,632.6	6,610.6	6,610.6	29.5	130.7	-86.65	1,343.7	-5,003.9	4,922.3	4,762.5	159.86	30.792	
7,480.3	6,631.6	6,609.6	6,609.6	30.8	130.6	-86.60	1,343.7	-5,003.9	5,000.8	4,839.7	161.13	31.036	
7,500.0	6,631.4	6,609.4	6,609.4	31.1	130.6	-86.58	1,343.7	-5,003.9	5,020.1	4,858.6	161.44	31.095	
7,578.7	6,630.4	6,608.4	6,608.4	32.5	130.6	-86.53	1,343.7	-5,003.9	5,097.1	4,934.3	162.82	31.306	
7,600.0	6,630.1	6,608.1	6,608.1	32.9	130.6	-86.51	1,343.7	-5,003.9	5,117.9	4,954.7	163.19	31.362	
7,677.1	6,629.1	6,607.1	6,607.1	34.3	130.6	-86.46	1,343.7	-5,003.9	5,193.4	5,028.8	164.64	31.544	
7,700.0	6,628.8	6,606.8	6,606.8	34.8	130.6	-86.44	1,343.7	-5,003.9	5,215.8	5,050.7	165.07	31.598	
7,775.6	6,627.8	6,605.8	6,605.8	36.3	130.6	-86.39	1,343.7	-5,003.9	5,289.8	5,123.3	166.58	31.756	
7,800.0	6,627.5	6,605.5	6,605.5	36.8	130.5	-86.37	1,343.7	-5,003.9	5,313.8	5,146.7	167.06	31.807	
7,874.0	6,626.6	6,604.6	6,604.6	38.4	130.5	-86.32	1,343.7	-5,003.9	5,386.3	5,217.7	168.61	31.946	
7,900.0	6,626.3	6,604.3	6,604.3	38.9	130.5	-86.30	1,343.7	-5,003.9	5,411.8	5,242.7	169.15	31.994	
7,972.4	6,625.3	6,603.3	6,603.3	40.5	130.5	-86.25	1,343.7	-5,003.9	5,482.9	5,312.2	170.72	32.115	
8,000.0	6,625.0	6,603.0	6,603.0	41.1	130.5	-86.23	1,343.7	-5,003.9	5,510.0	5,338.6	171.32	32.161	
8,070.8	6,624.1	6,602.1	6,602.1	42.7	130.5	-86.18	1,343.7	-5,003.9	5,579.5	5,406.6	172.91	32.268	
8,100.0	6,623.7	6,601.7	6,601.7	43.4	130.5	-86.16	1,343.7	-5,003.9	5,608.2	5,434.6	173.56	32.312	
8,169.3	6,622.8	6,600.8	6,600.8	45.0	130.5	-86.11	1,343.7	-5,003.9	5,676.2	5,501.1	175.15	32.407	
8,200.0	6,622.4	6,600.4	6,600.4	45.7	130.4	-86.09	1,343.7	-5,003.9	5,706.4	5,530.5	175.86	32.448	
8,267.7	6,621.6	6,599.6	6,599.6	47.4	130.4	-86.04	1,343.7	-5,003.9	5,773.0	5,595.5	177.45	32.533	
8,300.0	6,621.1	6,599.1	6,599.1	48.1	130.4	-86.02	1,343.7	-5,003.9	5,804.7	5,626.5	178.21	32.573	
8,366.1	6,620.3	6,598.3	6,598.3	49.7	130.4	-85.97	1,343.7	-5,003.9	5,869.8	5,690.0	179.79	32.648	
8,400.0	6,619.9	6,597.9	6,597.9	50.6	130.4	-85.95	1,343.7	-5,003.9	5,903.1	5,722.5	180.60	32.687	
8,464.5	6,619.0	6,597.0	6,597.0	52.2	130.4	-85.90	1,343.7	-5,003.9	5,966.6	5,784.4	182.16	32.754	
8,500.0	6,618.6	6,596.6	6,596.6	53.0	130.4	-85.88	1,343.7	-5,003.9	6,001.5	5,818.5	183.02	32.791	
8,563.0	6,617.8	6,595.8	6,595.8	54.6	130.4	-85.83	1,343.7	-5,003.9	6,063.5	5,878.9	184.57	32.852	
8,600.0	6,617.3	6,595.3	6,595.3	55.5	130.3	-85.81	1,343.7	-5,003.9	6,100.0	5,914.5	185.48	32.888	
8,661.4	6,616.5	6,594.5	6,594.5	57.1	130.3	-85.76	1,343.7	-5,003.9	6,160.5	5,973.5	187.01	32.943	
8,700.0	6,616.0	6,594.0	6,594.0	58.1	130.3	-85.74	1,343.7	-5,003.9	6,198.5	6,010.5	187.96	32.977	
8,759.8	6,615.2	6,593.2	6,593.2	59.6	130.3	-85.69	1,343.7	-5,003.9	6,257.5	6,068.0	189.47	33.027	
8,800.0	6,614.7	6,592.7	6,592.7	60.6	130.3	-85.66	1,343.7	-5,003.9	6,297.1	6,106.6	190.47	33.060	
8,858.2	6,614.0	6,592.0	6,592.0	62.1	130.3	-85.62	1,343.7	-5,003.9	6,354.5	6,162.6	191.95	33.106	
8,900.0	6,613.4	6,591.4	6,591.4	63.2	130.3	-85.59	1,343.7	-5,003.9	6,395.7	6,202.7	193.00	33.138	
8,956.7	6,612.7	6,590.7	6,590.7	64.7	130.3	-85.55	1,343.7	-5,003.9	6,451.6	6,257.1	194.45	33.179	
9,000.0	6,612.2	6,590.2	6,590.2	65.8	130.2	-85.52	1,343.7	-5,003.9	6,494.3	6,298.8	195.55	33.211	
9,055.1	6,611.5	6,589.5	6,589.5	67.3	130.2	-85.48	1,343.7	-5,003.9	6,548.7	6,351.8	196.96	33.249	
9,100.0	6,610.9	6,588.9	6,588.9	68.4	130.2	-85.45	1,343.7	-5,003.9	6,593.0	6,394.9	198.11	33.279	
9,153.5	6,610.2	6,588.2	6,588.2	69.8	130.2	-85.41	1,343.7	-5,003.9	6,645.9	6,446.4	199.49	33.314	
9,200.0	6,609.6	6,587.6	6,587.6	71.1	130.2	-85.38	1,343.7	-5,003.9	6,691.8	6,491.1	200.69	33.344	
9,251.9	6,608.9	6,586.9	6,586.9	72.4	130.2	-85.34	1,343.7	-5,003.9	6,743.1	6,541.0	202.04	33.376	
9,300.0	6,608.3	6,586.3	6,586.3	73.7	130.2	-85.31	1,343.7	-5,003.9	6,790.5	6,587.3	203.28	33.405	
9,350.4	6,607.7	6,585.7	6,585.7	75.0	130.1	-85.27	1,343.7	-5,003.9	6,840.3	6,635.7	204.59	33.434	
9,400.0	6,607.0	6,585.0	6,585.0	76.4	130.1	-85.24	1,343.7	-5,003.9	6,889.3	6,683.5	205.88	33.463	
9,448.8	6,606.4	6,584.4	6,584.4	77.7	130.1	-85.20	1,343.7	-5,003.9	6,937.6	6,730.4	207.16	33.490	
9,500.0	6,605.7	6,583.7	6,583.7	79.0	130.1	-85.17	1,343.7	-5,003.9	6,988.2	6,779.7	208.49	33.518	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BLOSKAS #1 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,605.1	6,583.1	6,583.1	80.3	130.1	-85.13	1,343.7	-5,003.9	7,034.9	6,825.1	209.73	33.543	
9,600.0	6,604.5	6,582.5	6,582.5	81.7	130.1	-85.10	1,343.7	-5,003.9	7,087.1	6,875.9	211.11	33.570	
9,645.6	6,603.9	6,581.9	6,581.9	82.9	130.1	-85.06	1,343.7	-5,003.9	7,132.2	6,919.9	212.31	33.593	
9,700.0	6,603.2	6,581.2	6,581.2	84.4	130.1	-85.03	1,343.7	-5,003.9	7,186.0	6,972.2	213.74	33.620	
9,744.1	6,602.6	6,580.6	6,580.6	85.6	130.0	-84.99	1,343.7	-5,003.9	7,229.6	7,014.7	214.90	33.641	
9,800.0	6,601.9	6,579.9	6,579.9	87.1	130.0	-84.95	1,343.7	-5,003.9	7,284.9	7,068.5	216.38	33.668	
9,842.5	6,601.3	6,579.3	6,579.3	88.2	130.0	-84.92	1,343.7	-5,003.9	7,326.9	7,109.4	217.50	33.687	
9,900.0	6,600.6	6,578.6	6,578.6	89.8	130.0	-84.88	1,343.7	-5,003.9	7,383.8	7,164.8	219.02	33.714	
9,940.9	6,600.1	6,578.1	6,578.1	90.9	130.0	-84.85	1,343.7	-5,003.9	7,424.4	7,204.3	220.10	33.732	
10,000.0	6,599.3	6,577.3	6,577.3	92.5	130.0	-84.81	1,343.7	-5,003.9	7,482.8	7,261.2	221.66	33.757	
10,039.3	6,598.8	6,576.8	6,576.8	93.5	130.0	-84.78	1,343.7	-5,003.9	7,521.8	7,299.1	222.71	33.774	
10,100.0	6,598.0	6,576.0	6,576.0	95.2	130.0	-84.74	1,343.7	-5,003.9	7,581.8	7,357.5	224.32	33.800	
10,137.8	6,597.5	6,575.5	6,575.5	96.2	129.9	-84.71	1,343.7	-5,003.9	7,619.3	7,393.9	225.32	33.815	
10,200.0	6,596.7	6,574.7	6,574.7	97.9	129.9	-84.67	1,343.7	-5,003.9	7,680.9	7,453.9	226.97	33.840	
10,236.2	6,596.3	6,574.3	6,574.3	98.9	129.9	-84.64	1,343.7	-5,003.9	7,716.7	7,488.8	227.94	33.855	
10,300.0	6,595.4	6,573.4	6,573.4	100.6	129.9	-84.60	1,343.7	-5,003.9	7,780.0	7,550.3	229.64	33.880	
10,334.6	6,595.0	6,573.0	6,573.0	101.6	129.9	-84.57	1,343.7	-5,003.9	7,814.3	7,583.7	230.56	33.893	
10,400.0	6,594.2	6,572.2	6,572.2	103.4	129.9	-84.53	1,343.7	-5,003.9	7,879.0	7,646.7	232.30	33.917	
10,433.0	6,593.7	6,571.7	6,571.7	104.3	129.9	-84.50	1,343.7	-5,003.9	7,911.8	7,678.6	233.18	33.930	
10,500.0	6,592.9	6,570.9	6,570.9	106.1	129.9	-84.46	1,343.7	-5,003.9	7,978.2	7,743.2	234.97	33.954	
10,531.5	6,592.5	6,570.5	6,570.5	106.9	129.8	-84.43	1,343.7	-5,003.9	8,009.4	7,773.5	235.81	33.965	
10,600.0	6,591.6	6,569.6	6,569.6	108.8	129.8	-84.38	1,343.7	-5,003.9	8,077.3	7,839.6	237.64	33.990	
10,629.9	6,591.2	6,569.2	6,569.2	109.6	129.8	-84.36	1,343.7	-5,003.9	8,106.9	7,868.5	238.44	34.000	
10,700.0	6,590.3	6,568.3	6,568.3	111.6	129.8	-84.31	1,343.7	-5,003.9	8,176.4	7,936.1	240.31	34.024	
10,728.3	6,589.9	6,567.9	6,567.9	112.3	129.8	-84.29	1,343.7	-5,003.9	8,204.5	7,963.5	241.07	34.033	
10,800.0	6,589.0	6,567.0	6,567.0	114.3	129.8	-84.24	1,343.7	-5,003.9	8,275.6	8,032.6	242.99	34.057	
10,826.7	6,588.7	6,566.7	6,566.7	115.0	129.8	-84.22	1,343.7	-5,003.9	8,302.1	8,058.4	243.71	34.066	
10,900.0	6,587.7	6,565.7	6,565.7	117.1	129.7	-84.17	1,343.7	-5,003.9	8,374.8	8,129.1	245.67	34.090	
10,925.2	6,587.4	6,565.4	6,565.4	117.7	129.7	-84.15	1,343.7	-5,003.9	8,399.8	8,153.4	246.35	34.098	
11,000.0	6,586.4	6,564.4	6,564.4	119.8	129.7	-84.10	1,343.7	-5,003.9	8,474.0	8,225.7	248.35	34.121	
11,023.6	6,586.1	6,564.1	6,564.1	120.4	129.7	-84.08	1,343.7	-5,003.9	8,497.4	8,248.4	248.98	34.128	
11,100.0	6,585.1	6,563.1	6,563.1	122.6	129.7	-84.03	1,343.7	-5,003.9	8,573.2	8,322.2	251.03	34.152	
11,122.0	6,584.8	6,562.8	6,562.8	123.2	129.7	-84.01	1,343.7	-5,003.9	8,595.1	8,343.5	251.63	34.158	
11,200.0	6,583.8	6,561.8	6,561.8	125.3	129.7	-83.96	1,343.7	-5,003.9	8,672.5	8,418.8	253.72	34.182	
11,220.4	6,583.6	6,561.6	6,561.6	125.9	129.7	-83.94	1,343.7	-5,003.9	8,692.8	8,438.5	254.27	34.188	
11,300.0	6,582.5	6,560.5	6,560.5	128.1	129.6	-83.88	1,343.7	-5,003.9	8,771.8	8,515.3	256.40	34.211	
11,318.9	6,582.3	6,560.3	6,560.3	128.6	129.6	-83.87	1,343.7	-5,003.9	8,790.5	8,533.6	256.91	34.216	
11,400.0	6,581.2	6,559.2	6,559.2	130.8	129.6	-83.81	1,343.7	-5,003.9	8,871.0	8,611.9	259.09	34.239	
11,417.3	6,581.0	6,559.0	6,559.0	131.3	129.6	-83.80	1,343.7	-5,003.9	8,888.2	8,628.7	259.56	34.244	
11,500.0	6,580.0	6,558.0	6,558.0	133.6	129.6	-83.74	1,343.7	-5,003.9	8,970.3	8,708.6	261.78	34.267	
11,515.7	6,579.7	6,557.7	6,557.7	134.0	129.6	-83.73	1,343.7	-5,003.9	8,985.9	8,723.7	262.20	34.271	
11,600.0	6,578.7	6,556.7	6,556.7	136.3	129.6	-83.67	1,343.7	-5,003.9	9,069.6	8,805.2	264.47	34.294	
11,614.1	6,578.5	6,556.5	6,556.5	136.7	129.6	-83.66	1,343.7	-5,003.9	9,083.7	8,818.8	264.85	34.298	
11,700.0	6,577.4	6,555.4	6,555.4	139.1	129.5	-83.60	1,343.7	-5,003.9	9,169.0	8,901.8	267.16	34.321	
11,712.6	6,577.2	6,555.2	6,555.2	139.5	129.5	-83.59	1,343.7	-5,003.9	9,181.5	8,914.0	267.50	34.324	
11,800.0	6,576.1	6,554.1	6,554.1	141.9	129.5	-83.53	1,343.7	-5,003.9	9,268.3	8,998.5	269.85	34.347	
11,811.0	6,575.9	6,553.9	6,553.9	142.2	129.5	-83.52	1,343.7	-5,003.9	9,279.2	9,009.1	270.14	34.349	
11,882.7	6,575.0	6,553.0	6,553.0	144.2	129.5	-83.47	1,343.7	-5,003.9	9,350.5	9,078.4	272.07	34.368	
11,883.5	6,575.0	6,553.0	6,553.0	144.2	129.5	-83.47	1,343.7	-5,003.9	9,351.3	9,079.2	272.09	34.369	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-87.03	258.5	-4,984.1	4,990.9				
98.4	98.4	66.4	66.4	0.1	0.1	-87.03	258.5	-4,984.1	4,990.8	4,990.6	0.17	N/A	
100.0	100.0	68.0	68.0	0.1	0.1	-87.03	258.5	-4,984.1	4,990.8	4,990.6	0.17	N/A	
196.8	196.8	164.8	164.8	0.3	1.8	-87.03	258.5	-4,984.1	4,990.8	4,988.7	2.12	2,354.167	
200.0	200.0	168.0	168.0	0.3	1.9	-87.03	258.5	-4,984.1	4,990.8	4,988.6	2.21	2,258.746	
295.3	295.3	263.3	263.3	0.5	4.0	-87.03	258.5	-4,984.1	4,990.8	4,986.2	4.57	1,092.770	
300.0	300.0	268.0	268.0	0.5	4.1	-87.03	258.5	-4,984.1	4,990.8	4,986.1	4.68	1,067.501	
393.7	393.7	361.7	361.7	0.8	6.0	-87.03	258.5	-4,984.1	4,990.8	4,984.0	6.80	733.955	
400.0	400.0	368.0	368.0	0.8	6.2	-87.03	258.5	-4,984.1	4,990.8	4,983.8	6.94	718.923	
492.1	492.1	460.1	460.1	1.0	8.0	-87.03	258.5	-4,984.1	4,990.8	4,981.8	9.02	553.588	
500.0	500.0	468.0	468.0	1.0	8.2	-87.03	258.5	-4,984.1	4,990.8	4,981.6	9.19	542.930	
590.5	590.5	558.5	558.5	1.2	10.0	-87.03	258.5	-4,984.1	4,990.8	4,979.5	11.22	444.627	
600.0	600.0	568.0	568.0	1.2	10.2	-87.03	258.5	-4,984.1	4,990.8	4,979.3	11.44	436.387	
689.0	689.0	657.0	657.0	1.4	12.0	-87.03	258.5	-4,984.1	4,990.8	4,977.3	13.43	371.588	
700.0	700.0	668.0	668.0	1.4	12.2	-87.03	258.5	-4,984.1	4,990.8	4,977.1	13.68	364.877	
787.4	787.4	755.4	755.4	1.6	14.0	-87.03	258.5	-4,984.1	4,990.8	4,975.1	15.64	319.194	
800.0	800.0	768.0	768.0	1.7	14.2	-87.03	258.5	-4,984.1	4,990.8	4,974.9	15.92	313.536	
885.8	885.8	853.8	853.8	1.9	16.0	-87.03	258.5	-4,984.1	4,990.8	4,972.9	17.84	279.765	
900.0	900.0	868.0	868.0	1.9	16.3	-87.03	258.5	-4,984.1	4,990.8	4,972.6	18.16	274.876	
984.2	984.2	952.2	952.2	2.1	18.0	-87.03	258.5	-4,984.1	4,990.8	4,970.7	20.04	249.015	
1,000.0	1,000.0	968.0	968.0	2.1	18.3	-87.03	258.5	-4,984.1	4,990.8	4,970.4	20.39	244.712	
1,082.7	1,082.7	1,050.7	1,050.7	2.3	19.9	-87.03	258.5	-4,984.1	4,990.8	4,968.5	22.24	224.360	
1,100.0	1,100.0	1,068.0	1,068.0	2.3	20.3	-87.03	258.5	-4,984.1	4,990.8	4,968.1	22.63	220.517	
1,181.1	1,181.1	1,149.1	1,149.1	2.5	21.9	-87.03	258.5	-4,984.1	4,990.8	4,966.3	24.45	204.151	
1,200.0	1,200.0	1,168.0	1,168.0	2.6	22.3	-87.03	258.5	-4,984.1	4,990.8	4,965.9	24.87	200.680	
1,279.5	1,279.5	1,247.5	1,247.5	2.7	23.9	-87.03	258.5	-4,984.1	4,990.8	4,964.1	26.65	187.283	
1,300.0	1,300.0	1,268.0	1,268.0	2.8	24.3	-87.03	258.5	-4,984.1	4,990.8	4,963.7	27.11	184.118	
1,377.9	1,377.9	1,345.9	1,345.9	3.0	25.9	-87.03	258.5	-4,984.1	4,990.8	4,961.9	28.85	172.991	
1,400.0	1,400.0	1,368.0	1,368.0	3.0	26.3	-87.03	258.5	-4,984.1	4,990.8	4,961.4	29.34	170.083	
1,476.4	1,476.4	1,444.4	1,444.4	3.2	27.9	-11.91	258.5	-4,984.1	4,989.8	4,958.7	31.03	160.789	
1,500.0	1,500.0	1,468.0	1,468.0	3.2	28.3	-11.92	258.5	-4,984.1	4,989.1	4,957.5	31.55	158.127	
1,574.8	1,574.7	1,542.7	1,542.7	3.4	29.8	-11.94	258.5	-4,984.1	4,985.6	4,952.4	33.17	150.310	
1,600.0	1,599.8	1,567.8	1,567.8	3.4	30.3	-11.95	258.5	-4,984.1	4,983.9	4,950.2	33.71	147.861	
1,673.2	1,672.8	1,640.8	1,640.8	3.6	31.8	-11.99	258.5	-4,984.1	4,978.0	4,942.8	35.25	141.201	
1,700.0	1,699.5	1,667.5	1,667.5	3.7	32.3	-12.01	258.5	-4,984.1	4,975.4	4,939.6	35.81	138.929	
1,771.6	1,770.6	1,738.6	1,738.6	3.8	33.8	-12.06	258.5	-4,984.1	4,967.2	4,929.9	37.29	133.218	
1,800.0	1,798.7	1,766.7	1,766.7	3.9	34.3	-12.09	258.5	-4,984.1	4,963.5	4,925.6	37.86	131.103	
1,870.1	1,868.0	1,836.0	1,836.0	4.1	35.7	-12.16	258.5	-4,984.1	4,953.1	4,913.9	39.26	126.177	
1,900.0	1,897.5	1,865.5	1,865.5	4.2	36.3	-12.19	258.5	-4,984.1	4,948.2	4,908.4	39.84	124.203	
1,968.5	1,964.8	1,932.8	1,932.8	4.4	37.7	-12.27	258.5	-4,984.1	4,935.8	4,894.6	41.15	119.932	
2,000.0	1,995.6	1,963.6	1,963.6	4.5	38.3	-12.32	258.5	-4,984.1	4,929.5	4,887.8	41.75	118.085	
2,066.9	2,060.9	2,028.9	2,028.9	4.7	39.6	-12.42	258.5	-4,984.1	4,915.2	4,872.2	42.98	114.364	
2,100.0	2,093.1	2,061.1	2,061.1	4.8	40.3	-12.47	258.5	-4,984.1	4,907.5	4,864.0	43.57	112.631	
2,165.3	2,156.3	2,124.3	2,124.3	5.1	41.5	-12.58	258.5	-4,984.1	4,891.4	4,846.7	44.72	109.377	
2,200.0	2,189.6	2,157.6	2,157.6	5.2	42.2	-12.65	258.5	-4,984.1	4,882.2	4,836.9	45.31	107.748	
2,263.8	2,250.7	2,218.7	2,218.7	5.5	43.4	-12.78	258.5	-4,984.1	4,864.4	4,818.0	46.38	104.892	
2,280.0	2,266.2	2,234.2	2,234.2	5.6	43.7	-12.81	258.5	-4,984.1	4,859.6	4,813.0	46.64	104.198	
2,300.0	2,285.3	2,253.3	2,253.3	5.7	44.1	-12.83	258.5	-4,984.1	4,853.7	4,806.7	47.06	103.148	
2,362.2	2,344.6	2,312.6	2,312.6	6.0	45.3	-12.88	258.5	-4,984.1	4,835.3	4,787.0	48.35	100.001	
2,400.0	2,380.6	2,348.6	2,348.6	6.2	46.0	-12.91	258.5	-4,984.1	4,824.2	4,775.0	49.15	98.147	
2,460.6	2,438.4	2,406.4	2,406.4	6.5	47.2	-12.96	258.5	-4,984.1	4,806.3	4,755.8	50.43	95.310	
2,500.0	2,475.9	2,443.9	2,443.9	6.7	48.0	-12.99	258.5	-4,984.1	4,794.6	4,743.4	51.26	93.541	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,500.2	2,500.2	7.0	49.1	-13.04	258.5	-4,984.1	4,777.2	4,724.7	52.50	90.988	
2,600.0	2,571.2	2,539.2	2,539.2	7.2	49.9	-13.07	258.5	-4,984.1	4,765.1	4,711.7	53.37	89.287	
2,657.5	2,626.0	2,594.0	2,594.0	7.5	51.0	-13.12	258.5	-4,984.1	4,748.1	4,693.6	54.59	86.985	
2,700.0	2,666.6	2,634.6	2,634.6	7.8	51.8	-13.15	258.5	-4,984.1	4,735.6	4,680.1	55.49	85.347	
2,755.9	2,719.8	2,687.8	2,687.8	8.1	52.9	-13.20	258.5	-4,984.1	4,719.1	4,662.4	56.67	83.269	
2,800.0	2,761.9	2,729.9	2,729.9	8.3	53.7	-13.24	258.5	-4,984.1	4,706.1	4,648.5	57.61	81.689	
2,854.3	2,813.7	2,781.7	2,781.7	8.7	54.8	-13.28	258.5	-4,984.1	4,690.1	4,631.3	58.77	79.809	
2,900.0	2,857.2	2,825.2	2,825.2	8.9	55.6	-13.32	258.5	-4,984.1	4,676.6	4,616.8	59.74	78.285	
2,952.7	2,907.5	2,875.5	2,875.5	9.2	56.6	-13.37	258.5	-4,984.1	4,661.0	4,600.2	60.86	76.583	
3,000.0	2,952.5	2,920.5	2,920.5	9.5	57.6	-13.41	258.5	-4,984.1	4,647.1	4,585.2	61.87	75.110	
3,051.2	3,001.3	2,969.3	2,969.3	9.8	58.5	-13.45	258.5	-4,984.1	4,632.0	4,569.0	62.96	73.566	
3,100.0	3,047.8	3,015.8	3,015.8	10.1	59.5	-13.49	258.5	-4,984.1	4,617.6	4,553.6	64.01	72.142	
3,149.6	3,095.1	3,063.1	3,063.1	10.4	60.4	-13.54	258.5	-4,984.1	4,603.0	4,537.9	65.07	70.741	
3,200.0	3,143.2	3,111.2	3,111.2	10.7	61.4	-13.58	258.5	-4,984.1	4,588.1	4,522.0	66.15	69.363	
3,248.0	3,188.9	3,156.9	3,156.9	11.0	62.3	-13.62	258.5	-4,984.1	4,574.0	4,506.8	67.18	68.089	
3,300.0	3,238.5	3,206.5	3,206.5	11.3	63.3	-13.67	258.5	-4,984.1	4,558.7	4,490.4	68.29	66.754	
3,346.4	3,282.8	3,250.8	3,250.8	11.6	64.2	-13.71	258.5	-4,984.1	4,545.0	4,475.7	69.29	65.596	
3,400.0	3,333.8	3,301.8	3,301.8	11.9	65.2	-13.76	258.5	-4,984.1	4,529.2	4,458.8	70.44	64.302	
3,444.9	3,376.6	3,344.6	3,344.6	12.2	66.1	-13.80	258.5	-4,984.1	4,516.0	4,444.6	71.40	63.248	
3,500.0	3,429.1	3,397.1	3,397.1	12.6	67.1	-13.85	258.5	-4,984.1	4,499.8	4,427.2	72.59	61.992	
3,543.3	3,470.4	3,438.4	3,438.4	12.8	68.0	-13.89	258.5	-4,984.1	4,487.0	4,413.5	73.52	61.033	
3,600.0	3,524.4	3,492.4	3,492.4	13.2	69.1	-13.94	258.5	-4,984.1	4,470.4	4,395.6	74.74	59.814	
3,641.7	3,564.2	3,532.2	3,532.2	13.4	69.9	-13.98	258.5	-4,984.1	4,458.1	4,382.4	75.64	58.940	
3,700.0	3,619.8	3,587.8	3,587.8	13.8	71.0	-14.04	258.5	-4,984.1	4,440.9	4,364.0	76.89	57.755	
3,740.1	3,658.0	3,626.0	3,626.0	14.0	71.7	-14.08	258.5	-4,984.1	4,429.1	4,351.4	77.76	56.960	
3,800.0	3,715.1	3,683.1	3,683.1	14.4	72.9	-14.13	258.5	-4,984.1	4,411.5	4,332.5	79.05	55.807	
3,838.6	3,751.8	3,719.8	3,719.8	14.7	73.6	-14.17	258.5	-4,984.1	4,400.2	4,320.3	79.88	55.083	
3,900.0	3,810.4	3,778.4	3,778.4	15.0	74.8	-14.23	258.5	-4,984.1	4,382.1	4,300.9	81.21	53.961	
3,937.0	3,845.7	3,813.7	3,813.7	15.3	75.5	-14.27	258.5	-4,984.1	4,371.3	4,289.2	82.01	53.303	
4,000.0	3,905.7	3,873.7	3,873.7	15.7	76.7	-14.33	258.5	-4,984.1	4,352.7	4,269.4	83.37	52.210	
4,035.4	3,939.5	3,907.5	3,907.5	15.9	77.4	-14.36	258.5	-4,984.1	4,342.3	4,258.2	84.14	51.611	
4,100.0	4,001.0	3,969.0	3,969.0	16.3	78.6	-14.43	258.5	-4,984.1	4,323.4	4,237.8	85.53	50.546	
4,133.8	4,033.3	4,001.3	4,001.3	16.5	79.3	-14.46	258.5	-4,984.1	4,313.4	4,227.2	86.27	50.001	
4,200.0	4,096.3	4,064.3	4,064.3	16.9	80.6	-14.53	258.5	-4,984.1	4,294.0	4,206.3	87.70	48.963	
4,232.3	4,127.1	4,095.1	4,095.1	17.1	81.2	-14.56	258.5	-4,984.1	4,284.5	4,196.1	88.40	48.469	
4,300.0	4,191.7	4,159.7	4,159.7	17.6	82.5	-14.63	258.5	-4,984.1	4,264.7	4,174.8	89.87	47.456	
4,330.7	4,220.9	4,188.9	4,188.9	17.8	83.1	-14.66	258.5	-4,984.1	4,255.7	4,165.1	90.53	47.007	
4,400.0	4,287.0	4,255.0	4,255.0	18.2	84.4	-14.73	258.5	-4,984.1	4,235.3	4,143.3	92.04	46.018	
4,429.1	4,314.7	4,282.7	4,282.7	18.4	84.9	-14.76	258.5	-4,984.1	4,226.8	4,134.1	92.67	45.612	
4,500.0	4,382.3	4,350.3	4,350.3	18.8	86.3	-14.84	258.5	-4,984.1	4,206.0	4,111.8	94.21	44.646	
4,527.5	4,408.6	4,376.6	4,376.6	19.0	86.8	-14.86	258.5	-4,984.1	4,197.9	4,103.1	94.81	44.279	
4,600.0	4,477.6	4,445.6	4,445.6	19.5	88.2	-14.94	258.5	-4,984.1	4,176.7	4,080.3	96.38	43.336	
4,626.0	4,502.4	4,470.4	4,470.4	19.6	88.7	-14.97	258.5	-4,984.1	4,169.1	4,072.1	96.94	43.005	
4,700.0	4,572.9	4,540.9	4,540.9	20.1	90.1	-15.05	258.5	-4,984.1	4,147.4	4,048.8	98.56	42.082	
4,724.4	4,596.2	4,564.2	4,564.2	20.3	90.6	-15.07	258.5	-4,984.1	4,140.2	4,041.2	99.09	41.784	
4,800.0	4,668.3	4,636.3	4,636.3	20.7	92.1	-15.16	258.5	-4,984.1	4,118.1	4,017.4	100.73	40.882	
4,822.8	4,690.0	4,658.0	4,658.0	20.9	92.5	-15.18	258.5	-4,984.1	4,111.4	4,010.2	101.23	40.615	
4,900.0	4,763.6	4,731.6	4,731.6	21.4	94.0	-15.27	258.5	-4,984.1	4,088.8	3,985.9	102.91	39.732	
4,921.2	4,783.8	4,751.8	4,751.8	21.5	94.4	-15.29	258.5	-4,984.1	4,082.6	3,979.2	103.37	39.494	
5,000.0	4,858.9	4,826.9	4,826.9	22.0	95.9	-15.38	258.5	-4,984.1	4,059.6	3,954.5	105.09	38.629	
5,019.7	4,877.7	4,845.7	4,845.7	22.1	96.3	-15.40	258.5	-4,984.1	4,053.8	3,948.3	105.52	38.417	
5,100.0	4,954.2	4,922.2	4,922.2	22.6	97.8	-15.49	258.5	-4,984.1	4,030.3	3,923.1	107.27	37.570	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,939.5	4,939.5	22.8	98.2	-15.51	258.5	-4,984.1	4,025.0	3,917.4	107.67	37.383	
5,171.8	5,022.7	4,990.7	4,990.7	23.1	99.2	-15.58	258.5	-4,984.1	4,009.4	3,900.5	108.84	36.836	
5,200.0	5,049.6	5,017.6	5,017.6	23.3	99.7	-15.56	258.5	-4,984.1	4,001.2	3,891.5	109.72	36.467	
5,216.5	5,065.4	5,033.4	5,033.4	23.3	100.0	-15.56	258.5	-4,984.1	3,996.6	3,886.4	110.23	36.256	
5,300.0	5,145.7	5,113.7	5,113.7	23.7	101.7	-15.52	258.5	-4,984.1	3,974.6	3,861.8	112.78	35.242	
5,314.9	5,160.1	5,128.1	5,128.1	23.8	101.9	-15.51	258.5	-4,984.1	3,970.8	3,857.6	113.23	35.070	
5,400.0	5,242.7	5,210.7	5,210.7	24.1	103.6	-15.48	258.5	-4,984.1	3,951.1	3,835.4	115.75	34.136	
5,413.4	5,255.7	5,223.7	5,223.7	24.2	103.9	-15.48	258.5	-4,984.1	3,948.2	3,832.1	116.13	33.997	
5,500.0	5,340.5	5,308.5	5,308.5	24.5	105.6	-15.46	258.5	-4,984.1	3,931.0	3,812.4	118.62	33.141	
5,511.8	5,352.1	5,320.1	5,320.1	24.5	105.8	-15.45	258.5	-4,984.1	3,928.8	3,809.9	118.95	33.030	
5,600.0	5,439.0	5,407.0	5,407.0	24.8	107.6	-15.43	258.5	-4,984.1	3,914.2	3,792.8	121.38	32.248	
5,610.2	5,449.1	5,417.1	5,417.1	24.8	107.8	-15.43	258.5	-4,984.1	3,912.7	3,791.0	121.65	32.162	
5,700.0	5,538.0	5,506.0	5,506.0	25.1	109.5	-15.41	258.5	-4,984.1	3,900.7	3,776.7	124.02	31.452	
5,708.6	5,546.6	5,514.6	5,514.6	25.1	109.7	-15.41	258.5	-4,984.1	3,899.7	3,775.4	124.24	31.387	
5,800.0	5,637.4	5,605.4	5,605.4	25.3	111.5	-15.40	258.5	-4,984.1	3,890.6	3,764.0	126.54	30.746	
5,807.1	5,644.5	5,612.5	5,612.5	25.3	111.7	-15.40	258.5	-4,984.1	3,890.0	3,763.3	126.71	30.699	
5,900.0	5,737.2	5,705.2	5,705.2	25.5	113.6	-15.39	258.5	-4,984.1	3,883.8	3,754.9	128.92	30.126	
5,905.5	5,742.6	5,710.6	5,710.6	25.5	113.7	-15.39	258.5	-4,984.1	3,883.5	3,754.5	129.05	30.094	
6,000.0	5,837.1	5,805.1	5,805.1	25.6	115.6	-15.39	258.5	-4,984.1	3,880.3	3,749.2	131.15	29.587	
6,003.9	5,841.0	5,809.0	5,809.0	25.6	115.6	-15.39	258.5	-4,984.1	3,880.3	3,749.0	131.24	29.567	
6,051.8	5,888.9	5,856.9	5,856.9	25.7	116.6	-90.51	258.5	-4,984.1	3,879.9	3,738.2	141.72	27.378	
6,081.8	5,918.9	5,886.9	5,886.9	25.7	117.2	-90.51	258.5	-4,984.1	3,879.9	3,737.5	142.35	27.256 CC, ES, SF	
6,100.0	5,937.1	5,905.1	5,905.1	25.7	117.6	179.49	258.5	-4,984.1	3,880.1	3,746.9	133.19	29.133	
6,102.3	5,939.4	5,907.4	5,907.4	25.7	117.6	179.49	258.5	-4,984.1	3,880.2	3,747.0	133.22	29.127	
6,150.0	5,987.0	5,955.0	5,955.0	25.7	118.6	179.48	258.5	-4,984.1	3,883.1	3,749.6	133.53	29.081	
6,200.0	6,036.5	6,004.5	6,004.5	25.7	119.6	179.48	258.5	-4,984.1	3,889.6	3,756.4	133.20	29.202	
6,200.8	6,037.3	6,005.3	6,005.3	25.7	119.6	179.48	258.5	-4,984.1	3,889.8	3,756.6	133.19	29.205	
6,250.0	6,085.5	6,053.5	6,053.5	25.7	120.6	179.47	258.5	-4,984.1	3,899.6	3,767.4	132.19	29.500	
6,299.2	6,133.0	6,101.0	6,101.0	25.6	121.5	179.47	258.5	-4,984.1	3,912.6	3,782.1	130.53	29.975	
6,300.0	6,133.7	6,101.7	6,101.7	25.6	121.5	179.47	258.5	-4,984.1	3,912.9	3,782.4	130.50	29.984	
6,350.0	6,180.9	6,148.9	6,148.9	25.5	122.5	179.45	258.5	-4,984.1	3,929.5	3,801.4	128.12	30.671	
6,397.6	6,224.6	6,192.6	6,192.6	25.4	123.4	179.44	258.5	-4,984.1	3,948.4	3,823.2	125.22	31.532	
6,400.0	6,226.7	6,194.7	6,194.7	25.4	123.4	179.44	258.5	-4,984.1	3,949.4	3,824.4	125.06	31.581	
6,450.0	6,271.1	6,239.1	6,239.1	25.2	124.3	179.42	258.5	-4,984.1	3,972.5	3,851.1	121.32	32.742	
6,496.0	6,310.4	6,278.4	6,278.4	25.1	125.1	179.40	258.5	-4,984.1	3,996.4	3,879.1	117.31	34.068	
6,500.0	6,313.7	6,281.7	6,281.7	25.1	125.1	179.40	258.5	-4,984.1	3,998.6	3,881.6	116.94	34.194	
6,550.0	6,354.4	6,322.4	6,322.4	25.0	126.0	179.38	258.5	-4,984.1	4,027.5	3,915.6	111.92	35.988	
6,594.5	6,388.9	6,356.9	6,356.9	24.9	126.7	179.35	258.5	-4,984.1	4,055.7	3,948.7	106.94	37.924	
6,600.0	6,393.0	6,361.0	6,361.0	24.9	126.7	179.34	258.5	-4,984.1	4,059.3	3,953.0	106.29	38.190	
6,650.0	6,429.3	6,397.3	6,397.3	24.8	127.5	179.30	258.5	-4,984.1	4,093.7	3,993.6	100.10	40.895	
6,692.9	6,458.5	6,426.5	6,426.5	24.7	128.1	179.26	258.5	-4,984.1	4,125.2	4,030.8	94.38	43.709	
6,700.0	6,463.1	6,431.1	6,431.1	24.7	128.1	179.26	258.5	-4,984.1	4,130.5	4,037.1	93.40	44.226	
6,750.0	6,494.3	6,462.3	6,462.3	24.7	128.8	179.20	258.5	-4,984.1	4,169.6	4,083.4	86.23	48.357	
6,791.3	6,517.9	6,485.9	6,485.9	24.7	129.3	179.13	258.5	-4,984.1	4,203.5	4,123.5	80.00	52.545	
6,800.0	6,522.6	6,490.6	6,490.6	24.7	129.3	179.12	258.5	-4,984.1	4,210.8	4,132.1	78.66	53.532	
6,850.0	6,548.0	6,516.0	6,516.0	24.7	129.9	179.02	258.5	-4,984.1	4,253.9	4,183.1	70.77	60.110	
6,889.7	6,566.0	6,534.0	6,534.0	24.8	130.2	178.91	258.5	-4,984.1	4,289.3	4,225.0	64.32	66.688	
6,900.0	6,570.4	6,538.4	6,538.4	24.9	130.3	178.88	258.5	-4,984.1	4,298.6	4,235.9	62.64	68.628	
6,950.0	6,589.5	6,557.5	6,557.5	25.1	130.7	178.69	258.5	-4,984.1	4,344.7	4,290.4	54.36	79.933	
6,988.2	6,602.0	6,570.0	6,570.0	25.3	130.9	178.48	258.5	-4,984.1	4,380.8	4,332.8	48.00	91.264	
7,000.0	6,605.4	6,573.4	6,573.4	25.3	131.0	178.40	258.5	-4,984.1	4,392.1	4,346.1	46.04	95.402	
7,050.0	6,618.0	6,586.0	6,586.0	25.6	131.3	177.93	258.5	-4,984.1	4,440.5	4,402.7	37.87	117.252	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,625.0	6,593.0	6,593.0	25.9	131.4	177.33	258.5	-4,984.1	4,476.4	4,444.2	32.27	138.715	
7,100.0	6,627.1	6,595.1	6,595.1	26.0	131.4	177.01	258.5	-4,984.1	4,489.7	4,459.2	30.42	147.578	
7,150.0	6,632.8	6,600.8	6,600.8	26.5	131.6	174.46	258.5	-4,984.1	4,539.3	4,512.1	27.24	166.659	
7,185.0	6,634.7	6,602.7	6,602.7	26.8	131.6	165.91	258.5	-4,984.1	4,574.3	4,529.7	44.59	102.593	
7,200.0	6,635.0	6,603.0	6,603.0	27.0	131.6	141.18	258.5	-4,984.1	4,589.3	4,487.6	101.68	45.135	
7,215.9	6,635.0	6,603.0	6,603.0	27.1	131.6	30.66	258.5	-4,984.1	4,605.2	4,522.5	82.71	55.676	
7,283.4	6,634.1	6,602.1	6,602.1	27.9	131.6	30.30	258.5	-4,984.1	4,672.7	4,590.3	82.38	56.720	
7,300.0	6,633.9	6,601.9	6,601.9	28.1	131.6	30.20	258.5	-4,984.1	4,689.3	4,607.0	82.29	56.986	
7,381.9	6,632.9	6,600.9	6,600.9	29.3	131.6	29.77	258.5	-4,984.1	4,771.1	4,689.1	81.98	58.196	
7,400.0	6,632.6	6,600.6	6,600.6	29.5	131.6	29.67	258.5	-4,984.1	4,789.2	4,707.3	81.90	58.476	
7,480.3	6,631.6	6,599.6	6,599.6	30.8	131.5	29.26	258.5	-4,984.1	4,869.5	4,787.9	81.69	59.610	
7,500.0	6,631.4	6,599.4	6,599.4	31.1	131.5	29.16	258.5	-4,984.1	4,889.2	4,807.6	81.62	59.901	
7,578.7	6,630.4	6,598.4	6,598.4	32.5	131.5	28.77	258.5	-4,984.1	4,968.0	4,886.5	81.49	60.966	
7,600.0	6,630.1	6,598.1	6,598.1	32.9	131.5	28.66	258.5	-4,984.1	4,989.2	4,907.8	81.43	61.266	
7,677.1	6,629.1	6,597.1	6,597.1	34.3	131.5	28.29	258.5	-4,984.1	5,066.4	4,985.0	81.36	62.270	
7,700.0	6,628.8	6,596.8	6,596.8	34.8	131.5	28.17	258.5	-4,984.1	5,089.2	5,007.9	81.32	62.580	
7,775.6	6,627.8	6,595.8	6,595.8	36.3	131.5	27.82	258.5	-4,984.1	5,164.8	5,083.5	81.30	63.529	
7,800.0	6,627.5	6,595.5	6,595.5	36.8	131.5	27.71	258.5	-4,984.1	5,189.2	5,107.9	81.27	63.849	
7,874.0	6,626.6	6,594.6	6,594.6	38.4	131.4	27.37	258.5	-4,984.1	5,263.2	5,181.9	81.29	64.748	
7,900.0	6,626.3	6,594.3	6,594.3	38.9	131.4	27.25	258.5	-4,984.1	5,289.2	5,207.9	81.28	65.078	
7,972.4	6,625.3	6,593.3	6,593.3	40.5	131.4	26.94	258.5	-4,984.1	5,361.6	5,280.3	81.32	65.932	
8,000.0	6,625.0	6,593.0	6,593.0	41.1	131.4	26.81	258.5	-4,984.1	5,389.2	5,307.9	81.32	66.271	
8,070.8	6,624.1	6,592.1	6,592.1	42.7	131.4	26.51	258.5	-4,984.1	5,460.0	5,378.6	81.39	67.084	
8,100.0	6,623.7	6,591.7	6,591.7	43.4	131.4	26.38	258.5	-4,984.1	5,489.2	5,407.8	81.40	67.432	
8,169.3	6,622.8	6,590.8	6,590.8	45.0	131.4	26.10	258.5	-4,984.1	5,558.4	5,477.0	81.49	68.208	
8,200.0	6,622.4	6,590.4	6,590.4	45.7	131.4	25.96	258.5	-4,984.1	5,589.2	5,507.7	81.52	68.566	
8,267.7	6,621.6	6,589.6	6,589.6	47.4	131.3	25.69	258.5	-4,984.1	5,656.9	5,575.2	81.62	69.307	
8,300.0	6,621.1	6,589.1	6,589.1	48.1	131.3	25.56	258.5	-4,984.1	5,689.2	5,607.5	81.65	69.674	
8,366.1	6,620.3	6,588.3	6,588.3	49.7	131.3	25.30	258.5	-4,984.1	5,755.3	5,673.5	81.77	70.382	
8,400.0	6,619.9	6,587.9	6,587.9	50.6	131.3	25.17	258.5	-4,984.1	5,789.1	5,707.3	81.82	70.759	
8,464.5	6,619.0	6,587.0	6,587.0	52.2	131.3	24.92	258.5	-4,984.1	5,853.7	5,771.7	81.94	71.436	
8,500.0	6,618.6	6,586.6	6,586.6	53.0	131.3	24.78	258.5	-4,984.1	5,889.1	5,807.1	82.00	71.822	
8,563.0	6,617.8	6,585.8	6,585.8	54.6	131.3	24.55	258.5	-4,984.1	5,952.1	5,870.0	82.13	72.471	
8,600.0	6,617.3	6,585.3	6,585.3	55.5	131.3	24.41	258.5	-4,984.1	5,989.1	5,906.9	82.19	72.866	
8,661.4	6,616.5	6,584.5	6,584.5	57.1	131.2	24.19	258.5	-4,984.1	6,050.5	5,968.2	82.33	73.487	
8,700.0	6,616.0	6,584.0	6,584.0	58.1	131.2	24.05	258.5	-4,984.1	6,089.1	6,006.7	82.41	73.892	
8,759.8	6,615.2	6,583.2	6,583.2	59.6	131.2	23.84	258.5	-4,984.1	6,148.9	6,066.4	82.55	74.486	
8,800.0	6,614.7	6,582.7	6,582.7	60.6	131.2	23.70	258.5	-4,984.1	6,189.1	6,106.5	82.63	74.900	
8,858.2	6,614.0	6,582.0	6,582.0	62.1	131.2	23.50	258.5	-4,984.1	6,247.4	6,164.6	82.78	75.469	
8,900.0	6,613.4	6,581.4	6,581.4	63.2	131.2	23.36	258.5	-4,984.1	6,289.1	6,206.2	82.87	75.892	
8,956.7	6,612.7	6,580.7	6,580.7	64.7	131.2	23.17	258.5	-4,984.1	6,345.8	6,262.7	83.02	76.437	
9,000.0	6,612.2	6,580.2	6,580.2	65.8	131.1	23.02	258.5	-4,984.1	6,389.1	6,306.0	83.12	76.869	
9,055.1	6,611.5	6,579.5	6,579.5	67.3	131.1	22.85	258.5	-4,984.1	6,444.2	6,360.9	83.27	77.391	
9,100.0	6,610.9	6,578.9	6,578.9	68.4	131.1	22.70	258.5	-4,984.1	6,489.1	6,405.7	83.37	77.831	
9,153.5	6,610.2	6,578.2	6,578.2	69.8	131.1	22.53	258.5	-4,984.1	6,542.6	6,459.1	83.53	78.330	
9,200.0	6,609.6	6,577.6	6,577.6	71.1	131.1	22.38	258.5	-4,984.1	6,589.1	6,505.4	83.64	78.778	
9,251.9	6,608.9	6,576.9	6,576.9	72.4	131.1	22.22	258.5	-4,984.1	6,641.0	6,557.2	83.79	79.256	
9,300.0	6,608.3	6,576.3	6,576.3	73.7	131.1	22.07	258.5	-4,984.1	6,689.1	6,605.1	83.92	79.712	
9,350.4	6,607.7	6,575.7	6,575.7	75.0	131.1	21.92	258.5	-4,984.1	6,739.4	6,655.4	84.07	80.168	
9,400.0	6,607.0	6,575.0	6,575.0	76.4	131.0	21.77	258.5	-4,984.1	6,789.0	6,704.9	84.20	80.633	
9,448.8	6,606.4	6,574.4	6,574.4	77.7	131.0	21.63	258.5	-4,984.1	6,837.8	6,753.5	84.35	81.068	
9,500.0	6,605.7	6,573.7	6,573.7	79.0	131.0	21.48	258.5	-4,984.1	6,889.0	6,804.6	84.49	81.541	

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

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<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.1	6,573.1	6,573.1	80.3	131.0	21.35	258.5	-4,984.1	6,936.3	6,851.6	84.63	81.956	
9,600.0	6,604.5	6,572.5	6,572.5	81.7	131.0	21.19	258.5	-4,984.1	6,989.0	6,904.2	84.78	82.436	
9,645.6	6,603.9	6,571.9	6,571.9	82.9	131.0	21.07	258.5	-4,984.1	7,034.7	6,949.7	84.93	82.832	
9,700.0	6,603.2	6,571.2	6,571.2	84.4	131.0	20.92	258.5	-4,984.1	7,089.0	7,003.9	85.08	83.319	
9,744.1	6,602.6	6,570.6	6,570.6	85.6	131.0	20.80	258.5	-4,984.1	7,133.1	7,047.9	85.23	83.696	
9,800.0	6,601.9	6,569.9	6,569.9	87.1	130.9	20.64	258.5	-4,984.1	7,189.0	7,103.6	85.39	84.190	
9,842.5	6,601.3	6,569.3	6,569.3	88.2	130.9	20.53	258.5	-4,984.1	7,231.5	7,146.0	85.53	84.548	
9,900.0	6,600.6	6,568.6	6,568.6	89.8	130.9	20.38	258.5	-4,984.1	7,289.0	7,203.3	85.70	85.049	
9,940.9	6,600.1	6,568.1	6,568.1	90.9	130.9	20.27	258.5	-4,984.1	7,329.9	7,244.1	85.84	85.389	
10,000.0	6,599.3	6,567.3	6,567.3	92.5	130.9	20.12	258.5	-4,984.1	7,389.0	7,303.0	86.02	85.896	
10,039.3	6,598.8	6,566.8	6,566.8	93.5	130.9	20.02	258.5	-4,984.1	7,428.3	7,342.2	86.16	86.219	
10,100.0	6,598.0	6,566.0	6,566.0	95.2	130.9	19.87	258.5	-4,984.1	7,489.0	7,402.6	86.35	86.732	
10,137.8	6,597.5	6,565.5	6,565.5	96.2	130.9	19.77	258.5	-4,984.1	7,526.8	7,440.3	86.48	87.038	
10,200.0	6,596.7	6,564.7	6,564.7	97.9	130.8	19.62	258.5	-4,984.1	7,589.0	7,502.3	86.67	87.557	
10,236.2	6,596.3	6,564.3	6,564.3	98.9	130.8	19.53	258.5	-4,984.1	7,625.2	7,538.4	86.80	87.847	
10,300.0	6,595.4	6,563.4	6,563.4	100.6	130.8	19.38	258.5	-4,984.1	7,689.0	7,602.0	87.01	88.371	
10,334.6	6,595.0	6,563.0	6,563.0	101.6	130.8	19.30	258.5	-4,984.1	7,723.6	7,636.5	87.13	88.644	
10,400.0	6,594.2	6,562.2	6,562.2	103.4	130.8	19.14	258.5	-4,984.1	7,789.0	7,701.6	87.35	89.174	
10,433.0	6,593.7	6,561.7	6,561.7	104.3	130.8	19.07	258.5	-4,984.1	7,822.0	7,734.5	87.46	89.431	
10,500.0	6,592.9	6,560.9	6,560.9	106.1	130.8	18.91	258.5	-4,984.1	7,888.9	7,801.3	87.69	89.966	
10,531.5	6,592.5	6,560.5	6,560.5	106.9	130.8	18.84	258.5	-4,984.1	7,920.4	7,832.6	87.80	90.208	
10,600.0	6,591.6	6,559.6	6,559.6	108.8	130.7	18.68	258.5	-4,984.1	7,988.9	7,900.9	88.03	90.748	
10,629.9	6,591.2	6,559.2	6,559.2	109.6	130.7	18.62	258.5	-4,984.1	8,018.8	7,930.7	88.14	90.974	
10,700.0	6,590.3	6,558.3	6,558.3	111.6	130.7	18.46	258.5	-4,984.1	8,088.9	8,000.5	88.39	91.519	
10,728.3	6,589.9	6,557.9	6,557.9	112.3	130.7	18.40	258.5	-4,984.1	8,117.2	8,028.8	88.49	91.730	
10,800.0	6,589.0	6,557.0	6,557.0	114.3	130.7	18.25	258.5	-4,984.1	8,188.9	8,100.2	88.74	92.279	
10,826.7	6,588.7	6,556.7	6,556.7	115.0	130.7	18.19	258.5	-4,984.1	8,215.7	8,126.8	88.84	92.476	
10,900.0	6,587.7	6,555.7	6,555.7	117.1	130.7	18.04	258.5	-4,984.1	8,288.9	8,199.8	89.10	93.029	
10,925.2	6,587.4	6,555.4	6,555.4	117.7	130.6	17.99	258.5	-4,984.1	8,314.1	8,224.9	89.20	93.212	
11,000.0	6,586.4	6,554.4	6,554.4	119.8	130.6	17.83	258.5	-4,984.1	8,388.9	8,299.4	89.46	93.769	
11,023.6	6,586.1	6,554.1	6,554.1	120.4	130.6	17.78	258.5	-4,984.1	8,412.5	8,322.9	89.55	93.938	
11,100.0	6,585.1	6,553.1	6,553.1	122.6	130.6	17.63	258.5	-4,984.1	8,488.9	8,399.1	89.83	94.499	
11,122.0	6,584.8	6,552.8	6,552.8	123.2	130.6	17.59	258.5	-4,984.1	8,510.9	8,421.0	89.92	94.654	
11,200.0	6,583.8	6,551.8	6,551.8	125.3	130.6	17.43	258.5	-4,984.1	8,588.9	8,498.7	90.20	95.219	
11,220.4	6,583.6	6,551.6	6,551.6	125.9	130.6	17.39	258.5	-4,984.1	8,609.3	8,519.0	90.28	95.361	
11,300.0	6,582.5	6,550.5	6,550.5	128.1	130.6	17.24	258.5	-4,984.1	8,688.9	8,598.3	90.58	95.929	
11,318.9	6,582.3	6,550.3	6,550.3	128.6	130.5	17.20	258.5	-4,984.1	8,707.7	8,617.1	90.65	96.058	
11,400.0	6,581.2	6,549.2	6,549.2	130.8	130.5	17.05	258.5	-4,984.1	8,788.9	8,697.9	90.95	96.629	
11,417.3	6,581.0	6,549.0	6,549.0	131.3	130.5	17.02	258.5	-4,984.1	8,806.2	8,715.1	91.02	96.746	
11,500.0	6,580.0	6,548.0	6,548.0	133.6	130.5	16.86	258.5	-4,984.1	8,888.9	8,797.5	91.34	97.320	
11,515.7	6,579.7	6,547.7	6,547.7	134.0	130.5	16.83	258.5	-4,984.1	8,904.6	8,813.2	91.40	97.424	
11,600.0	6,578.7	6,546.7	6,546.7	136.3	130.5	16.68	258.5	-4,984.1	8,988.8	8,897.1	91.72	98.000	
11,614.1	6,578.5	6,546.5	6,546.5	136.7	130.5	16.66	258.5	-4,984.1	9,003.0	8,911.2	91.78	98.093	
11,700.0	6,577.4	6,545.4	6,545.4	139.1	130.4	16.50	258.5	-4,984.1	9,088.8	8,996.7	92.11	98.672	
11,712.6	6,577.2	6,545.2	6,545.2	139.5	130.4	16.48	258.5	-4,984.1	9,101.4	9,009.2	92.16	98.753	
11,800.0	6,576.1	6,544.1	6,544.1	141.9	130.4	16.33	258.5	-4,984.1	9,188.8	9,096.3	92.50	99.333	
11,811.0	6,575.9	6,543.9	6,543.9	142.2	130.4	16.31	258.5	-4,984.1	9,199.8	9,107.3	92.55	99.404	
11,882.7	6,575.0	6,543.0	6,543.0	144.2	130.4	16.19	258.5	-4,984.1	9,271.5	9,178.7	92.83	99.874	
11,883.5	6,575.0	6,543.0	6,543.0	144.2	130.4	16.18	258.5	-4,984.1	9,272.3	9,179.5	92.83	99.883	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 usft	
Survey Program: 100-GYD_CT														Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
0.0	0.0	0.0	0.0	0.0	0.0	-105.97	-1,100.3	-3,844.3	3,998.8							
98.4	98.4	63.3	63.3	0.1	0.0	-105.97	-1,100.2	-3,844.3	3,998.6	3,998.5	0.11	N/A				
100.0	100.0	65.0	65.0	0.1	0.0	-105.97	-1,100.2	-3,844.3	3,998.6	3,998.5	0.11	N/A				
176.5	176.5	136.5	136.5	0.3	0.1	-105.97	-1,099.8	-3,844.3	3,998.5	3,998.2	0.35	N/A				
196.8	196.8	153.3	153.3	0.3	0.1	-105.96	-1,099.7	-3,844.3	3,998.5	3,998.1	0.42	9,428.212				
200.0	200.0	155.9	155.9	0.3	0.1	-105.96	-1,099.7	-3,844.3	3,998.5	3,998.1	0.44	9,181.069				
295.3	295.3	246.5	246.5	0.5	0.2	-105.96	-1,099.5	-3,844.6	3,998.8	3,998.0	0.74	5,387.567				
300.0	300.0	251.8	251.8	0.5	0.2	-105.96	-1,099.5	-3,844.6	3,998.8	3,998.0	0.75	5,296.488				
393.7	393.7	346.5	346.5	0.8	0.3	-105.96	-1,099.5	-3,844.8	3,998.9	3,997.9	1.02	3,912.767				
400.0	400.0	352.4	352.4	0.8	0.3	-105.96	-1,099.6	-3,844.8	3,998.9	3,997.9	1.04	3,841.786				
492.1	492.1	442.8	442.8	1.0	0.3	-105.96	-1,099.9	-3,844.9	3,999.1	3,997.8	1.31	3,047.527				
500.0	500.0	451.1	451.1	1.0	0.3	-105.96	-1,099.9	-3,844.9	3,999.2	3,997.8	1.33	2,995.770				
590.5	590.5	545.7	545.7	1.2	0.4	-105.97	-1,100.5	-3,844.9	3,999.3	3,997.7	1.59	2,509.473				
600.0	600.0	555.5	555.5	1.2	0.4	-105.97	-1,100.5	-3,844.9	3,999.3	3,997.7	1.62	2,467.958				
689.0	689.0	651.7	651.7	1.4	0.5	-105.98	-1,100.9	-3,844.9	3,999.4	3,997.5	1.87	2,139.229				
700.0	700.0	664.1	664.1	1.4	0.5	-105.98	-1,100.9	-3,844.8	3,999.3	3,997.4	1.90	2,104.921				
787.4	787.4	756.9	756.9	1.6	0.5	-105.98	-1,101.2	-3,844.6	3,999.2	3,997.0	2.14	1,867.835				
800.0	800.0	769.8	769.8	1.7	0.5	-105.98	-1,101.3	-3,844.5	3,999.2	3,997.0	2.18	1,838.046				
885.8	885.8	850.0	850.0	1.9	0.5	-105.99	-1,101.9	-3,844.2	3,999.0	3,996.6	2.41	1,661.667				
900.0	900.0	862.5	862.5	1.9	0.6	-106.00	-1,102.0	-3,844.1	3,999.0	3,996.5	2.44	1,636.073				
922.1	922.1	882.1	882.1	1.9	0.6	-106.00	-1,102.2	-3,844.1	3,999.0	3,996.5	2.50	1,597.679				
984.2	984.2	938.6	938.6	2.1	0.6	-106.01	-1,102.7	-3,844.0	3,999.0	3,996.3	2.67	1,499.290				
1,000.0	1,000.0	953.1	953.1	2.1	0.6	-106.01	-1,102.8	-3,844.0	3,999.0	3,996.3	2.71	1,476.282				
1,082.7	1,082.7	1,032.2	1,032.2	2.3	0.6	-106.01	-1,103.3	-3,844.0	3,999.2	3,996.3	2.93	1,365.796				
1,100.0	1,100.0	1,049.8	1,049.7	2.3	0.6	-106.02	-1,103.4	-3,844.0	3,999.3	3,996.3	2.97	1,344.565				
1,181.1	1,181.1	1,139.8	1,139.8	2.5	0.7	-106.02	-1,103.9	-3,844.1	3,999.4	3,996.2	3.19	1,252.981				
1,200.0	1,200.0	1,163.7	1,163.7	2.6	0.7	-106.02	-1,104.1	-3,844.0	3,999.4	3,996.2	3.24	1,233.397				
1,279.5	1,279.5	1,256.7	1,256.7	2.7	0.7	-106.03	-1,104.4	-3,843.6	3,999.2	3,995.7	3.46	1,157.250				
1,300.0	1,300.0	1,279.6	1,279.6	2.8	0.7	-106.03	-1,104.5	-3,843.5	3,999.1	3,995.6	3.51	1,138.915				
1,377.9	1,377.9	1,352.9	1,352.9	3.0	0.8	-106.04	-1,104.7	-3,843.1	3,998.7	3,995.0	3.72	1,076.101				
1,400.0	1,400.0	1,372.4	1,372.4	3.0	0.8	-106.04	-1,104.8	-3,843.0	3,998.7	3,994.9	3.77	1,059.740				
1,476.4	1,476.4	1,456.5	1,456.5	3.2	0.8	-30.94	-1,104.9	-3,842.7	3,997.5	3,993.6	3.92	1,020.546				
1,500.0	1,500.0	1,486.0	1,486.0	3.2	0.8	-30.95	-1,105.0	-3,842.5	3,996.8	3,992.8	3.98	1,004.934				
1,574.8	1,574.7	1,552.0	1,552.0	3.4	0.8	-31.02	-1,105.1	-3,842.0	3,993.3	3,989.1	4.15	961.460				
1,600.0	1,599.8	1,572.6	1,572.6	3.4	0.8	-31.04	-1,105.2	-3,841.9	3,991.8	3,987.5	4.21	947.684				
1,673.2	1,672.8	1,633.7	1,633.7	3.6	0.8	-31.14	-1,105.5	-3,841.7	3,986.5	3,982.1	4.39	908.861				
1,700.0	1,699.5	1,656.4	1,656.3	3.7	0.9	-31.18	-1,105.7	-3,841.7	3,984.2	3,979.7	4.45	895.377				
1,771.6	1,770.6	1,721.6	1,721.5	3.8	0.9	-31.32	-1,106.0	-3,841.7	3,977.1	3,972.5	4.63	859.617				
1,800.0	1,798.7	1,751.9	1,751.9	3.9	0.9	-31.38	-1,106.1	-3,841.7	3,973.9	3,969.2	4.70	845.735				
1,870.1	1,868.0	1,824.0	1,824.0	4.1	0.9	-31.57	-1,106.4	-3,841.7	3,964.9	3,960.1	4.88	811.883				
1,900.0	1,897.5	1,852.7	1,852.6	4.2	0.9	-31.65	-1,106.6	-3,841.7	3,960.7	3,955.7	4.96	798.125				
1,968.5	1,964.8	1,918.3	1,918.3	4.4	1.0	-31.87	-1,107.0	-3,841.7	3,949.9	3,944.8	5.15	766.733				
2,000.0	1,995.6	1,948.7	1,948.7	4.5	1.0	-31.97	-1,107.2	-3,841.7	3,944.5	3,939.3	5.24	752.947				
2,066.9	2,060.9	2,010.7	2,010.6	4.7	1.0	-32.22	-1,107.7	-3,841.7	3,932.1	3,926.7	5.43	723.636				
2,100.0	2,093.1	2,036.3	2,036.3	4.8	1.0	-32.34	-1,108.0	-3,841.7	3,925.6	3,920.0	5.53	709.953				
2,165.3	2,156.3	2,086.7	2,086.7	5.1	1.0	-32.61	-1,108.6	-3,841.8	3,911.9	3,906.1	5.73	682.573				
2,200.0	2,189.6	2,120.5	2,120.5	5.2	1.0	-32.77	-1,109.2	-3,841.9	3,904.2	3,898.4	5.84	668.540				
2,263.8	2,250.7	2,195.7	2,195.7	5.5	1.1	-33.13	-1,110.2	-3,842.0	3,889.0	3,883.0	6.06	641.642				
2,280.0	2,266.2	2,211.3	2,211.3	5.6	1.1	-33.22	-1,110.4	-3,842.0	3,885.0	3,878.9	6.12	635.123				
2,300.0	2,285.3	2,229.2	2,229.2	5.7	1.1	-33.27	-1,110.7	-3,842.0	3,879.9	3,873.7	6.19	627.258				
2,362.2	2,344.6	2,285.0	2,284.9	6.0	1.1	-33.42	-1,111.5	-3,842.0	3,864.3	3,857.9	6.40	603.865				
2,400.0	2,380.6	2,318.7	2,318.7	6.2	1.1	-33.52	-1,112.1	-3,842.1	3,854.8	3,848.3	6.54	589.528				

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,438.4	2,372.9	2,372.8	6.5	1.1	-33.67	-1,112.9	-3,842.2	3,839.7	3,832.9	6.76	568.002	
2,500.0	2,475.9	2,410.5	2,410.4	6.7	1.1	-33.77	-1,113.3	-3,842.3	3,829.9	3,823.0	6.91	554.513	
2,559.0	2,532.2	2,478.8	2,478.7	7.0	1.2	-33.96	-1,114.3	-3,842.4	3,815.2	3,808.0	7.14	534.529	
2,600.0	2,571.2	2,521.4	2,521.3	7.2	1.2	-34.09	-1,114.9	-3,842.3	3,804.9	3,797.6	7.30	521.345	
2,657.5	2,626.0	2,575.7	2,575.6	7.5	1.2	-34.24	-1,115.4	-3,842.3	3,790.4	3,782.9	7.53	503.599	
2,700.0	2,666.6	2,613.6	2,613.5	7.8	1.2	-34.34	-1,115.6	-3,842.3	3,779.8	3,772.1	7.70	491.106	
2,755.9	2,719.8	2,658.7	2,658.6	8.1	1.2	-34.47	-1,115.9	-3,842.4	3,765.9	3,757.9	7.92	475.373	
2,800.0	2,761.9	2,700.0	2,699.9	8.3	1.2	-34.58	-1,116.3	-3,842.6	3,755.0	3,746.9	8.10	463.502	
2,854.3	2,813.7	2,751.5	2,751.4	8.7	1.2	-34.73	-1,116.7	-3,842.8	3,741.6	3,733.3	8.33	449.239	
2,900.0	2,857.2	2,800.0	2,799.9	8.9	1.3	-34.86	-1,117.0	-3,843.0	3,730.4	3,721.8	8.52	437.669	
2,952.7	2,907.5	2,847.1	2,847.0	9.2	1.3	-34.99	-1,117.1	-3,843.2	3,717.3	3,708.6	8.75	424.870	
3,000.0	2,952.5	2,888.4	2,888.3	9.5	1.3	-35.11	-1,117.3	-3,843.4	3,705.7	3,696.8	8.95	413.930	
3,051.2	3,001.3	2,942.8	2,942.7	9.8	1.3	-35.26	-1,117.6	-3,843.6	3,693.2	3,684.0	9.18	402.378	
3,100.0	3,047.8	2,997.8	2,997.7	10.1	1.3	-35.42	-1,118.0	-3,843.7	3,681.2	3,671.8	9.40	391.773	
3,149.6	3,095.1	3,041.2	3,041.1	10.4	1.3	-35.55	-1,118.4	-3,843.7	3,668.9	3,659.3	9.62	381.557	
3,200.0	3,143.2	3,084.7	3,084.6	10.7	1.3	-35.68	-1,118.8	-3,843.8	3,656.5	3,646.7	9.84	371.617	
3,248.0	3,188.9	3,127.8	3,127.7	11.0	1.4	-35.81	-1,119.2	-3,843.9	3,644.8	3,634.8	10.06	362.463	
3,300.0	3,238.5	3,175.5	3,175.4	11.3	1.4	-35.95	-1,119.7	-3,844.0	3,632.2	3,621.9	10.29	352.946	
3,346.4	3,282.8	3,219.5	3,219.4	11.6	1.4	-36.08	-1,120.1	-3,844.2	3,621.0	3,610.5	10.50	344.735	
3,400.0	3,333.8	3,272.6	3,272.5	11.9	1.4	-36.24	-1,120.2	-3,844.5	3,608.0	3,597.2	10.75	335.703	
3,444.9	3,376.6	3,321.0	3,320.9	12.2	1.4	-36.38	-1,120.0	-3,844.9	3,597.1	3,586.2	10.96	328.337	
3,500.0	3,429.1	3,387.8	3,387.7	12.6	1.4	-36.56	-1,119.0	-3,845.4	3,583.6	3,572.4	11.22	319.416	
3,543.3	3,470.4	3,427.0	3,426.9	12.8	1.4	-36.66	-1,118.1	-3,845.8	3,573.0	3,561.5	11.42	312.812	
3,600.0	3,524.4	3,473.2	3,473.0	13.2	1.4	-36.77	-1,116.8	-3,846.3	3,559.1	3,547.4	11.68	304.603	
3,641.7	3,564.2	3,509.3	3,509.2	13.4	1.4	-36.86	-1,115.8	-3,846.9	3,549.0	3,537.1	11.88	298.748	
3,700.0	3,619.8	3,571.0	3,570.8	13.8	1.4	-37.01	-1,113.8	-3,847.8	3,534.9	3,522.7	12.16	290.755	
3,740.1	3,658.0	3,612.1	3,611.8	14.0	1.4	-37.12	-1,112.5	-3,848.4	3,525.1	3,512.7	12.35	285.436	
3,800.0	3,715.1	3,668.5	3,668.2	14.4	1.4	-37.26	-1,110.8	-3,849.2	3,510.5	3,497.9	12.64	277.816	
3,838.6	3,751.8	3,700.0	3,699.7	14.7	1.4	-37.34	-1,109.8	-3,849.7	3,501.2	3,488.4	12.82	273.112	
3,900.0	3,810.4	3,753.3	3,753.0	15.0	1.4	-37.47	-1,108.3	-3,850.4	3,486.4	3,473.3	13.11	265.879	
3,937.0	3,845.7	3,782.9	3,782.6	15.3	1.4	-37.55	-1,107.5	-3,850.9	3,477.6	3,464.3	13.29	261.683	
4,000.0	3,905.7	3,852.1	3,851.7	15.7	1.4	-37.74	-1,106.2	-3,851.9	3,462.6	3,449.0	13.60	254.562	
4,035.4	3,939.5	3,896.2	3,895.8	15.9	1.4	-37.87	-1,105.6	-3,852.3	3,454.1	3,440.3	13.78	250.602	
4,100.0	4,001.0	3,958.8	3,958.4	16.3	1.4	-38.06	-1,105.0	-3,852.6	3,438.5	3,424.4	14.11	243.755	
4,133.8	4,033.3	3,991.1	3,990.8	16.5	1.4	-38.16	-1,104.8	-3,852.7	3,430.3	3,416.0	14.28	240.277	
4,200.0	4,096.3	4,037.8	4,037.5	16.9	1.4	-38.30	-1,104.5	-3,852.9	3,414.5	3,399.9	14.60	233.901	
4,232.3	4,127.1	4,059.4	4,059.0	17.1	1.4	-38.37	-1,104.4	-3,853.1	3,406.9	3,392.2	14.75	230.907	
4,300.0	4,191.7	4,107.1	4,106.7	17.6	1.4	-38.51	-1,104.0	-3,853.9	3,391.3	3,376.2	15.09	224.813	
4,330.7	4,220.9	4,137.8	4,137.4	17.8	1.4	-38.61	-1,103.7	-3,854.4	3,384.3	3,369.1	15.24	222.043	
4,400.0	4,287.0	4,208.1	4,207.7	18.2	1.4	-38.81	-1,102.6	-3,855.8	3,368.5	3,352.9	15.60	215.973	
4,429.1	4,314.7	4,240.8	4,240.4	18.4	1.4	-38.91	-1,102.0	-3,856.5	3,361.8	3,346.1	15.75	213.447	
4,500.0	4,382.3	4,300.0	4,299.6	18.8	1.4	-39.08	-1,100.8	-3,857.5	3,345.5	3,329.4	16.11	207.653	
4,527.5	4,408.6	4,331.6	4,331.1	19.0	1.4	-39.17	-1,100.1	-3,858.2	3,339.2	3,322.9	16.26	205.407	
4,600.0	4,477.6	4,381.8	4,381.3	19.5	1.4	-39.31	-1,099.1	-3,859.4	3,322.9	3,306.3	16.62	199.951	
4,626.0	4,502.4	4,400.0	4,399.5	19.6	1.4	-39.36	-1,098.7	-3,859.9	3,317.2	3,300.4	16.75	198.053	
4,700.0	4,572.9	4,441.2	4,440.7	20.1	1.5	-39.48	-1,098.0	-3,861.3	3,301.3	3,284.2	17.11	192.922	
4,724.4	4,596.2	4,454.8	4,454.3	20.3	1.5	-39.52	-1,097.8	-3,861.8	3,296.2	3,279.0	17.23	191.282	
4,800.0	4,668.3	4,500.0	4,499.4	20.7	1.5	-39.66	-1,097.3	-3,863.8	3,280.9	3,263.3	17.61	186.343	
4,822.8	4,690.0	4,541.9	4,541.2	20.9	1.5	-39.79	-1,097.2	-3,865.5	3,276.4	3,258.6	17.74	184.656	
4,900.0	4,763.6	4,709.2	4,708.6	21.4	1.5	-40.38	-1,099.0	-3,868.1	3,259.5	3,241.3	18.25	178.587	
4,921.2	4,783.8	4,738.7	4,738.1	21.5	1.5	-40.49	-1,099.3	-3,868.0	3,254.6	3,236.2	18.38	177.092	
5,000.0	4,858.9	4,834.3	4,833.6	22.0	1.5	-40.86	-1,100.4	-3,867.3	3,236.0	3,217.2	18.83	171.828	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,877.7	4,853.9	4,853.2	22.1	1.5	-40.93	-1,100.6	-3,867.1	3,231.3	3,212.4	18.94	170.588	
5,100.0	4,954.2	4,930.8	4,930.1	22.6	1.6	-41.23	-1,101.2	-3,866.4	3,212.2	3,192.8	19.39	165.691	
5,118.1	4,971.5	4,947.2	4,946.6	22.8	1.6	-41.29	-1,101.3	-3,866.2	3,207.9	3,188.5	19.49	164.628	
5,171.8	5,022.7	4,996.0	4,995.4	23.1	1.6	-41.48	-1,101.5	-3,865.9	3,195.3	3,175.5	19.78	161.536	
5,200.0	5,049.6	5,028.3	5,027.6	23.3	1.6	-41.51	-1,101.6	-3,865.7	3,188.7	3,168.8	19.90	160.248	
5,216.5	5,065.4	5,047.9	5,047.2	23.3	1.6	-41.53	-1,101.5	-3,865.6	3,185.0	3,165.0	19.96	159.582	
5,300.0	5,145.7	5,139.1	5,138.5	23.7	1.6	-41.59	-1,101.1	-3,864.9	3,166.8	3,146.6	20.25	156.387	
5,314.9	5,160.1	5,153.9	5,153.2	23.8	1.6	-41.59	-1,101.0	-3,864.8	3,163.8	3,143.5	20.30	155.882	
5,400.0	5,242.7	5,230.8	5,230.1	24.1	1.6	-41.60	-1,100.7	-3,864.0	3,147.4	3,126.9	20.55	153.164	
5,413.4	5,255.7	5,241.5	5,240.8	24.2	1.6	-41.59	-1,100.6	-3,864.0	3,145.1	3,124.5	20.58	152.794	
5,500.0	5,340.5	5,313.0	5,312.4	24.5	1.6	-41.59	-1,100.5	-3,863.6	3,131.1	3,110.3	20.81	150.487	
5,511.8	5,352.1	5,324.1	5,323.4	24.5	1.6	-41.59	-1,100.5	-3,863.5	3,129.4	3,108.5	20.83	150.208	
5,600.0	5,439.0	5,409.2	5,408.6	24.8	1.6	-41.62	-1,100.8	-3,863.1	3,117.7	3,096.6	21.04	148.189	
5,610.2	5,449.1	5,422.7	5,422.0	24.8	1.6	-41.63	-1,100.9	-3,863.0	3,116.4	3,095.4	21.06	147.972	
5,700.0	5,538.0	5,537.1	5,536.4	25.1	1.6	-41.70	-1,101.0	-3,861.9	3,106.4	3,085.1	21.25	146.151	
5,708.6	5,546.6	5,547.5	5,546.8	25.1	1.6	-41.71	-1,101.0	-3,861.7	3,105.5	3,084.2	21.27	146.002	
5,800.0	5,637.4	5,656.5	5,655.8	25.3	1.6	-41.76	-1,101.2	-3,859.7	3,096.9	3,075.5	21.43	144.503	
5,807.1	5,644.5	5,664.9	5,664.2	25.3	1.6	-41.76	-1,101.2	-3,859.5	3,096.3	3,074.9	21.44	144.405	
5,900.0	5,737.2	5,771.2	5,770.4	25.5	1.6	-41.78	-1,101.1	-3,856.9	3,089.5	3,067.9	21.58	143.189	
5,905.5	5,742.6	5,777.4	5,776.6	25.5	1.6	-41.78	-1,101.1	-3,856.8	3,089.2	3,067.6	21.58	143.133	
6,000.0	5,837.1	5,875.3	5,874.5	25.6	1.7	-41.78	-1,101.3	-3,854.0	3,084.4	3,062.7	21.69	142.213	
6,003.9	5,841.0	5,879.2	5,878.5	25.6	1.7	-41.78	-1,101.3	-3,853.8	3,084.2	3,062.6	21.69	142.183	
6,051.8	5,888.9	5,929.7	5,928.9	25.7	1.7	-116.91	-1,101.4	-3,852.4	3,082.7	3,059.4	23.29	132.337	
6,081.8	5,918.9	5,962.3	5,961.5	25.7	1.7	-116.92	-1,101.4	-3,851.4	3,081.9	3,058.6	23.33	132.078 ES	
6,100.0	5,937.1	5,982.0	5,981.2	25.7	1.7	153.09	-1,101.4	-3,850.8	3,081.7	3,059.9	21.77	141.566	
6,102.3	5,939.4	5,984.6	5,983.7	25.7	1.7	153.09	-1,101.4	-3,850.7	3,081.6	3,059.9	21.77	141.577	
6,103.8	5,940.9	5,986.2	5,985.3	25.7	1.7	153.09	-1,101.4	-3,850.7	3,081.6	3,059.9	21.77	141.584 CC	
6,150.0	5,987.0	6,048.9	6,048.1	25.7	1.7	153.06	-1,101.4	-3,848.6	3,082.9	3,061.1	21.75	141.709	
6,200.0	6,036.5	6,116.5	6,115.5	25.7	1.7	152.97	-1,101.3	-3,845.9	3,086.9	3,065.1	21.76	141.827	
6,200.8	6,037.3	6,117.3	6,116.4	25.7	1.7	152.97	-1,101.3	-3,845.9	3,086.9	3,065.2	21.77	141.830	
6,250.0	6,085.5	6,170.9	6,169.9	25.7	1.7	152.78	-1,101.4	-3,843.5	3,093.8	3,072.0	21.79	141.974	
6,299.2	6,133.0	6,222.4	6,221.3	25.6	1.7	152.51	-1,101.6	-3,841.0	3,103.5	3,081.7	21.82	142.210	
6,300.0	6,133.7	6,223.2	6,222.1	25.6	1.7	152.51	-1,101.6	-3,841.0	3,103.7	3,081.9	21.82	142.214	
6,350.0	6,180.9	6,272.9	6,271.8	25.5	1.7	152.14	-1,101.7	-3,838.6	3,116.6	3,094.7	21.86	142.590	
6,397.6	6,224.6	6,320.4	6,319.2	25.4	1.7	151.69	-1,101.7	-3,836.4	3,131.6	3,109.7	21.89	143.094	
6,400.0	6,226.7	6,322.8	6,321.6	25.4	1.7	151.67	-1,101.7	-3,836.2	3,132.4	3,110.5	21.89	143.121	
6,450.0	6,271.1	6,373.0	6,371.8	25.2	1.7	151.10	-1,101.5	-3,833.9	3,151.1	3,129.2	21.92	143.788	
6,496.0	6,310.4	6,400.0	6,398.8	25.1	1.7	150.37	-1,101.3	-3,832.6	3,170.8	3,148.9	21.95	144.442	
6,500.0	6,313.7	6,400.0	6,398.8	25.1	1.7	150.29	-1,101.3	-3,832.6	3,172.6	3,150.7	21.96	144.493	
6,550.0	6,354.4	6,443.6	6,442.3	25.0	1.7	149.42	-1,101.0	-3,830.7	3,196.9	3,174.9	22.01	145.223	
6,594.5	6,388.9	6,468.8	6,467.5	24.9	1.7	148.40	-1,101.0	-3,829.6	3,220.9	3,198.8	22.10	145.763	
6,600.0	6,393.0	6,471.8	6,470.5	24.9	1.7	148.27	-1,101.0	-3,829.5	3,224.0	3,201.9	22.11	145.822	
6,650.0	6,429.3	6,500.0	6,498.7	24.8	1.8	146.90	-1,101.1	-3,828.4	3,253.8	3,231.5	22.25	146.206	
6,692.9	6,458.5	6,500.0	6,498.7	24.7	1.8	145.29	-1,101.1	-3,828.4	3,281.4	3,258.9	22.46	146.121	
6,700.0	6,463.1	6,500.0	6,498.7	24.7	1.8	145.00	-1,101.1	-3,828.4	3,286.1	3,263.6	22.50	146.080	
6,750.0	6,494.3	6,500.0	6,498.7	24.7	1.8	142.70	-1,101.1	-3,828.4	3,321.0	3,298.2	22.84	145.422	
6,791.3	6,517.9	6,537.7	6,536.3	24.7	1.8	140.94	-1,101.3	-3,827.2	3,351.0	3,327.9	23.16	144.693	
6,800.0	6,522.6	6,539.7	6,538.3	24.7	1.8	140.47	-1,101.3	-3,827.2	3,357.6	3,334.3	23.24	144.463	
6,850.0	6,548.0	6,550.5	6,549.2	24.7	1.8	137.38	-1,101.3	-3,827.0	3,396.4	3,372.6	23.80	142.691	
6,889.7	6,566.0	6,558.2	6,556.8	24.8	1.8	134.47	-1,101.4	-3,826.9	3,428.6	3,404.2	24.34	140.839	
6,900.0	6,570.4	6,560.0	6,558.6	24.9	1.8	133.65	-1,101.4	-3,826.8	3,437.0	3,412.5	24.49	140.334	
6,950.0	6,589.5	6,568.0	6,566.6	25.1	1.8	129.12	-1,101.5	-3,826.8	3,479.1	3,453.9	25.29	137.554	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,602.0	6,600.0	6,598.7	25.3	1.8	125.73	-1,101.7	-3,826.7	3,512.4	3,486.5	25.90	135.599	
7,000.0	6,605.4	6,600.0	6,598.7	25.3	1.8	124.33	-1,101.7	-3,826.7	3,522.8	3,496.7	26.11	134.919	
7,050.0	6,618.0	6,600.0	6,598.7	25.6	1.8	117.72	-1,101.7	-3,826.7	3,567.2	3,540.2	26.98	132.212	
7,086.6	6,625.0	6,600.0	6,598.7	25.9	1.8	112.14	-1,101.7	-3,826.7	3,600.2	3,572.7	27.54	130.717	
7,100.0	6,627.1	6,600.0	6,598.7	26.0	1.8	109.95	-1,101.7	-3,826.7	3,612.4	3,584.7	27.71	130.358	
7,150.0	6,632.8	6,600.0	6,598.7	26.5	1.8	101.09	-1,101.7	-3,826.7	3,658.3	3,630.1	28.20	129.732	
7,185.0	6,634.7	6,600.0	6,598.7	26.8	1.8	94.41	-1,101.7	-3,826.7	3,690.6	3,662.2	28.44	129.789	
7,200.0	6,635.0	6,600.0	6,598.7	27.0	1.8	91.48	-1,101.7	-3,826.7	3,704.5	3,675.9	28.53	129.826	
7,215.9	6,635.0	6,600.0	6,598.7	27.1	1.8	88.34	-1,101.7	-3,826.7	3,719.2	3,690.6	28.66	129.766	
7,283.4	6,634.1	6,600.0	6,598.7	27.9	1.8	88.34	-1,101.7	-3,826.7	3,781.9	3,752.4	29.49	128.226	
7,300.0	6,633.9	6,600.0	6,598.7	28.1	1.8	88.34	-1,101.7	-3,826.7	3,797.3	3,767.6	29.70	127.863	
7,381.9	6,632.9	6,600.0	6,598.7	29.3	1.8	88.34	-1,101.7	-3,826.7	3,873.6	3,842.7	30.87	125.471	
7,400.0	6,632.6	6,600.0	6,598.7	29.5	1.8	88.34	-1,101.7	-3,826.7	3,890.5	3,859.3	31.13	124.967	
7,480.3	6,631.6	6,600.0	6,598.7	30.8	1.8	88.34	-1,101.7	-3,826.7	3,965.5	3,933.1	32.43	122.261	
7,500.0	6,631.4	6,600.0	6,598.7	31.1	1.8	88.34	-1,101.7	-3,826.7	3,984.0	3,951.2	32.75	121.631	
7,578.7	6,630.4	6,600.0	6,598.7	32.5	1.8	88.34	-1,101.7	-3,826.7	4,057.8	4,023.7	34.16	118.793	
7,600.0	6,630.1	6,600.0	6,598.7	32.9	1.8	88.34	-1,101.7	-3,826.7	4,077.8	4,043.3	34.54	118.067	
7,677.1	6,629.1	6,600.0	6,598.7	34.3	1.8	88.34	-1,101.7	-3,826.7	4,150.4	4,114.4	36.02	115.228	
7,700.0	6,628.8	6,600.0	6,598.7	34.8	1.8	88.34	-1,101.7	-3,826.7	4,171.9	4,135.4	36.46	114.432	
7,775.6	6,627.8	6,600.0	6,598.7	36.3	1.8	88.34	-1,101.7	-3,826.7	4,243.2	4,205.2	37.99	111.678	
7,800.0	6,627.5	6,600.0	6,598.7	36.8	1.8	88.34	-1,101.7	-3,826.7	4,266.3	4,227.8	38.49	110.836	
7,874.0	6,626.6	6,600.0	6,598.7	38.4	1.8	88.34	-1,101.7	-3,826.7	4,336.3	4,296.2	40.07	108.221	
7,900.0	6,626.3	6,600.0	6,598.7	38.9	1.8	88.34	-1,101.7	-3,826.7	4,360.9	4,320.3	40.62	107.351	
7,972.4	6,625.3	6,600.0	6,598.7	40.5	1.8	88.34	-1,101.7	-3,826.7	4,429.6	4,387.3	42.23	104.904	
8,000.0	6,625.0	6,600.0	6,598.7	41.1	1.8	88.34	-1,101.7	-3,826.7	4,455.7	4,412.9	42.84	104.021	
8,070.8	6,624.1	6,600.0	6,598.7	42.7	1.8	88.34	-1,101.7	-3,826.7	4,523.1	4,478.6	44.45	101.753	
8,100.0	6,623.7	6,600.0	6,598.7	43.4	1.8	88.34	-1,101.7	-3,826.7	4,550.8	4,505.7	45.12	100.867	
8,169.3	6,622.8	6,600.0	6,598.7	45.0	1.8	88.34	-1,101.7	-3,826.7	4,616.8	4,570.1	46.74	98.780	
8,200.0	6,622.4	6,600.0	6,598.7	45.7	1.8	88.34	-1,101.7	-3,826.7	4,646.1	4,598.6	47.46	97.900	
8,267.7	6,621.6	6,600.0	6,598.7	47.4	1.8	88.34	-1,101.7	-3,826.7	4,710.7	4,661.6	49.08	95.988	
8,300.0	6,621.1	6,600.0	6,598.7	48.1	1.8	88.34	-1,101.7	-3,826.7	4,741.6	4,691.7	49.85	95.121	
8,366.1	6,620.3	6,600.0	6,598.7	49.7	1.8	88.34	-1,101.7	-3,826.7	4,804.8	4,753.4	51.46	93.374	
8,400.0	6,619.9	6,600.0	6,598.7	50.6	1.8	88.34	-1,101.7	-3,826.7	4,837.2	4,785.0	52.28	92.522	
8,464.5	6,619.0	6,600.0	6,598.7	52.2	1.8	88.34	-1,101.7	-3,826.7	4,899.1	4,845.2	53.88	90.931	
8,500.0	6,618.6	6,600.0	6,598.7	53.0	1.8	88.33	-1,101.7	-3,826.7	4,933.1	4,878.3	54.75	90.097	
8,563.0	6,617.8	6,600.0	6,598.7	54.6	1.8	88.33	-1,101.7	-3,826.7	4,993.5	4,937.2	56.33	88.648	
8,600.0	6,617.3	6,600.0	6,598.7	55.5	1.8	88.33	-1,101.7	-3,826.7	5,029.1	4,971.8	57.26	87.835	
8,661.4	6,616.5	6,600.0	6,598.7	57.1	1.8	88.33	-1,101.7	-3,826.7	5,088.1	5,029.3	58.81	86.517	
8,700.0	6,616.0	6,600.0	6,598.7	58.1	1.8	88.33	-1,101.7	-3,826.7	5,125.2	5,065.4	59.79	85.724	
8,759.8	6,615.2	6,600.0	6,598.7	59.6	1.8	88.33	-1,101.7	-3,826.7	5,182.8	5,121.5	61.32	84.526	
8,800.0	6,614.7	6,600.0	6,598.7	60.6	1.8	88.33	-1,101.7	-3,826.7	5,221.5	5,159.2	62.34	83.755	
8,858.2	6,614.0	6,600.0	6,598.7	62.1	1.8	88.33	-1,101.7	-3,826.7	5,277.7	5,213.8	63.84	82.665	
8,900.0	6,613.4	6,600.0	6,598.7	63.2	1.8	88.33	-1,101.7	-3,826.7	5,317.9	5,253.0	64.92	81.915	
8,956.7	6,612.7	6,600.0	6,598.7	64.7	1.8	88.33	-1,101.7	-3,826.7	5,372.6	5,306.2	66.39	80.924	
9,000.0	6,612.2	6,600.0	6,598.7	65.8	1.8	88.33	-1,101.7	-3,826.7	5,414.5	5,347.0	67.52	80.195	
9,055.1	6,611.5	6,600.0	6,598.7	67.3	1.8	88.33	-1,101.7	-3,826.7	5,467.7	5,398.8	68.96	79.293	
9,100.0	6,610.9	6,600.0	6,598.7	68.4	1.8	88.33	-1,101.7	-3,826.7	5,511.2	5,441.0	70.13	78.586	
9,153.5	6,610.2	6,600.0	6,598.7	69.8	1.8	88.33	-1,101.7	-3,826.7	5,563.0	5,491.4	71.54	77.764	
9,200.0	6,609.6	6,600.0	6,598.7	71.1	1.8	88.33	-1,101.7	-3,826.7	5,608.0	5,535.2	72.76	77.078	
9,251.9	6,608.9	6,600.0	6,598.7	72.4	1.8	88.33	-1,101.7	-3,826.7	5,658.3	5,584.2	74.13	76.330	
9,300.0	6,608.3	6,600.0	6,598.7	73.7	1.8	88.33	-1,101.7	-3,826.7	5,704.9	5,629.5	75.40	75.663	
9,350.4	6,607.7	6,600.0	6,598.7	75.0	1.8	88.33	-1,101.7	-3,826.7	5,753.7	5,677.0	76.74	74.981	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,607.0	6,600.0	6,598.7	76.4	1.8	88.33	-1,101.7	-3,826.7	5,801.9	5,723.8	78.05	74.333	
9,448.8	6,606.4	6,600.0	6,598.7	77.7	1.8	88.33	-1,101.7	-3,826.7	5,849.3	5,769.9	79.35	73.713	
9,500.0	6,605.7	6,600.0	6,598.7	79.0	1.8	88.33	-1,101.7	-3,826.7	5,899.0	5,818.3	80.72	73.083	
9,547.2	6,605.1	6,600.0	6,598.7	80.3	1.8	88.33	-1,101.7	-3,826.7	5,944.9	5,862.9	81.98	72.517	
9,600.0	6,604.5	6,600.0	6,598.7	81.7	1.8	88.33	-1,101.7	-3,826.7	5,996.2	5,912.8	83.39	71.905	
9,645.6	6,603.9	6,600.0	6,598.7	82.9	1.8	88.33	-1,101.7	-3,826.7	6,040.6	5,956.0	84.62	71.389	
9,700.0	6,603.2	6,600.0	6,598.7	84.4	1.8	88.32	-1,101.7	-3,826.7	6,093.5	6,007.4	86.07	70.795	
9,744.1	6,602.6	6,600.0	6,598.7	85.6	1.8	88.32	-1,101.7	-3,826.7	6,136.4	6,049.2	87.26	70.324	
9,800.0	6,601.9	6,600.0	6,598.7	87.1	1.8	88.32	-1,101.7	-3,826.7	6,190.9	6,102.1	88.76	69.746	
9,842.5	6,601.3	6,600.0	6,598.7	88.2	1.8	88.32	-1,101.7	-3,826.7	6,232.3	6,142.4	89.91	69.317	
9,900.0	6,600.6	6,600.0	6,598.7	89.8	1.8	88.32	-1,101.7	-3,826.7	6,288.4	6,196.9	91.46	68.754	
9,940.9	6,600.1	6,600.0	6,598.7	90.9	1.8	88.32	-1,101.7	-3,826.7	6,328.3	6,235.7	92.57	68.363	
10,000.0	6,599.3	6,600.0	6,598.7	92.5	1.8	88.32	-1,101.7	-3,826.7	6,385.9	6,291.7	94.17	67.815	
10,039.3	6,598.8	6,600.0	6,598.7	93.5	1.8	88.32	-1,101.7	-3,826.7	6,424.3	6,329.1	95.23	67.459	
10,100.0	6,598.0	6,600.0	6,598.7	95.2	1.8	88.32	-1,101.7	-3,826.7	6,483.5	6,386.6	96.88	66.925	
10,137.8	6,597.5	6,600.0	6,598.7	96.2	1.8	88.32	-1,101.7	-3,826.7	6,520.4	6,422.5	97.90	66.601	
10,200.0	6,596.7	6,600.0	6,598.7	97.9	1.8	88.32	-1,101.7	-3,826.7	6,581.2	6,481.6	99.59	66.081	
10,236.2	6,596.3	6,600.0	6,598.7	98.9	1.8	88.32	-1,101.7	-3,826.7	6,616.6	6,516.0	100.58	65.786	
10,300.0	6,595.4	6,600.0	6,598.7	100.6	1.8	88.32	-1,101.7	-3,826.7	6,679.0	6,576.7	102.31	65.279	
10,334.6	6,595.0	6,600.0	6,598.7	101.6	1.8	88.32	-1,101.7	-3,826.7	6,712.8	6,609.6	103.26	65.010	
10,400.0	6,594.2	6,600.0	6,598.7	103.4	1.8	88.32	-1,101.7	-3,826.7	6,776.8	6,671.8	105.04	64.516	
10,433.0	6,593.7	6,600.0	6,598.7	104.3	1.8	88.32	-1,101.7	-3,826.7	6,809.1	6,703.2	105.94	64.272	
10,500.0	6,592.9	6,600.0	6,598.7	106.1	1.8	88.32	-1,101.7	-3,826.7	6,874.7	6,766.9	107.77	63.790	
10,531.5	6,592.5	6,600.0	6,598.7	106.9	1.8	88.32	-1,101.7	-3,826.7	6,905.5	6,796.9	108.63	63.568	
10,600.0	6,591.6	6,600.0	6,598.7	108.8	1.8	88.31	-1,101.7	-3,826.7	6,972.6	6,862.1	110.50	63.098	
10,629.9	6,591.2	6,600.0	6,598.7	109.6	1.8	88.31	-1,101.7	-3,826.7	7,001.9	6,890.6	111.32	62.897	
10,700.0	6,590.3	6,600.0	6,598.7	111.6	1.8	88.31	-1,101.7	-3,826.7	7,070.6	6,957.4	113.24	62.438	
10,728.3	6,589.9	6,600.0	6,598.7	112.3	1.8	88.31	-1,101.7	-3,826.7	7,098.4	6,984.4	114.02	62.256	
10,800.0	6,589.0	6,600.0	6,598.7	114.3	1.8	88.31	-1,101.7	-3,826.7	7,168.7	7,052.7	115.98	61.807	
10,826.7	6,588.7	6,600.0	6,598.7	115.0	1.8	88.31	-1,101.7	-3,826.7	7,194.9	7,078.2	116.72	61.643	
10,900.0	6,587.7	6,600.0	6,598.7	117.1	1.8	88.31	-1,101.7	-3,826.7	7,266.8	7,148.1	118.73	61.205	
10,925.2	6,587.4	6,600.0	6,598.7	117.7	1.8	88.31	-1,101.7	-3,826.7	7,291.5	7,172.1	119.42	61.057	
11,000.0	6,586.4	6,600.0	6,598.7	119.8	1.8	88.31	-1,101.7	-3,826.7	7,365.0	7,243.5	121.48	60.629	
11,023.6	6,586.1	6,600.0	6,598.7	120.4	1.8	88.31	-1,101.7	-3,826.7	7,388.1	7,266.0	122.13	60.496	
11,100.0	6,585.1	6,600.0	6,598.7	122.6	1.8	88.31	-1,101.7	-3,826.7	7,463.2	7,339.0	124.23	60.077	
11,122.0	6,584.8	6,600.0	6,598.7	123.2	1.8	88.31	-1,101.7	-3,826.7	7,484.8	7,360.0	124.83	59.958	
11,200.0	6,583.8	6,600.0	6,598.7	125.3	1.8	88.31	-1,101.7	-3,826.7	7,561.4	7,434.5	126.98	59.548	
11,220.4	6,583.6	6,600.0	6,598.7	125.9	1.8	88.31	-1,101.7	-3,826.7	7,581.5	7,454.0	127.54	59.443	
11,300.0	6,582.5	6,600.0	6,598.7	128.1	1.8	88.31	-1,101.7	-3,826.7	7,659.7	7,530.0	129.74	59.041	
11,318.9	6,582.3	6,600.0	6,598.7	128.6	1.8	88.31	-1,101.7	-3,826.7	7,678.3	7,548.1	130.26	58.948	
11,400.0	6,581.2	6,600.0	6,598.7	130.8	1.8	88.31	-1,101.7	-3,826.7	7,758.1	7,625.6	132.49	58.554	
11,417.3	6,581.0	6,600.0	6,598.7	131.3	1.8	88.31	-1,101.7	-3,826.7	7,775.1	7,642.1	132.97	58.472	
11,500.0	6,580.0	6,600.0	6,598.7	133.6	1.8	88.30	-1,101.7	-3,826.7	7,856.5	7,721.2	135.25	58.087	
11,515.7	6,579.7	6,600.0	6,598.7	134.0	1.8	88.30	-1,101.7	-3,826.7	7,872.0	7,736.3	135.69	58.015	
11,600.0	6,578.7	6,600.0	6,598.7	136.3	1.8	88.30	-1,101.7	-3,826.7	7,954.9	7,816.9	138.02	57.638	
11,614.1	6,578.5	6,600.0	6,598.7	136.7	1.8	88.30	-1,101.7	-3,826.7	7,968.8	7,830.4	138.41	57.576	
11,700.0	6,577.4	6,600.0	6,598.7	139.1	1.8	88.30	-1,101.7	-3,826.7	8,053.4	7,912.6	140.78	57.206	
11,712.6	6,577.2	6,600.0	6,598.7	139.5	1.8	88.30	-1,101.7	-3,826.7	8,065.8	7,924.6	141.13	57.152	
11,800.0	6,576.1	6,600.0	6,598.7	141.9	1.8	88.30	-1,101.7	-3,826.7	8,151.9	8,008.3	143.54	56.790	
11,811.0	6,575.9	6,600.0	6,598.7	142.2	1.8	88.30	-1,101.7	-3,826.7	8,162.7	8,018.9	143.85	56.745	
11,882.7	6,575.0	6,600.0	6,598.7	144.2	1.8	88.30	-1,101.7	-3,826.7	8,233.4	8,087.5	145.83	56.458 SF	
11,883.5	6,575.0	6,600.0	6,598.7	144.2	1.8	88.30	-1,101.7	-3,826.7	8,234.2	8,088.3	145.85	56.458	

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

## Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-80.54	739.6	-4,438.5	4,499.8				
98.4	98.4	50.7	50.7	0.1	0.0	-80.54	739.7	-4,438.5	4,499.8	4,499.7	0.11	N/A	
100.0	100.0	52.0	52.0	0.1	0.0	-80.54	739.7	-4,438.5	4,499.8	4,499.7	0.11	N/A	
196.8	196.8	143.3	143.3	0.3	0.1	-80.53	740.5	-4,438.8	4,500.2	4,499.8	0.42	N/A	
200.0	200.0	146.9	146.9	0.3	0.1	-80.53	740.5	-4,438.8	4,500.2	4,499.8	0.43	N/A	
295.3	295.3	288.2	288.1	0.5	0.3	-80.49	743.4	-4,438.3	4,500.2	4,499.4	0.83	5,430.052	
300.0	300.0	296.7	296.7	0.5	0.3	-80.49	743.6	-4,438.2	4,500.2	4,499.4	0.85	5,311.171	
393.7	393.7	405.3	405.2	0.8	0.4	-80.44	747.2	-4,436.6	4,499.3	4,498.2	1.14	3,945.770	
400.0	400.0	411.2	411.1	0.8	0.4	-80.44	747.4	-4,436.5	4,499.3	4,498.1	1.16	3,884.302	
492.1	492.1	500.0	499.8	1.0	0.4	-80.39	751.1	-4,435.0	4,498.4	4,496.9	1.42	3,160.623	
500.0	500.0	505.9	505.7	1.0	0.5	-80.38	751.4	-4,434.9	4,498.3	4,496.8	1.44	3,114.406	
590.5	590.5	598.9	598.6	1.2	0.5	-80.33	755.6	-4,433.3	4,497.4	4,495.7	1.70	2,642.949	
600.0	600.0	608.8	608.4	1.2	0.5	-80.32	756.0	-4,433.1	4,497.3	4,495.6	1.73	2,602.456	
689.0	689.0	702.0	701.6	1.4	0.6	-80.26	760.3	-4,431.4	4,496.4	4,494.4	1.98	2,275.055	
700.0	700.0	712.6	712.2	1.4	0.6	-80.26	760.8	-4,431.2	4,496.3	4,494.3	2.01	2,241.065	
787.4	787.4	796.7	796.2	1.6	0.6	-80.21	764.5	-4,429.7	4,495.4	4,493.2	2.24	2,003.704	
800.0	800.0	809.4	808.8	1.7	0.6	-80.20	765.1	-4,429.5	4,495.3	4,493.0	2.28	1,973.569	
885.8	885.8	897.1	896.4	1.9	0.7	-80.15	768.8	-4,427.9	4,494.4	4,491.9	2.51	1,790.143	
900.0	900.0	911.0	910.4	1.9	0.7	-80.14	769.3	-4,427.7	4,494.2	4,491.7	2.55	1,763.379	
984.2	984.2	993.1	992.4	2.1	0.7	-80.10	772.5	-4,426.3	4,493.4	4,490.6	2.77	1,619.835	
1,000.0	1,000.0	1,008.3	1,007.5	2.1	0.7	-80.09	773.1	-4,426.0	4,493.2	4,490.4	2.82	1,595.642	
1,082.7	1,082.7	1,087.1	1,086.2	2.3	0.7	-80.05	776.0	-4,424.8	4,492.5	4,489.4	3.04	1,479.970	
1,100.0	1,100.0	1,100.0	1,099.2	2.3	0.7	-80.05	776.5	-4,424.6	4,492.3	4,489.3	3.08	1,458.545	
1,181.1	1,181.1	1,178.0	1,177.1	2.5	0.8	-80.01	779.3	-4,423.5	4,491.7	4,488.4	3.29	1,363.244	
1,200.0	1,200.0	1,195.4	1,194.4	2.6	0.8	-80.00	779.9	-4,423.2	4,491.6	4,488.2	3.34	1,342.933	
1,279.5	1,279.5	1,264.9	1,263.9	2.7	0.8	-79.97	782.4	-4,422.4	4,491.1	4,487.6	3.55	1,264.335	
1,300.0	1,300.0	1,282.7	1,281.8	2.8	0.8	-79.96	783.0	-4,422.2	4,491.0	4,487.4	3.61	1,245.581	
1,377.9	1,377.9	1,381.9	1,380.8	3.0	0.9	-79.91	786.5	-4,421.0	4,490.6	4,486.8	3.82	1,175.399	
1,400.0	1,400.0	1,413.7	1,412.6	3.0	0.9	-79.90	787.5	-4,420.5	4,490.4	4,486.5	3.88	1,156.666	
1,476.4	1,476.4	1,517.9	1,516.8	3.2	0.9	-4.74	790.3	-4,418.5	4,488.2	4,484.3	3.99	1,125.553	
1,500.0	1,500.0	1,540.9	1,539.7	3.2	0.9	-4.73	790.8	-4,418.0	4,487.1	4,483.1	4.05	1,108.827	
1,574.8	1,574.7	1,600.0	1,598.8	3.4	1.0	-4.72	792.2	-4,416.8	4,482.3	4,478.1	4.23	1,060.653	
1,600.0	1,599.8	1,629.9	1,628.8	3.4	1.0	-4.72	792.9	-4,416.2	4,480.3	4,476.0	4.29	1,044.814	
1,673.2	1,672.8	1,685.8	1,684.6	3.6	1.0	-4.72	794.2	-4,415.2	4,473.3	4,468.9	4.46	1,002.052	
1,700.0	1,699.5	1,700.0	1,698.8	3.7	1.0	-4.72	794.5	-4,415.0	4,470.4	4,465.9	4.53	987.558	
1,771.6	1,770.6	1,763.5	1,762.3	3.8	1.0	-4.72	795.8	-4,414.3	4,461.5	4,456.8	4.70	948.850	
1,800.0	1,798.7	1,786.0	1,784.8	3.9	1.0	-4.73	796.2	-4,414.1	4,457.6	4,452.8	4.77	934.403	
1,870.1	1,868.0	1,837.3	1,836.1	4.1	1.0	-4.74	797.0	-4,413.8	4,446.8	4,441.8	4.94	900.133	
1,900.0	1,897.5	1,858.5	1,857.3	4.2	1.1	-4.75	797.3	-4,413.7	4,441.8	4,436.7	5.01	886.250	
1,968.5	1,964.8	1,900.0	1,898.8	4.4	1.1	-4.77	797.8	-4,413.7	4,429.3	4,424.1	5.18	855.064	
2,000.0	1,995.6	1,933.9	1,932.7	4.5	1.1	-4.79	798.2	-4,413.8	4,423.1	4,417.9	5.26	841.072	
2,066.9	2,060.9	1,988.4	1,987.2	4.7	1.1	-4.82	798.8	-4,414.1	4,409.0	4,403.5	5.43	812.141	
2,100.0	2,093.1	2,015.0	2,013.7	4.8	1.1	-4.83	799.0	-4,414.3	4,401.5	4,396.0	5.51	798.693	
2,165.3	2,156.3	2,066.7	2,065.5	5.1	1.1	-4.87	799.5	-4,414.8	4,385.7	4,380.0	5.68	771.926	
2,200.0	2,189.6	2,100.0	2,098.8	5.2	1.1	-4.90	799.8	-4,415.2	4,376.8	4,371.1	5.77	758.360	
2,263.8	2,250.7	2,151.5	2,150.2	5.5	1.1	-4.94	800.1	-4,415.9	4,359.5	4,353.6	5.94	733.440	
2,280.0	2,266.2	2,166.3	2,165.1	5.6	1.1	-4.95	800.2	-4,416.2	4,354.9	4,348.9	5.99	727.395	
2,300.0	2,285.3	2,184.5	2,183.3	5.7	1.1	-4.96	800.3	-4,416.4	4,349.2	4,343.1	6.04	720.080	
2,362.2	2,344.6	2,245.1	2,243.8	6.0	1.2	-4.98	800.4	-4,417.3	4,331.3	4,325.1	6.20	698.229	
2,400.0	2,380.6	2,282.7	2,281.5	6.2	1.2	-5.00	800.5	-4,417.9	4,320.5	4,314.2	6.31	684.212	
2,460.6	2,438.4	2,338.0	2,336.7	6.5	1.2	-5.02	800.6	-4,418.7	4,303.1	4,296.6	6.48	663.656	
2,500.0	2,475.9	2,372.6	2,371.3	6.7	1.2	-5.03	800.6	-4,419.2	4,291.8	4,285.2	6.59	650.793	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,426.1	2,424.8	7.0	1.2	-5.05	800.5	-4,420.1	4,274.9	4,268.2	6.76	632.077	
2,600.0	2,571.2	2,464.5	2,463.2	7.2	1.2	-5.07	800.4	-4,420.8	4,263.2	4,256.4	6.88	619.579	
2,657.5	2,626.0	2,518.8	2,517.5	7.5	1.2	-5.10	800.2	-4,421.8	4,246.9	4,239.8	7.05	602.491	
2,700.0	2,666.6	2,559.4	2,558.1	7.8	1.2	-5.12	800.0	-4,422.5	4,234.7	4,227.6	7.17	590.287	
2,755.9	2,719.8	2,613.4	2,612.1	8.1	1.2	-5.14	799.7	-4,423.5	4,218.8	4,211.5	7.34	574.700	
2,800.0	2,761.9	2,657.1	2,655.8	8.3	1.2	-5.17	799.4	-4,424.3	4,206.2	4,198.8	7.47	562.859	
2,854.3	2,813.7	2,711.7	2,710.3	8.7	1.2	-5.20	798.9	-4,425.3	4,190.7	4,183.1	7.64	548.627	
2,900.0	2,857.2	2,759.6	2,758.2	8.9	1.2	-5.23	798.4	-4,426.2	4,177.6	4,169.9	7.78	537.059	
2,952.7	2,907.5	2,813.8	2,812.5	9.2	1.2	-5.26	797.7	-4,427.1	4,162.5	4,154.5	7.94	524.101	
3,000.0	2,952.5	2,859.9	2,858.5	9.5	1.2	-5.29	797.0	-4,427.9	4,148.9	4,140.8	8.09	512.979	
3,051.2	3,001.3	2,910.3	2,908.9	9.8	1.2	-5.32	796.2	-4,428.7	4,134.2	4,125.9	8.25	501.275	
3,100.0	3,047.8	2,960.7	2,959.3	10.1	1.2	-5.36	795.4	-4,429.5	4,120.1	4,111.7	8.40	490.477	
3,149.6	3,095.1	3,014.5	3,013.0	10.4	1.2	-5.39	794.6	-4,430.3	4,105.7	4,097.1	8.56	479.765	
3,200.0	3,143.2	3,077.5	3,076.0	10.7	1.3	-5.44	793.5	-4,431.1	4,091.0	4,082.3	8.72	469.069	
3,248.0	3,188.9	3,131.6	3,130.2	11.0	1.3	-5.48	792.5	-4,431.6	4,076.8	4,067.9	8.88	459.261	
3,300.0	3,238.5	3,186.5	3,185.0	11.3	1.3	-5.52	791.4	-4,432.1	4,061.4	4,052.4	9.04	449.077	
3,346.4	3,282.8	3,238.4	3,237.0	11.6	1.3	-5.55	790.3	-4,432.5	4,047.6	4,038.4	9.19	440.211	
3,400.0	3,333.8	3,299.6	3,298.1	11.9	1.3	-5.60	789.0	-4,432.8	4,031.5	4,022.1	9.37	430.324	
3,444.9	3,376.6	3,349.4	3,347.9	12.2	1.3	-5.64	787.9	-4,432.9	4,018.0	4,008.4	9.52	422.271	
3,500.0	3,429.1	3,409.7	3,408.2	12.6	1.3	-5.69	786.5	-4,433.0	4,001.2	3,991.5	9.69	412.726	
3,543.3	3,470.4	3,454.1	3,452.6	12.8	1.3	-5.72	785.5	-4,432.9	3,988.0	3,978.2	9.84	405.480	
3,600.0	3,524.4	3,511.6	3,510.0	13.2	1.3	-5.77	784.1	-4,432.9	3,970.7	3,960.6	10.02	396.332	
3,641.7	3,564.2	3,551.9	3,550.4	13.4	1.3	-5.80	783.2	-4,432.8	3,957.9	3,947.7	10.15	389.818	
3,700.0	3,619.8	3,608.3	3,606.8	13.8	1.3	-5.85	781.8	-4,432.7	3,940.0	3,929.7	10.34	380.982	
3,740.1	3,658.0	3,647.2	3,645.6	14.0	1.3	-5.88	780.8	-4,432.6	3,927.7	3,917.2	10.47	375.066	
3,800.0	3,715.1	3,705.1	3,703.5	14.4	1.3	-5.93	779.4	-4,432.5	3,909.4	3,898.7	10.67	366.510	
3,838.6	3,751.8	3,743.1	3,741.5	14.7	1.3	-5.96	778.4	-4,432.4	3,897.5	3,886.7	10.79	361.126	
3,900.0	3,810.4	3,803.7	3,802.1	15.0	1.3	-6.02	776.8	-4,432.2	3,878.6	3,867.6	10.99	352.801	
3,937.0	3,845.7	3,842.0	3,840.4	15.3	1.3	-6.05	775.9	-4,432.1	3,867.2	3,856.1	11.12	347.886	
4,000.0	3,905.7	3,907.0	3,905.3	15.7	1.3	-6.11	774.2	-4,431.8	3,847.8	3,836.4	11.33	339.752	
4,035.4	3,939.5	3,942.5	3,940.8	15.9	1.3	-6.14	773.3	-4,431.6	3,836.8	3,825.4	11.44	335.299	
4,100.0	4,001.0	4,006.5	4,004.8	16.3	1.3	-6.19	771.8	-4,431.2	3,816.7	3,805.1	11.66	327.413	
4,133.8	4,033.3	4,037.0	4,035.3	16.5	1.3	-6.22	771.2	-4,431.0	3,806.2	3,794.5	11.77	323.420	
4,200.0	4,096.3	4,096.5	4,094.8	16.9	1.3	-6.27	769.9	-4,430.6	3,785.7	3,773.8	11.99	315.833	
4,232.3	4,127.1	4,124.9	4,123.2	17.1	1.3	-6.29	769.3	-4,430.4	3,775.8	3,763.7	12.09	312.237	
4,300.0	4,191.7	4,184.2	4,182.5	17.6	1.4	-6.34	768.3	-4,430.1	3,754.9	3,742.6	12.32	304.899	
4,330.7	4,220.9	4,210.9	4,209.2	17.8	1.4	-6.36	767.8	-4,430.0	3,745.5	3,733.0	12.42	301.657	
4,400.0	4,287.0	4,270.5	4,268.8	18.2	1.4	-6.41	766.9	-4,429.8	3,724.3	3,711.6	12.64	294.538	
4,429.1	4,314.7	4,300.0	4,298.3	18.4	1.4	-6.43	766.6	-4,429.7	3,715.4	3,702.6	12.74	291.588	
4,500.0	4,382.3	4,358.8	4,357.0	18.8	1.4	-6.47	765.9	-4,429.6	3,693.8	3,680.9	12.98	284.676	
4,527.5	4,408.6	4,383.4	4,381.7	19.0	1.4	-6.49	765.6	-4,429.6	3,685.5	3,672.4	13.07	282.040	
4,600.0	4,477.6	4,448.3	4,446.6	19.5	1.4	-6.54	764.9	-4,429.6	3,663.6	3,650.3	13.31	275.278	
4,626.0	4,502.4	4,471.7	4,469.9	19.6	1.4	-6.56	764.7	-4,429.6	3,655.7	3,642.3	13.40	272.903	
4,700.0	4,572.9	4,537.7	4,535.9	20.1	1.4	-6.60	764.0	-4,429.7	3,633.5	3,619.8	13.64	266.301	
4,724.4	4,596.2	4,559.4	4,557.6	20.3	1.4	-6.62	763.8	-4,429.7	3,626.1	3,612.4	13.73	264.178	
4,800.0	4,668.3	4,627.1	4,625.3	20.7	1.4	-6.68	762.7	-4,430.0	3,603.5	3,589.5	13.98	257.753	
4,822.8	4,690.0	4,647.8	4,646.0	20.9	1.4	-6.70	762.4	-4,430.1	3,596.7	3,582.6	14.06	255.851	
4,900.0	4,763.6	4,722.9	4,721.1	21.4	1.4	-6.77	760.8	-4,430.5	3,573.7	3,559.4	14.32	249.529	
4,921.2	4,783.8	4,747.8	4,746.0	21.5	1.4	-6.79	760.2	-4,430.6	3,567.3	3,552.9	14.40	247.787	
5,000.0	4,858.9	4,838.5	4,836.7	22.0	1.4	-6.89	757.7	-4,430.8	3,543.5	3,528.9	14.68	241.446	
5,019.7	4,877.7	4,860.7	4,858.9	22.1	1.5	-6.91	757.1	-4,430.8	3,537.6	3,522.8	14.75	239.893	
5,100.0	4,954.2	4,956.6	4,954.7	22.6	1.5	-7.02	754.5	-4,430.5	3,512.9	3,497.8	15.03	233.666	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,979.1	4,977.2	22.8	1.5	-7.04	753.9	-4,430.3	3,507.2	3,492.1	15.10	232.269		
5,171.8	5,022.7	5,038.5	5,036.5	23.1	1.5	-7.10	752.4	-4,429.7	3,490.4	3,475.1	15.29	228.242		
5,200.0	5,049.6	5,067.9	5,066.0	23.3	1.5	-7.11	751.8	-4,429.4	3,481.7	3,466.3	15.37	226.586		
5,216.5	5,065.4	5,085.2	5,083.3	23.3	1.5	-7.11	751.5	-4,429.2	3,476.7	3,461.3	15.40	225.700		
5,300.0	5,145.7	5,172.7	5,170.7	23.7	1.5	-7.12	750.0	-4,427.9	3,452.7	3,437.1	15.59	221.485		
5,314.9	5,160.1	5,188.4	5,186.4	23.8	1.5	-7.13	749.7	-4,427.7	3,448.6	3,433.0	15.62	220.798		
5,400.0	5,242.7	5,286.2	5,284.2	24.1	1.5	-7.14	748.2	-4,425.9	3,426.7	3,410.9	15.79	217.050		
5,413.4	5,255.7	5,301.6	5,299.6	24.2	1.5	-7.14	748.0	-4,425.5	3,423.4	3,407.6	15.81	216.517		
5,500.0	5,340.5	5,391.9	5,389.9	24.5	1.5	-7.15	746.6	-4,423.5	3,403.7	3,387.7	15.96	213.302		
5,511.8	5,352.1	5,404.1	5,402.1	24.5	1.5	-7.15	746.4	-4,423.2	3,401.1	3,385.2	15.97	212.911		
5,600.0	5,439.0	5,494.1	5,492.0	24.8	1.6	-7.16	744.9	-4,421.1	3,383.8	3,367.7	16.10	210.177		
5,610.2	5,449.1	5,504.2	5,502.2	24.8	1.6	-7.16	744.7	-4,420.9	3,382.0	3,365.9	16.11	209.899		
5,700.0	5,538.0	5,590.1	5,588.0	25.1	1.6	-7.18	743.1	-4,418.8	3,367.4	3,351.2	16.22	207.622		
5,708.6	5,546.6	5,598.4	5,596.3	25.1	1.6	-7.18	743.0	-4,418.6	3,366.1	3,349.9	16.23	207.431		
5,800.0	5,637.4	5,694.4	5,692.3	25.3	1.6	-7.20	740.9	-4,416.4	3,354.4	3,338.0	16.32	205.512		
5,807.1	5,644.5	5,701.9	5,699.7	25.3	1.6	-7.20	740.7	-4,416.2	3,353.6	3,337.2	16.33	205.384		
5,900.0	5,737.2	5,798.6	5,796.4	25.5	1.6	-7.23	738.3	-4,413.8	3,344.6	3,328.2	16.41	203.802		
5,905.5	5,742.6	5,804.2	5,801.9	25.5	1.6	-7.23	738.1	-4,413.7	3,344.2	3,327.7	16.42	203.724		
6,000.0	5,837.1	5,898.3	5,896.0	25.6	1.6	-7.26	735.5	-4,411.3	3,338.2	3,321.7	16.49	202.457		
6,003.9	5,841.0	5,902.3	5,900.0	25.6	1.6	-7.26	735.4	-4,411.2	3,338.1	3,321.6	16.49	202.411		
6,051.8	5,888.9	5,952.3	5,950.0	25.7	1.6	-82.41	733.8	-4,410.0	3,336.3	3,309.1	27.19	122.698		
6,081.8	5,918.9	5,983.6	5,981.3	25.7	1.7	-82.42	732.8	-4,409.2	3,335.4	3,308.2	27.23	122.507 ES		
6,100.0	5,937.1	6,002.9	6,000.5	25.7	1.7	-172.44	732.2	-4,408.7	3,335.1	3,318.5	16.55	201.573		
6,102.3	5,939.4	6,005.7	6,003.3	25.7	1.7	-172.44	732.1	-4,408.6	3,335.1	3,318.5	16.54	201.636		
6,103.5	5,940.6	6,007.0	6,004.7	25.7	1.7	-172.44	732.1	-4,408.6	3,335.1	3,318.5	16.54	201.666 CC		
6,150.0	5,987.0	6,061.7	6,059.2	25.7	1.7	-172.46	730.3	-4,407.1	3,336.5	3,320.1	16.45	202.793		
6,200.0	6,036.5	6,118.5	6,116.1	25.7	1.7	-172.45	728.5	-4,405.4	3,341.3	3,324.9	16.38	203.997		
6,200.8	6,037.3	6,119.4	6,116.9	25.7	1.7	-172.45	728.5	-4,405.4	3,341.4	3,325.0	16.38	204.017		
6,250.0	6,085.5	6,171.8	6,169.3	25.7	1.7	-172.41	726.9	-4,403.7	3,349.4	3,333.1	16.31	205.394		
6,299.2	6,133.0	6,224.3	6,221.7	25.6	1.7	-172.35	725.5	-4,402.0	3,360.6	3,344.4	16.22	207.154		
6,300.0	6,133.7	6,225.2	6,222.6	25.6	1.7	-172.34	725.4	-4,402.0	3,360.8	3,344.6	16.22	207.185		
6,350.0	6,180.9	6,278.6	6,276.0	25.5	1.7	-172.24	724.0	-4,400.1	3,375.6	3,359.4	16.11	209.530		
6,397.6	6,224.6	6,332.5	6,329.8	25.4	1.7	-172.12	722.6	-4,398.1	3,392.5	3,376.5	15.98	212.354		
6,400.0	6,226.7	6,335.3	6,332.6	25.4	1.7	-172.11	722.5	-4,398.0	3,393.4	3,377.5	15.97	212.507		
6,450.0	6,271.1	6,393.6	6,390.9	25.2	1.7	-171.95	721.0	-4,395.6	3,414.3	3,398.5	15.80	216.165		
6,496.0	6,310.4	6,436.2	6,433.4	25.1	1.7	-171.74	719.9	-4,393.8	3,436.2	3,420.6	15.60	220.280		
6,500.0	6,313.7	6,439.6	6,436.8	25.1	1.7	-171.72	719.8	-4,393.6	3,438.2	3,422.6	15.58	220.659		
6,550.0	6,354.4	6,482.5	6,479.6	25.0	1.8	-171.44	718.7	-4,391.8	3,465.1	3,449.7	15.34	225.886		
6,594.5	6,388.9	6,526.9	6,524.0	24.9	1.8	-171.15	717.5	-4,389.8	3,491.3	3,476.2	15.12	230.920		
6,600.0	6,393.0	6,533.2	6,530.2	24.9	1.8	-171.11	717.4	-4,389.5	3,494.7	3,479.7	15.09	231.554		
6,650.0	6,429.3	6,588.3	6,585.3	24.8	1.8	-170.73	715.9	-4,386.8	3,526.9	3,512.1	14.85	237.443		
6,692.9	6,458.5	6,633.6	6,630.5	24.7	1.8	-170.34	714.7	-4,384.4	3,556.5	3,541.8	14.67	242.490		
6,700.0	6,463.1	6,640.9	6,637.8	24.7	1.8	-170.27	714.4	-4,384.0	3,561.5	3,546.9	14.64	243.307		
6,750.0	6,494.3	6,690.4	6,687.2	24.7	1.8	-169.69	713.0	-4,381.1	3,598.4	3,583.9	14.47	248.608		
6,791.3	6,517.9	6,732.0	6,728.7	24.7	1.8	-169.13	711.8	-4,378.5	3,630.4	3,616.0	14.41	251.960		
6,800.0	6,522.6	6,740.6	6,737.3	24.7	1.8	-168.99	711.5	-4,377.9	3,637.3	3,622.9	14.40	252.518		
6,850.0	6,548.0	6,787.9	6,784.5	24.7	1.8	-168.12	710.0	-4,374.7	3,678.2	3,663.7	14.47	254.218		
6,889.7	6,566.0	6,790.0	6,786.5	24.8	1.8	-167.02	710.0	-4,374.5	3,712.0	3,697.3	14.63	253.751		
6,900.0	6,570.4	6,790.0	6,786.5	24.9	1.8	-166.69	710.0	-4,374.5	3,720.9	3,706.2	14.69	253.245		
6,950.0	6,589.5	6,790.0	6,786.5	25.1	1.8	-164.75	710.0	-4,374.5	3,765.4	3,750.2	15.20	247.774		
6,988.2	6,602.0	6,790.0	6,786.5	25.3	1.8	-162.77	710.0	-4,374.5	3,800.5	3,784.7	15.83	240.113		
7,000.0	6,605.4	6,790.0	6,786.5	25.3	1.8	-162.03	710.0	-4,374.5	3,811.5	3,795.4	16.07	237.156		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,618.0	6,790.0	6,786.5	25.6	1.8	-158.00	710.0	-4,374.5	3,858.9	3,841.4	17.45	221.110	
7,086.6	6,625.0	6,790.0	6,786.5	25.9	1.8	-153.63	710.0	-4,374.5	3,894.1	3,875.2	18.92	205.772	
7,100.0	6,627.1	6,790.0	6,786.5	26.0	1.8	-151.56	710.0	-4,374.5	3,907.2	3,887.6	19.59	199.445	
7,150.0	6,632.8	6,790.0	6,786.5	26.5	1.8	-140.21	710.0	-4,374.5	3,956.2	3,933.3	22.91	172.673	
7,185.0	6,634.7	6,790.0	6,786.5	26.8	1.8	-126.47	710.0	-4,374.5	3,990.9	3,964.9	25.98	153.591	
7,200.0	6,635.0	6,790.0	6,786.5	27.0	1.8	-118.37	710.0	-4,374.5	4,005.7	3,978.5	27.24	147.048	
7,215.9	6,635.0	6,790.0	6,786.5	27.1	1.8	-108.14	710.0	-4,374.5	4,021.5	3,993.3	28.25	142.353	
7,283.4	6,634.1	6,790.0	6,786.5	27.9	1.8	-108.14	710.0	-4,374.5	4,088.7	4,059.6	29.05	140.770	
7,300.0	6,633.9	6,790.0	6,786.5	28.1	1.8	-108.14	710.0	-4,374.5	4,105.1	4,075.9	29.24	140.395	
7,381.9	6,632.9	6,790.0	6,786.5	29.3	1.8	-108.14	710.0	-4,374.5	4,186.5	4,156.2	30.36	137.896	
7,400.0	6,632.6	6,790.0	6,786.5	29.5	1.8	-108.13	710.0	-4,374.5	4,204.6	4,174.0	30.61	137.367	
7,480.3	6,631.6	6,790.0	6,786.5	30.8	1.8	-108.13	710.0	-4,374.5	4,284.4	4,252.6	31.85	134.508	
7,500.0	6,631.4	6,790.0	6,786.5	31.1	1.8	-108.13	710.0	-4,374.5	4,304.0	4,271.9	32.16	133.841	
7,578.7	6,630.4	6,790.0	6,786.5	32.5	1.8	-108.13	710.0	-4,374.5	4,382.4	4,348.9	33.50	130.821	
7,600.0	6,630.1	6,790.0	6,786.5	32.9	1.8	-108.13	710.0	-4,374.5	4,403.5	4,369.7	33.86	130.045	
7,677.1	6,629.1	6,790.0	6,786.5	34.3	1.8	-108.13	710.0	-4,374.5	4,480.3	4,445.0	35.28	127.006	
7,700.0	6,628.8	6,790.0	6,786.5	34.8	1.8	-108.13	710.0	-4,374.5	4,503.0	4,467.4	35.70	126.152	
7,775.6	6,627.8	6,790.0	6,786.5	36.3	1.8	-108.13	710.0	-4,374.5	4,578.3	4,541.1	37.16	123.191	
7,800.0	6,627.5	6,790.0	6,786.5	36.8	1.8	-108.13	710.0	-4,374.5	4,602.6	4,564.9	37.64	122.283	
7,874.0	6,626.6	6,790.0	6,786.5	38.4	1.8	-108.13	710.0	-4,374.5	4,676.3	4,637.1	39.15	119.460	
7,900.0	6,626.3	6,790.0	6,786.5	38.9	1.8	-108.12	710.0	-4,374.5	4,702.1	4,662.5	39.67	118.518	
7,972.4	6,625.3	6,790.0	6,786.5	40.5	1.8	-108.12	710.0	-4,374.5	4,774.3	4,733.0	41.21	115.866	
8,000.0	6,625.0	6,790.0	6,786.5	41.1	1.8	-108.12	710.0	-4,374.5	4,801.7	4,759.9	41.79	114.906	
8,070.8	6,624.1	6,790.0	6,786.5	42.7	1.8	-108.12	710.0	-4,374.5	4,872.3	4,828.9	43.33	112.440	
8,100.0	6,623.7	6,790.0	6,786.5	43.4	1.8	-108.12	710.0	-4,374.5	4,901.3	4,857.3	43.97	111.475	
8,169.3	6,622.8	6,790.0	6,786.5	45.0	1.8	-108.12	710.0	-4,374.5	4,970.3	4,924.8	45.52	109.199	
8,200.0	6,622.4	6,790.0	6,786.5	45.7	1.8	-108.12	710.0	-4,374.5	5,000.9	4,954.7	46.20	108.238	
8,267.7	6,621.6	6,790.0	6,786.5	47.4	1.8	-108.12	710.0	-4,374.5	5,068.4	5,020.6	47.75	106.146	
8,300.0	6,621.1	6,790.0	6,786.5	48.1	1.8	-108.11	710.0	-4,374.5	5,100.5	5,052.0	48.49	105.195	
8,366.1	6,620.3	6,790.0	6,786.5	49.7	1.8	-108.11	710.0	-4,374.5	5,166.4	5,116.4	50.02	103.281	
8,400.0	6,619.9	6,790.0	6,786.5	50.6	1.8	-108.11	710.0	-4,374.5	5,200.2	5,149.4	50.81	102.344	
8,464.5	6,619.0	6,790.0	6,786.5	52.2	1.8	-108.11	710.0	-4,374.5	5,264.5	5,212.2	52.33	100.595	
8,500.0	6,618.6	6,790.0	6,786.5	53.0	1.8	-108.11	710.0	-4,374.5	5,299.8	5,246.6	53.17	99.676	
8,563.0	6,617.8	6,790.0	6,786.5	54.6	1.8	-108.11	710.0	-4,374.5	5,362.6	5,307.9	54.68	98.080	
8,600.0	6,617.3	6,790.0	6,786.5	55.5	1.8	-108.11	710.0	-4,374.5	5,399.5	5,343.9	55.56	97.182	
8,661.4	6,616.5	6,790.0	6,786.5	57.1	1.8	-108.11	710.0	-4,374.5	5,460.7	5,403.6	57.04	95.727	
8,700.0	6,616.0	6,790.0	6,786.5	58.1	1.8	-108.10	710.0	-4,374.5	5,499.2	5,441.2	57.98	94.850	
8,759.8	6,615.2	6,790.0	6,786.5	59.6	1.8	-108.10	710.0	-4,374.5	5,558.8	5,499.4	59.44	93.524	
8,800.0	6,614.7	6,790.0	6,786.5	60.6	1.8	-108.10	710.0	-4,374.5	5,598.8	5,538.4	60.42	92.669	
8,858.2	6,614.0	6,790.0	6,786.5	62.1	1.8	-108.10	710.0	-4,374.5	5,656.9	5,595.1	61.85	91.460	
8,900.0	6,613.4	6,790.0	6,786.5	63.2	1.8	-108.10	710.0	-4,374.5	5,698.5	5,635.7	62.88	90.627	
8,956.7	6,612.7	6,790.0	6,786.5	64.7	1.8	-108.10	710.0	-4,374.5	5,755.1	5,690.8	64.28	89.526	
9,000.0	6,612.2	6,790.0	6,786.5	65.8	1.8	-108.10	710.0	-4,374.5	5,798.3	5,732.9	65.36	88.716	
9,055.1	6,611.5	6,790.0	6,786.5	67.3	1.8	-108.10	710.0	-4,374.5	5,853.2	5,786.5	66.73	87.712	
9,100.0	6,610.9	6,790.0	6,786.5	68.4	1.8	-108.09	710.0	-4,374.5	5,898.0	5,830.1	67.85	86.923	
9,153.5	6,610.2	6,790.0	6,786.5	69.8	1.8	-108.09	710.0	-4,374.5	5,951.4	5,882.2	69.20	86.008	
9,200.0	6,609.6	6,790.0	6,786.5	71.1	1.8	-108.09	710.0	-4,374.5	5,997.7	5,927.3	70.36	85.241	
9,251.9	6,608.9	6,790.0	6,786.5	72.4	1.8	-108.09	710.0	-4,374.5	6,049.5	5,977.8	71.67	84.406	
9,300.0	6,608.3	6,790.0	6,786.5	73.7	1.8	-108.09	710.0	-4,374.5	6,097.4	6,024.6	72.88	83.660	
9,350.4	6,607.7	6,790.0	6,786.5	75.0	1.8	-108.09	710.0	-4,374.5	6,147.7	6,073.5	74.16	82.898	
9,400.0	6,607.0	6,790.0	6,786.5	76.4	1.8	-108.08	710.0	-4,374.5	6,197.2	6,121.8	75.42	82.172	
9,448.8	6,606.4	6,790.0	6,786.5	77.7	1.8	-108.08	710.0	-4,374.5	6,245.9	6,169.2	76.66	81.477	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,500.0	6,605.7	6,790.0	6,786.5	79.0	1.8	-108.08	710.0	-4,374.5	6,296.9	6,219.0	77.96	80.771	
9,547.2	6,605.1	6,790.0	6,786.5	80.3	1.8	-108.08	710.0	-4,374.5	6,344.0	6,264.9	79.17	80.136	
9,600.0	6,604.5	6,790.0	6,786.5	81.7	1.8	-108.08	710.0	-4,374.5	6,396.7	6,316.2	80.51	79.449	
9,645.6	6,603.9	6,790.0	6,786.5	82.9	1.8	-108.08	710.0	-4,374.5	6,442.2	6,360.6	81.68	78.869	
9,700.0	6,603.2	6,790.0	6,786.5	84.4	1.8	-108.07	710.0	-4,374.5	6,496.5	6,413.4	83.08	78.200	
9,744.1	6,602.6	6,790.0	6,786.5	85.6	1.8	-108.07	710.0	-4,374.5	6,540.4	6,456.2	84.21	77.671	
9,800.0	6,601.9	6,790.0	6,786.5	87.1	1.8	-108.07	710.0	-4,374.5	6,596.2	6,510.6	85.64	77.019	
9,842.5	6,601.3	6,790.0	6,786.5	88.2	1.8	-108.07	710.0	-4,374.5	6,638.6	6,551.9	86.74	76.536	
9,900.0	6,600.6	6,790.0	6,786.5	89.8	1.8	-108.07	710.0	-4,374.5	6,696.0	6,607.8	88.22	75.901	
9,940.9	6,600.1	6,790.0	6,786.5	90.9	1.8	-108.07	710.0	-4,374.5	6,736.9	6,647.6	89.28	75.461	
10,000.0	6,599.3	6,790.0	6,786.5	92.5	1.8	-108.06	710.0	-4,374.5	6,795.8	6,705.0	90.80	74.842	
10,039.3	6,598.8	6,790.0	6,786.5	93.5	1.8	-108.06	710.0	-4,374.5	6,835.1	6,743.3	91.82	74.440	
10,100.0	6,598.0	6,790.0	6,786.5	95.2	1.8	-108.06	710.0	-4,374.5	6,895.6	6,802.2	93.39	73.836	
10,137.8	6,597.5	6,790.0	6,786.5	96.2	1.8	-108.06	710.0	-4,374.5	6,933.3	6,838.9	94.37	73.469	
10,200.0	6,596.7	6,790.0	6,786.5	97.9	1.8	-108.06	710.0	-4,374.5	6,995.4	6,899.4	95.98	72.881	
10,236.2	6,596.3	6,790.0	6,786.5	98.9	1.8	-108.06	710.0	-4,374.5	7,031.5	6,934.6	96.92	72.547	
10,300.0	6,595.4	6,790.0	6,786.5	100.6	1.8	-108.05	710.0	-4,374.5	7,095.2	6,996.6	98.58	71.972	
10,334.6	6,595.0	6,790.0	6,786.5	101.6	1.8	-108.05	710.0	-4,374.5	7,129.8	7,030.3	99.48	71.668	
10,400.0	6,594.2	6,790.0	6,786.5	103.4	1.8	-108.05	710.0	-4,374.5	7,195.0	7,093.8	101.19	71.107	
10,433.0	6,593.7	6,790.0	6,786.5	104.3	1.8	-108.05	710.0	-4,374.5	7,228.0	7,126.0	102.05	70.830	
10,500.0	6,592.9	6,790.0	6,786.5	106.1	1.8	-108.05	710.0	-4,374.5	7,294.8	7,191.1	103.79	70.282	
10,531.5	6,592.5	6,790.0	6,786.5	106.9	1.8	-108.05	710.0	-4,374.5	7,326.3	7,221.6	104.61	70.031	
10,600.0	6,591.6	6,790.0	6,786.5	108.8	1.8	-108.04	710.0	-4,374.5	7,394.7	7,288.3	106.40	69.496	
10,629.9	6,591.2	6,790.0	6,786.5	109.6	1.8	-108.04	710.0	-4,374.5	7,424.5	7,317.3	107.19	69.268	
10,700.0	6,590.3	6,790.0	6,786.5	111.6	1.8	-108.04	710.0	-4,374.5	7,494.5	7,385.5	109.02	68.745	
10,728.3	6,589.9	6,790.0	6,786.5	112.3	1.8	-108.04	710.0	-4,374.5	7,522.8	7,413.0	109.76	68.538	
10,800.0	6,589.0	6,790.0	6,786.5	114.3	1.8	-108.04	710.0	-4,374.5	7,594.3	7,482.7	111.64	68.027	
10,826.7	6,588.7	6,790.0	6,786.5	115.0	1.8	-108.04	710.0	-4,374.5	7,621.0	7,508.7	112.34	67.840	
10,900.0	6,587.7	6,790.0	6,786.5	117.1	1.8	-108.03	710.0	-4,374.5	7,694.2	7,579.9	114.26	67.340	
10,925.2	6,587.4	6,790.0	6,786.5	117.7	1.8	-108.03	710.0	-4,374.5	7,719.3	7,604.4	114.92	67.171	
11,000.0	6,586.4	6,790.0	6,786.5	119.8	1.8	-108.03	710.0	-4,374.5	7,794.0	7,677.1	116.88	66.682	
11,023.6	6,586.1	6,790.0	6,786.5	120.4	1.8	-108.03	710.0	-4,374.5	7,817.6	7,700.1	117.50	66.531	
11,100.0	6,585.1	6,790.0	6,786.5	122.6	1.8	-108.02	710.0	-4,374.5	7,893.8	7,774.3	119.51	66.051	
11,122.0	6,584.8	6,790.0	6,786.5	123.2	1.8	-108.02	710.0	-4,374.5	7,915.8	7,795.7	120.09	65.916	
11,200.0	6,583.8	6,790.0	6,786.5	125.3	1.8	-108.02	710.0	-4,374.5	7,993.7	7,871.6	122.14	65.447	
11,220.4	6,583.6	6,790.0	6,786.5	125.9	1.8	-108.02	710.0	-4,374.5	8,014.1	7,891.4	122.68	65.326	
11,300.0	6,582.5	6,790.0	6,786.5	128.1	1.8	-108.02	710.0	-4,374.5	8,093.5	7,968.8	124.77	64.866	
11,318.9	6,582.3	6,790.0	6,786.5	128.6	1.8	-108.02	710.0	-4,374.5	8,112.4	7,987.1	125.27	64.760	
11,400.0	6,581.2	6,790.0	6,786.5	130.8	1.8	-108.01	710.0	-4,374.5	8,193.4	8,066.0	127.41	64.309	
11,417.3	6,581.0	6,790.0	6,786.5	131.3	1.8	-108.01	710.0	-4,374.5	8,210.7	8,082.8	127.86	64.215	
11,500.0	6,580.0	6,790.0	6,786.5	133.6	1.8	-108.01	710.0	-4,374.5	8,293.3	8,163.2	130.04	63.773	
11,515.7	6,579.7	6,790.0	6,786.5	134.0	1.8	-108.01	710.0	-4,374.5	8,309.0	8,178.5	130.46	63.691	
11,600.0	6,578.7	6,790.0	6,786.5	136.3	1.8	-108.01	710.0	-4,374.5	8,393.1	8,260.4	132.68	63.257	
11,614.1	6,578.5	6,790.0	6,786.5	136.7	1.8	-108.01	710.0	-4,374.5	8,407.2	8,274.2	133.06	63.186	
11,700.0	6,577.4	6,790.0	6,786.5	139.1	1.8	-108.00	710.0	-4,374.5	8,493.0	8,357.7	135.32	62.761	
11,712.6	6,577.2	6,790.0	6,786.5	139.5	1.8	-108.00	710.0	-4,374.5	8,505.5	8,369.9	135.65	62.700	
11,800.0	6,576.1	6,790.0	6,786.5	141.9	1.8	-108.00	710.0	-4,374.5	8,592.9	8,454.9	137.96	62.283	
11,811.0	6,575.9	6,790.0	6,786.5	142.2	1.8	-108.00	710.0	-4,374.5	8,603.8	8,465.6	138.26	62.231	
11,882.7	6,575.0	6,790.0	6,786.5	144.2	1.8	-107.99	710.0	-4,374.5	8,675.4	8,535.3	140.15	61.901	
11,883.5	6,575.0	6,790.0	6,786.5	144.2	1.8	-107.99	710.0	-4,374.5	8,676.2	8,536.1	140.16	61.900 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.12	58.6	-3,799.0	3,799.6					
98.4	98.4	39.5	39.5	0.1	0.0	-89.12	58.6	-3,799.1	3,799.6	3,799.5	0.10	N/A		
100.0	100.0	40.5	40.5	0.1	0.0	-89.12	58.6	-3,799.1	3,799.6	3,799.5	0.10	N/A		
196.8	196.8	106.3	106.3	0.3	0.0	-89.12	58.4	-3,799.8	3,800.6	3,800.3	0.34	N/A		
200.0	200.0	110.8	110.8	0.3	0.0	-89.12	58.4	-3,799.9	3,800.7	3,800.3	0.36	N/A		
295.3	295.3	236.8	236.8	0.5	0.2	-89.13	58.0	-3,801.0	3,801.5	3,800.8	0.77	4,911.202		
300.0	300.0	242.2	242.2	0.5	0.2	-89.13	58.0	-3,801.1	3,801.6	3,800.8	0.79	4,819.866		
393.7	393.7	348.7	348.7	0.8	0.3	-89.14	57.1	-3,801.5	3,801.9	3,800.8	1.08	3,530.588		
400.0	400.0	355.8	355.8	0.8	0.3	-89.14	57.1	-3,801.5	3,801.9	3,800.8	1.10	3,468.915		
492.1	492.1	449.1	449.1	1.0	0.4	-89.15	56.3	-3,801.6	3,802.0	3,800.7	1.36	2,788.472		
500.0	500.0	456.4	456.4	1.0	0.4	-89.15	56.2	-3,801.6	3,802.1	3,800.7	1.39	2,744.059		
590.5	590.5	542.7	542.7	1.2	0.4	-89.16	55.7	-3,801.9	3,802.3	3,800.6	1.64	2,320.583		
600.0	600.0	551.9	551.9	1.2	0.5	-89.16	55.6	-3,801.9	3,802.3	3,800.6	1.66	2,283.939		
689.0	689.0	640.3	640.3	1.4	0.5	-89.17	54.9	-3,802.2	3,802.6	3,800.7	1.91	1,989.400		
700.0	700.0	651.5	651.5	1.4	0.5	-89.17	54.9	-3,802.2	3,802.6	3,800.7	1.94	1,958.265		
787.4	787.4	741.9	741.9	1.6	0.6	-89.18	54.2	-3,802.5	3,802.9	3,800.7	2.18	1,742.416		
800.0	800.0	755.3	755.2	1.7	0.6	-89.19	54.1	-3,802.5	3,802.9	3,800.7	2.22	1,715.206		
885.8	885.8	846.9	846.9	1.9	0.6	-89.20	53.2	-3,802.6	3,803.0	3,800.5	2.45	1,550.456		
900.0	900.0	862.2	862.1	1.9	0.6	-89.20	53.1	-3,802.6	3,803.0	3,800.5	2.49	1,526.265		
984.2	984.2	955.5	955.5	2.1	0.7	-89.21	52.3	-3,802.6	3,802.9	3,800.2	2.72	1,397.753		
1,000.0	1,000.0	973.3	973.3	2.1	0.7	-89.21	52.2	-3,802.5	3,802.9	3,800.1	2.76	1,376.221		
1,082.7	1,082.7	1,059.9	1,059.9	2.3	0.7	-89.22	51.8	-3,802.2	3,802.6	3,799.6	2.99	1,273.769		
1,100.0	1,100.0	1,077.5	1,077.4	2.3	0.7	-89.22	51.7	-3,802.2	3,802.5	3,799.5	3.03	1,254.250		
1,181.1	1,181.1	1,152.8	1,152.7	2.5	0.7	-89.23	51.3	-3,801.9	3,802.3	3,799.0	3.25	1,171.456		
1,200.0	1,200.0	1,169.7	1,169.7	2.6	0.7	-89.23	51.2	-3,801.9	3,802.2	3,798.9	3.30	1,153.813		
1,279.5	1,279.5	1,252.0	1,251.9	2.7	0.8	-89.23	50.9	-3,801.8	3,802.1	3,798.6	3.51	1,083.903		
1,300.0	1,300.0	1,275.3	1,275.2	2.8	0.8	-89.23	50.8	-3,801.7	3,802.1	3,798.5	3.56	1,067.035		
1,377.9	1,377.9	1,349.6	1,349.5	3.0	0.8	-89.24	50.4	-3,801.5	3,801.8	3,798.0	3.77	1,009.119		
1,400.0	1,400.0	1,369.0	1,369.0	3.0	0.8	-89.24	50.3	-3,801.4	3,801.8	3,797.9	3.82	994.056		
1,476.4	1,476.4	1,448.5	1,448.4	3.2	0.8	-14.13	49.9	-3,801.3	3,800.7	3,796.7	3.94	964.917		
1,500.0	1,500.0	1,476.3	1,476.2	3.2	0.9	-14.14	49.8	-3,801.2	3,799.9	3,795.9	4.00	950.630		
1,574.8	1,574.7	1,551.8	1,551.7	3.4	0.9	-14.18	49.4	-3,800.9	3,796.1	3,791.9	4.18	909.021		
1,600.0	1,599.8	1,575.7	1,575.6	3.4	0.9	-14.19	49.2	-3,800.9	3,794.4	3,790.2	4.24	895.728		
1,673.2	1,672.8	1,648.9	1,648.9	3.6	0.9	-14.25	48.7	-3,800.6	3,788.3	3,783.9	4.42	857.871		
1,700.0	1,699.5	1,676.5	1,676.4	3.7	0.9	-14.28	48.5	-3,800.5	3,785.7	3,781.2	4.48	844.652		
1,771.6	1,770.6	1,741.9	1,741.9	3.8	0.9	-14.36	48.2	-3,800.3	3,777.3	3,772.6	4.66	810.815		
1,800.0	1,798.7	1,766.3	1,766.2	3.9	1.0	-14.39	48.0	-3,800.3	3,773.6	3,768.8	4.73	798.161		
1,870.1	1,868.0	1,825.4	1,825.3	4.1	1.0	-14.48	47.7	-3,800.3	3,763.3	3,758.4	4.90	767.840		
1,900.0	1,897.5	1,850.1	1,850.0	4.2	1.0	-14.52	47.6	-3,800.3	3,758.5	3,753.5	4.97	755.506		
1,968.5	1,964.8	1,908.5	1,908.5	4.4	1.0	-14.63	47.4	-3,800.6	3,746.5	3,741.3	5.15	727.868		
2,000.0	1,995.6	1,942.8	1,942.8	4.5	1.0	-14.69	47.3	-3,800.8	3,740.4	3,735.2	5.23	715.209		
2,066.9	2,060.9	2,012.3	2,012.3	4.7	1.0	-14.83	47.1	-3,801.0	3,726.4	3,721.0	5.41	688.707		
2,100.0	2,093.1	2,040.9	2,040.8	4.8	1.0	-14.90	47.0	-3,801.1	3,719.0	3,713.5	5.50	676.396		
2,165.3	2,156.3	2,100.0	2,099.9	5.1	1.1	-15.04	46.9	-3,801.4	3,703.3	3,697.6	5.68	652.043		
2,200.0	2,189.6	2,132.5	2,132.4	5.2	1.1	-15.13	47.0	-3,801.6	3,694.4	3,688.7	5.78	639.664		
2,263.8	2,250.7	2,198.4	2,198.4	5.5	1.1	-15.30	47.1	-3,801.9	3,677.1	3,671.1	5.96	616.692		
2,280.0	2,266.2	2,216.1	2,216.0	5.6	1.1	-15.34	47.2	-3,802.0	3,672.4	3,666.4	6.01	611.019		
2,300.0	2,285.3	2,237.9	2,237.8	5.7	1.1	-15.37	47.3	-3,802.0	3,666.6	3,660.6	6.07	604.192		
2,362.2	2,344.6	2,305.2	2,305.1	6.0	1.1	-15.45	47.7	-3,802.2	3,648.5	3,642.3	6.25	584.104		
2,400.0	2,380.6	2,343.0	2,342.9	6.2	1.1	-15.50	47.9	-3,802.2	3,637.5	3,631.1	6.37	571.444		
2,460.6	2,438.4	2,403.7	2,403.7	6.5	1.1	-15.58	48.2	-3,802.2	3,619.8	3,613.2	6.55	552.771		
2,500.0	2,475.9	2,445.0	2,444.9	6.7	1.1	-15.63	48.3	-3,802.1	3,608.2	3,601.6	6.67	541.090		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,505.7	2,505.7	7.0	1.1	-15.71	48.6	-3,802.0	3,590.8	3,584.0	6.85	524.062	
2,600.0	2,571.2	2,542.0	2,541.9	7.2	1.1	-15.75	48.8	-3,801.9	3,578.8	3,571.8	6.98	512.890	
2,657.5	2,626.0	2,592.8	2,592.8	7.5	1.1	-15.82	49.2	-3,801.8	3,561.9	3,554.8	7.16	497.698	
2,700.0	2,666.6	2,635.5	2,635.5	7.8	1.1	-15.87	49.5	-3,801.7	3,549.4	3,542.2	7.29	486.806	
2,755.9	2,719.8	2,693.2	2,693.1	8.1	1.1	-15.95	49.9	-3,801.6	3,533.0	3,525.5	7.47	472.896	
2,800.0	2,761.9	2,732.0	2,731.9	8.3	1.1	-16.00	50.1	-3,801.5	3,520.0	3,512.4	7.61	462.467	
2,854.3	2,813.7	2,778.4	2,778.3	8.7	1.1	-16.06	50.3	-3,801.5	3,504.1	3,496.3	7.79	450.042	
2,900.0	2,857.2	2,819.3	2,819.2	8.9	1.1	-16.12	50.5	-3,801.5	3,490.8	3,482.9	7.93	439.980	
2,952.7	2,907.5	2,869.3	2,869.2	9.2	1.1	-16.18	50.7	-3,801.5	3,475.5	3,467.4	8.11	428.624	
3,000.0	2,952.5	2,915.9	2,915.8	9.5	1.1	-16.25	51.0	-3,801.5	3,461.7	3,453.4	8.27	418.806	
3,051.2	3,001.3	2,970.8	2,970.7	9.8	1.1	-16.32	51.3	-3,801.5	3,446.8	3,438.3	8.44	408.426	
3,100.0	3,047.8	3,019.8	3,019.8	10.1	1.1	-16.39	51.6	-3,801.3	3,432.4	3,423.8	8.60	398.888	
3,149.6	3,095.1	3,065.4	3,065.3	10.4	1.1	-16.46	51.8	-3,801.2	3,417.9	3,409.1	8.77	389.558	
3,200.0	3,143.2	3,110.1	3,110.0	10.7	1.1	-16.52	52.1	-3,801.2	3,403.1	3,394.2	8.94	380.481	
3,248.0	3,188.9	3,148.1	3,148.0	11.0	1.1	-16.57	52.4	-3,801.2	3,389.1	3,380.0	9.11	372.202	
3,300.0	3,238.5	3,189.2	3,189.1	11.3	1.1	-16.63	52.8	-3,801.3	3,374.1	3,364.9	9.28	363.548	
3,346.4	3,282.8	3,232.3	3,232.2	11.6	1.2	-16.69	53.2	-3,801.5	3,360.8	3,351.4	9.44	355.976	
3,400.0	3,333.8	3,284.8	3,284.8	11.9	1.2	-16.76	53.9	-3,801.7	3,345.4	3,335.8	9.63	347.496	
3,444.9	3,376.6	3,327.6	3,327.5	12.2	1.2	-16.81	54.4	-3,801.8	3,332.6	3,322.8	9.78	340.586	
3,500.0	3,429.1	3,379.3	3,379.2	12.6	1.2	-16.88	55.0	-3,802.0	3,316.7	3,306.8	9.98	332.366	
3,543.3	3,470.4	3,419.5	3,419.4	12.8	1.2	-16.94	55.4	-3,802.2	3,304.3	3,294.2	10.13	326.104	
3,600.0	3,524.4	3,471.8	3,471.7	13.2	1.2	-17.02	55.8	-3,802.5	3,288.1	3,277.8	10.33	318.181	
3,641.7	3,564.2	3,510.6	3,510.5	13.4	1.2	-17.07	56.1	-3,802.7	3,276.2	3,265.7	10.48	312.514	
3,700.0	3,619.8	3,566.4	3,566.3	13.8	1.2	-17.15	56.6	-3,803.0	3,259.6	3,248.9	10.69	304.829	
3,740.1	3,658.0	3,604.6	3,604.5	14.0	1.2	-17.21	57.1	-3,803.2	3,248.1	3,237.3	10.84	299.689	
3,800.0	3,715.1	3,659.2	3,659.1	14.4	1.2	-17.29	57.7	-3,803.5	3,231.1	3,220.0	11.05	292.288	
3,838.6	3,751.8	3,694.3	3,694.2	14.7	1.2	-17.34	58.0	-3,803.7	3,220.1	3,209.0	11.19	287.652	
3,900.0	3,810.4	3,752.4	3,752.2	15.0	1.2	-17.43	58.4	-3,804.1	3,202.7	3,191.3	11.42	280.461	
3,937.0	3,845.7	3,787.5	3,787.3	15.3	1.2	-17.48	58.7	-3,804.3	3,192.3	3,180.7	11.56	276.247	
4,000.0	3,905.7	3,854.8	3,854.6	15.7	1.3	-17.59	59.1	-3,804.7	3,174.4	3,162.6	11.79	269.174	
4,035.4	3,939.5	3,893.7	3,893.6	15.9	1.3	-17.65	59.3	-3,804.9	3,164.2	3,152.3	11.93	265.284	
4,100.0	4,001.0	3,964.1	3,964.0	16.3	1.3	-17.77	59.6	-3,805.0	3,145.6	3,133.5	12.17	258.408	
4,133.8	4,033.3	4,000.9	4,000.8	16.5	1.3	-17.83	59.7	-3,805.0	3,135.8	3,123.5	12.30	254.903	
4,200.0	4,096.3	4,064.5	4,064.3	16.9	1.3	-17.94	59.9	-3,804.9	3,116.6	3,104.1	12.55	248.301	
4,232.3	4,127.1	4,095.5	4,095.3	17.1	1.3	-18.00	60.0	-3,804.8	3,107.2	3,094.6	12.67	245.169	
4,300.0	4,191.7	4,176.3	4,176.2	17.6	1.3	-18.14	60.3	-3,804.5	3,087.4	3,074.5	12.94	238.651	
4,330.7	4,220.9	4,209.6	4,209.5	17.8	1.3	-18.20	60.4	-3,804.2	3,078.3	3,065.3	13.06	235.768	
4,400.0	4,287.0	4,269.5	4,269.4	18.2	1.3	-18.30	60.7	-3,803.8	3,057.8	3,044.5	13.32	229.589	
4,429.1	4,314.7	4,294.7	4,294.6	18.4	1.3	-18.35	60.8	-3,803.7	3,049.3	3,035.8	13.43	227.059	
4,500.0	4,382.3	4,368.1	4,368.0	18.8	1.3	-18.48	61.2	-3,803.2	3,028.4	3,014.7	13.70	220.975	
4,527.5	4,408.6	4,397.0	4,396.9	19.0	1.3	-18.53	61.3	-3,803.0	3,020.3	3,006.5	13.81	218.663	
4,600.0	4,477.6	4,451.9	4,451.8	19.5	1.3	-18.63	61.6	-3,802.7	2,999.0	2,984.9	14.08	212.939	
4,626.0	4,502.4	4,471.3	4,471.2	19.6	1.3	-18.67	61.7	-3,802.6	2,991.4	2,977.3	14.18	210.942	
4,700.0	4,572.9	4,539.3	4,539.1	20.1	1.4	-18.79	62.0	-3,802.6	2,970.1	2,955.6	14.47	205.318	
4,724.4	4,596.2	4,566.1	4,566.0	20.3	1.4	-18.85	62.1	-3,802.6	2,963.0	2,948.5	14.56	203.474	
4,800.0	4,668.3	4,646.9	4,646.7	20.7	1.4	-19.00	62.3	-3,802.3	2,941.0	2,926.2	14.86	197.850	
4,822.8	4,690.0	4,670.8	4,670.6	20.9	1.4	-19.05	62.4	-3,802.1	2,934.4	2,919.4	14.96	196.179	
4,900.0	4,763.6	4,744.8	4,744.7	21.4	1.4	-19.19	62.8	-3,801.7	2,911.7	2,896.4	15.27	190.720	
4,921.2	4,783.8	4,764.1	4,764.0	21.5	1.4	-19.23	62.8	-3,801.6	2,905.5	2,890.1	15.35	189.261	
5,000.0	4,858.9	4,842.5	4,842.3	22.0	1.4	-19.39	63.1	-3,801.1	2,882.5	2,866.8	15.67	183.933	
5,019.7	4,877.7	4,863.7	4,863.5	22.1	1.4	-19.43	63.2	-3,801.0	2,876.7	2,860.9	15.75	182.617	
5,100.0	4,954.2	4,943.1	4,943.0	22.6	1.4	-19.60	63.4	-3,800.3	2,853.0	2,836.9	16.08	177.403	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,118.1	4,971.5	4,959.9	4,959.7	22.8	1.4	-19.63	63.5	-3,800.1	2,847.6	2,831.5	16.16	176.261		
5,171.8	5,022.7	5,009.9	5,009.7	23.1	1.4	-19.73	63.6	-3,799.7	2,831.8	2,815.4	16.38	172.929		
5,200.0	5,049.6	5,036.7	5,036.5	23.3	1.4	-19.73	63.8	-3,799.5	2,823.6	2,807.2	16.46	171.573		
5,216.5	5,065.4	5,052.4	5,052.3	23.3	1.4	-19.73	63.8	-3,799.3	2,819.0	2,802.5	16.50	170.853		
5,300.0	5,145.7	5,134.6	5,134.5	23.7	1.5	-19.72	64.4	-3,798.7	2,796.7	2,780.0	16.71	167.380		
5,314.9	5,160.1	5,150.0	5,149.9	23.8	1.5	-19.72	64.5	-3,798.5	2,792.9	2,776.2	16.74	166.812		
5,400.0	5,242.7	5,240.0	5,239.8	24.1	1.5	-19.72	65.4	-3,797.6	2,772.8	2,755.8	16.93	163.732		
5,413.4	5,255.7	5,254.6	5,254.4	24.2	1.5	-19.72	65.5	-3,797.5	2,769.8	2,752.8	16.96	163.292		
5,500.0	5,340.5	5,341.4	5,341.2	24.5	1.5	-19.71	66.3	-3,796.3	2,751.7	2,734.6	17.13	160.637		
5,511.8	5,352.1	5,352.2	5,352.0	24.5	1.5	-19.71	66.4	-3,796.2	2,749.5	2,732.3	17.15	160.321		
5,600.0	5,439.0	5,448.3	5,448.1	24.8	1.5	-19.70	67.4	-3,794.9	2,733.9	2,716.6	17.30	158.033		
5,610.2	5,449.1	5,462.0	5,461.8	24.8	1.5	-19.70	67.5	-3,794.7	2,732.3	2,715.0	17.32	157.788		
5,700.0	5,538.0	5,557.0	5,556.8	25.1	1.5	-19.70	67.9	-3,792.7	2,718.7	2,701.3	17.45	155.821		
5,708.6	5,546.6	5,565.0	5,564.8	25.1	1.5	-19.70	67.9	-3,792.6	2,717.6	2,700.1	17.46	155.660		
5,800.0	5,637.4	5,646.0	5,645.8	25.3	1.6	-19.69	68.1	-3,791.1	2,706.9	2,689.4	17.57	154.095		
5,807.1	5,644.5	5,652.1	5,651.8	25.3	1.6	-19.68	68.1	-3,791.0	2,706.2	2,688.7	17.57	153.994		
5,900.0	5,737.2	5,740.8	5,740.5	25.5	1.6	-19.67	68.4	-3,789.7	2,698.8	2,681.2	17.67	152.739		
5,905.5	5,742.6	5,746.8	5,746.6	25.5	1.6	-19.67	68.4	-3,789.6	2,698.5	2,680.8	17.67	152.676		
6,000.0	5,837.1	5,838.6	5,838.3	25.6	1.6	-19.67	68.4	-3,788.1	2,693.9	2,676.1	17.76	151.676		
6,003.9	5,841.0	5,841.9	5,841.6	25.6	1.6	-19.67	68.4	-3,788.1	2,693.8	2,676.0	17.76	151.643		
6,051.8	5,888.9	5,881.7	5,881.5	25.7	1.6	-94.79	68.3	-3,787.6	2,692.8	2,666.5	26.32	102.294		
6,081.8	5,918.9	5,908.4	5,908.1	25.7	1.6	-94.80	68.2	-3,787.3	2,692.5	2,666.2	26.36	102.152 ES		
6,088.9	5,926.0	5,915.7	5,915.4	25.7	1.6	175.20	68.2	-3,787.2	2,692.5	2,674.6	17.84	150.895 CC		
6,100.0	5,937.1	5,927.2	5,927.0	25.7	1.6	175.20	68.1	-3,787.1	2,692.6	2,674.7	17.83	151.045		
6,102.3	5,939.4	5,929.7	5,929.4	25.7	1.6	175.20	68.1	-3,787.1	2,692.6	2,674.8	17.82	151.081		
6,150.0	5,987.0	5,979.0	5,978.8	25.7	1.6	175.19	68.0	-3,786.5	2,695.0	2,677.3	17.76	151.750		
6,200.0	6,036.5	6,031.3	6,031.0	25.7	1.6	175.15	67.8	-3,786.0	2,701.0	2,683.2	17.71	152.497		
6,200.8	6,037.3	6,032.1	6,031.8	25.7	1.6	175.15	67.8	-3,785.9	2,701.1	2,683.4	17.71	152.511		
6,250.0	6,085.5	6,083.5	6,083.2	25.7	1.6	175.11	67.7	-3,785.3	2,710.3	2,692.6	17.66	153.430		
6,299.2	6,133.0	6,137.5	6,137.3	25.6	1.7	175.04	67.5	-3,784.5	2,722.6	2,705.0	17.60	154.654		
6,300.0	6,133.7	6,138.4	6,138.2	25.6	1.7	175.04	67.5	-3,784.5	2,722.9	2,705.3	17.60	154.676		
6,350.0	6,180.9	6,194.0	6,193.7	25.5	1.7	174.94	67.0	-3,783.6	2,738.7	2,721.1	17.52	156.328		
6,397.6	6,224.6	6,268.6	6,268.3	25.4	1.7	174.85	66.2	-3,781.7	2,756.5	2,739.0	17.42	158.245		
6,400.0	6,226.7	6,272.5	6,272.2	25.4	1.7	174.84	66.1	-3,781.6	2,757.4	2,740.0	17.41	158.348		
6,450.0	6,271.1	6,332.5	6,332.1	25.2	1.7	174.70	65.4	-3,779.5	2,778.9	2,761.6	17.27	160.902		
6,496.0	6,310.4	6,376.7	6,376.3	25.1	1.7	174.54	64.6	-3,777.9	2,801.3	2,784.2	17.11	163.739		
6,500.0	6,313.7	6,380.4	6,380.0	25.1	1.7	174.52	64.5	-3,777.7	2,803.3	2,786.2	17.09	163.999		
6,550.0	6,354.4	6,433.5	6,433.0	25.0	1.7	174.31	63.4	-3,775.6	2,830.6	2,813.7	16.90	167.494		
6,594.5	6,388.9	6,483.3	6,482.8	24.9	1.7	174.09	62.2	-3,773.3	2,857.1	2,840.4	16.72	170.875		
6,600.0	6,393.0	6,489.3	6,488.8	24.9	1.7	174.06	62.1	-3,773.0	2,860.6	2,843.9	16.70	171.310		
6,650.0	6,429.3	6,539.0	6,538.4	24.8	1.7	173.75	60.7	-3,770.5	2,893.0	2,876.6	16.49	175.393		
6,692.9	6,458.5	6,578.8	6,578.1	24.7	1.7	173.43	59.4	-3,768.3	2,922.8	2,906.5	16.33	178.950		
6,700.0	6,463.1	6,585.2	6,584.5	24.7	1.7	173.37	59.2	-3,768.0	2,927.9	2,911.6	16.31	179.532		
6,750.0	6,494.3	6,617.8	6,617.0	24.7	1.8	172.89	58.0	-3,766.1	2,965.2	2,949.0	16.15	183.552		
6,791.3	6,517.9	6,638.5	6,637.7	24.7	1.8	172.39	57.2	-3,764.9	2,997.6	2,981.6	16.07	186.498		
6,800.0	6,522.6	6,642.6	6,641.8	24.7	1.8	172.27	57.1	-3,764.7	3,004.6	2,988.6	16.06	187.050		
6,850.0	6,548.0	6,665.1	6,664.2	24.7	1.8	171.49	56.3	-3,763.5	3,046.2	3,030.1	16.07	189.512		
6,889.7	6,566.0	6,681.1	6,680.2	24.8	1.8	170.70	55.7	-3,762.6	3,080.6	3,064.4	16.18	190.371		
6,900.0	6,570.4	6,685.0	6,684.1	24.9	1.8	170.46	55.6	-3,762.4	3,089.6	3,073.4	16.23	190.413		
6,950.0	6,589.5	6,700.0	6,699.0	25.1	1.8	169.06	55.1	-3,761.7	3,134.7	3,118.1	16.57	189.216		
6,988.2	6,602.0	6,700.0	6,699.0	25.3	1.8	167.53	55.1	-3,761.7	3,170.1	3,153.1	17.00	186.454		
7,000.0	6,605.4	6,700.0	6,699.0	25.3	1.8	166.95	55.1	-3,761.7	3,181.2	3,164.0	17.17	185.229		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	
7,050.0	6,618.0	6,700.0	6,699.0	25.6	1.8	163.69	55.1	-3,761.7	3,228.9	3,210.8	18.19	177.531		
7,086.6	6,625.0	6,700.0	6,699.0	25.9	1.8	159.95	55.1	-3,761.7	3,264.5	3,245.1	19.35	168.733		
7,100.0	6,627.1	6,700.0	6,699.0	26.0	1.8	158.11	55.1	-3,761.7	3,277.6	3,257.7	19.90	164.678		
7,150.0	6,632.8	6,700.0	6,699.0	26.5	1.8	146.90	55.1	-3,761.7	3,326.9	3,303.9	23.05	144.358		
7,185.0	6,634.7	6,700.0	6,699.0	26.8	1.8	130.43	55.1	-3,761.7	3,361.7	3,335.1	26.60	126.360		
7,200.0	6,635.0	6,700.0	6,699.0	27.0	1.8	119.13	55.1	-3,761.7	3,376.7	3,348.6	28.11	120.139		
7,215.9	6,635.0	6,700.0	6,699.0	27.1	1.8	103.65	55.1	-3,761.7	3,392.5	3,363.6	28.87	117.514		
7,283.4	6,634.1	6,700.0	6,699.0	27.9	1.8	103.65	55.1	-3,761.7	3,459.9	3,430.2	29.69	116.544		
7,300.0	6,633.9	6,700.0	6,699.0	28.1	1.8	103.65	55.1	-3,761.7	3,476.4	3,446.5	29.89	116.314		
7,381.9	6,632.9	6,700.0	6,699.0	29.3	1.8	103.65	55.1	-3,761.7	3,558.1	3,527.0	31.04	114.637		
7,400.0	6,632.6	6,700.0	6,699.0	29.5	1.8	103.65	55.1	-3,761.7	3,576.2	3,544.9	31.29	114.282		
7,480.3	6,631.6	6,700.0	6,699.0	30.8	1.8	103.65	55.1	-3,761.7	3,656.3	3,623.7	32.57	112.274		
7,500.0	6,631.4	6,700.0	6,699.0	31.1	1.8	103.64	55.1	-3,761.7	3,675.9	3,643.1	32.88	111.805		
7,578.7	6,630.4	6,700.0	6,699.0	32.5	1.8	103.64	55.1	-3,761.7	3,754.5	3,720.2	34.25	109.625		
7,600.0	6,630.1	6,700.0	6,699.0	32.9	1.8	103.64	55.1	-3,761.7	3,775.7	3,741.1	34.62	109.065		
7,677.1	6,629.1	6,700.0	6,699.0	34.3	1.8	103.64	55.1	-3,761.7	3,852.7	3,816.6	36.06	106.832		
7,700.0	6,628.8	6,700.0	6,699.0	34.8	1.8	103.64	55.1	-3,761.7	3,875.5	3,839.0	36.49	106.204		
7,775.6	6,627.8	6,700.0	6,699.0	36.3	1.8	103.64	55.1	-3,761.7	3,950.9	3,912.9	37.99	104.001		
7,800.0	6,627.5	6,700.0	6,699.0	36.8	1.8	103.63	55.1	-3,761.7	3,975.3	3,936.8	38.47	103.325		
7,874.0	6,626.6	6,700.0	6,699.0	38.4	1.8	103.63	55.1	-3,761.7	4,049.2	4,009.2	40.01	101.203		
7,900.0	6,626.3	6,700.0	6,699.0	38.9	1.8	103.63	55.1	-3,761.7	4,075.1	4,034.6	40.55	100.496		
7,972.4	6,625.3	6,700.0	6,699.0	40.5	1.8	103.63	55.1	-3,761.7	4,147.4	4,105.3	42.11	98.487		
8,000.0	6,625.0	6,700.0	6,699.0	41.1	1.8	103.62	55.1	-3,761.7	4,175.0	4,132.2	42.71	97.761		
8,070.8	6,624.1	6,700.0	6,699.0	42.7	1.8	103.62	55.1	-3,761.7	4,245.7	4,201.4	44.28	95.882		
8,100.0	6,623.7	6,700.0	6,699.0	43.4	1.8	103.62	55.1	-3,761.7	4,274.8	4,229.9	44.93	95.146		
8,169.3	6,622.8	6,700.0	6,699.0	45.0	1.8	103.62	55.1	-3,761.7	4,343.9	4,297.4	46.51	93.403		
8,200.0	6,622.4	6,700.0	6,699.0	45.7	1.8	103.62	55.1	-3,761.7	4,374.6	4,327.4	47.21	92.666		
8,267.7	6,621.6	6,700.0	6,699.0	47.4	1.8	103.62	55.1	-3,761.7	4,442.2	4,393.4	48.78	91.058		
8,300.0	6,621.1	6,700.0	6,699.0	48.1	1.8	103.61	55.1	-3,761.7	4,474.5	4,424.9	49.54	90.326		
8,366.1	6,620.3	6,700.0	6,699.0	49.7	1.8	103.61	55.1	-3,761.7	4,540.5	4,489.4	51.10	88.847		
8,400.0	6,619.9	6,700.0	6,699.0	50.6	1.8	103.61	55.1	-3,761.7	4,574.3	4,522.4	51.91	88.124		
8,464.5	6,619.0	6,700.0	6,699.0	52.2	1.8	103.61	55.1	-3,761.7	4,638.8	4,585.3	53.46	86.769		
8,500.0	6,618.6	6,700.0	6,699.0	53.0	1.8	103.60	55.1	-3,761.7	4,674.2	4,619.9	54.31	86.057		
8,563.0	6,617.8	6,700.0	6,699.0	54.6	1.8	103.60	55.1	-3,761.7	4,737.1	4,681.2	55.85	84.817		
8,600.0	6,617.3	6,700.0	6,699.0	55.5	1.8	103.60	55.1	-3,761.7	4,774.0	4,717.3	56.75	84.119		
8,661.4	6,616.5	6,700.0	6,699.0	57.1	1.8	103.60	55.1	-3,761.7	4,835.4	4,777.1	58.27	82.986		
8,700.0	6,616.0	6,700.0	6,699.0	58.1	1.8	103.60	55.1	-3,761.7	4,873.9	4,814.7	59.22	82.303		
8,759.8	6,615.2	6,700.0	6,699.0	59.6	1.8	103.60	55.1	-3,761.7	4,933.7	4,873.0	60.71	81.268		
8,800.0	6,614.7	6,700.0	6,699.0	60.6	1.8	103.59	55.1	-3,761.7	4,973.8	4,912.1	61.71	80.600		
8,858.2	6,614.0	6,700.0	6,699.0	62.1	1.8	103.59	55.1	-3,761.7	5,032.0	4,968.8	63.17	79.655		
8,900.0	6,613.4	6,700.0	6,699.0	63.2	1.8	103.59	55.1	-3,761.7	5,073.7	5,009.5	64.22	79.004		
8,956.7	6,612.7	6,700.0	6,699.0	64.7	1.8	103.59	55.1	-3,761.7	5,130.3	5,064.6	65.65	78.141		
9,000.0	6,612.2	6,700.0	6,699.0	65.8	1.8	103.58	55.1	-3,761.7	5,173.6	5,106.8	66.75	77.506		
9,055.1	6,611.5	6,700.0	6,699.0	67.3	1.8	103.58	55.1	-3,761.7	5,228.6	5,160.4	68.15	76.719		
9,100.0	6,610.9	6,700.0	6,699.0	68.4	1.8	103.58	55.1	-3,761.7	5,273.5	5,204.2	69.30	76.100		
9,153.5	6,610.2	6,700.0	6,699.0	69.8	1.8	103.58	55.1	-3,761.7	5,326.9	5,256.3	70.67	75.380		
9,200.0	6,609.6	6,700.0	6,699.0	71.1	1.8	103.57	55.1	-3,761.7	5,373.3	5,301.5	71.86	74.777		
9,251.9	6,608.9	6,700.0	6,699.0	72.4	1.8	103.57	55.1	-3,761.7	5,425.2	5,352.0	73.19	74.120		
9,300.0	6,608.3	6,700.0	6,699.0	73.7	1.8	103.57	55.1	-3,761.7	5,473.2	5,398.8	74.43	73.533		
9,350.4	6,607.7	6,700.0	6,699.0	75.0	1.8	103.57	55.1	-3,761.7	5,523.6	5,447.8	75.73	72.933		
9,400.0	6,607.0	6,700.0	6,699.0	76.4	1.8	103.56	55.1	-3,761.7	5,573.1	5,496.1	77.02	72.361		
9,448.8	6,606.4	6,700.0	6,699.0	77.7	1.8	103.56	55.1	-3,761.7	5,621.9	5,543.6	78.29	71.813		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,500.0	6,605.7	6,700.0	6,699.0	79.0	1.8	103.56	55.1	-3,761.7	5,673.0	5,593.4	79.62	71.255		
9,547.2	6,605.1	6,700.0	6,699.0	80.3	1.8	103.56	55.1	-3,761.7	5,720.2	5,639.4	80.85	70.755		
9,600.0	6,604.5	6,700.0	6,699.0	81.7	1.8	103.55	55.1	-3,761.7	5,773.0	5,690.7	82.22	70.212		
9,645.6	6,603.9	6,700.0	6,699.0	82.9	1.8	103.55	55.1	-3,761.7	5,818.6	5,735.2	83.42	69.754		
9,700.0	6,603.2	6,700.0	6,699.0	84.4	1.8	103.55	55.1	-3,761.7	5,872.9	5,788.0	84.84	69.225		
9,744.1	6,602.6	6,700.0	6,699.0	85.6	1.8	103.55	55.1	-3,761.7	5,916.9	5,830.9	85.99	68.807		
9,800.0	6,601.9	6,700.0	6,699.0	87.1	1.8	103.54	55.1	-3,761.7	5,972.8	5,885.3	87.46	68.291		
9,842.5	6,601.3	6,700.0	6,699.0	88.2	1.8	103.54	55.1	-3,761.7	6,015.2	5,926.7	88.58	67.909		
9,900.0	6,600.6	6,700.0	6,699.0	89.8	1.8	103.54	55.1	-3,761.7	6,072.7	5,982.6	90.09	67.406		
9,940.9	6,600.1	6,700.0	6,699.0	90.9	1.8	103.54	55.1	-3,761.7	6,113.6	6,022.4	91.17	67.057		
10,000.0	6,599.3	6,700.0	6,699.0	92.5	1.8	103.53	55.1	-3,761.7	6,172.6	6,079.9	92.73	66.566		
10,039.3	6,598.8	6,700.0	6,699.0	93.5	1.8	103.53	55.1	-3,761.7	6,211.9	6,118.2	93.77	66.248		
10,100.0	6,598.0	6,700.0	6,699.0	95.2	1.8	103.53	55.1	-3,761.7	6,272.5	6,177.2	95.37	65.769		
10,137.8	6,597.5	6,700.0	6,699.0	96.2	1.8	103.53	55.1	-3,761.7	6,310.3	6,213.9	96.37	65.478		
10,200.0	6,596.7	6,700.0	6,699.0	97.9	1.8	103.52	55.1	-3,761.7	6,372.5	6,274.4	98.02	65.011		
10,236.2	6,596.3	6,700.0	6,699.0	98.9	1.8	103.52	55.1	-3,761.7	6,408.6	6,309.7	98.98	64.746		
10,300.0	6,595.4	6,700.0	6,699.0	100.6	1.8	103.51	55.1	-3,761.7	6,472.4	6,371.7	100.68	64.290		
10,334.6	6,595.0	6,700.0	6,699.0	101.6	1.8	103.51	55.1	-3,761.7	6,507.0	6,405.4	101.60	64.048		
10,400.0	6,594.2	6,700.0	6,699.0	103.4	1.8	103.51	55.1	-3,761.7	6,572.3	6,469.0	103.33	63.603		
10,433.0	6,593.7	6,700.0	6,699.0	104.3	1.8	103.51	55.1	-3,761.7	6,605.4	6,501.1	104.21	63.383		
10,500.0	6,592.9	6,700.0	6,699.0	106.1	1.8	103.50	55.1	-3,761.7	6,672.3	6,566.3	106.00	62.947		
10,531.5	6,592.5	6,700.0	6,699.0	106.9	1.8	103.50	55.1	-3,761.7	6,703.7	6,596.9	106.84	62.747		
10,600.0	6,591.6	6,700.0	6,699.0	108.8	1.8	103.50	55.1	-3,761.7	6,772.2	6,663.5	108.67	62.322		
10,629.9	6,591.2	6,700.0	6,699.0	109.6	1.8	103.50	55.1	-3,761.7	6,802.1	6,692.6	109.46	62.140		
10,700.0	6,590.3	6,700.0	6,699.0	111.6	1.8	103.49	55.1	-3,761.7	6,872.1	6,760.8	111.34	61.724		
10,728.3	6,589.9	6,700.0	6,699.0	112.3	1.8	103.49	55.1	-3,761.7	6,900.4	6,788.3	112.09	61.560		
10,800.0	6,589.0	6,700.0	6,699.0	114.3	1.8	103.48	55.1	-3,761.7	6,972.1	6,858.1	114.01	61.152		
10,826.7	6,588.7	6,700.0	6,699.0	115.0	1.8	103.48	55.1	-3,761.7	6,998.8	6,884.1	114.73	61.004		
10,900.0	6,587.7	6,700.0	6,699.0	117.1	1.8	103.48	55.1	-3,761.7	7,072.0	6,955.3	116.69	60.605		
10,925.2	6,587.4	6,700.0	6,699.0	117.7	1.8	103.48	55.1	-3,761.7	7,097.2	6,979.8	117.36	60.472		
11,000.0	6,586.4	6,700.0	6,699.0	119.8	1.8	103.47	55.1	-3,761.7	7,171.9	7,052.6	119.37	60.081		
11,023.6	6,586.1	6,700.0	6,699.0	120.4	1.8	103.47	55.1	-3,761.7	7,195.5	7,075.5	120.00	59.961		
11,100.0	6,585.1	6,700.0	6,699.0	122.6	1.8	103.47	55.1	-3,761.7	7,271.9	7,149.8	122.05	59.579		
11,122.0	6,584.8	6,700.0	6,699.0	123.2	1.8	103.47	55.1	-3,761.7	7,293.9	7,171.3	122.65	59.471		
11,200.0	6,583.8	6,700.0	6,699.0	125.3	1.8	103.46	55.1	-3,761.7	7,371.8	7,247.1	124.74	59.097		
11,220.4	6,583.6	6,700.0	6,699.0	125.9	1.8	103.46	55.1	-3,761.7	7,392.3	7,267.0	125.29	59.001		
11,300.0	6,582.5	6,700.0	6,699.0	128.1	1.8	103.45	55.1	-3,761.7	7,471.8	7,344.3	127.43	58.634		
11,318.9	6,582.3	6,700.0	6,699.0	128.6	1.8	103.45	55.1	-3,761.7	7,490.6	7,362.7	127.94	58.549		
11,400.0	6,581.2	6,700.0	6,699.0	130.8	1.8	103.45	55.1	-3,761.7	7,571.7	7,441.6	130.12	58.189		
11,417.3	6,581.0	6,700.0	6,699.0	131.3	1.8	103.45	55.1	-3,761.7	7,589.0	7,458.4	130.59	58.114		
11,500.0	6,580.0	6,700.0	6,699.0	133.6	1.8	103.44	55.1	-3,761.7	7,671.7	7,538.9	132.82	57.761		
11,515.7	6,579.7	6,700.0	6,699.0	134.0	1.8	103.44	55.1	-3,761.7	7,687.4	7,554.1	133.24	57.696		
11,600.0	6,578.7	6,700.0	6,699.0	136.3	1.8	103.43	55.1	-3,761.7	7,771.6	7,636.1	135.51	57.350		
11,614.1	6,578.5	6,700.0	6,699.0	136.7	1.8	103.43	55.1	-3,761.7	7,785.8	7,649.9	135.89	57.293		
11,700.0	6,577.4	6,700.0	6,699.0	139.1	1.8	103.42	55.1	-3,761.7	7,871.6	7,733.4	138.21	56.953		
11,712.6	6,577.2	6,700.0	6,699.0	139.5	1.8	103.42	55.1	-3,761.7	7,884.1	7,745.6	138.55	56.904		
11,800.0	6,576.1	6,700.0	6,699.0	141.9	1.8	103.42	55.1	-3,761.7	7,971.5	7,830.6	140.91	56.571		
11,811.0	6,575.9	6,700.0	6,699.0	142.2	1.8	103.42	55.1	-3,761.7	7,982.5	7,841.3	141.21	56.530		
11,882.7	6,575.0	6,700.0	6,699.0	144.2	1.8	103.41	55.1	-3,761.7	8,054.2	7,911.0	143.15	56.265 SF		
11,883.5	6,575.0	6,700.0	6,699.0	144.2	1.8	103.41	55.1	-3,761.7	8,055.0	7,911.8	143.16	56.266		

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-69.61	1,371.6	-3,689.4	3,936.1				
98.4	98.4	84.4	84.4	0.1	0.0	-69.61	1,371.6	-3,689.4	3,936.1	3,936.0	0.10	N/A	
100.0	100.0	86.0	86.0	0.1	0.0	-69.61	1,371.6	-3,689.4	3,936.1	3,936.0	0.10	N/A	
196.8	196.8	182.8	182.8	0.3	1.0	-69.61	1,371.6	-3,689.4	3,936.1	3,934.8	1.31	3,008.797	
200.0	200.0	186.0	186.0	0.3	1.0	-69.61	1,371.6	-3,689.4	3,936.1	3,934.7	1.35	2,909.118	
295.3	295.3	281.3	281.3	0.5	3.1	-69.61	1,371.6	-3,689.4	3,936.1	3,932.5	3.60	1,094.623	
300.0	300.0	286.0	286.0	0.5	3.2	-69.61	1,371.6	-3,689.4	3,936.1	3,932.4	3.71	1,059.613	
393.7	393.7	379.7	379.7	0.8	5.1	-69.61	1,371.6	-3,689.4	3,936.1	3,930.2	5.90	666.881	
400.0	400.0	386.0	386.0	0.8	5.3	-69.61	1,371.6	-3,689.4	3,936.1	3,930.0	6.05	650.880	
492.1	492.1	478.1	478.1	1.0	7.2	-69.61	1,371.6	-3,689.4	3,936.1	3,927.9	8.14	483.499	
500.0	500.0	486.0	486.0	1.0	7.3	-69.61	1,371.6	-3,689.4	3,936.1	3,927.7	8.32	473.124	
590.5	590.5	576.5	576.5	1.2	9.2	-69.61	1,371.6	-3,689.4	3,936.1	3,925.7	10.36	379.856	
600.0	600.0	586.0	586.0	1.2	9.4	-69.61	1,371.6	-3,689.4	3,936.1	3,925.5	10.57	372.206	
689.0	689.0	675.0	675.0	1.4	11.2	-69.61	1,371.6	-3,689.4	3,936.1	3,923.5	12.58	312.992	
700.0	700.0	686.0	686.0	1.4	11.4	-69.61	1,371.6	-3,689.4	3,936.1	3,923.2	12.82	306.944	
787.4	787.4	773.4	773.4	1.6	13.1	-69.61	1,371.6	-3,689.4	3,936.1	3,921.3	14.79	266.217	
800.0	800.0	786.0	786.0	1.7	13.4	-69.61	1,371.6	-3,689.4	3,936.1	3,921.0	15.07	261.221	
885.8	885.8	871.8	871.8	1.9	15.1	-69.61	1,371.6	-3,689.4	3,936.1	3,919.1	16.99	231.638	
900.0	900.0	886.0	886.0	1.9	15.4	-69.61	1,371.6	-3,689.4	3,936.1	3,918.8	17.31	227.385	
984.2	984.2	970.2	970.2	2.1	17.1	-69.61	1,371.6	-3,689.4	3,936.1	3,916.9	19.20	205.025	
1,000.0	1,000.0	986.0	986.0	2.1	17.4	-69.61	1,371.6	-3,689.4	3,936.1	3,916.5	19.55	201.325	
1,082.7	1,082.7	1,068.7	1,068.7	2.3	19.1	-69.61	1,371.6	-3,689.4	3,936.1	3,914.7	21.40	183.907	
1,100.0	1,100.0	1,086.0	1,086.0	2.3	19.4	-69.61	1,371.6	-3,689.4	3,936.1	3,914.3	21.79	180.632	
1,181.1	1,181.1	1,167.1	1,167.1	2.5	21.1	-69.61	1,371.6	-3,689.4	3,936.1	3,912.5	23.61	166.738	
1,200.0	1,200.0	1,186.0	1,186.0	2.6	21.5	-69.61	1,371.6	-3,689.4	3,936.1	3,912.0	24.03	163.802	
1,279.5	1,279.5	1,265.5	1,265.5	2.7	23.1	-69.61	1,371.6	-3,689.4	3,936.1	3,910.3	25.81	152.505	
1,300.0	1,300.0	1,286.0	1,286.0	2.8	23.5	-69.61	1,371.6	-3,689.4	3,936.1	3,909.8	26.27	149.844	
1,377.9	1,377.9	1,363.9	1,363.9	3.0	25.0	-69.61	1,371.6	-3,689.4	3,936.1	3,908.1	28.01	140.512	
1,400.0	1,400.0	1,386.0	1,386.0	3.0	25.5	-69.61	1,371.6	-3,689.4	3,936.1	3,907.6	28.51	138.080	
1,476.4	1,476.4	1,462.4	1,462.4	3.2	27.0	5.52	1,371.6	-3,689.4	3,935.1	3,904.9	30.20	130.315	
1,500.0	1,500.0	1,486.0	1,486.0	3.2	27.5	5.53	1,371.6	-3,689.4	3,934.3	3,903.6	30.71	128.093	
1,574.8	1,574.7	1,560.7	1,560.7	3.4	29.0	5.54	1,371.6	-3,689.4	3,930.8	3,898.4	32.33	121.572	
1,600.0	1,599.8	1,585.8	1,585.8	3.4	29.5	5.54	1,371.6	-3,689.4	3,929.1	3,896.3	32.87	119.531	
1,673.2	1,672.8	1,658.8	1,658.8	3.6	31.0	5.56	1,371.6	-3,689.4	3,923.1	3,888.7	34.42	113.980	
1,700.0	1,699.5	1,685.5	1,685.5	3.7	31.5	5.57	1,371.6	-3,689.4	3,920.4	3,885.5	34.98	112.087	
1,771.6	1,770.6	1,756.6	1,756.6	3.8	32.9	5.60	1,371.6	-3,689.4	3,912.1	3,875.7	36.45	107.328	
1,800.0	1,798.7	1,784.7	1,784.7	3.9	33.5	5.61	1,371.6	-3,689.4	3,908.3	3,871.3	37.02	105.566	
1,870.1	1,868.0	1,854.0	1,854.0	4.1	34.9	5.65	1,371.6	-3,689.4	3,897.8	3,859.4	38.42	101.460	
1,900.0	1,897.5	1,883.5	1,883.5	4.2	35.5	5.67	1,371.6	-3,689.4	3,892.7	3,853.7	39.00	99.815	
1,968.5	1,964.8	1,950.8	1,950.8	4.4	36.9	5.71	1,371.6	-3,689.4	3,880.1	3,839.8	40.31	96.253	
2,000.0	1,995.6	1,981.6	1,981.6	4.5	37.5	5.73	1,371.6	-3,689.4	3,873.8	3,832.9	40.90	94.712	
2,066.9	2,060.9	2,046.9	2,046.9	4.7	38.8	5.78	1,371.6	-3,689.4	3,859.2	3,817.0	42.13	91.606	
2,100.0	2,093.1	2,079.1	2,079.1	4.8	39.4	5.81	1,371.6	-3,689.4	3,851.4	3,808.7	42.72	90.160	
2,165.3	2,156.3	2,142.3	2,142.3	5.1	40.7	5.87	1,371.6	-3,689.4	3,834.9	3,791.1	43.86	87.441	
2,200.0	2,189.6	2,175.6	2,175.6	5.2	41.4	5.91	1,371.6	-3,689.4	3,825.6	3,781.2	44.44	86.079	
2,263.8	2,250.7	2,236.7	2,236.7	5.5	42.6	5.97	1,371.6	-3,689.4	3,807.5	3,762.0	45.49	83.690	
2,280.0	2,266.2	2,252.2	2,252.2	5.6	42.9	5.99	1,371.6	-3,689.4	3,802.6	3,756.9	45.75	83.109	
2,300.0	2,285.3	2,271.3	2,271.3	5.7	43.3	6.00	1,371.6	-3,689.4	3,796.6	3,750.4	46.17	82.230	
2,362.2	2,344.6	2,330.6	2,330.6	6.0	44.5	6.03	1,371.6	-3,689.4	3,777.9	3,730.4	47.46	79.598	
2,400.0	2,380.6	2,366.6	2,366.6	6.2	45.2	6.05	1,371.6	-3,689.4	3,766.5	3,718.3	48.26	78.051	
2,460.6	2,438.4	2,424.4	2,424.4	6.5	46.4	6.08	1,371.6	-3,689.4	3,748.3	3,698.7	49.53	75.684	
2,500.0	2,475.9	2,461.9	2,461.9	6.7	47.1	6.10	1,371.6	-3,689.4	3,736.4	3,686.1	50.35	74.209	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,518.2	2,518.2	7.0	48.3	6.13	1,371.6	-3,689.4	3,718.7	3,667.1	51.59	72.082	
2,600.0	2,571.2	2,557.2	2,557.2	7.2	49.1	6.15	1,371.6	-3,689.4	3,706.3	3,653.9	52.45	70.666	
2,657.5	2,626.0	2,612.0	2,612.0	7.5	50.2	6.18	1,371.6	-3,689.4	3,689.1	3,635.4	53.66	68.751	
2,700.0	2,666.6	2,652.6	2,652.6	7.8	51.0	6.20	1,371.6	-3,689.4	3,676.3	3,621.7	54.55	67.389	
2,755.9	2,719.8	2,705.8	2,705.8	8.1	52.0	6.23	1,371.6	-3,689.4	3,659.5	3,603.7	55.73	65.662	
2,800.0	2,761.9	2,747.9	2,747.9	8.3	52.9	6.25	1,371.6	-3,689.4	3,646.2	3,589.5	56.66	64.350	
2,854.3	2,813.7	2,799.7	2,799.7	8.7	53.9	6.28	1,371.6	-3,689.4	3,629.9	3,572.0	57.81	62.790	
2,900.0	2,857.2	2,843.2	2,843.2	8.9	54.8	6.30	1,371.6	-3,689.4	3,616.1	3,557.3	58.77	61.526	
2,952.7	2,907.5	2,893.5	2,893.5	9.2	55.8	6.33	1,371.6	-3,689.4	3,600.3	3,540.4	59.89	60.114	
3,000.0	2,952.5	2,938.5	2,938.5	9.5	56.7	6.36	1,371.6	-3,689.4	3,586.0	3,525.2	60.89	58.894	
3,051.2	3,001.3	2,987.3	2,987.3	9.8	57.7	6.38	1,371.6	-3,689.4	3,570.7	3,508.7	61.97	57.615	
3,100.0	3,047.8	3,033.8	3,033.8	10.1	58.6	6.41	1,371.6	-3,689.4	3,556.0	3,493.0	63.01	56.436	
3,149.6	3,095.1	3,081.1	3,081.1	10.4	59.6	6.44	1,371.6	-3,689.4	3,541.1	3,477.0	64.06	55.276	
3,200.0	3,143.2	3,129.2	3,129.2	10.7	60.6	6.46	1,371.6	-3,689.4	3,525.9	3,460.8	65.13	54.136	
3,248.0	3,188.9	3,174.9	3,174.9	11.0	61.5	6.49	1,371.6	-3,689.4	3,511.5	3,445.3	66.15	53.083	
3,300.0	3,238.5	3,224.5	3,224.5	11.3	62.5	6.52	1,371.6	-3,689.4	3,495.9	3,428.6	67.26	51.979	
3,346.4	3,282.8	3,268.8	3,268.8	11.6	63.4	6.55	1,371.6	-3,689.4	3,481.9	3,413.6	68.24	51.022	
3,400.0	3,333.8	3,319.8	3,319.8	11.9	64.4	6.58	1,371.6	-3,689.4	3,465.8	3,396.4	69.38	49.952	
3,444.9	3,376.6	3,362.6	3,362.6	12.2	65.2	6.60	1,371.6	-3,689.4	3,452.3	3,382.0	70.34	49.082	
3,500.0	3,429.1	3,415.1	3,415.1	12.6	66.3	6.63	1,371.6	-3,689.4	3,435.7	3,364.2	71.51	48.045	
3,543.3	3,470.4	3,456.4	3,456.4	12.8	67.1	6.66	1,371.6	-3,689.4	3,422.7	3,350.3	72.43	47.254	
3,600.0	3,524.4	3,510.4	3,510.4	13.2	68.2	6.69	1,371.6	-3,689.4	3,405.7	3,332.0	73.64	46.247	
3,641.7	3,564.2	3,550.2	3,550.2	13.4	69.0	6.72	1,371.6	-3,689.4	3,393.1	3,318.6	74.53	45.527	
3,700.0	3,619.8	3,605.8	3,605.8	13.8	70.1	6.75	1,371.6	-3,689.4	3,375.6	3,299.9	75.77	44.549	
3,740.1	3,658.0	3,644.0	3,644.0	14.0	70.9	6.78	1,371.6	-3,689.4	3,363.6	3,286.9	76.63	43.893	
3,800.0	3,715.1	3,701.1	3,701.1	14.4	72.1	6.81	1,371.6	-3,689.4	3,345.6	3,267.7	77.91	42.943	
3,838.6	3,751.8	3,737.8	3,737.8	14.7	72.8	6.84	1,371.6	-3,689.4	3,334.0	3,255.3	78.73	42.346	
3,900.0	3,810.4	3,796.4	3,796.4	15.0	74.0	6.88	1,371.6	-3,689.4	3,315.6	3,235.5	80.04	41.422	
3,937.0	3,845.7	3,831.7	3,831.7	15.3	74.7	6.90	1,371.6	-3,689.4	3,304.4	3,223.6	80.83	40.879	
4,000.0	3,905.7	3,891.7	3,891.7	15.7	75.9	6.94	1,371.6	-3,689.4	3,285.5	3,203.3	82.18	39.979	
4,035.4	3,939.5	3,925.5	3,925.5	15.9	76.6	6.96	1,371.6	-3,689.4	3,274.9	3,191.9	82.94	39.486	
4,100.0	4,001.0	3,987.0	3,987.0	16.3	77.8	7.00	1,371.6	-3,689.4	3,255.5	3,171.2	84.32	38.609	
4,133.8	4,033.3	4,019.3	4,019.3	16.5	78.5	7.02	1,371.6	-3,689.4	3,245.3	3,160.3	85.04	38.160	
4,200.0	4,096.3	4,082.3	4,082.3	16.9	79.7	7.07	1,371.6	-3,689.4	3,225.4	3,139.0	86.46	37.306	
4,232.3	4,127.1	4,113.1	4,113.1	17.1	80.3	7.09	1,371.6	-3,689.4	3,215.8	3,128.6	87.15	36.899	
4,300.0	4,191.7	4,177.7	4,177.7	17.6	81.6	7.13	1,371.6	-3,689.4	3,195.4	3,106.8	88.60	36.065	
4,330.7	4,220.9	4,206.9	4,206.9	17.8	82.2	7.16	1,371.6	-3,689.4	3,186.2	3,096.9	89.26	35.696	
4,400.0	4,287.0	4,273.0	4,273.0	18.2	83.6	7.20	1,371.6	-3,689.4	3,165.4	3,074.7	90.74	34.883	
4,429.1	4,314.7	4,300.7	4,300.7	18.4	84.1	7.22	1,371.6	-3,689.4	3,156.7	3,065.3	91.37	34.549	
4,500.0	4,382.3	4,368.3	4,368.3	18.8	85.5	7.27	1,371.6	-3,689.4	3,135.4	3,042.5	92.89	33.755	
4,527.5	4,408.6	4,394.6	4,394.6	19.0	86.0	7.29	1,371.6	-3,689.4	3,127.1	3,033.6	93.48	33.453	
4,600.0	4,477.6	4,463.6	4,463.6	19.5	87.4	7.34	1,371.6	-3,689.4	3,105.4	3,010.3	95.03	32.677	
4,626.0	4,502.4	4,488.4	4,488.4	19.6	87.9	7.36	1,371.6	-3,689.4	3,097.6	3,002.0	95.59	32.405	
4,700.0	4,572.9	4,558.9	4,558.9	20.1	89.3	7.41	1,371.6	-3,689.4	3,075.4	2,978.2	97.18	31.647	
4,724.4	4,596.2	4,582.2	4,582.2	20.3	89.8	7.43	1,371.6	-3,689.4	3,068.0	2,970.3	97.70	31.402	
4,800.0	4,668.3	4,654.3	4,654.3	20.7	91.2	7.49	1,371.6	-3,689.4	3,045.4	2,946.0	99.32	30.661	
4,822.8	4,690.0	4,676.0	4,676.0	20.9	91.7	7.50	1,371.6	-3,689.4	3,038.5	2,938.7	99.81	30.441	
4,900.0	4,763.6	4,749.6	4,749.6	21.4	93.1	7.56	1,371.6	-3,689.4	3,015.3	2,913.9	101.47	29.716	
4,921.2	4,783.8	4,769.8	4,769.8	21.5	93.6	7.58	1,371.6	-3,689.4	3,009.0	2,907.0	101.93	29.520	
5,000.0	4,858.9	4,844.9	4,844.9	22.0	95.1	7.64	1,371.6	-3,689.4	2,985.4	2,881.7	103.62	28.810	
5,019.7	4,877.7	4,863.7	4,863.7	22.1	95.4	7.65	1,371.6	-3,689.4	2,979.5	2,875.4	104.04	28.636	
5,100.0	4,954.2	4,940.2	4,940.2	22.6	97.0	7.72	1,371.6	-3,689.4	2,955.4	2,849.6	105.77	27.941	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,957.5	4,957.5	22.8	97.3	7.73	1,371.6	-3,689.4	2,949.9	2,843.8	106.16	27.787	
5,171.8	5,022.7	5,008.7	5,008.7	23.1	98.4	7.77	1,371.6	-3,689.4	2,933.8	2,826.5	107.32	27.338	
5,200.0	5,049.6	5,035.6	5,035.6	23.3	98.9	7.77	1,371.6	-3,689.4	2,925.5	2,817.3	108.21	27.036	
5,216.5	5,065.4	5,051.4	5,051.4	23.3	99.2	7.77	1,371.6	-3,689.4	2,920.8	2,812.0	108.72	26.865	
5,300.0	5,145.7	5,131.7	5,131.7	23.7	100.8	7.77	1,371.6	-3,689.4	2,898.1	2,786.8	111.29	26.042	
5,314.9	5,160.1	5,146.1	5,146.1	23.8	101.1	7.77	1,371.6	-3,689.4	2,894.3	2,782.6	111.74	25.903	
5,400.0	5,242.7	5,228.7	5,228.7	24.1	102.8	7.77	1,371.6	-3,689.4	2,874.1	2,759.8	114.27	25.151	
5,413.4	5,255.7	5,241.7	5,241.7	24.2	103.0	7.77	1,371.6	-3,689.4	2,871.1	2,756.4	114.67	25.039	
5,500.0	5,340.5	5,326.5	5,326.5	24.5	104.7	7.77	1,371.6	-3,689.4	2,853.4	2,736.2	117.16	24.354	
5,511.8	5,352.1	5,338.1	5,338.1	24.5	105.0	7.77	1,371.6	-3,689.4	2,851.2	2,733.7	117.50	24.266	
5,600.0	5,439.0	5,425.0	5,425.0	24.8	106.7	7.77	1,371.6	-3,689.4	2,836.1	2,716.2	119.94	23.646	
5,610.2	5,449.1	5,435.1	5,435.1	24.8	106.9	7.77	1,371.6	-3,689.4	2,834.6	2,714.3	120.22	23.579	
5,700.0	5,538.0	5,524.0	5,524.0	25.1	108.7	7.77	1,371.6	-3,689.4	2,822.3	2,699.7	122.59	23.021	
5,708.6	5,546.6	5,532.6	5,532.6	25.1	108.9	7.77	1,371.6	-3,689.4	2,821.2	2,698.4	122.82	22.971	
5,800.0	5,637.4	5,623.4	5,623.4	25.3	110.7	7.77	1,371.6	-3,689.4	2,811.9	2,686.7	125.12	22.474	
5,807.1	5,644.5	5,630.5	5,630.5	25.3	110.9	7.77	1,371.6	-3,689.4	2,811.3	2,686.0	125.29	22.438	
5,900.0	5,737.2	5,723.2	5,723.2	25.5	112.7	7.77	1,371.6	-3,689.4	2,804.9	2,677.4	127.50	21.999	
5,905.5	5,742.6	5,728.6	5,728.6	25.5	112.8	7.77	1,371.6	-3,689.4	2,804.6	2,677.0	127.63	21.975	
6,000.0	5,837.1	5,823.1	5,823.1	25.6	114.7	7.77	1,371.6	-3,689.4	2,801.4	2,671.6	129.73	21.594	
6,003.9	5,841.0	5,827.0	5,827.0	25.6	114.8	7.77	1,371.6	-3,689.4	2,801.3	2,671.5	129.81	21.579	
6,051.8	5,888.9	5,874.9	5,874.9	25.7	115.8	-67.36	1,371.6	-3,689.4	2,800.9	2,659.6	141.25	19.829	
6,081.8	5,918.9	5,904.9	5,904.9	25.7	116.4	-67.36	1,371.6	-3,689.4	2,800.9	2,659.0	141.89	19.740	CC, ES, SF
6,100.0	5,937.1	5,923.1	5,923.1	25.7	116.7	-157.35	1,371.6	-3,689.4	2,801.1	2,669.3	131.77	21.257	
6,102.3	5,939.4	5,925.4	5,925.4	25.7	116.8	-157.35	1,371.6	-3,689.4	2,801.2	2,669.4	131.80	21.253	
6,150.0	5,987.0	5,973.0	5,973.0	25.7	117.7	-157.29	1,371.6	-3,689.4	2,803.9	2,671.7	132.21	21.208	
6,200.0	6,036.5	6,022.5	6,022.5	25.7	118.7	-157.16	1,371.6	-3,689.4	2,809.9	2,677.8	132.09	21.272	
6,200.8	6,037.3	6,023.3	6,023.3	25.7	118.8	-157.15	1,371.6	-3,689.4	2,810.0	2,677.9	132.09	21.274	
6,250.0	6,085.5	6,071.5	6,071.5	25.7	119.7	-156.94	1,371.6	-3,689.4	2,819.1	2,687.6	131.43	21.450	
6,299.2	6,133.0	6,119.0	6,119.0	25.6	120.7	-156.65	1,371.6	-3,689.4	2,831.1	2,700.9	130.25	21.736	
6,300.0	6,133.7	6,119.7	6,119.7	25.6	120.7	-156.65	1,371.6	-3,689.4	2,831.4	2,701.1	130.23	21.742	
6,350.0	6,180.9	6,166.9	6,166.9	25.5	121.6	-156.26	1,371.6	-3,689.4	2,846.8	2,718.3	128.51	22.151	
6,397.6	6,224.6	6,210.6	6,210.6	25.4	122.5	-155.80	1,371.6	-3,689.4	2,864.3	2,737.8	126.44	22.652	
6,400.0	6,226.7	6,212.7	6,212.7	25.4	122.6	-155.78	1,371.6	-3,689.4	2,865.2	2,738.9	126.33	22.680	
6,450.0	6,271.1	6,257.1	6,257.1	25.2	123.5	-155.18	1,371.6	-3,689.4	2,886.6	2,762.8	123.73	23.329	
6,496.0	6,310.4	6,296.4	6,296.4	25.1	124.3	-154.51	1,371.6	-3,689.4	2,908.8	2,787.7	121.05	24.029	
6,500.0	6,313.7	6,299.7	6,299.7	25.1	124.3	-154.45	1,371.6	-3,689.4	2,910.8	2,790.0	120.81	24.094	
6,550.0	6,354.4	6,340.4	6,340.4	25.0	125.1	-153.57	1,371.6	-3,689.4	2,937.7	2,820.1	117.67	24.965	
6,594.5	6,388.9	6,374.9	6,374.9	24.9	125.8	-152.63	1,371.6	-3,689.4	2,963.9	2,849.1	114.82	25.812	
6,600.0	6,393.0	6,379.0	6,379.0	24.9	125.9	-152.51	1,371.6	-3,689.4	2,967.3	2,852.8	114.47	25.921	
6,650.0	6,429.3	6,415.3	6,415.3	24.8	126.6	-151.22	1,371.6	-3,689.4	2,999.4	2,888.0	111.41	26.921	
6,692.9	6,458.5	6,444.5	6,444.5	24.7	127.2	-149.91	1,371.6	-3,689.4	3,028.7	2,919.6	109.09	27.763	
6,700.0	6,463.1	6,449.1	6,449.1	24.7	127.3	-149.67	1,371.6	-3,689.4	3,033.8	2,925.0	108.75	27.896	
6,750.0	6,494.3	6,480.3	6,480.3	24.7	127.9	-147.79	1,371.6	-3,689.4	3,070.3	2,963.5	106.81	28.745	
6,791.3	6,517.9	6,503.9	6,503.9	24.7	128.4	-145.93	1,371.6	-3,689.4	3,102.1	2,996.1	106.04	29.255	
6,800.0	6,522.6	6,508.6	6,508.6	24.7	128.5	-145.49	1,371.6	-3,689.4	3,108.9	3,002.9	105.99	29.332	
6,850.0	6,548.0	6,534.0	6,534.0	24.7	129.0	-142.67	1,371.6	-3,689.4	3,149.3	3,042.6	106.74	29.506	
6,889.7	6,566.0	6,552.0	6,552.0	24.8	129.4	-139.95	1,371.6	-3,689.4	3,182.7	3,073.9	108.76	29.264	
6,900.0	6,570.4	6,556.4	6,556.4	24.9	129.5	-139.16	1,371.6	-3,689.4	3,191.4	3,081.9	109.51	29.143	
6,950.0	6,589.5	6,575.5	6,575.5	25.1	129.9	-134.78	1,371.6	-3,689.4	3,234.9	3,120.2	114.68	28.207	
6,988.2	6,602.0	6,588.0	6,588.0	25.3	130.1	-130.70	1,371.6	-3,689.4	3,268.9	3,148.6	120.35	27.161	
7,000.0	6,605.4	6,591.4	6,591.4	25.3	130.2	-129.28	1,371.6	-3,689.4	3,279.6	3,157.2	122.39	26.796	
7,050.0	6,618.0	6,604.0	6,604.0	25.6	130.4	-122.35	1,371.6	-3,689.4	3,325.4	3,193.1	132.27	25.140	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,625.0	6,611.0	6,611.0	25.9	130.6	-116.23	1,371.6	-3,689.4	3,359.3	3,219.1	140.23	23.957	
7,100.0	6,627.1	6,613.1	6,613.1	26.0	130.6	-113.75	1,371.6	-3,689.4	3,371.9	3,228.8	143.10	23.562	
7,150.0	6,632.8	6,618.8	6,618.8	26.5	130.7	-103.40	1,371.6	-3,689.4	3,419.0	3,266.4	152.54	22.414	
7,185.0	6,634.7	6,620.7	6,620.7	26.8	130.8	-95.27	1,371.6	-3,689.4	3,452.2	3,295.5	156.63	22.040	
7,200.0	6,635.0	6,621.0	6,621.0	27.0	130.8	-91.65	1,371.6	-3,689.4	3,466.4	3,309.0	157.45	22.016	
7,215.9	6,635.0	6,621.0	6,621.0	27.1	130.8	-87.76	1,371.6	-3,689.4	3,481.5	3,323.9	157.64	22.086	
7,283.4	6,634.1	6,620.1	6,620.1	27.9	130.8	-87.71	1,371.6	-3,689.4	3,545.8	3,387.4	158.45	22.378	
7,300.0	6,633.9	6,619.9	6,619.9	28.1	130.8	-87.70	1,371.6	-3,689.4	3,561.6	3,402.9	158.65	22.449	
7,381.9	6,632.9	6,618.9	6,618.9	29.3	130.7	-87.64	1,371.6	-3,689.4	3,639.7	3,479.9	159.80	22.777	
7,400.0	6,632.6	6,618.6	6,618.6	29.5	130.7	-87.63	1,371.6	-3,689.4	3,657.0	3,496.9	160.05	22.849	
7,480.3	6,631.6	6,617.6	6,617.6	30.8	130.7	-87.58	1,371.6	-3,689.4	3,733.8	3,572.5	161.33	23.144	
7,500.0	6,631.4	6,617.4	6,617.4	31.1	130.7	-87.56	1,371.6	-3,689.4	3,752.7	3,591.0	161.64	23.216	
7,578.7	6,630.4	6,616.4	6,616.4	32.5	130.7	-87.51	1,371.6	-3,689.4	3,828.1	3,665.1	163.02	23.482	
7,600.0	6,630.1	6,616.1	6,616.1	32.9	130.7	-87.49	1,371.6	-3,689.4	3,848.5	3,685.1	163.39	23.554	
7,677.1	6,629.1	6,615.1	6,615.1	34.3	130.7	-87.44	1,371.6	-3,689.4	3,922.7	3,757.8	164.85	23.796	
7,700.0	6,628.8	6,614.8	6,614.8	34.8	130.7	-87.42	1,371.6	-3,689.4	3,944.6	3,779.3	165.28	23.867	
7,775.6	6,627.8	6,613.8	6,613.8	36.3	130.6	-87.37	1,371.6	-3,689.4	4,017.4	3,850.6	166.79	24.086	
7,800.0	6,627.5	6,613.5	6,613.5	36.8	130.6	-87.36	1,371.6	-3,689.4	4,040.9	3,873.6	167.28	24.157	
7,874.0	6,626.6	6,612.6	6,612.6	38.4	130.6	-87.31	1,371.6	-3,689.4	4,112.3	3,943.4	168.83	24.358	
7,900.0	6,626.3	6,612.3	6,612.3	38.9	130.6	-87.29	1,371.6	-3,689.4	4,137.4	3,968.0	169.37	24.427	
7,972.4	6,625.3	6,611.3	6,611.3	40.5	130.6	-87.24	1,371.6	-3,689.4	4,207.3	4,036.4	170.95	24.611	
8,000.0	6,625.0	6,611.0	6,611.0	41.1	130.6	-87.22	1,371.6	-3,689.4	4,234.0	4,062.4	171.55	24.681	
8,070.8	6,624.1	6,610.1	6,610.1	42.7	130.6	-87.17	1,371.6	-3,689.4	4,302.5	4,129.4	173.14	24.850	
8,100.0	6,623.7	6,609.7	6,609.7	43.4	130.6	-87.15	1,371.6	-3,689.4	4,330.7	4,156.9	173.80	24.918	
8,169.3	6,622.8	6,608.8	6,608.8	45.0	130.5	-87.10	1,371.6	-3,689.4	4,397.9	4,222.5	175.39	25.074	
8,200.0	6,622.4	6,608.4	6,608.4	45.7	130.5	-87.08	1,371.6	-3,689.4	4,427.7	4,251.6	176.10	25.143	
8,267.7	6,621.6	6,607.6	6,607.6	47.4	130.5	-87.03	1,371.6	-3,689.4	4,493.3	4,315.6	177.69	25.287	
8,300.0	6,621.1	6,607.1	6,607.1	48.1	130.5	-87.01	1,371.6	-3,689.4	4,524.7	4,346.2	178.45	25.355	
8,366.1	6,620.3	6,606.3	6,606.3	49.7	130.5	-86.97	1,371.6	-3,689.4	4,588.9	4,408.9	180.04	25.489	
8,400.0	6,619.9	6,605.9	6,605.9	50.6	130.5	-86.94	1,371.6	-3,689.4	4,621.9	4,441.0	180.85	25.557	
8,464.5	6,619.0	6,605.0	6,605.0	52.2	130.5	-86.90	1,371.6	-3,689.4	4,684.7	4,502.2	182.42	25.681	
8,500.0	6,618.6	6,604.6	6,604.6	53.0	130.4	-86.87	1,371.6	-3,689.4	4,719.2	4,535.9	183.28	25.748	
8,563.0	6,617.8	6,603.8	6,603.8	54.6	130.4	-86.83	1,371.6	-3,689.4	4,780.5	4,595.7	184.83	25.864	
8,600.0	6,617.3	6,603.3	6,603.3	55.5	130.4	-86.81	1,371.6	-3,689.4	4,816.6	4,630.8	185.75	25.931	
8,661.4	6,616.5	6,602.5	6,602.5	57.1	130.4	-86.76	1,371.6	-3,689.4	4,876.4	4,689.1	187.28	26.039	
8,700.0	6,616.0	6,602.0	6,602.0	58.1	130.4	-86.74	1,371.6	-3,689.4	4,914.1	4,725.8	188.24	26.106	
8,759.8	6,615.2	6,601.2	6,601.2	59.6	130.4	-86.70	1,371.6	-3,689.4	4,972.4	4,782.7	189.74	26.206	
8,800.0	6,614.7	6,600.7	6,600.7	60.6	130.4	-86.67	1,371.6	-3,689.4	5,011.7	4,820.9	190.75	26.273	
8,858.2	6,614.0	6,600.0	6,600.0	62.1	130.4	-86.63	1,371.6	-3,689.4	5,068.6	4,876.3	192.23	26.367	
8,900.0	6,613.4	6,599.4	6,599.4	63.2	130.3	-86.60	1,371.6	-3,689.4	5,109.4	4,916.1	193.29	26.434	
8,956.7	6,612.7	6,598.7	6,598.7	64.7	130.3	-86.56	1,371.6	-3,689.4	5,164.8	4,970.0	194.74	26.522	
9,000.0	6,612.2	6,598.2	6,598.2	65.8	130.3	-86.53	1,371.6	-3,689.4	5,207.1	5,011.3	195.84	26.588	
9,055.1	6,611.5	6,597.5	6,597.5	67.3	130.3	-86.49	1,371.6	-3,689.4	5,261.1	5,063.8	197.26	26.671	
9,100.0	6,610.9	6,596.9	6,596.9	68.4	130.3	-86.46	1,371.6	-3,689.4	5,305.0	5,106.6	198.41	26.737	
9,153.5	6,610.2	6,596.2	6,596.2	69.8	130.3	-86.42	1,371.6	-3,689.4	5,357.4	5,157.6	199.80	26.814	
9,200.0	6,609.6	6,595.6	6,595.6	71.1	130.3	-86.39	1,371.6	-3,689.4	5,403.0	5,202.0	201.00	26.881	
9,251.9	6,608.9	6,594.9	6,594.9	72.4	130.3	-86.36	1,371.6	-3,689.4	5,453.9	5,251.5	202.35	26.953	
9,300.0	6,608.3	6,594.3	6,594.3	73.7	130.2	-86.32	1,371.6	-3,689.4	5,501.0	5,297.4	203.60	27.019	
9,350.4	6,607.7	6,593.7	6,593.7	75.0	130.2	-86.29	1,371.6	-3,689.4	5,550.4	5,345.5	204.91	27.087	
9,400.0	6,607.0	6,593.0	6,593.0	76.4	130.2	-86.25	1,371.6	-3,689.4	5,599.1	5,392.9	206.21	27.153	
9,448.8	6,606.4	6,592.4	6,592.4	77.7	130.2	-86.22	1,371.6	-3,689.4	5,646.9	5,439.5	207.48	27.216	
9,500.0	6,605.7	6,591.7	6,591.7	79.0	130.2	-86.18	1,371.6	-3,689.4	5,697.2	5,488.4	208.83	27.282	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BOND #21-9 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,605.1	6,591.1	6,591.1	80.3	130.2	-86.15	1,371.6	-3,689.4	5,743.6	5,533.5	210.07	27.342	
9,600.0	6,604.5	6,590.5	6,590.5	81.7	130.2	-86.12	1,371.6	-3,689.4	5,795.4	5,584.0	211.45	27.408	
9,645.6	6,603.9	6,589.9	6,589.9	82.9	130.2	-86.08	1,371.6	-3,689.4	5,840.3	5,627.6	212.66	27.463	
9,700.0	6,603.2	6,589.2	6,589.2	84.4	130.1	-86.05	1,371.6	-3,689.4	5,893.7	5,679.6	214.09	27.529	
9,744.1	6,602.6	6,588.6	6,588.6	85.6	130.1	-86.02	1,371.6	-3,689.4	5,937.0	5,721.8	215.26	27.581	
9,800.0	6,601.9	6,587.9	6,587.9	87.1	130.1	-85.98	1,371.6	-3,689.4	5,992.0	5,775.3	216.73	27.647	
9,842.5	6,601.3	6,587.3	6,587.3	88.2	130.1	-85.95	1,371.6	-3,689.4	6,033.8	5,816.0	217.86	27.696	
9,900.0	6,600.6	6,586.6	6,586.6	89.8	130.1	-85.91	1,371.6	-3,689.4	6,090.4	5,871.0	219.38	27.762	
9,940.9	6,600.1	6,586.1	6,586.1	90.9	130.1	-85.88	1,371.6	-3,689.4	6,130.7	5,910.2	220.47	27.807	
10,000.0	6,599.3	6,585.3	6,585.3	92.5	130.1	-85.84	1,371.6	-3,689.4	6,188.9	5,966.8	222.04	27.873	
10,039.3	6,598.8	6,584.8	6,584.8	93.5	130.1	-85.81	1,371.6	-3,689.4	6,227.6	6,004.5	223.09	27.916	
10,100.0	6,598.0	6,584.0	6,584.0	95.2	130.0	-85.77	1,371.6	-3,689.4	6,287.3	6,062.6	224.70	27.981	
10,137.8	6,597.5	6,583.5	6,583.5	96.2	130.0	-85.74	1,371.6	-3,689.4	6,324.6	6,098.9	225.71	28.021	
10,200.0	6,596.7	6,582.7	6,582.7	97.9	130.0	-85.70	1,371.6	-3,689.4	6,385.9	6,158.5	227.37	28.086	
10,236.2	6,596.3	6,582.3	6,582.3	98.9	130.0	-85.67	1,371.6	-3,689.4	6,421.6	6,193.2	228.33	28.123	
10,300.0	6,595.4	6,581.4	6,581.4	100.6	130.0	-85.63	1,371.6	-3,689.4	6,484.5	6,254.4	230.04	28.189	
10,334.6	6,595.0	6,581.0	6,581.0	101.6	130.0	-85.61	1,371.6	-3,689.4	6,518.6	6,287.6	230.96	28.223	
10,400.0	6,594.2	6,580.2	6,580.2	103.4	130.0	-85.56	1,371.6	-3,689.4	6,583.1	6,350.4	232.71	28.288	
10,433.0	6,593.7	6,579.7	6,579.7	104.3	129.9	-85.54	1,371.6	-3,689.4	6,615.7	6,382.1	233.60	28.321	
10,500.0	6,592.9	6,578.9	6,578.9	106.1	129.9	-85.49	1,371.6	-3,689.4	6,681.7	6,446.3	235.39	28.386	
10,531.5	6,592.5	6,578.5	6,578.5	106.9	129.9	-85.47	1,371.6	-3,689.4	6,712.8	6,476.6	236.23	28.416	
10,600.0	6,591.6	6,577.6	6,577.6	108.8	129.9	-85.42	1,371.6	-3,689.4	6,780.4	6,542.4	238.07	28.481	
10,629.9	6,591.2	6,577.2	6,577.2	109.6	129.9	-85.40	1,371.6	-3,689.4	6,810.0	6,571.1	238.87	28.509	
10,700.0	6,590.3	6,576.3	6,576.3	111.6	129.9	-85.35	1,371.6	-3,689.4	6,879.2	6,638.4	240.76	28.573	
10,728.3	6,589.9	6,575.9	6,575.9	112.3	129.9	-85.33	1,371.6	-3,689.4	6,907.1	6,665.6	241.52	28.599	
10,800.0	6,589.0	6,575.0	6,575.0	114.3	129.9	-85.28	1,371.6	-3,689.4	6,977.9	6,734.5	243.44	28.664	
10,826.7	6,588.7	6,574.7	6,574.7	115.0	129.8	-85.26	1,371.6	-3,689.4	7,004.4	6,760.2	244.16	28.687	
10,900.0	6,587.7	6,573.7	6,573.7	117.1	129.8	-85.21	1,371.6	-3,689.4	7,076.8	6,830.6	246.13	28.752	
10,925.2	6,587.4	6,573.4	6,573.4	117.7	129.8	-85.20	1,371.6	-3,689.4	7,101.6	6,854.8	246.81	28.774	
11,000.0	6,586.4	6,572.4	6,572.4	119.8	129.8	-85.14	1,371.6	-3,689.4	7,175.6	6,926.8	248.82	28.838	
11,023.6	6,586.1	6,572.1	6,572.1	120.4	129.8	-85.13	1,371.6	-3,689.4	7,198.9	6,949.5	249.46	28.858	
11,100.0	6,585.1	6,571.1	6,571.1	122.6	129.8	-85.07	1,371.6	-3,689.4	7,274.5	7,023.0	251.52	28.923	
11,122.0	6,584.8	6,570.8	6,570.8	123.2	129.8	-85.06	1,371.6	-3,689.4	7,296.2	7,044.1	252.11	28.941	
11,200.0	6,583.8	6,569.8	6,569.8	125.3	129.8	-85.00	1,371.6	-3,689.4	7,373.4	7,119.2	254.21	29.005	
11,220.4	6,583.6	6,569.6	6,569.6	125.9	129.7	-84.99	1,371.6	-3,689.4	7,393.6	7,138.8	254.76	29.022	
11,300.0	6,582.5	6,568.5	6,568.5	128.1	129.7	-84.93	1,371.6	-3,689.4	7,472.3	7,215.4	256.91	29.086	
11,318.9	6,582.3	6,568.3	6,568.3	128.6	129.7	-84.92	1,371.6	-3,689.4	7,491.0	7,233.6	257.42	29.101	
11,400.0	6,581.2	6,567.2	6,567.2	130.8	129.7	-84.86	1,371.6	-3,689.4	7,571.3	7,311.7	259.60	29.165	
11,417.3	6,581.0	6,567.0	6,567.0	131.3	129.7	-84.85	1,371.6	-3,689.4	7,588.4	7,328.3	260.07	29.178	
11,500.0	6,580.0	6,566.0	6,566.0	133.6	129.7	-84.80	1,371.6	-3,689.4	7,670.2	7,407.9	262.30	29.242	
11,515.7	6,579.7	6,565.7	6,565.7	134.0	129.7	-84.78	1,371.6	-3,689.4	7,685.8	7,423.1	262.73	29.254	
11,600.0	6,578.7	6,564.7	6,564.7	136.3	129.6	-84.73	1,371.6	-3,689.4	7,769.3	7,504.3	265.00	29.318	
11,614.1	6,578.5	6,564.5	6,564.5	136.7	129.6	-84.72	1,371.6	-3,689.4	7,783.3	7,517.9	265.39	29.328	
11,700.0	6,577.4	6,563.4	6,563.4	139.1	129.6	-84.66	1,371.6	-3,689.4	7,868.3	7,600.6	267.70	29.392	
11,712.6	6,577.2	6,563.2	6,563.2	139.5	129.6	-84.65	1,371.6	-3,689.4	7,880.7	7,612.7	268.04	29.401	
11,800.0	6,576.1	6,562.1	6,562.1	141.9	129.6	-84.59	1,371.6	-3,689.4	7,967.4	7,696.9	270.41	29.464	
11,811.0	6,575.9	6,561.9	6,561.9	142.2	129.6	-84.58	1,371.6	-3,689.4	7,978.3	7,707.5	270.70	29.472	
11,882.7	6,575.0	6,561.0	6,561.0	144.2	129.6	-84.53	1,371.6	-3,689.4	8,049.3	7,776.6	272.64	29.523	
11,883.5	6,575.0	6,561.0	6,561.0	144.2	129.6	-84.53	1,371.6	-3,689.4	8,050.1	7,777.4	272.65	29.525	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-88.20	75.5	-2,405.0	2,406.5				
98.4	98.4	79.9	79.9	0.1	0.0	-88.20	75.4	-2,404.7	2,406.0	2,405.9	0.11	N/A	
100.0	100.0	82.0	82.0	0.1	0.0	-88.20	75.4	-2,404.7	2,406.0	2,405.9	0.12	N/A	
196.8	196.8	165.7	165.7	0.3	0.1	-88.21	75.1	-2,404.1	2,405.3	2,404.9	0.37	6,455.917	
200.0	200.0	168.2	168.1	0.3	0.1	-88.21	75.1	-2,404.1	2,405.3	2,404.9	0.38	6,312.363	
238.0	238.0	200.0	200.0	0.4	0.1	-88.21	75.0	-2,404.1	2,405.3	2,404.8	0.48	4,965.564	
295.3	295.3	258.8	258.8	0.5	0.1	-88.21	75.0	-2,404.1	2,405.3	2,404.6	0.66	3,627.253	
300.0	300.0	263.9	263.9	0.5	0.1	-88.21	74.9	-2,404.1	2,405.3	2,404.6	0.68	3,547.344	
393.7	393.7	374.3	374.3	0.8	0.2	-88.22	74.8	-2,403.7	2,404.9	2,404.0	0.96	2,510.967	
400.0	400.0	382.1	382.1	0.8	0.2	-88.22	74.8	-2,403.6	2,404.9	2,403.9	0.98	2,464.038	
492.1	492.1	461.5	461.5	1.0	0.2	-88.21	75.2	-2,403.1	2,404.3	2,403.0	1.22	1,971.522	
500.0	500.0	467.7	467.7	1.0	0.2	-88.21	75.2	-2,403.1	2,404.2	2,403.0	1.24	1,938.990	
590.5	590.5	566.0	566.0	1.2	0.3	-88.21	75.3	-2,402.9	2,404.1	2,402.6	1.46	1,644.858	
600.0	600.0	578.5	578.5	1.2	0.3	-88.21	75.2	-2,402.8	2,404.0	2,402.6	1.48	1,620.454	
689.0	689.0	659.9	659.8	1.4	0.3	-88.21	74.9	-2,402.3	2,403.4	2,401.7	1.70	1,412.054	
700.0	700.0	668.9	668.9	1.4	0.3	-88.21	74.9	-2,402.2	2,403.4	2,401.7	1.73	1,389.661	
787.4	787.4	770.7	770.7	1.6	0.3	-88.21	74.9	-2,401.9	2,403.1	2,401.2	1.97	1,221.911	
800.0	800.0	788.6	788.6	1.7	0.3	-88.21	74.9	-2,401.7	2,403.0	2,401.0	2.00	1,199.733	
885.8	885.8	871.2	871.2	1.9	0.4	-88.21	75.0	-2,400.8	2,402.0	2,399.8	2.24	1,070.656	
900.0	900.0	884.2	884.1	1.9	0.4	-88.21	75.0	-2,400.6	2,401.9	2,399.6	2.28	1,052.012	
984.2	984.2	959.7	959.7	2.1	0.4	-88.21	74.9	-2,400.1	2,401.3	2,398.8	2.51	957.412	
1,000.0	1,000.0	973.8	973.7	2.1	0.4	-88.21	74.9	-2,400.0	2,401.2	2,398.7	2.55	941.795	
1,081.2	1,081.2	1,043.2	1,043.2	2.3	0.5	-88.22	74.7	-2,399.8	2,401.0	2,398.2	2.74	875.096	
1,082.7	1,082.7	1,044.5	1,044.4	2.3	0.5	-88.22	74.7	-2,399.8	2,401.0	2,398.2	2.75	874.056	
1,100.0	1,100.0	1,058.9	1,058.9	2.3	0.5	-88.22	74.7	-2,399.8	2,401.0	2,398.2	2.79	861.827	
1,181.1	1,181.1	1,134.6	1,134.6	2.5	0.5	-88.21	75.2	-2,400.1	2,401.3	2,398.3	2.98	804.591	
1,200.0	1,200.0	1,155.1	1,155.1	2.6	0.5	-88.20	75.3	-2,400.1	2,401.3	2,398.3	3.04	790.847	
1,279.5	1,279.5	1,234.9	1,234.9	2.7	0.5	-88.19	75.7	-2,400.3	2,401.5	2,398.3	3.24	741.202	
1,300.0	1,300.0	1,253.7	1,253.7	2.8	0.5	-88.19	75.7	-2,400.4	2,401.6	2,398.3	3.29	730.323	
1,377.9	1,377.9	1,330.1	1,330.1	3.0	0.5	-88.20	75.5	-2,400.7	2,401.9	2,398.4	3.48	689.913	
1,400.0	1,400.0	1,354.4	1,354.3	3.0	0.5	-88.20	75.5	-2,400.8	2,402.0	2,398.5	3.54	678.377	
1,476.4	1,476.4	1,442.6	1,442.6	3.2	0.5	-13.09	75.4	-2,400.9	2,401.1	2,397.4	3.73	643.658	
1,500.0	1,500.0	1,471.5	1,471.4	3.2	0.5	-13.09	75.4	-2,400.8	2,400.3	2,396.5	3.78	634.424	
1,574.8	1,574.7	1,559.2	1,559.2	3.4	0.6	-13.14	75.0	-2,400.2	2,396.3	2,392.3	3.97	603.298	
1,600.0	1,599.8	1,588.2	1,588.2	3.4	0.6	-13.17	74.7	-2,399.9	2,394.5	2,390.4	4.04	592.745	
1,673.2	1,672.8	1,653.6	1,653.6	3.6	0.6	-13.25	73.8	-2,399.3	2,387.8	2,383.6	4.23	564.344	
1,700.0	1,699.5	1,676.4	1,676.3	3.7	0.6	-13.28	73.6	-2,399.2	2,385.1	2,380.8	4.30	554.578	
1,771.6	1,770.6	1,747.4	1,747.4	3.8	0.6	-13.38	73.2	-2,398.8	2,376.5	2,372.0	4.49	529.597	
1,800.0	1,798.7	1,778.0	1,778.0	3.9	0.6	-13.42	73.1	-2,398.6	2,372.6	2,368.1	4.56	520.261	
1,870.1	1,868.0	1,845.4	1,845.3	4.1	0.7	-13.52	73.3	-2,398.1	2,361.8	2,357.0	4.75	497.204	
1,900.0	1,897.5	1,872.6	1,872.6	4.2	0.7	-13.57	73.4	-2,397.9	2,356.7	2,351.9	4.83	487.757	
1,968.5	1,964.8	1,950.4	1,950.4	4.4	0.7	-13.71	73.6	-2,397.4	2,343.9	2,338.9	5.03	466.090	
2,000.0	1,995.6	1,991.5	1,991.5	4.5	0.7	-13.80	73.5	-2,396.9	2,337.3	2,332.2	5.12	456.393	
2,066.9	2,060.9	2,048.8	2,048.7	4.7	0.7	-13.95	73.3	-2,396.1	2,322.2	2,316.9	5.31	437.254	
2,100.0	2,093.1	2,075.4	2,075.4	4.8	0.7	-14.03	73.1	-2,395.9	2,314.3	2,308.9	5.40	428.309	
2,165.3	2,156.3	2,125.4	2,125.4	5.1	0.8	-14.21	72.7	-2,395.6	2,297.8	2,292.2	5.58	411.734	
2,200.0	2,189.6	2,150.7	2,150.7	5.2	0.8	-14.30	72.6	-2,395.5	2,288.7	2,283.0	5.67	403.662	
2,263.8	2,250.7	2,200.0	2,199.9	5.5	0.8	-14.49	72.5	-2,395.7	2,271.2	2,265.3	5.85	388.470	
2,280.0	2,266.2	2,214.2	2,214.1	5.6	0.8	-14.54	72.5	-2,395.8	2,266.6	2,260.7	5.89	384.647	
2,300.0	2,285.3	2,236.9	2,236.8	5.7	0.8	-14.58	72.5	-2,395.9	2,260.8	2,254.9	5.95	380.099	
2,362.2	2,344.6	2,300.0	2,299.9	6.0	0.8	-14.71	72.7	-2,396.1	2,242.7	2,236.6	6.11	366.911	
2,400.0	2,380.6	2,336.3	2,336.3	6.2	0.8	-14.78	72.8	-2,396.1	2,231.7	2,225.4	6.23	358.437	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,460.6	2,438.4	2,386.0	2,385.9	6.5	0.8	-14.88	72.9	-2,396.4	2,214.2	2,207.8	6.40	345.968	
2,500.0	2,475.9	2,420.5	2,420.4	6.7	0.8	-14.95	72.9	-2,396.6	2,202.9	2,196.4	6.52	338.111	
2,559.0	2,532.2	2,474.9	2,474.9	7.0	0.8	-15.07	72.9	-2,397.1	2,186.1	2,179.4	6.69	326.700	
2,600.0	2,571.2	2,514.6	2,514.5	7.2	0.8	-15.16	72.8	-2,397.4	2,174.4	2,167.6	6.82	319.057	
2,657.5	2,626.0	2,575.4	2,575.3	7.5	0.8	-15.28	73.0	-2,397.9	2,158.0	2,151.0	6.99	308.537	
2,700.0	2,666.6	2,616.8	2,616.7	7.8	0.8	-15.37	73.4	-2,398.1	2,145.8	2,138.7	7.13	301.063	
2,755.9	2,719.8	2,665.4	2,665.3	8.1	0.8	-15.47	73.7	-2,398.4	2,129.8	2,122.5	7.30	291.582	
2,800.0	2,761.9	2,704.8	2,704.7	8.3	0.8	-15.55	73.8	-2,398.8	2,117.3	2,109.8	7.44	284.390	
2,854.3	2,813.7	2,765.0	2,764.9	8.7	0.8	-15.68	74.1	-2,399.2	2,101.8	2,094.1	7.62	275.670	
2,900.0	2,857.2	2,812.2	2,812.1	8.9	0.9	-15.78	74.5	-2,399.4	2,088.6	2,080.8	7.77	268.646	
2,952.7	2,907.5	2,858.1	2,858.0	9.2	0.9	-15.88	74.8	-2,399.6	2,073.4	2,065.5	7.95	260.885	
3,000.0	2,952.5	2,900.0	2,899.9	9.5	0.9	-15.98	74.9	-2,399.8	2,059.9	2,051.8	8.10	254.199	
3,051.2	3,001.3	2,961.6	2,961.5	9.8	0.9	-16.12	75.2	-2,400.1	2,045.2	2,036.9	8.28	247.040	
3,100.0	3,047.8	3,014.6	3,014.5	10.1	0.9	-16.24	75.8	-2,400.0	2,030.9	2,022.5	8.45	240.478	
3,149.6	3,095.1	3,056.2	3,056.1	10.4	0.9	-16.33	76.2	-2,400.0	2,016.4	2,007.8	8.61	234.104	
3,200.0	3,143.2	3,100.0	3,099.9	10.7	0.9	-16.43	76.4	-2,400.1	2,001.8	1,993.1	8.78	227.882	
3,248.0	3,188.9	3,153.1	3,153.0	11.0	0.9	-16.56	76.6	-2,400.2	1,987.9	1,979.0	8.95	222.059	
3,300.0	3,238.5	3,210.8	3,210.7	11.3	0.9	-16.70	77.1	-2,400.0	1,972.6	1,963.5	9.13	215.942	
3,346.4	3,282.8	3,256.4	3,256.3	11.6	0.9	-16.81	77.5	-2,399.7	1,958.9	1,949.6	9.30	210.619	
3,400.0	3,333.8	3,308.2	3,308.1	11.9	0.9	-16.95	77.5	-2,399.4	1,943.0	1,933.5	9.49	204.679	
3,444.9	3,376.6	3,348.8	3,348.7	12.2	0.9	-17.06	77.5	-2,399.2	1,929.7	1,920.1	9.65	199.918	
3,500.0	3,429.1	3,400.0	3,399.9	12.6	0.9	-17.20	77.7	-2,398.9	1,913.5	1,903.6	9.85	194.267	
3,543.3	3,470.4	3,435.6	3,435.5	12.8	1.0	-17.29	77.9	-2,398.8	1,900.8	1,890.8	10.00	190.035	
3,600.0	3,524.4	3,483.9	3,483.8	13.2	1.0	-17.42	78.2	-2,398.8	1,884.4	1,874.2	10.20	184.664	
3,641.7	3,564.2	3,522.6	3,522.5	13.4	1.0	-17.52	78.5	-2,398.9	1,872.4	1,862.0	10.35	180.859	
3,700.0	3,619.8	3,580.0	3,579.9	13.8	1.0	-17.69	78.7	-2,399.0	1,855.6	1,845.0	10.56	175.704	
3,740.1	3,658.0	3,616.3	3,616.2	14.0	1.0	-17.80	78.6	-2,399.1	1,844.0	1,833.3	10.71	172.244	
3,800.0	3,715.1	3,665.7	3,665.6	14.4	1.0	-17.95	78.5	-2,399.3	1,827.0	1,816.1	10.92	167.250	
3,838.6	3,751.8	3,700.0	3,699.9	14.7	1.0	-18.06	78.4	-2,399.5	1,816.1	1,805.1	11.07	164.125	
3,900.0	3,810.4	3,765.6	3,765.5	15.0	1.0	-18.26	78.4	-2,400.0	1,798.8	1,787.5	11.30	159.181	
3,937.0	3,845.7	3,806.2	3,806.0	15.3	1.0	-18.39	78.4	-2,400.0	1,788.2	1,776.7	11.44	156.263	
4,000.0	3,905.7	3,868.4	3,868.3	15.7	1.0	-18.59	78.2	-2,400.1	1,770.1	1,758.4	11.68	151.490	
4,035.4	3,939.5	3,903.8	3,903.7	15.9	1.0	-18.72	77.9	-2,400.0	1,759.8	1,748.0	11.82	148.877	
4,100.0	4,001.0	3,975.4	3,975.3	16.3	1.0	-19.00	76.8	-2,399.7	1,741.0	1,728.9	12.09	144.044	
4,133.8	4,033.3	4,013.2	4,013.1	16.5	1.0	-19.16	75.9	-2,399.3	1,731.0	1,718.8	12.23	141.546	
4,200.0	4,096.3	4,088.3	4,088.1	16.9	1.0	-19.51	73.6	-2,398.1	1,711.2	1,698.6	12.51	136.733	
4,232.3	4,127.1	4,122.7	4,122.5	17.1	1.0	-19.67	72.3	-2,397.4	1,701.3	1,688.7	12.65	134.450	
4,300.0	4,191.7	4,192.8	4,192.5	17.6	1.1	-20.03	69.7	-2,395.7	1,680.6	1,667.6	12.95	129.799	
4,330.7	4,220.9	4,219.3	4,219.0	17.8	1.1	-20.17	68.6	-2,395.0	1,671.2	1,658.1	13.08	127.806	
4,400.0	4,287.0	4,275.9	4,275.5	18.2	1.1	-20.46	66.4	-2,393.8	1,650.1	1,636.8	13.36	123.486	
4,429.1	4,314.7	4,300.0	4,299.6	18.4	1.1	-20.59	65.4	-2,393.3	1,641.4	1,627.9	13.48	121.722	
4,500.0	4,382.3	4,364.5	4,364.0	18.8	1.1	-20.95	62.8	-2,392.3	1,620.4	1,606.6	13.79	117.528	
4,527.5	4,408.6	4,389.7	4,389.2	19.0	1.1	-21.08	61.9	-2,391.9	1,612.2	1,598.3	13.91	115.940	
4,600.0	4,477.6	4,458.6	4,458.0	19.5	1.1	-21.46	59.5	-2,390.8	1,590.9	1,576.7	14.23	111.838	
4,626.0	4,502.4	4,483.4	4,482.9	19.6	1.1	-21.59	58.8	-2,390.5	1,583.3	1,568.9	14.34	110.406	
4,700.0	4,572.9	4,558.5	4,557.9	20.1	1.1	-21.98	57.0	-2,389.3	1,561.4	1,546.8	14.68	106.385	
4,724.4	4,596.2	4,583.6	4,583.0	20.3	1.1	-22.11	56.5	-2,388.9	1,554.2	1,539.4	14.79	105.087	
4,800.0	4,668.3	4,651.2	4,650.6	20.7	1.2	-22.47	55.1	-2,387.7	1,531.8	1,516.6	15.13	101.247	
4,822.8	4,690.0	4,670.7	4,670.1	20.9	1.2	-22.58	54.6	-2,387.4	1,525.1	1,509.9	15.23	100.125	
4,900.0	4,763.6	4,738.6	4,738.0	21.4	1.2	-22.97	52.9	-2,386.5	1,502.7	1,487.1	15.58	96.432	
4,921.2	4,783.8	4,757.7	4,757.1	21.5	1.2	-23.08	52.5	-2,386.3	1,496.6	1,480.9	15.68	95.443	
5,000.0	4,858.9	4,827.4	4,826.8	22.0	1.2	-23.46	51.2	-2,385.7	1,474.1	1,458.0	16.04	91.893	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,877.7	4,844.4	4,843.8	22.1	1.2	-23.56	51.0	-2,385.6	1,468.5	1,452.4	16.13	91.033	
5,100.0	4,954.2	4,918.4	4,917.7	22.6	1.2	-23.97	49.9	-2,385.4	1,446.1	1,429.6	16.51	87.590	
5,118.1	4,971.5	4,938.9	4,938.3	22.8	1.2	-24.08	49.7	-2,385.4	1,441.0	1,424.4	16.60	86.805	
5,171.8	5,022.7	4,999.8	4,999.1	23.1	1.2	-24.43	49.1	-2,384.9	1,425.7	1,408.9	16.87	84.504	
5,200.0	5,049.6	5,025.6	5,024.9	23.3	1.2	-24.50	48.9	-2,384.6	1,417.8	1,400.8	16.97	83.548	
5,216.5	5,065.4	5,040.7	5,040.0	23.3	1.2	-24.54	48.8	-2,384.4	1,413.2	1,396.2	17.02	83.032	
5,300.0	5,145.7	5,118.0	5,117.3	23.7	1.3	-24.75	48.5	-2,383.8	1,391.7	1,374.4	17.27	80.586	
5,314.9	5,160.1	5,132.2	5,131.5	23.8	1.3	-24.78	48.5	-2,383.7	1,388.1	1,370.8	17.31	80.190	
5,400.0	5,242.7	5,213.7	5,213.0	24.1	1.3	-24.97	48.6	-2,383.2	1,368.9	1,351.4	17.53	78.074	
5,413.4	5,255.7	5,226.9	5,226.2	24.2	1.3	-24.99	48.7	-2,383.1	1,366.1	1,348.6	17.57	77.772	
5,500.0	5,340.5	5,312.3	5,311.6	24.5	1.3	-25.16	49.1	-2,382.6	1,349.3	1,331.6	17.77	75.939	
5,511.8	5,352.1	5,323.9	5,323.2	24.5	1.3	-25.18	49.1	-2,382.5	1,347.2	1,329.4	17.79	75.717	
5,600.0	5,439.0	5,411.2	5,410.5	24.8	1.3	-25.30	50.0	-2,382.1	1,332.9	1,314.9	17.97	74.178	
5,610.2	5,449.1	5,421.8	5,421.1	24.8	1.3	-25.31	50.1	-2,382.0	1,331.4	1,313.4	17.99	74.020	
5,700.0	5,538.0	5,515.5	5,514.8	25.1	1.3	-25.40	51.4	-2,381.4	1,319.3	1,301.2	18.14	72.733	
5,708.6	5,546.6	5,524.6	5,523.9	25.1	1.3	-25.40	51.5	-2,381.3	1,318.3	1,300.1	18.15	72.625	
5,800.0	5,637.4	5,618.0	5,617.3	25.3	1.3	-25.48	52.3	-2,380.1	1,308.5	1,290.2	18.28	71.564	
5,807.1	5,644.5	5,624.3	5,623.6	25.3	1.4	-25.48	52.3	-2,380.0	1,307.8	1,289.5	18.29	71.497	
5,900.0	5,737.2	5,709.3	5,708.6	25.5	1.4	-25.52	52.9	-2,379.3	1,301.1	1,282.7	18.40	70.715	
5,905.5	5,742.6	5,715.6	5,714.9	25.5	1.4	-25.52	52.9	-2,379.3	1,300.8	1,282.4	18.41	70.677	
6,000.0	5,837.1	5,817.8	5,817.0	25.6	1.4	-25.54	53.5	-2,378.1	1,296.7	1,278.2	18.50	70.082	
6,003.9	5,841.0	5,821.1	5,820.4	25.6	1.4	-25.54	53.5	-2,378.0	1,296.6	1,278.1	18.51	70.065	
6,051.8	5,888.9	5,861.7	5,861.0	25.7	1.4	-100.66	53.7	-2,377.7	1,295.7	1,270.2	25.46	50.900	
6,081.8	5,918.9	5,887.2	5,886.4	25.7	1.4	-100.65	53.9	-2,377.5	1,295.5	1,270.0	25.49	50.823 ES	
6,084.7	5,921.8	5,889.6	5,888.9	25.7	1.4	169.35	53.9	-2,377.5	1,295.5	1,276.9	18.59	69.704 CC	
6,100.0	5,937.1	5,903.3	5,902.6	25.7	1.4	169.36	54.0	-2,377.5	1,295.7	1,277.1	18.57	69.791	
6,102.3	5,939.4	5,905.8	5,905.1	25.7	1.4	169.36	54.1	-2,377.5	1,295.7	1,277.2	18.56	69.806	
6,150.0	5,987.0	5,957.4	5,956.6	25.7	1.4	169.36	54.5	-2,377.3	1,298.4	1,279.9	18.52	70.109	
6,200.0	6,036.5	6,009.6	6,008.9	25.7	1.4	169.34	54.8	-2,377.0	1,304.4	1,285.9	18.50	70.504	
6,200.8	6,037.3	6,010.3	6,009.6	25.7	1.4	169.34	54.8	-2,377.0	1,304.6	1,286.1	18.50	70.511	
6,250.0	6,085.5	6,055.7	6,054.9	25.7	1.4	169.29	55.2	-2,376.8	1,313.9	1,295.4	18.49	71.068	
6,299.2	6,133.0	6,100.2	6,099.5	25.6	1.4	169.21	55.6	-2,376.6	1,326.5	1,308.1	18.46	71.862	
6,300.0	6,133.7	6,101.0	6,100.3	25.6	1.4	169.21	55.6	-2,376.6	1,326.8	1,308.3	18.46	71.877	
6,350.0	6,180.9	6,152.4	6,151.6	25.5	1.4	169.11	56.1	-2,376.5	1,342.9	1,324.5	18.40	72.966	
6,397.6	6,224.6	6,200.0	6,199.3	25.4	1.5	168.98	56.2	-2,376.1	1,361.1	1,342.8	18.33	74.268	
6,400.0	6,226.7	6,200.0	6,199.3	25.4	1.5	168.96	56.2	-2,376.1	1,362.1	1,343.8	18.32	74.338	
6,450.0	6,271.1	6,241.2	6,240.4	25.2	1.5	168.74	56.2	-2,375.8	1,384.5	1,366.3	18.22	76.008	
6,496.0	6,310.4	6,275.7	6,275.0	25.1	1.5	168.48	56.2	-2,375.7	1,407.9	1,389.8	18.10	77.805	
6,500.0	6,313.7	6,278.6	6,277.9	25.1	1.5	168.46	56.2	-2,375.7	1,410.1	1,392.0	18.09	77.969	
6,550.0	6,354.4	6,318.1	6,317.4	25.0	1.5	168.12	56.1	-2,375.6	1,438.7	1,420.7	17.94	80.190	
6,594.5	6,388.9	6,356.5	6,355.7	24.9	1.5	167.78	56.1	-2,375.6	1,466.3	1,448.5	17.81	82.336	
6,600.0	6,393.0	6,361.1	6,360.4	24.9	1.5	167.73	56.1	-2,375.5	1,469.9	1,452.1	17.79	82.611	
6,650.0	6,429.3	6,400.0	6,399.3	24.8	1.5	167.23	56.0	-2,375.3	1,503.7	1,486.0	17.66	85.140	
6,692.9	6,458.5	6,427.3	6,426.6	24.7	1.5	166.67	55.9	-2,375.2	1,534.6	1,517.0	17.58	87.291	
6,700.0	6,463.1	6,431.4	6,430.7	24.7	1.5	166.56	55.9	-2,375.2	1,539.9	1,522.3	17.57	87.640	
6,750.0	6,494.3	6,459.0	6,458.2	24.7	1.5	165.69	55.9	-2,375.1	1,578.5	1,560.9	17.55	89.939	
6,791.3	6,517.9	6,479.7	6,479.0	24.7	1.5	164.79	55.9	-2,375.1	1,612.0	1,594.3	17.61	91.523	
6,800.0	6,522.6	6,483.8	6,483.1	24.7	1.5	164.58	55.9	-2,375.1	1,619.2	1,601.5	17.64	91.809	
6,850.0	6,548.0	6,507.2	6,506.5	24.7	1.5	163.13	56.0	-2,375.1	1,661.8	1,643.9	17.87	92.988	
6,889.7	6,566.0	6,526.1	6,525.4	24.8	1.5	161.69	56.0	-2,375.2	1,696.9	1,678.7	18.20	93.257	
6,900.0	6,570.4	6,530.7	6,529.9	24.9	1.5	161.26	56.0	-2,375.2	1,706.1	1,687.8	18.30	93.216	
6,950.0	6,589.5	6,550.9	6,550.1	25.1	1.5	158.67	55.9	-2,375.2	1,751.9	1,732.9	19.01	92.148	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,602.0	6,564.0	6,563.3	25.3	1.5	155.94	55.9	-2,375.2	1,787.7	1,767.8	19.81	90.258	
7,000.0	6,605.4	6,567.7	6,566.9	25.3	1.5	154.92	55.9	-2,375.2	1,798.9	1,778.8	20.10	89.476	
7,050.0	6,618.0	6,581.0	6,580.3	25.6	1.5	149.18	55.8	-2,375.2	1,846.8	1,825.1	21.75	84.928	
7,086.6	6,625.0	6,588.5	6,587.8	25.9	1.5	142.77	55.8	-2,375.2	1,882.5	1,859.0	23.42	80.362	
7,100.0	6,627.1	6,590.8	6,590.0	26.0	1.5	139.71	55.8	-2,375.2	1,895.6	1,871.4	24.15	78.497	
7,150.0	6,632.8	6,596.9	6,596.1	26.5	1.5	122.98	55.8	-2,375.2	1,944.9	1,917.7	27.14	71.664	
7,185.0	6,634.7	6,599.0	6,598.2	26.8	1.5	104.43	55.7	-2,375.2	1,979.6	1,951.2	28.35	69.819	
7,200.0	6,635.0	6,599.3	6,598.6	27.0	1.5	94.87	55.7	-2,375.2	1,994.4	1,966.2	28.29	70.510	
7,215.9	6,635.0	6,599.3	6,598.6	27.1	1.5	84.25	55.7	-2,375.2	2,010.2	1,982.0	28.28	71.088	
7,283.4	6,634.1	6,598.5	6,597.7	27.9	1.5	84.06	55.7	-2,375.2	2,077.3	2,048.2	29.11	71.372	
7,300.0	6,633.9	6,598.3	6,597.5	28.1	1.5	84.01	55.7	-2,375.2	2,093.8	2,064.4	29.31	71.440	
7,381.9	6,632.9	6,597.3	6,596.5	29.3	1.5	83.77	55.8	-2,375.2	2,175.1	2,144.6	30.47	71.378	
7,400.0	6,632.6	6,597.1	6,596.3	29.5	1.5	83.71	55.8	-2,375.2	2,193.1	2,162.4	30.73	71.365	
7,480.3	6,631.6	6,596.1	6,595.3	30.8	1.5	83.48	55.8	-2,375.2	2,273.0	2,240.9	32.02	70.978	
7,500.0	6,631.4	6,595.8	6,595.1	31.1	1.5	83.42	55.8	-2,375.2	2,292.6	2,260.2	32.34	70.888	
7,578.7	6,630.4	6,594.9	6,594.1	32.5	1.5	83.18	55.8	-2,375.2	2,370.9	2,337.1	33.73	70.284	
7,600.0	6,630.1	6,594.6	6,593.8	32.9	1.5	83.12	55.8	-2,375.2	2,392.0	2,357.9	34.11	70.130	
7,677.1	6,629.1	6,593.6	6,592.9	34.3	1.5	82.89	55.8	-2,375.2	2,468.8	2,433.2	35.58	69.397	
7,700.0	6,628.8	6,593.3	6,592.6	34.8	1.5	82.81	55.8	-2,375.2	2,491.6	2,455.5	36.01	69.192	
7,775.6	6,627.8	6,592.4	6,591.6	36.3	1.5	82.59	55.8	-2,375.2	2,566.8	2,529.3	37.53	68.393	
7,800.0	6,627.5	6,592.1	6,591.3	36.8	1.5	82.51	55.8	-2,375.2	2,591.1	2,553.1	38.02	68.149	
7,874.0	6,626.6	6,591.1	6,590.4	38.4	1.5	82.29	55.8	-2,375.2	2,664.8	2,625.2	39.58	67.328	
7,900.0	6,626.3	6,590.8	6,590.0	38.9	1.5	82.20	55.8	-2,375.2	2,690.7	2,650.6	40.13	67.055	
7,972.4	6,625.3	6,589.8	6,589.1	40.5	1.5	81.98	55.8	-2,375.2	2,762.8	2,721.1	41.71	66.243	
8,000.0	6,625.0	6,589.5	6,588.7	41.1	1.5	81.90	55.8	-2,375.2	2,790.3	2,748.0	42.31	65.950	
8,070.8	6,624.1	6,588.6	6,587.8	42.7	1.5	81.68	55.8	-2,375.2	2,860.9	2,817.0	43.90	65.166	
8,100.0	6,623.7	6,588.2	6,587.4	43.4	1.5	81.58	55.8	-2,375.2	2,890.0	2,845.4	44.56	64.860	
8,169.3	6,622.8	6,587.3	6,586.5	45.0	1.5	81.37	55.8	-2,375.2	2,959.0	2,912.8	46.15	64.114	
8,200.0	6,622.4	6,586.9	6,586.1	45.7	1.5	81.27	55.8	-2,375.2	2,989.6	2,942.8	46.86	63.801	
8,267.7	6,621.6	6,586.0	6,585.2	47.4	1.5	81.06	55.8	-2,375.2	3,057.1	3,008.7	48.45	63.101	
8,300.0	6,621.1	6,585.5	6,584.8	48.1	1.5	80.95	55.8	-2,375.2	3,089.3	3,040.1	49.21	62.784	
8,366.1	6,620.3	6,584.6	6,583.9	49.7	1.5	80.75	55.8	-2,375.2	3,155.2	3,104.5	50.78	62.132	
8,400.0	6,619.9	6,584.2	6,583.4	50.6	1.5	80.64	55.8	-2,375.2	3,189.0	3,137.4	51.59	61.815	
8,464.5	6,619.0	6,583.3	6,582.6	52.2	1.5	80.43	55.8	-2,375.2	3,253.4	3,200.2	53.15	61.211	
8,500.0	6,618.6	6,582.8	6,582.1	53.0	1.5	80.31	55.8	-2,375.2	3,288.7	3,234.7	54.01	60.896	
8,563.0	6,617.8	6,582.0	6,581.2	54.6	1.5	80.11	55.8	-2,375.2	3,351.5	3,296.0	55.54	60.340	
8,600.0	6,617.3	6,581.5	6,580.7	55.5	1.5	79.99	55.8	-2,375.2	3,388.5	3,332.0	56.45	60.028	
8,661.4	6,616.5	6,580.6	6,579.9	57.1	1.5	79.79	55.8	-2,375.2	3,449.7	3,391.8	57.96	59.517	
8,700.0	6,616.0	6,580.1	6,579.3	58.1	1.5	79.66	55.8	-2,375.2	3,488.2	3,429.3	58.91	59.211	
8,759.8	6,615.2	6,579.2	6,578.5	59.6	1.5	79.47	55.8	-2,375.2	3,547.9	3,487.5	60.40	58.743	
8,800.0	6,614.7	6,578.7	6,577.9	60.6	1.5	79.34	55.8	-2,375.2	3,588.0	3,526.6	61.39	58.443	
8,858.2	6,614.0	6,577.9	6,577.1	62.1	1.5	79.14	55.8	-2,375.2	3,646.1	3,583.3	62.85	58.015	
8,900.0	6,613.4	6,577.3	6,576.5	63.2	1.5	79.00	55.8	-2,375.2	3,687.8	3,623.9	63.89	57.721	
8,956.7	6,612.7	6,576.5	6,575.7	64.7	1.5	78.82	55.8	-2,375.2	3,744.3	3,679.0	65.31	57.330	
9,000.0	6,612.2	6,575.9	6,575.1	65.8	1.5	78.67	55.9	-2,375.2	3,787.6	3,721.2	66.40	57.044	
9,055.1	6,611.5	6,575.1	6,574.3	67.3	1.5	78.49	55.9	-2,375.2	3,842.6	3,774.8	67.78	56.688	
9,100.0	6,610.9	6,574.4	6,573.7	68.4	1.5	78.33	55.9	-2,375.2	3,887.4	3,818.5	68.91	56.410	
9,153.5	6,610.2	6,573.7	6,572.9	69.8	1.5	78.16	55.9	-2,375.2	3,940.8	3,870.5	70.27	56.085	
9,200.0	6,609.6	6,573.0	6,572.2	71.1	1.5	78.00	55.9	-2,375.2	3,987.2	3,915.7	71.44	55.814	
9,251.9	6,608.9	6,572.2	6,571.5	72.4	1.5	77.82	55.9	-2,375.2	4,039.0	3,966.3	72.75	55.519	
9,300.0	6,608.3	6,571.5	6,570.8	73.7	1.5	77.65	55.9	-2,375.2	4,087.0	4,013.0	73.96	55.256	
9,350.4	6,607.7	6,570.8	6,570.0	75.0	1.5	77.48	55.9	-2,375.2	4,137.3	4,062.0	75.24	54.987	

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

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<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,607.0	6,570.0	6,569.3	76.4	1.5	77.31	55.9	-2,375.2	4,186.8	4,110.3	76.50	54.733	
9,448.8	6,606.4	6,569.3	6,568.6	77.7	1.5	77.14	55.9	-2,375.2	4,235.5	4,157.8	77.73	54.489	
9,500.0	6,605.7	6,568.5	6,567.8	79.0	1.5	76.97	55.9	-2,375.2	4,286.7	4,207.6	79.03	54.243	
9,547.2	6,605.1	6,567.8	6,567.1	80.3	1.5	76.80	55.9	-2,375.2	4,333.8	4,253.6	80.22	54.021	
9,600.0	6,604.5	6,567.0	6,566.3	81.7	1.5	76.62	55.9	-2,375.2	4,386.5	4,304.9	81.56	53.783	
9,645.6	6,603.9	6,566.3	6,565.6	82.9	1.5	76.46	55.9	-2,375.2	4,432.1	4,349.4	82.72	53.582	
9,700.0	6,603.2	6,565.5	6,564.8	84.4	1.5	76.27	55.9	-2,375.2	4,486.3	4,402.3	84.09	53.352	
9,744.1	6,602.6	6,564.8	6,564.1	85.6	1.5	76.11	55.9	-2,375.2	4,530.4	4,445.2	85.21	53.170	
9,800.0	6,601.9	6,564.0	6,563.2	87.1	1.5	75.91	55.9	-2,375.2	4,586.2	4,499.6	86.62	52.948	
9,842.5	6,601.3	6,563.3	6,562.6	88.2	1.5	75.76	55.9	-2,375.2	4,628.6	4,541.0	87.69	52.783	
9,900.0	6,600.6	6,562.4	6,561.7	89.8	1.5	75.56	55.9	-2,375.2	4,686.1	4,596.9	89.14	52.569	
9,940.9	6,600.1	6,561.8	6,561.0	90.9	1.5	75.41	55.9	-2,375.2	4,726.9	4,636.8	90.17	52.420	
10,000.0	6,599.3	6,560.9	6,560.1	92.5	1.5	75.20	55.9	-2,375.2	4,785.9	4,694.3	91.66	52.213	
10,039.3	6,598.8	6,560.2	6,559.5	93.5	1.5	75.06	55.9	-2,375.2	4,825.2	4,732.6	92.65	52.079	
10,100.0	6,598.0	6,559.3	6,558.5	95.2	1.5	74.84	55.9	-2,375.2	4,885.8	4,791.6	94.17	51.880	
10,137.8	6,597.5	6,558.7	6,557.9	96.2	1.5	74.70	55.9	-2,375.2	4,923.5	4,828.4	95.12	51.760	
10,200.0	6,596.7	6,557.7	6,556.9	97.9	1.5	74.47	55.9	-2,375.2	4,985.7	4,889.0	96.68	51.569	
10,236.2	6,596.3	6,557.1	6,556.4	98.9	1.5	74.34	55.9	-2,375.2	5,021.8	4,924.2	97.59	51.460	
10,300.0	6,595.4	6,556.1	6,555.3	100.6	1.5	74.11	55.9	-2,375.2	5,085.6	4,986.4	99.18	51.277	
10,334.6	6,595.0	6,555.5	6,554.8	101.6	1.5	73.98	55.9	-2,375.2	5,120.1	5,020.1	100.04	51.179	
10,400.0	6,594.2	6,554.4	6,553.7	103.4	1.5	73.74	55.9	-2,375.2	5,185.4	5,083.8	101.67	51.003	
10,433.0	6,593.7	6,553.9	6,553.1	104.3	1.5	73.62	55.9	-2,375.2	5,218.5	5,116.0	102.49	50.916	
10,500.0	6,592.9	6,552.8	6,552.0	106.1	1.5	73.37	55.9	-2,375.2	5,285.3	5,181.2	104.15	50.748	
10,531.5	6,592.5	6,552.3	6,551.5	106.9	1.5	73.25	55.9	-2,375.2	5,316.8	5,211.8	104.93	50.670	
10,600.0	6,591.6	6,551.1	6,550.4	108.8	1.5	73.00	55.9	-2,375.2	5,385.2	5,278.6	106.62	50.509	
10,629.9	6,591.2	6,550.6	6,549.9	109.6	1.5	72.89	55.9	-2,375.2	5,415.1	5,307.7	107.36	50.440	
10,700.0	6,590.3	6,549.4	6,548.7	111.6	1.5	72.62	55.9	-2,375.2	5,485.1	5,376.0	109.08	50.286	
10,728.3	6,589.9	6,549.0	6,548.2	112.3	1.5	72.52	55.9	-2,375.2	5,513.4	5,403.6	109.77	50.226	
10,800.0	6,589.0	6,547.8	6,547.0	114.3	1.5	72.24	55.9	-2,375.2	5,585.0	5,473.5	111.52	50.079	
10,826.7	6,588.7	6,547.3	6,546.5	115.0	1.5	72.14	55.9	-2,375.2	5,611.7	5,499.6	112.18	50.025	
10,900.0	6,587.7	6,546.0	6,545.3	117.1	1.5	71.86	55.9	-2,375.2	5,684.9	5,571.0	113.96	49.886	
10,925.2	6,587.4	6,545.6	6,544.8	117.7	1.5	71.77	55.9	-2,375.2	5,710.1	5,595.5	114.57	49.839	
11,000.0	6,586.4	6,544.3	6,543.5	119.8	1.5	71.48	55.9	-2,375.2	5,784.8	5,668.4	116.38	49.706	
11,023.6	6,586.1	6,543.9	6,543.1	120.4	1.5	71.39	55.9	-2,375.2	5,808.4	5,691.4	116.95	49.665	
11,100.0	6,585.1	6,542.5	6,541.8	122.6	1.5	71.10	55.9	-2,375.2	5,884.7	5,765.9	118.79	49.540	
11,122.0	6,584.8	6,542.2	6,541.4	123.2	1.5	71.01	55.9	-2,375.2	5,906.7	5,787.4	119.32	49.505	
11,200.0	6,583.8	6,540.8	6,540.0	125.3	1.5	70.71	55.9	-2,375.2	5,984.6	5,863.5	121.18	49.386	
11,220.4	6,583.6	6,540.4	6,539.7	125.9	1.5	70.63	55.9	-2,375.2	6,005.1	5,883.4	121.67	49.356	
11,300.0	6,582.5	6,539.0	6,538.2	128.1	1.5	70.32	55.9	-2,375.2	6,084.6	5,961.0	123.56	49.245	
11,318.9	6,582.3	6,538.6	6,537.9	128.6	1.5	70.25	55.9	-2,375.2	6,103.4	5,979.4	124.01	49.219	
11,400.0	6,581.2	6,537.2	6,536.4	130.8	1.5	69.93	56.0	-2,375.2	6,184.5	6,058.5	125.92	49.115	
11,417.3	6,581.0	6,536.9	6,536.1	131.3	1.5	69.86	56.0	-2,375.2	6,201.8	6,075.4	126.33	49.093	
11,500.0	6,580.0	6,535.3	6,534.6	133.6	1.5	69.53	56.0	-2,375.2	6,284.4	6,156.1	128.26	48.996	
11,515.7	6,579.7	6,535.1	6,534.3	134.0	1.5	69.47	56.0	-2,375.2	6,300.1	6,171.5	128.63	48.978	
11,600.0	6,578.7	6,533.5	6,532.7	136.3	1.5	69.14	56.0	-2,375.2	6,384.3	6,253.7	130.59	48.888	
11,614.1	6,578.5	6,533.2	6,532.5	136.7	1.5	69.08	56.0	-2,375.2	6,398.4	6,267.5	130.92	48.873	
11,700.0	6,577.4	6,531.6	6,530.9	139.1	1.5	68.74	56.0	-2,375.2	6,484.2	6,351.3	132.90	48.790	
11,712.6	6,577.2	6,531.4	6,530.6	139.5	1.5	68.69	56.0	-2,375.2	6,496.8	6,363.6	133.19	48.779	
11,800.0	6,576.1	6,529.7	6,529.0	141.9	1.5	68.34	56.0	-2,375.2	6,584.2	6,449.0	135.19	48.703	
11,811.0	6,575.9	6,529.5	6,528.8	142.2	1.5	68.30	56.0	-2,375.2	6,595.1	6,459.7	135.44	48.694	
11,882.7	6,575.0	6,528.2	6,527.4	144.2	1.5	68.01	56.0	-2,375.2	6,666.8	6,529.7	137.07	48.638 SF	
11,883.5	6,575.0	6,528.1	6,527.4	144.2	1.5	68.00	56.0	-2,375.2	6,667.6	6,530.5	137.08	48.640	

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

## Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	173.34	-1,023.7	119.5	1,031.0				
98.4	98.4	68.1	68.1	0.1	0.0	173.34	-1,023.8	119.5	1,030.7	1,030.6	0.10	N/A CC	
100.0	100.0	69.6	69.6	0.1	0.0	173.34	-1,023.8	119.5	1,030.7	1,030.6	0.10	N/A	
196.8	196.8	169.3	169.3	0.3	0.0	173.34	-1,024.0	119.6	1,030.9	1,030.6	0.33	3,134.185	
200.0	200.0	172.7	172.7	0.3	0.0	173.34	-1,023.9	119.6	1,030.9	1,030.6	0.34	3,064.432	
281.0	281.0	253.0	253.0	0.5	0.1	173.35	-1,023.9	119.5	1,030.8	1,030.2	0.59	1,756.803	
295.3	295.3	266.7	266.7	0.5	0.1	173.35	-1,023.9	119.4	1,030.8	1,030.2	0.64	1,622.093	
300.0	300.0	271.2	271.2	0.5	0.1	173.35	-1,023.9	119.4	1,030.8	1,030.2	0.65	1,581.877	
393.7	393.7	363.8	363.8	0.8	0.2	173.36	-1,024.1	119.3	1,031.0	1,030.0	0.97	1,065.987	
400.0	400.0	370.1	370.1	0.8	0.2	173.36	-1,024.1	119.2	1,031.0	1,030.0	0.99	1,043.209	
492.1	492.1	462.6	462.6	1.0	0.3	173.36	-1,024.2	119.2	1,031.1	1,029.9	1.27	814.949	
500.0	500.0	470.5	470.5	1.0	0.3	173.36	-1,024.2	119.2	1,031.2	1,029.9	1.29	800.808	
590.5	590.5	560.5	560.5	1.2	0.3	173.35	-1,024.4	119.4	1,031.3	1,029.8	1.55	667.274	
600.0	600.0	569.9	569.9	1.2	0.4	173.35	-1,024.4	119.4	1,031.3	1,029.7	1.57	655.826 ES	
689.0	689.0	656.6	656.6	1.4	0.4	173.34	-1,024.6	119.7	1,031.6	1,029.8	1.82	566.249	
700.0	700.0	667.3	667.3	1.4	0.4	173.33	-1,024.6	119.8	1,031.6	1,029.8	1.85	556.971	
787.4	787.4	751.4	751.3	1.6	0.5	173.31	-1,025.1	120.2	1,032.2	1,030.1	2.09	493.695	
800.0	800.0	763.4	763.4	1.7	0.5	173.31	-1,025.2	120.3	1,032.3	1,030.1	2.12	485.796	
885.8	885.8	846.5	846.5	1.9	0.5	173.28	-1,025.9	120.9	1,033.1	1,030.7	2.36	438.439	
900.0	900.0	860.4	860.3	1.9	0.5	173.27	-1,026.1	121.1	1,033.3	1,030.9	2.39	431.543	
984.2	984.2	942.6	942.6	2.1	0.6	173.23	-1,027.0	122.0	1,034.3	1,031.7	2.62	394.921	
1,000.0	1,000.0	958.0	957.9	2.1	0.6	173.22	-1,027.2	122.2	1,034.5	1,031.8	2.66	388.800	
1,082.7	1,082.7	1,040.9	1,040.9	2.3	0.6	173.17	-1,028.2	123.2	1,035.7	1,032.8	2.88	359.626	
1,100.0	1,100.0	1,058.8	1,058.8	2.3	0.6	173.16	-1,028.4	123.4	1,035.9	1,033.0	2.93	354.065	
1,181.1	1,181.1	1,141.1	1,141.0	2.5	0.7	173.11	-1,029.3	124.3	1,036.9	1,033.7	3.14	330.318	
1,200.0	1,200.0	1,160.0	1,159.9	2.6	0.7	173.10	-1,029.5	124.5	1,037.1	1,033.9	3.19	325.273	
1,279.5	1,279.5	1,240.5	1,240.5	2.7	0.7	173.07	-1,030.3	125.3	1,038.0	1,034.6	3.40	305.719	
1,300.0	1,300.0	1,261.6	1,261.6	2.8	0.7	173.06	-1,030.5	125.4	1,038.2	1,034.7	3.45	301.076	
1,377.9	1,377.9	1,342.4	1,342.3	3.0	0.7	173.05	-1,031.2	125.8	1,038.9	1,035.2	3.65	284.664	
1,400.0	1,400.0	1,365.4	1,365.3	3.0	0.7	173.04	-1,031.4	125.8	1,039.0	1,035.3	3.71	280.348	
1,476.4	1,476.4	1,443.9	1,443.9	3.2	0.8	-111.86	-1,031.8	125.8	1,039.8	1,035.9	3.95	263.184	
1,500.0	1,500.0	1,468.0	1,467.9	3.2	0.8	-111.89	-1,031.9	125.7	1,040.2	1,036.2	4.01	259.474	
1,574.8	1,574.7	1,546.4	1,546.3	3.4	0.8	-112.02	-1,032.2	125.1	1,041.7	1,037.5	4.19	248.824	
1,600.0	1,599.8	1,573.3	1,573.3	3.4	0.8	-112.09	-1,032.2	124.9	1,042.3	1,038.1	4.25	245.487	
1,673.2	1,672.8	1,646.0	1,645.9	3.6	0.8	-112.33	-1,032.1	124.4	1,044.5	1,040.0	4.42	236.055	
1,700.0	1,699.5	1,671.4	1,671.3	3.7	0.8	-112.43	-1,032.1	124.3	1,045.5	1,041.0	4.49	232.858	
1,771.6	1,770.6	1,740.8	1,740.7	3.8	0.8	-112.76	-1,032.2	124.1	1,048.8	1,044.1	4.67	224.464	
1,800.0	1,798.7	1,768.6	1,768.6	3.9	0.8	-112.92	-1,032.3	124.1	1,050.3	1,045.6	4.74	221.407	
1,870.1	1,868.0	1,835.7	1,835.6	4.1	0.9	-113.36	-1,032.4	124.2	1,054.7	1,049.8	4.94	213.310	
1,900.0	1,897.5	1,863.7	1,863.6	4.2	0.9	-113.56	-1,032.5	124.3	1,056.9	1,051.9	5.03	210.004	
1,968.5	1,964.8	1,928.5	1,928.4	4.4	0.9	-114.06	-1,033.0	124.6	1,062.6	1,057.3	5.26	202.156	
2,000.0	1,995.6	1,958.7	1,958.7	4.5	0.9	-114.32	-1,033.2	124.8	1,065.5	1,060.2	5.36	198.833	
2,066.9	2,060.9	2,023.8	2,023.7	4.7	0.9	-114.92	-1,033.6	125.4	1,072.4	1,066.8	5.60	191.433	
2,100.0	2,093.1	2,056.8	2,056.8	4.8	0.9	-115.25	-1,033.8	125.8	1,076.0	1,070.3	5.72	188.116	
2,165.3	2,156.3	2,120.6	2,120.5	5.1	1.0	-115.93	-1,034.1	126.7	1,083.8	1,077.8	5.98	181.158	
2,200.0	2,189.6	2,152.9	2,152.8	5.2	1.0	-116.28	-1,034.3	127.2	1,088.3	1,082.2	6.12	177.798	
2,263.8	2,250.7	2,212.4	2,212.3	5.5	1.0	-116.97	-1,034.6	128.1	1,097.4	1,091.0	6.40	171.338	
2,280.0	2,266.2	2,227.8	2,227.7	5.6	1.0	-117.15	-1,034.7	128.4	1,099.9	1,093.4	6.48	169.815	
2,300.0	2,285.3	2,246.6	2,246.5	5.7	1.0	-117.44	-1,034.8	128.7	1,102.9	1,096.4	6.57	167.903	
2,362.2	2,344.6	2,305.3	2,305.2	6.0	1.0	-118.31	-1,035.1	129.7	1,112.7	1,105.8	6.86	162.127	
2,400.0	2,380.6	2,340.6	2,340.5	6.2	1.0	-118.82	-1,035.3	130.4	1,118.8	1,111.7	7.04	158.895	
2,460.6	2,438.4	2,397.2	2,397.1	6.5	1.0	-119.63	-1,035.8	131.3	1,128.7	1,121.4	7.34	153.853	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,475.9	2,435.7	2,435.6	6.7	1.1	-120.17	-1,036.0	131.9	1,135.4	1,127.8	7.53	150.846	
2,559.0	2,532.2	2,493.7	2,493.6	7.0	1.1	-120.98	-1,036.4	132.7	1,145.4	1,137.6	7.82	146.478	
2,600.0	2,571.2	2,533.0	2,532.8	7.2	1.1	-121.51	-1,036.6	133.2	1,152.4	1,144.4	8.02	143.697	
2,657.5	2,626.0	2,587.7	2,587.5	7.5	1.1	-122.25	-1,036.9	134.0	1,162.4	1,154.1	8.31	139.949	
2,700.0	2,666.6	2,627.6	2,627.4	7.8	1.1	-122.78	-1,037.1	134.5	1,170.0	1,161.5	8.52	137.383	
2,755.9	2,719.8	2,679.6	2,679.4	8.1	1.1	-123.46	-1,037.4	135.3	1,180.1	1,171.3	8.80	134.157	
2,800.0	2,761.9	2,721.7	2,721.5	8.3	1.2	-124.01	-1,037.6	135.9	1,188.2	1,179.2	9.02	131.802	
2,854.3	2,813.7	2,774.9	2,774.7	8.7	1.2	-124.68	-1,037.9	136.5	1,198.3	1,189.0	9.29	129.028	
2,900.0	2,857.2	2,817.6	2,817.4	8.9	1.2	-125.20	-1,038.2	136.9	1,206.9	1,197.4	9.51	126.847	
2,952.7	2,907.5	2,863.5	2,863.3	9.2	1.2	-125.76	-1,038.6	137.4	1,217.1	1,207.3	9.78	124.448	
3,000.0	2,952.5	2,905.1	2,904.9	9.5	1.2	-126.27	-1,039.0	138.0	1,226.5	1,216.4	10.02	122.462	
3,051.2	3,001.3	2,955.0	2,954.8	9.8	1.2	-126.86	-1,039.5	138.7	1,236.8	1,226.5	10.27	120.420	
3,100.0	3,047.8	3,002.6	3,002.4	10.1	1.3	-127.42	-1,040.0	139.3	1,246.7	1,236.1	10.51	118.597	
3,149.6	3,095.1	3,050.3	3,050.1	10.4	1.3	-127.96	-1,040.5	139.8	1,256.8	1,246.0	10.76	116.851	
3,200.0	3,143.2	3,098.7	3,098.5	10.7	1.3	-128.51	-1,040.9	140.4	1,267.2	1,256.2	11.00	115.192	
3,248.0	3,188.9	3,144.1	3,143.9	11.0	1.3	-129.03	-1,041.3	141.0	1,277.2	1,265.9	11.23	113.684	
3,300.0	3,238.5	3,193.3	3,193.1	11.3	1.3	-129.57	-1,041.7	141.7	1,288.1	1,276.6	11.49	112.156	
3,346.4	3,282.8	3,236.7	3,236.4	11.6	1.3	-130.04	-1,042.1	142.3	1,298.0	1,286.3	11.71	110.862	
3,400.0	3,333.8	3,286.3	3,286.1	11.9	1.3	-130.59	-1,042.4	143.2	1,309.6	1,297.6	11.96	109.471	
3,444.9	3,376.6	3,326.6	3,326.4	12.2	1.4	-131.03	-1,042.6	144.2	1,319.4	1,307.2	12.18	108.367	
3,500.0	3,429.1	3,375.3	3,375.0	12.6	1.4	-131.57	-1,042.9	145.5	1,331.7	1,319.2	12.43	107.100	
3,543.3	3,470.4	3,414.4	3,414.1	12.8	1.4	-132.00	-1,043.2	146.8	1,341.5	1,328.9	12.64	106.168	
3,600.0	3,524.4	3,468.0	3,467.7	13.2	1.4	-132.58	-1,043.5	148.5	1,354.6	1,341.7	12.90	105.034	
3,641.7	3,564.2	3,507.6	3,507.2	13.4	1.4	-133.01	-1,043.7	149.9	1,364.2	1,351.2	13.09	104.245	
3,700.0	3,619.8	3,564.0	3,563.6	13.8	1.4	-133.60	-1,043.9	151.8	1,377.8	1,364.5	13.35	103.223	
3,740.1	3,658.0	3,600.0	3,599.6	14.0	1.4	-133.98	-1,044.1	153.0	1,387.3	1,373.7	13.53	102.541	
3,800.0	3,715.1	3,655.4	3,655.0	14.4	1.5	-134.55	-1,044.3	154.9	1,401.5	1,387.7	13.80	101.584	
3,838.6	3,751.8	3,689.4	3,689.0	14.7	1.5	-134.89	-1,044.5	156.1	1,410.8	1,396.8	13.97	100.996	
3,900.0	3,810.4	3,746.7	3,746.2	15.0	1.5	-135.46	-1,045.0	158.1	1,425.8	1,411.6	14.24	100.127	
3,937.0	3,845.7	3,781.5	3,781.0	15.3	1.5	-135.80	-1,045.2	159.4	1,435.0	1,420.6	14.40	99.632	
4,000.0	3,905.7	3,841.2	3,840.6	15.7	1.5	-136.39	-1,045.5	161.7	1,450.6	1,435.9	14.67	98.849	
4,035.4	3,939.5	3,874.8	3,874.2	15.9	1.5	-136.71	-1,045.7	163.0	1,459.5	1,444.6	14.83	98.433	
4,100.0	4,001.0	3,936.5	3,935.8	16.3	1.6	-137.30	-1,045.9	165.5	1,475.7	1,460.6	15.10	97.722	
4,133.8	4,033.3	3,968.9	3,968.3	16.5	1.6	-137.61	-1,046.0	166.8	1,484.2	1,469.0	15.24	97.368	
4,200.0	4,096.3	4,033.6	4,032.9	16.9	1.6	-138.20	-1,046.3	169.2	1,501.0	1,485.5	15.52	96.719	
4,232.3	4,127.1	4,065.8	4,065.0	17.1	1.6	-138.49	-1,046.3	170.4	1,509.2	1,493.5	15.65	96.418	
4,300.0	4,191.7	4,136.9	4,136.1	17.6	1.6	-139.12	-1,046.4	172.9	1,526.3	1,510.4	15.93	95.839	
4,330.7	4,220.9	4,170.8	4,170.0	17.8	1.6	-139.41	-1,046.3	173.9	1,534.0	1,517.9	16.05	95.592	
4,400.0	4,287.0	4,244.2	4,243.4	18.2	1.6	-140.03	-1,045.9	175.9	1,551.1	1,534.8	16.32	95.046	
4,429.1	4,314.7	4,274.2	4,273.3	18.4	1.7	-140.28	-1,045.7	176.7	1,558.3	1,541.8	16.43	94.818	
4,500.0	4,382.3	4,348.5	4,347.7	18.8	1.7	-140.89	-1,044.9	178.7	1,575.6	1,558.9	16.71	94.306	
4,527.5	4,408.6	4,377.8	4,376.9	19.0	1.7	-141.13	-1,044.4	179.4	1,582.3	1,565.5	16.81	94.116	
4,600.0	4,477.6	4,451.9	4,451.0	19.5	1.7	-141.73	-1,043.1	181.1	1,599.7	1,582.7	17.09	93.629	
4,626.0	4,502.4	4,478.1	4,477.2	19.6	1.7	-141.94	-1,042.6	181.7	1,606.0	1,588.8	17.18	93.460	
4,700.0	4,572.9	4,550.4	4,549.4	20.1	1.7	-142.51	-1,041.0	183.4	1,623.8	1,606.4	17.46	92.986	
4,724.4	4,596.2	4,573.8	4,572.9	20.3	1.7	-142.69	-1,040.5	183.9	1,629.7	1,612.2	17.55	92.835	
4,800.0	4,668.3	4,648.5	4,647.5	20.7	1.7	-143.26	-1,038.9	185.5	1,648.0	1,630.2	17.84	92.399	
4,822.8	4,690.0	4,671.3	4,670.3	20.9	1.7	-143.44	-1,038.3	186.0	1,653.5	1,635.6	17.92	92.274	
4,900.0	4,763.6	4,747.0	4,746.0	21.4	1.7	-144.00	-1,036.4	187.6	1,672.2	1,654.0	18.20	91.864	
4,921.2	4,783.8	4,767.6	4,766.5	21.5	1.7	-144.15	-1,035.9	188.1	1,677.4	1,659.1	18.28	91.755	
5,000.0	4,858.9	4,841.5	4,840.4	22.0	1.8	-144.69	-1,033.9	189.6	1,696.6	1,678.0	18.57	91.360	
5,019.7	4,877.7	4,859.6	4,858.4	22.1	1.8	-144.82	-1,033.5	189.9	1,701.4	1,682.8	18.64	91.262	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,954.2	4,931.2	4,930.1	22.6	1.8	-145.32	-1,031.9	191.3	1,721.3	1,702.4	18.94	90.870	
5,118.1	4,971.5	4,946.8	4,945.6	22.8	1.8	-145.42	-1,031.7	191.5	1,725.8	1,706.8	19.01	90.782	
5,171.8	5,022.7	4,993.0	4,991.8	23.1	1.8	-145.73	-1,031.0	192.3	1,739.5	1,720.2	19.21	90.532	
5,200.0	5,049.6	5,018.5	5,017.3	23.3	1.8	-145.97	-1,030.7	192.7	1,746.6	1,727.3	19.28	90.598	
5,216.5	5,065.4	5,033.7	5,032.6	23.3	1.8	-146.11	-1,030.6	192.9	1,750.6	1,731.3	19.31	90.682	
5,300.0	5,145.7	5,110.9	5,109.7	23.7	1.8	-146.77	-1,029.9	194.0	1,770.2	1,750.7	19.44	91.037	
5,314.9	5,160.1	5,124.5	5,123.3	23.8	1.8	-146.87	-1,029.8	194.2	1,773.5	1,754.0	19.47	91.103	
5,400.0	5,242.7	5,200.0	5,198.8	24.1	1.8	-147.42	-1,029.6	195.2	1,791.3	1,771.7	19.60	91.405	
5,413.4	5,255.7	5,214.6	5,213.4	24.2	1.8	-147.51	-1,029.6	195.4	1,793.9	1,774.3	19.61	91.458	
5,500.0	5,340.5	5,295.4	5,294.2	24.5	1.9	-147.99	-1,029.7	196.2	1,809.9	1,790.2	19.74	91.699	
5,511.8	5,352.1	5,306.7	5,305.5	24.5	1.9	-148.05	-1,029.8	196.3	1,812.0	1,792.2	19.75	91.733	
5,600.0	5,439.0	5,392.2	5,391.0	24.8	1.9	-148.45	-1,030.4	197.1	1,825.9	1,806.0	19.87	91.900	
5,610.2	5,449.1	5,402.2	5,401.0	24.8	1.9	-148.49	-1,030.4	197.1	1,827.3	1,807.4	19.88	91.922	
5,700.0	5,538.0	5,493.2	5,492.0	25.1	1.9	-148.81	-1,031.2	197.7	1,838.9	1,818.9	19.98	92.013	
5,708.6	5,546.6	5,501.8	5,500.6	25.1	1.9	-148.84	-1,031.3	197.8	1,839.8	1,819.8	19.99	92.022	
5,800.0	5,637.4	5,589.6	5,588.4	25.3	2.0	-149.07	-1,032.2	198.1	1,848.9	1,828.8	20.09	92.025	
5,807.1	5,644.5	5,596.4	5,595.2	25.3	2.0	-149.08	-1,032.3	198.1	1,849.5	1,829.4	20.10	92.026	
5,900.0	5,737.2	5,683.2	5,681.9	25.5	2.0	-149.23	-1,033.5	198.5	1,856.3	1,836.1	20.19	91.942	
5,905.5	5,742.6	5,688.3	5,687.1	25.5	2.0	-149.24	-1,033.6	198.5	1,856.6	1,836.4	20.19	91.938	
6,000.0	5,837.1	5,782.3	5,781.1	25.6	2.0	-149.31	-1,035.1	199.0	1,860.8	1,840.6	20.28	91.750	
6,003.9	5,841.0	5,786.2	5,785.0	25.6	2.0	-149.31	-1,035.2	199.0	1,860.9	1,840.7	20.28	91.741	
6,051.8	5,888.9	5,835.0	5,833.8	25.7	2.0	135.56	-1,036.0	199.3	1,862.0	1,837.2	24.81	75.058	
6,081.8	5,918.9	5,865.8	5,864.5	25.7	2.0	135.57	-1,036.4	199.4	1,862.4	1,837.6	24.84	74.969	
6,100.0	5,937.1	5,884.4	5,883.2	25.7	2.0	45.57	-1,036.7	199.5	1,862.5	1,842.2	20.37	91.427	
6,102.3	5,939.4	5,886.8	5,885.6	25.7	2.0	45.57	-1,036.7	199.5	1,862.5	1,842.1	20.37	91.433	
6,150.0	5,987.0	5,933.9	5,932.7	25.7	2.0	45.72	-1,037.4	199.8	1,861.1	1,840.7	20.37	91.371	
6,200.0	6,036.5	5,982.5	5,981.2	25.7	2.1	46.09	-1,038.1	200.1	1,857.3	1,836.9	20.41	91.013	
6,200.8	6,037.3	5,983.2	5,981.9	25.7	2.1	46.10	-1,038.1	200.1	1,857.2	1,836.8	20.41	91.006	
6,250.0	6,085.5	6,033.6	6,032.3	25.7	2.1	46.69	-1,038.9	200.4	1,851.1	1,830.6	20.49	90.323	
6,299.2	6,133.0	6,084.9	6,083.6	25.6	2.1	47.52	-1,039.5	200.6	1,842.6	1,822.0	20.63	89.317	
6,300.0	6,133.7	6,085.7	6,084.4	25.6	2.1	47.53	-1,039.5	200.6	1,842.5	1,821.9	20.63	89.297	
6,350.0	6,180.9	6,136.6	6,135.3	25.5	2.1	48.61	-1,040.0	200.9	1,831.5	1,810.7	20.82	87.953	
6,397.6	6,224.6	6,183.8	6,182.5	25.4	2.1	49.86	-1,040.4	201.1	1,819.0	1,798.0	21.05	86.396	
6,400.0	6,226.7	6,186.1	6,184.8	25.4	2.1	49.93	-1,040.4	201.1	1,818.3	1,797.3	21.07	86.310	
6,450.0	6,271.1	6,233.3	6,232.0	25.2	2.1	51.48	-1,040.7	201.3	1,803.1	1,781.7	21.36	84.404	
6,496.0	6,310.4	6,275.0	6,273.7	25.1	2.1	53.13	-1,040.8	201.5	1,787.3	1,765.6	21.68	82.438	
6,500.0	6,313.7	6,278.5	6,277.2	25.1	2.1	53.28	-1,040.8	201.5	1,785.9	1,764.1	21.71	82.261	
6,550.0	6,354.4	6,318.4	6,317.1	25.0	2.2	55.26	-1,040.9	201.7	1,766.9	1,744.8	22.09	79.969	
6,594.5	6,388.9	6,349.5	6,348.2	24.9	2.2	57.16	-1,041.0	201.9	1,748.8	1,726.3	22.46	77.846	
6,600.0	6,393.0	6,353.3	6,352.0	24.9	2.2	57.41	-1,041.0	201.9	1,746.5	1,724.0	22.51	77.580	
6,650.0	6,429.3	6,386.2	6,384.9	24.8	2.2	59.75	-1,041.1	202.2	1,724.8	1,701.8	22.97	75.101	
6,692.9	6,458.5	6,412.5	6,411.2	24.7	2.2	61.90	-1,041.3	202.4	1,705.3	1,682.0	23.38	72.940	
6,700.0	6,463.1	6,416.7	6,415.4	24.7	2.2	62.27	-1,041.3	202.5	1,702.1	1,678.6	23.45	72.591	
6,750.0	6,494.3	6,444.6	6,443.3	24.7	2.2	64.94	-1,041.5	202.8	1,678.5	1,654.5	23.94	70.100	
6,791.3	6,517.9	6,465.9	6,464.6	24.7	2.2	67.23	-1,041.7	203.0	1,658.5	1,634.1	24.36	68.073	
6,800.0	6,522.6	6,470.1	6,468.8	24.7	2.2	67.72	-1,041.7	203.1	1,654.3	1,629.8	24.45	67.667	
6,850.0	6,548.0	6,493.1	6,491.8	24.7	2.2	70.57	-1,042.0	203.3	1,629.6	1,604.7	24.95	65.323	
6,889.7	6,566.0	6,500.0	6,498.7	24.8	2.2	72.53	-1,042.1	203.4	1,609.9	1,584.6	25.31	63.598	
6,900.0	6,570.4	6,512.1	6,510.8	24.9	2.2	73.40	-1,042.3	203.6	1,604.8	1,579.4	25.44	63.093	
6,950.0	6,589.5	6,528.0	6,526.7	25.1	2.2	76.18	-1,042.6	203.8	1,580.1	1,554.2	25.92	60.967	
6,988.2	6,602.0	6,538.3	6,537.0	25.3	2.2	78.25	-1,042.8	203.9	1,561.4	1,535.1	26.29	59.389	
7,000.0	6,605.4	6,541.2	6,539.9	25.3	2.2	78.88	-1,042.8	203.9	1,555.7	1,529.3	26.40	58.928	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,618.0	6,551.9	6,550.6	25.6	2.2	81.45	-1,043.0	204.1	1,531.8	1,504.9	26.89	56.961	
7,086.6	6,625.0	6,557.9	6,556.6	25.9	2.2	83.23	-1,043.2	204.1	1,514.8	1,487.5	27.27	55.545	
7,100.0	6,627.1	6,559.8	6,558.5	26.0	2.2	83.85	-1,043.2	204.2	1,508.7	1,481.3	27.41	55.050	
7,150.0	6,632.8	6,564.9	6,563.6	26.5	2.2	86.04	-1,043.3	204.2	1,486.5	1,458.5	27.95	53.189	
7,185.0	6,634.7	6,566.8	6,565.5	26.8	2.2	87.44	-1,043.4	204.3	1,471.6	1,443.3	28.35	51.906	
7,200.0	6,635.0	6,567.2	6,565.9	27.0	2.2	88.00	-1,043.4	204.3	1,465.4	1,436.9	28.52	51.380	
7,215.9	6,635.0	6,567.4	6,566.1	27.1	2.2	88.57	-1,043.4	204.3	1,459.0	1,430.3	28.71	50.817	
7,283.4	6,634.1	6,567.5	6,566.1	27.9	2.2	88.57	-1,043.4	204.3	1,433.3	1,403.8	29.54	48.514	
7,300.0	6,633.9	6,567.5	6,566.1	28.1	2.2	88.57	-1,043.4	204.3	1,427.4	1,397.7	29.75	47.983	
7,381.9	6,632.9	6,567.5	6,566.2	29.3	2.2	88.57	-1,043.4	204.3	1,400.9	1,370.0	30.92	45.302	
7,400.0	6,632.6	6,567.5	6,566.2	29.5	2.2	88.57	-1,043.4	204.3	1,395.6	1,364.4	31.18	44.755	
7,480.3	6,631.6	6,567.6	6,566.3	30.8	2.2	88.57	-1,043.4	204.3	1,374.7	1,342.2	32.49	42.318	
7,500.0	6,631.4	6,567.6	6,566.3	31.1	2.2	88.57	-1,043.4	204.3	1,370.3	1,337.5	32.81	41.770	
7,578.7	6,630.4	6,567.7	6,566.3	32.5	2.2	88.58	-1,043.4	204.3	1,355.3	1,321.0	34.21	39.616	
7,600.0	6,630.1	6,567.7	6,566.4	32.9	2.2	88.58	-1,043.4	204.3	1,351.9	1,317.4	34.59	39.086	
7,677.1	6,629.1	6,567.7	6,566.4	34.3	2.2	88.58	-1,043.4	204.3	1,342.7	1,306.7	36.07	37.225	
7,700.0	6,628.8	6,567.7	6,566.4	34.8	2.2	88.58	-1,043.4	204.3	1,340.8	1,304.3	36.51	36.726	
7,775.6	6,627.8	6,567.8	6,566.5	36.3	2.2	88.58	-1,043.4	204.3	1,337.3	1,299.3	38.05	35.150	
7,799.7	6,627.5	6,567.8	6,566.5	36.8	2.2	88.58	-1,043.4	204.3	1,337.1	1,298.6	38.54	34.697	
7,800.0	6,627.5	6,567.8	6,566.5	36.8	2.2	88.58	-1,043.4	204.3	1,337.1	1,298.6	38.54	34.691	
7,874.0	6,626.6	6,567.9	6,566.6	38.4	2.2	88.59	-1,043.4	204.3	1,339.2	1,299.1	40.12	33.379	
7,900.0	6,626.3	6,567.9	6,566.6	38.9	2.2	88.59	-1,043.4	204.3	1,340.9	1,300.2	40.67	32.966	
7,972.4	6,625.3	6,567.9	6,566.6	40.5	2.2	88.59	-1,043.4	204.3	1,348.2	1,306.0	42.28	31.890	
8,000.0	6,625.0	6,568.0	6,566.6	41.1	2.2	88.59	-1,043.4	204.3	1,352.0	1,309.2	42.89	31.525	
8,070.8	6,624.1	6,568.0	6,566.7	42.7	2.2	88.59	-1,043.4	204.3	1,364.3	1,319.8	44.50	30.656	
8,100.0	6,623.7	6,568.0	6,566.7	43.4	2.2	88.59	-1,043.4	204.3	1,370.4	1,325.3	45.17	30.340	
8,169.3	6,622.8	6,568.1	6,566.8	45.0	2.2	88.60	-1,043.4	204.3	1,387.3	1,340.5	46.79	29.648	
8,200.0	6,622.4	6,568.1	6,566.8	45.7	2.2	88.60	-1,043.4	204.3	1,395.8	1,348.2	47.51	29.378	
8,267.7	6,621.6	6,568.2	6,566.8	47.4	2.2	88.60	-1,043.4	204.3	1,416.7	1,367.5	49.13	28.835	
8,300.0	6,621.1	6,568.2	6,566.9	48.1	2.2	88.60	-1,043.4	204.3	1,427.7	1,377.8	49.90	28.609	
8,366.1	6,620.3	6,568.2	6,566.9	49.7	2.2	88.60	-1,043.4	204.3	1,452.1	1,400.6	51.51	28.191	
8,400.0	6,619.9	6,568.2	6,566.9	50.6	2.2	88.60	-1,043.4	204.3	1,465.7	1,413.4	52.34	28.006	
8,464.5	6,619.0	6,568.3	6,567.0	52.2	2.2	88.60	-1,043.4	204.3	1,493.3	1,439.4	53.93	27.689	
8,500.0	6,618.6	6,568.3	6,567.0	53.0	2.2	88.61	-1,043.4	204.3	1,509.4	1,454.6	54.81	27.540	
8,563.0	6,617.8	6,568.4	6,567.0	54.6	2.2	88.61	-1,043.4	204.3	1,539.6	1,483.3	56.38	27.306	
8,600.0	6,617.3	6,568.4	6,567.1	55.5	2.2	88.61	-1,043.4	204.3	1,558.3	1,501.0	57.31	27.191	
8,661.4	6,616.5	6,568.4	6,567.1	57.1	2.2	88.61	-1,043.4	204.3	1,590.7	1,531.9	58.87	27.023	
8,700.0	6,616.0	6,568.5	6,567.1	58.1	2.2	88.61	-1,043.4	204.3	1,612.0	1,552.1	59.84	26.937	
8,759.8	6,615.2	6,568.5	6,567.2	59.6	2.2	88.61	-1,043.4	204.3	1,646.1	1,584.8	61.37	26.822	
8,800.0	6,614.7	6,568.5	6,567.2	60.6	2.2	88.61	-1,043.4	204.3	1,669.9	1,607.5	62.40	26.762	
8,858.2	6,614.0	6,568.6	6,567.3	62.1	2.2	88.62	-1,043.4	204.3	1,705.4	1,641.5	63.90	26.689	
8,900.0	6,613.4	6,568.6	6,567.3	63.2	2.2	88.62	-1,043.4	204.3	1,731.6	1,666.7	64.98	26.650	
8,956.7	6,612.7	6,568.6	6,567.3	64.7	2.2	88.62	-1,043.4	204.3	1,768.2	1,701.7	66.45	26.610	
9,000.0	6,612.2	6,568.7	6,567.4	65.8	2.2	88.62	-1,043.4	204.3	1,796.8	1,729.3	67.57	26.591	
9,055.1	6,611.5	6,568.7	6,567.4	67.3	2.2	88.62	-1,043.4	204.3	1,834.1	1,765.1	69.01	26.576	
9,100.0	6,610.9	6,568.7	6,567.4	68.4	2.2	88.62	-1,043.4	204.3	1,865.1	1,794.9	70.19	26.574 SF	
9,153.5	6,610.2	6,568.8	6,567.5	69.8	2.2	88.62	-1,043.4	204.3	1,902.8	1,831.2	71.59	26.578	
9,200.0	6,609.6	6,568.8	6,567.5	71.1	2.2	88.63	-1,043.4	204.3	1,936.2	1,863.4	72.81	26.590	
9,251.9	6,608.9	6,568.9	6,567.5	72.4	2.2	88.63	-1,043.4	204.3	1,974.1	1,899.9	74.19	26.609	
9,300.0	6,608.3	6,568.9	6,567.6	73.7	2.2	88.63	-1,043.4	204.3	2,009.7	1,934.2	75.46	26.634	
9,350.4	6,607.7	6,568.9	6,567.6	75.0	2.2	88.63	-1,043.4	204.3	2,047.6	1,970.8	76.79	26.663	
9,400.0	6,607.0	6,569.0	6,567.6	76.4	2.2	88.63	-1,043.4	204.3	2,085.4	2,007.3	78.11	26.698	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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	6,606.4	6,569.0	6,567.7	77.7	2.2	88.63	-1,043.4	204.3	2,123.1	2,043.7	79.41	26.735	
9,500.0	6,605.7	6,569.0	6,567.7	79.0	2.2	88.63	-1,043.4	204.3	2,163.1	2,082.3	80.78	26.779	
9,547.2	6,605.1	6,569.1	6,567.7	80.3	2.2	88.64	-1,043.4	204.3	2,200.4	2,118.4	82.04	26.822	
9,600.0	6,604.5	6,569.1	6,567.8	81.7	2.2	88.64	-1,043.4	204.3	2,242.5	2,159.1	83.45	26.873	
9,645.6	6,603.9	6,569.1	6,567.8	82.9	2.2	88.64	-1,043.4	204.3	2,279.4	2,194.7	84.67	26.919	
9,700.0	6,603.2	6,569.2	6,567.9	84.4	2.2	88.64	-1,043.4	204.3	2,323.6	2,237.5	86.13	26.977	
9,744.1	6,602.6	6,569.2	6,567.9	85.6	2.2	88.64	-1,043.4	204.3	2,359.8	2,272.5	87.32	27.025	
9,800.0	6,601.9	6,569.2	6,567.9	87.1	2.2	88.64	-1,043.4	204.3	2,406.1	2,317.2	88.82	27.088	
9,842.5	6,601.3	6,569.3	6,568.0	88.2	2.2	88.64	-1,043.4	204.3	2,441.5	2,351.5	89.97	27.137	
9,900.0	6,600.6	6,569.3	6,568.0	89.8	2.2	88.64	-1,043.4	204.3	2,489.8	2,398.3	91.52	27.204	
9,940.9	6,600.1	6,569.3	6,568.0	90.9	2.2	88.65	-1,043.4	204.3	2,524.4	2,431.8	92.63	27.253	
10,000.0	6,599.3	6,569.4	6,568.1	92.5	2.2	88.65	-1,043.5	204.3	2,574.7	2,480.5	94.23	27.325	
10,039.3	6,598.8	6,569.4	6,568.1	93.5	2.2	88.65	-1,043.5	204.3	2,608.4	2,513.1	95.29	27.372	
10,100.0	6,598.0	6,569.5	6,568.1	95.2	2.2	88.65	-1,043.5	204.3	2,660.7	2,563.8	96.94	27.447	
10,137.8	6,597.5	6,569.5	6,568.2	96.2	2.2	88.65	-1,043.5	204.3	2,693.4	2,595.5	97.97	27.494	
10,200.0	6,596.7	6,569.5	6,568.2	97.9	2.2	88.65	-1,043.5	204.3	2,747.6	2,648.0	99.66	27.571	
10,236.2	6,596.3	6,569.6	6,568.2	98.9	2.2	88.65	-1,043.5	204.3	2,779.3	2,678.7	100.64	27.616	
10,300.0	6,595.4	6,569.6	6,568.3	100.6	2.2	88.66	-1,043.5	204.3	2,835.4	2,733.0	102.38	27.695	
10,334.6	6,595.0	6,569.6	6,568.3	101.6	2.2	88.66	-1,043.5	204.3	2,866.0	2,762.6	103.32	27.738	
10,400.0	6,594.2	6,569.7	6,568.4	103.4	2.2	88.66	-1,043.5	204.3	2,924.0	2,818.8	105.10	27.820	
10,433.0	6,593.7	6,569.7	6,568.4	104.3	2.2	88.66	-1,043.5	204.3	2,953.4	2,847.4	106.01	27.860	
10,500.0	6,592.9	6,569.7	6,568.4	106.1	2.2	88.66	-1,043.5	204.3	3,013.2	2,905.4	107.84	27.943	
10,531.5	6,592.5	6,569.8	6,568.5	106.9	2.2	88.66	-1,043.5	204.3	3,041.5	2,932.8	108.70	27.981	
10,600.0	6,591.6	6,569.8	6,568.5	108.8	2.2	88.66	-1,043.5	204.3	3,103.2	2,992.6	110.57	28.065	
10,629.9	6,591.2	6,569.8	6,568.5	109.6	2.2	88.66	-1,043.5	204.3	3,130.2	3,018.8	111.39	28.101	
10,700.0	6,590.3	6,569.9	6,568.6	111.6	2.2	88.67	-1,043.5	204.3	3,193.7	3,080.4	113.31	28.186	
10,728.3	6,589.9	6,569.9	6,568.6	112.3	2.2	88.67	-1,043.5	204.3	3,219.4	3,105.4	114.09	28.220	
10,800.0	6,589.0	6,570.0	6,568.6	114.3	2.2	88.67	-1,043.5	204.3	3,284.8	3,168.7	116.05	28.305	
10,826.7	6,588.7	6,570.0	6,568.7	115.0	2.2	88.67	-1,043.5	204.3	3,309.2	3,192.4	116.79	28.336	
10,900.0	6,587.7	6,570.0	6,568.7	117.1	2.2	88.67	-1,043.5	204.3	3,376.4	3,257.6	118.80	28.421	
10,925.2	6,587.4	6,570.0	6,568.7	117.7	2.2	88.67	-1,043.5	204.3	3,399.5	3,280.0	119.49	28.450	
11,000.0	6,586.4	6,570.1	6,568.8	119.8	2.2	88.67	-1,043.5	204.3	3,468.4	3,346.9	121.54	28.536	
11,023.6	6,586.1	6,570.1	6,568.8	120.4	2.2	88.67	-1,043.5	204.3	3,490.2	3,368.0	122.19	28.563	
11,100.0	6,585.1	6,570.2	6,568.9	122.6	2.2	88.68	-1,043.5	204.3	3,560.9	3,436.6	124.30	28.649	
11,122.0	6,584.8	6,570.2	6,568.9	123.2	2.2	88.68	-1,043.5	204.3	3,581.3	3,456.4	124.90	28.673	
11,200.0	6,583.8	6,570.2	6,568.9	125.3	2.2	88.68	-1,043.5	204.3	3,653.8	3,526.7	127.05	28.759	
11,220.4	6,583.6	6,570.3	6,568.9	125.9	2.2	88.68	-1,043.5	204.3	3,672.8	3,545.2	127.61	28.781	
11,300.0	6,582.5	6,570.3	6,569.0	128.1	2.2	88.68	-1,043.5	204.3	3,747.0	3,617.2	129.81	28.866	
11,318.9	6,582.3	6,570.3	6,569.0	128.6	2.2	88.68	-1,043.5	204.3	3,764.6	3,634.3	130.33	28.886	
11,400.0	6,581.2	6,570.4	6,569.1	130.8	2.2	88.68	-1,043.5	204.3	3,840.6	3,708.0	132.56	28.972	
11,417.3	6,581.0	6,570.4	6,569.1	131.3	2.2	88.68	-1,043.5	204.3	3,856.8	3,723.8	133.04	28.989	
11,500.0	6,580.0	6,570.5	6,569.1	133.6	2.2	88.69	-1,043.5	204.3	3,934.5	3,799.2	135.32	29.074	
11,515.7	6,579.7	6,570.5	6,569.2	134.0	2.2	88.69	-1,043.5	204.3	3,949.3	3,813.5	135.76	29.090	
11,600.0	6,578.7	6,570.5	6,569.2	136.3	2.2	88.69	-1,043.5	204.3	4,028.7	3,890.6	138.09	29.175	
11,614.1	6,578.5	6,570.5	6,569.2	136.7	2.2	88.69	-1,043.5	204.3	4,042.0	3,903.5	138.48	29.189	
11,700.0	6,577.4	6,570.6	6,569.3	139.1	2.2	88.69	-1,043.5	204.3	4,123.1	3,982.3	140.85	29.273	
11,712.6	6,577.2	6,570.6	6,569.3	139.5	2.2	88.69	-1,043.5	204.3	4,135.0	3,993.8	141.20	29.285	
11,800.0	6,576.1	6,570.7	6,569.4	141.9	2.2	88.69	-1,043.5	204.3	4,217.9	4,074.2	143.62	29.369	
11,811.0	6,575.9	6,570.7	6,569.4	142.2	2.2	88.69	-1,043.5	204.3	4,228.3	4,084.4	143.92	29.379	
11,882.7	6,575.0	6,570.7	6,569.4	144.2	2.2	88.69	-1,043.5	204.3	4,296.4	4,150.5	145.91	29.446	
11,883.5	6,575.0	6,570.7	6,569.4	144.2	2.2	88.69	-1,043.5	204.3	4,297.1	4,151.2	145.92	29.448	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-76.34	1,548.4	-6,373.5	6,558.9				
98.4	98.4	77.4	77.4	0.1	0.0	-76.34	1,548.4	-6,373.5	6,558.9	6,558.8	0.10	N/A	
100.0	100.0	79.0	79.0	0.1	0.0	-76.34	1,548.4	-6,373.5	6,558.9	6,558.8	0.10	N/A	
196.8	196.8	175.8	175.8	0.3	1.0	-76.34	1,548.4	-6,373.5	6,558.9	6,557.6	1.29	5,064.800	
200.0	200.0	179.0	179.0	0.3	1.0	-76.34	1,548.4	-6,373.5	6,558.9	6,557.6	1.34	4,884.653	
295.3	295.3	274.3	274.3	0.5	3.0	-76.34	1,548.4	-6,373.5	6,558.9	6,555.4	3.51	1,866.617	
300.0	300.0	279.0	279.0	0.5	3.1	-76.34	1,548.4	-6,373.5	6,558.9	6,555.3	3.63	1,806.041	
393.7	393.7	372.7	372.7	0.8	5.1	-76.34	1,548.4	-6,373.5	6,558.9	6,553.1	5.83	1,125.324	
400.0	400.0	379.0	379.0	0.8	5.2	-76.34	1,548.4	-6,373.5	6,558.9	6,552.9	5.97	1,098.012	
492.1	492.1	471.1	471.1	1.0	7.1	-76.34	1,548.4	-6,373.5	6,558.9	6,550.8	8.07	812.882	
500.0	500.0	479.0	479.0	1.0	7.3	-76.34	1,548.4	-6,373.5	6,558.9	6,550.7	8.25	795.290	
590.5	590.5	569.5	569.5	1.2	9.1	-76.34	1,548.4	-6,373.5	6,558.9	6,548.6	10.29	637.373	
600.0	600.0	579.0	579.0	1.2	9.3	-76.34	1,548.4	-6,373.5	6,558.9	6,548.4	10.50	624.450	
689.0	689.0	668.0	668.0	1.4	11.1	-76.34	1,548.4	-6,373.5	6,558.9	6,546.4	12.50	524.525	
700.0	700.0	679.0	679.0	1.4	11.3	-76.34	1,548.4	-6,373.5	6,558.9	6,546.2	12.75	514.334	
787.4	787.4	766.4	766.4	1.6	13.1	-76.34	1,548.4	-6,373.5	6,558.9	6,544.2	14.71	445.753	
800.0	800.0	779.0	779.0	1.7	13.3	-76.34	1,548.4	-6,373.5	6,558.9	6,543.9	15.00	437.349	
885.8	885.8	864.8	864.8	1.9	15.1	-76.34	1,548.4	-6,373.5	6,558.9	6,542.0	16.92	387.608	
900.0	900.0	879.0	879.0	1.9	15.3	-76.34	1,548.4	-6,373.5	6,558.9	6,541.7	17.24	380.463	
984.2	984.2	963.2	963.2	2.1	17.0	-76.34	1,548.4	-6,373.5	6,558.9	6,539.8	19.13	342.910	
1,000.0	1,000.0	979.0	979.0	2.1	17.4	-76.34	1,548.4	-6,373.5	6,558.9	6,539.4	19.48	336.698	
1,082.7	1,082.7	1,061.7	1,061.7	2.3	19.0	-76.34	1,548.4	-6,373.5	6,558.9	6,537.6	21.33	307.471	
1,100.0	1,100.0	1,079.0	1,079.0	2.3	19.4	-76.34	1,548.4	-6,373.5	6,558.9	6,537.2	21.72	301.978	
1,181.1	1,181.1	1,160.1	1,160.1	2.5	21.0	-76.34	1,548.4	-6,373.5	6,558.9	6,535.4	23.54	278.680	
1,200.0	1,200.0	1,179.0	1,179.0	2.6	21.4	-76.34	1,548.4	-6,373.5	6,558.9	6,535.0	23.96	273.758	
1,279.5	1,279.5	1,258.5	1,258.5	2.7	23.0	-76.34	1,548.4	-6,373.5	6,558.9	6,533.2	25.74	254.825	
1,300.0	1,300.0	1,279.0	1,279.0	2.8	23.4	-76.34	1,548.4	-6,373.5	6,558.9	6,532.7	26.20	250.367	
1,377.9	1,377.9	1,356.9	1,356.9	3.0	25.0	-76.34	1,548.4	-6,373.5	6,558.9	6,531.0	27.94	234.736	
1,400.0	1,400.0	1,379.0	1,379.0	3.0	25.4	-76.34	1,548.4	-6,373.5	6,558.9	6,530.5	28.44	230.662	
1,476.4	1,476.4	1,455.4	1,455.4	3.2	27.0	-1.22	1,548.4	-6,373.5	6,557.9	6,527.8	30.13	217.684	
1,500.0	1,500.0	1,479.0	1,479.0	3.2	27.4	-1.22	1,548.4	-6,373.5	6,557.2	6,526.5	30.64	213.980	
1,574.8	1,574.7	1,553.7	1,553.7	3.4	28.9	-1.22	1,548.4	-6,373.5	6,553.6	6,521.3	32.26	203.139	
1,600.0	1,599.8	1,578.8	1,578.8	3.4	29.4	-1.22	1,548.4	-6,373.5	6,551.9	6,519.1	32.80	199.755	
1,673.2	1,672.8	1,651.8	1,651.8	3.6	30.9	-1.23	1,548.4	-6,373.5	6,545.9	6,511.5	34.35	190.582	
1,700.0	1,699.5	1,678.5	1,678.5	3.7	31.4	-1.23	1,548.4	-6,373.5	6,543.2	6,508.3	34.90	187.462	
1,771.6	1,770.6	1,749.6	1,749.6	3.8	32.9	-1.23	1,548.4	-6,373.5	6,534.8	6,498.5	36.38	179.648	
1,800.0	1,798.7	1,777.7	1,777.7	3.9	33.4	-1.24	1,548.4	-6,373.5	6,531.0	6,494.1	36.95	176.764	
1,870.1	1,868.0	1,847.0	1,847.0	4.1	34.8	-1.24	1,548.4	-6,373.5	6,520.4	6,482.1	38.34	170.070	
1,900.0	1,897.5	1,876.5	1,876.5	4.2	35.4	-1.25	1,548.4	-6,373.5	6,515.4	6,476.5	38.92	167.397	
1,968.5	1,964.8	1,943.8	1,943.8	4.4	36.8	-1.25	1,548.4	-6,373.5	6,502.7	6,462.5	40.23	161.635	
2,000.0	1,995.6	1,974.6	1,974.6	4.5	37.4	-1.26	1,548.4	-6,373.5	6,496.3	6,455.5	40.82	159.153	
2,066.9	2,060.9	2,039.9	2,039.9	4.7	38.7	-1.27	1,548.4	-6,373.5	6,481.6	6,439.6	42.04	154.174	
2,100.0	2,093.1	2,072.1	2,072.1	4.8	39.4	-1.27	1,548.4	-6,373.5	6,473.8	6,431.2	42.63	151.865	
2,165.3	2,156.3	2,135.3	2,135.3	5.1	40.6	-1.28	1,548.4	-6,373.5	6,457.3	6,413.5	43.76	147.549	
2,200.0	2,189.6	2,168.6	2,168.6	5.2	41.3	-1.29	1,548.4	-6,373.5	6,448.0	6,403.6	44.35	145.400	
2,263.8	2,250.7	2,229.7	2,229.7	5.5	42.5	-1.30	1,548.4	-6,373.5	6,429.7	6,384.3	45.39	141.650	
2,280.0	2,266.2	2,245.2	2,245.2	5.6	42.8	-1.30	1,548.4	-6,373.5	6,424.8	6,379.2	45.65	140.743	
2,300.0	2,285.3	2,264.3	2,264.3	5.7	43.2	-1.31	1,548.4	-6,373.5	6,418.8	6,372.7	46.06	139.345	
2,362.2	2,344.6	2,323.6	2,323.6	6.0	44.4	-1.31	1,548.4	-6,373.5	6,400.0	6,352.6	47.35	135.161	
2,400.0	2,380.6	2,359.6	2,359.6	6.2	45.1	-1.31	1,548.4	-6,373.5	6,388.6	6,340.4	48.14	132.698	
2,460.6	2,438.4	2,417.4	2,417.4	6.5	46.3	-1.32	1,548.4	-6,373.5	6,370.2	6,320.8	49.41	128.932	
2,500.0	2,475.9	2,454.9	2,454.9	6.7	47.1	-1.32	1,548.4	-6,373.5	6,358.3	6,308.1	50.23	126.585	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,511.2	2,511.2	7.0	48.2	-1.32	1,548.4	-6,373.5	6,340.5	6,289.0	51.46	123.202	
2,600.0	2,571.2	2,550.2	2,550.2	7.2	49.0	-1.32	1,548.4	-6,373.5	6,328.1	6,275.8	52.32	120.948	
2,657.5	2,626.0	2,605.0	2,605.0	7.5	50.1	-1.33	1,548.4	-6,373.5	6,310.7	6,257.2	53.53	117.902	
2,700.0	2,666.6	2,645.6	2,645.6	7.8	50.9	-1.33	1,548.4	-6,373.5	6,297.9	6,243.5	54.42	115.734	
2,755.9	2,719.8	2,698.8	2,698.8	8.1	52.0	-1.33	1,548.4	-6,373.5	6,281.0	6,225.4	55.59	112.987	
2,800.0	2,761.9	2,740.9	2,740.9	8.3	52.8	-1.34	1,548.4	-6,373.5	6,267.6	6,211.1	56.52	110.899	
2,854.3	2,813.7	2,792.7	2,792.7	8.7	53.9	-1.34	1,548.4	-6,373.5	6,251.2	6,193.6	57.66	108.417	
2,900.0	2,857.2	2,836.2	2,836.2	8.9	54.7	-1.34	1,548.4	-6,373.5	6,237.4	6,178.8	58.62	106.405	
2,952.7	2,907.5	2,886.5	2,886.5	9.2	55.7	-1.35	1,548.4	-6,373.5	6,221.5	6,161.7	59.73	104.158	
3,000.0	2,952.5	2,931.5	2,931.5	9.5	56.7	-1.35	1,548.4	-6,373.5	6,207.2	6,146.5	60.73	102.216	
3,051.2	3,001.3	2,980.3	2,980.3	9.8	57.6	-1.35	1,548.4	-6,373.5	6,191.7	6,129.9	61.81	100.181	
3,100.0	3,047.8	3,026.8	3,026.8	10.1	58.6	-1.36	1,548.4	-6,373.5	6,177.0	6,114.1	62.84	98.304	
3,149.6	3,095.1	3,074.1	3,074.1	10.4	59.5	-1.36	1,548.4	-6,373.5	6,162.0	6,098.1	63.88	96.458	
3,200.0	3,143.2	3,122.2	3,122.2	10.7	60.5	-1.36	1,548.4	-6,373.5	6,146.7	6,081.8	64.95	94.643	
3,248.0	3,188.9	3,167.9	3,167.9	11.0	61.4	-1.37	1,548.4	-6,373.5	6,132.2	6,066.2	65.96	92.966	
3,300.0	3,238.5	3,217.5	3,217.5	11.3	62.4	-1.37	1,548.4	-6,373.5	6,116.5	6,049.4	67.06	91.209	
3,346.4	3,282.8	3,261.8	3,261.8	11.6	63.3	-1.37	1,548.4	-6,373.5	6,102.5	6,034.4	68.04	89.686	
3,400.0	3,333.8	3,312.8	3,312.8	11.9	64.3	-1.38	1,548.4	-6,373.5	6,086.3	6,017.1	69.18	87.983	
3,444.9	3,376.6	3,355.6	3,355.6	12.2	65.2	-1.38	1,548.4	-6,373.5	6,072.7	6,002.6	70.13	86.597	
3,500.0	3,429.1	3,408.1	3,408.1	12.6	66.2	-1.38	1,548.4	-6,373.5	6,056.0	5,984.7	71.29	84.946	
3,543.3	3,470.4	3,449.4	3,449.4	12.8	67.1	-1.39	1,548.4	-6,373.5	6,042.9	5,970.7	72.21	83.686	
3,600.0	3,524.4	3,503.4	3,503.4	13.2	68.2	-1.39	1,548.4	-6,373.5	6,025.8	5,952.4	73.41	82.083	
3,641.7	3,564.2	3,543.2	3,543.2	13.4	69.0	-1.39	1,548.4	-6,373.5	6,013.2	5,938.9	74.30	80.936	
3,700.0	3,619.8	3,598.8	3,598.8	13.8	70.1	-1.40	1,548.4	-6,373.5	5,995.6	5,920.0	75.53	79.379	
3,740.1	3,658.0	3,637.0	3,637.0	14.0	70.8	-1.40	1,548.4	-6,373.5	5,983.4	5,907.1	76.38	78.335	
3,800.0	3,715.1	3,694.1	3,694.1	14.4	72.0	-1.41	1,548.4	-6,373.5	5,965.3	5,887.7	77.65	76.821	
3,838.6	3,751.8	3,730.8	3,730.8	14.7	72.7	-1.41	1,548.4	-6,373.5	5,953.7	5,875.2	78.47	75.871	
3,900.0	3,810.4	3,789.4	3,789.4	15.0	73.9	-1.41	1,548.4	-6,373.5	5,935.1	5,855.3	79.77	74.398	
3,937.0	3,845.7	3,824.7	3,824.7	15.3	74.6	-1.42	1,548.4	-6,373.5	5,923.9	5,843.4	80.56	73.534	
4,000.0	3,905.7	3,884.7	3,884.7	15.7	75.8	-1.42	1,548.4	-6,373.5	5,904.9	5,823.0	81.90	72.100	
4,035.4	3,939.5	3,918.5	3,918.5	15.9	76.5	-1.42	1,548.4	-6,373.5	5,894.2	5,811.5	82.65	71.314	
4,100.0	4,001.0	3,980.0	3,980.0	16.3	77.7	-1.43	1,548.4	-6,373.5	5,874.7	5,790.6	84.02	69.918	
4,133.8	4,033.3	4,012.3	4,012.3	16.5	78.4	-1.43	1,548.4	-6,373.5	5,864.4	5,779.7	84.74	69.203	
4,200.0	4,096.3	4,075.3	4,075.3	16.9	79.7	-1.43	1,548.4	-6,373.5	5,844.4	5,758.3	86.15	67.842	
4,232.3	4,127.1	4,106.1	4,106.1	17.1	80.3	-1.44	1,548.4	-6,373.5	5,834.7	5,747.8	86.83	67.194	
4,300.0	4,191.7	4,170.7	4,170.7	17.6	81.6	-1.44	1,548.4	-6,373.5	5,814.2	5,725.9	88.27	65.866	
4,330.7	4,220.9	4,199.9	4,199.9	17.8	82.2	-1.44	1,548.4	-6,373.5	5,804.9	5,716.0	88.93	65.278	
4,400.0	4,287.0	4,266.0	4,266.0	18.2	83.5	-1.45	1,548.4	-6,373.5	5,784.0	5,693.6	90.40	63.982	
4,429.1	4,314.7	4,293.7	4,293.7	18.4	84.0	-1.45	1,548.4	-6,373.5	5,775.2	5,684.1	91.02	63.450	
4,500.0	4,382.3	4,361.3	4,361.3	18.8	85.4	-1.46	1,548.4	-6,373.5	5,753.7	5,661.2	92.53	62.184	
4,527.5	4,408.6	4,387.6	4,387.6	19.0	85.9	-1.46	1,548.4	-6,373.5	5,745.4	5,652.3	93.11	61.703	
4,600.0	4,477.6	4,456.6	4,456.6	19.5	87.3	-1.46	1,548.4	-6,373.5	5,723.5	5,628.9	94.66	60.467	
4,626.0	4,502.4	4,481.4	4,481.4	19.6	87.8	-1.47	1,548.4	-6,373.5	5,715.7	5,620.5	95.21	60.033	
4,700.0	4,572.9	4,551.9	4,551.9	20.1	89.2	-1.47	1,548.4	-6,373.5	5,693.3	5,596.5	96.78	58.825	
4,724.4	4,596.2	4,575.2	4,575.2	20.3	89.7	-1.47	1,548.4	-6,373.5	5,685.9	5,588.6	97.30	58.435	
4,800.0	4,668.3	4,647.3	4,647.3	20.7	91.2	-1.48	1,548.4	-6,373.5	5,663.1	5,564.1	98.91	57.253	
4,822.8	4,690.0	4,669.0	4,669.0	20.9	91.6	-1.48	1,548.4	-6,373.5	5,656.2	5,556.8	99.40	56.904	
4,900.0	4,763.6	4,742.6	4,742.6	21.4	93.1	-1.49	1,548.4	-6,373.5	5,632.8	5,531.8	101.04	55.747	
4,921.2	4,783.8	4,762.8	4,762.8	21.5	93.5	-1.49	1,548.4	-6,373.5	5,626.4	5,524.9	101.49	55.435	
5,000.0	4,858.9	4,837.9	4,837.9	22.0	95.0	-1.50	1,548.4	-6,373.5	5,602.6	5,499.4	103.17	54.303	
5,019.7	4,877.7	4,856.7	4,856.7	22.1	95.4	-1.50	1,548.4	-6,373.5	5,596.6	5,493.1	103.59	54.026	
5,100.0	4,954.2	4,933.2	4,933.2	22.6	96.9	-1.50	1,548.4	-6,373.5	5,572.4	5,467.1	105.30	52.918	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,950.5	4,950.5	22.8	97.3	-1.51	1,548.4	-6,373.5	5,566.9	5,461.2	105.69	52.673	
5,171.8	5,022.7	5,001.7	5,001.7	23.1	98.3	-1.51	1,548.4	-6,373.5	5,550.7	5,443.8	106.83	51.957	
5,200.0	5,049.6	5,028.6	5,028.6	23.3	98.8	-1.51	1,548.4	-6,373.5	5,542.3	5,434.5	107.73	51.448	
5,216.5	5,065.4	5,044.4	5,044.4	23.3	99.1	-1.51	1,548.4	-6,373.5	5,537.5	5,429.2	108.24	51.158	
5,300.0	5,145.7	5,124.7	5,124.7	23.7	100.8	-1.50	1,548.4	-6,373.5	5,514.7	5,403.8	110.82	49.762	
5,314.9	5,160.1	5,139.1	5,139.1	23.8	101.0	-1.50	1,548.4	-6,373.5	5,510.8	5,399.5	111.28	49.524	
5,400.0	5,242.7	5,221.7	5,221.7	24.1	102.7	-1.49	1,548.4	-6,373.5	5,490.4	5,376.6	113.82	48.236	
5,413.4	5,255.7	5,234.7	5,234.7	24.2	103.0	-1.49	1,548.4	-6,373.5	5,487.4	5,373.2	114.22	48.043	
5,500.0	5,340.5	5,319.5	5,319.5	24.5	104.7	-1.49	1,548.4	-6,373.5	5,469.6	5,352.8	116.73	46.858	
5,511.8	5,352.1	5,331.1	5,331.1	24.5	104.9	-1.49	1,548.4	-6,373.5	5,467.3	5,350.3	117.06	46.705	
5,600.0	5,439.0	5,418.0	5,418.0	24.8	106.7	-1.48	1,548.4	-6,373.5	5,452.1	5,332.6	119.51	45.619	
5,610.2	5,449.1	5,428.1	5,428.1	24.8	106.9	-1.48	1,548.4	-6,373.5	5,450.6	5,330.8	119.79	45.500	
5,700.0	5,538.0	5,517.0	5,517.0	25.1	108.6	-1.48	1,548.4	-6,373.5	5,438.2	5,316.0	122.18	44.510	
5,708.6	5,546.6	5,525.6	5,525.6	25.1	108.8	-1.48	1,548.4	-6,373.5	5,437.1	5,314.7	122.40	44.420	
5,800.0	5,637.4	5,616.4	5,616.4	25.3	110.6	-1.48	1,548.4	-6,373.5	5,427.7	5,303.0	124.71	43.522	
5,807.1	5,644.5	5,623.5	5,623.5	25.3	110.8	-1.48	1,548.4	-6,373.5	5,427.0	5,302.2	124.88	43.457	
5,900.0	5,737.2	5,716.2	5,716.2	25.5	112.7	-1.48	1,548.4	-6,373.5	5,420.6	5,293.5	127.10	42.649	
5,905.5	5,742.6	5,721.6	5,721.6	25.5	112.8	-1.48	1,548.4	-6,373.5	5,420.3	5,293.1	127.22	42.605	
6,000.0	5,837.1	5,816.1	5,816.1	25.6	114.7	-1.48	1,548.4	-6,373.5	5,417.1	5,287.7	129.33	41.885	
6,003.9	5,841.0	5,820.0	5,820.0	25.6	114.7	-1.48	1,548.4	-6,373.5	5,417.0	5,287.6	129.42	41.857	
6,051.8	5,888.9	5,867.9	5,867.9	25.7	115.7	-76.60	1,548.4	-6,373.5	5,416.6	5,275.2	141.37	38.314	
6,081.8	5,918.9	5,897.9	5,897.9	25.7	116.3	-76.60	1,548.4	-6,373.5	5,416.6	5,274.6	142.01	38.143	CC, ES, SF
6,100.0	5,937.1	5,916.1	5,916.1	25.7	116.7	-166.60	1,548.4	-6,373.5	5,416.8	5,285.5	131.37	41.234	
6,102.3	5,939.4	5,918.4	5,918.4	25.7	116.7	-166.60	1,548.4	-6,373.5	5,416.9	5,285.5	131.40	41.225	
6,150.0	5,987.0	5,966.0	5,966.0	25.7	117.7	-166.55	1,548.4	-6,373.5	5,419.8	5,288.0	131.73	41.143	
6,200.0	6,036.5	6,015.5	6,015.5	25.7	118.7	-166.45	1,548.4	-6,373.5	5,426.1	5,294.6	131.47	41.272	
6,200.8	6,037.3	6,016.3	6,016.3	25.7	118.7	-166.45	1,548.4	-6,373.5	5,426.2	5,294.7	131.46	41.276	
6,250.0	6,085.5	6,064.5	6,064.5	25.7	119.7	-166.29	1,548.4	-6,373.5	5,435.7	5,305.1	130.58	41.627	
6,299.2	6,133.0	6,112.0	6,112.0	25.6	120.6	-166.07	1,548.4	-6,373.5	5,448.5	5,319.4	129.10	42.205	
6,300.0	6,133.7	6,112.7	6,112.7	25.6	120.6	-166.06	1,548.4	-6,373.5	5,448.7	5,319.6	129.07	42.216	
6,350.0	6,180.9	6,159.9	6,159.9	25.5	121.6	-165.77	1,548.4	-6,373.5	5,464.9	5,338.0	126.93	43.053	
6,397.6	6,224.6	6,203.6	6,203.6	25.4	122.5	-165.42	1,548.4	-6,373.5	5,483.3	5,358.9	124.35	44.095	
6,400.0	6,226.7	6,205.7	6,205.7	25.4	122.5	-165.41	1,548.4	-6,373.5	5,484.3	5,360.1	124.21	44.154	
6,450.0	6,271.1	6,250.1	6,250.1	25.2	123.4	-164.95	1,548.4	-6,373.5	5,506.7	5,385.8	120.92	45.539	
6,496.0	6,310.4	6,289.4	6,289.4	25.1	124.2	-164.45	1,548.4	-6,373.5	5,530.0	5,412.5	117.45	47.084	
6,500.0	6,313.7	6,292.7	6,292.7	25.1	124.2	-164.40	1,548.4	-6,373.5	5,532.1	5,415.0	117.13	47.229	
6,550.0	6,354.4	6,333.4	6,333.4	25.0	125.1	-163.73	1,548.4	-6,373.5	5,560.4	5,447.4	112.92	49.244	
6,594.5	6,388.9	6,367.9	6,367.9	24.9	125.8	-163.01	1,548.4	-6,373.5	5,587.8	5,478.9	108.89	51.316	
6,600.0	6,393.0	6,372.0	6,372.0	24.9	125.8	-162.91	1,548.4	-6,373.5	5,591.3	5,482.9	108.38	51.592	
6,650.0	6,429.3	6,408.3	6,408.3	24.8	126.6	-161.93	1,548.4	-6,373.5	5,624.8	5,521.1	103.67	54.259	
6,692.9	6,458.5	6,437.5	6,437.5	24.7	127.2	-160.91	1,548.4	-6,373.5	5,655.5	5,555.8	99.65	56.751	
6,700.0	6,463.1	6,442.1	6,442.1	24.7	127.3	-160.72	1,548.4	-6,373.5	5,660.7	5,561.7	99.00	57.177	
6,750.0	6,494.3	6,473.3	6,473.3	24.7	127.9	-159.23	1,548.4	-6,373.5	5,698.9	5,604.2	94.69	60.185	
6,791.3	6,517.9	6,496.9	6,496.9	24.7	128.4	-157.73	1,548.4	-6,373.5	5,731.9	5,640.2	91.68	62.518	
6,800.0	6,522.6	6,501.6	6,501.6	24.7	128.4	-157.38	1,548.4	-6,373.5	5,739.0	5,647.9	91.15	62.964	
6,850.0	6,548.0	6,527.0	6,527.0	24.7	129.0	-155.04	1,548.4	-6,373.5	5,781.0	5,692.1	88.97	64.978	
6,889.7	6,566.0	6,545.0	6,545.0	24.8	129.3	-152.71	1,548.4	-6,373.5	5,815.6	5,726.9	88.73	65.542	
6,900.0	6,570.4	6,549.4	6,549.4	24.9	129.4	-152.02	1,548.4	-6,373.5	5,824.7	5,735.8	88.95	65.486	
6,950.0	6,589.5	6,568.5	6,568.5	25.1	129.8	-148.04	1,548.4	-6,373.5	5,869.8	5,777.7	92.06	63.759	
6,988.2	6,602.0	6,581.0	6,581.0	25.3	130.0	-144.10	1,548.4	-6,373.5	5,905.1	5,807.8	97.23	60.736	
7,000.0	6,605.4	6,584.4	6,584.4	25.3	130.1	-142.67	1,548.4	-6,373.5	5,916.1	5,816.7	99.38	59.527	
7,050.0	6,618.0	6,597.0	6,597.0	25.6	130.4	-135.24	1,548.4	-6,373.5	5,963.4	5,851.7	111.71	53.382	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,625.0	6,604.0	6,604.0	25.9	130.5	-127.97	1,548.4	-6,373.5	5,998.5	5,874.7	123.81	48.448	
7,100.0	6,627.1	6,606.1	6,606.1	26.0	130.6	-124.82	1,548.4	-6,373.5	6,011.5	5,882.8	128.71	46.706	
7,150.0	6,632.8	6,611.8	6,611.8	26.5	130.7	-110.50	1,548.4	-6,373.5	6,060.0	5,913.2	146.82	41.276	
7,185.0	6,634.7	6,613.7	6,613.7	26.8	130.7	-98.20	1,548.4	-6,373.5	6,094.3	5,938.7	155.59	39.170	
7,200.0	6,635.0	6,614.0	6,614.0	27.0	130.7	-92.57	1,548.4	-6,373.5	6,108.9	5,951.6	157.27	38.843	
7,215.9	6,635.0	6,614.0	6,614.0	27.1	130.7	-86.51	1,548.4	-6,373.5	6,124.5	5,967.0	157.42	38.905	
7,283.4	6,634.1	6,613.1	6,613.1	27.9	130.7	-86.47	1,548.4	-6,373.5	6,190.6	6,032.4	158.23	39.124	
7,300.0	6,633.9	6,612.9	6,612.9	28.1	130.7	-86.46	1,548.4	-6,373.5	6,206.8	6,048.4	158.43	39.177	
7,381.9	6,632.9	6,611.9	6,611.9	29.3	130.7	-86.41	1,548.4	-6,373.5	6,287.0	6,127.4	159.58	39.398	
7,400.0	6,632.6	6,611.6	6,611.6	29.5	130.7	-86.40	1,548.4	-6,373.5	6,304.8	6,144.9	159.83	39.447	
7,480.3	6,631.6	6,610.6	6,610.6	30.8	130.6	-86.36	1,548.4	-6,373.5	6,383.5	6,222.4	161.10	39.624	
7,500.0	6,631.4	6,610.4	6,610.4	31.1	130.6	-86.34	1,548.4	-6,373.5	6,402.8	6,241.4	161.41	39.667	
7,578.7	6,630.4	6,609.4	6,609.4	32.5	130.6	-86.30	1,548.4	-6,373.5	6,480.0	6,317.2	162.79	39.806	
7,600.0	6,630.1	6,609.1	6,609.1	32.9	130.6	-86.28	1,548.4	-6,373.5	6,500.9	6,337.7	163.16	39.843	
7,677.1	6,629.1	6,608.1	6,608.1	34.3	130.6	-86.24	1,548.4	-6,373.5	6,576.6	6,412.0	164.61	39.952	
7,700.0	6,628.8	6,607.8	6,607.8	34.8	130.6	-86.22	1,548.4	-6,373.5	6,599.0	6,434.0	165.04	39.984	
7,775.6	6,627.8	6,606.8	6,606.8	36.3	130.6	-86.18	1,548.4	-6,373.5	6,673.2	6,506.7	166.55	40.067	
7,800.0	6,627.5	6,606.5	6,606.5	36.8	130.6	-86.17	1,548.4	-6,373.5	6,697.2	6,530.2	167.04	40.094	
7,874.0	6,626.6	6,605.6	6,605.6	38.4	130.5	-86.12	1,548.4	-6,373.5	6,769.9	6,601.3	168.59	40.157	
7,900.0	6,626.3	6,605.3	6,605.3	38.9	130.5	-86.11	1,548.4	-6,373.5	6,795.4	6,626.3	169.13	40.179	
7,972.4	6,625.3	6,604.3	6,604.3	40.5	130.5	-86.06	1,548.4	-6,373.5	6,866.6	6,695.9	170.70	40.226	
8,000.0	6,625.0	6,604.0	6,604.0	41.1	130.5	-86.05	1,548.4	-6,373.5	6,893.7	6,722.4	171.30	40.243	
8,070.8	6,624.1	6,603.1	6,603.1	42.7	130.5	-86.01	1,548.4	-6,373.5	6,963.4	6,790.5	172.89	40.277	
8,100.0	6,623.7	6,602.7	6,602.7	43.4	130.5	-85.99	1,548.4	-6,373.5	6,992.1	6,818.5	173.54	40.291	
8,169.3	6,622.8	6,601.8	6,601.8	45.0	130.5	-85.95	1,548.4	-6,373.5	7,060.2	6,885.1	175.13	40.313	
8,200.0	6,622.4	6,601.4	6,601.4	45.7	130.5	-85.93	1,548.4	-6,373.5	7,090.5	6,914.6	175.84	40.323	
8,267.7	6,621.6	6,600.6	6,600.6	47.4	130.4	-85.89	1,548.4	-6,373.5	7,157.1	6,979.7	177.43	40.338	
8,300.0	6,621.1	6,600.1	6,600.1	48.1	130.4	-85.87	1,548.4	-6,373.5	7,188.9	7,010.7	178.19	40.344	
8,366.1	6,620.3	6,599.3	6,599.3	49.7	130.4	-85.83	1,548.4	-6,373.5	7,254.0	7,074.2	179.77	40.352	
8,400.0	6,619.9	6,598.9	6,598.9	50.6	130.4	-85.81	1,548.4	-6,373.5	7,287.4	7,106.8	180.58	40.356	
8,464.5	6,619.0	6,598.0	6,598.0	52.2	130.4	-85.77	1,548.4	-6,373.5	7,351.0	7,168.8	182.15	40.358	
8,500.0	6,618.6	6,597.6	6,597.6	53.0	130.4	-85.75	1,548.4	-6,373.5	7,385.9	7,202.9	183.01	40.359	
8,563.0	6,617.8	6,596.8	6,596.8	54.6	130.4	-85.71	1,548.4	-6,373.5	7,448.0	7,263.4	184.55	40.356	
8,600.0	6,617.3	6,596.3	6,596.3	55.5	130.4	-85.69	1,548.4	-6,373.5	7,484.5	7,299.0	185.46	40.355	
8,661.4	6,616.5	6,595.5	6,595.5	57.1	130.3	-85.65	1,548.4	-6,373.5	7,545.0	7,358.0	186.99	40.349	
8,700.0	6,616.0	6,595.0	6,595.0	58.1	130.3	-85.63	1,548.4	-6,373.5	7,583.1	7,395.1	187.95	40.346	
8,759.8	6,615.2	6,594.2	6,594.2	59.6	130.3	-85.60	1,548.4	-6,373.5	7,642.1	7,452.6	189.45	40.337	
8,800.0	6,614.7	6,593.7	6,593.7	60.6	130.3	-85.57	1,548.4	-6,373.5	7,681.7	7,491.2	190.46	40.332	
8,858.2	6,614.0	6,593.0	6,593.0	62.1	130.3	-85.54	1,548.4	-6,373.5	7,739.1	7,547.2	191.94	40.322	
8,900.0	6,613.4	6,592.4	6,592.4	63.2	130.3	-85.51	1,548.4	-6,373.5	7,780.3	7,587.4	192.99	40.314	
8,956.7	6,612.7	6,591.7	6,591.7	64.7	130.3	-85.48	1,548.4	-6,373.5	7,836.3	7,641.8	194.44	40.302	
9,000.0	6,612.2	6,591.2	6,591.2	65.8	130.2	-85.45	1,548.4	-6,373.5	7,879.0	7,683.5	195.54	40.293	
9,055.1	6,611.5	6,590.5	6,590.5	67.3	130.2	-85.42	1,548.4	-6,373.5	7,933.4	7,736.5	196.96	40.280	
9,100.0	6,610.9	6,589.9	6,589.9	68.4	130.2	-85.39	1,548.4	-6,373.5	7,977.8	7,779.7	198.11	40.270	
9,153.5	6,610.2	6,589.2	6,589.2	69.8	130.2	-85.36	1,548.4	-6,373.5	8,030.6	7,831.1	199.49	40.256	
9,200.0	6,609.6	6,588.6	6,588.6	71.1	130.2	-85.33	1,548.4	-6,373.5	8,076.5	7,875.8	200.69	40.244	
9,251.9	6,608.9	6,587.9	6,587.9	72.4	130.2	-85.30	1,548.4	-6,373.5	8,127.9	7,925.8	202.03	40.230	
9,300.0	6,608.3	6,587.3	6,587.3	73.7	130.2	-85.27	1,548.4	-6,373.5	8,175.3	7,972.0	203.28	40.217	
9,350.4	6,607.7	6,586.7	6,586.7	75.0	130.2	-85.24	1,548.4	-6,373.5	8,225.1	8,020.5	204.59	40.202	
9,400.0	6,607.0	6,586.0	6,586.0	76.4	130.1	-85.21	1,548.4	-6,373.5	8,274.1	8,068.3	205.88	40.188	
9,448.8	6,606.4	6,585.4	6,585.4	77.7	130.1	-85.19	1,548.4	-6,373.5	8,322.4	8,115.2	207.16	40.174	
9,500.0	6,605.7	6,584.7	6,584.7	79.0	130.1	-85.15	1,548.4	-6,373.5	8,373.0	8,164.5	208.50	40.159	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT HECKENDORF #1 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	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	6,605.1	6,584.1	6,584.1	80.3	130.1	-85.13	1,548.4	-6,373.5	8,419.7	8,210.0	209.74	40.144	
9,600.0	6,604.5	6,583.5	6,583.5	81.7	130.1	-85.09	1,548.4	-6,373.5	8,471.9	8,260.8	211.12	40.128	
9,645.6	6,603.9	6,582.9	6,582.9	82.9	130.1	-85.07	1,548.4	-6,373.5	8,517.0	8,304.7	212.32	40.113	
9,700.0	6,603.2	6,582.2	6,582.2	84.4	130.1	-85.03	1,548.4	-6,373.5	8,570.8	8,357.0	213.75	40.097	
9,744.1	6,602.6	6,581.6	6,581.6	85.6	130.1	-85.01	1,548.4	-6,373.5	8,614.4	8,399.5	214.92	40.082	
9,800.0	6,601.9	6,580.9	6,580.9	87.1	130.0	-84.97	1,548.4	-6,373.5	8,669.7	8,453.3	216.39	40.065	
9,842.5	6,601.3	6,580.3	6,580.3	88.2	130.0	-84.95	1,548.4	-6,373.5	8,711.8	8,494.2	217.52	40.051	
9,900.0	6,600.6	6,579.6	6,579.6	89.8	130.0	-84.91	1,548.4	-6,373.5	8,768.7	8,549.6	219.04	40.033	
9,940.9	6,600.1	6,579.1	6,579.1	90.9	130.0	-84.89	1,548.4	-6,373.5	8,809.2	8,589.0	220.12	40.019	
10,000.0	6,599.3	6,578.3	6,578.3	92.5	130.0	-84.85	1,548.4	-6,373.5	8,867.6	8,645.9	221.69	40.000	
10,039.3	6,598.8	6,577.8	6,577.8	93.5	130.0	-84.83	1,548.4	-6,373.5	8,906.6	8,683.8	222.73	39.988	
10,100.0	6,598.0	6,577.0	6,577.0	95.2	130.0	-84.79	1,548.4	-6,373.5	8,966.6	8,742.3	224.34	39.968	
10,137.8	6,597.5	6,576.5	6,576.5	96.2	130.0	-84.77	1,548.4	-6,373.5	9,004.0	8,778.7	225.35	39.956	
10,200.0	6,596.7	6,575.7	6,575.7	97.9	129.9	-84.73	1,548.4	-6,373.5	9,065.6	8,838.6	227.01	39.936	
10,236.2	6,596.3	6,575.3	6,575.3	98.9	129.9	-84.71	1,548.4	-6,373.5	9,101.5	8,873.5	227.97	39.924	
10,300.0	6,595.4	6,574.4	6,574.4	100.6	129.9	-84.68	1,548.4	-6,373.5	9,164.7	8,935.0	229.67	39.903	
10,334.6	6,595.0	6,574.0	6,574.0	101.6	129.9	-84.65	1,548.4	-6,373.5	9,199.0	8,968.4	230.60	39.892	
10,400.0	6,594.2	6,573.2	6,573.2	103.4	129.9	-84.62	1,548.4	-6,373.5	9,263.7	9,031.4	232.34	39.871	
10,433.0	6,593.7	6,572.7	6,572.7	104.3	129.9	-84.60	1,548.4	-6,373.5	9,296.5	9,063.3	233.23	39.860	
10,500.0	6,592.9	6,571.9	6,571.9	106.1	129.9	-84.56	1,548.4	-6,373.5	9,362.8	9,127.8	235.02	39.839	
10,531.5	6,592.5	6,571.5	6,571.5	106.9	129.9	-84.54	1,548.4	-6,373.5	9,394.0	9,158.1	235.86	39.829	
10,600.0	6,591.6	6,570.6	6,570.6	108.8	129.8	-84.50	1,548.4	-6,373.5	9,461.9	9,224.2	237.69	39.808	
10,629.9	6,591.2	6,570.2	6,570.2	109.6	129.8	-84.48	1,548.4	-6,373.5	9,491.5	9,253.1	238.49	39.798	
10,700.0	6,590.3	6,569.3	6,569.3	111.6	129.8	-84.44	1,548.4	-6,373.5	9,561.0	9,320.7	240.37	39.776	
10,728.3	6,589.9	6,568.9	6,568.9	112.3	129.8	-84.42	1,548.4	-6,373.5	9,589.1	9,348.0	241.13	39.767	
10,800.0	6,589.0	6,568.0	6,568.0	114.3	129.8	-84.38	1,548.4	-6,373.5	9,660.2	9,417.1	243.05	39.745	
10,826.7	6,588.7	6,567.7	6,567.7	115.0	129.8	-84.36	1,548.4	-6,373.5	9,686.7	9,442.9	243.77	39.737	
10,900.0	6,587.7	6,566.7	6,566.7	117.1	129.8	-84.32	1,548.4	-6,373.5	9,759.3	9,513.6	245.74	39.714	
10,925.2	6,587.4	6,566.4	6,566.4	117.7	129.8	-84.30	1,548.4	-6,373.5	9,784.3	9,537.9	246.41	39.707	
11,000.0	6,586.4	6,565.4	6,565.4	119.8	129.7	-84.25	1,548.4	-6,373.5	9,858.5	9,610.1	248.42	39.684	
11,023.6	6,586.1	6,565.1	6,565.1	120.4	129.7	-84.24	1,548.4	-6,373.5	9,881.9	9,632.8	249.06	39.677	
11,100.0	6,585.1	6,564.1	6,564.1	122.6	129.7	-84.19	1,548.4	-6,373.5	9,957.7	9,706.6	251.11	39.654	
11,122.0	6,584.8	6,563.8	6,563.8	123.2	129.7	-84.18	1,548.4	-6,373.5	9,979.5	9,727.8	251.71	39.647	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-34.98	1,413.6	-989.0	1,725.2				
98.4	98.4	102.4	102.4	0.1	0.0	-34.98	1,413.6	-989.0	1,725.2	1,725.1	0.12	N/A	
100.0	100.0	104.0	104.0	0.1	0.0	-34.98	1,413.6	-989.0	1,725.2	1,725.1	0.14	N/A	
196.8	196.8	200.8	200.8	0.3	1.0	-34.98	1,413.6	-989.0	1,725.2	1,723.9	1.29	1,333.261	
200.0	200.0	204.0	204.0	0.3	1.1	-34.98	1,413.6	-989.0	1,725.2	1,723.8	1.37	1,254.736	
295.3	295.3	299.3	299.3	0.5	3.3	-34.98	1,413.6	-989.0	1,725.2	1,721.4	3.82	451.119	
300.0	300.0	304.0	304.0	0.5	3.4	-34.98	1,413.6	-989.0	1,725.2	1,721.3	3.94	438.407	
393.7	393.7	397.7	397.7	0.8	5.3	-34.98	1,413.6	-989.0	1,725.2	1,719.1	6.10	283.002	
400.0	400.0	404.0	404.0	0.8	5.5	-34.98	1,413.6	-989.0	1,725.2	1,719.0	6.24	276.482	
492.1	492.1	496.1	496.1	1.0	7.3	-34.98	1,413.6	-989.0	1,725.2	1,716.9	8.33	207.139	
500.0	500.0	504.0	504.0	1.0	7.5	-34.98	1,413.6	-989.0	1,725.2	1,716.7	8.51	202.804	
590.5	590.5	594.5	594.5	1.2	9.3	-34.98	1,413.6	-989.0	1,725.2	1,714.7	10.55	163.563	
600.0	600.0	604.0	604.0	1.2	9.5	-34.98	1,413.6	-989.0	1,725.2	1,714.5	10.76	160.330	
689.0	689.0	693.0	693.0	1.4	11.3	-34.98	1,413.6	-989.0	1,725.2	1,712.5	12.76	135.204	
700.0	700.0	704.0	704.0	1.4	11.6	-34.98	1,413.6	-989.0	1,725.2	1,712.2	13.01	132.630	
787.4	787.4	791.4	791.4	1.6	13.3	-34.98	1,413.6	-989.0	1,725.2	1,710.2	14.97	115.253	
800.0	800.0	804.0	804.0	1.7	13.6	-34.98	1,413.6	-989.0	1,725.2	1,710.0	15.25	113.117	
885.8	885.8	889.8	889.8	1.9	15.3	-34.98	1,413.6	-989.0	1,725.2	1,708.0	17.18	100.445	
900.0	900.0	904.0	904.0	1.9	15.6	-34.98	1,413.6	-989.0	1,725.2	1,707.7	17.49	98.621	
984.2	984.2	988.2	988.2	2.1	17.3	-34.98	1,413.6	-989.0	1,725.2	1,705.8	19.38	89.016	
1,000.0	1,000.0	1,004.0	1,004.0	2.1	17.6	-34.98	1,413.6	-989.0	1,725.2	1,705.5	19.73	87.424	
1,082.7	1,082.7	1,086.7	1,086.7	2.3	19.3	-34.98	1,413.6	-989.0	1,725.2	1,703.6	21.59	79.926	
1,100.0	1,100.0	1,104.0	1,104.0	2.3	19.6	-34.98	1,413.6	-989.0	1,725.2	1,703.2	21.97	78.514	
1,181.1	1,181.1	1,185.1	1,185.1	2.5	21.3	-34.98	1,413.6	-989.0	1,725.2	1,701.4	23.79	72.522	
1,200.0	1,200.0	1,204.0	1,204.0	2.6	21.6	-34.98	1,413.6	-989.0	1,725.2	1,701.0	24.21	71.255	
1,279.5	1,279.5	1,283.5	1,283.5	2.7	23.2	-34.98	1,413.6	-989.0	1,725.2	1,699.2	25.99	66.375	
1,300.0	1,300.0	1,304.0	1,304.0	2.8	23.7	-34.98	1,413.6	-989.0	1,725.2	1,698.8	26.45	65.225	
1,377.9	1,377.9	1,381.9	1,381.9	3.0	25.2	-34.98	1,413.6	-989.0	1,725.2	1,697.0	28.19	61.190	
1,400.0	1,400.0	1,404.0	1,404.0	3.0	25.7	-34.98	1,413.6	-989.0	1,725.2	1,696.5	28.69	60.137	
1,476.4	1,476.4	1,480.4	1,480.4	3.2	27.2	40.18	1,413.6	-989.0	1,724.4	1,694.0	30.38	56.756	
1,500.0	1,500.0	1,504.0	1,504.0	3.2	27.7	40.20	1,413.6	-989.0	1,723.9	1,693.0	30.90	55.781	
1,574.8	1,574.7	1,578.7	1,578.7	3.4	29.2	40.31	1,413.6	-989.0	1,721.1	1,688.6	32.54	52.892	
1,600.0	1,599.8	1,603.8	1,603.8	3.4	29.7	40.37	1,413.6	-989.0	1,719.9	1,686.8	33.09	51.979	
1,673.2	1,672.8	1,676.8	1,676.8	3.6	31.2	40.56	1,413.6	-989.0	1,715.3	1,680.6	34.67	49.472	
1,700.0	1,699.5	1,703.5	1,703.5	3.7	31.7	40.64	1,413.6	-989.0	1,713.2	1,678.0	35.25	48.609	
1,771.6	1,770.6	1,774.6	1,774.6	3.8	33.1	40.91	1,413.6	-989.0	1,706.9	1,670.1	36.78	46.413	
1,800.0	1,798.7	1,802.7	1,802.7	3.9	33.7	41.03	1,413.6	-989.0	1,704.0	1,666.6	37.38	45.592	
1,870.1	1,868.0	1,872.0	1,872.0	4.1	35.1	41.37	1,413.6	-989.0	1,696.0	1,657.1	38.85	43.651	
1,900.0	1,897.5	1,901.5	1,901.5	4.2	35.7	41.53	1,413.6	-989.0	1,692.2	1,652.7	39.48	42.864	
1,968.5	1,964.8	1,968.8	1,968.8	4.4	37.0	41.95	1,413.6	-989.0	1,682.6	1,641.7	40.91	41.133	
2,000.0	1,995.6	1,999.6	1,999.6	4.5	37.7	42.15	1,413.6	-989.0	1,677.8	1,636.3	41.56	40.375	
2,066.9	2,060.9	2,064.9	2,064.9	4.7	39.0	42.64	1,413.6	-989.0	1,666.9	1,623.9	42.94	38.819	
2,100.0	2,093.1	2,097.1	2,097.1	4.8	39.6	42.90	1,413.6	-989.0	1,661.1	1,617.5	43.62	38.084	
2,165.3	2,156.3	2,160.3	2,160.3	5.1	40.9	43.46	1,413.6	-989.0	1,648.8	1,603.9	44.96	36.673	
2,200.0	2,189.6	2,193.6	2,193.6	5.2	41.6	43.77	1,413.6	-989.0	1,641.9	1,596.3	45.67	35.955	
2,263.8	2,250.7	2,254.7	2,254.7	5.5	42.8	44.40	1,413.6	-989.0	1,628.6	1,581.6	46.98	34.667	
2,280.0	2,266.2	2,270.2	2,270.2	5.6	43.1	44.57	1,413.6	-989.0	1,625.0	1,577.7	47.31	34.349	
2,300.0	2,285.3	2,289.3	2,289.3	5.7	43.5	44.72	1,413.6	-989.0	1,620.6	1,572.8	47.76	33.929	
2,362.2	2,344.6	2,348.6	2,348.6	6.0	44.7	45.18	1,413.6	-989.0	1,607.0	1,557.8	49.19	32.666	
2,400.0	2,380.6	2,384.6	2,384.6	6.2	45.4	45.46	1,413.6	-989.0	1,598.7	1,548.7	50.07	31.932	
2,460.6	2,438.4	2,442.4	2,442.4	6.5	46.6	45.92	1,413.6	-989.0	1,585.6	1,534.2	51.48	30.801	
2,500.0	2,475.9	2,479.9	2,479.9	6.7	47.3	46.22	1,413.6	-989.0	1,577.2	1,524.8	52.40	30.100	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,536.2	2,536.2	7.0	48.4	46.69	1,413.6	-989.0	1,564.6	1,510.8	53.79	29.087	
2,600.0	2,571.2	2,575.2	2,575.2	7.2	49.2	47.01	1,413.6	-989.0	1,555.9	1,501.1	54.76	28.415	
2,657.5	2,626.0	2,630.0	2,630.0	7.5	50.3	47.47	1,413.6	-989.0	1,543.8	1,487.7	56.12	27.508	
2,700.0	2,666.6	2,670.6	2,670.6	7.8	51.2	47.81	1,413.6	-989.0	1,534.9	1,477.8	57.14	26.864	
2,755.9	2,719.8	2,723.8	2,723.8	8.1	52.2	48.27	1,413.6	-989.0	1,523.3	1,464.8	58.48	26.049	
2,800.0	2,761.9	2,765.9	2,765.9	8.3	53.1	48.64	1,413.6	-989.0	1,514.2	1,454.7	59.54	25.433	
2,854.3	2,813.7	2,817.7	2,817.7	8.7	54.1	49.10	1,413.6	-989.0	1,503.1	1,442.3	60.85	24.701	
2,900.0	2,857.2	2,861.2	2,861.2	8.9	55.0	49.49	1,413.6	-989.0	1,493.9	1,431.9	61.96	24.110	
2,952.7	2,907.5	2,911.5	2,911.5	9.2	56.0	49.94	1,413.6	-989.0	1,483.3	1,420.0	63.25	23.452	
3,000.0	2,952.5	2,956.5	2,956.5	9.5	56.9	50.36	1,413.6	-989.0	1,473.8	1,409.4	64.40	22.885	
3,051.2	3,001.3	3,005.3	3,005.3	9.8	57.9	50.81	1,413.6	-989.0	1,463.7	1,398.1	65.66	22.292	
3,100.0	3,047.8	3,051.8	3,051.8	10.1	58.8	51.25	1,413.6	-989.0	1,454.2	1,387.3	66.86	21.748	
3,149.6	3,095.1	3,099.1	3,099.1	10.4	59.8	51.70	1,413.6	-989.0	1,444.6	1,376.5	68.09	21.215	
3,200.0	3,143.2	3,147.2	3,147.2	10.7	60.7	52.16	1,413.6	-989.0	1,434.9	1,365.6	69.34	20.693	
3,248.0	3,188.9	3,192.9	3,192.9	11.0	61.7	52.61	1,413.6	-989.0	1,425.8	1,355.2	70.54	20.212	
3,300.0	3,238.5	3,242.5	3,242.5	11.3	62.7	53.10	1,413.6	-989.0	1,416.0	1,344.2	71.84	19.710	
3,346.4	3,282.8	3,286.8	3,286.8	11.6	63.5	53.54	1,413.6	-989.0	1,407.3	1,334.3	73.01	19.277	
3,400.0	3,333.8	3,337.8	3,337.8	11.9	64.6	54.06	1,413.6	-989.0	1,397.5	1,323.1	74.35	18.795	
3,444.9	3,376.6	3,380.6	3,380.6	12.2	65.4	54.50	1,413.6	-989.0	1,389.3	1,313.8	75.49	18.405	
3,500.0	3,429.1	3,433.1	3,433.1	12.6	66.5	55.05	1,413.6	-989.0	1,379.4	1,302.5	76.88	17.942	
3,543.3	3,470.4	3,474.4	3,474.4	12.8	67.3	55.48	1,413.6	-989.0	1,371.7	1,293.7	77.98	17.590	
3,600.0	3,524.4	3,528.4	3,528.4	13.2	68.4	56.05	1,413.6	-989.0	1,361.7	1,282.3	79.43	17.144	
3,641.7	3,564.2	3,568.2	3,568.2	13.4	69.2	56.48	1,413.6	-989.0	1,354.5	1,274.0	80.49	16.827	
3,700.0	3,619.8	3,623.8	3,623.8	13.8	70.3	57.09	1,413.6	-989.0	1,344.5	1,262.5	81.99	16.399	
3,740.1	3,658.0	3,662.0	3,662.0	14.0	71.1	57.51	1,413.6	-989.0	1,337.7	1,254.7	83.02	16.113	
3,800.0	3,715.1	3,719.1	3,719.1	14.4	72.2	58.15	1,413.6	-989.0	1,327.8	1,243.2	84.56	15.702	
3,838.6	3,751.8	3,755.8	3,755.8	14.7	73.0	58.56	1,413.6	-989.0	1,321.4	1,235.9	85.56	15.445	
3,900.0	3,810.4	3,814.4	3,814.4	15.0	74.2	59.23	1,413.6	-989.0	1,311.5	1,224.3	87.15	15.048	
3,937.0	3,845.7	3,849.7	3,849.7	15.3	74.9	59.64	1,413.6	-989.0	1,305.6	1,217.5	88.11	14.817	
4,000.0	3,905.7	3,909.7	3,909.7	15.7	76.1	60.34	1,413.6	-989.0	1,295.7	1,206.0	89.75	14.437	
4,035.4	3,939.5	3,943.5	3,943.5	15.9	76.8	60.74	1,413.6	-989.0	1,290.3	1,199.6	90.68	14.229	
4,100.0	4,001.0	4,005.0	4,005.0	16.3	78.0	61.47	1,413.6	-989.0	1,280.5	1,188.1	92.37	13.863	
4,133.8	4,033.3	4,037.3	4,037.3	16.5	78.6	61.86	1,413.6	-989.0	1,275.4	1,182.2	93.26	13.677	
4,200.0	4,096.3	4,100.3	4,100.3	16.9	79.9	62.63	1,413.6	-989.0	1,265.8	1,170.8	94.99	13.325	
4,232.3	4,127.1	4,131.1	4,131.1	17.1	80.5	63.01	1,413.6	-989.0	1,261.1	1,165.3	95.85	13.158	
4,300.0	4,191.7	4,195.7	4,195.7	17.6	81.8	63.81	1,413.6	-989.0	1,251.6	1,154.0	97.63	12.820	
4,330.7	4,220.9	4,224.9	4,224.9	17.8	82.4	64.18	1,413.6	-989.0	1,247.4	1,149.0	98.44	12.671	
4,400.0	4,287.0	4,291.0	4,291.0	18.2	83.7	65.02	1,413.6	-989.0	1,238.1	1,137.8	100.28	12.346	
4,429.1	4,314.7	4,318.7	4,318.7	18.4	84.3	65.38	1,413.6	-989.0	1,234.2	1,133.2	101.05	12.214	
4,500.0	4,382.3	4,386.3	4,386.3	18.8	85.7	66.25	1,413.6	-989.0	1,225.1	1,122.1	102.94	11.901	
4,527.5	4,408.6	4,412.6	4,412.6	19.0	86.2	66.60	1,413.6	-989.0	1,221.6	1,117.9	103.67	11.784	
4,600.0	4,477.6	4,481.6	4,481.6	19.5	87.6	67.51	1,413.6	-989.0	1,212.7	1,107.1	105.60	11.484	
4,626.0	4,502.4	4,506.4	4,506.4	19.6	88.1	67.84	1,413.6	-989.0	1,209.6	1,103.3	106.29	11.380	
4,700.0	4,572.9	4,576.9	4,576.9	20.1	89.5	68.79	1,413.6	-989.0	1,201.0	1,092.7	108.27	11.093	
4,724.4	4,596.2	4,600.2	4,600.2	20.3	90.0	69.10	1,413.6	-989.0	1,198.2	1,089.3	108.92	11.001	
4,800.0	4,668.3	4,672.3	4,672.3	20.7	91.4	70.09	1,413.6	-989.0	1,189.9	1,079.0	110.95	10.725	
4,822.8	4,690.0	4,694.0	4,694.0	20.9	91.8	70.39	1,413.6	-989.0	1,187.5	1,075.9	111.56	10.645	
4,900.0	4,763.6	4,767.6	4,767.6	21.4	93.3	71.41	1,413.6	-989.0	1,179.5	1,065.9	113.62	10.381	
4,921.2	4,783.8	4,787.8	4,787.8	21.5	93.7	71.70	1,413.6	-989.0	1,177.4	1,063.2	114.19	10.311	
5,000.0	4,858.9	4,862.9	4,862.9	22.0	95.2	72.76	1,413.6	-989.0	1,169.8	1,053.5	116.30	10.058	
5,019.7	4,877.7	4,881.7	4,881.7	22.1	95.6	73.02	1,413.6	-989.0	1,168.0	1,051.1	116.83	9.997	
5,100.0	4,954.2	4,958.2	4,958.2	22.6	97.2	74.12	1,413.6	-989.0	1,160.8	1,041.8	118.98	9.756	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,975.5	4,975.5	22.8	97.5	74.37	1,413.6	-989.0	1,159.2	1,039.8	119.47	9.703	
5,171.8	5,022.7	5,026.7	5,026.7	23.1	98.5	75.11	1,413.6	-989.0	1,154.8	1,033.9	120.91	9.551	
5,200.0	5,049.6	5,053.6	5,053.6	23.3	99.1	75.46	1,413.6	-989.0	1,152.6	1,030.9	121.65	9.474	
5,216.5	5,065.4	5,069.4	5,069.4	23.3	99.4	75.65	1,413.6	-989.0	1,151.3	1,029.2	122.07	9.431	
5,300.0	5,145.7	5,149.7	5,149.7	23.7	101.0	76.61	1,413.6	-989.0	1,145.6	1,021.4	124.19	9.225	
5,314.9	5,160.1	5,164.1	5,164.1	23.8	101.3	76.77	1,413.6	-989.0	1,144.7	1,020.2	124.56	9.190	
5,400.0	5,242.7	5,246.7	5,246.7	24.1	103.0	77.65	1,413.6	-989.0	1,140.1	1,013.4	126.66	9.001	
5,413.4	5,255.7	5,259.7	5,259.7	24.2	103.2	77.78	1,413.6	-989.0	1,139.4	1,012.4	126.98	8.973	
5,500.0	5,340.5	5,344.5	5,344.5	24.5	104.9	78.57	1,413.6	-989.0	1,135.7	1,006.6	129.08	8.798	
5,511.8	5,352.1	5,356.1	5,356.1	24.5	105.2	78.67	1,413.6	-989.0	1,135.2	1,005.9	129.36	8.776	
5,600.0	5,439.0	5,443.0	5,443.0	24.8	106.9	79.36	1,413.6	-989.0	1,132.3	1,000.9	131.44	8.615	
5,610.2	5,449.1	5,453.1	5,453.1	24.8	107.1	79.43	1,413.6	-989.0	1,132.0	1,000.3	131.67	8.597	
5,700.0	5,538.0	5,542.0	5,542.0	25.1	108.9	80.00	1,413.6	-989.0	1,129.8	996.0	133.74	8.447	
5,708.6	5,546.6	5,550.6	5,550.6	25.1	109.1	80.04	1,413.6	-989.0	1,129.6	995.6	133.94	8.434	
5,800.0	5,637.4	5,641.4	5,641.4	25.3	110.9	80.48	1,413.6	-989.0	1,128.0	992.0	136.00	8.294	
5,807.1	5,644.5	5,648.5	5,648.5	25.3	111.0	80.51	1,413.6	-989.0	1,127.9	991.7	136.15	8.284	
5,900.0	5,737.2	5,741.2	5,741.2	25.5	112.9	80.81	1,413.6	-989.0	1,126.8	988.6	138.20	8.153	
5,905.5	5,742.6	5,746.6	5,746.6	25.5	113.0	80.83	1,413.6	-989.0	1,126.8	988.5	138.32	8.146	
6,000.0	5,837.1	5,841.1	5,841.1	25.6	114.9	80.98	1,413.6	-989.0	1,126.3	985.9	140.35	8.024	
6,003.9	5,841.0	5,845.0	5,845.0	25.6	115.0	80.98	1,413.6	-989.0	1,126.2	985.8	140.44	8.020	
6,051.8	5,888.9	5,892.9	5,892.9	25.7	116.0	5.88	1,413.6	-989.0	1,126.2	995.2	130.98	8.598	
6,081.8	5,918.9	5,922.9	5,922.9	25.7	116.6	5.88	1,413.6	-989.0	1,126.2	994.6	131.63	8.555	
6,100.0	5,937.1	5,941.1	5,941.1	25.7	116.9	-84.14	1,413.6	-989.0	1,126.2	983.7	142.46	7.905	
6,102.3	5,939.4	5,943.4	5,943.4	25.7	117.0	-84.14	1,413.6	-989.0	1,126.2	983.6	142.51	7.902	
6,150.0	5,987.0	5,991.0	5,991.0	25.7	117.9	-84.31	1,413.6	-989.0	1,125.9	982.4	143.47	7.847	
6,200.0	6,036.5	6,040.5	6,040.5	25.7	118.9	-84.69	1,413.6	-989.0	1,125.2	980.8	144.42	7.792	
6,200.8	6,037.3	6,041.3	6,041.3	25.7	118.9	-84.70	1,413.6	-989.0	1,125.2	980.8	144.43	7.791	
6,250.0	6,085.5	6,089.5	6,089.5	25.7	119.9	-85.25	1,413.6	-989.0	1,124.3	979.0	145.31	7.738	
6,299.2	6,133.0	6,137.0	6,137.0	25.6	120.9	-85.98	1,413.6	-989.0	1,123.3	977.2	146.14	7.687	
6,300.0	6,133.7	6,137.7	6,137.7	25.6	120.9	-85.99	1,413.6	-989.0	1,123.3	977.1	146.15	7.686	
6,350.0	6,180.9	6,184.9	6,184.9	25.5	121.8	-86.88	1,413.6	-989.0	1,122.2	975.2	146.95	7.637	
6,397.6	6,224.6	6,228.6	6,228.6	25.4	122.7	-87.84	1,413.6	-989.0	1,121.2	973.6	147.67	7.593	
6,400.0	6,226.7	6,230.7	6,230.7	25.4	122.7	-87.89	1,413.6	-989.0	1,121.2	973.5	147.70	7.591	
6,450.0	6,271.1	6,275.1	6,275.1	25.2	123.6	-88.99	1,413.6	-989.0	1,120.5	972.1	148.41	7.550	
6,493.9	6,308.6	6,312.6	6,312.6	25.1	124.4	-90.00	1,413.6	-989.0	1,120.3	971.3	148.99	7.519 CC	
6,496.0	6,310.4	6,314.4	6,314.4	25.1	124.4	-90.05	1,413.6	-989.0	1,120.3	971.2	149.02	7.518	
6,500.0	6,313.7	6,317.7	6,317.7	25.1	124.5	-90.14	1,413.6	-989.0	1,120.3	971.2	149.07	7.515	
6,550.0	6,354.4	6,358.4	6,358.4	25.0	125.3	-91.31	1,413.6	-989.0	1,120.7	971.1	149.68	7.488 ES	
6,594.5	6,388.9	6,392.9	6,392.9	24.9	126.0	-92.33	1,413.6	-989.0	1,121.9	971.7	150.17	7.471	
6,600.0	6,393.0	6,397.0	6,397.0	24.9	126.1	-92.46	1,413.6	-989.0	1,122.1	971.9	150.23	7.469	
6,650.0	6,429.3	6,433.3	6,433.3	24.8	126.8	-93.53	1,413.6	-989.0	1,124.6	973.9	150.73	7.461 SF	
6,692.9	6,458.5	6,462.5	6,462.5	24.7	127.4	-94.36	1,413.6	-989.0	1,127.8	976.7	151.12	7.463	
6,700.0	6,463.1	6,467.1	6,467.1	24.7	127.5	-94.49	1,413.6	-989.0	1,128.4	977.2	151.18	7.464	
6,750.0	6,494.3	6,498.3	6,498.3	24.7	128.1	-95.30	1,413.6	-989.0	1,133.8	982.2	151.62	7.478	
6,791.3	6,517.9	6,521.9	6,521.9	24.7	128.6	-95.82	1,413.6	-989.0	1,139.5	987.5	151.98	7.497	
6,800.0	6,522.6	6,526.6	6,526.6	24.7	128.7	-95.91	1,413.6	-989.0	1,140.8	988.8	152.06	7.503	
6,850.0	6,548.0	6,552.0	6,552.0	24.7	129.2	-96.30	1,413.6	-989.0	1,149.7	997.2	152.53	7.538	
6,889.7	6,566.0	6,570.0	6,570.0	24.8	129.6	-96.42	1,413.6	-989.0	1,158.2	1,005.3	152.97	7.572	
6,900.0	6,570.4	6,574.4	6,574.4	24.9	129.7	-96.42	1,413.6	-989.0	1,160.6	1,007.5	153.08	7.582	
6,950.0	6,589.5	6,593.5	6,593.5	25.1	130.0	-96.25	1,413.6	-989.0	1,173.5	1,019.8	153.71	7.635	
6,988.2	6,602.0	6,606.0	6,606.0	25.3	130.3	-95.91	1,413.6	-989.0	1,184.8	1,030.5	154.27	7.680	
7,000.0	6,605.4	6,609.4	6,609.4	25.3	130.4	-95.76	1,413.6	-989.0	1,188.5	1,034.1	154.45	7.695	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	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	6,618.0	6,622.0	6,622.0	25.6	130.6	-94.93	1,413.6	-989.0	1,205.5	1,050.3	155.28	7.764	
7,086.6	6,625.0	6,629.0	6,629.0	25.9	130.8	-94.10	1,413.6	-989.0	1,219.3	1,063.3	155.92	7.820	
7,100.0	6,627.1	6,631.1	6,631.1	26.0	130.8	-93.75	1,413.6	-989.0	1,224.5	1,068.4	156.15	7.842	
7,150.0	6,632.8	6,636.8	6,636.8	26.5	130.9	-92.20	1,413.6	-989.0	1,245.4	1,088.4	156.99	7.933	
7,185.0	6,634.7	6,638.7	6,638.7	26.8	131.0	-90.90	1,413.6	-989.0	1,261.1	1,103.6	157.52	8.006	
7,200.0	6,635.0	6,639.0	6,639.0	27.0	131.0	-90.29	1,413.6	-989.0	1,268.0	1,110.3	157.72	8.040	
7,215.9	6,635.0	6,639.0	6,639.0	27.1	131.0	-89.60	1,413.6	-989.0	1,275.6	1,117.7	157.90	8.078	
7,283.4	6,634.1	6,638.1	6,638.1	27.9	130.9	-89.56	1,413.6	-989.0	1,309.2	1,150.5	158.72	8.249	
7,300.0	6,633.9	6,637.9	6,637.9	28.1	130.9	-89.55	1,413.6	-989.0	1,317.9	1,158.9	158.92	8.293	
7,381.9	6,632.9	6,636.9	6,636.9	29.3	130.9	-89.49	1,413.6	-989.0	1,362.8	1,202.7	160.07	8.513	
7,400.0	6,632.6	6,636.6	6,636.6	29.5	130.9	-89.48	1,413.6	-989.0	1,373.2	1,212.8	160.33	8.565	
7,480.3	6,631.6	6,635.6	6,635.6	30.8	130.9	-89.43	1,413.6	-989.0	1,421.1	1,259.5	161.61	8.793	
7,500.0	6,631.4	6,635.4	6,635.4	31.1	130.9	-89.42	1,413.6	-989.0	1,433.3	1,271.4	161.93	8.852	
7,578.7	6,630.4	6,634.4	6,634.4	32.5	130.9	-89.36	1,413.6	-989.0	1,483.7	1,320.4	163.31	9.085	
7,600.0	6,630.1	6,634.1	6,634.1	32.9	130.9	-89.35	1,413.6	-989.0	1,497.7	1,334.0	163.68	9.150	
7,677.1	6,629.1	6,633.1	6,633.1	34.3	130.8	-89.30	1,413.6	-989.0	1,550.0	1,384.8	165.14	9.386	
7,700.0	6,628.8	6,632.8	6,632.8	34.8	130.8	-89.28	1,413.6	-989.0	1,565.9	1,400.3	165.58	9.457	
7,775.6	6,627.8	6,631.8	6,631.8	36.3	130.8	-89.24	1,413.6	-989.0	1,619.6	1,452.5	167.09	9.693	
7,800.0	6,627.5	6,631.5	6,631.5	36.8	130.8	-89.22	1,413.6	-989.0	1,637.3	1,469.7	167.59	9.770	
7,874.0	6,626.6	6,630.6	6,630.6	38.4	130.8	-89.17	1,413.6	-989.0	1,692.0	1,522.9	169.14	10.004	
7,900.0	6,626.3	6,630.3	6,630.3	38.9	130.8	-89.15	1,413.6	-989.0	1,711.6	1,541.9	169.69	10.087	
7,972.4	6,625.3	6,629.3	6,629.3	40.5	130.8	-89.11	1,413.6	-989.0	1,767.0	1,595.7	171.27	10.317	
8,000.0	6,625.0	6,629.0	6,629.0	41.1	130.8	-89.09	1,413.6	-989.0	1,788.4	1,616.5	171.87	10.405	
8,070.8	6,624.1	6,628.1	6,628.1	42.7	130.7	-89.04	1,413.6	-989.0	1,844.1	1,670.7	173.47	10.631	
8,100.0	6,623.7	6,627.7	6,627.7	43.4	130.7	-89.02	1,413.6	-989.0	1,867.4	1,693.2	174.13	10.724	
8,169.3	6,622.8	6,626.8	6,626.8	45.0	130.7	-88.98	1,413.6	-989.0	1,923.2	1,747.5	175.73	10.944	
8,200.0	6,622.4	6,626.4	6,626.4	45.7	130.7	-88.96	1,413.6	-989.0	1,948.3	1,771.9	176.44	11.042	
8,267.7	6,621.6	6,625.6	6,625.6	47.4	130.7	-88.91	1,413.6	-989.0	2,004.1	1,826.0	178.04	11.256	
8,300.0	6,621.1	6,625.1	6,625.1	48.1	130.7	-88.89	1,413.6	-989.0	2,030.9	1,852.1	178.80	11.358	
8,366.1	6,620.3	6,624.3	6,624.3	49.7	130.7	-88.85	1,413.6	-989.0	2,086.4	1,906.0	180.40	11.566	
8,400.0	6,619.9	6,623.9	6,623.9	50.6	130.7	-88.82	1,413.6	-989.0	2,115.0	1,933.8	181.21	11.672	
8,464.5	6,619.0	6,623.0	6,623.0	52.2	130.6	-88.78	1,413.6	-989.0	2,170.1	1,987.3	182.79	11.872	
8,500.0	6,618.6	6,622.6	6,622.6	53.0	130.6	-88.76	1,413.6	-989.0	2,200.5	2,016.8	183.65	11.982	
8,563.0	6,617.8	6,621.8	6,621.8	54.6	130.6	-88.72	1,413.6	-989.0	2,254.9	2,069.7	185.21	12.175	
8,600.0	6,617.3	6,621.3	6,621.3	55.5	130.6	-88.69	1,413.6	-989.0	2,287.1	2,101.0	186.13	12.288	
8,661.4	6,616.5	6,620.5	6,620.5	57.1	130.6	-88.65	1,413.6	-989.0	2,340.8	2,153.2	187.66	12.474	
8,700.0	6,616.0	6,620.0	6,620.0	58.1	130.6	-88.63	1,413.6	-989.0	2,374.8	2,186.2	188.63	12.590	
8,759.8	6,615.2	6,619.2	6,619.2	59.6	130.6	-88.59	1,413.6	-989.0	2,427.7	2,237.6	190.14	12.768	
8,800.0	6,614.7	6,618.7	6,618.7	60.6	130.6	-88.56	1,413.6	-989.0	2,463.4	2,272.3	191.15	12.887	
8,858.2	6,614.0	6,618.0	6,618.0	62.1	130.5	-88.52	1,413.6	-989.0	2,515.4	2,322.8	192.64	13.058	
8,900.0	6,613.4	6,617.4	6,617.4	63.2	130.5	-88.49	1,413.6	-989.0	2,552.9	2,359.2	193.70	13.179	
8,956.7	6,612.7	6,616.7	6,616.7	64.7	130.5	-88.46	1,413.6	-989.0	2,603.9	2,408.8	195.16	13.343	
9,000.0	6,612.2	6,616.2	6,616.2	65.8	130.5	-88.43	1,413.6	-989.0	2,643.1	2,446.8	196.27	13.467	
9,055.1	6,611.5	6,615.5	6,615.5	67.3	130.5	-88.39	1,413.6	-989.0	2,693.1	2,495.4	197.69	13.623	
9,100.0	6,610.9	6,614.9	6,614.9	68.4	130.5	-88.36	1,413.6	-989.0	2,734.0	2,535.1	198.85	13.749	
9,153.5	6,610.2	6,614.2	6,614.2	69.8	130.5	-88.33	1,413.6	-989.0	2,782.9	2,582.7	200.24	13.898	
9,200.0	6,609.6	6,613.6	6,613.6	71.1	130.4	-88.30	1,413.6	-989.0	2,825.5	2,624.1	201.45	14.026	
9,251.9	6,608.9	6,612.9	6,612.9	72.4	130.4	-88.26	1,413.6	-989.0	2,873.3	2,670.5	202.80	14.168	
9,300.0	6,608.3	6,612.3	6,612.3	73.7	130.4	-88.23	1,413.6	-989.0	2,917.6	2,713.5	204.06	14.298	
9,350.4	6,607.7	6,611.7	6,611.7	75.0	130.4	-88.20	1,413.6	-989.0	2,964.1	2,758.8	205.38	14.433	
9,400.0	6,607.0	6,611.0	6,611.0	76.4	130.4	-88.16	1,413.6	-989.0	3,010.1	2,803.5	206.68	14.564	
9,448.8	6,606.4	6,610.4	6,610.4	77.7	130.4	-88.13	1,413.6	-989.0	3,055.5	2,847.5	207.96	14.692	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.7	6,609.7	6,609.7	79.0	130.4	-88.10	1,413.6	-989.0	3,103.2	2,893.9	209.31	14.826	
9,547.2	6,605.1	6,609.1	6,609.1	80.3	130.4	-88.07	1,413.6	-989.0	3,147.3	2,936.7	210.56	14.947	
9,600.0	6,604.5	6,608.5	6,608.5	81.7	130.3	-88.03	1,413.6	-989.0	3,196.6	2,984.7	211.95	15.082	
9,645.6	6,603.9	6,607.9	6,607.9	82.9	130.3	-88.00	1,413.6	-989.0	3,239.4	3,026.3	213.16	15.197	
9,700.0	6,603.2	6,607.2	6,607.2	84.4	130.3	-87.97	1,413.6	-989.0	3,290.5	3,075.9	214.60	15.333	
9,744.1	6,602.6	6,606.6	6,606.6	85.6	130.3	-87.94	1,413.6	-989.0	3,331.9	3,116.2	215.77	15.442	
9,800.0	6,601.9	6,605.9	6,605.9	87.1	130.3	-87.90	1,413.6	-989.0	3,384.7	3,167.4	217.26	15.579	
9,842.5	6,601.3	6,605.3	6,605.3	88.2	130.3	-87.87	1,413.6	-989.0	3,424.8	3,206.4	218.39	15.682	
9,900.0	6,600.6	6,604.6	6,604.6	89.8	130.3	-87.83	1,413.6	-989.0	3,479.2	3,259.2	219.92	15.820	
9,940.9	6,600.1	6,604.1	6,604.1	90.9	130.3	-87.81	1,413.6	-989.0	3,517.9	3,296.9	221.01	15.917	
10,000.0	6,599.3	6,603.3	6,603.3	92.5	130.2	-87.77	1,413.6	-989.0	3,574.0	3,351.4	222.59	16.056	
10,039.3	6,598.8	6,602.8	6,602.8	93.5	130.2	-87.74	1,413.6	-989.0	3,611.4	3,387.7	223.64	16.148	
10,100.0	6,598.0	6,602.0	6,602.0	95.2	130.2	-87.70	1,413.6	-989.0	3,669.1	3,443.8	225.27	16.288	
10,137.8	6,597.5	6,601.5	6,601.5	96.2	130.2	-87.68	1,413.6	-989.0	3,705.0	3,478.8	226.28	16.374	
10,200.0	6,596.7	6,600.7	6,600.7	97.9	130.2	-87.63	1,413.6	-989.0	3,764.4	3,536.5	227.95	16.514	
10,236.2	6,596.3	6,600.3	6,600.3	98.9	130.2	-87.61	1,413.6	-989.0	3,799.0	3,570.1	228.92	16.595	
10,300.0	6,595.4	6,599.4	6,599.4	100.6	130.2	-87.57	1,413.6	-989.0	3,860.0	3,629.3	230.63	16.737	
10,334.6	6,595.0	6,599.0	6,599.0	101.6	130.2	-87.54	1,413.6	-989.0	3,893.1	3,661.6	231.56	16.812	
10,400.0	6,594.2	6,598.2	6,598.2	103.4	130.1	-87.50	1,413.6	-989.0	3,955.8	3,722.5	233.32	16.954	
10,433.0	6,593.7	6,597.7	6,597.7	104.3	130.1	-87.48	1,413.6	-989.0	3,987.5	3,753.3	234.21	17.025	
10,500.0	6,592.9	6,596.9	6,596.9	106.1	130.1	-87.43	1,413.6	-989.0	4,051.8	3,815.8	236.01	17.168	
10,531.5	6,592.5	6,596.5	6,596.5	106.9	130.1	-87.41	1,413.6	-989.0	4,082.0	3,845.2	236.86	17.234	
10,600.0	6,591.6	6,595.6	6,595.6	108.8	130.1	-87.37	1,413.6	-989.0	4,148.0	3,909.2	238.71	17.377	
10,629.9	6,591.2	6,595.2	6,595.2	109.6	130.1	-87.35	1,413.6	-989.0	4,176.8	3,937.2	239.52	17.438	
10,700.0	6,590.3	6,594.3	6,594.3	111.6	130.1	-87.30	1,413.6	-989.0	4,244.3	4,002.9	241.41	17.582	
10,728.3	6,589.9	6,593.9	6,593.9	112.3	130.1	-87.28	1,413.6	-989.0	4,271.6	4,029.5	242.17	17.639	
10,800.0	6,589.0	6,593.0	6,593.0	114.3	130.0	-87.23	1,413.6	-989.0	4,340.8	4,096.7	244.11	17.782	
10,826.7	6,588.7	6,592.7	6,592.7	115.0	130.0	-87.22	1,413.6	-989.0	4,366.7	4,121.9	244.83	17.835	
10,900.0	6,587.7	6,591.7	6,591.7	117.1	130.0	-87.17	1,413.6	-989.0	4,437.5	4,190.7	246.81	17.979	
10,925.2	6,587.4	6,591.4	6,591.4	117.7	130.0	-87.15	1,413.6	-989.0	4,461.9	4,214.4	247.50	18.028	
11,000.0	6,586.4	6,590.4	6,590.4	119.8	130.0	-87.10	1,413.6	-989.0	4,534.3	4,284.8	249.52	18.172	
11,023.6	6,586.1	6,590.1	6,590.1	120.4	130.0	-87.08	1,413.6	-989.0	4,557.2	4,307.1	250.16	18.217	
11,100.0	6,585.1	6,589.1	6,589.1	122.6	130.0	-87.03	1,413.6	-989.0	4,631.3	4,379.1	252.23	18.361	
11,122.0	6,584.8	6,588.8	6,588.8	123.2	130.0	-87.02	1,413.6	-989.0	4,652.7	4,399.8	252.83	18.402	
11,200.0	6,583.8	6,587.8	6,587.8	125.3	129.9	-86.97	1,413.6	-989.0	4,728.4	4,473.4	254.94	18.547	
11,220.4	6,583.6	6,587.6	6,587.6	125.9	129.9	-86.95	1,413.6	-989.0	4,748.3	4,492.8	255.50	18.584	
11,300.0	6,582.5	6,586.5	6,586.5	128.1	129.9	-86.90	1,413.6	-989.0	4,825.6	4,567.9	257.66	18.729	
11,318.9	6,582.3	6,586.3	6,586.3	128.6	129.9	-86.89	1,413.6	-989.0	4,844.0	4,585.8	258.17	18.763	
11,400.0	6,581.2	6,585.2	6,585.2	130.8	129.9	-86.83	1,413.6	-989.0	4,922.9	4,662.5	260.37	18.907	
11,417.3	6,581.0	6,585.0	6,585.0	131.3	129.9	-86.82	1,413.6	-989.0	4,939.8	4,678.9	260.84	18.938	
11,500.0	6,580.0	6,584.0	6,584.0	133.6	129.9	-86.77	1,413.6	-989.0	5,020.3	4,757.2	263.09	19.082	
11,515.7	6,579.7	6,583.7	6,583.7	134.0	129.8	-86.76	1,413.6	-989.0	5,035.7	4,772.1	263.51	19.110	
11,600.0	6,578.7	6,582.7	6,582.7	136.3	129.8	-86.70	1,413.6	-989.0	5,117.8	4,852.0	265.80	19.254	
11,614.1	6,578.5	6,582.5	6,582.5	136.7	129.8	-86.69	1,413.6	-989.0	5,131.7	4,865.5	266.19	19.278	
11,700.0	6,577.4	6,581.4	6,581.4	139.1	129.8	-86.63	1,413.6	-989.0	5,215.5	4,946.9	268.52	19.423	
11,712.6	6,577.2	6,581.2	6,581.2	139.5	129.8	-86.62	1,413.6	-989.0	5,227.7	4,958.9	268.87	19.444	
11,800.0	6,576.1	6,580.1	6,580.1	141.9	129.8	-86.57	1,413.6	-989.0	5,313.2	5,041.9	271.24	19.588	
11,811.0	6,575.9	6,579.9	6,579.9	142.2	129.8	-86.56	1,413.6	-989.0	5,323.9	5,052.4	271.54	19.606	
11,882.7	6,575.0	6,579.0	6,579.0	144.2	129.8	-86.51	1,413.6	-989.0	5,394.0	5,120.5	273.49	19.723	
11,883.5	6,575.0	6,579.0	6,579.0	144.2	129.8	-86.51	1,413.6	-989.0	5,394.8	5,121.3	273.51	19.725	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-101.81	-1,313.6	-6,282.1	6,418.0				
98.4	98.4	79.2	79.2	0.1	0.0	-101.81	-1,313.5	-6,282.0	6,417.9	6,417.8	0.11	N/A	
100.0	100.0	81.1	81.1	0.1	0.0	-101.81	-1,313.5	-6,282.0	6,417.9	6,417.8	0.11	N/A	
196.8	196.8	197.7	197.7	0.3	0.2	-101.81	-1,313.0	-6,281.6	6,417.5	6,417.0	0.52	N/A	
200.0	200.0	201.2	201.2	0.3	0.2	-101.81	-1,313.0	-6,281.6	6,417.5	6,416.9	0.53	N/A	
295.3	295.3	299.3	299.3	0.5	0.3	-101.80	-1,312.5	-6,281.1	6,416.9	6,416.1	0.83	7,716.100	
300.0	300.0	300.0	300.0	0.5	0.3	-101.80	-1,312.5	-6,281.1	6,416.9	6,416.0	0.84	7,613.376	
393.7	393.7	373.7	373.7	0.8	0.3	-101.80	-1,312.2	-6,280.8	6,416.5	6,415.4	1.10	5,854.722	
400.0	400.0	378.4	378.4	0.8	0.4	-101.80	-1,312.2	-6,280.8	6,416.5	6,415.4	1.11	5,765.818	
492.1	492.1	488.6	488.6	1.0	0.4	-101.80	-1,311.7	-6,280.6	6,416.2	6,414.9	1.38	4,640.807	
500.0	500.0	499.6	499.6	1.0	0.4	-101.80	-1,311.7	-6,280.6	6,416.2	6,414.8	1.41	4,561.840	
590.5	590.5	592.5	592.5	1.2	0.5	-101.79	-1,311.2	-6,280.2	6,415.7	6,414.0	1.66	3,871.836	
600.0	600.0	600.0	600.0	1.2	0.5	-101.79	-1,311.2	-6,280.1	6,415.6	6,414.0	1.68	3,814.221	
689.0	689.0	674.4	674.4	1.4	0.5	-101.79	-1,311.0	-6,279.8	6,415.2	6,413.3	1.92	3,347.539	
700.0	700.0	683.5	683.4	1.4	0.5	-101.79	-1,311.0	-6,279.8	6,415.2	6,413.3	1.95	3,297.734	
787.4	787.4	759.7	759.7	1.6	0.6	-101.79	-1,310.8	-6,279.7	6,415.0	6,412.9	2.17	2,952.713	
800.0	800.0	770.9	770.9	1.7	0.6	-101.79	-1,310.8	-6,279.7	6,415.0	6,412.8	2.21	2,908.968	
885.8	885.8	852.2	852.2	1.9	0.6	-101.79	-1,310.6	-6,279.7	6,415.0	6,412.6	2.43	2,636.727	
900.0	900.0	866.2	866.2	1.9	0.6	-101.79	-1,310.6	-6,279.7	6,415.0	6,412.5	2.47	2,596.037	
984.2	984.2	970.8	970.8	2.1	0.6	-101.79	-1,310.5	-6,279.6	6,414.9	6,412.2	2.69	2,383.555	
1,000.0	1,000.0	993.2	993.2	2.1	0.7	-101.79	-1,310.5	-6,279.5	6,414.8	6,412.1	2.73	2,348.339	
1,082.7	1,082.7	1,057.3	1,057.2	2.3	0.7	-101.79	-1,310.5	-6,279.3	6,414.6	6,411.6	2.92	2,193.853	
1,100.0	1,100.0	1,070.0	1,070.0	2.3	0.7	-101.79	-1,310.5	-6,279.2	6,414.6	6,411.6	2.96	2,164.215	
1,118.8	1,118.8	1,083.9	1,083.8	2.4	0.7	-101.79	-1,310.5	-6,279.2	6,414.5	6,411.5	3.01	2,132.872	
1,181.1	1,181.1	1,136.4	1,136.4	2.5	0.7	-101.79	-1,310.7	-6,279.3	6,414.6	6,411.4	3.16	2,032.617	
1,200.0	1,200.0	1,153.5	1,153.5	2.6	0.7	-101.79	-1,310.7	-6,279.3	6,414.6	6,411.4	3.20	2,003.574	
1,279.5	1,279.5	1,249.4	1,249.4	2.7	0.7	-101.79	-1,310.7	-6,279.4	6,414.8	6,411.4	3.39	1,892.615	
1,300.0	1,300.0	1,285.5	1,285.5	2.8	0.7	-101.79	-1,310.7	-6,279.4	6,414.7	6,411.3	3.44	1,867.176	
1,377.9	1,377.9	1,365.0	1,365.0	3.0	0.7	-101.79	-1,310.7	-6,279.1	6,414.4	6,410.8	3.63	1,767.833	
1,400.0	1,400.0	1,385.6	1,385.6	3.0	0.7	-101.79	-1,310.7	-6,279.0	6,414.4	6,410.7	3.68	1,741.355	
1,476.4	1,476.4	1,458.7	1,458.7	3.2	0.7	-26.68	-1,310.9	-6,278.7	6,413.2	6,409.3	3.90	1,644.500	
1,500.0	1,500.0	1,481.5	1,481.5	3.2	0.7	-26.69	-1,310.9	-6,278.7	6,412.5	6,408.6	3.96	1,619.247	
1,574.8	1,574.7	1,554.0	1,554.0	3.4	0.8	-26.74	-1,311.0	-6,278.5	6,409.1	6,405.0	4.14	1,546.272	
1,600.0	1,599.8	1,578.5	1,578.5	3.4	0.8	-26.76	-1,311.1	-6,278.4	6,407.6	6,403.4	4.21	1,523.126	
1,673.2	1,672.8	1,649.1	1,649.1	3.6	0.8	-26.83	-1,311.3	-6,278.2	6,402.1	6,397.7	4.38	1,462.245	
1,700.0	1,699.5	1,674.8	1,674.8	3.7	0.8	-26.86	-1,311.2	-6,278.2	6,399.6	6,395.2	4.44	1,441.682	
1,771.6	1,770.6	1,741.0	1,741.0	3.8	0.8	-26.96	-1,310.8	-6,278.2	6,392.1	6,387.4	4.61	1,385.157	
1,800.0	1,798.7	1,766.6	1,766.5	3.9	0.8	-27.01	-1,310.6	-6,278.2	6,388.6	6,384.0	4.69	1,363.139	
1,870.1	1,868.0	1,833.6	1,833.6	4.1	0.8	-27.13	-1,310.0	-6,278.3	6,379.2	6,374.3	4.87	1,309.719	
1,900.0	1,897.5	1,864.0	1,864.0	4.2	0.8	-27.19	-1,309.7	-6,278.4	6,374.7	6,369.7	4.95	1,287.903	
1,968.5	1,964.8	1,935.9	1,935.9	4.4	0.9	-27.34	-1,308.9	-6,278.5	6,363.3	6,358.2	5.14	1,238.213	
2,000.0	1,995.6	1,970.1	1,970.0	4.5	0.9	-27.42	-1,308.6	-6,278.5	6,357.6	6,352.3	5.23	1,216.284	
2,066.9	2,060.9	2,035.2	2,035.2	4.7	0.9	-27.60	-1,307.7	-6,278.6	6,344.4	6,339.0	5.42	1,170.363	
2,100.0	2,093.1	2,064.9	2,064.9	4.8	0.9	-27.69	-1,307.2	-6,278.7	6,337.4	6,331.9	5.52	1,148.866	
2,165.3	2,156.3	2,142.6	2,142.6	5.1	0.9	-27.90	-1,305.5	-6,278.9	6,322.6	6,316.8	5.72	1,104.797	
2,200.0	2,189.6	2,198.8	2,198.7	5.2	0.9	-28.04	-1,304.4	-6,278.9	6,314.1	6,308.2	5.84	1,081.731	
2,263.8	2,250.7	2,242.1	2,242.0	5.5	1.0	-28.25	-1,303.6	-6,278.8	6,297.5	6,291.4	6.04	1,042.250	
2,280.0	2,266.2	2,252.9	2,252.8	5.6	1.0	-28.31	-1,303.3	-6,278.8	6,293.1	6,287.0	6.09	1,032.666	
2,300.0	2,285.3	2,266.2	2,266.1	5.7	1.0	-28.32	-1,303.1	-6,278.8	6,287.6	6,281.5	6.16	1,021.180	
2,362.2	2,344.6	2,316.7	2,316.6	6.0	1.0	-28.38	-1,302.1	-6,279.0	6,270.8	6,264.5	6.36	986.723	
2,400.0	2,380.6	2,371.6	2,371.5	6.2	1.0	-28.45	-1,301.1	-6,279.0	6,260.6	6,254.1	6.49	964.304	
2,460.6	2,438.4	2,500.0	2,499.9	6.5	1.1	-28.61	-1,299.2	-6,278.1	6,243.7	6,236.9	6.73	927.215	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,500.0	2,475.9	2,534.0	2,533.9	6.7	1.1	-28.65	-1,298.6	-6,277.7	6,232.5	6,225.6	6.87	906.903	
2,559.0	2,532.2	2,569.1	2,569.0	7.0	1.1	-28.69	-1,297.9	-6,277.3	6,215.9	6,208.8	7.08	878.094	
2,600.0	2,571.2	2,600.0	2,599.9	7.2	1.1	-28.73	-1,297.2	-6,277.2	6,204.5	6,197.3	7.23	858.683	
2,657.5	2,626.0	2,639.4	2,639.2	7.5	1.1	-28.78	-1,296.3	-6,277.0	6,188.6	6,181.2	7.43	832.900	
2,700.0	2,666.6	2,675.3	2,675.1	7.8	1.1	-28.82	-1,295.7	-6,276.9	6,176.9	6,169.3	7.58	814.387	
2,755.9	2,719.8	2,739.8	2,739.6	8.1	1.1	-28.90	-1,294.6	-6,276.7	6,161.6	6,153.8	7.80	790.006	
2,800.0	2,761.9	2,805.5	2,805.3	8.3	1.2	-28.99	-1,293.1	-6,276.3	6,149.3	6,141.3	7.98	770.900	
2,854.3	2,813.7	2,885.3	2,885.1	8.7	1.2	-29.08	-1,291.2	-6,275.5	6,134.0	6,125.8	8.20	747.860	
2,900.0	2,857.2	2,935.2	2,935.0	8.9	1.2	-29.15	-1,290.1	-6,274.8	6,121.0	6,112.6	8.38	729.997	
2,952.7	2,907.5	2,987.2	2,986.9	9.2	1.2	-29.21	-1,289.2	-6,274.0	6,105.9	6,097.4	8.60	710.286	
3,000.0	2,952.5	3,035.6	3,035.4	9.5	1.2	-29.28	-1,288.7	-6,273.2	6,092.5	6,083.7	8.79	693.329	
3,051.2	3,001.3	3,088.9	3,088.6	9.8	1.2	-29.36	-1,288.4	-6,272.2	6,077.8	6,068.9	9.00	675.559	
3,100.0	3,047.8	3,126.1	3,125.8	10.1	1.3	-29.41	-1,288.3	-6,271.5	6,063.9	6,054.7	9.19	659.728	
3,149.6	3,095.1	3,160.0	3,159.8	10.4	1.3	-29.46	-1,288.2	-6,270.9	6,049.9	6,040.5	9.39	644.318	
3,200.0	3,143.2	3,200.0	3,199.7	10.7	1.3	-29.52	-1,288.0	-6,270.3	6,035.7	6,026.1	9.59	629.139	
3,248.0	3,188.9	3,224.0	3,223.7	11.0	1.3	-29.56	-1,287.9	-6,270.0	6,022.3	6,012.5	9.78	615.604	
3,300.0	3,238.5	3,255.1	3,254.8	11.3	1.3	-29.60	-1,287.7	-6,269.7	6,008.0	5,998.0	9.99	601.396	
3,346.4	3,282.8	3,300.0	3,299.7	11.6	1.3	-29.67	-1,287.6	-6,269.5	5,995.3	5,985.2	10.18	588.739	
3,400.0	3,333.8	3,300.0	3,299.7	11.9	1.3	-29.67	-1,287.6	-6,269.5	5,980.9	5,970.5	10.39	575.782	
3,444.9	3,376.6	3,337.3	3,337.1	12.2	1.3	-29.72	-1,287.6	-6,269.4	5,968.9	5,958.3	10.56	565.198	
3,500.0	3,429.1	3,366.9	3,366.6	12.6	1.3	-29.77	-1,287.5	-6,269.5	5,954.4	5,943.6	10.78	552.533	
3,543.3	3,470.4	3,400.0	3,399.7	12.8	1.3	-29.81	-1,287.4	-6,269.8	5,943.2	5,932.2	10.95	542.739	
3,600.0	3,524.4	3,424.6	3,424.3	13.2	1.3	-29.85	-1,287.4	-6,270.0	5,928.6	5,917.5	11.17	530.573	
3,641.7	3,564.2	3,451.3	3,451.1	13.4	1.3	-29.89	-1,287.5	-6,270.3	5,918.1	5,906.7	11.34	521.851	
3,700.0	3,619.8	3,500.0	3,499.7	13.8	1.3	-29.97	-1,287.8	-6,271.0	5,903.5	5,891.9	11.57	510.067	
3,740.1	3,658.0	3,523.0	3,522.7	14.0	1.3	-30.00	-1,288.0	-6,271.4	5,893.5	5,881.7	11.74	502.141	
3,800.0	3,715.1	3,584.0	3,583.6	14.4	1.3	-30.10	-1,288.5	-6,272.3	5,878.6	5,866.6	11.99	490.418	
3,838.6	3,751.8	3,600.0	3,599.7	14.7	1.3	-30.12	-1,288.7	-6,272.5	5,869.1	5,856.9	12.14	483.337	
3,900.0	3,810.4	3,654.1	3,653.8	15.0	1.3	-30.21	-1,289.1	-6,273.4	5,853.9	5,841.5	12.40	472.108	
3,937.0	3,845.7	3,677.9	3,677.6	15.3	1.3	-30.25	-1,289.3	-6,273.9	5,844.9	5,832.4	12.55	465.637	
4,000.0	3,905.7	3,737.6	3,737.3	15.7	1.3	-30.34	-1,289.7	-6,275.3	5,829.8	5,816.9	12.82	454.741	
4,035.4	3,939.5	3,783.9	3,783.6	15.9	1.3	-30.41	-1,289.8	-6,276.3	5,821.2	5,808.2	12.97	448.649	
4,100.0	4,001.0	3,850.4	3,850.0	16.3	1.3	-30.51	-1,289.9	-6,277.7	5,805.4	5,792.2	13.26	437.966	
4,133.8	4,033.3	3,883.0	3,882.7	16.5	1.3	-30.56	-1,289.8	-6,278.4	5,797.1	5,783.7	13.40	432.534	
4,200.0	4,096.3	3,963.1	3,962.7	16.9	1.4	-30.68	-1,289.6	-6,280.0	5,780.9	5,767.2	13.70	422.024	
4,232.3	4,127.1	4,007.6	4,007.2	17.1	1.4	-30.74	-1,289.3	-6,280.8	5,773.0	5,759.1	13.85	416.954	
4,300.0	4,191.7	4,124.3	4,123.9	17.6	1.4	-30.92	-1,288.7	-6,282.1	5,755.8	5,741.6	14.17	406.192	
4,330.7	4,220.9	4,161.0	4,160.6	17.8	1.4	-30.98	-1,288.6	-6,282.3	5,747.9	5,733.6	14.31	401.670	
4,400.0	4,287.0	4,234.4	4,234.0	18.2	1.4	-31.09	-1,288.7	-6,282.6	5,729.9	5,715.3	14.62	391.876	
4,429.1	4,314.7	4,261.7	4,261.3	18.4	1.4	-31.14	-1,288.7	-6,282.7	5,722.4	5,707.6	14.75	387.915	
4,500.0	4,382.3	4,329.0	4,328.6	18.8	1.4	-31.25	-1,288.6	-6,282.9	5,704.0	5,689.0	15.07	378.517	
4,527.5	4,408.6	4,355.6	4,355.2	19.0	1.4	-31.29	-1,288.5	-6,283.0	5,696.9	5,681.7	15.19	374.943	
4,600.0	4,477.6	4,420.0	4,419.6	19.5	1.4	-31.39	-1,288.4	-6,283.3	5,678.2	5,662.7	15.52	365.867	
4,626.0	4,502.4	4,439.8	4,439.3	19.6	1.4	-31.42	-1,288.3	-6,283.4	5,671.5	5,655.9	15.64	362.740	
4,700.0	4,572.9	4,500.0	4,499.6	20.1	1.4	-31.52	-1,288.2	-6,283.8	5,652.7	5,636.7	15.97	354.027	
4,724.4	4,596.2	4,518.8	4,518.4	20.3	1.4	-31.55	-1,288.2	-6,284.0	5,646.5	5,630.4	16.08	351.238	
4,800.0	4,668.3	4,593.3	4,592.9	20.7	1.5	-31.67	-1,288.0	-6,284.6	5,627.3	5,610.9	16.42	342.651	
4,822.8	4,690.0	4,600.0	4,599.6	20.9	1.5	-31.68	-1,288.0	-6,284.6	5,621.5	5,605.0	16.52	340.277	
4,900.0	4,763.6	4,651.4	4,651.0	21.4	1.5	-31.77	-1,287.9	-6,285.2	5,602.3	5,585.4	16.86	332.220	
4,921.2	4,783.8	4,663.1	4,662.7	21.5	1.5	-31.79	-1,287.9	-6,285.4	5,597.0	5,580.1	16.96	330.077	
5,000.0	4,858.9	4,714.3	4,713.8	22.0	1.5	-31.87	-1,288.1	-6,286.3	5,577.9	5,560.6	17.31	322.299	
5,019.7	4,877.7	4,737.4	4,737.0	22.1	1.5	-31.91	-1,288.2	-6,286.8	5,573.2	5,555.8	17.40	320.302	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,954.2	4,888.5	4,888.0	22.6	1.5	-32.18	-1,289.4	-6,288.6	5,553.6	5,535.7	17.82	311.664	
5,118.1	4,971.5	4,900.0	4,899.5	22.8	1.5	-32.20	-1,289.5	-6,288.6	5,549.0	5,531.1	17.90	309.967	
5,171.8	5,022.7	4,947.0	4,946.6	23.1	1.5	-32.28	-1,289.9	-6,288.8	5,535.4	5,517.2	18.15	304.905	
5,200.0	5,049.6	4,966.5	4,966.1	23.3	1.5	-32.24	-1,290.1	-6,288.9	5,528.4	5,510.1	18.24	303.021	
5,216.5	5,065.4	4,978.0	4,977.5	23.3	1.5	-32.21	-1,290.2	-6,289.0	5,524.4	5,506.1	18.29	302.063	
5,300.0	5,145.7	5,066.5	5,066.0	23.7	1.5	-32.15	-1,290.8	-6,289.7	5,505.7	5,487.2	18.53	297.146	
5,314.9	5,160.1	5,085.7	5,085.2	23.8	1.5	-32.14	-1,291.0	-6,289.8	5,502.5	5,484.0	18.57	296.333	
5,400.0	5,242.7	5,213.2	5,212.7	24.1	1.5	-32.14	-1,291.9	-6,290.0	5,485.4	5,466.6	18.81	291.691	
5,413.4	5,255.7	5,232.4	5,231.9	24.2	1.5	-32.14	-1,292.0	-6,289.9	5,482.8	5,464.0	18.84	291.048	
5,500.0	5,340.5	5,349.5	5,349.1	24.5	1.5	-32.11	-1,292.3	-6,289.2	5,467.1	5,448.1	19.04	287.081	
5,511.8	5,352.1	5,364.3	5,363.8	24.5	1.5	-32.11	-1,292.3	-6,289.1	5,465.1	5,446.1	19.07	286.612	
5,600.0	5,439.0	5,487.8	5,487.3	24.8	1.5	-32.08	-1,292.6	-6,287.5	5,451.2	5,432.0	19.25	283.161	
5,610.2	5,449.1	5,501.9	5,501.5	24.8	1.5	-32.08	-1,292.5	-6,287.3	5,449.7	5,430.4	19.27	282.812	
5,700.0	5,538.0	5,590.2	5,589.7	25.1	1.5	-32.02	-1,292.3	-6,285.9	5,437.7	5,418.3	19.41	280.079	
5,708.6	5,546.6	5,598.7	5,598.2	25.1	1.5	-32.02	-1,292.3	-6,285.7	5,436.7	5,417.3	19.43	279.856	
5,800.0	5,637.4	5,695.7	5,695.2	25.3	1.5	-31.98	-1,292.8	-6,283.9	5,427.2	5,407.6	19.56	277.523	
5,807.1	5,644.5	5,700.0	5,699.5	25.3	1.5	-31.98	-1,292.9	-6,283.8	5,426.5	5,407.0	19.56	277.386	
5,900.0	5,737.2	5,788.3	5,787.7	25.5	1.6	-31.96	-1,293.9	-6,282.0	5,419.5	5,399.9	19.67	275.477	
5,905.5	5,742.6	5,793.4	5,792.8	25.5	1.6	-31.95	-1,293.9	-6,281.9	5,419.2	5,399.5	19.68	275.385	
6,000.0	5,837.1	5,867.3	5,866.7	25.6	1.6	-31.94	-1,295.0	-6,280.5	5,415.1	5,395.3	19.77	273.884	
6,003.9	5,841.0	5,870.3	5,869.8	25.6	1.6	-31.94	-1,295.0	-6,280.4	5,415.0	5,395.2	19.77	273.832	
6,051.8	5,888.9	5,900.0	5,899.4	25.7	1.6	-107.07	-1,295.5	-6,279.9	5,414.2	5,389.4	24.80	218.326	
6,081.8	5,918.9	5,931.1	5,930.6	25.7	1.6	-107.07	-1,296.0	-6,279.5	5,413.9	5,389.1	24.83	218.017 ES	
6,088.1	5,925.2	5,936.1	5,935.5	25.7	1.6	162.93	-1,296.0	-6,279.4	5,413.9	5,394.0	19.86	272.640 CC	
6,100.0	5,937.1	5,945.5	5,944.9	25.7	1.6	162.92	-1,296.2	-6,279.3	5,414.0	5,394.1	19.85	272.782	
6,102.3	5,939.4	5,947.3	5,946.8	25.7	1.6	162.92	-1,296.2	-6,279.3	5,414.0	5,394.2	19.84	272.816	
6,150.0	5,987.0	5,984.9	5,984.3	25.7	1.6	162.87	-1,296.7	-6,278.8	5,416.5	5,396.7	19.82	273.236	
6,200.0	6,036.5	6,030.2	6,029.6	25.7	1.6	162.74	-1,297.3	-6,278.4	5,422.4	5,402.6	19.83	273.450	
6,200.8	6,037.3	6,031.0	6,030.4	25.7	1.6	162.73	-1,297.3	-6,278.4	5,422.5	5,402.7	19.83	273.454	
6,250.0	6,085.5	6,078.8	6,078.2	25.7	1.6	162.54	-1,297.8	-6,278.0	5,431.7	5,411.8	19.85	273.639	
6,299.2	6,133.0	6,124.5	6,123.9	25.6	1.6	162.26	-1,298.2	-6,277.7	5,443.9	5,424.1	19.87	274.006	
6,300.0	6,133.7	6,125.2	6,124.6	25.6	1.6	162.26	-1,298.2	-6,277.6	5,444.2	5,424.3	19.87	274.013	
6,350.0	6,180.9	6,169.6	6,168.9	25.5	1.6	161.89	-1,298.7	-6,277.3	5,459.9	5,440.0	19.88	274.676	
6,397.6	6,224.6	6,214.5	6,213.9	25.4	1.6	161.46	-1,299.3	-6,276.9	5,477.8	5,457.9	19.88	275.582	
6,400.0	6,226.7	6,217.2	6,216.6	25.4	1.6	161.44	-1,299.4	-6,276.9	5,478.7	5,458.8	19.88	275.629	
6,450.0	6,271.1	6,273.9	6,273.2	25.2	1.6	160.90	-1,300.1	-6,276.3	5,500.5	5,480.7	19.87	276.789	
6,496.0	6,310.4	6,322.8	6,322.2	25.1	1.6	160.31	-1,300.7	-6,275.7	5,523.1	5,503.3	19.87	278.000	
6,500.0	6,313.7	6,326.8	6,326.2	25.1	1.6	160.25	-1,300.7	-6,275.7	5,525.2	5,505.3	19.87	278.104	
6,550.0	6,354.4	6,376.2	6,375.5	25.0	1.6	159.46	-1,301.3	-6,275.1	5,552.6	5,532.7	19.87	279.403	
6,594.5	6,388.9	6,420.7	6,420.1	24.9	1.6	158.63	-1,301.7	-6,274.4	5,579.1	5,559.2	19.90	280.332	
6,600.0	6,393.0	6,426.5	6,425.9	24.9	1.6	158.52	-1,301.8	-6,274.3	5,582.6	5,562.7	19.91	280.422	
6,650.0	6,429.3	6,477.5	6,476.9	24.8	1.6	157.41	-1,302.3	-6,273.4	5,615.0	5,595.0	19.99	280.874	
6,692.9	6,458.5	6,511.1	6,510.5	24.7	1.6	156.24	-1,302.7	-6,272.8	5,644.8	5,624.6	20.12	280.574	
6,700.0	6,463.1	6,515.0	6,514.4	24.7	1.6	156.02	-1,302.7	-6,272.7	5,649.8	5,629.7	20.15	280.454	
6,750.0	6,494.3	6,541.3	6,540.6	24.7	1.6	154.29	-1,303.1	-6,272.2	5,686.9	5,666.5	20.40	278.733	
6,791.3	6,517.9	6,561.2	6,560.5	24.7	1.6	152.56	-1,303.4	-6,271.8	5,719.1	5,698.4	20.72	276.024	
6,800.0	6,522.6	6,565.2	6,564.5	24.7	1.6	152.15	-1,303.4	-6,271.8	5,726.0	5,705.2	20.80	275.314	
6,850.0	6,548.0	6,586.7	6,586.0	24.7	1.6	149.50	-1,303.8	-6,271.4	5,767.0	5,745.7	21.37	269.907	
6,889.7	6,566.0	6,600.0	6,599.3	24.8	1.6	146.90	-1,304.0	-6,271.1	5,800.9	5,778.9	21.97	264.053	
6,900.0	6,570.4	6,600.0	6,599.3	24.9	1.6	146.11	-1,304.0	-6,271.1	5,809.8	5,787.6	22.15	262.332	
6,950.0	6,589.5	6,620.8	6,620.1	25.1	1.6	141.90	-1,304.4	-6,270.8	5,853.9	5,830.8	23.15	252.879	
6,988.2	6,602.0	6,630.9	6,630.2	25.3	1.6	137.82	-1,304.6	-6,270.6	5,888.5	5,864.4	24.08	244.553	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.4	6,633.7	6,633.0	25.3	1.6	136.38	-1,304.7	-6,270.5	5,899.4	5,875.0	24.39	241.909	
7,050.0	6,618.0	6,644.1	6,643.3	25.6	1.6	129.18	-1,304.9	-6,270.4	5,945.8	5,920.0	25.79	230.524	
7,086.6	6,625.0	6,649.9	6,649.2	25.9	1.6	122.56	-1,305.0	-6,270.3	5,980.4	5,953.5	26.83	222.898	
7,100.0	6,627.1	6,651.7	6,651.0	26.0	1.6	119.82	-1,305.1	-6,270.2	5,993.1	5,965.9	27.17	220.537	
7,150.0	6,632.8	6,656.7	6,656.0	26.5	1.6	108.00	-1,305.2	-6,270.2	6,040.9	6,012.7	28.16	214.549	
7,185.0	6,634.7	6,658.7	6,657.9	26.8	1.6	98.40	-1,305.2	-6,270.1	6,074.6	6,046.2	28.43	213.657	
7,200.0	6,635.0	6,659.1	6,658.4	27.0	1.6	94.07	-1,305.2	-6,270.1	6,089.1	6,060.6	28.48	213.816	
7,215.9	6,635.0	6,659.2	6,658.5	27.1	1.6	89.40	-1,305.3	-6,270.1	6,104.4	6,075.8	28.55	213.778	
7,283.4	6,634.1	6,659.4	6,658.7	27.9	1.6	89.41	-1,305.3	-6,270.1	6,169.6	6,140.2	29.39	209.931	
7,300.0	6,633.9	6,659.5	6,658.8	28.1	1.6	89.41	-1,305.3	-6,270.1	6,185.6	6,156.0	29.59	209.022	
7,381.9	6,632.9	6,659.7	6,659.0	29.3	1.6	89.42	-1,305.3	-6,270.1	6,264.7	6,234.0	30.77	203.614	
7,400.0	6,632.6	6,659.7	6,659.0	29.5	1.6	89.42	-1,305.3	-6,270.1	6,282.3	6,251.2	31.03	202.472	
7,480.3	6,631.6	6,659.9	6,659.2	30.8	1.6	89.43	-1,305.3	-6,270.1	6,359.9	6,327.6	32.33	196.711	
7,500.0	6,631.4	6,660.0	6,659.3	31.1	1.6	89.43	-1,305.3	-6,270.1	6,379.0	6,346.4	32.65	195.368	
7,578.7	6,630.4	6,660.2	6,659.4	32.5	1.6	89.43	-1,305.3	-6,270.1	6,455.3	6,421.2	34.06	189.548	
7,600.0	6,630.1	6,660.2	6,659.5	32.9	1.6	89.43	-1,305.3	-6,270.1	6,475.9	6,441.4	34.44	188.057	
7,677.1	6,629.1	6,660.4	6,659.7	34.3	1.6	89.44	-1,305.3	-6,270.1	6,550.7	6,514.7	35.92	182.382	
7,700.0	6,628.8	6,660.5	6,659.7	34.8	1.6	89.44	-1,305.3	-6,270.1	6,572.8	6,536.5	36.36	180.791	
7,775.6	6,627.8	6,660.6	6,659.9	36.3	1.6	89.45	-1,305.3	-6,270.1	6,646.2	6,608.3	37.89	175.388	
7,800.0	6,627.5	6,660.7	6,660.0	36.8	1.6	89.45	-1,305.3	-6,270.1	6,669.9	6,631.5	38.39	173.735	
7,874.0	6,626.6	6,660.9	6,660.2	38.4	1.6	89.46	-1,305.3	-6,270.1	6,741.7	6,701.8	39.97	168.676	
7,900.0	6,626.3	6,661.0	6,660.2	38.9	1.6	89.46	-1,305.3	-6,270.1	6,767.0	6,726.5	40.52	166.992	
7,972.4	6,625.3	6,661.1	6,660.4	40.5	1.6	89.46	-1,305.3	-6,270.1	6,837.4	6,795.3	42.13	162.308	
8,000.0	6,625.0	6,661.2	6,660.5	41.1	1.6	89.47	-1,305.3	-6,270.1	6,864.2	6,821.5	42.74	160.618	
8,070.8	6,624.1	6,661.4	6,660.7	42.7	1.6	89.47	-1,305.3	-6,270.1	6,933.1	6,888.8	44.35	156.315	
8,100.0	6,623.7	6,661.4	6,660.7	43.4	1.6	89.47	-1,305.3	-6,270.1	6,961.5	6,916.5	45.02	154.635	
8,169.3	6,622.8	6,661.6	6,660.9	45.0	1.6	89.48	-1,305.3	-6,270.1	7,028.9	6,982.3	46.64	150.703	
8,200.0	6,622.4	6,661.7	6,661.0	45.7	1.6	89.48	-1,305.3	-6,270.1	7,058.9	7,011.5	47.36	149.046	
8,267.7	6,621.6	6,661.8	6,661.1	47.4	1.6	89.49	-1,305.3	-6,270.1	7,124.8	7,075.8	48.98	145.465	
8,300.0	6,621.1	6,661.9	6,661.2	48.1	1.6	89.49	-1,305.3	-6,270.1	7,156.3	7,106.5	49.75	143.839	
8,366.1	6,620.3	6,662.1	6,661.4	49.7	1.6	89.49	-1,305.3	-6,270.1	7,220.8	7,169.4	51.36	140.585	
8,400.0	6,619.9	6,662.2	6,661.4	50.6	1.6	89.50	-1,305.3	-6,270.1	7,253.8	7,201.6	52.19	138.997	
8,464.5	6,619.0	6,662.3	6,661.6	52.2	1.6	89.50	-1,305.3	-6,270.1	7,316.8	7,263.0	53.78	136.044	
8,500.0	6,618.6	6,662.4	6,661.7	53.0	1.6	89.50	-1,305.3	-6,270.1	7,351.4	7,296.7	54.66	134.496	
8,563.0	6,617.8	6,662.5	6,661.8	54.6	1.6	89.51	-1,305.3	-6,270.1	7,412.9	7,356.6	56.24	131.817	
8,600.0	6,617.3	6,662.6	6,661.9	55.5	1.6	89.51	-1,305.3	-6,270.1	7,449.0	7,391.9	57.16	130.312	
8,661.4	6,616.5	6,662.8	6,662.1	57.1	1.6	89.52	-1,305.3	-6,270.1	7,509.0	7,450.3	58.72	127.883	
8,700.0	6,616.0	6,662.9	6,662.1	58.1	1.6	89.52	-1,305.3	-6,270.1	7,546.7	7,487.0	59.70	126.421	
8,759.8	6,615.2	6,663.0	6,662.3	59.6	1.6	89.52	-1,305.3	-6,270.1	7,605.2	7,544.0	61.22	124.217	
8,800.0	6,614.7	6,663.1	6,662.4	60.6	1.6	89.53	-1,305.3	-6,270.1	7,644.5	7,582.2	62.25	122.799	
8,858.2	6,614.0	6,663.2	6,662.5	62.1	1.6	89.53	-1,305.3	-6,270.1	7,701.4	7,637.7	63.75	120.799	
8,900.0	6,613.4	6,663.3	6,662.6	63.2	1.6	89.53	-1,305.3	-6,270.1	7,742.3	7,677.5	64.83	119.424	
8,956.7	6,612.7	6,663.5	6,662.7	64.7	1.6	89.54	-1,305.3	-6,270.1	7,797.8	7,731.5	66.30	117.609	
9,000.0	6,612.2	6,663.6	6,662.8	65.8	1.6	89.54	-1,305.3	-6,270.1	7,840.2	7,772.7	67.43	116.275	
9,055.1	6,611.5	6,663.7	6,663.0	67.3	1.6	89.54	-1,305.4	-6,270.1	7,894.1	7,825.2	68.87	114.626	
9,100.0	6,610.9	6,663.8	6,663.1	68.4	1.6	89.55	-1,305.4	-6,270.0	7,938.1	7,868.0	70.04	113.333	
9,153.5	6,610.2	6,663.9	6,663.2	69.8	1.6	89.55	-1,305.4	-6,270.0	7,990.5	7,919.1	71.45	111.835	
9,200.0	6,609.6	6,664.0	6,663.3	71.1	1.6	89.55	-1,305.4	-6,270.0	8,036.1	7,963.4	72.67	110.581	
9,251.9	6,608.9	6,664.1	6,663.4	72.4	1.6	89.56	-1,305.4	-6,270.0	8,087.0	8,012.9	74.04	109.219	
9,300.0	6,608.3	6,664.2	6,663.5	73.7	1.6	89.56	-1,305.4	-6,270.0	8,134.1	8,058.8	75.31	108.003	
9,350.4	6,607.7	6,664.3	6,663.6	75.0	1.6	89.56	-1,305.4	-6,270.0	8,183.5	8,106.8	76.65	106.763	
9,400.0	6,607.0	6,664.5	6,663.7	76.4	1.6	89.57	-1,305.4	-6,270.0	8,232.2	8,154.2	77.97	105.583	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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	6,606.4	6,664.6	6,663.8	77.7	1.6	89.57	-1,305.4	-6,270.0	8,280.0	8,200.8	79.27	104.455	
9,500.0	6,605.7	6,664.7	6,664.0	79.0	1.6	89.57	-1,305.4	-6,270.0	8,330.3	8,249.6	80.63	103.310	
9,547.2	6,605.1	6,664.8	6,664.1	80.3	1.6	89.58	-1,305.4	-6,270.0	8,376.6	8,294.7	81.90	102.282	
9,600.0	6,604.5	6,664.9	6,664.2	81.7	1.6	89.58	-1,305.4	-6,270.0	8,428.4	8,345.1	83.31	101.171	
9,645.6	6,603.9	6,665.0	6,664.3	82.9	1.6	89.58	-1,305.4	-6,270.0	8,473.3	8,388.7	84.53	100.235	
9,700.0	6,603.2	6,665.1	6,664.4	84.4	1.6	89.59	-1,305.4	-6,270.0	8,526.7	8,440.7	85.99	99.155	
9,744.1	6,602.6	6,665.2	6,664.5	85.6	1.6	89.59	-1,305.4	-6,270.0	8,569.9	8,482.8	87.18	98.303	
9,800.0	6,601.9	6,665.3	6,664.6	87.1	1.6	89.59	-1,305.4	-6,270.0	8,624.9	8,536.2	88.68	97.254	
9,842.5	6,601.3	6,665.4	6,664.7	88.2	1.6	89.60	-1,305.4	-6,270.0	8,666.7	8,576.8	89.83	96.477	
9,900.0	6,600.6	6,665.6	6,664.8	89.8	1.6	89.60	-1,305.4	-6,270.0	8,723.2	8,631.8	91.38	95.456	
9,940.9	6,600.1	6,665.6	6,664.9	90.9	1.6	89.60	-1,305.4	-6,270.0	8,763.4	8,670.9	92.49	94.749	
10,000.0	6,599.3	6,665.8	6,665.1	92.5	1.6	89.61	-1,305.4	-6,270.0	8,821.5	8,727.4	94.09	93.756	
10,039.3	6,598.8	6,665.9	6,665.1	93.5	1.6	89.61	-1,305.4	-6,270.0	8,860.2	8,765.1	95.16	93.112	
10,100.0	6,598.0	6,666.0	6,665.3	95.2	1.6	89.61	-1,305.4	-6,270.0	8,919.9	8,823.1	96.80	92.146	
10,137.8	6,597.5	6,666.1	6,665.4	96.2	1.6	89.62	-1,305.4	-6,270.0	8,957.0	8,859.2	97.83	91.559	
10,200.0	6,596.7	6,666.2	6,665.5	97.9	1.6	89.62	-1,305.4	-6,270.0	9,018.3	8,918.8	99.52	90.619	
10,236.2	6,596.3	6,666.3	6,665.6	98.9	1.6	89.62	-1,305.4	-6,270.0	9,053.9	8,953.4	100.50	90.084	
10,300.0	6,595.4	6,666.4	6,665.7	100.6	1.6	89.63	-1,305.4	-6,270.0	9,116.7	9,014.5	102.24	89.168	
10,334.6	6,595.0	6,666.5	6,665.8	101.6	1.6	89.63	-1,305.4	-6,270.0	9,150.8	9,047.6	103.19	88.683	
10,400.0	6,594.2	6,666.6	6,665.9	103.4	1.6	89.63	-1,305.4	-6,270.0	9,215.2	9,110.2	104.97	87.789	
10,433.0	6,593.7	6,666.7	6,666.0	104.3	1.6	89.64	-1,305.4	-6,270.0	9,247.7	9,141.9	105.87	87.348	
10,500.0	6,592.9	6,666.8	6,666.1	106.1	1.6	89.64	-1,305.4	-6,270.0	9,313.7	9,206.0	107.70	86.477	
10,531.5	6,592.5	6,666.9	6,666.2	106.9	1.6	89.64	-1,305.4	-6,270.0	9,344.7	9,236.1	108.56	86.077	
10,600.0	6,591.6	6,667.0	6,666.3	108.8	1.6	89.65	-1,305.4	-6,270.0	9,412.2	9,301.8	110.44	85.227	
10,629.9	6,591.2	6,667.1	6,666.4	109.6	1.6	89.65	-1,305.4	-6,270.0	9,441.7	9,330.4	111.26	84.865	
10,700.0	6,590.3	6,667.2	6,666.5	111.6	1.6	89.65	-1,305.4	-6,270.0	9,510.8	9,397.6	113.18	84.035	
10,728.3	6,589.9	6,667.3	6,666.6	112.3	1.6	89.65	-1,305.4	-6,270.0	9,538.7	9,424.7	113.95	83.707	
10,800.0	6,589.0	6,667.5	6,666.7	114.3	1.6	89.66	-1,305.4	-6,270.0	9,609.4	9,493.4	115.92	82.897	
10,826.7	6,588.7	6,667.5	6,666.8	115.0	1.6	89.66	-1,305.4	-6,270.0	9,635.7	9,519.1	116.65	82.602	
10,900.0	6,587.7	6,667.7	6,666.9	117.1	1.6	89.66	-1,305.4	-6,270.0	9,708.0	9,589.3	118.66	81.810	
10,925.2	6,587.4	6,667.7	6,667.0	117.7	1.6	89.67	-1,305.4	-6,270.0	9,732.8	9,613.5	119.36	81.544	
11,000.0	6,586.4	6,667.9	6,667.1	119.8	1.6	89.67	-1,305.4	-6,270.0	9,806.6	9,685.2	121.41	80.770	
11,023.6	6,586.1	6,667.9	6,667.2	120.4	1.6	89.67	-1,305.4	-6,270.0	9,829.9	9,707.8	122.06	80.531	
11,100.0	6,585.1	6,668.1	6,667.4	122.6	1.6	89.68	-1,305.5	-6,270.0	9,905.3	9,781.1	124.17	79.775	
11,122.0	6,584.8	6,668.1	6,667.4	123.2	1.6	89.68	-1,305.5	-6,270.0	9,927.0	9,802.3	124.77	79.561 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-89.08	121.8	-7,598.5	7,599.6					
98.4	98.4	46.2	46.2	0.1	0.0	-89.08	121.7	-7,598.6	7,599.6	7,599.5	0.10	N/A		
100.0	100.0	47.3	47.3	0.1	0.0	-89.08	121.7	-7,598.6	7,599.6	7,599.5	0.11	N/A		
196.8	196.8	137.2	137.1	0.3	0.1	-89.09	121.1	-7,598.9	7,599.9	7,599.5	0.40	N/A		
200.0	200.0	141.9	141.9	0.3	0.1	-89.09	121.1	-7,599.0	7,600.0	7,599.5	0.42	N/A		
295.3	295.3	558.0	557.8	0.5	0.5	-89.11	117.3	-7,591.1	7,597.8	7,596.8	0.99	7,706.238		
300.0	300.0	563.4	563.2	0.5	0.5	-89.12	117.2	-7,590.9	7,597.6	7,596.6	1.00	7,601.298		
393.7	393.7	662.2	662.0	0.8	0.5	-89.12	116.1	-7,587.0	7,593.9	7,592.7	1.26	6,023.026		
400.0	400.0	668.6	668.3	0.8	0.5	-89.12	116.0	-7,586.7	7,593.7	7,592.4	1.28	5,941.373		
492.1	492.1	759.9	759.6	1.0	0.6	-89.13	115.0	-7,583.1	7,590.0	7,588.5	1.53	4,966.593		
500.0	500.0	767.7	767.4	1.0	0.6	-89.13	114.9	-7,582.8	7,589.7	7,588.1	1.55	4,898.229		
590.5	590.5	880.9	880.4	1.2	0.6	-89.14	113.4	-7,578.2	7,586.0	7,584.2	1.80	4,209.006		
600.0	600.0	894.1	893.7	1.2	0.6	-89.14	113.2	-7,577.6	7,585.6	7,583.7	1.83	4,146.923		
689.0	689.0	974.5	974.0	1.4	0.7	-89.15	112.3	-7,574.2	7,581.8	7,579.7	2.06	3,677.606		
700.0	700.0	984.2	983.7	1.4	0.7	-89.15	112.2	-7,573.8	7,581.3	7,579.2	2.09	3,626.941		
787.4	787.4	1,076.6	1,076.0	1.6	0.7	-89.16	110.9	-7,569.9	7,577.6	7,575.3	2.32	3,261.732		
800.0	800.0	1,090.5	1,089.8	1.7	0.7	-89.16	110.7	-7,569.3	7,577.1	7,574.7	2.36	3,214.740		
885.8	885.8	1,164.8	1,164.1	1.9	0.8	-89.17	109.6	-7,566.2	7,573.4	7,570.9	2.58	2,938.323		
900.0	900.0	1,176.7	1,176.0	1.9	0.8	-89.17	109.4	-7,565.7	7,572.9	7,570.2	2.61	2,897.359		
984.2	984.2	1,248.5	1,247.8	2.1	0.8	-89.18	108.6	-7,562.8	7,569.5	7,566.6	2.83	2,676.222		
1,000.0	1,000.0	1,262.1	1,261.3	2.1	0.8	-89.18	108.5	-7,562.3	7,568.8	7,566.0	2.87	2,638.617		
1,082.7	1,082.7	1,324.6	1,323.8	2.3	0.8	-89.18	107.9	-7,559.9	7,565.7	7,562.6	3.08	2,459.669		
1,100.0	1,100.0	1,335.7	1,334.9	2.3	0.8	-89.18	107.8	-7,559.5	7,565.1	7,562.0	3.12	2,425.749		
1,181.1	1,181.1	1,400.0	1,399.1	2.5	0.8	-89.19	106.9	-7,557.4	7,562.3	7,559.0	3.32	2,275.736		
1,200.0	1,200.0	1,400.0	1,399.1	2.6	0.8	-89.19	106.9	-7,557.4	7,561.7	7,558.4	3.37	2,246.830		
1,279.5	1,279.5	1,454.5	1,453.6	2.7	0.9	-89.20	106.1	-7,555.8	7,559.4	7,555.8	3.56	2,121.605		
1,300.0	1,300.0	1,468.6	1,467.6	2.8	0.9	-89.20	105.9	-7,555.4	7,558.9	7,555.2	3.61	2,091.578		
1,377.9	1,377.9	1,526.4	1,525.4	3.0	0.9	-89.20	105.1	-7,553.9	7,556.9	7,553.1	3.81	1,983.963		
1,400.0	1,400.0	1,544.4	1,543.5	3.0	0.9	-89.20	104.9	-7,553.5	7,556.4	7,552.5	3.86	1,955.235		
1,476.4	1,476.4	1,600.0	1,599.0	3.2	0.9	-14.10	104.1	-7,552.3	7,553.6	7,549.5	4.09	1,845.021		
1,500.0	1,500.0	1,622.2	1,621.3	3.2	0.9	-14.11	103.7	-7,551.8	7,552.4	7,548.3	4.15	1,818.249		
1,574.8	1,574.7	1,674.0	1,673.0	3.4	1.0	-14.14	102.9	-7,550.8	7,547.5	7,543.2	4.33	1,742.641		
1,600.0	1,599.8	1,700.0	1,699.0	3.4	1.0	-14.16	102.4	-7,550.4	7,545.5	7,541.1	4.39	1,717.485		
1,673.2	1,672.8	1,754.4	1,753.3	3.6	1.0	-14.21	101.3	-7,549.5	7,538.5	7,533.9	4.57	1,649.767		
1,700.0	1,699.5	1,778.2	1,777.2	3.7	1.0	-14.24	100.8	-7,549.2	7,535.5	7,530.8	4.63	1,625.875		
1,771.6	1,770.6	1,832.7	1,831.6	3.8	1.0	-14.30	99.5	-7,548.4	7,526.4	7,521.5	4.81	1,564.981		
1,800.0	1,798.7	1,852.2	1,851.2	3.9	1.0	-14.33	99.0	-7,548.2	7,522.3	7,517.4	4.88	1,542.322		
1,870.1	1,868.0	1,900.0	1,898.9	4.1	1.0	-14.41	97.9	-7,547.7	7,511.3	7,506.3	5.05	1,487.591		
1,900.0	1,897.5	1,923.2	1,922.1	4.2	1.0	-14.45	97.4	-7,547.5	7,506.2	7,501.1	5.12	1,465.383		
1,968.5	1,964.8	1,974.9	1,973.8	4.4	1.1	-14.54	96.4	-7,547.2	7,493.4	7,488.1	5.29	1,415.422		
2,000.0	1,995.6	2,000.0	1,998.9	4.5	1.1	-14.58	95.9	-7,547.1	7,487.1	7,481.7	5.37	1,393.445		
2,066.9	2,060.9	2,066.2	2,065.1	4.7	1.1	-14.70	94.7	-7,546.7	7,472.5	7,467.0	5.55	1,346.232		
2,100.0	2,093.1	2,099.7	2,098.6	4.8	1.1	-14.76	94.1	-7,546.6	7,464.8	7,459.1	5.64	1,323.969		
2,165.3	2,156.3	2,151.3	2,150.2	5.1	1.1	-14.88	93.1	-7,546.3	7,448.5	7,442.6	5.82	1,280.895		
2,200.0	2,189.6	2,178.6	2,177.5	5.2	1.1	-14.95	92.7	-7,546.2	7,439.3	7,433.4	5.91	1,259.202		
2,263.8	2,250.7	2,233.3	2,232.2	5.5	1.2	-15.08	91.8	-7,546.1	7,421.4	7,415.4	6.09	1,219.031		
2,280.0	2,266.2	2,248.1	2,247.0	5.6	1.2	-15.12	91.6	-7,546.1	7,416.7	7,410.6	6.13	1,209.294		
2,300.0	2,285.3	2,266.3	2,265.2	5.7	1.2	-15.13	91.4	-7,546.0	7,410.8	7,404.6	6.19	1,197.346		
2,362.2	2,344.6	2,320.2	2,319.0	6.0	1.2	-15.17	90.7	-7,545.9	7,392.5	7,386.1	6.36	1,162.310		
2,400.0	2,380.6	2,350.4	2,349.3	6.2	1.2	-15.20	90.3	-7,545.9	7,381.4	7,374.9	6.47	1,140.033		
2,460.6	2,438.4	2,400.0	2,398.9	6.5	1.2	-15.23	89.7	-7,545.9	7,363.7	7,357.0	6.65	1,107.083		
2,500.0	2,475.9	2,437.5	2,436.3	6.7	1.2	-15.26	89.3	-7,546.0	7,352.2	7,345.4	6.77	1,086.186		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,495.5	2,494.3	7.0	1.2	-15.30	88.8	-7,546.0	7,334.9	7,328.0	6.95	1,055.751	
2,600.0	2,571.2	2,534.5	2,533.4	7.2	1.2	-15.33	88.4	-7,546.0	7,322.9	7,315.9	7.07	1,035.361	
2,657.5	2,626.0	2,589.2	2,588.0	7.5	1.3	-15.37	87.8	-7,546.0	7,306.2	7,298.9	7.25	1,007.569	
2,700.0	2,666.6	2,630.8	2,629.7	7.8	1.3	-15.40	87.2	-7,546.1	7,293.7	7,286.3	7.38	987.723	
2,755.9	2,719.8	2,686.1	2,685.0	8.1	1.3	-15.45	86.5	-7,546.1	7,277.4	7,269.8	7.56	962.369	
2,800.0	2,761.9	2,728.0	2,726.8	8.3	1.3	-15.48	85.9	-7,546.1	7,264.5	7,256.8	7.70	943.174	
2,854.3	2,813.7	2,778.4	2,777.3	8.7	1.3	-15.52	85.2	-7,546.1	7,248.6	7,240.7	7.88	920.249	
2,900.0	2,857.2	2,819.8	2,818.7	8.9	1.3	-15.55	84.7	-7,546.1	7,235.3	7,227.3	8.02	901.750	
2,952.7	2,907.5	2,866.4	2,865.2	9.2	1.3	-15.59	84.0	-7,546.1	7,219.9	7,211.7	8.19	881.074	
3,000.0	2,952.5	2,910.3	2,909.1	9.5	1.4	-15.62	83.3	-7,546.2	7,206.2	7,197.8	8.35	863.165	
3,051.2	3,001.3	2,967.2	2,966.1	9.8	1.4	-15.67	82.4	-7,546.2	7,191.2	7,182.7	8.52	844.033	
3,100.0	3,047.8	3,021.1	3,019.9	10.1	1.4	-15.71	81.6	-7,546.2	7,176.9	7,168.3	8.68	826.394	
3,149.6	3,095.1	3,075.2	3,074.0	10.4	1.4	-15.76	80.8	-7,546.1	7,162.4	7,153.5	8.85	808.929	
3,200.0	3,143.2	3,122.4	3,121.2	10.7	1.4	-15.79	80.2	-7,546.0	7,147.6	7,138.5	9.02	792.060	
3,248.0	3,188.9	3,161.3	3,160.1	11.0	1.4	-15.82	79.7	-7,545.9	7,133.5	7,124.3	9.18	776.651	
3,300.0	3,238.5	3,204.7	3,203.5	11.3	1.5	-15.86	79.4	-7,545.9	7,118.3	7,108.9	9.36	760.573	
3,346.4	3,282.8	3,256.5	3,255.3	11.6	1.5	-15.89	79.2	-7,545.9	7,104.7	7,095.2	9.51	746.787	
3,400.0	3,333.8	3,320.9	3,319.6	11.9	1.5	-15.94	79.6	-7,545.8	7,089.0	7,079.3	9.70	731.071	
3,444.9	3,376.6	3,385.0	3,383.8	12.2	1.5	-15.97	80.4	-7,545.5	7,075.7	7,065.9	9.86	717.508	
3,500.0	3,429.1	3,451.2	3,449.9	12.6	1.5	-16.01	81.4	-7,545.0	7,059.3	7,049.2	10.06	701.675	
3,543.3	3,470.4	3,500.0	3,498.8	12.8	1.5	-16.04	82.4	-7,544.6	7,046.3	7,036.1	10.22	689.672	
3,600.0	3,524.4	3,542.7	3,541.4	13.2	1.5	-16.06	83.3	-7,544.3	7,029.3	7,018.9	10.41	675.122	
3,641.7	3,564.2	3,573.8	3,572.5	13.4	1.5	-16.08	84.0	-7,544.1	7,016.9	7,006.3	10.56	664.727	
3,700.0	3,619.8	3,633.1	3,631.8	13.8	1.5	-16.11	85.3	-7,543.7	6,999.6	6,988.8	10.76	650.339	
3,740.1	3,658.0	3,690.7	3,689.4	14.0	1.5	-16.14	86.7	-7,543.3	6,987.5	6,976.6	10.91	640.362	
3,800.0	3,715.1	3,736.6	3,735.3	14.4	1.5	-16.16	87.7	-7,542.9	6,969.6	6,958.5	11.12	626.706	
3,838.6	3,751.8	3,763.2	3,761.9	14.7	1.5	-16.18	88.2	-7,542.7	6,958.1	6,946.8	11.26	618.206	
3,900.0	3,810.4	3,808.3	3,806.9	15.0	1.5	-16.20	89.1	-7,542.5	6,939.9	6,928.4	11.47	605.038	
3,937.0	3,845.7	3,846.7	3,845.4	15.3	1.5	-16.23	89.8	-7,542.3	6,928.9	6,917.3	11.60	597.155	
4,000.0	3,905.7	3,900.0	3,898.7	15.7	1.5	-16.26	90.8	-7,542.0	6,910.2	6,898.4	11.83	584.316	
4,035.4	3,939.5	3,931.7	3,930.4	15.9	1.5	-16.27	91.4	-7,541.9	6,899.8	6,887.8	11.95	577.284	
4,100.0	4,001.0	3,975.1	3,973.8	16.3	1.5	-16.30	92.0	-7,541.8	6,880.8	6,868.6	12.18	565.039	
4,133.8	4,033.3	4,000.0	3,998.6	16.5	1.5	-16.32	92.3	-7,541.8	6,870.9	6,858.6	12.30	558.756	
4,200.0	4,096.3	4,029.9	4,028.6	16.9	1.5	-16.34	92.6	-7,541.8	6,851.8	6,839.3	12.52	547.335	
4,232.3	4,127.1	4,045.3	4,043.9	17.1	1.5	-16.35	92.8	-7,541.9	6,842.6	6,830.0	12.63	541.888	
4,300.0	4,191.7	4,100.0	4,098.6	17.6	1.5	-16.38	93.1	-7,542.5	6,823.6	6,810.7	12.86	530.578	
4,330.7	4,220.9	4,100.0	4,098.6	17.8	1.5	-16.38	93.1	-7,542.5	6,814.9	6,802.0	12.96	525.745	
4,400.0	4,287.0	4,128.6	4,127.2	18.2	1.5	-16.41	93.1	-7,543.0	6,795.8	6,782.6	13.20	514.916	
4,429.1	4,314.7	4,144.3	4,143.0	18.4	1.5	-16.42	93.2	-7,543.3	6,787.9	6,774.6	13.30	510.430	
4,500.0	4,382.3	4,200.0	4,198.6	18.8	1.5	-16.46	93.2	-7,544.6	6,768.8	6,755.3	13.54	499.933	
4,527.5	4,408.6	4,200.0	4,198.6	19.0	1.5	-16.46	93.2	-7,544.6	6,761.4	6,747.8	13.63	496.023	
4,600.0	4,477.6	4,232.2	4,230.8	19.5	1.5	-16.48	93.2	-7,545.6	6,742.4	6,728.5	13.88	485.811	
4,626.0	4,502.4	4,244.5	4,243.1	19.6	1.5	-16.49	93.2	-7,546.0	6,735.6	6,721.7	13.97	482.237	
4,700.0	4,572.9	4,300.0	4,298.6	20.1	1.5	-16.54	92.9	-7,548.0	6,716.7	6,702.5	14.22	472.226	
4,724.4	4,596.2	4,300.0	4,298.6	20.3	1.5	-16.54	92.9	-7,548.0	6,710.5	6,696.2	14.31	469.093	
4,800.0	4,668.3	4,338.3	4,336.8	20.7	1.5	-16.57	92.6	-7,549.7	6,691.6	6,677.0	14.57	459.383	
4,822.8	4,690.0	4,353.6	4,352.1	20.9	1.5	-16.58	92.5	-7,550.4	6,685.9	6,671.3	14.65	456.496	
4,900.0	4,763.6	4,400.0	4,398.5	21.4	1.5	-16.62	92.1	-7,552.5	6,667.0	6,652.1	14.91	447.010	
4,921.2	4,783.8	4,400.0	4,398.5	21.5	1.5	-16.62	92.1	-7,552.5	6,661.9	6,646.9	14.99	444.535	
5,000.0	4,858.9	4,456.7	4,455.1	22.0	1.5	-16.67	91.4	-7,555.5	6,643.0	6,627.7	15.26	435.195	
5,019.7	4,877.7	4,467.0	4,465.4	22.1	1.5	-16.68	91.3	-7,556.0	6,638.3	6,623.0	15.33	432.941	
5,100.0	4,954.2	4,516.1	4,514.4	22.6	1.5	-16.72	90.4	-7,558.9	6,619.6	6,604.0	15.62	423.895	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,532.7	4,530.9	22.8	1.5	-16.74	90.1	-7,560.0	6,615.4	6,599.7	15.68	421.853		
5,171.8	5,022.7	4,581.9	4,580.1	23.1	1.5	-16.78	89.2	-7,563.0	6,603.0	6,587.1	15.88	415.894		
5,200.0	5,049.6	4,718.4	4,716.3	23.3	1.5	-16.87	87.0	-7,570.2	6,596.4	6,580.4	16.00	412.348		
5,216.5	5,065.4	4,738.1	4,736.0	23.3	1.5	-16.86	86.8	-7,571.1	6,592.6	6,576.5	16.04	410.993		
5,300.0	5,145.7	4,835.2	4,833.0	23.7	1.5	-16.83	85.9	-7,575.3	6,574.2	6,557.9	16.25	404.555		
5,314.9	5,160.1	4,851.8	4,849.6	23.8	1.5	-16.82	85.8	-7,576.0	6,571.1	6,554.8	16.28	403.535		
5,400.0	5,242.7	4,952.3	4,950.0	24.1	1.6	-16.79	85.0	-7,580.1	6,554.9	6,538.4	16.47	397.960		
5,413.4	5,255.7	4,969.1	4,966.8	24.2	1.6	-16.79	84.9	-7,580.7	6,552.6	6,536.1	16.50	397.171		
5,500.0	5,340.5	5,112.4	5,110.0	24.5	1.6	-16.79	84.0	-7,585.7	6,538.4	6,521.7	16.68	392.039		
5,511.8	5,352.1	5,127.8	5,125.4	24.5	1.6	-16.79	84.0	-7,586.1	6,536.6	6,519.9	16.70	391.444		
5,600.0	5,439.0	5,235.0	5,232.6	24.8	1.6	-16.76	83.6	-7,589.1	6,524.4	6,507.6	16.85	387.267		
5,610.2	5,449.1	5,246.0	5,243.5	24.8	1.6	-16.76	83.6	-7,589.3	6,523.2	6,506.3	16.86	386.855		
5,700.0	5,538.0	5,368.8	5,366.3	25.1	1.6	-16.75	83.8	-7,592.4	6,513.5	6,496.5	16.99	383.286		
5,708.6	5,546.6	5,384.0	5,381.5	25.1	1.6	-16.74	83.9	-7,592.7	6,512.7	6,495.7	17.01	382.979		
5,800.0	5,637.4	5,503.9	5,501.4	25.3	1.6	-16.72	85.6	-7,594.8	6,505.2	6,488.1	17.12	379.987		
5,807.1	5,644.5	5,511.6	5,509.0	25.3	1.6	-16.71	85.7	-7,594.9	6,504.7	6,487.6	17.13	379.798		
5,900.0	5,737.2	5,612.1	5,609.5	25.5	1.6	-16.69	87.5	-7,596.5	6,499.9	6,482.7	17.22	377.383		
5,905.5	5,742.6	5,618.1	5,615.5	25.5	1.6	-16.69	87.7	-7,596.6	6,499.7	6,482.5	17.23	377.264		
6,000.0	5,837.1	5,719.5	5,716.9	25.6	1.6	-16.67	89.4	-7,598.0	6,497.9	6,480.6	17.32	375.245		
6,003.9	5,841.0	5,723.5	5,720.9	25.6	1.6	-16.67	89.5	-7,598.1	6,497.9	6,480.5	17.32	375.172		
6,012.7	5,849.8	5,732.3	5,729.8	25.6	1.6	-16.67	89.7	-7,598.2	6,497.9	6,480.5	17.33	375.010 CC		
6,051.8	5,888.9	5,772.0	5,769.4	25.7	1.6	-91.79	90.4	-7,598.7	6,498.1	6,471.5	26.64	243.944 ES		
6,081.8	5,918.9	5,800.0	5,797.4	25.7	1.6	-91.79	90.9	-7,599.1	6,498.5	6,471.8	26.67	243.659		
6,100.0	5,937.1	5,818.6	5,816.0	25.7	1.6	178.22	91.2	-7,599.4	6,499.0	6,481.6	17.39	373.788		
6,102.3	5,939.4	5,820.7	5,818.1	25.7	1.6	178.22	91.2	-7,599.4	6,499.1	6,481.7	17.38	373.870		
6,150.0	5,987.0	5,863.9	5,861.2	25.7	1.6	178.22	92.0	-7,600.0	6,502.7	6,485.3	17.33	375.322		
6,200.0	6,036.5	5,900.0	5,897.4	25.7	1.6	178.20	92.5	-7,600.5	6,509.9	6,492.6	17.27	376.899		
6,200.8	6,037.3	5,900.0	5,897.4	25.7	1.6	178.20	92.5	-7,600.5	6,510.0	6,492.7	17.27	376.931		
6,250.0	6,085.5	5,938.4	5,935.7	25.7	1.6	178.18	93.1	-7,601.2	6,520.6	6,503.4	17.21	378.837		
6,299.2	6,133.0	5,969.3	5,966.7	25.6	1.6	178.15	93.5	-7,601.8	6,534.5	6,517.4	17.13	381.529		
6,300.0	6,133.7	5,969.8	5,967.1	25.6	1.6	178.15	93.5	-7,601.8	6,534.8	6,517.7	17.13	381.579		
6,350.0	6,180.9	6,001.1	5,998.5	25.5	1.6	178.11	93.9	-7,602.5	6,552.4	6,535.4	17.00	385.342		
6,397.6	6,224.6	6,074.8	6,072.2	25.4	1.6	178.07	94.9	-7,604.0	6,572.2	6,555.3	16.88	389.400		
6,400.0	6,226.7	6,078.5	6,075.8	25.4	1.6	178.07	95.0	-7,604.0	6,573.2	6,556.4	16.87	389.622		
6,450.0	6,271.1	6,131.6	6,128.9	25.2	1.7	178.01	95.9	-7,604.9	6,597.0	6,580.3	16.69	395.334		
6,496.0	6,310.4	6,170.9	6,168.2	25.1	1.7	177.94	96.5	-7,605.6	6,621.6	6,605.1	16.48	401.793		
6,500.0	6,313.7	6,174.2	6,171.4	25.1	1.7	177.94	96.5	-7,605.7	6,623.8	6,607.3	16.46	402.388		
6,550.0	6,354.4	6,212.1	6,209.4	25.0	1.7	177.84	97.1	-7,606.3	6,653.4	6,637.2	16.20	410.648		
6,594.5	6,388.9	6,240.3	6,237.6	24.9	1.7	177.74	97.5	-7,606.8	6,682.1	6,666.2	15.95	418.958		
6,600.0	6,393.0	6,243.7	6,241.0	24.9	1.7	177.73	97.6	-7,606.8	6,685.8	6,669.9	15.92	420.037		
6,650.0	6,429.3	6,273.3	6,270.6	24.8	1.7	177.58	98.0	-7,607.4	6,720.8	6,705.2	15.62	430.245		
6,692.9	6,458.5	6,300.0	6,297.3	24.7	1.7	177.43	98.3	-7,607.9	6,752.8	6,737.5	15.37	439.253		
6,700.0	6,463.1	6,301.1	6,298.3	24.7	1.7	177.40	98.3	-7,607.9	6,758.3	6,743.0	15.33	440.850		
6,750.0	6,494.3	6,339.8	6,337.0	24.7	1.7	177.18	98.8	-7,608.6	6,797.9	6,782.9	15.08	450.762		
6,791.3	6,517.9	6,369.2	6,366.4	24.7	1.7	176.95	99.2	-7,609.2	6,832.2	6,817.3	14.91	458.155		
6,800.0	6,522.6	6,375.0	6,372.2	24.7	1.7	176.90	99.3	-7,609.3	6,839.6	6,824.7	14.88	459.573		
6,850.0	6,548.0	6,400.0	6,397.2	24.7	1.7	176.52	99.6	-7,609.7	6,883.0	6,868.3	14.76	466.466		
6,889.7	6,566.0	6,417.3	6,414.5	24.8	1.7	176.13	99.8	-7,610.0	6,918.7	6,904.0	14.73	469.554		
6,900.0	6,570.4	6,420.4	6,417.7	24.9	1.7	176.00	99.8	-7,610.0	6,928.1	6,913.4	14.74	469.992		
6,950.0	6,589.5	6,434.5	6,431.7	25.1	1.7	175.26	100.0	-7,610.3	6,974.6	6,959.7	14.87	468.985		
6,988.2	6,602.0	6,443.5	6,440.7	25.3	1.7	174.44	100.2	-7,610.5	7,010.9	6,995.8	15.10	464.262		
7,000.0	6,605.4	6,446.0	6,443.2	25.3	1.7	174.12	100.2	-7,610.5	7,022.2	7,007.0	15.20	462.045		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,618.0	6,454.8	6,452.0	25.6	1.7	172.19	100.4	-7,610.7	7,070.8	7,055.0	15.81	447.334	
7,086.6	6,625.0	6,459.7	6,456.9	25.9	1.7	169.64	100.4	-7,610.8	7,106.9	7,090.3	16.58	428.749	
7,100.0	6,627.1	6,461.1	6,458.3	26.0	1.7	168.22	100.4	-7,610.8	7,120.1	7,103.1	16.99	419.161	
7,150.0	6,632.8	6,464.7	6,461.9	26.5	1.7	155.94	100.5	-7,610.9	7,169.9	7,149.4	20.43	351.007	
7,185.0	6,634.7	6,465.6	6,462.8	26.8	1.7	112.96	100.5	-7,610.9	7,204.8	7,176.6	28.21	255.371	
7,200.0	6,635.0	6,465.6	6,462.8	27.0	1.7	70.28	100.5	-7,610.9	7,219.8	7,192.0	27.86	259.161	
7,215.9	6,635.0	6,465.4	6,462.6	27.1	1.7	40.00	100.5	-7,610.9	7,235.7	7,212.2	23.47	308.316	
7,283.4	6,634.1	6,463.7	6,460.9	27.9	1.7	39.81	100.5	-7,610.8	7,303.2	7,279.2	24.01	304.216	
7,300.0	6,633.9	6,463.3	6,460.5	28.1	1.7	39.76	100.5	-7,610.8	7,319.7	7,295.6	24.14	303.254	
7,381.9	6,632.9	6,461.3	6,458.6	29.3	1.7	39.52	100.5	-7,610.8	7,401.5	7,376.6	24.89	297.360	
7,400.0	6,632.6	6,460.9	6,458.1	29.5	1.7	39.47	100.4	-7,610.8	7,419.6	7,394.6	25.06	296.122	
7,480.3	6,631.6	6,459.0	6,456.2	30.8	1.7	39.24	100.4	-7,610.7	7,499.9	7,474.0	25.89	289.728	
7,500.0	6,631.4	6,458.5	6,455.7	31.1	1.7	39.18	100.4	-7,610.7	7,519.6	7,493.5	26.09	288.243	
7,578.7	6,630.4	6,456.6	6,453.8	32.5	1.7	38.96	100.4	-7,610.7	7,598.2	7,571.3	26.97	281.683	
7,600.0	6,630.1	6,456.1	6,453.3	32.9	1.7	38.90	100.4	-7,610.7	7,619.5	7,592.3	27.21	280.005	
7,677.1	6,629.1	6,454.3	6,451.5	34.3	1.7	38.69	100.3	-7,610.7	7,696.6	7,668.4	28.14	273.517	
7,700.0	6,628.8	6,453.7	6,451.0	34.8	1.7	38.63	100.3	-7,610.6	7,719.4	7,691.0	28.41	271.700	
7,775.6	6,627.8	6,452.0	6,449.2	36.3	1.7	38.43	100.3	-7,610.6	7,794.9	7,765.6	29.37	265.441	
7,800.0	6,627.5	6,451.4	6,448.6	36.8	1.7	38.36	100.3	-7,610.6	7,819.3	7,789.7	29.67	263.528	
7,874.0	6,626.6	6,449.7	6,446.9	38.4	1.7	38.17	100.3	-7,610.6	7,893.3	7,862.6	30.64	257.594	
7,900.0	6,626.3	6,449.1	6,446.3	38.9	1.7	38.10	100.3	-7,610.6	7,919.2	7,888.3	30.98	255.622	
7,972.4	6,625.3	6,447.4	6,444.6	40.5	1.7	37.91	100.2	-7,610.5	7,991.6	7,959.7	31.96	250.065	
8,000.0	6,625.0	6,446.7	6,444.0	41.1	1.7	37.84	100.2	-7,610.5	8,019.2	7,986.8	32.33	248.061	
8,070.8	6,624.1	6,445.1	6,442.3	42.7	1.7	37.66	100.2	-7,610.5	8,090.0	8,056.7	33.31	242.902	
8,100.0	6,623.7	6,444.4	6,441.7	43.4	1.7	37.58	100.2	-7,610.5	8,119.1	8,085.4	33.70	240.890	
8,169.3	6,622.8	6,442.8	6,440.1	45.0	1.7	37.41	100.2	-7,610.4	8,188.3	8,153.6	34.68	236.128	
8,200.0	6,622.4	6,442.1	6,439.4	45.7	1.7	37.33	100.2	-7,610.4	8,219.0	8,183.9	35.11	234.124	
8,267.7	6,621.6	6,440.6	6,437.8	47.4	1.7	37.17	100.1	-7,610.4	8,286.7	8,250.6	36.07	229.749	
8,300.0	6,621.1	6,439.9	6,437.1	48.1	1.7	37.09	100.1	-7,610.4	8,318.9	8,282.4	36.52	227.766	
8,366.1	6,620.3	6,438.4	6,435.6	49.7	1.7	36.93	100.1	-7,610.4	8,385.0	8,347.5	37.47	223.756	
8,400.0	6,619.9	6,437.6	6,434.8	50.6	1.7	36.85	100.1	-7,610.3	8,418.9	8,380.9	37.96	221.803	
8,464.5	6,619.0	6,436.2	6,433.4	52.2	1.7	36.70	100.1	-7,610.3	8,483.4	8,444.5	38.89	218.137	
8,500.0	6,618.6	6,435.4	6,432.6	53.0	1.7	36.61	100.1	-7,610.3	8,518.8	8,479.4	39.40	216.220	
8,563.0	6,617.8	6,434.0	6,431.2	54.6	1.7	36.47	100.0	-7,610.3	8,581.7	8,541.4	40.31	212.873	
8,600.0	6,617.3	6,433.1	6,430.4	55.5	1.7	36.38	100.0	-7,610.3	8,618.7	8,577.9	40.85	210.996	
8,661.4	6,616.5	6,431.8	6,429.0	57.1	1.7	36.24	100.0	-7,610.2	8,680.1	8,638.3	41.74	207.939	
8,700.0	6,616.0	6,430.9	6,428.1	58.1	1.7	36.15	100.0	-7,610.2	8,718.7	8,676.4	42.30	206.107	
8,759.8	6,615.2	6,429.6	6,426.8	59.6	1.7	36.02	100.0	-7,610.2	8,778.4	8,735.3	43.18	203.320	
8,800.0	6,614.7	6,428.7	6,425.9	60.6	1.7	35.92	100.0	-7,610.2	8,818.6	8,774.8	43.76	201.533	
8,858.2	6,614.0	6,427.4	6,424.7	62.1	1.7	35.80	99.9	-7,610.2	8,876.8	8,832.2	44.61	198.991	
8,900.0	6,613.4	6,426.5	6,423.8	63.2	1.7	35.70	99.9	-7,610.1	8,918.5	8,873.3	45.21	197.249	
8,956.7	6,612.7	6,425.3	6,422.5	64.7	1.7	35.58	99.9	-7,610.1	8,975.1	8,929.1	46.04	194.931	
9,000.0	6,612.2	6,424.3	6,421.6	65.8	1.7	35.49	99.9	-7,610.1	9,018.4	8,971.8	46.67	193.236	
9,055.1	6,611.5	6,423.2	6,420.4	67.3	1.7	35.37	99.9	-7,610.1	9,073.5	9,026.0	47.47	191.122	
9,100.0	6,610.9	6,422.2	6,419.4	68.4	1.7	35.27	99.9	-7,610.1	9,118.4	9,070.3	48.13	189.472	
9,153.5	6,610.2	6,421.0	6,418.3	69.8	1.7	35.16	99.9	-7,610.1	9,171.9	9,123.0	48.91	187.544	
9,200.0	6,609.6	6,420.0	6,417.3	71.1	1.7	35.06	99.8	-7,610.0	9,218.3	9,168.7	49.58	185.940	
9,251.9	6,608.9	6,418.9	6,416.2	72.4	1.7	34.96	99.8	-7,610.0	9,270.2	9,219.9	50.33	184.181	
9,300.0	6,608.3	6,417.9	6,415.1	73.7	1.7	34.85	99.8	-7,610.0	9,318.2	9,267.2	51.03	182.621	
9,350.4	6,607.7	6,416.8	6,414.1	75.0	1.7	34.75	99.8	-7,610.0	9,368.6	9,316.8	51.76	181.016	
9,400.0	6,607.0	6,415.8	6,413.0	76.4	1.7	34.65	99.8	-7,610.0	9,418.2	9,365.7	52.47	179.499	
9,448.8	6,606.4	6,400.0	6,397.2	77.7	1.7	33.22	99.6	-7,609.7	9,467.0	9,415.0	52.00	182.059	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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	6,605.7	6,400.0	6,397.2	79.0	1.7	33.22	99.6	-7,609.7	9,518.1	9,465.3	52.80	180.265	
9,547.2	6,605.1	6,400.0	6,397.2	80.3	1.7	33.22	99.6	-7,609.7	9,565.3	9,511.8	53.55	178.640	
9,600.0	6,604.5	6,400.0	6,397.2	81.7	1.7	33.22	99.6	-7,609.7	9,618.1	9,563.7	54.37	176.887	
9,645.6	6,603.9	6,400.0	6,397.2	82.9	1.7	33.22	99.6	-7,609.7	9,663.7	9,608.6	55.10	175.398	
9,700.0	6,603.2	6,400.0	6,397.2	84.4	1.7	33.21	99.6	-7,609.7	9,718.0	9,662.0	55.95	173.685	
9,744.1	6,602.6	6,400.0	6,397.2	85.6	1.7	33.21	99.6	-7,609.7	9,762.0	9,705.4	56.65	172.320	
9,800.0	6,601.9	6,400.0	6,397.2	87.1	1.7	33.21	99.6	-7,609.7	9,817.9	9,760.4	57.53	170.646	
9,842.5	6,601.3	6,400.0	6,397.2	88.2	1.7	33.21	99.6	-7,609.7	9,860.4	9,802.2	58.21	169.395	
9,900.0	6,600.6	6,400.0	6,397.2	89.8	1.7	33.21	99.6	-7,609.7	9,917.9	9,858.7	59.12	167.759	
9,940.9	6,600.1	6,400.0	6,397.2	90.9	1.7	33.21	99.6	-7,609.7	9,958.8	9,899.0	59.77	166.613 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-90.83	-94.2	-6,519.8	6,520.6					
98.4	98.4	69.0	69.0	0.1	0.0	-90.83	-94.2	-6,519.8	6,520.5	6,520.4	0.10	N/A		
100.0	100.0	70.7	70.7	0.1	0.0	-90.83	-94.2	-6,519.8	6,520.5	6,520.4	0.11	N/A		
168.0	168.0	129.4	129.4	0.3	0.0	-90.83	-94.3	-6,519.8	6,520.4	6,520.1	0.30	N/A		
196.8	196.8	149.8	149.8	0.3	0.1	-90.83	-94.3	-6,519.8	6,520.5	6,520.1	0.39	N/A		
200.0	200.0	152.0	152.0	0.3	0.1	-90.83	-94.4	-6,519.8	6,520.5	6,520.1	0.40	N/A		
295.3	295.3	219.4	219.4	0.5	0.1	-90.83	-94.6	-6,520.0	6,520.9	6,520.2	0.69	9,493.695		
300.0	300.0	222.8	222.8	0.5	0.2	-90.83	-94.7	-6,520.1	6,520.9	6,520.2	0.70	9,297.944		
393.7	393.7	300.0	300.0	0.8	0.2	-90.84	-95.2	-6,520.7	6,521.7	6,520.7	1.00	6,517.069		
400.0	400.0	300.0	300.0	0.8	0.2	-90.84	-95.2	-6,520.7	6,521.7	6,520.7	1.01	6,426.195		
492.1	492.1	400.0	400.0	1.0	0.3	-90.84	-96.0	-6,521.6	6,522.6	6,521.3	1.30	5,011.110		
500.0	500.0	400.0	400.0	1.0	0.3	-90.84	-96.0	-6,521.6	6,522.7	6,521.3	1.32	4,943.935		
590.5	590.5	471.9	471.9	1.2	0.4	-90.85	-96.8	-6,522.3	6,523.6	6,522.0	1.57	4,155.730		
600.0	600.0	478.1	478.1	1.2	0.4	-90.85	-96.8	-6,522.4	6,523.7	6,522.1	1.60	4,089.854		
689.0	689.0	557.8	557.7	1.4	0.4	-90.86	-98.0	-6,523.6	6,525.0	6,523.1	1.84	3,542.238		
700.0	700.0	569.2	569.1	1.4	0.4	-90.86	-98.2	-6,523.7	6,525.1	6,523.3	1.87	3,483.283		
787.4	787.4	655.8	655.8	1.6	0.5	-90.87	-99.5	-6,525.0	6,526.4	6,524.3	2.12	3,085.307		
800.0	800.0	668.1	668.0	1.7	0.5	-90.88	-99.7	-6,525.1	6,526.6	6,524.5	2.15	3,035.903		
885.8	885.8	748.9	748.8	1.9	0.5	-90.89	-100.9	-6,526.3	6,527.9	6,525.5	2.38	2,741.445		
900.0	900.0	762.0	761.9	1.9	0.5	-90.89	-101.1	-6,526.5	6,528.1	6,525.7	2.42	2,698.640		
984.2	984.2	844.6	844.5	2.1	0.6	-90.90	-102.2	-6,527.8	6,529.5	6,526.8	2.64	2,468.851		
1,000.0	1,000.0	860.9	860.7	2.1	0.6	-90.90	-102.5	-6,528.1	6,529.7	6,527.0	2.69	2,430.061		
1,082.7	1,082.7	942.3	942.2	2.3	0.6	-90.91	-103.6	-6,529.3	6,531.0	6,528.1	2.92	2,236.963		
1,100.0	1,100.0	958.6	958.5	2.3	0.7	-90.91	-103.9	-6,529.6	6,531.3	6,528.3	2.97	2,198.968		
1,181.1	1,181.1	1,035.2	1,035.0	2.5	0.7	-90.92	-105.1	-6,530.8	6,532.6	6,529.4	3.21	2,037.056		
1,200.0	1,200.0	1,053.0	1,052.9	2.6	0.7	-90.92	-105.4	-6,531.1	6,532.9	6,529.7	3.26	2,002.702		
1,279.5	1,279.5	1,134.2	1,134.0	2.7	0.8	-90.94	-106.8	-6,532.5	6,534.3	6,530.8	3.49	1,874.529		
1,300.0	1,300.0	1,157.8	1,157.6	2.8	0.8	-90.94	-107.2	-6,532.9	6,534.6	6,531.1	3.54	1,846.026		
1,377.9	1,377.9	1,238.9	1,238.7	3.0	0.8	-90.95	-108.5	-6,534.2	6,535.9	6,532.1	3.75	1,741.988		
1,400.0	1,400.0	1,259.6	1,259.4	3.0	0.8	-90.95	-108.9	-6,534.5	6,536.2	6,532.4	3.81	1,713.920		
1,476.4	1,476.4	1,331.5	1,331.3	3.2	0.9	-15.84	-110.1	-6,535.6	6,536.5	6,532.5	4.03	1,622.756		
1,500.0	1,500.0	1,353.8	1,353.5	3.2	0.9	-15.85	-110.5	-6,536.0	6,536.2	6,532.1	4.09	1,597.365		
1,574.8	1,574.7	1,422.5	1,422.2	3.4	0.9	-15.88	-111.7	-6,537.2	6,534.0	6,529.7	4.28	1,525.936		
1,600.0	1,599.8	1,444.5	1,444.3	3.4	1.0	-15.89	-112.1	-6,537.6	6,532.9	6,528.6	4.34	1,504.884		
1,673.2	1,672.8	1,512.8	1,512.5	3.6	1.0	-15.94	-113.3	-6,538.8	6,528.5	6,524.0	4.52	1,445.020		
1,700.0	1,699.5	1,547.4	1,547.1	3.7	1.0	-15.96	-114.0	-6,539.5	6,526.4	6,521.8	4.59	1,423.278		
1,771.6	1,770.6	1,673.6	1,673.2	3.8	1.0	-16.06	-116.6	-6,541.2	6,519.4	6,514.6	4.78	1,363.686		
1,800.0	1,798.7	1,727.8	1,727.5	3.9	1.1	-16.11	-117.6	-6,541.6	6,515.9	6,511.1	4.86	1,340.962		
1,870.1	1,868.0	1,913.5	1,913.1	4.1	1.1	-16.26	-120.6	-6,541.1	6,505.7	6,500.6	5.06	1,284.467		
1,900.0	1,897.5	1,961.4	1,961.0	4.2	1.1	-16.32	-121.3	-6,540.4	6,500.5	6,495.3	5.14	1,263.730		
1,968.5	1,964.8	2,051.2	2,050.8	4.4	1.1	-16.45	-122.8	-6,538.8	6,487.1	6,481.7	5.32	1,218.265		
2,000.0	1,995.6	2,087.4	2,087.0	4.5	1.1	-16.52	-123.4	-6,538.1	6,480.3	6,474.9	5.41	1,198.673		
2,066.9	2,060.9	2,154.2	2,153.7	4.7	1.2	-16.65	-124.6	-6,536.7	6,465.0	6,459.4	5.60	1,154.456		
2,100.0	2,093.1	2,186.1	2,185.6	4.8	1.2	-16.73	-125.2	-6,536.1	6,456.8	6,451.1	5.70	1,133.476		
2,165.3	2,156.3	2,248.8	2,248.3	5.1	1.2	-16.89	-126.4	-6,534.8	6,439.7	6,433.8	5.89	1,092.487		
2,200.0	2,189.6	2,281.8	2,281.3	5.2	1.3	-16.97	-127.2	-6,534.1	6,430.0	6,424.0	6.00	1,071.960		
2,263.8	2,250.7	2,342.3	2,341.8	5.5	1.3	-17.15	-128.6	-6,532.9	6,411.3	6,405.1	6.20	1,034.396		
2,280.0	2,266.2	2,357.6	2,357.1	5.6	1.3	-17.20	-128.9	-6,532.6	6,406.3	6,400.1	6.25	1,025.334		
2,300.0	2,285.3	2,376.5	2,375.9	5.7	1.3	-17.22	-129.4	-6,532.2	6,400.2	6,393.8	6.31	1,014.241		
2,362.2	2,344.6	2,432.1	2,431.5	6.0	1.3	-17.28	-130.8	-6,531.1	6,381.0	6,374.5	6.49	983.237		
2,400.0	2,380.6	2,464.6	2,464.0	6.2	1.3	-17.31	-131.6	-6,530.4	6,369.3	6,362.7	6.61	964.209		
2,460.6	2,438.4	2,518.7	2,518.1	6.5	1.4	-17.37	-132.7	-6,529.4	6,350.7	6,343.9	6.79	935.939		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	0.0 usft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	2,475.9	2,556.3	2,555.7	6.7	1.4	-17.41	-133.5	-6,528.7	6,338.6	6,331.7	6.90	918.053	
2,559.0	2,532.2	2,600.0	2,599.4	7.0	1.4	-17.46	-134.4	-6,527.9	6,320.4	6,313.4	7.08	892.343	
2,600.0	2,571.2	2,643.1	2,642.5	7.2	1.4	-17.50	-135.3	-6,527.1	6,307.9	6,300.7	7.22	874.139	
2,657.5	2,626.0	2,688.9	2,688.2	7.5	1.4	-17.55	-136.2	-6,526.3	6,290.3	6,282.9	7.40	849.945	
2,700.0	2,666.6	2,722.8	2,722.1	7.8	1.4	-17.59	-136.9	-6,525.8	6,277.4	6,269.9	7.54	832.727	
2,755.9	2,719.8	2,767.4	2,766.7	8.1	1.4	-17.64	-137.7	-6,525.1	6,260.5	6,252.8	7.72	810.769	
2,800.0	2,761.9	2,800.0	2,799.3	8.3	1.5	-17.67	-138.3	-6,524.7	6,247.2	6,239.3	7.87	794.197	
2,854.3	2,813.7	2,848.9	2,848.1	8.7	1.5	-17.72	-139.3	-6,524.1	6,230.9	6,222.8	8.04	774.826	
2,900.0	2,857.2	2,887.7	2,887.0	8.9	1.5	-17.76	-140.0	-6,523.6	6,217.2	6,209.0	8.19	759.166	
2,952.7	2,907.5	2,928.6	2,927.9	9.2	1.5	-17.81	-140.8	-6,523.2	6,201.4	6,193.1	8.36	741.633	
3,000.0	2,952.5	2,964.0	2,963.2	9.5	1.5	-17.85	-141.5	-6,522.9	6,187.4	6,178.9	8.52	726.508	
3,051.2	3,001.3	3,000.0	2,999.2	9.8	1.5	-17.89	-142.2	-6,522.6	6,172.3	6,163.6	8.69	710.640	
3,100.0	3,047.8	3,030.0	3,029.3	10.1	1.5	-17.92	-142.8	-6,522.5	6,158.0	6,149.1	8.84	696.252	
3,149.6	3,095.1	3,058.8	3,058.0	10.4	1.5	-17.95	-143.3	-6,522.4	6,143.6	6,134.6	9.01	682.053	
3,200.0	3,143.2	3,100.0	3,099.2	10.7	1.5	-17.99	-143.8	-6,522.5	6,129.1	6,119.9	9.18	667.929	
3,248.0	3,188.9	3,125.7	3,125.0	11.0	1.5	-18.02	-144.1	-6,522.6	6,115.4	6,106.1	9.34	654.761	
3,300.0	3,238.5	3,174.4	3,173.7	11.3	1.6	-18.07	-144.6	-6,522.8	6,100.6	6,091.1	9.53	640.436	
3,346.4	3,282.8	3,218.0	3,217.2	11.6	1.6	-18.11	-144.9	-6,523.0	6,087.4	6,077.7	9.69	627.981	
3,400.0	3,333.8	3,268.2	3,267.4	11.9	1.6	-18.16	-145.3	-6,523.2	6,072.2	6,062.3	9.89	614.189	
3,444.9	3,376.6	3,310.3	3,309.5	12.2	1.6	-18.20	-145.5	-6,523.4	6,059.5	6,049.5	10.05	602.989	
3,500.0	3,429.1	3,362.0	3,361.2	12.6	1.6	-18.25	-145.8	-6,523.7	6,043.9	6,033.6	10.25	589.556	
3,543.3	3,470.4	3,402.6	3,401.8	12.8	1.7	-18.29	-146.0	-6,523.9	6,031.6	6,021.2	10.41	579.319	
3,600.0	3,524.4	3,455.8	3,455.0	13.2	1.7	-18.35	-146.2	-6,524.2	6,015.6	6,004.9	10.62	566.361	
3,641.7	3,564.2	3,495.0	3,494.2	13.4	1.7	-18.38	-146.4	-6,524.4	6,003.8	5,993.0	10.78	557.105	
3,700.0	3,619.8	3,552.8	3,552.0	13.8	1.7	-18.44	-146.6	-6,524.7	5,987.3	5,976.3	10.99	544.812	
3,740.1	3,658.0	3,592.9	3,592.1	14.0	1.7	-18.48	-146.7	-6,524.9	5,975.9	5,964.8	11.14	536.593	
3,800.0	3,715.1	3,644.9	3,644.1	14.4	1.7	-18.53	-146.8	-6,525.2	5,959.0	5,947.6	11.35	524.828	
3,838.6	3,751.8	3,677.8	3,677.0	14.7	1.7	-18.56	-146.8	-6,525.4	5,948.1	5,936.6	11.49	517.464	
3,900.0	3,810.4	3,734.4	3,733.6	15.0	1.8	-18.62	-146.9	-6,525.8	5,930.8	5,919.1	11.72	506.019	
3,937.0	3,845.7	3,770.4	3,769.6	15.3	1.8	-18.65	-146.9	-6,526.0	5,920.4	5,908.5	11.86	499.278	
4,000.0	3,905.7	3,828.3	3,827.5	15.7	1.8	-18.71	-147.1	-6,526.4	5,902.7	5,890.6	12.09	488.173	
4,035.4	3,939.5	3,859.1	3,858.3	15.9	1.8	-18.74	-147.1	-6,526.6	5,892.7	5,880.5	12.22	482.114	
4,100.0	4,001.0	3,916.7	3,915.9	16.3	1.8	-18.80	-147.3	-6,527.1	5,874.7	5,862.2	12.46	471.364	
4,133.8	4,033.3	3,948.9	3,948.1	16.5	1.8	-18.83	-147.4	-6,527.3	5,865.2	5,852.6	12.59	465.843	
4,200.0	4,096.3	4,013.5	4,012.7	16.9	1.8	-18.90	-147.6	-6,527.9	5,846.7	5,833.9	12.84	455.328	
4,232.3	4,127.1	4,049.0	4,048.2	17.1	1.8	-18.94	-147.7	-6,528.1	5,837.7	5,824.7	12.96	450.266	
4,300.0	4,191.7	4,118.1	4,117.3	17.6	1.8	-19.01	-148.1	-6,528.6	5,818.7	5,805.4	13.22	440.002	
4,330.7	4,220.9	4,144.3	4,143.5	17.8	1.8	-19.04	-148.3	-6,528.7	5,810.0	5,796.7	13.34	435.536	
4,400.0	4,287.0	4,200.0	4,199.2	18.2	1.9	-19.10	-148.8	-6,529.1	5,790.7	5,777.1	13.60	425.770	
4,429.1	4,314.7	4,221.5	4,220.7	18.4	1.9	-19.12	-149.0	-6,529.3	5,782.6	5,768.8	13.71	421.810	
4,500.0	4,382.3	4,267.3	4,266.5	18.8	1.9	-19.17	-149.5	-6,529.8	5,763.0	5,749.1	13.97	412.512	
4,527.5	4,408.6	4,300.0	4,299.2	19.0	1.9	-19.21	-149.8	-6,530.3	5,755.5	5,741.5	14.08	408.825	
4,600.0	4,477.6	4,347.5	4,346.7	19.5	1.9	-19.27	-150.3	-6,531.1	5,735.9	5,721.5	14.35	399.760	
4,626.0	4,502.4	4,372.5	4,371.7	19.6	1.9	-19.29	-150.6	-6,531.5	5,728.8	5,714.4	14.45	396.496	
4,700.0	4,572.9	4,488.0	4,487.2	20.1	1.9	-19.43	-151.7	-6,533.0	5,708.6	5,693.8	14.76	386.777	
4,724.4	4,596.2	4,518.7	4,517.9	20.3	2.0	-19.46	-152.0	-6,533.2	5,701.8	5,686.9	14.86	383.720	
4,800.0	4,668.3	4,596.4	4,595.6	20.7	2.0	-19.55	-152.6	-6,533.7	5,680.6	5,665.5	15.16	374.697	
4,822.8	4,690.0	4,618.6	4,617.7	20.9	2.0	-19.57	-152.8	-6,533.8	5,674.2	5,659.0	15.25	372.064	
4,900.0	4,763.6	4,692.6	4,691.8	21.4	2.0	-19.66	-153.4	-6,534.2	5,652.6	5,637.1	15.56	363.394	
4,921.2	4,783.8	4,712.3	4,711.4	21.5	2.0	-19.68	-153.6	-6,534.4	5,646.7	5,631.0	15.64	361.042	
5,000.0	4,858.9	4,783.6	4,782.7	22.0	2.0	-19.77	-154.3	-6,534.8	5,624.7	5,608.7	15.96	352.496	
5,019.7	4,877.7	4,801.4	4,800.5	22.1	2.0	-19.79	-154.5	-6,534.9	5,619.2	5,603.1	16.04	350.409	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,954.2	4,874.1	4,873.2	22.6	2.1	-19.87	-155.3	-6,535.4	5,596.8	5,580.4	16.36	342.090		
5,118.1	4,971.5	4,890.5	4,889.6	22.8	2.1	-19.89	-155.4	-6,535.5	5,591.8	5,575.3	16.43	340.258		
5,171.8	5,022.7	4,938.8	4,937.9	23.1	2.1	-19.95	-156.0	-6,535.9	5,576.9	5,560.2	16.65	334.912		
5,200.0	5,049.6	4,964.1	4,963.2	23.3	2.1	-19.93	-156.3	-6,536.1	5,569.2	5,552.4	16.74	332.725		
5,216.5	5,065.4	4,979.0	4,978.1	23.3	2.1	-19.92	-156.5	-6,536.2	5,564.8	5,548.0	16.78	331.575		
5,300.0	5,145.7	5,054.6	5,053.7	23.7	2.1	-19.85	-157.3	-6,536.9	5,544.0	5,527.0	17.01	326.006		
5,314.9	5,160.1	5,068.2	5,067.3	23.8	2.2	-19.84	-157.4	-6,537.0	5,540.5	5,523.5	17.04	325.101		
5,400.0	5,242.7	5,154.4	5,153.5	24.1	2.2	-19.80	-158.2	-6,537.9	5,522.1	5,504.9	17.25	320.169		
5,413.4	5,255.7	5,168.9	5,168.0	24.2	2.2	-19.79	-158.3	-6,538.0	5,519.4	5,502.1	17.28	319.473		
5,500.0	5,340.5	5,255.1	5,254.2	24.5	2.2	-19.75	-158.9	-6,538.7	5,503.3	5,485.9	17.46	315.207		
5,511.8	5,352.1	5,266.4	5,265.5	24.5	2.2	-19.74	-158.9	-6,538.8	5,501.3	5,483.8	17.48	314.695		
5,600.0	5,439.0	5,349.4	5,348.5	24.8	2.2	-19.71	-159.3	-6,539.6	5,487.8	5,470.2	17.64	311.038		
5,610.2	5,449.1	5,359.0	5,358.1	24.8	2.2	-19.70	-159.3	-6,539.7	5,486.4	5,468.8	17.66	310.668		
5,700.0	5,538.0	5,449.6	5,448.7	25.1	2.3	-19.67	-159.4	-6,540.6	5,475.7	5,457.9	17.81	307.429		
5,708.6	5,546.6	5,459.0	5,458.0	25.1	2.3	-19.67	-159.4	-6,540.7	5,474.8	5,456.9	17.82	307.147		
5,800.0	5,637.4	5,557.8	5,556.8	25.3	2.3	-19.65	-159.2	-6,541.6	5,466.6	5,448.7	17.97	304.281		
5,807.1	5,644.5	5,565.4	5,564.5	25.3	2.3	-19.65	-159.1	-6,541.6	5,466.1	5,448.1	17.98	304.091		
5,900.0	5,737.2	5,643.6	5,642.7	25.5	2.3	-19.63	-158.8	-6,542.3	5,460.9	5,442.8	18.09	301.913		
5,905.5	5,742.6	5,647.6	5,646.6	25.5	2.3	-19.63	-158.7	-6,542.4	5,460.7	5,442.6	18.09	301.814		
5,996.7	5,833.8	5,700.0	5,699.1	25.6	2.3	-19.61	-158.2	-6,543.1	5,458.9	5,440.7	18.18	300.280 CC		
6,000.0	5,837.1	5,700.0	5,699.1	25.6	2.3	-19.61	-158.2	-6,543.1	5,458.9	5,440.7	18.18	300.234		
6,003.9	5,841.0	5,700.0	5,699.1	25.6	2.3	-19.61	-158.2	-6,543.1	5,458.9	5,440.7	18.18	300.188		
6,051.8	5,888.9	5,743.7	5,742.8	25.7	2.3	-94.74	-157.5	-6,543.9	5,459.4	5,432.5	26.90	202.939 ES		
6,081.8	5,918.9	5,761.7	5,760.7	25.7	2.3	-94.73	-157.1	-6,544.4	5,460.0	5,433.1	26.93	202.728		
6,100.0	5,937.1	5,772.6	5,771.6	25.7	2.3	175.27	-156.9	-6,544.6	5,460.7	5,442.4	18.25	299.196		
6,102.3	5,939.4	5,774.0	5,773.0	25.7	2.3	175.27	-156.9	-6,544.7	5,460.8	5,442.5	18.25	299.269		
6,150.0	5,987.0	5,800.0	5,799.0	25.7	2.3	175.25	-156.2	-6,545.4	5,464.9	5,446.8	18.17	300.788		
6,200.0	6,036.5	5,839.7	5,838.7	25.7	2.3	175.21	-155.2	-6,546.6	5,472.8	5,454.7	18.08	302.659		
6,200.8	6,037.3	5,840.3	5,839.3	25.7	2.3	175.21	-155.2	-6,546.6	5,472.9	5,454.9	18.08	302.693		
6,250.0	6,085.5	5,876.0	5,874.9	25.7	2.3	175.15	-154.1	-6,547.8	5,484.2	5,466.2	17.98	304.980		
6,299.2	6,133.0	5,945.2	5,944.0	25.6	2.3	175.09	-151.8	-6,550.2	5,498.7	5,480.9	17.87	307.659		
6,300.0	6,133.7	5,947.5	5,946.4	25.6	2.3	175.09	-151.7	-6,550.2	5,499.0	5,481.1	17.87	307.699		
6,350.0	6,180.9	6,039.8	6,038.6	25.5	2.3	175.03	-148.0	-6,552.6	5,516.6	5,498.9	17.74	310.939		
6,397.6	6,224.6	6,097.9	6,096.5	25.4	2.3	174.94	-145.5	-6,553.9	5,536.2	5,518.6	17.58	314.863		
6,400.0	6,226.7	6,100.5	6,099.2	25.4	2.3	174.93	-145.3	-6,553.9	5,537.3	5,519.7	17.57	315.073		
6,450.0	6,271.1	6,144.8	6,143.4	25.2	2.3	174.78	-143.4	-6,554.8	5,561.0	5,543.6	17.38	320.052		
6,496.0	6,310.4	6,184.0	6,182.6	25.1	2.3	174.61	-141.9	-6,555.6	5,585.5	5,568.3	17.17	325.332		
6,500.0	6,313.7	6,187.3	6,185.9	25.1	2.3	174.59	-141.7	-6,555.6	5,587.7	5,570.5	17.15	325.809		
6,550.0	6,354.4	6,227.7	6,226.3	25.0	2.3	174.36	-140.3	-6,556.4	5,617.3	5,600.3	16.91	332.254		
6,594.5	6,388.9	6,261.9	6,260.4	24.9	2.3	174.10	-139.2	-6,557.1	5,645.9	5,629.2	16.68	338.449		
6,600.0	6,393.0	6,266.0	6,264.5	24.9	2.3	174.07	-139.1	-6,557.1	5,649.6	5,632.9	16.65	339.238		
6,650.0	6,429.3	6,300.0	6,298.5	24.8	2.3	173.70	-138.1	-6,557.8	5,684.4	5,668.0	16.40	346.532		
6,692.9	6,458.5	6,328.8	6,327.3	24.7	2.3	173.32	-137.4	-6,558.3	5,716.3	5,700.1	16.21	352.652		
6,700.0	6,463.1	6,333.1	6,331.6	24.7	2.3	173.25	-137.3	-6,558.4	5,721.7	5,705.5	16.18	353.637		
6,750.0	6,494.3	6,361.8	6,360.3	24.7	2.3	172.67	-136.6	-6,558.9	5,761.2	5,745.2	16.00	360.022		
6,791.3	6,517.9	6,383.5	6,382.0	24.7	2.3	172.07	-136.1	-6,559.3	5,795.4	5,779.5	15.92	364.136		
6,800.0	6,522.6	6,387.9	6,386.3	24.7	2.3	171.93	-136.0	-6,559.4	5,802.8	5,786.9	15.91	364.824		
6,850.0	6,548.0	6,412.6	6,411.1	24.7	2.3	170.97	-135.5	-6,559.9	5,846.1	5,830.2	15.93	366.972		
6,889.7	6,566.0	6,431.3	6,429.8	24.8	2.3	169.97	-135.1	-6,560.2	5,881.8	5,865.7	16.07	365.982		
6,900.0	6,570.4	6,435.8	6,434.3	24.9	2.3	169.67	-135.0	-6,560.3	5,891.1	5,875.0	16.13	365.286		
6,950.0	6,589.5	6,455.6	6,454.0	25.1	2.3	167.83	-134.6	-6,560.7	5,937.5	5,920.9	16.56	358.475		
6,988.2	6,602.0	6,468.3	6,466.7	25.3	2.3	165.84	-134.4	-6,560.9	5,973.7	5,956.5	17.12	348.828		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.4	6,471.8	6,470.2	25.3	2.3	165.08	-134.3	-6,561.0	5,985.0	5,967.7	17.35	344.948		
7,050.0	6,618.0	6,484.4	6,482.9	25.6	2.3	160.55	-134.1	-6,561.2	6,033.5	6,014.8	18.72	322.323		
7,086.6	6,625.0	6,491.3	6,489.8	25.9	2.3	154.93	-133.9	-6,561.3	6,069.4	6,049.0	20.39	297.696		
7,100.0	6,627.1	6,493.3	6,491.8	26.0	2.3	151.98	-133.9	-6,561.3	6,082.6	6,061.4	21.22	286.589		
7,150.0	6,632.8	6,498.6	6,497.0	26.5	2.3	132.02	-133.8	-6,561.4	6,132.3	6,106.3	25.94	236.375		
7,185.0	6,634.7	6,500.0	6,498.4	26.8	2.3	101.43	-133.7	-6,561.5	6,167.2	6,138.3	28.85	213.754		
7,200.0	6,635.0	6,500.0	6,498.4	27.0	2.3	84.33	-133.7	-6,561.5	6,182.1	6,153.3	28.81	214.612		
7,215.9	6,635.0	6,499.7	6,498.1	27.1	2.3	67.17	-133.8	-6,561.5	6,198.0	6,169.9	28.08	220.715		
7,283.4	6,634.1	6,497.4	6,495.9	27.9	2.3	66.92	-133.8	-6,561.4	6,265.3	6,236.5	28.83	217.326		
7,300.0	6,633.9	6,496.9	6,495.3	28.1	2.3	66.85	-133.8	-6,561.4	6,281.8	6,252.8	29.01	198.736		
7,381.9	6,632.9	6,494.2	6,492.6	29.3	2.3	66.55	-133.9	-6,561.4	6,363.5	6,333.4	30.07	211.650		
7,400.0	6,632.6	6,493.6	6,492.0	29.5	2.3	66.48	-133.9	-6,561.4	6,381.6	6,351.3	30.30	210.624		
7,480.3	6,631.6	6,490.9	6,489.4	30.8	2.3	66.18	-133.9	-6,561.3	6,461.7	6,430.2	31.47	205.348		
7,500.0	6,631.4	6,490.3	6,488.7	31.1	2.3	66.11	-133.9	-6,561.3	6,481.3	6,449.6	31.75	204.121		
7,578.7	6,630.4	6,487.6	6,486.1	32.5	2.3	65.82	-134.0	-6,561.2	6,559.8	6,526.8	33.01	198.736		
7,600.0	6,630.1	6,486.9	6,485.4	32.9	2.3	65.74	-134.0	-6,561.2	6,581.1	6,547.7	33.35	197.358		
7,677.1	6,629.1	6,484.4	6,482.8	34.3	2.3	65.45	-134.1	-6,561.2	6,658.0	6,623.3	34.67	192.066		
7,700.0	6,628.8	6,483.6	6,482.0	34.8	2.3	65.36	-134.1	-6,561.2	6,680.8	6,645.7	35.05	190.584		
7,775.6	6,627.8	6,481.1	6,479.5	36.3	2.3	65.09	-134.1	-6,561.1	6,756.2	6,719.8	36.42	185.516		
7,800.0	6,627.5	6,480.3	6,478.7	36.8	2.3	65.00	-134.1	-6,561.1	6,780.6	6,743.7	36.86	183.967		
7,874.0	6,626.6	6,477.8	6,476.2	38.4	2.3	64.73	-134.2	-6,561.1	6,854.4	6,816.1	38.25	179.199		
7,900.0	6,626.3	6,476.9	6,475.3	38.9	2.3	64.63	-134.2	-6,561.1	6,880.3	6,841.6	38.74	177.615		
7,972.4	6,625.3	6,474.5	6,472.9	40.5	2.3	64.36	-134.2	-6,561.0	6,952.6	6,912.4	40.15	173.184		
8,000.0	6,625.0	6,473.5	6,472.0	41.1	2.3	64.26	-134.3	-6,561.0	6,980.1	6,939.4	40.68	171.587		
8,070.8	6,624.1	6,471.1	6,469.6	42.7	2.3	64.00	-134.3	-6,561.0	7,050.8	7,008.7	42.09	167.505		
8,100.0	6,623.7	6,470.2	6,468.6	43.4	2.3	63.90	-134.3	-6,560.9	7,079.9	7,037.2	42.67	165.914		
8,169.3	6,622.8	6,467.8	6,466.3	45.0	2.3	63.65	-134.4	-6,560.9	7,149.0	7,104.9	44.08	162.176		
8,200.0	6,622.4	6,466.8	6,465.2	45.7	2.3	63.53	-134.4	-6,560.9	7,179.6	7,134.9	44.70	160.604		
8,267.7	6,621.6	6,464.5	6,462.9	47.4	2.3	63.29	-134.4	-6,560.8	7,247.2	7,201.1	46.10	157.195		
8,300.0	6,621.1	6,463.4	6,461.8	48.1	2.3	63.17	-134.5	-6,560.8	7,279.4	7,232.6	46.77	155.650		
8,366.1	6,620.3	6,461.1	6,459.6	49.7	2.3	62.93	-134.5	-6,560.8	7,345.4	7,297.2	48.15	152.549		
8,400.0	6,619.9	6,460.0	6,458.4	50.6	2.3	62.81	-134.5	-6,560.7	7,379.2	7,330.3	48.86	151.039		
8,464.5	6,619.0	6,457.8	6,456.2	52.2	2.3	62.58	-134.6	-6,560.7	7,443.6	7,393.4	50.22	148.224		
8,500.0	6,618.6	6,456.5	6,455.0	53.0	2.3	62.45	-134.6	-6,560.7	7,479.0	7,428.0	50.96	146.752		
8,563.0	6,617.8	6,454.4	6,452.8	54.6	2.3	62.22	-134.6	-6,560.6	7,541.8	7,489.5	52.30	144.198		
8,600.0	6,617.3	6,453.1	6,451.6	55.5	2.3	62.09	-134.7	-6,560.6	7,578.8	7,525.7	53.09	142.767		
8,661.4	6,616.5	6,451.0	6,449.5	57.1	2.3	61.87	-134.7	-6,560.6	7,640.1	7,585.7	54.40	140.452		
8,700.0	6,616.0	6,449.7	6,448.1	58.1	2.3	61.73	-134.7	-6,560.6	7,678.6	7,623.4	55.22	139.063		
8,759.8	6,615.2	6,447.6	6,446.1	59.6	2.3	61.52	-134.8	-6,560.5	7,738.3	7,681.8	56.50	136.966		
8,800.0	6,614.7	6,446.2	6,444.7	60.6	2.3	61.38	-134.8	-6,560.5	7,778.4	7,721.0	57.35	135.620		
8,858.2	6,614.0	6,444.2	6,442.7	62.1	2.3	61.17	-134.8	-6,560.5	7,836.5	7,777.9	58.60	133.719		
8,900.0	6,613.4	6,442.8	6,441.2	63.2	2.3	61.02	-134.9	-6,560.4	7,878.2	7,818.7	59.50	132.416		
8,956.7	6,612.7	6,440.8	6,439.3	64.7	2.3	60.82	-134.9	-6,560.4	7,934.7	7,874.0	60.71	130.694		
9,000.0	6,612.2	6,439.3	6,437.8	65.8	2.3	60.67	-134.9	-6,560.4	7,978.0	7,916.4	61.64	129.433		
9,055.1	6,611.5	6,437.4	6,435.8	67.3	2.3	60.48	-135.0	-6,560.3	8,033.0	7,970.2	62.82	127.872		
9,100.0	6,610.9	6,435.8	6,434.3	68.4	2.3	60.32	-135.0	-6,560.3	8,077.8	8,014.0	63.78	126.652		
9,153.5	6,610.2	6,433.9	6,432.4	69.8	2.3	60.13	-135.1	-6,560.3	8,131.2	8,066.3	64.93	125.237		
9,200.0	6,609.6	6,432.3	6,430.8	71.1	2.3	59.97	-135.1	-6,560.2	8,177.6	8,111.7	65.92	124.058		
9,251.9	6,608.9	6,430.5	6,429.0	72.4	2.3	59.79	-135.1	-6,560.2	8,229.5	8,162.4	67.03	122.775		
9,300.0	6,608.3	6,428.8	6,427.3	73.7	2.3	59.62	-135.2	-6,560.2	8,277.4	8,209.4	68.05	121.635		
9,350.4	6,607.7	6,427.1	6,425.5	75.0	2.3	59.44	-135.2	-6,560.1	8,327.7	8,258.6	69.13	120.471		
9,400.0	6,607.0	6,425.3	6,423.8	76.4	2.3	59.27	-135.2	-6,560.1	8,377.3	8,307.1	70.18	119.370		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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	6,606.4	6,423.6	6,422.1	77.7	2.3	59.10	-135.3	-6,560.1	8,426.0	8,354.8	71.22	118.314	
9,500.0	6,605.7	6,421.8	6,420.2	79.0	2.3	58.92	-135.3	-6,560.0	8,477.1	8,404.8	72.30	117.249	
9,547.2	6,605.1	6,420.1	6,418.6	80.3	2.3	58.76	-135.3	-6,560.0	8,524.2	8,450.9	73.30	116.292	
9,600.0	6,604.5	6,418.2	6,416.7	81.7	2.3	58.58	-135.4	-6,560.0	8,576.9	8,502.5	74.41	115.262	
9,645.6	6,603.9	6,416.6	6,415.1	82.9	2.3	58.43	-135.4	-6,559.9	8,622.5	8,547.1	75.38	114.394	
9,700.0	6,603.2	6,414.7	6,413.2	84.4	2.3	58.24	-135.4	-6,559.9	8,676.7	8,600.2	76.51	113.399	
9,744.1	6,602.6	6,413.1	6,411.6	85.6	2.3	58.09	-135.5	-6,559.9	8,720.7	8,643.3	77.44	112.612	
9,800.0	6,601.9	6,411.1	6,409.6	87.1	2.3	57.90	-135.5	-6,559.8	8,776.6	8,698.0	78.61	111.650	
9,842.5	6,601.3	6,409.6	6,408.1	88.2	2.3	57.75	-135.5	-6,559.8	8,819.0	8,739.5	79.50	110.937	
9,900.0	6,600.6	6,407.6	6,406.0	89.8	2.3	57.56	-135.6	-6,559.8	8,876.4	8,795.7	80.69	110.006	
9,940.9	6,600.1	6,406.1	6,404.6	90.9	2.3	57.42	-135.6	-6,559.8	8,917.3	8,835.7	81.54	109.360	
10,000.0	6,599.3	6,404.0	6,402.5	92.5	2.3	57.22	-135.7	-6,559.7	8,976.2	8,893.5	82.76	108.460	
10,039.3	6,598.8	6,402.6	6,401.1	93.5	2.3	57.09	-135.7	-6,559.7	9,015.5	8,932.0	83.57	107.875	
10,100.0	6,598.0	6,400.4	6,398.9	95.2	2.3	56.88	-135.7	-6,559.6	9,076.1	8,991.3	84.82	107.005	
10,137.8	6,597.5	6,400.0	6,398.5	96.2	2.3	56.85	-135.7	-6,559.6	9,113.8	9,028.1	85.66	106.392	
10,200.0	6,596.7	6,400.0	6,398.5	97.9	2.3	56.84	-135.7	-6,559.6	9,175.9	9,088.8	87.09	105.355	
10,236.2	6,596.3	6,396.3	6,394.8	98.9	2.3	56.50	-135.8	-6,559.6	9,212.1	9,124.4	87.66	105.085	
10,300.0	6,595.4	6,394.4	6,392.9	100.6	2.3	56.33	-135.9	-6,559.5	9,275.8	9,186.8	88.99	104.235	
10,334.6	6,595.0	6,393.4	6,391.9	101.6	2.3	56.23	-135.9	-6,559.5	9,310.3	9,220.6	89.71	103.783	
10,400.0	6,594.2	6,391.4	6,389.9	103.4	2.3	56.05	-135.9	-6,559.5	9,375.6	9,284.6	91.06	102.958	
10,433.0	6,593.7	6,390.5	6,388.9	104.3	2.3	55.97	-135.9	-6,559.5	9,408.6	9,316.9	91.75	102.550	
10,500.0	6,592.9	6,388.5	6,387.0	106.1	2.3	55.78	-136.0	-6,559.4	9,475.5	9,382.3	93.13	101.749	
10,531.5	6,592.5	6,387.6	6,386.0	106.9	2.3	55.70	-136.0	-6,559.4	9,506.9	9,413.1	93.77	101.380	
10,600.0	6,591.6	6,385.5	6,384.0	108.8	2.3	55.52	-136.0	-6,559.4	9,575.3	9,480.1	95.18	100.602	
10,629.9	6,591.2	6,384.7	6,383.1	109.6	2.3	55.44	-136.1	-6,559.3	9,605.2	9,509.4	95.79	100.270	
10,700.0	6,590.3	6,382.6	6,381.1	111.6	2.3	55.25	-136.1	-6,559.3	9,675.2	9,577.9	97.22	99.515	
10,728.3	6,589.9	6,381.7	6,380.2	112.3	2.3	55.18	-136.1	-6,559.3	9,703.5	9,605.7	97.80	99.216	
10,800.0	6,589.0	6,379.6	6,378.1	114.3	2.3	54.99	-136.2	-6,559.3	9,775.0	9,675.8	99.26	98.482	
10,826.7	6,588.7	6,378.8	6,377.3	115.0	2.3	54.92	-136.2	-6,559.2	9,801.7	9,701.9	99.80	98.214	
10,900.0	6,587.7	6,376.7	6,375.2	117.1	2.3	54.72	-136.2	-6,559.2	9,874.9	9,773.6	101.28	97.501	
10,925.2	6,587.4	6,375.9	6,374.4	117.7	2.3	54.66	-136.3	-6,559.2	9,900.0	9,798.2	101.79	97.261	
11,000.0	6,586.4	6,373.7	6,372.2	119.8	2.3	54.46	-136.3	-6,559.1	9,974.7	9,871.4	103.29	96.569	
11,023.6	6,586.1	6,373.0	6,371.5	120.4	2.3	54.40	-136.3	-6,559.1	9,998.3	9,894.5	103.77	96.354 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-105.02	-1,903.2	-7,092.3	7,343.3				
98.4	98.4	56.5	56.5	0.1	0.0	-105.02	-1,903.1	-7,092.4	7,343.3	7,343.2	0.11	N/A	
100.0	100.0	57.9	57.9	0.1	0.0	-105.02	-1,903.1	-7,092.4	7,343.3	7,343.2	0.11	N/A	
196.8	196.8	165.9	165.9	0.3	0.1	-105.02	-1,902.5	-7,092.7	7,343.4	7,343.0	0.46	N/A	
200.0	200.0	170.2	170.2	0.3	0.1	-105.01	-1,902.5	-7,092.7	7,343.4	7,342.9	0.47	N/A	
295.3	295.3	264.5	264.5	0.5	0.3	-105.01	-1,901.8	-7,092.8	7,343.3	7,342.5	0.80	9,162.169	
300.0	300.0	268.6	268.6	0.5	0.3	-105.01	-1,901.8	-7,092.8	7,343.3	7,342.5	0.82	9,000.389	
313.3	313.3	280.4	280.3	0.6	0.3	-105.01	-1,901.7	-7,092.8	7,343.3	7,342.5	0.86	8,572.714	
393.7	393.7	359.5	359.5	0.8	0.3	-105.01	-1,901.2	-7,093.0	7,343.3	7,342.2	1.10	6,682.888	
400.0	400.0	366.0	366.0	0.8	0.3	-105.00	-1,901.2	-7,093.0	7,343.3	7,342.2	1.12	6,569.804	
492.1	492.1	446.4	446.4	1.0	0.4	-105.00	-1,900.6	-7,093.2	7,343.4	7,342.0	1.38	5,327.982	
500.0	500.0	452.6	452.6	1.0	0.4	-105.00	-1,900.6	-7,093.2	7,343.4	7,342.0	1.40	5,246.134	
590.5	590.5	528.7	528.7	1.2	0.4	-104.99	-1,900.0	-7,093.6	7,343.7	7,342.1	1.65	4,453.409	
600.0	600.0	537.7	537.7	1.2	0.5	-104.99	-1,900.0	-7,093.6	7,343.7	7,342.1	1.68	4,383.229	
689.0	689.0	621.2	621.2	1.4	0.5	-104.99	-1,899.4	-7,094.2	7,344.1	7,342.2	1.92	3,820.875	
700.0	700.0	631.3	631.3	1.4	0.5	-104.99	-1,899.4	-7,094.2	7,344.2	7,342.2	1.95	3,762.495	
787.4	787.4	713.2	713.2	1.6	0.5	-104.99	-1,899.1	-7,094.8	7,344.6	7,342.5	2.19	3,354.719	
800.0	800.0	727.2	727.2	1.7	0.6	-104.98	-1,899.1	-7,094.8	7,344.7	7,342.5	2.22	3,302.094	
885.8	885.8	821.2	821.2	1.9	0.6	-104.98	-1,898.9	-7,095.4	7,345.1	7,342.7	2.46	2,985.107	
900.0	900.0	836.2	836.2	1.9	0.6	-104.98	-1,898.9	-7,095.4	7,345.2	7,342.7	2.50	2,939.517	
984.2	984.2	923.9	923.8	2.1	0.6	-104.98	-1,898.9	-7,095.8	7,345.5	7,342.8	2.72	2,696.096	
1,000.0	1,000.0	939.7	939.6	2.1	0.6	-104.98	-1,898.9	-7,095.8	7,345.6	7,342.8	2.77	2,655.570	
1,082.7	1,082.7	1,023.5	1,023.5	2.3	0.7	-104.98	-1,898.7	-7,096.2	7,345.9	7,342.9	2.98	2,463.794	
1,100.0	1,100.0	1,041.6	1,041.6	2.3	0.7	-104.98	-1,898.7	-7,096.3	7,345.9	7,342.9	3.03	2,428.396	
1,181.1	1,181.1	1,123.9	1,123.9	2.5	0.7	-104.98	-1,898.8	-7,096.5	7,346.2	7,343.0	3.23	2,275.165	
1,200.0	1,200.0	1,141.9	1,141.9	2.6	0.7	-104.98	-1,898.8	-7,096.6	7,346.3	7,343.0	3.28	2,242.095	
1,279.5	1,279.5	1,219.4	1,219.4	2.7	0.7	-104.98	-1,899.0	-7,096.8	7,346.6	7,343.1	3.48	2,112.581	
1,300.0	1,300.0	1,240.7	1,240.7	2.8	0.7	-104.98	-1,899.1	-7,096.9	7,346.6	7,343.1	3.53	2,081.394	
1,377.9	1,377.9	1,320.9	1,320.9	3.0	0.8	-104.98	-1,899.2	-7,097.1	7,346.9	7,343.2	3.73	1,971.221	
1,400.0	1,400.0	1,343.0	1,342.9	3.0	0.8	-104.98	-1,899.3	-7,097.2	7,347.0	7,343.2	3.78	1,942.585	
1,476.4	1,476.4	1,419.7	1,419.7	3.2	0.8	-29.87	-1,899.5	-7,097.4	7,346.3	7,342.4	3.97	1,852.662	
1,500.0	1,500.0	1,443.9	1,443.9	3.2	0.8	-29.88	-1,899.6	-7,097.4	7,345.8	7,341.8	4.02	1,825.157	
1,574.8	1,574.7	1,515.1	1,515.1	3.4	0.8	-29.92	-1,899.9	-7,097.6	7,342.9	7,338.7	4.21	1,745.630	
1,600.0	1,599.8	1,534.2	1,534.2	3.4	0.8	-29.94	-1,900.0	-7,097.6	7,341.6	7,337.3	4.27	1,721.052	
1,673.2	1,672.8	1,600.0	1,600.0	3.6	0.9	-30.01	-1,900.4	-7,097.9	7,336.8	7,332.3	4.45	1,650.444	
1,700.0	1,699.5	1,610.7	1,610.7	3.7	0.9	-30.04	-1,900.4	-7,098.0	7,334.6	7,330.1	4.51	1,627.351	
1,771.6	1,770.6	1,668.7	1,668.7	3.8	0.9	-30.13	-1,900.9	-7,098.4	7,328.0	7,323.3	4.69	1,563.613	
1,800.0	1,798.7	1,700.0	1,700.0	3.9	0.9	-30.18	-1,901.1	-7,098.7	7,325.0	7,320.2	4.76	1,538.830	
1,870.1	1,868.0	1,744.6	1,744.6	4.1	0.9	-30.30	-1,901.6	-7,099.1	7,316.5	7,311.6	4.94	1,481.772	
1,900.0	1,897.5	1,766.9	1,766.9	4.2	0.9	-30.35	-1,901.9	-7,099.3	7,312.6	7,307.5	5.01	1,458.266	
1,968.5	1,964.8	1,822.7	1,822.7	4.4	0.9	-30.50	-1,902.6	-7,099.9	7,302.5	7,297.3	5.20	1,404.225	
2,000.0	1,995.6	1,852.4	1,852.3	4.5	0.9	-30.58	-1,903.0	-7,100.3	7,297.5	7,292.2	5.29	1,380.218	
2,066.9	2,060.9	1,915.4	1,915.3	4.7	1.0	-30.76	-1,903.9	-7,101.0	7,285.8	7,280.3	5.48	1,329.208	
2,100.0	2,093.1	1,946.8	1,946.7	4.8	1.0	-30.86	-1,904.4	-7,101.4	7,279.5	7,274.0	5.58	1,304.987	
2,165.3	2,156.3	2,007.9	2,007.8	5.1	1.0	-31.07	-1,905.4	-7,102.1	7,266.3	7,260.5	5.78	1,256.489	
2,200.0	2,189.6	2,038.1	2,038.0	5.2	1.0	-31.19	-1,905.9	-7,102.5	7,258.7	7,252.8	5.89	1,232.279	
2,263.8	2,250.7	2,093.5	2,093.4	5.5	1.0	-31.42	-1,906.7	-7,103.2	7,244.0	7,237.9	6.10	1,186.864	
2,280.0	2,266.2	2,111.8	2,111.7	5.6	1.0	-31.49	-1,907.0	-7,103.5	7,240.1	7,233.9	6.16	1,175.486	
2,300.0	2,285.3	2,139.0	2,138.9	5.7	1.0	-31.52	-1,907.3	-7,103.8	7,235.2	7,228.9	6.23	1,161.179	
2,362.2	2,344.6	2,215.3	2,215.2	6.0	1.1	-31.63	-1,908.0	-7,104.7	7,219.8	7,213.3	6.45	1,119.174	
2,400.0	2,380.6	2,248.6	2,248.5	6.2	1.1	-31.67	-1,908.3	-7,105.1	7,210.4	7,203.8	6.59	1,094.041	
2,460.6	2,438.4	2,300.0	2,299.9	6.5	1.1	-31.74	-1,908.8	-7,105.8	7,195.5	7,188.7	6.81	1,056.427	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,475.9	2,332.9	2,332.8	6.7	1.1	-31.78	-1,909.0	-7,106.2	7,185.8	7,178.8	6.96	1,033.152	
2,559.0	2,532.2	2,379.7	2,379.6	7.0	1.1	-31.85	-1,909.3	-7,106.9	7,171.4	7,164.2	7.17	999.512	
2,600.0	2,571.2	2,417.2	2,417.1	7.2	1.1	-31.90	-1,909.6	-7,107.5	7,161.4	7,154.1	7.33	976.901	
2,657.5	2,626.0	2,481.5	2,481.3	7.5	1.1	-31.98	-1,910.0	-7,108.4	7,147.4	7,139.8	7.56	945.608	
2,700.0	2,666.6	2,528.8	2,528.6	7.8	1.2	-32.05	-1,910.4	-7,109.1	7,136.9	7,129.2	7.73	923.409	
2,755.9	2,719.8	2,590.7	2,590.6	8.1	1.2	-32.13	-1,911.0	-7,109.8	7,123.2	7,115.3	7.96	895.201	
2,800.0	2,761.9	2,634.1	2,633.9	8.3	1.2	-32.19	-1,911.4	-7,110.3	7,112.4	7,104.2	8.14	874.232	
2,854.3	2,813.7	2,685.9	2,685.7	8.7	1.2	-32.26	-1,912.0	-7,110.8	7,099.0	7,090.6	8.36	849.383	
2,900.0	2,857.2	2,733.0	2,732.8	8.9	1.2	-32.33	-1,912.6	-7,111.3	7,087.7	7,079.2	8.55	829.301	
2,952.7	2,907.5	2,789.4	2,789.2	9.2	1.2	-32.41	-1,913.4	-7,111.8	7,074.7	7,066.0	8.77	806.870	
3,000.0	2,952.5	2,836.7	2,836.6	9.5	1.3	-32.48	-1,914.1	-7,112.2	7,063.1	7,054.1	8.97	787.748	
3,051.2	3,001.3	2,887.1	2,886.9	9.8	1.3	-32.55	-1,914.8	-7,112.6	7,050.4	7,041.2	9.18	767.794	
3,100.0	3,047.8	2,931.7	2,931.5	10.1	1.3	-32.62	-1,915.4	-7,113.0	7,038.4	7,029.0	9.39	749.666	
3,149.6	3,095.1	2,975.7	2,975.5	10.4	1.3	-32.68	-1,915.9	-7,113.4	7,026.2	7,016.6	9.60	731.932	
3,200.0	3,143.2	3,040.3	3,040.1	10.7	1.3	-32.78	-1,916.7	-7,113.9	7,013.8	7,003.9	9.82	714.013	
3,248.0	3,188.9	3,212.4	3,212.2	11.0	1.4	-33.03	-1,918.3	-7,113.8	7,001.6	6,991.5	10.07	694.989	
3,300.0	3,238.5	3,288.2	3,287.9	11.3	1.4	-33.14	-1,918.9	-7,112.8	6,987.7	6,977.4	10.30	678.200	
3,346.4	3,282.8	3,339.3	3,339.1	11.6	1.4	-33.22	-1,919.5	-7,112.0	6,975.3	6,964.8	10.50	664.091	
3,400.0	3,333.8	3,394.2	3,393.9	11.9	1.4	-33.31	-1,920.2	-7,111.0	6,960.8	6,950.1	10.73	648.552	
3,444.9	3,376.6	3,454.8	3,454.5	12.2	1.4	-33.40	-1,921.2	-7,109.8	6,948.7	6,937.8	10.93	635.679	
3,500.0	3,429.1	3,518.8	3,518.5	12.6	1.4	-33.51	-1,922.3	-7,108.3	6,933.7	6,922.5	11.17	620.579	
3,543.3	3,470.4	3,554.8	3,554.5	12.8	1.4	-33.57	-1,922.9	-7,107.4	6,921.9	6,910.5	11.36	609.325	
3,600.0	3,524.4	3,602.7	3,602.3	13.2	1.4	-33.65	-1,923.9	-7,106.3	6,906.5	6,894.9	11.61	595.090	
3,641.7	3,564.2	3,651.9	3,651.5	13.4	1.4	-33.73	-1,925.0	-7,105.1	6,895.1	6,883.3	11.79	584.712	
3,700.0	3,619.8	3,715.8	3,715.4	13.8	1.4	-33.84	-1,926.4	-7,103.4	6,879.2	6,867.2	12.05	570.768	
3,740.1	3,658.0	3,752.2	3,751.7	14.0	1.4	-33.90	-1,927.2	-7,102.4	6,868.3	6,856.1	12.23	561.555	
3,800.0	3,715.1	3,800.0	3,799.5	14.4	1.4	-33.98	-1,928.3	-7,101.2	6,852.0	6,839.5	12.50	548.374	
3,838.6	3,751.8	3,828.1	3,827.6	14.7	1.4	-34.03	-1,928.9	-7,100.5	6,841.5	6,828.9	12.66	540.212	
3,900.0	3,810.4	3,865.9	3,865.4	15.0	1.4	-34.10	-1,929.8	-7,099.6	6,825.1	6,812.1	12.93	527.732	
3,937.0	3,845.7	3,900.0	3,899.5	15.3	1.4	-34.16	-1,930.7	-7,098.9	6,815.2	6,802.1	13.10	520.292	
4,000.0	3,905.7	3,930.3	3,929.7	15.7	1.4	-34.21	-1,931.5	-7,098.4	6,798.6	6,785.3	13.37	508.379	
4,035.4	3,939.5	3,954.2	3,953.7	15.9	1.4	-34.25	-1,932.1	-7,098.0	6,789.4	6,775.9	13.53	501.786	
4,100.0	4,001.0	4,000.0	3,999.4	16.3	1.4	-34.33	-1,933.3	-7,097.3	6,772.7	6,758.8	13.82	490.111	
4,133.8	4,033.3	4,026.5	4,025.9	16.5	1.5	-34.38	-1,934.1	-7,097.0	6,763.9	6,750.0	13.97	484.099	
4,200.0	4,096.3	4,083.7	4,083.1	16.9	1.5	-34.48	-1,935.5	-7,096.3	6,747.0	6,732.7	14.28	472.632	
4,232.3	4,127.1	4,116.8	4,116.2	17.1	1.5	-34.53	-1,936.3	-7,095.9	6,738.7	6,724.3	14.43	467.109	
4,300.0	4,191.7	4,201.4	4,200.8	17.6	1.5	-34.68	-1,937.9	-7,095.0	6,721.3	6,706.5	14.75	455.624	
4,330.7	4,220.9	4,230.0	4,229.3	17.8	1.5	-34.73	-1,938.4	-7,094.6	6,713.4	6,698.5	14.90	450.697	
4,400.0	4,287.0	4,294.4	4,293.8	18.2	1.5	-34.84	-1,939.4	-7,093.9	6,695.5	6,680.3	15.22	439.898	
4,429.1	4,314.7	4,320.3	4,319.7	18.4	1.5	-34.88	-1,939.7	-7,093.6	6,688.0	6,672.6	15.36	435.506	
4,500.0	4,382.3	4,382.5	4,381.9	18.8	1.5	-34.98	-1,940.6	-7,093.0	6,669.8	6,654.1	15.69	425.137	
4,527.5	4,408.6	4,400.0	4,399.3	19.0	1.5	-35.01	-1,940.8	-7,092.8	6,662.7	6,646.9	15.81	421.294	
4,600.0	4,477.6	4,452.7	4,452.0	19.5	1.5	-35.10	-1,941.5	-7,092.4	6,644.3	6,628.2	16.15	411.397	
4,626.0	4,502.4	4,469.8	4,469.1	19.6	1.5	-35.13	-1,941.7	-7,092.3	6,637.8	6,621.5	16.27	407.962	
4,700.0	4,572.9	4,521.4	4,520.8	20.1	1.6	-35.22	-1,942.3	-7,092.2	6,619.3	6,602.7	16.61	398.394	
4,724.4	4,596.2	4,540.1	4,539.4	20.3	1.6	-35.25	-1,942.6	-7,092.2	6,613.3	6,596.5	16.73	395.295	
4,800.0	4,668.3	4,600.0	4,599.3	20.7	1.6	-35.35	-1,943.4	-7,092.2	6,594.7	6,577.6	17.09	385.920	
4,822.8	4,690.0	4,617.4	4,616.7	20.9	1.6	-35.38	-1,943.6	-7,092.2	6,589.1	6,571.9	17.20	383.154	
4,900.0	4,763.6	4,684.7	4,684.0	21.4	1.6	-35.49	-1,944.5	-7,092.4	6,570.3	6,552.7	17.57	373.940	
4,921.2	4,783.8	4,700.0	4,699.3	21.5	1.6	-35.51	-1,944.6	-7,092.4	6,565.1	6,547.4	17.67	371.504	
5,000.0	4,858.9	4,772.7	4,772.0	22.0	1.6	-35.64	-1,945.5	-7,092.7	6,546.0	6,528.0	18.06	362.491	
5,019.7	4,877.7	4,790.0	4,789.3	22.1	1.6	-35.66	-1,945.7	-7,092.8	6,541.3	6,523.1	18.15	360.303	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Wellbore #													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,100.0	4,954.2	4,848.3	4,847.6	22.6	1.7	-35.76	-1,946.5	-7,093.1	6,522.0	6,503.5	18.54	351.758		
5,118.1	4,971.5	4,861.0	4,860.2	22.8	1.7	-35.78	-1,946.6	-7,093.2	6,517.7	6,499.1	18.63	349.880		
5,171.8	5,022.7	4,900.0	4,899.3	23.1	1.7	-35.85	-1,947.2	-7,093.6	6,505.0	6,486.1	18.89	344.387		
5,200.0	5,049.6	4,937.5	4,936.8	23.3	1.7	-35.83	-1,947.7	-7,093.9	6,498.5	6,479.5	19.00	342.049		
5,216.5	5,065.4	4,961.2	4,960.5	23.3	1.7	-35.83	-1,948.0	-7,094.1	6,494.7	6,475.7	19.06	340.836		
5,300.0	5,145.7	5,050.4	5,049.7	23.7	1.7	-35.75	-1,948.9	-7,094.7	6,476.8	6,457.5	19.32	335.224		
5,314.9	5,160.1	5,063.8	5,063.1	23.8	1.7	-35.73	-1,949.0	-7,094.8	6,473.8	6,454.4	19.36	334.350		
5,400.0	5,242.7	5,138.0	5,137.3	24.1	1.7	-35.64	-1,949.6	-7,095.4	6,457.9	6,438.3	19.60	329.552		
5,413.4	5,255.7	5,149.4	5,148.6	24.2	1.7	-35.63	-1,949.7	-7,095.5	6,455.6	6,436.0	19.63	328.887		
5,500.0	5,340.5	5,229.3	5,228.6	24.5	1.8	-35.55	-1,950.1	-7,096.4	6,442.0	6,422.2	19.84	324.647		
5,511.8	5,352.1	5,242.1	5,241.3	24.5	1.8	-35.55	-1,950.2	-7,096.5	6,440.3	6,420.5	19.87	324.123		
5,600.0	5,439.0	5,338.3	5,337.6	24.8	1.8	-35.50	-1,950.8	-7,097.5	6,428.9	6,408.8	20.07	320.309		
5,610.2	5,449.1	5,349.7	5,348.9	24.8	1.8	-35.49	-1,950.8	-7,097.6	6,427.7	6,407.6	20.09	319.924		
5,700.0	5,538.0	5,439.5	5,438.7	25.1	1.8	-35.45	-1,951.1	-7,098.5	6,418.5	6,398.2	20.27	316.707		
5,708.6	5,546.6	5,447.1	5,446.4	25.1	1.8	-35.45	-1,951.1	-7,098.6	6,417.7	6,397.4	20.28	316.450		
5,800.0	5,637.4	5,529.0	5,528.2	25.3	1.8	-35.42	-1,951.7	-7,099.3	6,411.0	6,390.6	20.43	313.776		
5,807.1	5,644.5	5,535.4	5,534.6	25.3	1.8	-35.41	-1,951.7	-7,099.4	6,410.6	6,390.2	20.44	313.602		
5,900.0	5,737.2	5,621.1	5,620.3	25.5	1.9	-35.40	-1,952.6	-7,100.2	6,406.5	6,385.9	20.58	311.347		
5,905.5	5,742.6	5,626.4	5,625.6	25.5	1.9	-35.40	-1,952.6	-7,100.3	6,406.4	6,385.8	20.58	311.237		
6,000.0	5,837.1	5,715.3	5,714.6	25.6	1.9	-35.41	-1,953.7	-7,101.1	6,405.0	6,384.3	20.70	309.375		
6,002.5	5,839.6	5,717.5	5,716.7	25.6	1.9	-35.41	-1,953.8	-7,101.2	6,405.0	6,384.3	20.71	309.335 CC		
6,003.9	5,841.0	5,718.7	5,717.9	25.6	1.9	-35.41	-1,953.8	-7,101.2	6,405.0	6,384.3	20.71	309.312		
6,051.8	5,888.9	5,760.0	5,759.3	25.7	1.9	-110.55	-1,954.4	-7,101.6	6,405.3	6,380.9	24.41	262.450 ES		
6,081.8	5,918.9	5,785.9	5,785.1	25.7	1.9	-110.55	-1,954.8	-7,101.9	6,405.8	6,381.4	24.44	262.056		
6,100.0	5,937.1	5,800.0	5,799.2	25.7	1.9	159.44	-1,955.0	-7,102.0	6,406.3	6,385.5	20.80	308.006		
6,102.3	5,939.4	5,800.0	5,799.2	25.7	1.9	159.43	-1,955.0	-7,102.0	6,406.4	6,385.6	20.80	308.039		
6,150.0	5,987.0	5,842.7	5,841.9	25.7	1.9	159.34	-1,955.8	-7,102.5	6,410.0	6,389.2	20.79	308.366		
6,200.0	6,036.5	5,883.6	5,882.7	25.7	2.0	159.15	-1,956.4	-7,103.1	6,416.9	6,396.2	20.79	308.697		
6,200.8	6,037.3	5,884.2	5,883.4	25.7	2.0	159.15	-1,956.4	-7,103.1	6,417.1	6,396.3	20.79	308.705		
6,250.0	6,085.5	5,929.9	5,929.1	25.7	2.0	158.88	-1,957.0	-7,103.8	6,427.2	6,406.4	20.80	309.060		
6,299.2	6,133.0	5,978.7	5,977.8	25.6	2.0	158.52	-1,957.7	-7,104.5	6,440.3	6,419.5	20.81	309.541		
6,300.0	6,133.7	5,979.4	5,978.6	25.6	2.0	158.51	-1,957.7	-7,104.5	6,440.6	6,419.8	20.81	309.548		
6,350.0	6,180.9	6,019.4	6,018.6	25.5	2.0	158.04	-1,958.3	-7,105.1	6,457.1	6,436.3	20.81	310.269		
6,397.6	6,224.6	6,050.6	6,049.7	25.4	2.0	157.47	-1,958.7	-7,105.7	6,475.7	6,454.9	20.81	311.167		
6,400.0	6,226.7	6,052.1	6,051.2	25.4	2.0	157.44	-1,958.7	-7,105.7	6,476.7	6,455.9	20.81	311.211		
6,450.0	6,271.1	6,083.6	6,082.7	25.2	2.0	156.70	-1,959.1	-7,106.3	6,499.3	6,478.5	20.81	312.269		
6,496.0	6,310.4	6,113.3	6,112.4	25.1	2.0	155.89	-1,959.4	-7,107.0	6,522.7	6,501.9	20.83	313.206		
6,500.0	6,313.7	6,116.0	6,115.1	25.1	2.0	155.81	-1,959.4	-7,107.1	6,524.8	6,504.0	20.83	313.275		
6,550.0	6,354.4	6,149.4	6,148.5	25.0	2.0	154.75	-1,959.7	-7,107.9	6,553.1	6,532.2	20.87	314.014		
6,594.5	6,388.9	6,177.6	6,176.7	24.9	2.0	153.63	-1,960.0	-7,108.6	6,580.4	6,559.5	20.94	314.240		
6,600.0	6,393.0	6,180.9	6,180.1	24.9	2.0	153.48	-1,960.1	-7,108.6	6,584.0	6,563.0	20.95	314.231		
6,650.0	6,429.3	6,213.8	6,212.9	24.8	2.0	151.96	-1,960.4	-7,109.5	6,617.3	6,596.2	21.10	313.596		
6,692.9	6,458.5	6,245.1	6,244.2	24.7	2.1	150.44	-1,960.7	-7,110.3	6,647.7	6,626.4	21.30	312.102		
6,700.0	6,463.1	6,250.1	6,249.2	24.7	2.1	150.16	-1,960.8	-7,110.4	6,652.8	6,631.5	21.34	311.771		
6,750.0	6,494.3	6,283.4	6,282.5	24.7	2.1	147.98	-1,961.1	-7,111.2	6,690.5	6,668.8	21.69	308.453		
6,791.3	6,517.9	6,308.5	6,307.5	24.7	2.1	145.83	-1,961.4	-7,111.9	6,723.0	6,700.9	22.09	304.376		
6,800.0	6,522.6	6,313.4	6,312.5	24.7	2.1	145.33	-1,961.4	-7,112.0	6,730.0	6,707.8	22.18	303.390		
6,850.0	6,548.0	6,340.0	6,339.0	24.7	2.1	142.08	-1,961.7	-7,112.6	6,771.2	6,748.4	22.84	296.479		
6,889.7	6,566.0	6,358.6	6,357.7	24.8	2.1	138.96	-1,961.8	-7,113.1	6,805.1	6,781.6	23.49	289.707		
6,900.0	6,570.4	6,363.1	6,362.1	24.9	2.1	138.07	-1,961.9	-7,113.2	6,814.0	6,790.3	23.67	287.854		
6,950.0	6,589.5	6,382.8	6,381.8	25.1	2.1	133.07	-1,962.0	-7,113.7	6,858.0	6,833.3	24.67	277.963		
6,988.2	6,602.0	6,395.3	6,394.4	25.3	2.1	128.44	-1,962.1	-7,114.0	6,892.4	6,866.9	25.52	270.027		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Wellbore #													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
7,000.0	6,605.4	6,398.8	6,397.8	25.3	2.1	126.84	-1,962.2	-7,114.1	6,903.2	6,877.4	25.79	267.663		
7,050.0	6,618.0	6,416.3	6,415.3	25.6	2.1	119.21	-1,962.3	-7,114.5	6,949.2	6,922.3	26.90	258.315		
7,086.6	6,625.0	6,426.1	6,425.1	25.9	2.1	112.60	-1,962.3	-7,114.7	6,983.4	6,955.8	27.61	252.921		
7,100.0	6,627.1	6,428.9	6,427.9	26.0	2.1	109.95	-1,962.3	-7,114.8	6,995.9	6,968.1	27.82	251.473		
7,150.0	6,632.8	6,436.2	6,435.2	26.5	2.1	99.17	-1,962.4	-7,114.9	7,043.1	7,014.7	28.36	248.315		
7,185.0	6,634.7	6,438.0	6,437.0	26.8	2.1	90.98	-1,962.4	-7,115.0	7,076.3	7,047.7	28.58	247.605		
7,200.0	6,635.0	6,437.9	6,436.9	27.0	2.1	87.42	-1,962.4	-7,115.0	7,090.4	7,061.8	28.66	247.409		
7,215.9	6,635.0	6,437.3	6,436.3	27.1	2.1	83.63	-1,962.4	-7,115.0	7,105.5	7,076.8	28.75	247.147		
7,283.4	6,634.1	6,433.4	6,432.4	27.9	2.1	83.54	-1,962.4	-7,114.9	7,169.6	7,140.0	29.57	242.424		
7,300.0	6,633.9	6,432.5	6,431.5	28.1	2.1	83.51	-1,962.4	-7,114.9	7,185.3	7,155.5	29.78	241.307		
7,381.9	6,632.9	6,427.8	6,426.8	29.3	2.1	83.39	-1,962.3	-7,114.8	7,263.0	7,232.1	30.94	234.756		
7,400.0	6,632.6	6,426.7	6,425.7	29.5	2.1	83.37	-1,962.3	-7,114.7	7,280.2	7,249.0	31.20	233.373		
7,480.3	6,631.6	6,422.0	6,421.0	30.8	2.1	83.25	-1,962.3	-7,114.6	7,356.5	7,324.1	32.49	226.456		
7,500.0	6,631.4	6,420.8	6,419.9	31.1	2.1	83.22	-1,962.3	-7,114.6	7,375.3	7,342.5	32.80	224.843		
7,578.7	6,630.4	6,416.2	6,415.2	32.5	2.1	83.10	-1,962.3	-7,114.5	7,450.2	7,416.0	34.19	217.895		
7,600.0	6,630.1	6,414.9	6,413.9	32.9	2.1	83.07	-1,962.3	-7,114.5	7,470.5	7,435.9	34.57	216.115		
7,677.1	6,629.1	6,410.3	6,409.3	34.3	2.1	82.95	-1,962.2	-7,114.3	7,544.0	7,508.0	36.03	209.365		
7,700.0	6,628.8	6,408.9	6,407.9	34.8	2.1	82.92	-1,962.2	-7,114.3	7,565.8	7,529.3	36.47	207.472		
7,775.6	6,627.8	6,404.3	6,403.3	36.3	2.1	82.80	-1,962.2	-7,114.2	7,637.9	7,599.9	37.99	201.064		
7,800.0	6,627.5	6,402.8	6,401.8	36.8	2.1	82.77	-1,962.2	-7,114.2	7,661.2	7,622.8	38.48	199.103		
7,874.0	6,626.6	6,398.8	6,397.9	38.4	2.1	82.67	-1,962.2	-7,114.1	7,731.9	7,691.9	40.04	193.111		
7,900.0	6,626.3	6,397.8	6,396.8	38.9	2.1	82.64	-1,962.1	-7,114.0	7,756.8	7,716.2	40.59	191.114		
7,972.4	6,625.3	6,394.8	6,393.9	40.5	2.1	82.57	-1,962.1	-7,114.0	7,826.1	7,783.9	42.17	185.568		
8,000.0	6,625.0	6,393.7	6,392.8	41.1	2.1	82.54	-1,962.1	-7,113.9	7,852.5	7,809.7	42.78	183.566		
8,070.8	6,624.1	6,390.8	6,389.9	42.7	2.1	82.47	-1,962.1	-7,113.9	7,920.3	7,875.9	44.38	178.477		
8,100.0	6,623.7	6,389.7	6,388.7	43.4	2.1	82.44	-1,962.1	-7,113.8	7,948.2	7,903.2	45.04	176.490		
8,169.3	6,622.8	6,386.9	6,385.9	45.0	2.1	82.37	-1,962.1	-7,113.8	8,014.6	7,968.0	46.64	171.844		
8,200.0	6,622.4	6,385.6	6,384.7	45.7	2.1	82.33	-1,962.1	-7,113.7	8,044.1	7,996.7	47.35	169.886		
8,267.7	6,621.6	6,382.9	6,381.9	47.4	2.1	82.27	-1,962.0	-7,113.7	8,109.0	8,060.1	48.95	165.659		
8,300.0	6,621.1	6,381.6	6,380.6	48.1	2.1	82.23	-1,962.0	-7,113.6	8,140.0	8,090.3	49.71	163.739		
8,366.1	6,620.3	6,378.9	6,377.9	49.7	2.1	82.17	-1,962.0	-7,113.6	8,203.6	8,152.3	51.30	159.901		
8,400.0	6,619.9	6,377.5	6,376.5	50.6	2.1	82.13	-1,962.0	-7,113.5	8,236.1	8,184.0	52.12	158.026		
8,464.5	6,619.0	6,374.9	6,373.9	52.2	2.1	82.06	-1,962.0	-7,113.5	8,298.2	8,244.5	53.69	154.544		
8,500.0	6,618.6	6,373.4	6,372.5	53.0	2.1	82.03	-1,962.0	-7,113.4	8,332.3	8,277.7	54.56	152.719		
8,563.0	6,617.8	6,370.9	6,369.9	54.6	2.1	81.96	-1,961.9	-7,113.4	8,392.8	8,336.7	56.12	149.563		
8,600.0	6,617.3	6,369.4	6,368.4	55.5	2.1	81.93	-1,961.9	-7,113.3	8,428.5	8,371.5	57.03	147.789		
8,661.4	6,616.5	6,366.9	6,365.9	57.1	2.1	81.86	-1,961.9	-7,113.3	8,487.6	8,429.1	58.56	144.927		
8,700.0	6,616.0	6,365.3	6,364.4	58.1	2.1	81.82	-1,961.9	-7,113.2	8,524.8	8,465.3	59.53	143.205		
8,759.8	6,615.2	6,362.9	6,361.9	59.6	2.1	81.76	-1,961.9	-7,113.2	8,582.5	8,521.4	61.04	140.612		
8,800.0	6,614.7	6,361.3	6,360.3	60.6	2.1	81.72	-1,961.9	-7,113.2	8,621.2	8,559.2	62.05	138.942		
8,858.2	6,614.0	6,358.9	6,357.9	62.1	2.1	81.66	-1,961.8	-7,113.1	8,677.4	8,613.9	63.53	136.589		
8,900.0	6,613.4	6,357.2	6,356.2	63.2	2.1	81.62	-1,961.8	-7,113.1	8,717.7	8,653.1	64.59	134.970		
8,956.7	6,612.7	6,354.9	6,353.9	64.7	2.1	81.56	-1,961.8	-7,113.0	8,772.4	8,706.4	66.04	132.835		
9,000.0	6,612.2	6,353.1	6,352.2	65.8	2.1	81.52	-1,961.8	-7,113.0	8,814.3	8,747.1	67.15	131.266		
9,055.1	6,611.5	6,350.9	6,349.9	67.3	2.1	81.46	-1,961.8	-7,112.9	8,867.5	8,798.9	68.57	129.328		
9,100.0	6,610.9	6,349.1	6,348.1	68.4	2.1	81.42	-1,961.8	-7,112.9	8,910.9	8,841.2	69.72	127.808		
9,153.5	6,610.2	6,346.9	6,345.9	69.8	2.1	81.36	-1,961.7	-7,112.8	8,962.6	8,891.5	71.11	126.046		
9,200.0	6,609.6	6,345.0	6,344.0	71.1	2.1	81.31	-1,961.7	-7,112.8	9,007.6	8,935.3	72.31	124.573		
9,251.9	6,608.9	6,342.9	6,341.9	72.4	2.1	81.26	-1,961.7	-7,112.7	9,057.9	8,984.2	73.66	122.972		
9,300.0	6,608.3	6,340.9	6,340.0	73.7	2.1	81.21	-1,961.7	-7,112.7	9,104.4	9,029.5	74.91	121.544		
9,350.4	6,607.7	6,338.9	6,337.9	75.0	2.1	81.16	-1,961.7	-7,112.6	9,153.1	9,076.9	76.22	120.088		
9,400.0	6,607.0	6,336.8	6,335.9	76.4	2.1	81.11	-1,961.6	-7,112.6	9,201.2	9,123.7	77.51	118.703		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Wellbore #												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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	6,606.4	6,334.9	6,333.9	77.7	2.1	81.06	-1,961.6	-7,112.5	9,248.5	9,169.7	78.79	117.378	
9,500.0	6,605.7	6,332.8	6,331.8	79.0	2.1	81.01	-1,961.6	-7,112.5	9,298.1	9,218.0	80.13	116.035	
9,547.2	6,605.1	6,330.8	6,329.9	80.3	2.1	80.96	-1,961.6	-7,112.4	9,343.9	9,262.5	81.37	114.829	
9,600.0	6,604.5	6,328.7	6,327.7	81.7	2.1	80.91	-1,961.6	-7,112.4	9,395.1	9,312.3	82.76	113.525	
9,645.6	6,603.9	6,326.8	6,325.9	82.9	2.1	80.86	-1,961.6	-7,112.3	9,439.4	9,355.4	83.96	112.427	
9,700.0	6,603.2	6,324.6	6,323.7	84.4	2.1	80.80	-1,961.5	-7,112.3	9,492.1	9,406.7	85.39	111.161	
9,744.1	6,602.6	6,322.8	6,321.9	85.6	2.1	80.76	-1,961.5	-7,112.2	9,534.9	9,448.3	86.55	110.161	
9,800.0	6,601.9	6,320.5	6,319.6	87.1	2.1	80.70	-1,961.5	-7,112.2	9,589.2	9,501.2	88.03	108.932	
9,842.5	6,601.3	6,318.8	6,317.8	88.2	2.1	80.66	-1,961.5	-7,112.1	9,630.5	9,541.3	89.15	108.021	
9,900.0	6,600.6	6,316.4	6,315.5	89.8	2.1	80.60	-1,961.5	-7,112.1	9,686.4	9,595.7	90.67	106.826	
9,940.9	6,600.1	6,314.8	6,313.8	90.9	2.1	80.56	-1,961.4	-7,112.0	9,726.1	9,634.4	91.76	105.997	
10,000.0	6,599.3	6,312.4	6,311.4	92.5	2.1	80.50	-1,961.4	-7,112.0	9,783.6	9,690.2	93.32	104.835	
10,039.3	6,598.8	6,310.7	6,309.8	93.5	2.1	80.46	-1,961.4	-7,111.9	9,821.8	9,727.5	94.37	104.081	
10,100.0	6,598.0	6,308.3	6,307.3	95.2	2.1	80.40	-1,961.4	-7,111.9	9,880.8	9,784.8	95.98	102.950	
10,137.8	6,597.5	6,306.7	6,305.8	96.2	2.1	80.36	-1,961.4	-7,111.8	9,917.6	9,820.6	96.98	102.263	
10,200.0	6,596.7	6,304.2	6,303.2	97.9	2.1	80.29	-1,961.3	-7,111.8	9,978.1	9,879.5	98.63	101.163 SF	

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<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-98.90	-1,166.8	-7,447.7	7,538.6				
98.4	98.4	87.4	87.4	0.1	0.0	-98.90	-1,166.8	-7,447.7	7,538.6	7,538.5	0.10	N/A	
100.0	100.0	89.0	89.0	0.1	0.0	-98.90	-1,166.8	-7,447.7	7,538.6	7,538.5	0.10	N/A	
196.8	196.8	185.8	185.8	0.3	1.0	-98.90	-1,166.8	-7,447.7	7,538.6	7,537.3	1.31	5,755.322	
200.0	200.0	189.0	189.0	0.3	1.0	-98.90	-1,166.8	-7,447.7	7,538.6	7,537.2	1.35	5,570.059	
295.3	295.3	284.3	284.3	0.5	3.1	-98.90	-1,166.8	-7,447.7	7,538.6	7,534.9	3.63	2,075.549	
300.0	300.0	289.0	289.0	0.5	3.2	-98.90	-1,166.8	-7,447.7	7,538.6	7,534.8	3.75	2,009.582	
393.7	393.7	382.7	382.7	0.8	5.2	-98.90	-1,166.8	-7,447.7	7,538.6	7,532.6	5.93	1,270.381	
400.0	400.0	389.0	389.0	0.8	5.3	-98.90	-1,166.8	-7,447.7	7,538.6	7,532.5	6.08	1,240.051	
492.1	492.1	481.1	481.1	1.0	7.2	-98.90	-1,166.8	-7,447.7	7,538.6	7,530.4	8.17	922.504	
500.0	500.0	489.0	489.0	1.0	7.4	-98.90	-1,166.8	-7,447.7	7,538.6	7,530.2	8.35	902.780	
590.5	590.5	579.5	579.5	1.2	9.2	-98.90	-1,166.8	-7,447.7	7,538.6	7,528.2	10.39	725.369	
600.0	600.0	589.0	589.0	1.2	9.4	-98.90	-1,166.8	-7,447.7	7,538.6	7,528.0	10.61	710.802	
689.0	689.0	678.0	678.0	1.4	11.2	-98.90	-1,166.8	-7,447.7	7,538.6	7,526.0	12.61	598.005	
700.0	700.0	689.0	689.0	1.4	11.4	-98.90	-1,166.8	-7,447.7	7,538.6	7,525.7	12.85	586.477	
787.4	787.4	776.4	776.4	1.6	13.2	-98.90	-1,166.8	-7,447.7	7,538.6	7,523.8	14.82	508.824	
800.0	800.0	789.0	789.0	1.7	13.4	-98.90	-1,166.8	-7,447.7	7,538.6	7,523.5	15.10	499.295	
885.8	885.8	874.8	874.8	1.9	15.2	-98.90	-1,166.8	-7,447.7	7,538.6	7,521.5	17.02	442.852	
900.0	900.0	889.0	889.0	1.9	15.4	-98.90	-1,166.8	-7,447.7	7,538.6	7,521.2	17.34	434.736	
984.2	984.2	973.2	973.2	2.1	17.1	-98.90	-1,166.8	-7,447.7	7,538.6	7,519.3	19.23	392.055	
1,000.0	1,000.0	989.0	989.0	2.1	17.5	-98.90	-1,166.8	-7,447.7	7,538.6	7,519.0	19.58	384.990	
1,082.7	1,082.7	1,071.7	1,071.7	2.3	19.1	-98.90	-1,166.8	-7,447.7	7,538.6	7,517.1	21.43	351.730	
1,100.0	1,100.0	1,089.0	1,089.0	2.3	19.5	-98.90	-1,166.8	-7,447.7	7,538.6	7,516.8	21.82	345.475	
1,181.1	1,181.1	1,170.1	1,170.1	2.5	21.1	-98.90	-1,166.8	-7,447.7	7,538.6	7,514.9	23.64	318.936	
1,200.0	1,200.0	1,189.0	1,189.0	2.6	21.5	-98.90	-1,166.8	-7,447.7	7,538.6	7,514.5	24.06	313.327	
1,279.5	1,279.5	1,268.5	1,268.5	2.7	23.1	-98.90	-1,166.8	-7,447.7	7,538.6	7,512.7	25.84	291.743	
1,300.0	1,300.0	1,289.0	1,289.0	2.8	23.5	-98.90	-1,166.8	-7,447.7	7,538.6	7,512.3	26.30	286.659	
1,377.9	1,377.9	1,366.9	1,366.9	3.0	25.1	-98.90	-1,166.8	-7,447.7	7,538.6	7,510.5	28.04	268.826	
1,400.0	1,400.0	1,389.0	1,389.0	3.0	25.5	-98.90	-1,166.8	-7,447.7	7,538.6	7,510.0	28.54	264.178	
1,476.4	1,476.4	1,465.4	1,465.4	3.2	27.1	-23.79	-1,166.8	-7,447.7	7,537.6	7,507.4	30.23	249.358	
1,500.0	1,500.0	1,489.0	1,489.0	3.2	27.5	-23.80	-1,166.8	-7,447.7	7,537.0	7,506.2	30.75	245.125	
1,574.8	1,574.7	1,563.7	1,563.7	3.4	29.0	-23.83	-1,166.8	-7,447.7	7,533.7	7,501.3	32.37	232.724	
1,600.0	1,599.8	1,588.8	1,588.8	3.4	29.5	-23.85	-1,166.8	-7,447.7	7,532.2	7,499.3	32.91	228.850	
1,673.2	1,672.8	1,661.8	1,661.8	3.6	31.0	-23.91	-1,166.8	-7,447.7	7,526.7	7,492.2	34.47	218.335	
1,700.0	1,699.5	1,688.5	1,688.5	3.7	31.5	-23.94	-1,166.8	-7,447.7	7,524.2	7,489.2	35.04	214.754	
1,771.6	1,770.6	1,759.6	1,759.6	3.8	33.0	-24.03	-1,166.8	-7,447.7	7,516.5	7,480.0	36.53	205.774	
1,800.0	1,798.7	1,787.7	1,787.7	3.9	33.5	-24.07	-1,166.8	-7,447.7	7,513.1	7,476.0	37.11	202.453	
1,870.1	1,868.0	1,857.0	1,857.0	4.1	34.9	-24.18	-1,166.8	-7,447.7	7,503.4	7,464.8	38.53	194.732	
1,900.0	1,897.5	1,886.5	1,886.5	4.2	35.5	-24.24	-1,166.8	-7,447.7	7,498.8	7,459.6	39.13	191.642	
1,968.5	1,964.8	1,953.8	1,953.8	4.4	36.9	-24.38	-1,166.8	-7,447.7	7,487.2	7,446.7	40.48	184.962	
2,000.0	1,995.6	1,984.6	1,984.6	4.5	37.5	-24.44	-1,166.8	-7,447.7	7,481.3	7,440.2	41.09	182.077	
2,066.9	2,060.9	2,049.9	2,049.9	4.7	38.8	-24.60	-1,166.8	-7,447.7	7,467.9	7,425.5	42.37	176.266	
2,100.0	2,093.1	2,082.1	2,082.1	4.8	39.5	-24.69	-1,166.8	-7,447.7	7,460.8	7,417.8	42.99	173.562	
2,165.3	2,156.3	2,145.3	2,145.3	5.1	40.7	-24.87	-1,166.8	-7,447.7	7,445.7	7,401.5	44.19	168.479	
2,200.0	2,189.6	2,178.6	2,178.6	5.2	41.4	-24.98	-1,166.8	-7,447.7	7,437.2	7,392.3	44.82	165.937	
2,263.8	2,250.7	2,239.7	2,239.7	5.5	42.6	-25.18	-1,166.8	-7,447.7	7,420.5	7,374.5	45.96	161.471	
2,280.0	2,266.2	2,255.2	2,255.2	5.6	42.9	-25.24	-1,166.8	-7,447.7	7,416.0	7,369.8	46.24	160.386	
2,300.0	2,285.3	2,274.3	2,274.3	5.7	43.3	-25.26	-1,166.8	-7,447.7	7,410.5	7,363.9	46.67	158.800	
2,362.2	2,344.6	2,333.6	2,333.6	6.0	44.5	-25.32	-1,166.8	-7,447.7	7,393.4	7,345.4	47.99	154.051	
2,400.0	2,380.6	2,369.6	2,369.6	6.2	45.2	-25.36	-1,166.8	-7,447.7	7,383.0	7,334.2	48.81	151.256	
2,460.6	2,438.4	2,427.4	2,427.4	6.5	46.4	-25.42	-1,166.8	-7,447.7	7,366.3	7,316.2	50.12	146.979	
2,500.0	2,475.9	2,464.9	2,464.9	6.7	47.2	-25.46	-1,166.8	-7,447.7	7,355.4	7,304.5	50.97	144.313	

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

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<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,521.2	2,521.2	7.0	48.3	-25.52	-1,166.8	-7,447.7	7,339.2	7,286.9	52.25	140.468		
2,600.0	2,571.2	2,560.2	2,560.2	7.2	49.1	-25.56	-1,166.8	-7,447.7	7,327.9	7,274.8	53.14	137.907		
2,657.5	2,626.0	2,615.0	2,615.0	7.5	50.2	-25.62	-1,166.8	-7,447.7	7,312.1	7,257.7	54.39	134.444		
2,700.0	2,666.6	2,655.6	2,655.6	7.8	51.0	-25.66	-1,166.8	-7,447.7	7,300.4	7,245.1	55.31	131.981		
2,755.9	2,719.8	2,708.8	2,708.8	8.1	52.1	-25.72	-1,166.8	-7,447.7	7,285.0	7,228.5	56.54	128.858		
2,800.0	2,761.9	2,750.9	2,750.9	8.3	52.9	-25.76	-1,166.8	-7,447.7	7,272.9	7,215.4	57.50	126.486		
2,854.3	2,813.7	2,802.7	2,802.7	8.7	54.0	-25.82	-1,166.8	-7,447.7	7,258.0	7,199.3	58.69	123.666		
2,900.0	2,857.2	2,846.2	2,846.2	8.9	54.8	-25.87	-1,166.8	-7,447.7	7,245.5	7,185.8	59.69	121.380		
2,952.7	2,907.5	2,896.5	2,896.5	9.2	55.8	-25.92	-1,166.8	-7,447.7	7,231.0	7,170.1	60.85	118.829		
3,000.0	2,952.5	2,941.5	2,941.5	9.5	56.8	-25.97	-1,166.8	-7,447.7	7,218.0	7,156.1	61.89	116.624		
3,051.2	3,001.3	2,990.3	2,990.3	9.8	57.7	-26.02	-1,166.8	-7,447.7	7,204.0	7,141.0	63.02	114.314		
3,100.0	3,047.8	3,036.8	3,036.8	10.1	58.7	-26.07	-1,166.8	-7,447.7	7,190.6	7,126.5	64.10	112.184		
3,149.6	3,095.1	3,084.1	3,084.1	10.4	59.6	-26.13	-1,166.8	-7,447.7	7,177.0	7,111.8	65.19	110.090		
3,200.0	3,143.2	3,132.2	3,132.2	10.7	60.6	-26.18	-1,166.8	-7,447.7	7,163.2	7,096.9	66.31	108.032		
3,248.0	3,188.9	3,177.9	3,177.9	11.0	61.5	-26.23	-1,166.8	-7,447.7	7,150.1	7,082.7	67.37	106.131		
3,300.0	3,238.5	3,227.5	3,227.5	11.3	62.5	-26.29	-1,166.8	-7,447.7	7,135.8	7,067.3	68.52	104.140		
3,346.4	3,282.8	3,271.8	3,271.8	11.6	63.4	-26.34	-1,166.8	-7,447.7	7,123.1	7,053.6	69.55	102.415		
3,400.0	3,333.8	3,322.8	3,322.8	11.9	64.4	-26.39	-1,166.8	-7,447.7	7,108.5	7,037.8	70.74	100.487		
3,444.9	3,376.6	3,365.6	3,365.6	12.2	65.3	-26.44	-1,166.8	-7,447.7	7,096.2	7,024.5	71.74	98.919		
3,500.0	3,429.1	3,418.1	3,418.1	12.6	66.3	-26.50	-1,166.8	-7,447.7	7,081.2	7,008.2	72.96	97.050		
3,543.3	3,470.4	3,459.4	3,459.4	12.8	67.2	-26.55	-1,166.8	-7,447.7	7,069.4	6,995.4	73.93	95.624		
3,600.0	3,524.4	3,513.4	3,513.4	13.2	68.3	-26.61	-1,166.8	-7,447.7	7,053.9	6,978.7	75.19	93.812		
3,641.7	3,564.2	3,553.2	3,553.2	13.4	69.1	-26.65	-1,166.8	-7,447.7	7,042.5	6,966.4	76.12	92.516		
3,700.0	3,619.8	3,608.8	3,608.8	13.8	70.2	-26.72	-1,166.8	-7,447.7	7,026.6	6,949.2	77.42	90.757		
3,740.1	3,658.0	3,647.0	3,647.0	14.0	70.9	-26.76	-1,166.8	-7,447.7	7,015.7	6,937.3	78.32	89.578		
3,800.0	3,715.1	3,704.1	3,704.1	14.4	72.1	-26.83	-1,166.8	-7,447.7	6,999.4	6,919.7	79.66	87.869		
3,838.6	3,751.8	3,740.8	3,740.8	14.7	72.8	-26.87	-1,166.8	-7,447.7	6,988.8	6,908.3	80.52	86.797		
3,900.0	3,810.4	3,799.4	3,799.4	15.0	74.0	-26.94	-1,166.8	-7,447.7	6,972.1	6,890.2	81.89	85.136		
3,937.0	3,845.7	3,834.7	3,834.7	15.3	74.7	-26.98	-1,166.8	-7,447.7	6,962.1	6,879.3	82.72	84.161		
4,000.0	3,905.7	3,894.7	3,894.7	15.7	75.9	-27.05	-1,166.8	-7,447.7	6,944.9	6,860.8	84.13	82.545		
4,035.4	3,939.5	3,928.5	3,928.5	15.9	76.6	-27.09	-1,166.8	-7,447.7	6,935.3	6,850.4	84.93	81.660		
4,100.0	4,001.0	3,990.0	3,990.0	16.3	77.8	-27.16	-1,166.8	-7,447.7	6,917.7	6,831.4	86.38	80.087		
4,133.8	4,033.3	4,022.3	4,022.3	16.5	78.5	-27.20	-1,166.8	-7,447.7	6,908.6	6,821.4	87.14	79.282		
4,200.0	4,096.3	4,085.3	4,085.3	16.9	79.8	-27.28	-1,166.8	-7,447.7	6,890.6	6,802.0	88.62	77.750		
4,232.3	4,127.1	4,116.1	4,116.1	17.1	80.4	-27.31	-1,166.8	-7,447.7	6,881.8	6,792.5	89.35	77.021		
4,300.0	4,191.7	4,180.7	4,180.7	17.6	81.7	-27.39	-1,166.8	-7,447.7	6,863.5	6,772.6	90.87	75.527		
4,330.7	4,220.9	4,209.9	4,209.9	17.8	82.3	-27.43	-1,166.8	-7,447.7	6,855.2	6,763.6	91.57	74.866		
4,400.0	4,287.0	4,276.0	4,276.0	18.2	83.6	-27.51	-1,166.8	-7,447.7	6,836.4	6,743.3	93.13	73.410		
4,429.1	4,314.7	4,303.7	4,303.7	18.4	84.1	-27.54	-1,166.8	-7,447.7	6,828.5	6,734.7	93.78	72.812		
4,500.0	4,382.3	4,371.3	4,371.3	18.8	85.5	-27.62	-1,166.8	-7,447.7	6,809.3	6,713.9	95.38	71.391		
4,527.5	4,408.6	4,397.6	4,397.6	19.0	86.0	-27.66	-1,166.8	-7,447.7	6,801.9	6,705.9	96.00	70.851		
4,600.0	4,477.6	4,466.6	4,466.6	19.5	87.4	-27.74	-1,166.8	-7,447.7	6,782.3	6,684.6	97.64	69.463		
4,626.0	4,502.4	4,491.4	4,491.4	19.6	87.9	-27.77	-1,166.8	-7,447.7	6,775.2	6,677.0	98.23	68.977		
4,700.0	4,572.9	4,561.9	4,561.9	20.1	89.3	-27.86	-1,166.8	-7,447.7	6,755.2	6,655.3	99.90	67.621		
4,724.4	4,596.2	4,585.2	4,585.2	20.3	89.8	-27.89	-1,166.8	-7,447.7	6,748.7	6,648.2	100.45	67.184		
4,800.0	4,668.3	4,657.3	4,657.3	20.7	91.3	-27.98	-1,166.8	-7,447.7	6,728.3	6,626.1	102.16	65.859		
4,822.8	4,690.0	4,679.0	4,679.0	20.9	91.7	-28.01	-1,166.8	-7,447.7	6,722.1	6,619.4	102.68	65.468		
4,900.0	4,763.6	4,752.6	4,752.6	21.4	93.2	-28.10	-1,166.8	-7,447.7	6,701.3	6,596.9	104.43	64.173		
4,921.2	4,783.8	4,772.8	4,772.8	21.5	93.6	-28.12	-1,166.8	-7,447.7	6,695.6	6,590.7	104.91	63.823		
5,000.0	4,858.9	4,847.9	4,847.9	22.0	95.1	-28.22	-1,166.8	-7,447.7	6,674.4	6,567.7	106.69	62.556		
5,019.7	4,877.7	4,866.7	4,866.7	22.1	95.5	-28.24	-1,166.8	-7,447.7	6,669.1	6,561.9	107.14	62.246		
5,100.0	4,954.2	4,943.2	4,943.2	22.6	97.0	-28.34	-1,166.8	-7,447.7	6,647.5	6,538.5	108.96	61.006		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,960.5	4,960.5	22.8	97.4	-28.36	-1,166.8	-7,447.7	6,642.6	6,533.2	109.38	60.732	
5,171.8	5,022.7	5,011.7	5,011.7	23.1	98.4	-28.43	-1,166.8	-7,447.7	6,628.2	6,517.6	110.60	59.932	
5,200.0	5,049.6	5,038.6	5,038.6	23.3	98.9	-28.39	-1,166.8	-7,447.7	6,620.7	6,509.3	111.44	59.411	
5,216.5	5,065.4	5,054.4	5,054.4	23.3	99.2	-28.37	-1,166.8	-7,447.7	6,616.4	6,504.5	111.92	59.115	
5,300.0	5,145.7	5,134.7	5,134.7	23.7	100.9	-28.26	-1,166.8	-7,447.7	6,596.2	6,481.8	114.36	57.679	
5,314.9	5,160.1	5,149.1	5,149.1	23.8	101.1	-28.25	-1,166.8	-7,447.7	6,592.8	6,478.0	114.79	57.434	
5,400.0	5,242.7	5,231.7	5,231.7	24.1	102.8	-28.15	-1,166.8	-7,447.7	6,574.6	6,457.4	117.21	56.093	
5,413.4	5,255.7	5,244.7	5,244.7	24.2	103.1	-28.14	-1,166.8	-7,447.7	6,572.0	6,454.4	117.58	55.892	
5,500.0	5,340.5	5,329.5	5,329.5	24.5	104.8	-28.06	-1,166.8	-7,447.7	6,556.2	6,436.2	119.98	54.645	
5,511.8	5,352.1	5,341.1	5,341.1	24.5	105.0	-28.05	-1,166.8	-7,447.7	6,554.2	6,433.9	120.30	54.483	
5,600.0	5,439.0	5,428.0	5,428.0	24.8	106.8	-27.99	-1,166.8	-7,447.7	6,540.7	6,418.1	122.65	53.326	
5,610.2	5,449.1	5,438.1	5,438.1	24.8	107.0	-27.98	-1,166.8	-7,447.7	6,539.3	6,416.4	122.92	53.199	
5,700.0	5,538.0	5,527.0	5,527.0	25.1	108.7	-27.93	-1,166.8	-7,447.7	6,528.4	6,403.1	125.23	52.131	
5,708.6	5,546.6	5,535.6	5,535.6	25.1	108.9	-27.92	-1,166.8	-7,447.7	6,527.4	6,402.0	125.45	52.033	
5,800.0	5,637.4	5,626.4	5,626.4	25.3	110.7	-27.88	-1,166.8	-7,447.7	6,519.0	6,391.4	127.70	51.051	
5,807.1	5,644.5	5,633.5	5,633.5	25.3	110.9	-27.88	-1,166.8	-7,447.7	6,518.5	6,390.6	127.87	50.979	
5,900.0	5,737.2	5,726.2	5,726.2	25.5	112.8	-27.85	-1,166.8	-7,447.7	6,512.8	6,382.8	130.04	50.082	
5,905.5	5,742.6	5,731.6	5,731.6	25.5	112.9	-27.85	-1,166.8	-7,447.7	6,512.6	6,382.4	130.17	50.032	
6,000.0	5,837.1	5,826.1	5,826.1	25.6	114.8	-27.84	-1,166.8	-7,447.7	6,509.7	6,377.4	132.26	49.218	
6,003.9	5,841.0	5,830.0	5,830.0	25.6	114.8	-27.84	-1,166.8	-7,447.7	6,509.6	6,377.3	132.35	49.186	
6,051.8	5,888.9	5,877.9	5,877.9	25.7	115.8	-102.96	-1,166.8	-7,447.7	6,509.3	6,369.6	139.63	46.619	
6,081.8	5,918.9	5,907.9	5,907.9	25.7	116.4	-102.96	-1,166.8	-7,447.7	6,509.3	6,369.0	140.26	46.408 CC, ES	
6,100.0	5,937.1	5,926.1	5,926.1	25.7	116.8	167.03	-1,166.8	-7,447.7	6,509.5	6,375.2	134.31	48.467	
6,102.3	5,939.4	5,928.4	5,928.4	25.7	116.8	167.03	-1,166.8	-7,447.7	6,509.6	6,375.2	134.34	48.456	
6,150.0	5,987.0	5,976.0	5,976.0	25.7	117.8	166.99	-1,166.8	-7,447.7	6,512.4	6,377.7	134.72	48.342	
6,200.0	6,036.5	6,025.5	6,025.5	25.7	118.8	166.88	-1,166.8	-7,447.7	6,518.7	6,384.2	134.50	48.466	
6,200.8	6,037.3	6,026.3	6,026.3	25.7	118.8	166.88	-1,166.8	-7,447.7	6,518.9	6,384.4	134.49	48.470	
6,250.0	6,085.5	6,074.5	6,074.5	25.7	119.8	166.72	-1,166.8	-7,447.7	6,528.4	6,394.8	133.66	48.843	
6,299.2	6,133.0	6,122.0	6,122.0	25.6	120.7	166.51	-1,166.8	-7,447.7	6,541.2	6,409.0	132.22	49.470	
6,300.0	6,133.7	6,122.7	6,122.7	25.6	120.7	166.50	-1,166.8	-7,447.7	6,541.4	6,409.2	132.20	49.482	
6,350.0	6,180.9	6,169.9	6,169.9	25.5	121.7	166.21	-1,166.8	-7,447.7	6,557.6	6,427.5	130.12	50.397	
6,397.6	6,224.6	6,213.6	6,213.6	25.4	122.6	165.87	-1,166.8	-7,447.7	6,576.0	6,448.5	127.59	51.540	
6,400.0	6,226.7	6,215.7	6,215.7	25.4	122.6	165.85	-1,166.8	-7,447.7	6,577.0	6,449.6	127.45	51.604	
6,450.0	6,271.1	6,260.1	6,260.1	25.2	123.5	165.40	-1,166.8	-7,447.7	6,599.5	6,475.3	124.23	53.123	
6,496.0	6,310.4	6,299.4	6,299.4	25.1	124.3	164.89	-1,166.8	-7,447.7	6,622.8	6,502.0	120.81	54.819	
6,500.0	6,313.7	6,302.7	6,302.7	25.1	124.3	164.85	-1,166.8	-7,447.7	6,625.0	6,504.5	120.50	54.978	
6,550.0	6,354.4	6,343.4	6,343.4	25.0	125.2	164.18	-1,166.8	-7,447.7	6,653.2	6,536.9	116.34	57.189	
6,594.5	6,388.9	6,377.9	6,377.9	24.9	125.9	163.47	-1,166.8	-7,447.7	6,680.7	6,568.3	112.35	59.462	
6,600.0	6,393.0	6,382.0	6,382.0	24.9	125.9	163.37	-1,166.8	-7,447.7	6,684.2	6,572.4	111.84	59.765	
6,650.0	6,429.3	6,418.3	6,418.3	24.8	126.7	162.39	-1,166.8	-7,447.7	6,717.8	6,610.6	107.15	62.693	
6,692.9	6,458.5	6,447.5	6,447.5	24.7	127.3	161.37	-1,166.8	-7,447.7	6,748.5	6,645.4	103.13	65.439	
6,700.0	6,463.1	6,452.1	6,452.1	24.7	127.4	161.19	-1,166.8	-7,447.7	6,753.8	6,651.3	102.47	65.909	
6,750.0	6,494.3	6,483.3	6,483.3	24.7	128.0	159.71	-1,166.8	-7,447.7	6,791.9	6,693.9	98.07	69.253	
6,791.3	6,517.9	6,506.9	6,506.9	24.7	128.5	158.22	-1,166.8	-7,447.7	6,825.0	6,730.1	94.94	71.887	
6,800.0	6,522.6	6,511.6	6,511.6	24.7	128.5	157.87	-1,166.8	-7,447.7	6,832.2	6,737.8	94.37	72.398	
6,850.0	6,548.0	6,537.0	6,537.0	24.7	129.1	155.54	-1,166.8	-7,447.7	6,874.2	6,782.3	91.93	74.776	
6,889.7	6,566.0	6,555.0	6,555.0	24.8	129.4	153.21	-1,166.8	-7,447.7	6,908.8	6,817.4	91.42	75.574	
6,900.0	6,570.4	6,559.4	6,559.4	24.9	129.5	152.53	-1,166.8	-7,447.7	6,917.9	6,826.4	91.55	75.562	
6,950.0	6,589.5	6,578.5	6,578.5	25.1	129.9	148.57	-1,166.8	-7,447.7	6,963.1	6,868.8	94.24	73.883	
6,988.2	6,602.0	6,591.0	6,591.0	25.3	130.1	144.63	-1,166.8	-7,447.7	6,998.4	6,899.3	99.06	70.648	
7,000.0	6,605.4	6,594.4	6,594.4	25.3	130.2	143.20	-1,166.8	-7,447.7	7,009.4	6,908.3	101.11	69.323	
7,050.0	6,618.0	6,607.0	6,607.0	25.6	130.5	135.76	-1,166.8	-7,447.7	7,056.7	6,943.7	113.01	62.442	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,625.0	6,614.0	6,614.0	25.9	130.6	128.44	-1,166.8	-7,447.7	7,091.9	6,967.0	124.85	56.805	
7,100.0	6,627.1	6,616.1	6,616.1	26.0	130.7	125.27	-1,166.8	-7,447.7	7,104.8	6,975.2	129.65	54.798	
7,150.0	6,632.8	6,621.8	6,621.8	26.5	130.8	110.79	-1,166.8	-7,447.7	7,153.5	7,006.0	147.46	48.511	
7,185.0	6,634.7	6,623.7	6,623.7	26.8	130.8	98.32	-1,166.8	-7,447.7	7,187.7	7,031.7	155.94	46.093	
7,200.0	6,635.0	6,624.0	6,624.0	27.0	130.8	92.61	-1,166.8	-7,447.7	7,202.3	7,044.9	157.46	45.742	
7,215.9	6,635.0	6,624.0	6,624.0	27.1	130.8	86.46	-1,166.8	-7,447.7	7,217.9	7,060.5	157.40	45.857	
7,283.4	6,634.1	6,623.1	6,623.1	27.9	130.8	86.43	-1,166.8	-7,447.7	7,284.1	7,125.9	158.21	46.041	
7,300.0	6,633.9	6,622.9	6,622.9	28.1	130.8	86.42	-1,166.8	-7,447.7	7,300.3	7,141.9	158.40	46.086	
7,381.9	6,632.9	6,621.9	6,621.9	29.3	130.8	86.38	-1,166.8	-7,447.7	7,380.5	7,221.0	159.55	46.259	
7,400.0	6,632.6	6,621.6	6,621.6	29.5	130.8	86.37	-1,166.8	-7,447.7	7,398.3	7,238.5	159.80	46.297	
7,480.3	6,631.6	6,620.6	6,620.6	30.8	130.7	86.33	-1,166.8	-7,447.7	7,477.0	7,315.9	161.07	46.420	
7,500.0	6,631.4	6,620.4	6,620.4	31.1	130.7	86.32	-1,166.8	-7,447.7	7,496.3	7,335.0	161.39	46.450	
7,578.7	6,630.4	6,619.4	6,619.4	32.5	130.7	86.28	-1,166.8	-7,447.7	7,573.6	7,410.8	162.76	46.532	
7,600.0	6,630.1	6,619.1	6,619.1	32.9	130.7	86.27	-1,166.8	-7,447.7	7,594.4	7,431.3	163.13	46.554	
7,677.1	6,629.1	6,618.1	6,618.1	34.3	130.7	86.23	-1,166.8	-7,447.7	7,670.2	7,505.6	164.58	46.604	
7,700.0	6,628.8	6,617.8	6,617.8	34.8	130.7	86.22	-1,166.8	-7,447.7	7,692.6	7,527.6	165.01	46.619	
7,775.6	6,627.8	6,616.8	6,616.8	36.3	130.7	86.18	-1,166.8	-7,447.7	7,766.8	7,600.3	166.52	46.642	
7,800.0	6,627.5	6,616.5	6,616.5	36.8	130.7	86.17	-1,166.8	-7,447.7	7,790.8	7,623.8	167.01	46.650	
7,874.0	6,626.6	6,615.6	6,615.6	38.4	130.6	86.13	-1,166.8	-7,447.7	7,863.5	7,694.9	168.55	46.653	
7,900.0	6,626.3	6,615.3	6,615.3	38.9	130.6	86.11	-1,166.8	-7,447.7	7,889.0	7,719.9	169.10	46.654	
7,972.4	6,625.3	6,614.3	6,614.3	40.5	130.6	86.08	-1,166.8	-7,447.7	7,960.2	7,789.5	170.67	46.641	
8,000.0	6,625.0	6,614.0	6,614.0	41.1	130.6	86.06	-1,166.8	-7,447.7	7,987.3	7,816.0	171.27	46.636	
8,070.8	6,624.1	6,613.1	6,613.1	42.7	130.6	86.03	-1,166.8	-7,447.7	8,057.0	7,884.1	172.86	46.611	
8,100.0	6,623.7	6,612.7	6,612.7	43.4	130.6	86.01	-1,166.8	-7,447.7	8,085.6	7,912.1	173.51	46.601	
8,169.3	6,622.8	6,611.8	6,611.8	45.0	130.6	85.98	-1,166.8	-7,447.7	8,153.8	7,978.7	175.10	46.566	
8,200.0	6,622.4	6,611.4	6,611.4	45.7	130.6	85.96	-1,166.8	-7,447.7	8,184.0	8,008.2	175.81	46.551	
8,267.7	6,621.6	6,610.6	6,610.6	47.4	130.5	85.93	-1,166.8	-7,447.7	8,250.6	8,073.2	177.40	46.509	
8,300.0	6,621.1	6,610.1	6,610.1	48.1	130.5	85.91	-1,166.8	-7,447.7	8,282.4	8,104.3	178.16	46.489	
8,366.1	6,620.3	6,609.3	6,609.3	49.7	130.5	85.88	-1,166.8	-7,447.7	8,347.5	8,167.8	179.74	46.442	
8,400.0	6,619.9	6,608.9	6,608.9	50.6	130.5	85.86	-1,166.8	-7,447.7	8,380.9	8,200.3	180.55	46.419	
8,464.5	6,619.0	6,608.0	6,608.0	52.2	130.5	85.83	-1,166.8	-7,447.7	8,444.4	8,262.3	182.12	46.368	
8,500.0	6,618.6	6,607.6	6,607.6	53.0	130.5	85.81	-1,166.8	-7,447.7	8,479.3	8,296.4	182.98	46.341	
8,563.0	6,617.8	6,606.8	6,606.8	54.6	130.5	85.78	-1,166.8	-7,447.7	8,541.4	8,356.9	184.53	46.288	
8,600.0	6,617.3	6,606.3	6,606.3	55.5	130.5	85.76	-1,166.8	-7,447.7	8,577.9	8,392.4	185.44	46.258	
8,661.4	6,616.5	6,605.5	6,605.5	57.1	130.4	85.73	-1,166.8	-7,447.7	8,638.4	8,451.4	186.96	46.203	
8,700.0	6,616.0	6,605.0	6,605.0	58.1	130.4	85.70	-1,166.8	-7,447.7	8,676.4	8,488.5	187.92	46.170	
8,759.8	6,615.2	6,604.2	6,604.2	59.6	130.4	85.67	-1,166.8	-7,447.7	8,735.4	8,546.0	189.43	46.115	
8,800.0	6,614.7	6,603.7	6,603.7	60.6	130.4	85.65	-1,166.8	-7,447.7	8,775.0	8,584.6	190.43	46.079	
8,858.2	6,614.0	6,603.0	6,603.0	62.1	130.4	85.62	-1,166.8	-7,447.7	8,832.4	8,640.5	191.91	46.024	
8,900.0	6,613.4	6,602.4	6,602.4	63.2	130.4	85.60	-1,166.8	-7,447.7	8,873.6	8,680.6	192.97	45.985	
8,956.7	6,612.7	6,601.7	6,601.7	64.7	130.4	85.57	-1,166.8	-7,447.7	8,929.5	8,735.1	194.41	45.931	
9,000.0	6,612.2	6,601.2	6,601.2	65.8	130.4	85.55	-1,166.8	-7,447.7	8,972.2	8,776.7	195.52	45.890	
9,055.1	6,611.5	6,600.5	6,600.5	67.3	130.3	85.52	-1,166.8	-7,447.7	9,026.6	8,829.7	196.93	45.836	
9,100.0	6,610.9	6,599.9	6,599.9	68.4	130.3	85.50	-1,166.8	-7,447.7	9,070.9	8,872.8	198.08	45.793	
9,153.5	6,610.2	6,599.2	6,599.2	69.8	130.3	85.47	-1,166.8	-7,447.7	9,123.7	8,924.3	199.47	45.741	
9,200.0	6,609.6	6,598.6	6,598.6	71.1	130.3	85.45	-1,166.8	-7,447.7	9,169.6	8,969.0	200.67	45.696	
9,251.9	6,608.9	6,597.9	6,597.9	72.4	130.3	85.42	-1,166.8	-7,447.7	9,220.9	9,018.9	202.01	45.645	
9,300.0	6,608.3	6,597.3	6,597.3	73.7	130.3	85.40	-1,166.8	-7,447.7	9,268.4	9,065.1	203.26	45.599	
9,350.4	6,607.7	6,596.7	6,596.7	75.0	130.3	85.37	-1,166.8	-7,447.7	9,318.1	9,113.5	204.57	45.549	
9,400.0	6,607.0	6,596.0	6,596.0	76.4	130.2	85.34	-1,166.8	-7,447.7	9,367.1	9,161.2	205.87	45.501	
9,448.8	6,606.4	6,595.4	6,595.4	77.7	130.2	85.32	-1,166.8	-7,447.7	9,415.3	9,208.2	207.14	45.453	
9,500.0	6,605.7	6,594.7	6,594.7	79.0	130.2	85.29	-1,166.8	-7,447.7	9,465.9	9,257.4	208.48	45.404	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS PM B #B8-10 - Wellbore #1 - Design #												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	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	6,605.1	6,594.1	6,594.1	80.3	130.2	85.27	-1,166.8	-7,447.7	9,512.5	9,302.8	209.72	45.358	
9,600.0	6,604.5	6,593.5	6,593.5	81.7	130.2	85.24	-1,166.8	-7,447.7	9,564.7	9,353.6	211.11	45.308	
9,645.6	6,603.9	6,592.9	6,592.9	82.9	130.2	85.22	-1,166.8	-7,447.7	9,609.8	9,397.5	212.31	45.264	
9,700.0	6,603.2	6,592.2	6,592.2	84.4	130.2	85.19	-1,166.8	-7,447.7	9,663.5	9,449.8	213.74	45.212	
9,744.1	6,602.6	6,591.6	6,591.6	85.6	130.2	85.17	-1,166.8	-7,447.7	9,707.1	9,492.2	214.90	45.170	
9,800.0	6,601.9	6,590.9	6,590.9	87.1	130.1	85.14	-1,166.8	-7,447.7	9,762.4	9,546.0	216.38	45.117	
9,842.5	6,601.3	6,590.3	6,590.3	88.2	130.1	85.12	-1,166.8	-7,447.7	9,804.4	9,586.9	217.50	45.077	
9,900.0	6,600.6	6,589.6	6,589.6	89.8	130.1	85.09	-1,166.8	-7,447.7	9,861.3	9,642.2	219.03	45.023	
9,940.9	6,600.1	6,589.1	6,589.1	90.9	130.1	85.07	-1,166.8	-7,447.7	9,901.7	9,681.6	220.11	44.985	
10,000.0	6,599.3	6,588.3	6,588.3	92.5	130.1	85.03	-1,166.8	-7,447.7	9,960.2	9,738.5	221.68	44.930	
10,039.3	6,598.8	6,587.8	6,587.8	93.5	130.1	85.02	-1,166.8	-7,447.7	9,999.1	9,776.4	222.73	44.894 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-86.36	445.8	-7,001.7	7,016.0				
98.4	98.4	34.1	34.1	0.1	0.0	-86.36	445.8	-7,001.8	7,016.0	7,015.9	0.10	N/A	
100.0	100.0	34.9	34.9	0.1	0.0	-86.36	445.8	-7,001.8	7,016.0	7,015.9	0.10	N/A	
196.8	196.8	100.0	100.0	0.3	0.0	-86.36	445.4	-7,002.4	7,016.8	7,016.5	0.33	N/A	
200.0	200.0	100.0	100.0	0.3	0.0	-86.36	445.4	-7,002.4	7,016.8	7,016.5	0.34	N/A	
295.3	295.3	183.2	183.2	0.5	0.2	-86.37	444.9	-7,003.4	7,018.0	7,017.2	0.71	9,816.900	
300.0	300.0	188.7	188.6	0.5	0.2	-86.37	444.8	-7,003.5	7,018.0	7,017.3	0.74	9,537.570	
393.7	393.7	277.1	277.1	0.8	0.3	-86.37	444.6	-7,004.5	7,019.1	7,018.0	1.03	6,805.786	
400.0	400.0	282.9	282.9	0.8	0.3	-86.37	444.6	-7,004.5	7,019.1	7,018.1	1.05	6,683.222	
492.1	492.1	373.1	373.1	1.0	0.4	-86.37	444.7	-7,005.6	7,020.2	7,018.9	1.32	5,315.498	
500.0	500.0	380.9	380.9	1.0	0.4	-86.37	444.7	-7,005.7	7,020.3	7,019.0	1.34	5,224.658	
590.5	590.5	457.7	457.7	1.2	0.4	-86.37	444.7	-7,006.7	7,021.5	7,019.9	1.59	4,408.914	
600.0	600.0	465.3	465.3	1.2	0.4	-86.37	444.7	-7,006.8	7,021.6	7,020.0	1.62	4,339.400	
689.0	689.0	538.7	538.6	1.4	0.5	-86.37	444.7	-7,008.0	7,023.0	7,021.2	1.86	3,782.149	
700.0	700.0	547.9	547.9	1.4	0.5	-86.37	444.7	-7,008.1	7,023.2	7,021.3	1.89	3,723.324	
787.4	787.4	623.1	623.0	1.6	0.5	-86.37	444.5	-7,009.5	7,024.8	7,022.6	2.12	3,315.003	
800.0	800.0	634.6	634.5	1.7	0.5	-86.37	444.4	-7,009.7	7,025.0	7,022.8	2.15	3,263.507	
885.8	885.8	714.1	714.0	1.9	0.6	-86.38	444.1	-7,011.2	7,026.6	7,024.3	2.38	2,951.302	
900.0	900.0	728.2	728.1	1.9	0.6	-86.38	444.0	-7,011.5	7,026.9	7,024.5	2.42	2,905.369	
984.2	984.2	812.6	812.5	2.1	0.6	-86.38	443.5	-7,013.2	7,028.6	7,025.9	2.64	2,659.716	
1,000.0	1,000.0	828.6	828.5	2.1	0.6	-86.38	443.5	-7,013.5	7,028.9	7,026.2	2.68	2,618.617	
1,082.7	1,082.7	914.0	913.9	2.3	0.7	-86.39	443.0	-7,015.2	7,030.5	7,027.6	2.90	2,422.131	
1,100.0	1,100.0	933.2	933.1	2.3	0.7	-86.39	442.8	-7,015.6	7,030.8	7,027.9	2.95	2,384.547	
1,181.1	1,181.1	1,019.0	1,018.8	2.5	0.7	-86.39	442.1	-7,017.2	7,032.3	7,029.1	3.16	2,224.417	
1,200.0	1,200.0	1,036.1	1,036.0	2.6	0.7	-86.40	442.0	-7,017.5	7,032.7	7,029.4	3.21	2,190.995	
1,279.5	1,279.5	1,109.4	1,109.3	2.7	0.7	-86.40	441.2	-7,019.0	7,034.2	7,030.8	3.41	2,060.622	
1,300.0	1,300.0	1,130.7	1,130.5	2.8	0.8	-86.41	441.0	-7,019.4	7,034.6	7,031.1	3.47	2,029.225	
1,377.9	1,377.9	1,209.9	1,209.7	3.0	0.8	-86.41	440.0	-7,021.0	7,036.0	7,032.4	3.67	1,918.360	
1,400.0	1,400.0	1,229.7	1,229.5	3.0	0.8	-86.42	439.8	-7,021.4	7,036.5	7,032.7	3.72	1,889.741	
1,476.4	1,476.4	1,300.0	1,299.8	3.2	0.8	-11.30	439.0	-7,022.8	7,037.0	7,033.0	4.00	1,761.256	
1,500.0	1,500.0	1,318.4	1,318.2	3.2	0.8	-11.30	438.9	-7,023.2	7,036.8	7,032.7	4.05	1,736.146	
1,574.8	1,574.7	1,382.7	1,382.5	3.4	0.9	-11.32	438.4	-7,024.7	7,034.9	7,030.7	4.23	1,661.740	
1,600.0	1,599.8	1,411.2	1,410.9	3.4	0.9	-11.32	438.4	-7,025.3	7,033.8	7,029.5	4.30	1,636.950	
1,673.2	1,672.8	1,535.9	1,535.7	3.6	0.9	-11.36	437.8	-7,027.5	7,029.2	7,024.7	4.50	1,560.911	
1,700.0	1,699.5	1,565.4	1,565.1	3.7	0.9	-11.38	437.8	-7,028.0	7,026.9	7,022.3	4.57	1,536.907	
1,771.6	1,770.6	1,637.0	1,636.8	3.8	1.0	-11.42	437.8	-7,029.0	7,019.7	7,014.9	4.76	1,475.631	
1,800.0	1,798.7	1,663.2	1,662.9	3.9	1.0	-11.44	437.8	-7,029.4	7,016.4	7,011.5	4.83	1,452.943	
1,870.1	1,868.0	1,733.8	1,733.5	4.1	1.0	-11.50	437.8	-7,030.4	7,007.0	7,002.0	5.01	1,397.840	
1,900.0	1,897.5	1,767.4	1,767.1	4.2	1.0	-11.52	437.7	-7,030.9	7,002.5	6,997.4	5.09	1,375.245	
1,968.5	1,964.8	1,832.2	1,831.9	4.4	1.0	-11.59	437.4	-7,031.8	6,990.9	6,985.7	5.27	1,325.934	
2,000.0	1,995.6	1,858.0	1,857.7	4.5	1.0	-11.63	437.2	-7,032.2	6,985.1	6,979.8	5.35	1,304.814	
2,066.9	2,060.9	1,929.0	1,928.6	4.7	1.1	-11.72	436.5	-7,033.3	6,971.8	6,966.2	5.54	1,259.297	
2,100.0	2,093.1	1,991.0	1,990.6	4.8	1.1	-11.78	435.8	-7,034.1	6,964.5	6,958.8	5.63	1,235.968	
2,165.3	2,156.3	2,133.7	2,133.4	5.1	1.1	-11.93	433.9	-7,034.7	6,948.5	6,942.7	5.84	1,189.505	
2,200.0	2,189.6	2,189.7	2,189.3	5.2	1.1	-12.00	433.1	-7,034.6	6,939.2	6,933.3	5.94	1,168.526	
2,263.8	2,250.7	2,262.9	2,262.6	5.5	1.2	-12.12	432.3	-7,034.2	6,921.0	6,914.9	6.12	1,131.420	
2,280.0	2,266.2	2,280.7	2,280.4	5.6	1.2	-12.16	432.1	-7,034.1	6,916.1	6,909.9	6.16	1,122.461	
2,300.0	2,285.3	2,302.2	2,301.8	5.7	1.2	-12.17	431.9	-7,034.0	6,910.0	6,903.8	6.22	1,111.470	
2,362.2	2,344.6	2,361.3	2,361.0	6.0	1.2	-12.21	431.2	-7,033.6	6,891.2	6,884.8	6.38	1,079.795	
2,400.0	2,380.6	2,397.3	2,396.9	6.2	1.2	-12.23	430.8	-7,033.3	6,879.7	6,873.2	6.49	1,059.453	
2,460.6	2,438.4	2,459.4	2,459.0	6.5	1.2	-12.27	430.1	-7,032.9	6,861.3	6,854.7	6.67	1,029.337	
2,500.0	2,475.9	2,499.8	2,499.5	6.7	1.2	-12.30	429.6	-7,032.6	6,849.4	6,842.6	6.78	1,010.370	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,549.2	2,548.8	7.0	1.2	-12.33	429.1	-7,032.2	6,831.4	6,824.5	6.95	983.059	
2,600.0	2,571.2	2,583.4	2,583.0	7.2	1.2	-12.35	428.7	-7,032.0	6,819.0	6,812.0	7.07	964.786	
2,657.5	2,626.0	2,628.2	2,627.8	7.5	1.2	-12.38	428.2	-7,031.8	6,801.7	6,794.5	7.24	939.937	
2,700.0	2,666.6	2,660.2	2,659.8	7.8	1.2	-12.41	427.8	-7,031.6	6,788.9	6,781.6	7.36	922.240	
2,755.9	2,719.8	2,703.4	2,703.0	8.1	1.2	-12.44	427.3	-7,031.5	6,772.2	6,764.7	7.53	899.557	
2,800.0	2,761.9	2,755.5	2,755.1	8.3	1.3	-12.47	426.7	-7,031.4	6,759.0	6,751.4	7.67	881.782	
2,854.3	2,813.7	2,814.8	2,814.4	8.7	1.3	-12.51	426.0	-7,031.1	6,742.7	6,734.9	7.84	860.585	
2,900.0	2,857.2	2,855.7	2,855.3	8.9	1.3	-12.54	425.5	-7,031.0	6,729.0	6,721.0	7.98	843.570	
2,952.7	2,907.5	2,900.0	2,899.6	9.2	1.3	-12.57	424.9	-7,030.8	6,713.1	6,705.0	8.14	824.543	
3,000.0	2,952.5	2,937.9	2,937.5	9.5	1.3	-12.60	424.4	-7,030.7	6,699.0	6,690.7	8.29	808.254	
3,051.2	3,001.3	2,976.4	2,975.9	9.8	1.3	-12.63	423.9	-7,030.6	6,683.8	6,675.3	8.45	791.115	
3,100.0	3,047.8	3,022.5	3,022.1	10.1	1.3	-12.66	423.3	-7,030.6	6,669.3	6,660.7	8.60	775.087	
3,149.6	3,095.1	3,086.7	3,086.3	10.4	1.3	-12.70	422.4	-7,030.5	6,654.5	6,645.7	8.77	758.854	
3,200.0	3,143.2	3,279.7	3,279.2	10.7	1.4	-12.86	418.4	-7,027.9	6,638.9	6,630.0	8.98	739.292	
3,248.0	3,188.9	3,378.3	3,377.7	11.0	1.4	-12.94	415.9	-7,025.0	6,623.4	6,614.2	9.16	723.287	
3,300.0	3,238.5	3,446.0	3,445.4	11.3	1.4	-13.00	414.0	-7,022.7	6,606.3	6,596.9	9.34	707.681	
3,346.4	3,282.8	3,499.1	3,498.4	11.6	1.4	-13.04	412.5	-7,020.8	6,590.9	6,581.4	9.49	694.342	
3,400.0	3,333.8	3,561.8	3,561.0	11.9	1.4	-13.10	410.7	-7,018.5	6,573.1	6,563.4	9.67	679.503	
3,444.9	3,376.6	3,614.7	3,613.9	12.2	1.4	-13.14	409.3	-7,016.4	6,558.1	6,548.3	9.83	667.396	
3,500.0	3,429.1	3,680.8	3,679.9	12.6	1.4	-13.20	407.5	-7,013.6	6,539.6	6,529.6	10.02	652.945	
3,543.3	3,470.4	3,737.5	3,736.5	12.8	1.5	-13.25	406.2	-7,011.2	6,525.0	6,514.9	10.17	641.776	
3,600.0	3,524.4	3,800.0	3,799.0	13.2	1.5	-13.30	404.6	-7,008.3	6,505.7	6,495.4	10.36	627.796	
3,641.7	3,564.2	3,839.1	3,838.0	13.4	1.5	-13.34	403.6	-7,006.4	6,491.5	6,481.0	10.50	617.979	
3,700.0	3,619.8	3,882.2	3,881.1	13.8	1.5	-13.38	402.3	-7,004.5	6,471.7	6,461.0	10.70	604.880	
3,740.1	3,658.0	3,913.3	3,912.1	14.0	1.5	-13.41	401.2	-7,003.1	6,458.2	6,447.4	10.83	596.090	
3,800.0	3,715.1	3,962.6	3,961.4	14.4	1.5	-13.46	399.6	-7,001.0	6,438.0	6,427.0	11.04	583.365	
3,838.6	3,751.8	4,000.0	3,998.7	14.7	1.5	-13.49	398.5	-6,999.4	6,425.1	6,413.9	11.17	575.302	
3,900.0	3,810.4	4,034.9	4,033.5	15.0	1.5	-13.52	397.4	-6,998.0	6,404.5	6,393.2	11.37	563.192	
3,937.0	3,845.7	4,058.5	4,057.1	15.3	1.5	-13.55	396.8	-6,997.1	6,392.3	6,380.8	11.50	556.053	
4,000.0	3,905.7	4,100.0	4,098.6	15.7	1.5	-13.58	395.7	-6,995.6	6,371.5	6,359.8	11.71	544.235	
4,035.4	3,939.5	4,124.5	4,123.1	15.9	1.5	-13.60	395.1	-6,994.8	6,359.9	6,348.0	11.83	537.751	
4,100.0	4,001.0	4,171.8	4,170.3	16.3	1.5	-13.65	394.0	-6,993.3	6,338.8	6,326.7	12.05	526.233	
4,133.8	4,033.3	4,200.0	4,198.5	16.5	1.5	-13.67	393.5	-6,992.4	6,327.8	6,315.6	12.16	520.308	
4,200.0	4,096.3	4,241.2	4,239.7	16.9	1.5	-13.71	392.7	-6,991.2	6,306.5	6,294.1	12.39	509.190	
4,232.3	4,127.1	4,262.9	4,261.3	17.1	1.6	-13.72	392.3	-6,990.6	6,296.1	6,283.6	12.50	503.884	
4,300.0	4,191.7	4,309.9	4,308.3	17.6	1.6	-13.76	391.5	-6,989.5	6,274.5	6,261.8	12.73	493.027	
4,330.7	4,220.9	4,334.1	4,332.5	17.8	1.6	-13.79	391.1	-6,988.9	6,264.8	6,252.0	12.83	488.183	
4,400.0	4,287.0	4,389.0	4,387.4	18.2	1.6	-13.83	390.2	-6,987.7	6,242.9	6,229.8	13.07	477.535	
4,429.1	4,314.7	4,411.5	4,409.9	18.4	1.6	-13.85	389.9	-6,987.2	6,233.8	6,220.6	13.17	473.167	
4,500.0	4,382.3	4,465.3	4,463.6	18.8	1.6	-13.89	389.2	-6,986.2	6,211.6	6,198.1	13.42	462.811	
4,527.5	4,408.6	4,486.2	4,484.5	19.0	1.6	-13.91	389.0	-6,985.8	6,203.0	6,189.5	13.52	458.882	
4,600.0	4,477.6	4,546.4	4,544.7	19.5	1.6	-13.96	388.4	-6,984.8	6,180.5	6,166.7	13.77	448.735	
4,626.0	4,502.4	4,568.6	4,566.9	19.6	1.6	-13.98	388.2	-6,984.5	6,172.4	6,158.6	13.87	445.173	
4,700.0	4,572.9	4,625.8	4,624.2	20.1	1.6	-14.02	387.7	-6,983.6	6,149.6	6,135.5	14.13	435.344	
4,724.4	4,596.2	4,642.7	4,641.1	20.3	1.6	-14.04	387.5	-6,983.4	6,142.1	6,127.9	14.21	432.201	
4,800.0	4,668.3	4,700.0	4,698.3	20.7	1.6	-14.08	386.8	-6,982.8	6,119.1	6,104.6	14.48	422.652	
4,822.8	4,690.0	4,700.0	4,698.3	20.9	1.6	-14.08	386.8	-6,982.8	6,112.2	6,097.6	14.55	420.015	
4,900.0	4,763.6	4,764.6	4,762.9	21.4	1.7	-14.14	386.0	-6,982.3	6,088.9	6,074.1	14.83	410.663	
4,921.2	4,783.8	4,779.4	4,777.7	21.5	1.7	-14.15	385.7	-6,982.2	6,082.6	6,067.7	14.90	408.176	
5,000.0	4,858.9	4,834.3	4,832.6	22.0	1.7	-14.20	384.9	-6,982.1	6,059.2	6,044.0	15.18	399.169	
5,019.7	4,877.7	4,848.0	4,846.3	22.1	1.7	-14.21	384.7	-6,982.1	6,053.4	6,038.2	15.25	396.968	
5,100.0	4,954.2	4,905.2	4,903.5	22.6	1.7	-14.26	383.9	-6,982.2	6,029.9	6,014.4	15.53	388.175	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,920.8	4,919.1	22.8	1.7	-14.28	383.7	-6,982.2	6,024.6	6,009.0	15.60	386.202		
5,171.8	5,022.7	4,967.2	4,965.5	23.1	1.7	-14.32	383.0	-6,982.4	6,009.0	5,993.2	15.79	380.443		
5,200.0	5,049.6	4,991.6	4,989.9	23.3	1.7	-14.30	382.7	-6,982.5	6,001.0	5,985.1	15.87	378.181		
5,216.5	5,065.4	5,005.9	5,004.2	23.3	1.7	-14.29	382.5	-6,982.6	5,996.4	5,980.5	15.91	376.992		
5,300.0	5,145.7	5,078.8	5,077.1	23.7	1.8	-14.23	381.6	-6,983.0	5,974.6	5,958.5	16.09	371.256		
5,314.9	5,160.1	5,092.0	5,090.3	23.8	1.8	-14.22	381.5	-6,983.1	5,971.0	5,954.9	16.12	370.331		
5,400.0	5,242.7	5,152.2	5,150.4	24.1	1.8	-14.17	380.9	-6,983.5	5,951.8	5,935.5	16.29	365.463		
5,413.4	5,255.7	5,161.4	5,159.7	24.2	1.8	-14.16	380.8	-6,983.6	5,949.0	5,932.7	16.31	364.784		
5,500.0	5,340.5	5,244.0	5,242.3	24.5	1.8	-14.13	380.0	-6,984.6	5,932.7	5,916.2	16.46	360.428		
5,511.8	5,352.1	5,260.9	5,259.1	24.5	1.8	-14.13	379.9	-6,984.8	5,930.6	5,914.2	16.48	359.863		
5,600.0	5,439.0	5,344.3	5,342.6	24.8	1.8	-14.10	379.3	-6,985.6	5,916.7	5,900.1	16.61	356.126		
5,610.2	5,449.1	5,351.8	5,350.1	24.8	1.8	-14.09	379.2	-6,985.7	5,915.3	5,898.6	16.63	355.763		
5,700.0	5,538.0	5,423.0	5,421.2	25.1	1.8	-14.07	378.9	-6,986.6	5,904.4	5,887.6	16.74	352.706		
5,708.6	5,546.6	5,431.3	5,429.6	25.1	1.8	-14.07	378.9	-6,986.7	5,903.5	5,886.7	16.75	352.446		
5,800.0	5,637.4	5,522.1	5,520.3	25.3	1.9	-14.05	378.4	-6,988.0	5,895.6	5,878.7	16.85	349.806		
5,807.1	5,644.5	5,529.9	5,528.1	25.3	1.9	-14.05	378.4	-6,988.1	5,895.1	5,878.2	16.86	349.628		
5,900.0	5,737.2	5,628.2	5,626.5	25.5	1.9	-14.05	377.6	-6,989.4	5,890.1	5,873.1	16.95	347.396		
5,905.5	5,742.6	5,633.5	5,631.8	25.5	1.9	-14.05	377.6	-6,989.5	5,889.9	5,872.9	16.96	347.288		
6,000.0	5,837.1	5,726.7	5,725.0	25.6	1.9	-14.06	376.9	-6,990.7	5,888.0	5,870.9	17.04	345.478		
6,003.9	5,841.0	5,730.8	5,729.1	25.6	1.9	-14.06	376.9	-6,990.8	5,888.0	5,870.9	17.05	345.412		
6,012.9	5,850.0	5,740.3	5,738.5	25.6	1.9	-14.06	376.9	-6,990.9	5,887.9	5,870.9	17.05	345.263 CC		
6,051.8	5,888.9	5,780.9	5,779.2	25.7	1.9	-89.19	376.9	-6,991.5	5,888.2	5,861.1	27.11	217.215 ES		
6,081.8	5,918.9	5,812.9	5,811.1	25.7	1.9	-89.19	376.9	-6,991.9	5,888.6	5,861.4	27.14	216.961		
6,100.0	5,937.1	5,832.8	5,831.0	25.7	1.9	-179.18	377.0	-6,992.1	5,889.0	5,871.9	17.11	344.238		
6,102.3	5,939.4	5,835.4	5,833.6	25.7	1.9	-179.18	377.0	-6,992.1	5,889.1	5,872.0	17.10	344.334		
6,150.0	5,987.0	5,887.4	5,885.6	25.7	1.9	-179.18	377.3	-6,992.7	5,892.6	5,875.6	17.03	346.099		
6,200.0	6,036.5	5,938.9	5,937.1	25.7	1.9	-179.17	377.6	-6,993.3	5,899.7	5,882.7	16.95	347.962		
6,200.8	6,037.3	5,939.6	5,937.8	25.7	1.9	-179.17	377.6	-6,993.3	5,899.8	5,882.9	16.95	347.994		
6,250.0	6,085.5	5,988.8	5,987.0	25.7	1.9	-179.15	378.1	-6,993.9	5,910.1	5,893.3	16.88	350.137		
6,299.2	6,133.0	6,035.6	6,033.8	25.6	1.9	-179.13	378.6	-6,994.4	5,923.7	5,907.0	16.79	352.910		
6,300.0	6,133.7	6,036.3	6,034.5	25.6	1.9	-179.13	378.6	-6,994.4	5,924.0	5,907.2	16.78	352.960		
6,350.0	6,180.9	6,082.3	6,080.5	25.5	1.9	-179.11	379.2	-6,994.9	5,941.2	5,924.5	16.66	356.693		
6,397.6	6,224.6	6,121.3	6,119.5	25.4	1.9	-179.08	379.8	-6,995.3	5,960.5	5,944.0	16.50	361.302		
6,400.0	6,226.7	6,123.1	6,121.3	25.4	1.9	-179.07	379.8	-6,995.3	5,961.6	5,945.1	16.49	361.557		
6,450.0	6,271.1	6,160.2	6,158.3	25.2	1.9	-179.04	380.4	-6,995.8	5,985.2	5,968.9	16.28	367.673		
6,496.0	6,310.4	6,200.0	6,198.2	25.1	1.9	-178.99	381.1	-6,996.3	6,009.6	5,993.6	16.06	374.311		
6,500.0	6,313.7	6,200.0	6,198.2	25.1	1.9	-178.99	381.1	-6,996.3	6,011.8	5,995.8	16.03	374.990		
6,550.0	6,354.4	6,238.9	6,237.1	25.0	1.9	-178.93	381.9	-6,996.9	6,041.4	6,025.7	15.75	383.534		
6,594.5	6,388.9	6,276.6	6,274.8	24.9	1.9	-178.87	382.7	-6,997.4	6,070.0	6,054.5	15.48	392.001		
6,600.0	6,393.0	6,281.2	6,279.3	24.9	1.9	-178.86	382.8	-6,997.4	6,073.7	6,058.2	15.45	393.106		
6,650.0	6,429.3	6,318.8	6,317.0	24.8	1.9	-178.78	383.6	-6,997.9	6,108.5	6,093.4	15.13	403.700		
6,692.9	6,458.5	6,347.6	6,345.7	24.7	1.9	-178.69	384.3	-6,998.3	6,140.4	6,125.5	14.85	413.367		
6,700.0	6,463.1	6,352.1	6,350.2	24.7	1.9	-178.67	384.4	-6,998.3	6,145.8	6,131.0	14.81	414.994		
6,750.0	6,494.3	6,382.7	6,380.8	24.7	1.9	-178.55	385.2	-6,998.7	6,185.3	6,170.8	14.51	426.420		
6,791.3	6,517.9	6,406.2	6,404.3	24.7	1.9	-178.41	385.8	-6,999.0	6,219.5	6,205.2	14.28	435.394		
6,800.0	6,522.6	6,411.0	6,409.1	24.7	1.9	-178.38	386.0	-6,999.0	6,226.8	6,212.6	14.24	437.177		
6,850.0	6,548.0	6,436.8	6,434.9	24.7	1.9	-178.17	386.7	-6,999.4	6,270.2	6,256.1	14.05	446.227		
6,889.7	6,566.0	6,455.1	6,453.2	24.8	1.9	-177.95	387.2	-6,999.6	6,305.8	6,291.9	13.97	451.431		
6,900.0	6,570.4	6,459.5	6,457.6	24.9	1.9	-177.89	387.3	-6,999.6	6,315.2	6,301.2	13.96	452.447		
6,950.0	6,589.5	6,478.9	6,476.9	25.1	1.9	-177.49	387.9	-6,999.9	6,361.6	6,347.6	13.99	454.760		
6,988.2	6,602.0	6,491.4	6,489.4	25.3	1.9	-177.06	388.3	-7,000.0	6,397.8	6,383.7	14.11	453.410		
7,000.0	6,605.4	6,494.8	6,492.9	25.3	1.9	-176.89	388.4	-7,000.1	6,409.2	6,395.0	14.16	452.475		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,618.0	6,506.4	6,504.5	25.6	1.9	-175.88	388.8	-7,000.2	6,457.7	6,443.2	14.50	445.381		
7,086.6	6,625.0	6,512.4	6,510.5	25.9	1.9	-174.56	389.0	-7,000.3	6,493.7	6,478.8	14.87	436.708		
7,100.0	6,627.1	6,514.2	6,512.3	26.0	1.9	-173.83	389.0	-7,000.3	6,506.9	6,491.9	15.04	432.545		
7,150.0	6,632.8	6,518.9	6,516.9	26.5	1.9	-167.63	389.2	-7,000.3	6,556.7	6,540.3	16.33	401.521		
7,185.0	6,634.7	6,520.2	6,518.3	26.8	1.9	-140.78	389.2	-7,000.4	6,591.7	6,568.7	22.97	287.019		
7,200.0	6,635.0	6,520.3	6,518.4	27.0	1.9	-78.05	389.2	-7,000.4	6,606.6	6,577.8	28.80	229.385		
7,215.9	6,635.0	6,520.2	6,518.2	27.1	1.9	-29.83	389.2	-7,000.4	6,622.5	6,600.0	22.50	294.355		
7,283.4	6,634.1	6,518.6	6,516.7	27.9	1.9	-29.59	389.2	-7,000.3	6,690.1	6,667.1	22.96	291.393		
7,300.0	6,633.9	6,518.3	6,516.3	28.1	1.9	-29.53	389.2	-7,000.3	6,706.6	6,683.5	23.07	290.702		
7,381.9	6,632.9	6,516.4	6,514.4	29.3	1.9	-29.25	389.1	-7,000.3	6,788.4	6,764.7	23.70	286.476		
7,400.0	6,632.6	6,516.0	6,514.0	29.5	1.9	-29.18	389.1	-7,000.3	6,806.6	6,782.7	23.83	285.593		
7,480.3	6,631.6	6,514.2	6,512.2	30.8	1.9	-28.91	389.0	-7,000.3	6,886.8	6,862.3	24.51	281.015		
7,500.0	6,631.4	6,513.8	6,511.8	31.1	1.9	-28.85	389.0	-7,000.3	6,906.5	6,881.8	24.67	279.954		
7,578.7	6,630.4	6,512.0	6,510.0	32.5	1.9	-28.59	389.0	-7,000.3	6,985.2	6,959.8	25.38	275.243		
7,600.0	6,630.1	6,511.5	6,509.6	32.9	1.9	-28.52	389.0	-7,000.2	7,006.5	6,980.9	25.57	274.040		
7,677.1	6,629.1	6,509.8	6,507.8	34.3	1.9	-28.27	388.9	-7,000.2	7,083.6	7,057.3	26.30	269.355		
7,700.0	6,628.8	6,509.3	6,507.3	34.8	1.9	-28.19	388.9	-7,000.2	7,106.4	7,079.9	26.51	268.043		
7,775.6	6,627.8	6,507.6	6,505.6	36.3	1.9	-27.95	388.8	-7,000.2	7,182.0	7,154.7	27.26	263.490		
7,800.0	6,627.5	6,507.0	6,505.1	36.8	1.9	-27.88	388.8	-7,000.2	7,206.4	7,178.9	27.50	262.098		
7,874.0	6,626.6	6,505.4	6,503.4	38.4	1.9	-27.65	388.8	-7,000.2	7,280.4	7,252.1	28.25	257.747		
7,900.0	6,626.3	6,500.0	6,498.0	38.9	1.9	-26.92	388.6	-7,000.1	7,306.3	7,278.1	28.25	258.664		
7,972.4	6,625.3	6,500.0	6,498.0	40.5	1.9	-26.92	388.6	-7,000.1	7,378.7	7,349.7	29.08	253.763		
8,000.0	6,625.0	6,500.0	6,498.0	41.1	1.9	-26.92	388.6	-7,000.1	7,406.3	7,376.9	29.39	251.982		
8,070.8	6,624.1	6,500.0	6,498.0	42.7	1.9	-26.92	388.6	-7,000.1	7,477.1	7,446.9	30.23	247.370		
8,100.0	6,623.7	6,500.0	6,498.0	43.4	1.9	-26.91	388.6	-7,000.1	7,506.3	7,475.7	30.57	245.557		
8,169.3	6,622.8	6,498.7	6,496.7	45.0	1.9	-26.74	388.5	-7,000.1	7,575.5	7,544.2	31.32	241.881		
8,200.0	6,622.4	6,497.9	6,495.9	45.7	1.9	-26.64	388.5	-7,000.1	7,606.2	7,574.6	31.64	240.431		
8,267.7	6,621.6	6,496.1	6,494.2	47.4	1.9	-26.41	388.5	-7,000.1	7,673.9	7,641.6	32.35	237.241		
8,300.0	6,621.1	6,495.3	6,493.3	48.1	1.9	-26.30	388.4	-7,000.1	7,706.2	7,673.5	32.68	235.799		
8,366.1	6,620.3	6,493.6	6,491.6	49.7	1.9	-26.09	388.4	-7,000.0	7,772.3	7,738.9	33.38	232.861		
8,400.0	6,619.9	6,492.7	6,490.8	50.6	1.9	-25.98	388.4	-7,000.0	7,806.2	7,772.4	33.73	231.435		
8,464.5	6,619.0	6,491.0	6,489.1	52.2	1.9	-25.77	388.3	-7,000.0	7,870.7	7,836.3	34.41	228.738		
8,500.0	6,618.6	6,490.1	6,488.2	53.0	1.9	-25.66	388.3	-7,000.0	7,906.1	7,871.3	34.78	227.333		
8,563.0	6,617.8	6,488.5	6,486.5	54.6	1.9	-25.46	388.2	-7,000.0	7,969.1	7,933.6	35.44	224.861		
8,600.0	6,617.3	6,487.5	6,485.6	55.5	1.9	-25.35	388.2	-7,000.0	8,006.1	7,970.3	35.82	223.483		
8,661.4	6,616.5	6,485.9	6,484.0	57.1	1.9	-25.16	388.1	-6,999.9	8,067.5	8,031.0	36.47	221.223		
8,700.0	6,616.0	6,484.9	6,483.0	58.1	1.9	-25.04	388.1	-6,999.9	8,106.0	8,069.2	36.87	219.872		
8,759.8	6,615.2	6,483.4	6,481.4	59.6	1.9	-24.86	388.1	-6,999.9	8,165.8	8,128.3	37.49	217.806		
8,800.0	6,614.7	6,482.3	6,480.4	60.6	1.9	-24.74	388.0	-6,999.9	8,206.0	8,168.1	37.91	216.487		
8,858.2	6,614.0	6,480.8	6,478.9	62.1	1.9	-24.57	388.0	-6,999.9	8,264.2	8,225.7	38.51	214.600		
8,900.0	6,613.4	6,479.7	6,477.8	63.2	1.9	-24.44	388.0	-6,999.9	8,306.0	8,267.0	38.94	213.313		
8,956.7	6,612.7	6,478.2	6,476.3	64.7	1.9	-24.28	387.9	-6,999.9	8,362.6	8,323.1	39.52	211.592		
9,000.0	6,612.2	6,477.1	6,475.2	65.8	1.9	-24.16	387.9	-6,999.8	8,405.9	8,366.0	39.96	210.339		
9,055.1	6,611.5	6,475.7	6,473.7	67.3	1.9	-24.00	387.8	-6,999.8	8,461.0	8,420.5	40.53	208.768		
9,100.0	6,610.9	6,474.5	6,472.5	68.4	1.9	-23.87	387.8	-6,999.8	8,505.9	8,464.9	40.98	207.549		
9,153.5	6,610.2	6,473.1	6,471.1	69.8	1.9	-23.72	387.7	-6,999.8	8,559.4	8,517.9	41.53	206.117		
9,200.0	6,609.6	6,471.9	6,469.9	71.1	1.9	-23.59	387.7	-6,999.8	8,605.8	8,563.9	41.99	204.932		
9,251.9	6,608.9	6,470.5	6,468.6	72.4	1.9	-23.45	387.7	-6,999.8	8,657.8	8,615.3	42.52	203.628		
9,300.0	6,608.3	6,469.2	6,467.3	73.7	1.9	-23.32	387.6	-6,999.7	8,705.8	8,662.8	43.00	202.477		
9,350.4	6,607.7	6,467.9	6,466.0	75.0	1.9	-23.19	387.6	-6,999.7	8,756.2	8,712.7	43.50	201.288		
9,400.0	6,607.0	6,466.6	6,464.7	76.4	1.9	-23.05	387.6	-6,999.7	8,805.8	8,761.8	43.99	200.171		
9,448.8	6,606.4	6,465.3	6,463.4	77.7	1.9	-22.92	387.5	-6,999.7	8,854.6	8,810.1	44.48	199.088		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT LOWER LATHAM #8-15 - Wellbore #1 - Wellbore												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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	6,605.7	6,464.0	6,462.0	79.0	1.9	-22.79	387.5	-6,999.7	8,905.7	8,860.8	44.98	198.004	
9,547.2	6,605.1	6,462.7	6,460.8	80.3	1.9	-22.67	387.4	-6,999.7	8,952.9	8,907.5	45.44	197.019	
9,600.0	6,604.5	6,461.3	6,459.4	81.7	1.9	-22.53	387.4	-6,999.7	9,005.7	8,959.7	45.96	195.967	
9,645.6	6,603.9	6,460.1	6,458.2	82.9	1.9	-22.41	387.4	-6,999.6	9,051.3	9,004.9	46.40	195.071	
9,700.0	6,603.2	6,458.7	6,456.8	84.4	1.9	-22.28	387.3	-6,999.6	9,105.7	9,058.7	46.92	194.051	
9,744.1	6,602.6	6,457.5	6,455.6	85.6	1.9	-22.17	387.3	-6,999.6	9,149.7	9,102.4	47.35	193.236	
9,800.0	6,601.9	6,456.1	6,454.1	87.1	1.9	-22.03	387.2	-6,999.6	9,205.6	9,157.7	47.88	192.247	
9,842.5	6,601.3	6,454.9	6,453.0	88.2	1.9	-21.92	387.2	-6,999.6	9,248.1	9,199.8	48.29	191.506	
9,900.0	6,600.6	6,453.4	6,451.5	89.8	1.9	-21.78	387.2	-6,999.6	9,305.6	9,256.8	48.84	190.548	
9,940.9	6,600.1	6,452.3	6,450.4	90.9	1.9	-21.68	387.1	-6,999.5	9,346.5	9,297.3	49.22	189.875	
10,000.0	6,599.3	6,450.7	6,448.8	92.5	1.9	-21.54	387.1	-6,999.5	9,405.6	9,355.8	49.78	188.947	
10,039.3	6,598.8	6,449.7	6,447.8	93.5	1.9	-21.45	387.0	-6,999.5	9,444.9	9,394.7	50.15	188.336	
10,100.0	6,598.0	6,448.1	6,446.2	95.2	1.9	-21.31	387.0	-6,999.5	9,505.5	9,454.8	50.71	187.436	
10,137.8	6,597.5	6,447.1	6,445.2	96.2	1.9	-21.22	387.0	-6,999.5	9,543.3	9,492.2	51.07	186.883	
10,200.0	6,596.7	6,445.4	6,443.5	97.9	1.9	-21.07	386.9	-6,999.5	9,605.5	9,553.8	51.64	186.011	
10,236.2	6,596.3	6,444.5	6,442.5	98.9	1.9	-20.99	386.9	-6,999.5	9,641.7	9,589.7	51.97	185.509	
10,300.0	6,595.4	6,442.7	6,440.8	100.6	1.9	-20.85	386.8	-6,999.4	9,705.4	9,652.9	52.56	184.665	
10,334.6	6,595.0	6,441.8	6,439.9	101.6	1.9	-20.77	386.8	-6,999.4	9,740.1	9,687.2	52.87	184.211	
10,400.0	6,594.2	6,440.1	6,438.2	103.4	1.9	-20.62	386.8	-6,999.4	9,805.4	9,751.9	53.47	183.393	
10,433.0	6,593.7	6,439.2	6,437.3	104.3	1.9	-20.55	386.7	-6,999.4	9,838.4	9,784.7	53.77	182.983	
10,500.0	6,592.9	6,437.4	6,435.5	106.1	1.9	-20.40	386.7	-6,999.4	9,905.4	9,851.0	54.37	182.190	
10,531.5	6,592.5	6,436.6	6,434.6	106.9	1.9	-20.34	386.7	-6,999.4	9,936.8	9,882.2	54.65	181.821 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	5.48	1,748.7	167.9	1,756.8				
98.4	98.4	93.4	93.4	0.1	1.1	5.48	1,748.7	167.9	1,756.8	1,755.5	1.24	1,416.377	
100.0	100.0	95.0	95.0	0.1	1.2	5.48	1,748.7	167.9	1,756.8	1,755.5	1.26	1,392.727	
196.8	196.8	191.8	191.8	0.3	3.3	5.48	1,748.7	167.9	1,756.8	1,753.1	3.64	482.894	
200.0	200.0	195.0	195.0	0.3	3.4	5.48	1,748.7	167.9	1,756.8	1,753.0	3.72	472.628	
295.3	295.3	290.3	290.3	0.5	5.4	5.48	1,748.7	167.9	1,756.8	1,750.8	5.92	296.695	
300.0	300.0	295.0	295.0	0.5	5.5	5.48	1,748.7	167.9	1,756.8	1,750.7	6.03	291.341	
393.7	393.7	388.7	388.7	0.8	7.4	5.48	1,748.7	167.9	1,756.8	1,748.6	8.16	215.403	
400.0	400.0	395.0	395.0	0.8	7.5	5.48	1,748.7	167.9	1,756.8	1,748.5	8.30	211.696	
492.1	492.1	487.1	487.1	1.0	9.4	5.48	1,748.7	167.9	1,756.8	1,746.4	10.38	169.319	
500.0	500.0	495.0	495.0	1.0	9.6	5.48	1,748.7	167.9	1,756.8	1,746.2	10.55	166.471	
590.5	590.5	585.5	585.5	1.2	11.4	5.48	1,748.7	167.9	1,756.8	1,744.2	12.59	139.554	
600.0	600.0	595.0	595.0	1.2	11.6	5.48	1,748.7	167.9	1,756.8	1,744.0	12.80	137.238	
689.0	689.0	684.0	684.0	1.4	13.4	5.48	1,748.7	167.9	1,756.8	1,742.0	14.80	118.719	
700.0	700.0	695.0	695.0	1.4	13.6	5.48	1,748.7	167.9	1,756.8	1,741.7	15.04	116.767	
787.4	787.4	782.4	782.4	1.6	15.4	5.48	1,748.7	167.9	1,756.8	1,739.8	17.00	103.311	
800.0	800.0	795.0	795.0	1.7	15.6	5.48	1,748.7	167.9	1,756.8	1,739.5	17.29	101.623	
885.8	885.8	880.8	880.8	1.9	17.3	5.48	1,748.7	167.9	1,756.8	1,737.5	19.21	91.450	
900.0	900.0	895.0	895.0	1.9	17.6	5.48	1,748.7	167.9	1,756.8	1,737.2	19.53	89.963	
984.2	984.2	979.2	979.2	2.1	19.3	5.48	1,748.7	167.9	1,756.8	1,735.3	21.41	82.036	
1,000.0	1,000.0	995.0	995.0	2.1	19.6	5.48	1,748.7	167.9	1,756.8	1,735.0	21.77	80.707	
1,082.7	1,082.7	1,077.7	1,077.7	2.3	21.3	5.48	1,748.7	167.9	1,756.8	1,733.1	23.62	74.382	
1,100.0	1,100.0	1,095.0	1,095.0	2.3	21.7	5.48	1,748.7	167.9	1,756.8	1,732.8	24.01	73.180	
1,181.1	1,181.1	1,176.1	1,176.1	2.5	23.3	5.48	1,748.7	167.9	1,756.8	1,730.9	25.82	68.035	
1,200.0	1,200.0	1,195.0	1,195.0	2.6	23.7	5.48	1,748.7	167.9	1,756.8	1,730.5	26.24	66.939	
1,279.5	1,279.5	1,274.5	1,274.5	2.7	25.3	5.48	1,748.7	167.9	1,756.8	1,728.7	28.02	62.688	
1,300.0	1,300.0	1,295.0	1,295.0	2.8	25.7	5.48	1,748.7	167.9	1,756.8	1,728.3	28.48	61.679	
1,377.9	1,377.9	1,372.9	1,372.9	3.0	27.3	5.48	1,748.7	167.9	1,756.8	1,726.5	30.23	58.120	
1,400.0	1,400.0	1,395.0	1,395.0	3.0	27.7	5.48	1,748.7	167.9	1,756.8	1,726.0	30.72	57.187	
1,476.4	1,476.4	1,471.4	1,471.4	3.2	29.2	80.65	1,748.7	167.9	1,756.6	1,724.2	32.42	54.181	
1,500.0	1,500.0	1,495.0	1,495.0	3.2	29.7	80.67	1,748.7	167.9	1,756.5	1,723.5	32.95	53.312	
1,574.8	1,574.7	1,569.7	1,569.7	3.4	31.2	80.80	1,748.7	167.9	1,755.9	1,721.3	34.61	50.739	
1,600.0	1,599.8	1,594.8	1,594.8	3.4	31.7	80.86	1,748.7	167.9	1,755.6	1,720.5	35.17	49.925	
1,673.2	1,672.8	1,667.8	1,667.8	3.6	33.2	81.07	1,748.7	167.9	1,754.7	1,717.9	36.79	47.690	
1,700.0	1,699.5	1,694.5	1,694.5	3.7	33.7	81.16	1,748.7	167.9	1,754.3	1,716.9	37.39	46.920	
1,771.6	1,770.6	1,765.6	1,765.6	3.8	35.2	81.46	1,748.7	167.9	1,753.0	1,714.0	38.99	44.962	
1,800.0	1,798.7	1,793.7	1,793.7	3.9	35.7	81.59	1,748.7	167.9	1,752.4	1,712.8	39.62	44.231	
1,870.1	1,868.0	1,863.0	1,863.0	4.1	37.1	81.96	1,748.7	167.9	1,750.9	1,709.7	41.20	42.502	
1,900.0	1,897.5	1,892.5	1,892.5	4.2	37.7	82.14	1,748.7	167.9	1,750.2	1,708.3	41.87	41.804	
1,968.5	1,964.8	1,959.8	1,959.8	4.4	39.1	82.58	1,748.7	167.9	1,748.5	1,705.0	43.42	40.267	
2,000.0	1,995.6	1,990.6	1,990.6	4.5	39.7	82.80	1,748.7	167.9	1,747.6	1,703.5	44.14	39.597	
2,066.9	2,060.9	2,055.9	2,055.9	4.7	41.0	83.30	1,748.7	167.9	1,745.8	1,700.1	45.68	38.222	
2,100.0	2,093.1	2,088.1	2,088.1	4.8	41.6	83.56	1,748.7	167.9	1,744.9	1,698.5	46.43	37.577	
2,165.3	2,156.3	2,151.3	2,151.3	5.1	42.9	84.12	1,748.7	167.9	1,743.1	1,695.1	47.96	36.342	
2,200.0	2,189.6	2,184.6	2,184.6	5.2	43.6	84.44	1,748.7	167.9	1,742.1	1,693.3	48.77	35.720	
2,263.8	2,250.7	2,245.7	2,245.7	5.5	44.8	85.04	1,748.7	167.9	1,740.4	1,690.1	50.29	34.608	
2,280.0	2,266.2	2,261.2	2,261.2	5.6	45.1	85.21	1,748.7	167.9	1,739.9	1,689.2	50.67	34.336	
2,300.0	2,285.3	2,280.3	2,280.3	5.7	45.5	85.40	1,748.7	167.9	1,739.4	1,688.2	51.15	34.004	
2,362.2	2,344.6	2,339.6	2,339.6	6.0	46.7	85.98	1,748.7	167.9	1,737.9	1,685.3	52.66	33.004	
2,400.0	2,380.6	2,375.6	2,375.6	6.2	47.4	86.34	1,748.7	167.9	1,737.1	1,683.5	53.57	32.425	
2,460.6	2,438.4	2,433.4	2,433.4	6.5	48.6	86.92	1,748.7	167.9	1,736.0	1,680.9	55.05	31.532	
2,500.0	2,475.9	2,470.9	2,470.9	6.7	49.3	87.29	1,748.7	167.9	1,735.4	1,679.3	56.02	30.979	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	2,532.2	2,527.2	2,527.2	7.0	50.5	87.85	1,748.7	167.9	1,734.6	1,677.1	57.47	30.181	
2,600.0	2,571.2	2,566.2	2,566.2	7.2	51.3	88.24	1,748.7	167.9	1,734.1	1,675.6	58.48	29.653	
2,657.5	2,626.0	2,621.0	2,621.0	7.5	52.4	88.79	1,748.7	167.9	1,733.6	1,673.7	59.90	28.940	
2,700.0	2,666.6	2,661.6	2,661.6	7.8	53.2	89.20	1,748.7	167.9	1,733.4	1,672.5	60.96	28.436	
2,755.9	2,719.8	2,714.8	2,714.8	8.1	54.3	89.73	1,748.7	167.9	1,733.2	1,670.9	62.35	27.799	
2,784.4	2,747.0	2,742.0	2,742.0	8.3	54.8	90.00	1,748.7	167.9	1,733.2	1,670.2	63.06	27.487	
2,800.0	2,761.9	2,756.9	2,756.9	8.3	55.1	90.15	1,748.7	167.9	1,733.2	1,669.8	63.45	27.318	
2,854.3	2,813.7	2,808.7	2,808.7	8.7	56.1	90.67	1,748.7	167.9	1,733.4	1,668.5	64.80	26.748	
2,900.0	2,857.2	2,852.2	2,852.2	8.9	57.0	91.10	1,748.7	167.9	1,733.6	1,667.6	65.94	26.290	
2,952.7	2,907.5	2,902.5	2,902.5	9.2	58.0	91.60	1,748.7	167.9	1,734.0	1,666.7	67.26	25.780	
3,000.0	2,952.5	2,947.5	2,947.5	9.5	58.9	92.05	1,748.7	167.9	1,734.4	1,666.0	68.44	25.342	
3,051.2	3,001.3	2,996.3	2,996.3	9.8	59.9	92.54	1,748.7	167.9	1,735.1	1,665.4	69.72	24.886	
3,100.0	3,047.8	3,042.8	3,042.8	10.1	60.9	93.00	1,748.7	167.9	1,735.8	1,664.9	70.94	24.468	
3,149.6	3,095.1	3,090.1	3,090.1	10.4	61.8	93.48	1,748.7	167.9	1,736.7	1,664.5	72.19	24.059	
3,200.0	3,143.2	3,138.2	3,138.2	10.7	62.8	93.95	1,748.7	167.9	1,737.8	1,664.3	73.45	23.659	
3,248.0	3,188.9	3,183.9	3,183.9	11.0	63.7	94.41	1,748.7	167.9	1,738.9	1,664.2	74.65	23.293	
3,300.0	3,238.5	3,233.5	3,233.5	11.3	64.7	94.90	1,748.7	167.9	1,740.2	1,664.3	75.95	22.911	
3,346.4	3,282.8	3,277.8	3,277.8	11.6	65.6	95.34	1,748.7	167.9	1,741.5	1,664.4	77.12	22.583	
3,400.0	3,333.8	3,328.8	3,328.8	11.9	66.6	95.85	1,748.7	167.9	1,743.2	1,664.7	78.46	22.218	
3,444.9	3,376.6	3,371.6	3,371.6	12.2	67.5	96.27	1,748.7	167.9	1,744.7	1,665.1	79.58	21.924	
3,500.0	3,429.1	3,424.1	3,424.1	12.6	68.5	96.79	1,748.7	167.9	1,746.7	1,665.7	80.96	21.575	
3,543.3	3,470.4	3,465.4	3,465.4	12.8	69.3	97.19	1,748.7	167.9	1,748.3	1,666.3	82.04	21.311	
3,600.0	3,524.4	3,519.4	3,519.4	13.2	70.4	97.72	1,748.7	167.9	1,750.7	1,667.2	83.46	20.977	
3,641.7	3,564.2	3,559.2	3,559.2	13.4	71.2	98.11	1,748.7	167.9	1,752.5	1,668.0	84.50	20.741	
3,700.0	3,619.8	3,614.8	3,614.8	13.8	72.4	98.66	1,748.7	167.9	1,755.2	1,669.2	85.95	20.421	
3,740.1	3,658.0	3,653.0	3,653.0	14.0	73.1	99.03	1,748.7	167.9	1,757.2	1,670.2	86.95	20.209	
3,800.0	3,715.1	3,710.1	3,710.1	14.4	74.3	99.59	1,748.7	167.9	1,760.2	1,671.8	88.44	19.904	
3,838.6	3,751.8	3,746.8	3,746.8	14.7	75.0	99.94	1,748.7	167.9	1,762.3	1,672.9	89.40	19.713	
3,900.0	3,810.4	3,805.4	3,805.4	15.0	76.2	100.51	1,748.7	167.9	1,765.7	1,674.8	90.92	19.421	
3,937.0	3,845.7	3,840.7	3,840.7	15.3	76.9	100.85	1,748.7	167.9	1,767.9	1,676.1	91.84	19.251	
4,000.0	3,905.7	3,900.7	3,900.7	15.7	78.1	101.43	1,748.7	167.9	1,771.8	1,678.4	93.40	18.970	
4,035.4	3,939.5	3,934.5	3,934.5	15.9	78.8	101.75	1,748.7	167.9	1,774.0	1,679.8	94.27	18.818	
4,100.0	4,001.0	3,996.0	3,996.0	16.3	80.0	102.34	1,748.7	167.9	1,778.3	1,682.4	95.87	18.550	
4,133.8	4,033.3	4,028.3	4,028.3	16.5	80.7	102.65	1,748.7	167.9	1,780.6	1,683.9	96.70	18.414	
4,200.0	4,096.3	4,091.3	4,091.3	16.9	81.9	103.25	1,748.7	167.9	1,785.3	1,687.0	98.33	18.156	
4,232.3	4,127.1	4,122.1	4,122.1	17.1	82.6	103.54	1,748.7	167.9	1,787.7	1,688.5	99.12	18.035	
4,300.0	4,191.7	4,186.7	4,186.7	17.6	83.9	104.15	1,748.7	167.9	1,792.8	1,692.0	100.78	17.788	
4,330.7	4,220.9	4,215.9	4,215.9	17.8	84.4	104.42	1,748.7	167.9	1,795.2	1,693.6	101.54	17.680	
4,400.0	4,287.0	4,282.0	4,282.0	18.2	85.8	105.04	1,748.7	167.9	1,800.8	1,697.5	103.23	17.444	
4,429.1	4,314.7	4,309.7	4,309.7	18.4	86.3	105.30	1,748.7	167.9	1,803.2	1,699.2	103.94	17.348	
4,500.0	4,382.3	4,377.3	4,377.3	18.8	87.7	105.92	1,748.7	167.9	1,809.2	1,703.5	105.67	17.121	
4,527.5	4,408.6	4,403.6	4,403.6	19.0	88.2	106.17	1,748.7	167.9	1,811.6	1,705.3	106.34	17.036	
4,600.0	4,477.6	4,472.6	4,472.6	19.5	89.6	106.80	1,748.7	167.9	1,818.1	1,710.0	108.10	16.818	
4,626.0	4,502.4	4,497.4	4,497.4	19.6	90.1	107.03	1,748.7	167.9	1,820.5	1,711.8	108.73	16.743	
4,700.0	4,572.9	4,567.9	4,567.9	20.1	91.5	107.67	1,748.7	167.9	1,827.5	1,716.9	110.52	16.534	
4,724.4	4,596.2	4,591.2	4,591.2	20.3	92.0	107.88	1,748.7	167.9	1,829.8	1,718.7	111.11	16.468	
4,800.0	4,668.3	4,663.3	4,663.3	20.7	93.4	108.53	1,748.7	167.9	1,837.3	1,724.3	112.94	16.268	
4,822.8	4,690.0	4,685.0	4,685.0	20.9	93.9	108.73	1,748.7	167.9	1,839.6	1,726.1	113.49	16.209	
4,900.0	4,763.6	4,758.6	4,758.6	21.4	95.4	109.38	1,748.7	167.9	1,847.5	1,732.2	115.34	16.018	
4,921.2	4,783.8	4,778.8	4,778.8	21.5	95.8	109.56	1,748.7	167.9	1,849.7	1,733.9	115.85	15.967	
5,000.0	4,858.9	4,853.9	4,853.9	22.0	97.3	110.23	1,748.7	167.9	1,858.2	1,740.5	117.74	15.783	
5,019.7	4,877.7	4,872.7	4,872.7	22.1	97.7	110.39	1,748.7	167.9	1,860.4	1,742.1	118.21	15.738	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,954.2	4,949.2	4,949.2	22.6	99.2	111.06	1,748.7	167.9	1,869.3	1,749.2	120.12	15.562	
5,118.1	4,971.5	4,966.5	4,966.5	22.8	99.5	111.21	1,748.7	167.9	1,871.4	1,750.8	120.55	15.523	
5,171.8	5,022.7	5,017.7	5,017.7	23.1	100.6	111.65	1,748.7	167.9	1,877.6	1,755.7	121.83	15.411	
5,200.0	5,049.6	5,044.6	5,044.6	23.3	101.1	111.94	1,748.7	167.9	1,880.8	1,758.3	122.51	15.352	
5,216.5	5,065.4	5,060.4	5,060.4	23.3	101.4	112.11	1,748.7	167.9	1,882.7	1,759.8	122.90	15.319	
5,300.0	5,145.7	5,140.7	5,140.7	23.7	103.0	112.90	1,748.7	167.9	1,891.7	1,766.8	124.87	15.150	
5,314.9	5,160.1	5,155.1	5,155.1	23.8	103.3	113.03	1,748.7	167.9	1,893.2	1,768.0	125.21	15.120	
5,400.0	5,242.7	5,237.7	5,237.7	24.1	105.0	113.73	1,748.7	167.9	1,901.5	1,774.3	127.21	14.948	
5,413.4	5,255.7	5,250.7	5,250.7	24.2	105.3	113.84	1,748.7	167.9	1,902.8	1,775.3	127.52	14.921	
5,500.0	5,340.5	5,335.5	5,335.5	24.5	107.0	114.45	1,748.7	167.9	1,910.2	1,780.7	129.54	14.746	
5,511.8	5,352.1	5,347.1	5,347.1	24.5	107.2	114.53	1,748.7	167.9	1,911.2	1,781.3	129.81	14.723	
5,600.0	5,439.0	5,434.0	5,434.0	24.8	108.9	115.06	1,748.7	167.9	1,917.6	1,785.8	131.85	14.544	
5,610.2	5,449.1	5,444.1	5,444.1	24.8	109.1	115.11	1,748.7	167.9	1,918.3	1,786.2	132.08	14.524	
5,700.0	5,538.0	5,533.0	5,533.0	25.1	110.9	115.54	1,748.7	167.9	1,923.6	1,789.5	134.12	14.342	
5,708.6	5,546.6	5,541.6	5,541.6	25.1	111.1	115.58	1,748.7	167.9	1,924.1	1,789.8	134.32	14.325	
5,800.0	5,637.4	5,632.4	5,632.4	25.3	112.9	115.90	1,748.7	167.9	1,928.2	1,791.9	136.36	14.140	
5,807.1	5,644.5	5,639.5	5,639.5	25.3	113.1	115.92	1,748.7	167.9	1,928.5	1,792.0	136.52	14.126	
5,900.0	5,737.2	5,732.2	5,732.2	25.5	114.9	116.15	1,748.7	167.9	1,931.3	1,792.7	138.56	13.938	
5,905.5	5,742.6	5,737.6	5,737.6	25.5	115.0	116.16	1,748.7	167.9	1,931.4	1,792.8	138.68	13.927	
6,000.0	5,837.1	5,832.1	5,832.1	25.6	116.9	116.27	1,748.7	167.9	1,932.9	1,792.2	140.71	13.736	
6,003.9	5,841.0	5,836.0	5,836.0	25.6	117.0	116.27	1,748.7	167.9	1,932.9	1,792.1	140.79	13.729	
6,051.8	5,888.9	5,883.9	5,883.9	25.7	118.0	41.16	1,748.7	167.9	1,933.1	1,797.5	135.54	14.262	
6,081.8	5,918.9	5,913.9	5,913.9	25.7	118.6	41.16	1,748.7	167.9	1,933.1	1,796.9	136.19	14.194	
6,100.0	5,937.1	5,932.1	5,932.1	25.7	119.0	-48.86	1,748.7	167.9	1,932.9	1,790.1	142.80	13.536	
6,102.3	5,939.4	5,934.4	5,934.4	25.7	119.0	-48.86	1,748.7	167.9	1,932.9	1,790.1	142.84	13.532	
6,150.0	5,987.0	5,982.0	5,982.0	25.7	120.0	-49.04	1,748.7	167.9	1,931.0	1,787.4	143.58	13.449	
6,200.0	6,036.5	6,031.5	6,031.5	25.7	121.0	-49.45	1,748.7	167.9	1,926.7	1,782.6	144.09	13.372	
6,200.8	6,037.3	6,032.3	6,032.3	25.7	121.0	-49.46	1,748.7	167.9	1,926.6	1,782.5	144.09	13.371	
6,250.0	6,085.5	6,080.5	6,080.5	25.7	121.9	-50.07	1,748.7	167.9	1,920.2	1,775.9	144.34	13.303	
6,299.2	6,133.0	6,128.0	6,128.0	25.6	122.9	-50.90	1,748.7	167.9	1,911.7	1,767.3	144.40	13.239	
6,300.0	6,133.7	6,128.7	6,128.7	25.6	122.9	-50.91	1,748.7	167.9	1,911.5	1,767.1	144.40	13.238	
6,350.0	6,180.9	6,175.9	6,175.9	25.5	123.9	-51.98	1,748.7	167.9	1,900.8	1,756.5	144.31	13.171	
6,397.6	6,224.6	6,219.6	6,219.6	25.4	124.7	-53.21	1,748.7	167.9	1,888.7	1,744.5	144.17	13.101	
6,400.0	6,226.7	6,221.7	6,221.7	25.4	124.8	-53.27	1,748.7	167.9	1,888.1	1,743.9	144.16	13.097	
6,450.0	6,271.1	6,266.1	6,266.1	25.2	125.7	-54.79	1,748.7	167.9	1,873.5	1,729.4	144.03	13.007	
6,496.0	6,310.4	6,305.4	6,305.4	25.1	126.5	-56.38	1,748.7	167.9	1,858.5	1,714.5	144.01	12.905	
6,500.0	6,313.7	6,308.7	6,308.7	25.1	126.5	-56.52	1,748.7	167.9	1,857.1	1,713.1	144.01	12.895	
6,550.0	6,354.4	6,349.4	6,349.4	25.0	127.3	-58.48	1,748.7	167.9	1,839.3	1,695.1	144.20	12.755	
6,594.5	6,388.9	6,383.9	6,383.9	24.9	128.0	-60.38	1,748.7	167.9	1,822.2	1,677.6	144.60	12.602	
6,600.0	6,393.0	6,388.0	6,388.0	24.9	128.1	-60.63	1,748.7	167.9	1,820.0	1,675.4	144.66	12.581	
6,650.0	6,429.3	6,424.3	6,424.3	24.8	128.9	-62.97	1,748.7	167.9	1,799.6	1,654.1	145.44	12.373	
6,692.9	6,458.5	6,453.5	6,453.5	24.7	129.4	-65.11	1,748.7	167.9	1,781.3	1,634.9	146.37	12.170	
6,700.0	6,463.1	6,458.1	6,458.1	24.7	129.5	-65.47	1,748.7	167.9	1,778.2	1,631.6	146.54	12.134	
6,750.0	6,494.3	6,489.3	6,489.3	24.7	130.2	-68.10	1,748.7	167.9	1,756.0	1,608.1	147.93	11.870	
6,791.3	6,517.9	6,512.9	6,512.9	24.7	130.6	-70.34	1,748.7	167.9	1,737.3	1,588.0	149.25	11.640	
6,800.0	6,522.6	6,517.6	6,517.6	24.7	130.7	-70.82	1,748.7	167.9	1,733.3	1,583.8	149.53	11.591	
6,850.0	6,548.0	6,543.0	6,543.0	24.7	131.2	-73.57	1,748.7	167.9	1,710.3	1,559.0	151.25	11.307	
6,889.7	6,566.0	6,561.0	6,561.0	24.8	131.6	-75.75	1,748.7	167.9	1,692.0	1,539.3	152.64	11.085	
6,900.0	6,570.4	6,565.4	6,565.4	24.9	131.7	-76.31	1,748.7	167.9	1,687.2	1,534.3	152.98	11.029	
6,950.0	6,589.5	6,584.5	6,584.5	25.1	132.1	-78.99	1,748.7	167.9	1,664.4	1,509.7	154.61	10.765	
6,988.2	6,602.0	6,597.0	6,597.0	25.3	132.3	-80.95	1,748.7	167.9	1,647.2	1,491.4	155.75	10.575	
7,000.0	6,605.4	6,600.4	6,600.4	25.3	132.4	-81.54	1,748.7	167.9	1,641.9	1,485.8	156.08	10.520	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,050.0	6,618.0	6,613.0	6,613.0	25.6	132.6	-83.94	1,748.7	167.9	1,620.1	1,462.7	157.32	10.298	
7,086.6	6,625.0	6,620.0	6,620.0	25.9	132.8	-85.57	1,748.7	167.9	1,604.6	1,446.5	158.09	10.150	
7,100.0	6,627.1	6,622.1	6,622.1	26.0	132.8	-86.13	1,748.7	167.9	1,599.1	1,440.8	158.33	10.100	
7,150.0	6,632.8	6,627.8	6,627.8	26.5	132.9	-88.09	1,748.7	167.9	1,579.2	1,420.0	159.13	9.923	
7,185.0	6,634.7	6,629.7	6,629.7	26.8	133.0	-89.31	1,748.7	167.9	1,565.9	1,406.3	159.59	9.812	
7,200.0	6,635.0	6,630.0	6,630.0	27.0	133.0	-89.79	1,748.7	167.9	1,560.5	1,400.7	159.76	9.768	
7,215.9	6,635.0	6,630.0	6,630.0	27.1	133.0	-90.27	1,748.7	167.9	1,554.8	1,394.9	159.93	9.722	
7,283.4	6,634.1	6,629.1	6,629.1	27.9	133.0	-90.24	1,748.7	167.9	1,532.3	1,371.6	160.74	9.533	
7,300.0	6,633.9	6,628.9	6,628.9	28.1	133.0	-90.23	1,748.7	167.9	1,527.2	1,366.3	160.94	9.489	
7,381.9	6,632.9	6,627.9	6,627.9	29.3	132.9	-90.19	1,748.7	167.9	1,504.5	1,342.4	162.10	9.281	
7,400.0	6,632.6	6,627.6	6,627.6	29.5	132.9	-90.18	1,748.7	167.9	1,500.0	1,337.6	162.35	9.239	
7,480.3	6,631.6	6,626.6	6,626.6	30.8	132.9	-90.14	1,748.7	167.9	1,482.6	1,319.0	163.64	9.060	
7,500.0	6,631.4	6,626.4	6,626.4	31.1	132.9	-90.13	1,748.7	167.9	1,479.0	1,315.0	163.95	9.021	
7,578.7	6,630.4	6,625.4	6,625.4	32.5	132.9	-90.09	1,748.7	167.9	1,467.0	1,301.7	165.34	8.873	
7,600.0	6,630.1	6,625.1	6,625.1	32.9	132.9	-90.08	1,748.7	167.9	1,464.5	1,298.8	165.71	8.838	
7,677.1	6,629.1	6,624.1	6,624.1	34.3	132.9	-90.04	1,748.7	167.9	1,457.9	1,290.8	167.17	8.721	
7,700.0	6,628.8	6,623.8	6,623.8	34.8	132.9	-90.03	1,748.7	167.9	1,456.8	1,289.2	167.61	8.692	
7,762.9	6,628.0	6,623.0	6,623.0	36.0	132.9	-90.00	1,748.7	167.9	1,455.4	1,286.5	168.87	8.618 CC	
7,775.6	6,627.8	6,622.8	6,622.8	36.3	132.8	-89.99	1,748.7	167.9	1,455.5	1,286.3	169.13	8.606	
7,800.0	6,627.5	6,622.5	6,622.5	36.8	132.8	-89.98	1,748.7	167.9	1,455.9	1,286.3	169.62	8.583 ES	
7,874.0	6,626.6	6,621.6	6,621.6	38.4	132.8	-89.94	1,748.7	167.9	1,459.7	1,288.5	171.18	8.527	
7,900.0	6,626.3	6,621.3	6,621.3	38.9	132.8	-89.93	1,748.7	167.9	1,461.9	1,290.1	171.72	8.513	
7,972.4	6,625.3	6,620.3	6,620.3	40.5	132.8	-89.89	1,748.7	167.9	1,470.4	1,297.1	173.31	8.484	
8,000.0	6,625.0	6,620.0	6,620.0	41.1	132.8	-89.88	1,748.7	167.9	1,474.6	1,300.7	173.91	8.479	
8,070.8	6,624.1	6,619.1	6,619.1	42.7	132.8	-89.84	1,748.7	167.9	1,487.6	1,312.1	175.51	8.476 SF	
8,100.0	6,623.7	6,618.7	6,618.7	43.4	132.8	-89.83	1,748.7	167.9	1,493.9	1,317.8	176.17	8.480	
8,169.3	6,622.8	6,617.8	6,617.8	45.0	132.7	-89.80	1,748.7	167.9	1,511.1	1,333.3	177.77	8.500	
8,200.0	6,622.4	6,617.4	6,617.4	45.7	132.7	-89.78	1,748.7	167.9	1,519.6	1,341.1	178.49	8.514	
8,267.7	6,621.6	6,616.6	6,616.6	47.4	132.7	-89.75	1,748.7	167.9	1,540.5	1,360.4	180.09	8.554	
8,300.0	6,621.1	6,616.1	6,616.1	48.1	132.7	-89.73	1,748.7	167.9	1,551.4	1,370.5	180.85	8.578	
8,366.1	6,620.3	6,615.3	6,615.3	49.7	132.7	-89.70	1,748.7	167.9	1,575.5	1,393.0	182.44	8.635	
8,400.0	6,619.9	6,614.9	6,614.9	50.6	132.7	-89.68	1,748.7	167.9	1,588.7	1,405.5	183.26	8.669	
8,464.5	6,619.0	6,614.0	6,614.0	52.2	132.7	-89.65	1,748.7	167.9	1,615.7	1,430.9	184.84	8.741	
8,500.0	6,618.6	6,613.6	6,613.6	53.0	132.7	-89.63	1,748.7	167.9	1,631.4	1,445.7	185.71	8.785	
8,563.0	6,617.8	6,612.8	6,612.8	54.6	132.6	-89.60	1,748.7	167.9	1,660.8	1,473.5	187.27	8.869	
8,600.0	6,617.3	6,612.3	6,612.3	55.5	132.6	-89.58	1,748.7	167.9	1,679.0	1,490.8	188.18	8.922	
8,661.4	6,616.5	6,611.5	6,611.5	57.1	132.6	-89.55	1,748.7	167.9	1,710.4	1,520.7	189.72	9.015	
8,700.0	6,616.0	6,611.0	6,611.0	58.1	132.6	-89.53	1,748.7	167.9	1,731.0	1,540.3	190.69	9.077	
8,759.8	6,615.2	6,610.2	6,610.2	59.6	132.6	-89.50	1,748.7	167.9	1,764.1	1,571.9	192.20	9.178	
8,800.0	6,614.7	6,609.7	6,609.7	60.6	132.6	-89.48	1,748.7	167.9	1,787.1	1,593.9	193.22	9.249	
8,858.2	6,614.0	6,609.0	6,609.0	62.1	132.6	-89.45	1,748.7	167.9	1,821.5	1,626.8	194.71	9.355	
8,900.0	6,613.4	6,608.4	6,608.4	63.2	132.6	-89.43	1,748.7	167.9	1,846.9	1,651.1	195.77	9.434	
8,956.7	6,612.7	6,607.7	6,607.7	64.7	132.5	-89.40	1,748.7	167.9	1,882.3	1,685.1	197.23	9.544	
9,000.0	6,612.2	6,607.2	6,607.2	65.8	132.5	-89.37	1,748.7	167.9	1,910.1	1,711.8	198.34	9.630	
9,055.1	6,611.5	6,606.5	6,606.5	67.3	132.5	-89.35	1,748.7	167.9	1,946.2	1,746.5	199.77	9.742	
9,100.0	6,610.9	6,605.9	6,605.9	68.4	132.5	-89.32	1,748.7	167.9	1,976.3	1,775.4	200.93	9.836	
9,153.5	6,610.2	6,605.2	6,605.2	69.8	132.5	-89.30	1,748.7	167.9	2,012.9	1,810.6	202.32	9.949	
9,200.0	6,609.6	6,604.6	6,604.6	71.1	132.5	-89.27	1,748.7	167.9	2,045.3	1,841.8	203.53	10.049	
9,251.9	6,608.9	6,603.9	6,603.9	72.4	132.5	-89.25	1,748.7	167.9	2,082.1	1,877.2	204.89	10.162	
9,300.0	6,608.3	6,603.3	6,603.3	73.7	132.5	-89.22	1,748.7	167.9	2,116.7	1,910.6	206.15	10.268	
9,350.4	6,607.7	6,602.7	6,602.7	75.0	132.4	-89.20	1,748.7	167.9	2,153.6	1,946.1	207.47	10.380	
9,400.0	6,607.0	6,602.0	6,602.0	76.4	132.4	-89.17	1,748.7	167.9	2,190.4	1,981.7	208.77	10.492	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,606.4	6,601.4	6,601.4	77.7	132.4	-89.15	1,748.7	167.9	2,227.1	2,017.1	210.06	10.602	
9,500.0	6,605.7	6,600.7	6,600.7	79.0	132.4	-89.12	1,748.7	167.9	2,266.1	2,054.7	211.41	10.719	
9,547.2	6,605.1	6,600.1	6,600.1	80.3	132.4	-89.10	1,748.7	167.9	2,302.5	2,089.9	212.66	10.827	
9,600.0	6,604.5	6,599.5	6,599.5	81.7	132.4	-89.07	1,748.7	167.9	2,343.7	2,129.6	214.06	10.949	
9,645.6	6,603.9	6,598.9	6,598.9	82.9	132.4	-89.05	1,748.7	167.9	2,379.6	2,164.3	215.27	11.054	
9,700.0	6,603.2	6,598.2	6,598.2	84.4	132.4	-89.02	1,748.7	167.9	2,422.8	2,206.1	216.71	11.180	
9,744.1	6,602.6	6,597.6	6,597.6	85.6	132.3	-89.00	1,748.7	167.9	2,458.2	2,240.3	217.89	11.282	
9,800.0	6,601.9	6,596.9	6,596.9	87.1	132.3	-88.97	1,748.7	167.9	2,503.5	2,284.1	219.38	11.412	
9,842.5	6,601.3	6,596.3	6,596.3	88.2	132.3	-88.95	1,748.7	167.9	2,538.2	2,317.7	220.51	11.510	
9,900.0	6,600.6	6,595.6	6,595.6	89.8	132.3	-88.92	1,748.7	167.9	2,585.5	2,363.4	222.05	11.644	
9,940.9	6,600.1	6,595.1	6,595.1	90.9	132.3	-88.90	1,748.7	167.9	2,619.4	2,396.3	223.14	11.739	
10,000.0	6,599.3	6,594.3	6,594.3	92.5	132.3	-88.87	1,748.7	167.9	2,668.7	2,444.0	224.72	11.876	
10,039.3	6,598.8	6,593.8	6,593.8	93.5	132.3	-88.85	1,748.7	167.9	2,701.8	2,476.0	225.78	11.967	
10,100.0	6,598.0	6,593.0	6,593.0	95.2	132.2	-88.82	1,748.7	167.9	2,753.1	2,525.7	227.41	12.107	
10,137.8	6,597.5	6,592.5	6,592.5	96.2	132.2	-88.80	1,748.7	167.9	2,785.2	2,556.8	228.42	12.193	
10,200.0	6,596.7	6,591.7	6,591.7	97.9	132.2	-88.76	1,748.7	167.9	2,838.5	2,608.4	230.09	12.336	
10,236.2	6,596.3	6,591.3	6,591.3	98.9	132.2	-88.75	1,748.7	167.9	2,869.6	2,638.5	231.07	12.419	
10,300.0	6,595.4	6,590.4	6,590.4	100.6	132.2	-88.71	1,748.7	167.9	2,924.7	2,692.0	232.79	12.564	
10,334.6	6,595.0	6,590.0	6,590.0	101.6	132.2	-88.70	1,748.7	167.9	2,954.8	2,721.1	233.72	12.643	
10,400.0	6,594.2	6,589.2	6,589.2	103.4	132.2	-88.66	1,748.7	167.9	3,011.9	2,776.4	235.48	12.790	
10,433.0	6,593.7	6,588.7	6,588.7	104.3	132.2	-88.65	1,748.7	167.9	3,040.9	2,804.5	236.37	12.865	
10,500.0	6,592.9	6,587.9	6,587.9	106.1	132.1	-88.61	1,748.7	167.9	3,099.8	2,861.6	238.18	13.014	
10,531.5	6,592.5	6,587.5	6,587.5	106.9	132.1	-88.60	1,748.7	167.9	3,127.6	2,888.6	239.03	13.084	
10,600.0	6,591.6	6,586.6	6,586.6	108.8	132.1	-88.56	1,748.7	167.9	3,188.4	2,947.6	240.89	13.236	
10,629.9	6,591.2	6,586.2	6,586.2	109.6	132.1	-88.54	1,748.7	167.9	3,215.1	2,973.4	241.70	13.302	
10,700.0	6,590.3	6,585.3	6,585.3	111.6	132.1	-88.51	1,748.7	167.9	3,277.7	3,034.1	243.60	13.456	
10,728.3	6,589.9	6,584.9	6,584.9	112.3	132.1	-88.49	1,748.7	167.9	3,303.1	3,058.8	244.36	13.517	
10,800.0	6,589.0	6,584.0	6,584.0	114.3	132.1	-88.46	1,748.7	167.9	3,367.6	3,121.3	246.31	13.672	
10,826.7	6,588.7	6,583.7	6,583.7	115.0	132.1	-88.44	1,748.7	167.9	3,391.8	3,144.7	247.03	13.730	
10,900.0	6,587.7	6,582.7	6,582.7	117.1	132.0	-88.41	1,748.7	167.9	3,458.1	3,209.0	249.02	13.887	
10,925.2	6,587.4	6,582.4	6,582.4	117.7	132.0	-88.39	1,748.7	167.9	3,480.9	3,231.2	249.71	13.940	
11,000.0	6,586.4	6,581.4	6,581.4	119.8	132.0	-88.35	1,748.7	167.9	3,549.0	3,297.3	251.74	14.098	
11,023.6	6,586.1	6,581.1	6,581.1	120.4	132.0	-88.34	1,748.7	167.9	3,570.5	3,318.2	252.38	14.147	
11,100.0	6,585.1	6,580.1	6,580.1	122.6	132.0	-88.30	1,748.7	167.9	3,640.4	3,386.0	254.46	14.307	
11,122.0	6,584.8	6,579.8	6,579.8	123.2	132.0	-88.29	1,748.7	167.9	3,660.6	3,405.6	255.06	14.352	
11,200.0	6,583.8	6,578.8	6,578.8	125.3	132.0	-88.25	1,748.7	167.9	3,732.3	3,475.1	257.18	14.512	
11,220.4	6,583.6	6,578.6	6,578.6	125.9	132.0	-88.24	1,748.7	167.9	3,751.1	3,493.4	257.74	14.554	
11,300.0	6,582.5	6,577.5	6,577.5	128.1	131.9	-88.20	1,748.7	167.9	3,824.6	3,564.7	259.90	14.715	
11,318.9	6,582.3	6,577.3	6,577.3	128.6	131.9	-88.19	1,748.7	167.9	3,842.0	3,581.6	260.42	14.753	
11,400.0	6,581.2	6,576.2	6,576.2	130.8	131.9	-88.15	1,748.7	167.9	3,917.2	3,654.6	262.63	14.915	
11,417.3	6,581.0	6,576.0	6,576.0	131.3	131.9	-88.14	1,748.7	167.9	3,933.3	3,670.2	263.10	14.950	
11,500.0	6,580.0	6,575.0	6,575.0	133.6	131.9	-88.10	1,748.7	167.9	4,010.2	3,744.9	265.36	15.113	
11,515.7	6,579.7	6,574.7	6,574.7	134.0	131.9	-88.09	1,748.7	167.9	4,024.9	3,759.1	265.79	15.143	
11,600.0	6,578.7	6,573.7	6,573.7	136.3	131.9	-88.05	1,748.7	167.9	4,103.6	3,835.5	268.08	15.307	
11,614.1	6,578.5	6,573.5	6,573.5	136.7	131.9	-88.04	1,748.7	167.9	4,116.8	3,848.3	268.47	15.334	
11,700.0	6,577.4	6,572.4	6,572.4	139.1	131.8	-88.00	1,748.7	167.9	4,197.2	3,926.4	270.82	15.498	
11,712.6	6,577.2	6,572.2	6,572.2	139.5	131.8	-87.99	1,748.7	167.9	4,209.0	3,937.8	271.16	15.522	
11,800.0	6,576.1	6,571.1	6,571.1	141.9	131.8	-87.94	1,748.7	167.9	4,291.1	4,017.6	273.55	15.687	
11,811.0	6,575.9	6,570.9	6,570.9	142.2	131.8	-87.94	1,748.7	167.9	4,301.5	4,027.6	273.85	15.708	
11,882.7	6,575.0	6,570.0	6,570.0	144.2	131.8	-87.90	1,748.7	167.9	4,369.0	4,093.2	275.81	15.841	
11,883.5	6,575.0	6,570.0	6,570.0	144.2	131.8	-87.90	1,748.7	167.9	4,369.8	4,093.9	275.82	15.843	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-53.75	1,602.0	-2,184.6	2,709.1				
98.4	98.4	94.4	94.4	0.1	0.0	-53.75	1,602.0	-2,184.6	2,709.1	2,709.0	0.10	N/A	
100.0	100.0	96.0	96.0	0.1	0.0	-53.75	1,602.0	-2,184.6	2,709.1	2,709.0	0.10	N/A	
196.8	196.8	192.8	192.8	0.3	1.0	-53.75	1,602.0	-2,184.6	2,709.1	2,707.8	1.30	2,076.882	
200.0	200.0	196.0	196.0	0.3	1.0	-53.75	1,602.0	-2,184.6	2,709.1	2,707.7	1.35	2,014.144	
295.3	295.3	291.3	291.3	0.5	3.2	-53.75	1,602.0	-2,184.6	2,709.1	2,705.3	3.72	728.352	
300.0	300.0	296.0	296.0	0.5	3.3	-53.75	1,602.0	-2,184.6	2,709.1	2,705.2	3.84	705.542	
393.7	393.7	389.7	389.7	0.8	5.3	-53.75	1,602.0	-2,184.6	2,709.1	2,703.1	6.01	450.820	
400.0	400.0	396.0	396.0	0.8	5.4	-53.75	1,602.0	-2,184.6	2,709.1	2,702.9	6.15	440.182	
492.1	492.1	488.1	488.1	1.0	7.3	-53.75	1,602.0	-2,184.6	2,709.1	2,700.8	8.24	328.580	
500.0	500.0	496.0	496.0	1.0	7.4	-53.75	1,602.0	-2,184.6	2,709.1	2,700.6	8.42	321.615	
590.5	590.5	586.5	586.5	1.2	9.3	-53.75	1,602.0	-2,184.6	2,709.1	2,698.6	10.46	258.874	
600.0	600.0	596.0	596.0	1.2	9.5	-53.75	1,602.0	-2,184.6	2,709.1	2,698.4	10.68	253.710	
689.0	689.0	685.0	685.0	1.4	11.3	-53.75	1,602.0	-2,184.6	2,709.1	2,696.4	12.68	213.686	
700.0	700.0	696.0	696.0	1.4	11.5	-53.75	1,602.0	-2,184.6	2,709.1	2,696.1	12.93	209.589	
787.4	787.4	783.4	783.4	1.6	13.2	-53.75	1,602.0	-2,184.6	2,709.1	2,694.2	14.89	181.975	
800.0	800.0	796.0	796.0	1.7	13.5	-53.75	1,602.0	-2,184.6	2,709.1	2,693.9	15.17	178.583	
885.8	885.8	881.8	881.8	1.9	15.2	-53.75	1,602.0	-2,184.6	2,709.1	2,692.0	17.09	158.481	
900.0	900.0	896.0	896.0	1.9	15.5	-53.75	1,602.0	-2,184.6	2,709.1	2,691.7	17.41	155.588	
984.2	984.2	980.2	980.2	2.1	17.2	-53.75	1,602.0	-2,184.6	2,709.1	2,689.8	19.30	140.370	
1,000.0	1,000.0	996.0	996.0	2.1	17.5	-53.75	1,602.0	-2,184.6	2,709.1	2,689.4	19.65	137.850	
1,082.7	1,082.7	1,078.7	1,078.7	2.3	19.2	-53.75	1,602.0	-2,184.6	2,709.1	2,687.6	21.50	125.981	
1,100.0	1,100.0	1,096.0	1,096.0	2.3	19.5	-53.75	1,602.0	-2,184.6	2,709.1	2,687.2	21.89	123.748	
1,181.1	1,181.1	1,177.1	1,177.1	2.5	21.2	-53.75	1,602.0	-2,184.6	2,709.1	2,685.4	23.71	114.270	
1,200.0	1,200.0	1,196.0	1,196.0	2.6	21.6	-53.75	1,602.0	-2,184.6	2,709.1	2,684.9	24.13	112.267	
1,279.5	1,279.5	1,275.5	1,275.5	2.7	23.2	-53.75	1,602.0	-2,184.6	2,709.1	2,683.2	25.91	104.554	
1,300.0	1,300.0	1,296.0	1,296.0	2.8	23.6	-53.75	1,602.0	-2,184.6	2,709.1	2,682.7	26.37	102.737	
1,377.9	1,377.9	1,373.9	1,373.9	3.0	25.1	-53.75	1,602.0	-2,184.6	2,709.1	2,681.0	28.11	96.362	
1,400.0	1,400.0	1,396.0	1,396.0	3.0	25.6	-53.75	1,602.0	-2,184.6	2,709.1	2,680.5	28.61	94.700	
1,476.4	1,476.4	1,472.4	1,472.4	3.2	27.1	21.39	1,602.0	-2,184.6	2,708.1	2,677.8	30.30	89.380	
1,500.0	1,500.0	1,496.0	1,496.0	3.2	27.6	21.40	1,602.0	-2,184.6	2,707.4	2,676.6	30.82	87.853	
1,574.8	1,574.7	1,570.7	1,570.7	3.4	29.1	21.46	1,602.0	-2,184.6	2,704.1	2,671.7	32.44	83.353	
1,600.0	1,599.8	1,595.8	1,595.8	3.4	29.6	21.48	1,602.0	-2,184.6	2,702.6	2,669.6	32.98	81.938	
1,673.2	1,672.8	1,668.8	1,668.8	3.6	31.1	21.57	1,602.0	-2,184.6	2,696.9	2,662.4	34.54	78.077	
1,700.0	1,699.5	1,695.5	1,695.5	3.7	31.6	21.61	1,602.0	-2,184.6	2,694.5	2,659.4	35.10	76.755	
1,771.6	1,770.6	1,766.6	1,766.6	3.8	33.0	21.73	1,602.0	-2,184.6	2,686.7	2,650.1	36.60	73.415	
1,800.0	1,798.7	1,794.7	1,794.7	3.9	33.6	21.79	1,602.0	-2,184.6	2,683.1	2,645.9	37.18	72.173	
1,870.1	1,868.0	1,864.0	1,864.0	4.1	35.0	21.95	1,602.0	-2,184.6	2,673.3	2,634.7	38.60	69.262	
1,900.0	1,897.5	1,893.5	1,893.5	4.2	35.6	22.02	1,602.0	-2,184.6	2,668.6	2,629.4	39.19	68.090	
1,968.5	1,964.8	1,960.8	1,960.8	4.4	37.0	22.22	1,602.0	-2,184.6	2,656.8	2,616.3	40.54	65.534	
2,000.0	1,995.6	1,991.6	1,991.6	4.5	37.6	22.31	1,602.0	-2,184.6	2,650.9	2,609.7	41.15	64.422	
2,066.9	2,060.9	2,056.9	2,056.9	4.7	38.9	22.54	1,602.0	-2,184.6	2,637.3	2,594.8	42.43	62.162	
2,100.0	2,093.1	2,089.1	2,089.1	4.8	39.5	22.66	1,602.0	-2,184.6	2,630.0	2,587.0	43.04	61.104	
2,165.3	2,156.3	2,152.3	2,152.3	5.1	40.8	22.92	1,602.0	-2,184.6	2,614.7	2,570.4	44.25	59.094	
2,200.0	2,189.6	2,185.6	2,185.6	5.2	41.5	23.07	1,602.0	-2,184.6	2,606.0	2,561.2	44.87	58.079	
2,263.8	2,250.7	2,246.7	2,246.7	5.5	42.7	23.37	1,602.0	-2,184.6	2,589.2	2,543.1	46.00	56.280	
2,280.0	2,266.2	2,262.2	2,262.2	5.6	43.0	23.45	1,602.0	-2,184.6	2,584.7	2,538.4	46.29	55.839	
2,300.0	2,285.3	2,281.3	2,281.3	5.7	43.4	23.50	1,602.0	-2,184.6	2,579.1	2,532.4	46.72	55.207	
2,362.2	2,344.6	2,340.6	2,340.6	6.0	44.6	23.67	1,602.0	-2,184.6	2,561.7	2,513.7	48.05	53.311	
2,400.0	2,380.6	2,376.6	2,376.6	6.2	45.3	23.77	1,602.0	-2,184.6	2,551.2	2,502.3	48.87	52.201	
2,460.6	2,438.4	2,434.4	2,434.4	6.5	46.5	23.94	1,602.0	-2,184.6	2,534.3	2,484.1	50.19	50.497	
2,500.0	2,475.9	2,471.9	2,471.9	6.7	47.2	24.05	1,602.0	-2,184.6	2,523.3	2,472.3	51.04	49.436	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,528.2	2,528.2	7.0	48.4	24.21	1,602.0	-2,184.6	2,506.9	2,454.6	52.33	47.905	
2,600.0	2,571.2	2,567.2	2,567.2	7.2	49.2	24.33	1,602.0	-2,184.6	2,495.5	2,442.3	53.22	46.887	
2,657.5	2,626.0	2,622.0	2,622.0	7.5	50.3	24.49	1,602.0	-2,184.6	2,479.6	2,425.1	54.48	45.509	
2,700.0	2,666.6	2,662.6	2,662.6	7.8	51.1	24.61	1,602.0	-2,184.6	2,467.8	2,412.4	55.42	44.530	
2,755.9	2,719.8	2,715.8	2,715.8	8.1	52.1	24.78	1,602.0	-2,184.6	2,452.3	2,395.6	56.65	43.289	
2,800.0	2,761.9	2,757.9	2,757.9	8.3	53.0	24.91	1,602.0	-2,184.6	2,440.1	2,382.5	57.62	42.346	
2,854.3	2,813.7	2,809.7	2,809.7	8.7	54.0	25.07	1,602.0	-2,184.6	2,425.1	2,366.3	58.83	41.225	
2,900.0	2,857.2	2,853.2	2,853.2	8.9	54.9	25.21	1,602.0	-2,184.6	2,412.5	2,352.6	59.84	40.317	
2,952.7	2,907.5	2,903.5	2,903.5	9.2	55.9	25.37	1,602.0	-2,184.6	2,397.9	2,336.9	61.01	39.304	
3,000.0	2,952.5	2,948.5	2,948.5	9.5	56.8	25.51	1,602.0	-2,184.6	2,384.9	2,322.9	62.06	38.429	
3,051.2	3,001.3	2,997.3	2,997.3	9.8	57.8	25.67	1,602.0	-2,184.6	2,370.8	2,307.6	63.20	37.512	
3,100.0	3,047.8	3,043.8	3,043.8	10.1	58.7	25.83	1,602.0	-2,184.6	2,357.4	2,293.1	64.29	36.667	
3,149.6	3,095.1	3,091.1	3,091.1	10.4	59.7	25.98	1,602.0	-2,184.6	2,343.8	2,278.4	65.40	35.836	
3,200.0	3,143.2	3,139.2	3,139.2	10.7	60.7	26.15	1,602.0	-2,184.6	2,330.0	2,263.5	66.54	35.019	
3,248.0	3,188.9	3,184.9	3,184.9	11.0	61.6	26.30	1,602.0	-2,184.6	2,316.9	2,249.2	67.61	34.265	
3,300.0	3,238.5	3,234.5	3,234.5	11.3	62.6	26.48	1,602.0	-2,184.6	2,302.7	2,233.9	68.79	33.476	
3,346.4	3,282.8	3,278.8	3,278.8	11.6	63.5	26.63	1,602.0	-2,184.6	2,290.0	2,220.1	69.83	32.792	
3,400.0	3,333.8	3,329.8	3,329.8	11.9	64.5	26.81	1,602.0	-2,184.6	2,275.4	2,204.3	71.04	32.028	
3,444.9	3,376.6	3,372.6	3,372.6	12.2	65.4	26.97	1,602.0	-2,184.6	2,263.2	2,191.1	72.06	31.407	
3,500.0	3,429.1	3,425.1	3,425.1	12.6	66.4	27.16	1,602.0	-2,184.6	2,248.2	2,174.9	73.31	30.667	
3,543.3	3,470.4	3,466.4	3,466.4	12.8	67.2	27.31	1,602.0	-2,184.6	2,236.4	2,162.1	74.29	30.102	
3,600.0	3,524.4	3,520.4	3,520.4	13.2	68.3	27.51	1,602.0	-2,184.6	2,221.0	2,145.5	75.58	29.385	
3,641.7	3,564.2	3,560.2	3,560.2	13.4	69.1	27.66	1,602.0	-2,184.6	2,209.8	2,133.2	76.54	28.872	
3,700.0	3,619.8	3,615.8	3,615.8	13.8	70.2	27.87	1,602.0	-2,184.6	2,194.0	2,116.1	77.87	28.176	
3,740.1	3,658.0	3,654.0	3,654.0	14.0	71.0	28.02	1,602.0	-2,184.6	2,183.2	2,104.4	78.79	27.710	
3,800.0	3,715.1	3,711.1	3,711.1	14.4	72.2	28.24	1,602.0	-2,184.6	2,167.0	2,086.9	80.16	27.034	
3,838.6	3,751.8	3,747.8	3,747.8	14.7	72.9	28.39	1,602.0	-2,184.6	2,156.7	2,075.6	81.05	26.611	
3,900.0	3,810.4	3,806.4	3,806.4	15.0	74.1	28.62	1,602.0	-2,184.6	2,140.2	2,057.7	82.46	25.955	
3,937.0	3,845.7	3,841.7	3,841.7	15.3	74.8	28.76	1,602.0	-2,184.6	2,130.3	2,046.9	83.31	25.570	
4,000.0	3,905.7	3,901.7	3,901.7	15.7	76.0	29.01	1,602.0	-2,184.6	2,113.4	2,028.6	84.77	24.932	
4,035.4	3,939.5	3,935.5	3,935.5	15.9	76.7	29.15	1,602.0	-2,184.6	2,103.9	2,018.3	85.59	24.582	
4,100.0	4,001.0	3,997.0	3,997.0	16.3	77.9	29.41	1,602.0	-2,184.6	2,086.7	1,999.6	87.08	23.962	
4,133.8	4,033.3	4,029.3	4,029.3	16.5	78.6	29.54	1,602.0	-2,184.6	2,077.7	1,989.8	87.87	23.645	
4,200.0	4,096.3	4,092.3	4,092.3	16.9	79.8	29.81	1,602.0	-2,184.6	2,060.1	1,970.7	89.41	23.041	
4,232.3	4,127.1	4,123.1	4,123.1	17.1	80.4	29.95	1,602.0	-2,184.6	2,051.6	1,961.4	90.16	22.754	
4,300.0	4,191.7	4,187.7	4,187.7	17.6	81.7	30.23	1,602.0	-2,184.6	2,033.6	1,941.9	91.74	22.166	
4,330.7	4,220.9	4,216.9	4,216.9	17.8	82.3	30.36	1,602.0	-2,184.6	2,025.5	1,933.1	92.46	21.906	
4,400.0	4,287.0	4,283.0	4,283.0	18.2	83.7	30.66	1,602.0	-2,184.6	2,007.3	1,913.2	94.09	21.334	
4,429.1	4,314.7	4,310.7	4,310.7	18.4	84.2	30.79	1,602.0	-2,184.6	1,999.6	1,904.8	94.77	21.099	
4,500.0	4,382.3	4,378.3	4,378.3	18.8	85.6	31.10	1,602.0	-2,184.6	1,981.0	1,884.5	96.44	20.541	
4,527.5	4,408.6	4,404.6	4,404.6	19.0	86.1	31.23	1,602.0	-2,184.6	1,973.8	1,876.7	97.09	20.329	
4,600.0	4,477.6	4,473.6	4,473.6	19.5	87.5	31.55	1,602.0	-2,184.6	1,954.8	1,856.0	98.81	19.784	
4,626.0	4,502.4	4,498.4	4,498.4	19.6	88.0	31.67	1,602.0	-2,184.6	1,948.1	1,848.6	99.42	19.594	
4,700.0	4,572.9	4,568.9	4,568.9	20.1	89.4	32.02	1,602.0	-2,184.6	1,928.8	1,827.6	101.18	19.063	
4,724.4	4,596.2	4,592.2	4,592.2	20.3	89.9	32.13	1,602.0	-2,184.6	1,922.5	1,820.7	101.76	18.892	
4,800.0	4,668.3	4,664.3	4,664.3	20.7	91.3	32.50	1,602.0	-2,184.6	1,902.9	1,799.3	103.57	18.374	
4,822.8	4,690.0	4,686.0	4,686.0	20.9	91.8	32.61	1,602.0	-2,184.6	1,897.0	1,792.9	104.11	18.221	
4,900.0	4,763.6	4,759.6	4,759.6	21.4	93.2	32.98	1,602.0	-2,184.6	1,877.1	1,771.1	105.96	17.715	
4,921.2	4,783.8	4,779.8	4,779.8	21.5	93.7	33.09	1,602.0	-2,184.6	1,871.6	1,765.2	106.47	17.579	
5,000.0	4,858.9	4,854.9	4,854.9	22.0	95.2	33.49	1,602.0	-2,184.6	1,851.5	1,743.1	108.37	17.085	
5,019.7	4,877.7	4,873.7	4,873.7	22.1	95.5	33.59	1,602.0	-2,184.6	1,846.4	1,737.6	108.84	16.964	
5,100.0	4,954.2	4,950.2	4,950.2	22.6	97.1	34.00	1,602.0	-2,184.6	1,825.9	1,715.2	110.79	16.482	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,967.5	4,967.5	22.8	97.4	34.10	1,602.0	-2,184.6	1,821.3	1,710.1	111.22	16.375		
5,171.8	5,022.7	5,018.7	5,018.7	23.1	98.5	34.38	1,602.0	-2,184.6	1,807.7	1,695.2	112.53	16.065		
5,200.0	5,049.6	5,045.6	5,045.6	23.3	99.0	34.45	1,602.0	-2,184.6	1,800.7	1,687.3	113.38	15.882		
5,216.5	5,065.4	5,061.4	5,061.4	23.3	99.3	34.49	1,602.0	-2,184.6	1,796.7	1,682.8	113.86	15.779		
5,300.0	5,145.7	5,141.7	5,141.7	23.7	100.9	34.68	1,602.0	-2,184.6	1,777.7	1,661.4	116.29	15.286		
5,314.9	5,160.1	5,156.1	5,156.1	23.8	101.2	34.71	1,602.0	-2,184.6	1,774.5	1,657.8	116.72	15.203		
5,400.0	5,242.7	5,238.7	5,238.7	24.1	102.9	34.88	1,602.0	-2,184.6	1,757.6	1,638.4	119.13	14.753		
5,413.4	5,255.7	5,251.7	5,251.7	24.2	103.1	34.91	1,602.0	-2,184.6	1,755.1	1,635.6	119.50	14.687		
5,500.0	5,340.5	5,336.5	5,336.5	24.5	104.8	35.07	1,602.0	-2,184.6	1,740.3	1,618.5	121.88	14.279		
5,511.8	5,352.1	5,348.1	5,348.1	24.5	105.1	35.09	1,602.0	-2,184.6	1,738.5	1,616.3	122.20	14.227		
5,600.0	5,439.0	5,435.0	5,435.0	24.8	106.8	35.24	1,602.0	-2,184.6	1,726.0	1,601.5	124.54	13.859		
5,610.2	5,449.1	5,445.1	5,445.1	24.8	107.0	35.25	1,602.0	-2,184.6	1,724.7	1,599.9	124.80	13.820		
5,700.0	5,538.0	5,534.0	5,534.0	25.1	108.8	35.37	1,602.0	-2,184.6	1,714.6	1,587.5	127.09	13.491		
5,708.6	5,546.6	5,542.6	5,542.6	25.1	109.0	35.38	1,602.0	-2,184.6	1,713.7	1,586.4	127.31	13.461		
5,800.0	5,637.4	5,633.4	5,633.4	25.3	110.8	35.48	1,602.0	-2,184.6	1,706.0	1,576.5	129.54	13.170		
5,807.1	5,644.5	5,640.5	5,640.5	25.3	111.0	35.48	1,602.0	-2,184.6	1,705.5	1,575.8	129.71	13.149		
5,900.0	5,737.2	5,733.2	5,733.2	25.5	112.8	35.55	1,602.0	-2,184.6	1,700.3	1,568.4	131.87	12.894		
5,905.5	5,742.6	5,738.6	5,738.6	25.5	112.9	35.55	1,602.0	-2,184.6	1,700.0	1,568.0	131.99	12.880		
6,000.0	5,837.1	5,833.1	5,833.1	25.6	114.8	35.58	1,602.0	-2,184.6	1,697.4	1,563.3	134.07	12.660		
6,003.9	5,841.0	5,837.0	5,837.0	25.6	114.9	35.58	1,602.0	-2,184.6	1,697.3	1,563.1	134.16	12.652		
6,051.8	5,888.9	5,884.9	5,884.9	25.7	115.9	-39.54	1,602.0	-2,184.6	1,697.0	1,558.7	138.31	12.269		
6,081.8	5,918.9	5,914.9	5,914.9	25.7	116.5	-39.54	1,602.0	-2,184.6	1,697.0	1,558.0	138.95	12.213 CC, ES, SF		
6,100.0	5,937.1	5,933.1	5,933.1	25.7	116.8	-129.54	1,602.0	-2,184.6	1,697.1	1,561.0	136.15	12.465		
6,102.3	5,939.4	5,935.4	5,935.4	25.7	116.9	-129.54	1,602.0	-2,184.6	1,697.2	1,561.0	136.19	12.461		
6,150.0	5,987.0	5,983.0	5,983.0	25.7	117.8	-129.50	1,602.0	-2,184.6	1,699.0	1,562.1	136.91	12.410		
6,200.0	6,036.5	6,032.5	6,032.5	25.7	118.8	-129.41	1,602.0	-2,184.6	1,703.2	1,565.8	137.41	12.395		
6,200.8	6,037.3	6,033.3	6,033.3	25.7	118.9	-129.40	1,602.0	-2,184.6	1,703.3	1,565.9	137.41	12.395		
6,250.0	6,085.5	6,081.5	6,081.5	25.7	119.8	-129.26	1,602.0	-2,184.6	1,709.6	1,571.9	137.65	12.420		
6,299.2	6,133.0	6,129.0	6,129.0	25.6	120.8	-129.06	1,602.0	-2,184.6	1,718.0	1,580.4	137.65	12.481		
6,300.0	6,133.7	6,129.7	6,129.7	25.6	120.8	-129.06	1,602.0	-2,184.6	1,718.2	1,580.5	137.65	12.482		
6,350.0	6,180.9	6,176.9	6,176.9	25.5	121.7	-128.78	1,602.0	-2,184.6	1,729.0	1,591.6	137.44	12.580		
6,397.6	6,224.6	6,220.6	6,220.6	25.4	122.6	-128.44	1,602.0	-2,184.6	1,741.4	1,604.3	137.08	12.704		
6,400.0	6,226.7	6,222.7	6,222.7	25.4	122.7	-128.43	1,602.0	-2,184.6	1,742.1	1,605.0	137.06	12.711		
6,450.0	6,271.1	6,267.1	6,267.1	25.2	123.6	-127.97	1,602.0	-2,184.6	1,757.4	1,620.8	136.55	12.870		
6,496.0	6,310.4	6,306.4	6,306.4	25.1	124.4	-127.44	1,602.0	-2,184.6	1,773.4	1,637.4	136.03	13.037		
6,500.0	6,313.7	6,309.7	6,309.7	25.1	124.4	-127.39	1,602.0	-2,184.6	1,774.9	1,638.9	135.98	13.052		
6,550.0	6,354.4	6,350.4	6,350.4	25.0	125.2	-126.68	1,602.0	-2,184.6	1,794.6	1,659.2	135.44	13.250		
6,594.5	6,388.9	6,384.9	6,384.9	24.9	125.9	-125.91	1,602.0	-2,184.6	1,814.0	1,678.9	135.05	13.431		
6,600.0	6,393.0	6,389.0	6,389.0	24.9	126.0	-125.81	1,602.0	-2,184.6	1,816.5	1,681.5	135.02	13.454		
6,650.0	6,429.3	6,425.3	6,425.3	24.8	126.7	-124.75	1,602.0	-2,184.6	1,840.5	1,705.7	134.82	13.652		
6,692.9	6,458.5	6,454.5	6,454.5	24.7	127.3	-123.66	1,602.0	-2,184.6	1,862.8	1,727.8	134.91	13.807		
6,700.0	6,463.1	6,459.1	6,459.1	24.7	127.4	-123.47	1,602.0	-2,184.6	1,866.6	1,731.6	134.95	13.831		
6,750.0	6,494.3	6,490.3	6,490.3	24.7	128.1	-121.94	1,602.0	-2,184.6	1,894.7	1,759.1	135.53	13.979		
6,791.3	6,517.9	6,513.9	6,513.9	24.7	128.5	-120.45	1,602.0	-2,184.6	1,919.3	1,782.9	136.42	14.069		
6,800.0	6,522.6	6,518.6	6,518.6	24.7	128.6	-120.12	1,602.0	-2,184.6	1,924.6	1,788.0	136.65	14.084		
6,850.0	6,548.0	6,544.0	6,544.0	24.7	129.1	-117.97	1,602.0	-2,184.6	1,956.4	1,818.1	138.37	14.139		
6,889.7	6,566.0	6,562.0	6,562.0	24.8	129.5	-115.99	1,602.0	-2,184.6	1,982.9	1,842.7	140.19	14.145		
6,900.0	6,570.4	6,566.4	6,566.4	24.9	129.6	-115.44	1,602.0	-2,184.6	1,989.9	1,849.2	140.71	14.142		
6,950.0	6,589.5	6,585.5	6,585.5	25.1	130.0	-112.50	1,602.0	-2,184.6	2,024.9	1,881.3	143.59	14.102		
6,988.2	6,602.0	6,598.0	6,598.0	25.3	130.2	-109.96	1,602.0	-2,184.6	2,052.6	1,906.5	146.08	14.051		
7,000.0	6,605.4	6,601.4	6,601.4	25.3	130.3	-109.11	1,602.0	-2,184.6	2,061.3	1,914.4	146.88	14.034		
7,050.0	6,618.0	6,614.0	6,614.0	25.6	130.5	-105.23	1,602.0	-2,184.6	2,098.9	1,948.6	150.31	13.964		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,086.6	6,625.0	6,621.0	6,621.0	25.9	130.7	-102.08	1,602.0	-2,184.6	2,127.1	1,974.4	152.71	13.929	
7,100.0	6,627.1	6,623.1	6,623.1	26.0	130.7	-100.86	1,602.0	-2,184.6	2,137.6	1,984.0	153.52	13.923	
7,150.0	6,632.8	6,628.8	6,628.8	26.5	130.8	-96.01	1,602.0	-2,184.6	2,177.0	2,020.9	156.11	13.946	
7,185.0	6,634.7	6,630.7	6,630.7	26.8	130.9	-92.36	1,602.0	-2,184.6	2,205.1	2,047.8	157.31	14.018	
7,200.0	6,635.0	6,631.0	6,631.0	27.0	130.9	-90.74	1,602.0	-2,184.6	2,217.1	2,059.5	157.62	14.067	
7,215.9	6,635.0	6,631.0	6,631.0	27.1	130.9	-88.99	1,602.0	-2,184.6	2,230.0	2,072.2	157.81	14.131	
7,283.4	6,634.1	6,630.1	6,630.1	27.9	130.9	-88.95	1,602.0	-2,184.6	2,285.0	2,126.4	158.63	14.405	
7,300.0	6,633.9	6,629.9	6,629.9	28.1	130.9	-88.94	1,602.0	-2,184.6	2,298.6	2,139.8	158.83	14.472	
7,381.9	6,632.9	6,628.9	6,628.9	29.3	130.8	-88.90	1,602.0	-2,184.6	2,366.4	2,206.4	159.98	14.792	
7,400.0	6,632.6	6,628.6	6,628.6	29.5	130.8	-88.89	1,602.0	-2,184.6	2,381.5	2,221.3	160.24	14.863	
7,480.3	6,631.6	6,627.6	6,627.6	30.8	130.8	-88.84	1,602.0	-2,184.6	2,449.0	2,287.5	161.52	15.162	
7,500.0	6,631.4	6,627.4	6,627.4	31.1	130.8	-88.83	1,602.0	-2,184.6	2,465.7	2,303.8	161.83	15.236	
7,578.7	6,630.4	6,626.4	6,626.4	32.5	130.8	-88.79	1,602.0	-2,184.6	2,532.7	2,369.5	163.21	15.518	
7,600.0	6,630.1	6,626.1	6,626.1	32.9	130.8	-88.78	1,602.0	-2,184.6	2,551.0	2,387.4	163.59	15.594	
7,677.1	6,629.1	6,625.1	6,625.1	34.3	130.8	-88.73	1,602.0	-2,184.6	2,617.5	2,452.4	165.05	15.859	
7,700.0	6,628.8	6,624.8	6,624.8	34.8	130.8	-88.72	1,602.0	-2,184.6	2,637.3	2,471.8	165.48	15.937	
7,775.6	6,627.8	6,623.8	6,623.8	36.3	130.7	-88.68	1,602.0	-2,184.6	2,703.2	2,536.2	166.99	16.187	
7,800.0	6,627.5	6,623.5	6,623.5	36.8	130.7	-88.66	1,602.0	-2,184.6	2,724.5	2,557.1	167.48	16.267	
7,874.0	6,626.6	6,622.6	6,622.6	38.4	130.7	-88.62	1,602.0	-2,184.6	2,789.7	2,620.6	169.04	16.503	
7,900.0	6,626.3	6,622.3	6,622.3	38.9	130.7	-88.61	1,602.0	-2,184.6	2,812.7	2,643.1	169.59	16.585	
7,972.4	6,625.3	6,621.3	6,621.3	40.5	130.7	-88.57	1,602.0	-2,184.6	2,877.0	2,705.8	171.17	16.808	
8,000.0	6,625.0	6,621.0	6,621.0	41.1	130.7	-88.55	1,602.0	-2,184.6	2,901.5	2,729.8	171.77	16.892	
8,070.8	6,624.1	6,620.1	6,620.1	42.7	130.7	-88.51	1,602.0	-2,184.6	2,964.9	2,791.6	173.37	17.102	
8,100.0	6,623.7	6,619.7	6,619.7	43.4	130.7	-88.49	1,602.0	-2,184.6	2,991.1	2,817.1	174.02	17.188	
8,169.3	6,622.8	6,618.8	6,618.8	45.0	130.6	-88.45	1,602.0	-2,184.6	3,053.6	2,877.9	175.63	17.387	
8,200.0	6,622.4	6,618.4	6,618.4	45.7	130.6	-88.44	1,602.0	-2,184.6	3,081.3	2,905.0	176.34	17.474	
8,267.7	6,621.6	6,617.6	6,617.6	47.4	130.6	-88.40	1,602.0	-2,184.6	3,142.8	2,964.8	177.93	17.663	
8,300.0	6,621.1	6,617.1	6,617.1	48.1	130.6	-88.38	1,602.0	-2,184.6	3,172.2	2,993.5	178.70	17.752	
8,366.1	6,620.3	6,616.3	6,616.3	49.7	130.6	-88.34	1,602.0	-2,184.6	3,232.5	3,052.2	180.29	17.930	
8,400.0	6,619.9	6,615.9	6,615.9	50.6	130.6	-88.32	1,602.0	-2,184.6	3,263.5	3,082.4	181.10	18.020	
8,464.5	6,619.0	6,615.0	6,615.0	52.2	130.6	-88.29	1,602.0	-2,184.6	3,322.7	3,140.1	182.68	18.189	
8,500.0	6,618.6	6,614.6	6,614.6	53.0	130.5	-88.27	1,602.0	-2,184.6	3,355.3	3,171.8	183.54	18.281	
8,563.0	6,617.8	6,613.8	6,613.8	54.6	130.5	-88.23	1,602.0	-2,184.6	3,413.4	3,228.3	185.10	18.441	
8,600.0	6,617.3	6,613.3	6,613.3	55.5	130.5	-88.21	1,602.0	-2,184.6	3,447.6	3,261.6	186.01	18.534	
8,661.4	6,616.5	6,612.5	6,612.5	57.1	130.5	-88.18	1,602.0	-2,184.6	3,504.5	3,317.0	187.55	18.686	
8,700.0	6,616.0	6,612.0	6,612.0	58.1	130.5	-88.15	1,602.0	-2,184.6	3,540.3	3,351.8	188.51	18.780	
8,759.8	6,615.2	6,611.2	6,611.2	59.6	130.5	-88.12	1,602.0	-2,184.6	3,596.0	3,406.0	190.02	18.924	
8,800.0	6,614.7	6,610.7	6,610.7	60.6	130.5	-88.10	1,602.0	-2,184.6	3,633.4	3,442.4	191.04	19.019	
8,858.2	6,614.0	6,610.0	6,610.0	62.1	130.5	-88.06	1,602.0	-2,184.6	3,687.8	3,495.3	192.52	19.155	
8,900.0	6,613.4	6,609.4	6,609.4	63.2	130.4	-88.04	1,602.0	-2,184.6	3,726.9	3,533.3	193.58	19.252	
8,956.7	6,612.7	6,608.7	6,608.7	64.7	130.4	-88.01	1,602.0	-2,184.6	3,780.0	3,585.0	195.04	19.381	
9,000.0	6,612.2	6,608.2	6,608.2	65.8	130.4	-87.98	1,602.0	-2,184.6	3,820.7	3,624.5	196.15	19.478	
9,055.1	6,611.5	6,607.5	6,607.5	67.3	130.4	-87.95	1,602.0	-2,184.6	3,872.5	3,674.9	197.57	19.601	
9,100.0	6,610.9	6,606.9	6,606.9	68.4	130.4	-87.93	1,602.0	-2,184.6	3,914.8	3,716.0	198.73	19.699	
9,153.5	6,610.2	6,606.2	6,606.2	69.8	130.4	-87.90	1,602.0	-2,184.6	3,965.3	3,765.1	200.12	19.814	
9,200.0	6,609.6	6,605.6	6,605.6	71.1	130.4	-87.87	1,602.0	-2,184.6	4,009.2	3,807.8	201.33	19.914	
9,251.9	6,608.9	6,604.9	6,604.9	72.4	130.4	-87.84	1,602.0	-2,184.6	4,058.3	3,855.6	202.68	20.023	
9,300.0	6,608.3	6,604.3	6,604.3	73.7	130.3	-87.81	1,602.0	-2,184.6	4,103.8	3,899.9	203.93	20.123	
9,350.4	6,607.7	6,603.7	6,603.7	75.0	130.3	-87.79	1,602.0	-2,184.6	4,151.6	3,946.3	205.25	20.227	
9,400.0	6,607.0	6,603.0	6,603.0	76.4	130.3	-87.76	1,602.0	-2,184.6	4,198.7	3,992.1	206.55	20.327	
9,448.8	6,606.4	6,602.4	6,602.4	77.7	130.3	-87.73	1,602.0	-2,184.6	4,245.1	4,037.2	207.84	20.425	
9,500.0	6,605.7	6,601.7	6,601.7	79.0	130.3	-87.70	1,602.0	-2,184.6	4,293.8	4,084.6	209.18	20.526	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	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	6,605.1	6,601.1	6,601.1	80.3	130.3	-87.67	1,602.0	-2,184.6	4,338.8	4,128.4	210.43	20.619	
9,600.0	6,604.5	6,600.5	6,600.5	81.7	130.3	-87.64	1,602.0	-2,184.6	4,389.2	4,177.3	211.82	20.721	
9,645.6	6,603.9	6,599.9	6,599.9	82.9	130.3	-87.62	1,602.0	-2,184.6	4,432.7	4,219.7	213.03	20.808	
9,700.0	6,603.2	6,599.2	6,599.2	84.4	130.2	-87.59	1,602.0	-2,184.6	4,484.7	4,270.2	214.47	20.910	
9,744.1	6,602.6	6,598.6	6,598.6	85.6	130.2	-87.56	1,602.0	-2,184.6	4,526.9	4,311.2	215.64	20.992	
9,800.0	6,601.9	6,597.9	6,597.9	87.1	130.2	-87.53	1,602.0	-2,184.6	4,580.4	4,363.3	217.13	21.095	
9,842.5	6,601.3	6,597.3	6,597.3	88.2	130.2	-87.50	1,602.0	-2,184.6	4,621.2	4,402.9	218.26	21.173	
9,900.0	6,600.6	6,596.6	6,596.6	89.8	130.2	-87.47	1,602.0	-2,184.6	4,676.3	4,456.5	219.79	21.276	
9,940.9	6,600.1	6,596.1	6,596.1	90.9	130.2	-87.45	1,602.0	-2,184.6	4,715.6	4,494.8	220.88	21.349	
10,000.0	6,599.3	6,595.3	6,595.3	92.5	130.2	-87.41	1,602.0	-2,184.6	4,772.4	4,550.0	222.46	21.453	
10,039.3	6,598.8	6,594.8	6,594.8	93.5	130.2	-87.39	1,602.0	-2,184.6	4,810.3	4,586.8	223.51	21.521	
10,100.0	6,598.0	6,594.0	6,594.0	95.2	130.1	-87.36	1,602.0	-2,184.6	4,868.7	4,643.5	225.13	21.626	
10,137.8	6,597.5	6,593.5	6,593.5	96.2	130.1	-87.34	1,602.0	-2,184.6	4,905.0	4,678.9	226.15	21.690	
10,200.0	6,596.7	6,592.7	6,592.7	97.9	130.1	-87.30	1,602.0	-2,184.6	4,965.0	4,737.2	227.81	21.794	
10,236.2	6,596.3	6,592.3	6,592.3	98.9	130.1	-87.28	1,602.0	-2,184.6	5,000.0	4,771.2	228.79	21.854	
10,300.0	6,595.4	6,591.4	6,591.4	100.6	130.1	-87.24	1,602.0	-2,184.6	5,061.6	4,831.1	230.50	21.959	
10,334.6	6,595.0	6,591.0	6,591.0	101.6	130.1	-87.22	1,602.0	-2,184.6	5,095.0	4,863.6	231.43	22.015	
10,400.0	6,594.2	6,590.2	6,590.2	103.4	130.1	-87.19	1,602.0	-2,184.6	5,158.2	4,925.0	233.19	22.121	
10,433.0	6,593.7	6,589.7	6,589.7	104.3	130.1	-87.17	1,602.0	-2,184.6	5,190.2	4,956.1	234.08	22.173	
10,500.0	6,592.9	6,588.9	6,588.9	106.1	130.0	-87.13	1,602.0	-2,184.6	5,255.0	5,019.1	235.88	22.278	
10,531.5	6,592.5	6,588.5	6,588.5	106.9	130.0	-87.11	1,602.0	-2,184.6	5,285.5	5,048.8	236.73	22.327	
10,600.0	6,591.6	6,587.6	6,587.6	108.8	130.0	-87.07	1,602.0	-2,184.6	5,351.9	5,113.3	238.58	22.433	
10,629.9	6,591.2	6,587.2	6,587.2	109.6	130.0	-87.06	1,602.0	-2,184.6	5,380.9	5,141.5	239.38	22.478	
10,700.0	6,590.3	6,586.3	6,586.3	111.6	130.0	-87.01	1,602.0	-2,184.6	5,448.9	5,207.6	241.27	22.584	
10,728.3	6,589.9	6,585.9	6,585.9	112.3	130.0	-87.00	1,602.0	-2,184.6	5,476.4	5,234.4	242.04	22.626	
10,800.0	6,589.0	6,585.0	6,585.0	114.3	130.0	-86.96	1,602.0	-2,184.6	5,546.0	5,302.1	243.98	22.732	
10,826.7	6,588.7	6,584.7	6,584.7	115.0	129.9	-86.94	1,602.0	-2,184.6	5,572.0	5,327.3	244.70	22.771	
10,900.0	6,587.7	6,583.7	6,583.7	117.1	129.9	-86.90	1,602.0	-2,184.6	5,643.2	5,396.6	246.68	22.877	
10,925.2	6,587.4	6,583.4	6,583.4	117.7	129.9	-86.89	1,602.0	-2,184.6	5,667.7	5,420.4	247.36	22.913	
11,000.0	6,586.4	6,582.4	6,582.4	119.8	129.9	-86.84	1,602.0	-2,184.6	5,740.6	5,491.2	249.39	23.018	
11,023.6	6,586.1	6,582.1	6,582.1	120.4	129.9	-86.83	1,602.0	-2,184.6	5,763.5	5,513.5	250.03	23.052	
11,100.0	6,585.1	6,581.1	6,581.1	122.6	129.9	-86.79	1,602.0	-2,184.6	5,838.0	5,585.9	252.10	23.157	
11,122.0	6,584.8	6,580.8	6,580.8	123.2	129.9	-86.77	1,602.0	-2,184.6	5,859.4	5,606.7	252.70	23.188	
11,200.0	6,583.8	6,579.8	6,579.8	125.3	129.9	-86.73	1,602.0	-2,184.6	5,935.5	5,680.6	254.81	23.294	
11,220.4	6,583.6	6,579.6	6,579.6	125.9	129.8	-86.72	1,602.0	-2,184.6	5,955.4	5,700.0	255.37	23.321	
11,300.0	6,582.5	6,578.5	6,578.5	128.1	129.8	-86.67	1,602.0	-2,184.6	6,033.0	5,775.5	257.52	23.427	
11,318.9	6,582.3	6,578.3	6,578.3	128.6	129.8	-86.66	1,602.0	-2,184.6	6,051.4	5,793.4	258.04	23.452	
11,400.0	6,581.2	6,577.2	6,577.2	130.8	129.8	-86.61	1,602.0	-2,184.6	6,130.7	5,870.4	260.24	23.558	
11,417.3	6,581.0	6,577.0	6,577.0	131.3	129.8	-86.60	1,602.0	-2,184.6	6,147.6	5,886.9	260.71	23.580	
11,500.0	6,580.0	6,576.0	6,576.0	133.6	129.8	-86.56	1,602.0	-2,184.6	6,228.4	5,965.4	262.96	23.686	
11,515.7	6,579.7	6,575.7	6,575.7	134.0	129.8	-86.55	1,602.0	-2,184.6	6,243.8	5,980.4	263.38	23.706	
11,600.0	6,578.7	6,574.7	6,574.7	136.3	129.7	-86.50	1,602.0	-2,184.6	6,326.2	6,060.5	265.67	23.812	
11,614.1	6,578.5	6,574.5	6,574.5	136.7	129.7	-86.49	1,602.0	-2,184.6	6,340.0	6,074.0	266.06	23.829	
11,700.0	6,577.4	6,573.4	6,573.4	139.1	129.7	-86.44	1,602.0	-2,184.6	6,424.1	6,155.7	268.39	23.935	
11,712.6	6,577.2	6,573.2	6,573.2	139.5	129.7	-86.43	1,602.0	-2,184.6	6,436.4	6,167.6	268.74	23.950	
11,800.0	6,576.1	6,572.1	6,572.1	141.9	129.7	-86.38	1,602.0	-2,184.6	6,522.0	6,250.9	271.12	24.056	
11,811.0	6,575.9	6,571.9	6,571.9	142.2	129.7	-86.38	1,602.0	-2,184.6	6,532.8	6,261.3	271.41	24.069	
11,882.7	6,575.0	6,571.0	6,571.0	144.2	129.7	-86.34	1,602.0	-2,184.6	6,603.0	6,329.6	273.37	24.154	
11,883.5	6,575.0	6,571.0	6,571.0	144.2	129.7	-86.34	1,602.0	-2,184.6	6,603.8	6,330.4	273.38	24.156	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-90.63	-101.0	-9,146.6	9,147.2				
98.4	98.4	73.4	73.4	0.1	0.0	-90.63	-101.0	-9,146.6	9,147.1	9,147.0	0.11	N/A	
100.0	100.0	75.0	75.0	0.1	0.0	-90.63	-101.0	-9,146.6	9,147.1	9,147.0	0.11	N/A	
196.8	196.8	171.8	171.8	0.3	1.9	-90.63	-101.0	-9,146.6	9,147.1	9,144.9	2.24	4,087.478	
200.0	200.0	175.0	175.0	0.3	2.0	-90.63	-101.0	-9,146.6	9,147.1	9,144.8	2.33	3,928.136	
295.3	295.3	270.3	270.3	0.5	4.1	-90.63	-101.0	-9,146.6	9,147.1	9,142.5	4.65	1,965.996	
300.0	300.0	275.0	275.0	0.5	4.2	-90.63	-101.0	-9,146.6	9,147.1	9,142.4	4.76	1,921.469	
393.7	393.7	368.7	368.7	0.8	6.1	-90.63	-101.0	-9,146.6	9,147.1	9,140.2	6.88	1,329.610	
400.0	400.0	375.0	375.0	0.8	6.2	-90.63	-101.0	-9,146.6	9,147.1	9,140.1	7.02	1,302.718	
492.1	492.1	467.1	467.1	1.0	8.1	-90.63	-101.0	-9,146.6	9,147.1	9,138.0	9.09	1,006.007	
500.0	500.0	475.0	475.0	1.0	8.3	-90.63	-101.0	-9,146.6	9,147.1	9,137.8	9.27	986.814	
590.5	590.5	565.5	565.5	1.2	10.1	-90.63	-101.0	-9,146.6	9,147.1	9,135.8	11.30	809.455	
600.0	600.0	575.0	575.0	1.2	10.3	-90.63	-101.0	-9,146.6	9,147.1	9,135.6	11.51	794.558	
689.0	689.0	664.0	664.0	1.4	12.1	-90.63	-101.0	-9,146.6	9,147.1	9,133.6	13.51	677.277	
700.0	700.0	675.0	675.0	1.4	12.3	-90.63	-101.0	-9,146.6	9,147.1	9,133.4	13.75	665.115	
787.4	787.4	762.4	762.4	1.6	14.1	-90.63	-101.0	-9,146.6	9,147.1	9,131.4	15.71	582.259	
800.0	800.0	775.0	775.0	1.7	14.3	-90.63	-101.0	-9,146.6	9,147.1	9,131.1	15.99	571.988	
885.8	885.8	860.8	860.8	1.9	16.0	-90.63	-101.0	-9,146.6	9,147.1	9,129.2	17.91	510.647	
900.0	900.0	875.0	875.0	1.9	16.3	-90.63	-101.0	-9,146.6	9,147.1	9,128.9	18.23	501.760	
984.2	984.2	959.2	959.2	2.1	18.0	-90.63	-101.0	-9,146.6	9,147.1	9,127.0	20.12	454.734	
1,000.0	1,000.0	975.0	975.0	2.1	18.3	-90.63	-101.0	-9,146.6	9,147.1	9,126.6	20.47	446.904	
1,082.7	1,082.7	1,057.7	1,057.7	2.3	20.0	-90.63	-101.0	-9,146.6	9,147.1	9,124.8	22.32	409.864	
1,100.0	1,100.0	1,075.0	1,075.0	2.3	20.4	-90.63	-101.0	-9,146.6	9,147.1	9,124.4	22.71	402.867	
1,181.1	1,181.1	1,156.1	1,156.1	2.5	22.0	-90.63	-101.0	-9,146.6	9,147.1	9,122.6	24.52	373.058	
1,200.0	1,200.0	1,175.0	1,175.0	2.6	22.4	-90.63	-101.0	-9,146.6	9,147.1	9,122.2	24.94	366.735	
1,279.5	1,279.5	1,254.5	1,254.5	2.7	24.0	-90.63	-101.0	-9,146.6	9,147.1	9,120.4	26.72	342.321	
1,300.0	1,300.0	1,275.0	1,275.0	2.8	24.4	-90.63	-101.0	-9,146.6	9,147.1	9,119.9	27.18	336.553	
1,377.9	1,377.9	1,352.9	1,352.9	3.0	26.0	-90.63	-101.0	-9,146.6	9,147.1	9,118.2	28.92	316.265	
1,400.0	1,400.0	1,375.0	1,375.0	3.0	26.4	-90.63	-101.0	-9,146.6	9,147.1	9,117.7	29.42	310.963	
1,476.4	1,476.4	1,451.4	1,451.4	3.2	27.9	-15.51	-101.0	-9,146.6	9,146.1	9,115.0	31.11	294.035	
1,500.0	1,500.0	1,475.0	1,475.0	3.2	28.4	-15.52	-101.0	-9,146.6	9,145.4	9,113.8	31.62	289.196	
1,574.8	1,574.7	1,549.7	1,549.7	3.4	29.9	-15.54	-101.0	-9,146.6	9,142.0	9,108.7	33.24	275.010	
1,600.0	1,599.8	1,574.8	1,574.8	3.4	30.4	-15.55	-101.0	-9,146.6	9,140.4	9,106.6	33.78	270.576	
1,673.2	1,672.8	1,647.8	1,647.8	3.6	31.9	-15.60	-101.0	-9,146.6	9,134.6	9,099.2	35.33	258.541	
1,700.0	1,699.5	1,674.5	1,674.5	3.7	32.4	-15.61	-101.0	-9,146.6	9,132.0	9,096.1	35.89	254.443	
1,771.6	1,770.6	1,745.6	1,745.6	3.8	33.9	-15.67	-101.0	-9,146.6	9,123.9	9,086.6	37.37	244.169	
1,800.0	1,798.7	1,773.7	1,773.7	3.9	34.4	-15.70	-101.0	-9,146.6	9,120.3	9,082.3	37.94	240.373	
1,870.1	1,868.0	1,843.0	1,843.0	4.1	35.8	-15.77	-101.0	-9,146.6	9,110.0	9,070.7	39.34	231.555	
1,900.0	1,897.5	1,872.5	1,872.5	4.2	36.4	-15.81	-101.0	-9,146.6	9,105.2	9,065.3	39.93	228.029	
1,968.5	1,964.8	1,939.8	1,939.8	4.4	37.8	-15.90	-101.0	-9,146.6	9,093.0	9,051.7	41.25	220.424	
2,000.0	1,995.6	1,970.6	1,970.6	4.5	38.4	-15.94	-101.0	-9,146.6	9,086.8	9,045.0	41.85	217.144	
2,066.9	2,060.9	2,035.9	2,035.9	4.7	39.7	-16.05	-101.0	-9,146.6	9,072.7	9,029.6	43.09	210.557	
2,100.0	2,093.1	2,068.1	2,068.1	4.8	40.3	-16.11	-101.0	-9,146.6	9,065.1	9,021.5	43.69	207.499	
2,165.3	2,156.3	2,131.3	2,131.3	5.1	41.6	-16.23	-101.0	-9,146.6	9,049.2	9,004.4	44.85	201.772	
2,200.0	2,189.6	2,164.6	2,164.6	5.2	42.3	-16.29	-101.0	-9,146.6	9,040.2	8,994.8	45.45	198.918	
2,263.8	2,250.7	2,225.7	2,225.7	5.5	43.5	-16.43	-101.0	-9,146.6	9,022.7	8,976.1	46.53	193.927	
2,280.0	2,266.2	2,241.2	2,241.2	5.6	43.8	-16.47	-101.0	-9,146.6	9,018.0	8,971.2	46.79	192.718	
2,300.0	2,285.3	2,260.3	2,260.3	5.7	44.2	-16.48	-101.0	-9,146.6	9,012.2	8,964.9	47.21	190.882	
2,362.2	2,344.6	2,319.6	2,319.6	6.0	45.4	-16.51	-101.0	-9,146.6	8,994.0	8,945.5	48.52	185.381	
2,400.0	2,380.6	2,355.6	2,355.6	6.2	46.1	-16.53	-101.0	-9,146.6	8,983.1	8,933.7	49.32	182.138	
2,460.6	2,438.4	2,413.4	2,413.4	6.5	47.3	-16.56	-101.0	-9,146.6	8,965.4	8,914.8	50.60	177.176	
2,500.0	2,475.9	2,450.9	2,450.9	6.7	48.0	-16.59	-101.0	-9,146.6	8,954.0	8,902.5	51.44	174.080	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,507.2	2,507.2	7.0	49.2	-16.62	-101.0	-9,146.6	8,936.8	8,884.1	52.69	169.613			
2,600.0	2,571.2	2,546.2	2,546.2	7.2	50.0	-16.64	-101.0	-9,146.6	8,924.9	8,871.3	53.56	166.635			
2,657.5	2,626.0	2,601.0	2,601.0	7.5	51.1	-16.67	-101.0	-9,146.6	8,908.2	8,853.4	54.78	162.607			
2,700.0	2,666.6	2,641.6	2,641.6	7.8	51.9	-16.70	-101.0	-9,146.6	8,895.8	8,840.1	55.69	159.739			
2,755.9	2,719.8	2,694.8	2,694.8	8.1	52.9	-16.73	-101.0	-9,146.6	8,879.5	8,822.7	56.88	156.101			
2,800.0	2,761.9	2,736.9	2,736.9	8.3	53.8	-16.75	-101.0	-9,146.6	8,866.7	8,808.9	57.83	153.336			
2,854.3	2,813.7	2,788.7	2,788.7	8.7	54.8	-16.78	-101.0	-9,146.6	8,850.9	8,792.0	58.99	150.045			
2,900.0	2,857.2	2,832.2	2,832.2	8.9	55.7	-16.81	-101.0	-9,146.6	8,837.7	8,777.7	59.97	147.376			
2,952.7	2,907.5	2,882.5	2,882.5	9.2	56.7	-16.84	-101.0	-9,146.6	8,822.3	8,761.2	61.10	144.395			
3,000.0	2,952.5	2,927.5	2,927.5	9.5	57.6	-16.87	-101.0	-9,146.6	8,808.6	8,746.5	62.11	141.817			
3,051.2	3,001.3	2,976.3	2,976.3	9.8	58.6	-16.90	-101.0	-9,146.6	8,793.7	8,730.5	63.21	139.114			
3,100.0	3,047.8	3,022.8	3,022.8	10.1	59.5	-16.92	-101.0	-9,146.6	8,779.6	8,715.3	64.26	136.620			
3,149.6	3,095.1	3,070.1	3,070.1	10.4	60.5	-16.95	-101.0	-9,146.6	8,765.2	8,699.8	65.33	134.167			
3,200.0	3,143.2	3,118.2	3,118.2	10.7	61.5	-16.98	-101.0	-9,146.6	8,750.5	8,684.1	66.42	131.753			
3,248.0	3,188.9	3,163.9	3,163.9	11.0	62.4	-17.01	-101.0	-9,146.6	8,736.6	8,669.1	67.45	129.524			
3,300.0	3,238.5	3,213.5	3,213.5	11.3	63.4	-17.04	-101.0	-9,146.6	8,721.5	8,652.9	68.57	127.186			
3,346.4	3,282.8	3,257.8	3,257.8	11.6	64.3	-17.07	-101.0	-9,146.6	8,708.0	8,638.4	69.58	125.158			
3,400.0	3,333.8	3,308.8	3,308.8	11.9	65.3	-17.10	-101.0	-9,146.6	8,692.5	8,621.7	70.73	122.892			
3,444.9	3,376.6	3,351.6	3,351.6	12.2	66.2	-17.12	-101.0	-9,146.6	8,679.5	8,607.8	71.70	121.047			
3,500.0	3,429.1	3,404.1	3,404.1	12.6	67.2	-17.15	-101.0	-9,146.6	8,663.5	8,590.6	72.90	118.848			
3,543.3	3,470.4	3,445.4	3,445.4	12.8	68.0	-17.18	-101.0	-9,146.6	8,650.9	8,577.1	73.83	117.169			
3,600.0	3,524.4	3,499.4	3,499.4	13.2	69.1	-17.21	-101.0	-9,146.6	8,634.5	8,559.4	75.06	115.033			
3,641.7	3,564.2	3,539.2	3,539.2	13.4	69.9	-17.24	-101.0	-9,146.6	8,622.4	8,546.4	75.97	113.504			
3,700.0	3,619.8	3,594.8	3,594.8	13.8	71.0	-17.27	-101.0	-9,146.6	8,605.5	8,528.2	77.23	111.429			
3,740.1	3,658.0	3,633.0	3,633.0	14.0	71.8	-17.30	-101.0	-9,146.6	8,593.8	8,515.7	78.10	110.037			
3,800.0	3,715.1	3,690.1	3,690.1	14.4	73.0	-17.33	-101.0	-9,146.6	8,576.5	8,497.1	79.40	108.019			
3,838.6	3,751.8	3,726.8	3,726.8	14.7	73.7	-17.36	-101.0	-9,146.6	8,565.3	8,485.1	80.24	106.752			
3,900.0	3,810.4	3,785.4	3,785.4	15.0	74.9	-17.39	-101.0	-9,146.6	8,547.5	8,465.9	81.57	104.787			
3,937.0	3,845.7	3,820.7	3,820.7	15.3	75.6	-17.42	-101.0	-9,146.6	8,536.8	8,454.4	82.37	103.634			
4,000.0	3,905.7	3,880.7	3,880.7	15.7	76.8	-17.45	-101.0	-9,146.6	8,518.5	8,434.8	83.74	101.721			
4,035.4	3,939.5	3,914.5	3,914.5	15.9	77.5	-17.48	-101.0	-9,146.6	8,508.3	8,423.8	84.51	100.673			
4,100.0	4,001.0	3,976.0	3,976.0	16.3	78.7	-17.51	-101.0	-9,146.6	8,489.6	8,403.7	85.92	98.809			
4,133.8	4,033.3	4,008.3	4,008.3	16.5	79.4	-17.54	-101.0	-9,146.6	8,479.8	8,393.1	86.66	97.855			
4,200.0	4,096.3	4,071.3	4,071.3	16.9	80.6	-17.58	-101.0	-9,146.6	8,460.6	8,372.5	88.10	96.038			
4,232.3	4,127.1	4,102.1	4,102.1	17.1	81.2	-17.60	-101.0	-9,146.6	8,451.3	8,362.5	88.80	95.172			
4,300.0	4,191.7	4,166.7	4,166.7	17.6	82.5	-17.64	-101.0	-9,146.6	8,431.7	8,341.4	90.28	93.399			
4,330.7	4,220.9	4,195.9	4,195.9	17.8	83.1	-17.66	-101.0	-9,146.6	8,422.8	8,331.9	90.95	92.614			
4,400.0	4,287.0	4,262.0	4,262.0	18.2	84.5	-17.70	-101.0	-9,146.6	8,402.7	8,310.3	92.46	90.883			
4,429.1	4,314.7	4,289.7	4,289.7	18.4	85.0	-17.72	-101.0	-9,146.6	8,394.3	8,301.2	93.09	90.173			
4,500.0	4,382.3	4,357.3	4,357.3	18.8	86.4	-17.76	-101.0	-9,146.6	8,373.8	8,279.2	94.64	88.482			
4,527.5	4,408.6	4,383.6	4,383.6	19.0	86.9	-17.78	-101.0	-9,146.6	8,365.9	8,270.6	95.24	87.840			
4,600.0	4,477.6	4,452.6	4,452.6	19.5	88.3	-17.83	-101.0	-9,146.6	8,344.9	8,248.1	96.82	86.188			
4,626.0	4,502.4	4,477.4	4,477.4	19.6	88.8	-17.84	-101.0	-9,146.6	8,337.4	8,240.0	97.39	85.609			
4,700.0	4,572.9	4,547.9	4,547.9	20.1	90.2	-17.89	-101.0	-9,146.6	8,316.0	8,217.0	99.01	83.994			
4,724.4	4,596.2	4,571.2	4,571.2	20.3	90.7	-17.90	-101.0	-9,146.6	8,309.0	8,209.4	99.54	83.473			
4,800.0	4,668.3	4,643.3	4,643.3	20.7	92.1	-17.95	-101.0	-9,146.6	8,287.1	8,185.9	101.19	81.894			
4,822.8	4,690.0	4,665.0	4,665.0	20.9	92.6	-17.97	-101.0	-9,146.6	8,280.5	8,178.8	101.69	81.427			
4,900.0	4,763.6	4,738.6	4,738.6	21.4	94.0	-18.02	-101.0	-9,146.6	8,258.2	8,154.8	103.38	79.881			
4,921.2	4,783.8	4,758.8	4,758.8	21.5	94.5	-18.03	-101.0	-9,146.6	8,252.1	8,148.2	103.85	79.464			
5,000.0	4,858.9	4,833.9	4,833.9	22.0	96.0	-18.08	-101.0	-9,146.6	8,229.3	8,123.8	105.57	77.951			
5,019.7	4,877.7	4,852.7	4,852.7	22.1	96.3	-18.10	-101.0	-9,146.6	8,223.7	8,117.7	106.00	77.581			
5,100.0	4,954.2	4,929.2	4,929.2	22.6	97.9	-18.15	-101.0	-9,146.6	8,200.5	8,092.7	107.76	76.099			

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,946.5	4,946.5	22.8	98.2	-18.16	-101.0	-9,146.6	8,195.3	8,087.1	108.16	75.772	
5,171.8	5,022.7	4,997.7	4,997.7	23.1	99.3	-18.19	-101.0	-9,146.6	8,179.8	8,070.4	109.33	74.814	
5,200.0	5,049.6	5,024.6	5,024.6	23.3	99.8	-18.16	-101.0	-9,146.6	8,171.7	8,061.5	110.21	74.149	
5,216.5	5,065.4	5,040.4	5,040.4	23.3	100.1	-18.14	-101.0	-9,146.6	8,167.2	8,056.5	110.71	73.770	
5,300.0	5,145.7	5,120.7	5,120.7	23.7	101.7	-18.05	-101.0	-9,146.6	8,145.4	8,032.2	113.23	71.934	
5,314.9	5,160.1	5,135.1	5,135.1	23.8	102.0	-18.04	-101.0	-9,146.6	8,141.7	8,028.1	113.68	71.621	
5,400.0	5,242.7	5,217.7	5,217.7	24.1	103.7	-17.96	-101.0	-9,146.6	8,122.3	8,006.1	116.18	69.913	
5,413.4	5,255.7	5,230.7	5,230.7	24.2	103.9	-17.95	-101.0	-9,146.6	8,119.4	8,002.9	116.56	69.657	
5,500.0	5,340.5	5,315.5	5,315.5	24.5	105.6	-17.88	-101.0	-9,146.6	8,102.4	7,983.4	119.03	68.072	
5,511.8	5,352.1	5,327.1	5,327.1	24.5	105.9	-17.87	-101.0	-9,146.6	8,100.2	7,980.9	119.36	67.866	
5,600.0	5,439.0	5,414.0	5,414.0	24.8	107.6	-17.81	-101.0	-9,146.6	8,085.8	7,964.0	121.77	66.400	
5,610.2	5,449.1	5,424.1	5,424.1	24.8	107.8	-17.81	-101.0	-9,146.6	8,084.3	7,962.2	122.05	66.239	
5,700.0	5,538.0	5,513.0	5,513.0	25.1	109.6	-17.76	-101.0	-9,146.6	8,072.4	7,948.0	124.40	64.889	
5,708.6	5,546.6	5,521.6	5,521.6	25.1	109.8	-17.76	-101.0	-9,146.6	8,071.4	7,946.8	124.63	64.766	
5,800.0	5,637.4	5,612.4	5,612.4	25.3	111.6	-17.72	-101.0	-9,146.6	8,062.4	7,935.5	126.91	63.528	
5,807.1	5,644.5	5,619.5	5,619.5	25.3	111.8	-17.72	-101.0	-9,146.6	8,061.8	7,934.8	127.08	63.438	
5,900.0	5,737.2	5,712.2	5,712.2	25.5	113.6	-17.70	-101.0	-9,146.6	8,055.7	7,926.4	129.28	62.310	
5,905.5	5,742.6	5,717.6	5,717.6	25.5	113.7	-17.69	-101.0	-9,146.6	8,055.4	7,926.0	129.41	62.247	
6,000.0	5,837.1	5,812.1	5,812.1	25.6	115.6	-17.68	-101.0	-9,146.6	8,052.3	7,920.8	131.52	61.227	
6,003.9	5,841.0	5,816.0	5,816.0	25.6	115.7	-17.68	-101.0	-9,146.6	8,052.3	7,920.7	131.60	61.188	
6,051.8	5,888.9	5,863.9	5,863.9	25.7	116.7	-92.81	-101.0	-9,146.6	8,051.9	7,910.3	141.60	56.862	
6,081.8	5,918.9	5,893.9	5,893.9	25.7	117.3	-92.81	-101.0	-9,146.6	8,051.9	7,909.6	142.24	56.608 CC, ES	
6,100.0	5,937.1	5,912.1	5,912.1	25.7	117.6	177.19	-101.0	-9,146.6	8,052.1	7,918.6	133.55	60.292	
6,102.3	5,939.4	5,914.4	5,914.4	25.7	117.7	177.19	-101.0	-9,146.6	8,052.2	7,918.6	133.58	60.279	
6,150.0	5,987.0	5,962.0	5,962.0	25.7	118.6	177.18	-101.0	-9,146.6	8,055.1	7,921.2	133.90	60.159	
6,200.0	6,036.5	6,011.5	6,011.5	25.7	119.6	177.16	-101.0	-9,146.6	8,061.6	7,928.0	133.58	60.351	
6,200.8	6,037.3	6,012.3	6,012.3	25.7	119.7	177.16	-101.0	-9,146.6	8,061.7	7,928.2	133.57	60.357	
6,250.0	6,085.5	6,060.5	6,060.5	25.7	120.6	177.12	-101.0	-9,146.6	8,071.5	7,938.9	132.58	60.879	
6,299.2	6,133.0	6,108.0	6,108.0	25.6	121.6	177.07	-101.0	-9,146.6	8,084.6	7,953.6	130.94	61.744	
6,300.0	6,133.7	6,108.7	6,108.7	25.6	121.6	177.07	-101.0	-9,146.6	8,084.8	7,953.9	130.91	61.761	
6,350.0	6,180.9	6,155.9	6,155.9	25.5	122.5	177.00	-101.0	-9,146.6	8,101.5	7,972.9	128.55	63.024	
6,397.6	6,224.6	6,199.6	6,199.6	25.4	123.4	176.92	-101.0	-9,146.6	8,120.3	7,994.6	125.67	64.616	
6,400.0	6,226.7	6,201.7	6,201.7	25.4	123.5	176.92	-101.0	-9,146.6	8,121.3	7,995.8	125.51	64.706	
6,450.0	6,271.1	6,246.1	6,246.1	25.2	124.4	176.81	-101.0	-9,146.6	8,144.4	8,022.5	121.81	66.861	
6,496.0	6,310.4	6,285.4	6,285.4	25.1	125.1	176.70	-101.0	-9,146.6	8,168.2	8,050.4	117.83	69.322	
6,500.0	6,313.7	6,288.7	6,288.7	25.1	125.2	176.69	-101.0	-9,146.6	8,170.4	8,052.9	117.46	69.556	
6,550.0	6,354.4	6,329.4	6,329.4	25.0	126.0	176.53	-101.0	-9,146.6	8,199.4	8,086.9	112.50	72.884	
6,594.5	6,388.9	6,363.9	6,363.9	24.9	126.7	176.36	-101.0	-9,146.6	8,227.5	8,119.9	107.59	76.471	
6,600.0	6,393.0	6,368.0	6,368.0	24.9	126.8	176.34	-101.0	-9,146.6	8,231.1	8,124.2	106.95	76.963	
6,650.0	6,429.3	6,404.3	6,404.3	24.8	127.5	176.10	-101.0	-9,146.6	8,265.4	8,164.6	100.86	81.950	
6,692.9	6,458.5	6,433.5	6,433.5	24.7	128.1	175.86	-101.0	-9,146.6	8,296.9	8,201.6	95.25	87.108	
6,700.0	6,463.1	6,438.1	6,438.1	24.7	128.2	175.82	-101.0	-9,146.6	8,302.2	8,207.9	94.29	88.052	
6,750.0	6,494.3	6,469.3	6,469.3	24.7	128.8	175.46	-101.0	-9,146.6	8,341.3	8,254.0	87.31	95.536	
6,791.3	6,517.9	6,492.9	6,492.9	24.7	129.3	175.08	-101.0	-9,146.6	8,375.1	8,293.8	81.31	103.008	
6,800.0	6,522.6	6,497.6	6,497.6	24.7	129.4	175.00	-101.0	-9,146.6	8,382.4	8,302.4	80.02	104.748	
6,850.0	6,548.0	6,523.0	6,523.0	24.7	129.9	174.40	-101.0	-9,146.6	8,425.4	8,352.9	72.57	116.106	
6,889.7	6,566.0	6,541.0	6,541.0	24.8	130.3	173.78	-101.0	-9,146.6	8,460.8	8,394.2	66.65	126.942	
6,900.0	6,570.4	6,545.4	6,545.4	24.9	130.4	173.60	-101.0	-9,146.6	8,470.1	8,405.0	65.15	130.016	
6,950.0	6,589.5	6,564.5	6,564.5	25.1	130.8	172.47	-101.0	-9,146.6	8,516.2	8,458.1	58.14	146.481	
6,988.2	6,602.0	6,577.0	6,577.0	25.3	131.0	171.27	-101.0	-9,146.6	8,552.3	8,498.7	53.53	159.766	
7,000.0	6,605.4	6,580.4	6,580.4	25.3	131.1	170.80	-101.0	-9,146.6	8,563.6	8,511.2	52.34	163.616	
7,050.0	6,618.0	6,593.0	6,593.0	25.6	131.3	168.08	-101.0	-9,146.6	8,611.9	8,562.2	49.70	173.273	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT PAULINE #5 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	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	6,625.0	6,600.0	6,600.0	25.9	131.5	164.71	-101.0	-9,146.6	8,647.8	8,595.3	52.43	164.928	
7,100.0	6,627.1	6,602.1	6,602.1	26.0	131.5	162.94	-101.0	-9,146.6	8,661.0	8,605.8	55.21	156.885	
7,150.0	6,632.8	6,607.8	6,607.8	26.5	131.6	150.21	-101.0	-9,146.6	8,710.6	8,628.4	82.24	105.912	
7,185.0	6,634.7	6,609.7	6,609.7	26.8	131.7	123.91	-101.0	-9,146.6	8,745.5	8,613.0	132.59	65.959	
7,200.0	6,635.0	6,610.0	6,610.0	27.0	131.7	101.83	-101.0	-9,146.6	8,760.5	8,605.1	155.35	56.390 SF	
7,215.9	6,635.0	6,610.0	6,610.0	27.1	131.7	74.16	-101.0	-9,146.6	8,776.4	8,623.9	152.48	57.557	
7,283.4	6,634.1	6,609.1	6,609.1	27.9	131.7	74.04	-101.0	-9,146.6	8,843.9	8,690.7	153.18	57.735	
7,300.0	6,633.9	6,608.9	6,608.9	28.1	131.7	74.01	-101.0	-9,146.6	8,860.4	8,707.0	153.35	57.779	
7,381.9	6,632.9	6,607.9	6,607.9	29.3	131.6	73.87	-101.0	-9,146.6	8,942.2	8,787.8	154.35	57.933	
7,400.0	6,632.6	6,607.6	6,607.6	29.5	131.6	73.83	-101.0	-9,146.6	8,960.3	8,805.7	154.57	57.969	
7,480.3	6,631.6	6,606.6	6,606.6	30.8	131.6	73.69	-101.0	-9,146.6	9,040.5	8,884.8	155.70	58.064	
7,500.0	6,631.4	6,606.4	6,606.4	31.1	131.6	73.66	-101.0	-9,146.6	9,060.2	8,904.2	155.97	58.089	
7,578.7	6,630.4	6,605.4	6,605.4	32.5	131.6	73.52	-101.0	-9,146.6	9,138.8	8,981.6	157.20	58.136	
7,600.0	6,630.1	6,605.1	6,605.1	32.9	131.6	73.48	-101.0	-9,146.6	9,160.1	9,002.6	157.52	58.150	
7,677.1	6,629.1	6,604.1	6,604.1	34.3	131.6	73.35	-101.0	-9,146.6	9,237.2	9,078.3	158.82	58.160	
7,700.0	6,628.8	6,603.8	6,603.8	34.8	131.6	73.30	-101.0	-9,146.6	9,260.0	9,100.8	159.20	58.164	
7,775.6	6,627.8	6,602.8	6,602.8	36.3	131.5	73.18	-101.0	-9,146.6	9,335.5	9,174.9	160.56	58.145	
7,800.0	6,627.5	6,602.5	6,602.5	36.8	131.5	73.13	-101.0	-9,146.6	9,359.9	9,198.9	160.99	58.140	
7,874.0	6,626.6	6,601.6	6,601.6	38.4	131.5	73.00	-101.0	-9,146.6	9,433.8	9,271.4	162.38	58.097	
7,900.0	6,626.3	6,601.3	6,601.3	38.9	131.5	72.95	-101.0	-9,146.6	9,459.8	9,296.9	162.86	58.084	
7,972.4	6,625.3	6,600.3	6,600.3	40.5	131.5	72.83	-101.0	-9,146.6	9,532.1	9,367.9	164.28	58.025	
8,000.0	6,625.0	6,600.0	6,600.0	41.1	131.5	72.78	-101.0	-9,146.6	9,559.7	9,394.9	164.81	58.004	
8,070.8	6,624.1	6,599.1	6,599.1	42.7	131.5	72.66	-101.0	-9,146.6	9,630.5	9,464.2	166.24	57.932	
8,100.0	6,623.7	6,598.7	6,598.7	43.4	131.4	72.60	-101.0	-9,146.6	9,659.6	9,492.8	166.82	57.905	
8,169.3	6,622.8	6,597.8	6,597.8	45.0	131.4	72.49	-101.0	-9,146.6	9,728.8	9,560.6	168.25	57.824	
8,200.0	6,622.4	6,597.4	6,597.4	45.7	131.4	72.43	-101.0	-9,146.6	9,759.5	9,590.6	168.88	57.790	
8,267.7	6,621.6	6,596.6	6,596.6	47.4	131.4	72.32	-101.0	-9,146.6	9,827.2	9,656.8	170.30	57.703	
8,300.0	6,621.1	6,596.1	6,596.1	48.1	131.4	72.26	-101.0	-9,146.6	9,859.4	9,688.4	170.98	57.664	
8,366.1	6,620.3	6,595.3	6,595.3	49.7	131.4	72.15	-101.0	-9,146.6	9,925.5	9,753.1	172.40	57.573	
8,400.0	6,619.9	6,594.9	6,594.9	50.6	131.4	72.08	-101.0	-9,146.6	9,959.3	9,786.2	173.12	57.529	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-96.81	-1,046.2	-8,767.1	8,829.3				
98.4	98.4	108.3	108.3	0.1	0.0	-96.80	-1,046.1	-8,766.8	8,829.1	8,829.0	0.12	N/A	
100.0	100.0	109.8	109.8	0.1	0.0	-96.80	-1,046.1	-8,766.8	8,829.1	8,829.0	0.13	N/A	
196.8	196.8	200.0	200.0	0.3	0.2	-96.81	-1,046.2	-8,766.4	8,828.6	8,828.1	0.50	N/A	
200.0	200.0	200.0	200.0	0.3	0.2	-96.81	-1,046.2	-8,766.4	8,828.6	8,828.1	0.51	N/A	
295.3	295.3	282.7	282.7	0.5	0.2	-96.80	-1,046.1	-8,766.1	8,828.3	8,827.6	0.75	N/A	
300.0	300.0	286.5	286.5	0.5	0.2	-96.80	-1,046.0	-8,766.1	8,828.3	8,827.5	0.76	N/A	
366.5	366.5	333.5	333.5	0.7	0.2	-96.80	-1,045.7	-8,766.1	8,828.2	8,827.3	0.94	9,438.110	
393.7	393.7	351.8	351.8	0.8	0.3	-96.80	-1,045.7	-8,766.1	8,828.2	8,827.2	1.01	8,769.646	
400.0	400.0	356.1	356.1	0.8	0.3	-96.80	-1,045.6	-8,766.1	8,828.2	8,827.2	1.02	8,628.155	
492.1	492.1	507.8	507.8	1.0	0.3	-96.80	-1,045.3	-8,766.1	8,828.3	8,827.1	1.27	6,942.319	
500.0	500.0	515.4	515.4	1.0	0.3	-96.80	-1,045.3	-8,766.1	8,828.3	8,827.0	1.29	6,820.488	
590.5	590.5	602.3	602.3	1.2	0.4	-96.80	-1,045.0	-8,765.6	8,827.8	8,826.3	1.56	5,676.517	
600.0	600.0	611.4	611.4	1.2	0.4	-96.80	-1,044.9	-8,765.6	8,827.8	8,826.2	1.58	5,581.095	
689.0	689.0	696.6	696.6	1.4	0.4	-96.80	-1,044.5	-8,765.2	8,827.3	8,825.5	1.83	4,818.738	
700.0	700.0	707.5	707.5	1.4	0.4	-96.80	-1,044.5	-8,765.2	8,827.3	8,825.4	1.86	4,739.334	
787.4	787.4	795.2	795.2	1.6	0.5	-96.79	-1,044.1	-8,764.8	8,826.9	8,824.8	2.10	4,194.196	
800.0	800.0	800.0	800.0	1.7	0.5	-96.79	-1,044.0	-8,764.8	8,826.8	8,824.7	2.14	4,133.651	
885.8	885.8	876.2	876.2	1.9	0.5	-96.79	-1,043.9	-8,764.5	8,826.5	8,824.2	2.34	3,768.870	
900.0	900.0	887.8	887.8	1.9	0.5	-96.79	-1,043.9	-8,764.5	8,826.5	8,824.1	2.38	3,715.030	
976.1	976.1	943.1	943.1	2.1	0.5	-96.79	-1,044.1	-8,764.4	8,826.4	8,823.8	2.56	3,450.799	
984.2	984.2	948.8	948.8	2.1	0.5	-96.79	-1,044.1	-8,764.4	8,826.4	8,823.8	2.58	3,424.661	
1,000.0	1,000.0	960.0	959.9	2.1	0.5	-96.79	-1,044.1	-8,764.4	8,826.4	8,823.8	2.61	3,375.385	
1,082.7	1,082.7	1,100.0	1,100.0	2.3	0.5	-96.79	-1,044.3	-8,764.3	8,826.5	8,823.6	2.81	3,138.783	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	0.5	-96.79	-1,044.3	-8,764.3	8,826.4	8,823.5	2.85	3,095.883	
1,181.1	1,181.1	1,162.7	1,162.7	2.5	0.5	-96.79	-1,044.2	-8,764.1	8,826.1	8,823.1	3.04	2,899.881	
1,200.0	1,200.0	1,174.7	1,174.7	2.6	0.5	-96.79	-1,044.2	-8,764.1	8,826.1	8,823.0	3.09	2,858.136	
1,279.5	1,279.5	1,262.3	1,262.2	2.7	0.6	-96.79	-1,044.0	-8,764.1	8,826.0	8,822.8	3.27	2,695.499	
1,300.0	1,300.0	1,294.4	1,294.4	2.8	0.6	-96.79	-1,044.0	-8,764.0	8,826.0	8,822.7	3.32	2,656.714	
1,377.9	1,377.9	1,371.9	1,371.8	3.0	0.6	-96.79	-1,043.9	-8,763.8	8,825.7	8,822.2	3.51	2,514.894	
1,400.0	1,400.0	1,393.1	1,393.1	3.0	0.6	-96.79	-1,043.8	-8,763.7	8,825.7	8,822.1	3.56	2,477.440	
1,476.4	1,476.4	1,497.4	1,497.4	3.2	0.6	-21.68	-1,043.5	-8,763.3	8,824.4	8,820.6	3.78	2,331.481	
1,500.0	1,500.0	1,526.9	1,526.9	3.2	0.6	-21.69	-1,043.5	-8,763.1	8,823.6	8,819.7	3.85	2,292.567	
1,574.8	1,574.7	1,600.0	1,600.0	3.4	0.6	-21.72	-1,043.3	-8,762.5	8,819.7	8,815.6	4.04	2,182.745	
1,600.0	1,599.8	1,627.9	1,627.9	3.4	0.7	-21.74	-1,043.2	-8,762.3	8,818.0	8,813.8	4.11	2,147.148	
1,673.2	1,672.8	1,677.9	1,677.9	3.6	0.7	-21.79	-1,043.0	-8,762.1	8,811.9	8,807.6	4.29	2,053.637	
1,700.0	1,699.5	1,700.0	1,700.0	3.7	0.7	-21.82	-1,042.9	-8,762.0	8,809.3	8,805.0	4.36	2,020.574	
1,771.6	1,770.6	1,830.4	1,830.4	3.8	0.7	-21.91	-1,042.3	-8,761.0	8,800.9	8,796.3	4.58	1,923.013	
1,800.0	1,798.7	1,851.7	1,851.7	3.9	0.8	-21.95	-1,042.1	-8,760.8	8,797.1	8,792.4	4.65	1,891.774	
1,870.1	1,868.0	1,900.0	1,900.0	4.1	0.8	-22.04	-1,041.6	-8,760.4	8,786.6	8,781.8	4.84	1,816.988	
1,900.0	1,897.5	1,930.4	1,930.4	4.2	0.8	-22.09	-1,041.3	-8,760.2	8,781.7	8,776.8	4.92	1,786.107	
1,968.5	1,964.8	1,989.0	1,989.0	4.4	0.8	-22.21	-1,040.9	-8,759.9	8,769.4	8,764.3	5.10	1,717.957	
2,000.0	1,995.6	2,038.4	2,038.3	4.5	0.8	-22.28	-1,040.9	-8,759.5	8,763.3	8,758.1	5.20	1,684.910	
2,066.9	2,060.9	2,100.0	2,100.0	4.7	0.9	-22.43	-1,040.8	-8,758.9	8,749.0	8,743.6	5.40	1,620.405	
2,100.0	2,093.1	2,134.0	2,133.9	4.8	0.9	-22.51	-1,040.8	-8,758.5	8,741.4	8,735.9	5.49	1,591.444	
2,165.3	2,156.3	2,165.6	2,165.5	5.1	0.9	-22.65	-1,040.9	-8,758.3	8,725.6	8,720.0	5.68	1,536.319	
2,200.0	2,189.6	2,200.0	2,200.0	5.2	0.9	-22.75	-1,041.0	-8,758.2	8,716.9	8,711.1	5.78	1,507.608	
2,263.8	2,250.7	2,237.4	2,237.3	5.5	0.9	-22.92	-1,041.1	-8,758.1	8,699.8	8,693.8	5.98	1,455.788	
2,280.0	2,266.2	2,259.9	2,259.8	5.6	0.9	-22.97	-1,041.3	-8,758.0	8,695.2	8,689.2	6.03	1,442.524	
2,300.0	2,285.3	2,287.5	2,287.5	5.7	0.9	-23.00	-1,041.5	-8,757.9	8,689.6	8,683.5	6.09	1,426.729	
2,362.2	2,344.6	2,340.0	2,340.0	6.0	0.9	-23.04	-1,041.9	-8,757.6	8,671.9	8,665.6	6.28	1,381.188	
2,400.0	2,380.6	2,368.5	2,368.5	6.2	0.9	-23.07	-1,042.1	-8,757.5	8,661.2	8,654.8	6.40	1,352.583	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,438.4	2,400.0	2,399.9	6.5	0.9	-23.09	-1,042.1	-8,757.5	8,644.1	8,637.5	6.59	1,310.954	
2,500.0	2,475.9	2,432.1	2,432.0	6.7	0.9	-23.12	-1,042.2	-8,757.5	8,633.1	8,626.4	6.71	1,286.152	
2,559.0	2,532.2	2,464.6	2,464.5	7.0	0.9	-23.15	-1,042.2	-8,757.5	8,616.7	8,609.8	6.90	1,249.438	
2,600.0	2,571.2	2,500.0	2,499.9	7.2	0.9	-23.17	-1,042.3	-8,757.7	8,605.5	8,598.5	7.02	1,225.012	
2,657.5	2,626.0	2,578.9	2,578.9	7.5	0.9	-23.24	-1,042.4	-8,758.1	8,589.7	8,582.4	7.22	1,190.147	
2,700.0	2,666.6	2,628.5	2,628.4	7.8	0.9	-23.28	-1,042.4	-8,758.1	8,577.8	8,570.4	7.36	1,165.574	
2,755.9	2,719.8	2,676.2	2,676.1	8.1	0.9	-23.32	-1,042.4	-8,758.1	8,562.2	8,554.7	7.55	1,134.736	
2,800.0	2,761.9	2,711.9	2,711.9	8.3	0.9	-23.35	-1,042.3	-8,758.2	8,549.9	8,542.2	7.69	1,111.208	
2,854.3	2,813.7	2,751.9	2,751.9	8.7	0.9	-23.38	-1,042.0	-8,758.4	8,534.9	8,527.0	7.88	1,082.816	
2,900.0	2,857.2	2,785.6	2,785.6	8.9	1.0	-23.41	-1,041.5	-8,758.5	8,522.3	8,514.2	8.04	1,059.936	
2,952.7	2,907.5	2,824.5	2,824.5	9.2	1.0	-23.43	-1,040.9	-8,758.8	8,507.8	8,499.6	8.23	1,034.373	
3,000.0	2,952.5	2,859.4	2,859.3	9.5	1.0	-23.46	-1,040.3	-8,759.1	8,494.9	8,486.5	8.39	1,012.386	
3,051.2	3,001.3	2,900.0	2,899.9	9.8	1.0	-23.49	-1,039.7	-8,759.5	8,481.0	8,472.4	8.57	989.279	
3,100.0	3,047.8	3,075.7	3,075.6	10.1	1.0	-23.62	-1,036.4	-8,759.9	8,467.2	8,458.4	8.80	962.130	
3,149.6	3,095.1	3,100.0	3,099.9	10.4	1.0	-23.63	-1,035.9	-8,759.7	8,453.0	8,444.0	8.98	941.155	
3,200.0	3,143.2	3,141.4	3,141.3	10.7	1.0	-23.66	-1,035.2	-8,759.6	8,438.7	8,429.5	9.16	920.868	
3,248.0	3,188.9	3,164.6	3,164.4	11.0	1.0	-23.68	-1,034.9	-8,759.6	8,425.2	8,415.8	9.34	902.488	
3,300.0	3,238.5	3,200.0	3,199.9	11.3	1.0	-23.71	-1,034.6	-8,759.6	8,410.7	8,401.2	9.52	883.090	
3,346.4	3,282.8	3,228.4	3,228.2	11.6	1.1	-23.73	-1,034.5	-8,759.7	8,397.8	8,388.1	9.69	866.431	
3,400.0	3,333.8	3,289.0	3,288.9	11.9	1.1	-23.78	-1,034.3	-8,759.9	8,383.0	8,373.1	9.89	847.264	
3,444.9	3,376.6	3,326.7	3,326.6	12.2	1.1	-23.82	-1,034.1	-8,760.0	8,370.6	8,360.5	10.06	831.860	
3,500.0	3,429.1	3,368.8	3,368.6	12.6	1.1	-23.85	-1,033.6	-8,760.1	8,355.4	8,345.1	10.27	813.599	
3,543.3	3,470.4	3,400.0	3,399.9	12.8	1.1	-23.87	-1,033.1	-8,760.3	8,343.4	8,333.0	10.43	799.742	
3,600.0	3,524.4	3,450.4	3,450.3	13.2	1.1	-23.91	-1,032.2	-8,760.7	8,327.9	8,317.3	10.65	782.060	
3,641.7	3,564.2	3,486.0	3,485.9	13.4	1.1	-23.94	-1,031.6	-8,761.0	8,316.5	8,305.7	10.81	769.479	
3,700.0	3,619.8	3,611.1	3,610.9	13.8	1.2	-24.03	-1,029.3	-8,761.5	8,300.4	8,289.3	11.06	750.438	
3,740.1	3,658.0	3,643.5	3,643.4	14.0	1.2	-24.05	-1,028.6	-8,761.5	8,289.1	8,277.9	11.22	738.921	
3,800.0	3,715.1	3,691.9	3,691.7	14.4	1.2	-24.09	-1,027.9	-8,761.5	8,272.3	8,260.9	11.45	722.376	
3,838.6	3,751.8	3,729.1	3,728.9	14.7	1.2	-24.12	-1,027.5	-8,761.5	8,261.6	8,250.0	11.60	711.936	
3,900.0	3,810.4	3,791.6	3,791.4	15.0	1.2	-24.17	-1,026.9	-8,761.5	8,244.4	8,232.5	11.85	695.788	
3,937.0	3,845.7	3,836.0	3,835.8	15.3	1.2	-24.21	-1,026.6	-8,761.5	8,234.0	8,222.0	12.00	686.122	
4,000.0	3,905.7	3,900.0	3,899.8	15.7	1.2	-24.27	-1,026.2	-8,761.3	8,216.3	8,204.0	12.26	670.360	
4,035.4	3,939.5	3,900.0	3,899.8	15.9	1.2	-24.27	-1,026.2	-8,761.3	8,206.4	8,194.0	12.39	662.560	
4,100.0	4,001.0	3,950.1	3,949.9	16.3	1.2	-24.31	-1,026.0	-8,761.3	8,188.4	8,175.8	12.63	648.249	
4,133.8	4,033.3	3,965.3	3,965.1	16.5	1.2	-24.32	-1,025.9	-8,761.3	8,179.1	8,166.4	12.76	641.037	
4,200.0	4,096.3	4,000.0	3,999.8	16.9	1.2	-24.36	-1,026.0	-8,761.5	8,161.2	8,148.2	13.01	627.371	
4,232.3	4,127.1	4,000.0	3,999.8	17.1	1.2	-24.36	-1,026.0	-8,761.5	8,152.5	8,139.4	13.13	621.037	
4,300.0	4,191.7	4,043.6	4,043.4	17.6	1.2	-24.40	-1,026.1	-8,762.0	8,134.5	8,121.1	13.39	607.703	
4,330.7	4,220.9	4,058.7	4,058.5	17.8	1.2	-24.41	-1,026.3	-8,762.2	8,126.4	8,112.9	13.50	601.867	
4,400.0	4,287.0	4,100.0	4,099.8	18.2	1.3	-24.45	-1,026.8	-8,762.9	8,108.4	8,094.7	13.77	589.019	
4,429.1	4,314.7	4,111.4	4,111.1	18.4	1.3	-24.46	-1,026.9	-8,763.1	8,100.9	8,087.0	13.88	583.760	
4,500.0	4,382.3	4,167.8	4,167.5	18.8	1.3	-24.52	-1,027.8	-8,764.3	8,082.8	8,068.6	14.16	570.980	
4,527.5	4,408.6	4,189.7	4,189.4	19.0	1.3	-24.54	-1,028.1	-8,764.7	8,075.7	8,061.5	14.26	566.143	
4,600.0	4,477.6	4,248.8	4,248.5	19.5	1.3	-24.60	-1,028.9	-8,766.0	8,057.3	8,042.8	14.55	553.647	
4,626.0	4,502.4	4,270.1	4,269.8	19.6	1.3	-24.62	-1,029.2	-8,766.5	8,050.7	8,036.1	14.66	549.270	
4,700.0	4,572.9	4,327.0	4,326.7	20.1	1.3	-24.68	-1,029.7	-8,767.9	8,032.1	8,017.1	14.95	537.168	
4,724.4	4,596.2	4,344.5	4,344.2	20.3	1.3	-24.69	-1,029.8	-8,768.3	8,026.0	8,010.9	15.05	533.292	
4,800.0	4,668.3	4,400.0	4,399.7	20.7	1.3	-24.75	-1,030.2	-8,769.9	8,007.1	7,991.8	15.35	521.579	
4,822.8	4,690.0	4,415.3	4,414.9	20.9	1.3	-24.76	-1,030.3	-8,770.3	8,001.5	7,986.0	15.44	518.145	
4,900.0	4,763.6	4,470.5	4,470.2	21.4	1.3	-24.81	-1,030.7	-8,772.0	7,982.5	7,966.7	15.75	506.782	
4,921.2	4,783.8	4,485.8	4,485.4	21.5	1.3	-24.83	-1,030.8	-8,772.5	7,977.3	7,961.4	15.84	503.727	
5,000.0	4,858.9	4,618.9	4,618.5	22.0	1.3	-24.96	-1,031.9	-8,776.3	7,957.7	7,941.5	16.19	491.582	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,019.7	4,877.7	4,633.5	4,633.1	22.1	1.3	-24.97	-1,032.0	-8,776.7	7,952.8	7,936.5	16.27	488.845		
5,100.0	4,954.2	4,700.0	4,699.6	22.6	1.3	-25.03	-1,032.2	-8,778.5	7,932.8	7,916.2	16.60	477.870		
5,118.1	4,971.5	4,700.0	4,699.6	22.8	1.3	-25.03	-1,032.2	-8,778.5	7,928.3	7,911.6	16.67	475.640		
5,171.8	5,022.7	4,751.0	4,750.6	23.1	1.3	-25.08	-1,032.3	-8,780.0	7,915.0	7,898.1	16.89	468.558		
5,200.0	5,049.6	4,774.0	4,773.5	23.3	1.3	-25.04	-1,032.4	-8,780.7	7,908.2	7,891.2	16.97	465.909		
5,216.5	5,065.4	4,787.4	4,786.9	23.3	1.3	-25.02	-1,032.5	-8,781.1	7,904.3	7,887.3	17.01	464.554		
5,300.0	5,145.7	4,937.7	4,937.2	23.7	1.3	-24.99	-1,033.6	-8,785.0	7,885.6	7,868.3	17.26	456.923		
5,314.9	5,160.1	4,955.3	4,954.8	23.8	1.3	-24.98	-1,033.6	-8,785.4	7,882.4	7,865.1	17.29	455.794		
5,400.0	5,242.7	5,033.4	5,032.8	24.1	1.4	-24.89	-1,033.5	-8,787.1	7,865.6	7,848.1	17.48	449.915		
5,413.4	5,255.7	5,042.9	5,042.3	24.2	1.4	-24.88	-1,033.5	-8,787.3	7,863.2	7,845.7	17.51	449.128		
5,500.0	5,340.5	5,100.0	5,099.4	24.5	1.4	-24.79	-1,033.2	-8,788.8	7,849.0	7,831.3	17.67	444.236		
5,511.8	5,352.1	5,114.8	5,114.2	24.5	1.4	-24.78	-1,033.1	-8,789.2	7,847.3	7,829.6	17.69	443.603		
5,600.0	5,439.0	5,185.6	5,185.0	24.8	1.4	-24.72	-1,032.6	-8,791.2	7,835.8	7,818.0	17.84	439.311		
5,610.2	5,449.1	5,200.0	5,199.4	24.8	1.4	-24.71	-1,032.5	-8,791.6	7,834.7	7,816.8	17.85	438.844		
5,700.0	5,538.0	5,383.3	5,382.6	25.1	1.4	-24.69	-1,029.8	-8,795.6	7,824.9	7,806.8	18.01	434.365		
5,708.6	5,546.6	5,391.8	5,391.1	25.1	1.4	-24.68	-1,029.7	-8,795.8	7,824.0	7,806.0	18.03	434.054		
5,800.0	5,637.4	5,493.1	5,492.3	25.3	1.5	-24.64	-1,027.9	-8,797.7	7,816.8	7,798.7	18.14	430.803		
5,807.1	5,644.5	5,501.3	5,500.6	25.3	1.5	-24.64	-1,027.8	-8,797.8	7,816.3	7,798.2	18.15	430.588		
5,900.0	5,737.2	5,600.0	5,599.2	25.5	1.5	-24.60	-1,025.9	-8,799.3	7,811.6	7,793.4	18.26	427.845		
5,905.5	5,742.6	5,600.0	5,599.2	25.5	1.5	-24.60	-1,025.9	-8,799.3	7,811.4	7,793.2	18.26	427.735		
5,999.9	5,837.0	5,676.0	5,675.2	25.6	1.5	-24.58	-1,024.4	-8,800.6	7,809.8	7,791.4	18.35	425.504 CC		
6,000.0	5,837.1	5,676.1	5,675.3	25.6	1.5	-24.58	-1,024.4	-8,800.6	7,809.8	7,791.4	18.35	425.501		
6,003.9	5,841.0	5,678.4	5,677.7	25.6	1.5	-24.58	-1,024.3	-8,800.7	7,809.8	7,791.4	18.36	425.424		
6,051.8	5,888.9	5,721.4	5,720.6	25.7	1.5	-99.71	-1,023.6	-8,801.6	7,810.2	7,784.5	25.74	303.460 ES		
6,081.8	5,918.9	5,773.1	5,772.3	25.7	1.5	-99.70	-1,022.6	-8,802.6	7,810.7	7,784.9	25.78	302.947		
6,100.0	5,937.1	5,823.4	5,822.6	25.7	1.5	170.30	-1,021.4	-8,803.4	7,811.2	7,792.8	18.44	423.559		
6,102.3	5,939.4	5,844.6	5,843.7	25.7	1.5	170.31	-1,020.8	-8,803.7	7,811.3	7,792.8	18.44	423.571		
6,150.0	5,987.0	5,938.2	5,937.3	25.7	1.6	170.30	-1,017.7	-8,804.6	7,814.3	7,795.9	18.42	424.236		
6,200.0	6,036.5	5,983.9	5,983.0	25.7	1.6	170.22	-1,016.6	-8,804.9	7,820.8	7,802.4	18.41	424.755		
6,200.8	6,037.3	5,984.6	5,983.7	25.7	1.6	170.22	-1,016.6	-8,804.9	7,820.9	7,802.5	18.41	424.766		
6,250.0	6,085.5	6,000.0	5,999.1	25.7	1.6	170.09	-1,016.3	-8,805.0	7,830.8	7,812.4	18.40	425.578		
6,299.2	6,133.0	6,047.7	6,046.8	25.6	1.6	169.92	-1,015.3	-8,805.4	7,843.9	7,825.5	18.38	426.665		
6,300.0	6,133.7	6,048.2	6,047.2	25.6	1.6	169.92	-1,015.3	-8,805.4	7,844.2	7,825.8	18.38	426.688		
6,350.0	6,180.9	6,076.5	6,075.6	25.5	1.6	169.69	-1,014.7	-8,805.7	7,861.0	7,842.6	18.34	428.730		
6,397.6	6,224.6	6,100.0	6,099.0	25.4	1.6	169.40	-1,014.2	-8,806.1	7,880.0	7,861.8	18.26	431.527		
6,400.0	6,226.7	6,100.0	6,099.0	25.4	1.6	169.38	-1,014.2	-8,806.1	7,881.1	7,862.8	18.26	431.696		
6,450.0	6,271.1	6,143.7	6,142.7	25.2	1.6	169.03	-1,013.2	-8,806.8	7,904.3	7,886.1	18.16	435.189		
6,496.0	6,310.4	6,177.2	6,176.2	25.1	1.6	168.63	-1,012.4	-8,807.3	7,928.4	7,910.3	18.06	439.071		
6,500.0	6,313.7	6,180.0	6,179.0	25.1	1.6	168.59	-1,012.3	-8,807.4	7,930.6	7,912.5	18.05	439.418		
6,550.0	6,354.4	6,233.8	6,232.8	25.0	1.7	168.08	-1,011.0	-8,808.3	7,959.7	7,941.7	17.94	443.764		
6,594.5	6,388.9	6,300.0	6,299.0	24.9	1.7	167.57	-1,009.2	-8,809.2	7,987.7	7,969.9	17.86	447.325		
6,600.0	6,393.0	6,300.0	6,299.0	24.9	1.7	167.49	-1,009.2	-8,809.2	7,991.4	7,973.5	17.84	447.883		
6,650.0	6,429.3	6,329.0	6,328.0	24.8	1.7	166.70	-1,008.3	-8,809.5	8,025.6	8,007.8	17.75	452.067		
6,692.9	6,458.5	6,349.5	6,348.4	24.7	1.7	165.88	-1,007.6	-8,809.8	8,056.9	8,039.2	17.72	454.777		
6,700.0	6,463.1	6,352.7	6,351.6	24.7	1.7	165.72	-1,007.5	-8,809.9	8,062.2	8,044.5	17.71	455.110		
6,750.0	6,494.3	6,374.4	6,373.3	24.7	1.7	164.51	-1,006.7	-8,810.2	8,101.1	8,083.4	17.76	456.031		
6,791.3	6,517.9	6,400.0	6,398.9	24.7	1.7	163.30	-1,005.8	-8,810.7	8,134.9	8,117.0	17.91	454.310		
6,800.0	6,522.6	6,400.0	6,398.9	24.7	1.7	162.99	-1,005.8	-8,810.7	8,142.1	8,124.2	17.95	453.693		
6,850.0	6,548.0	6,400.0	6,398.9	24.7	1.7	160.93	-1,005.8	-8,810.7	8,184.9	8,166.6	18.30	447.143		
6,889.7	6,566.0	6,400.0	6,398.9	24.8	1.7	158.83	-1,005.8	-8,810.7	8,220.2	8,201.4	18.77	437.872		
6,900.0	6,570.4	6,400.0	6,398.9	24.9	1.7	158.21	-1,005.8	-8,810.7	8,229.4	8,210.5	18.92	434.884		
6,950.0	6,589.5	6,400.0	6,398.9	25.1	1.7	154.47	-1,005.8	-8,810.7	8,275.4	8,255.5	19.89	416.051		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT PJ #2 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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	6,602.0	6,400.0	6,398.9	25.3	1.7	150.59	-1,005.8	-8,810.7	8,311.2	8,290.3	20.94	396.981	
7,000.0	6,605.4	6,400.0	6,398.9	25.3	1.7	149.13	-1,005.8	-8,810.7	8,322.5	8,301.2	21.32	390.356	
7,050.0	6,618.0	6,400.0	6,398.9	25.6	1.7	141.16	-1,005.8	-8,810.7	8,370.5	8,347.2	23.33	358.765	
7,086.6	6,625.0	6,400.0	6,398.9	25.9	1.7	132.64	-1,005.8	-8,810.7	8,406.2	8,381.0	25.16	334.073	
7,100.0	6,627.1	6,400.0	6,398.9	26.0	1.7	128.73	-1,005.8	-8,810.7	8,419.3	8,393.4	25.86	325.569	
7,150.0	6,632.8	6,400.0	6,398.9	26.5	1.7	109.58	-1,005.8	-8,810.7	8,468.5	8,440.5	27.96	302.888	
7,185.0	6,634.7	6,400.0	6,398.9	26.8	1.7	92.30	-1,005.8	-8,810.7	8,503.1	8,474.8	28.31	300.371	
7,200.0	6,635.0	6,400.0	6,398.9	27.0	1.7	84.56	-1,005.8	-8,810.7	8,517.9	8,489.5	28.37	300.240	
7,215.9	6,635.0	6,400.0	6,398.9	27.1	1.7	76.55	-1,005.8	-8,810.7	8,533.6	8,505.2	28.38	300.713	
7,283.4	6,634.1	6,400.0	6,398.9	27.9	1.7	76.55	-1,005.8	-8,810.7	8,600.3	8,571.1	29.19	294.642	
7,300.0	6,633.9	6,400.0	6,398.9	28.1	1.7	76.55	-1,005.8	-8,810.7	8,616.6	8,587.3	29.39	293.206	
7,381.9	6,632.9	6,400.0	6,398.9	29.3	1.7	76.55	-1,005.8	-8,810.7	8,697.5	8,667.0	30.53	284.871	
7,400.0	6,632.6	6,400.0	6,398.9	29.5	1.7	76.55	-1,005.8	-8,810.7	8,715.4	8,684.7	30.78	283.111	
7,480.3	6,631.6	6,400.0	6,398.9	30.8	1.7	76.55	-1,005.8	-8,810.7	8,794.8	8,762.8	32.05	274.367	
7,500.0	6,631.4	6,400.0	6,398.9	31.1	1.7	76.54	-1,005.8	-8,810.7	8,814.3	8,781.9	32.37	272.328	
7,578.7	6,630.4	6,400.0	6,398.9	32.5	1.7	76.54	-1,005.8	-8,810.7	8,892.1	8,858.4	33.74	263.582	
7,600.0	6,630.1	6,400.0	6,398.9	32.9	1.7	76.54	-1,005.8	-8,810.7	8,913.1	8,879.0	34.11	261.340	
7,677.1	6,629.1	6,400.0	6,398.9	34.3	1.7	76.54	-1,005.8	-8,810.7	8,989.4	8,953.9	35.55	252.867	
7,700.0	6,628.8	6,400.0	6,398.9	34.8	1.7	76.54	-1,005.8	-8,810.7	9,012.0	8,976.0	35.98	250.490	
7,775.6	6,627.8	6,400.0	6,398.9	36.3	1.7	76.54	-1,005.8	-8,810.7	9,086.8	9,049.3	37.48	242.462	
7,800.0	6,627.5	6,400.0	6,398.9	36.8	1.7	76.54	-1,005.8	-8,810.7	9,110.9	9,073.0	37.96	240.004	
7,874.0	6,626.6	6,400.0	6,398.9	38.4	1.7	76.54	-1,005.8	-8,810.7	9,184.1	9,144.6	39.50	232.511	
7,900.0	6,626.3	6,400.0	6,398.9	38.9	1.7	76.54	-1,005.8	-8,810.7	9,209.9	9,169.8	40.04	230.016	
7,972.4	6,625.3	6,400.0	6,398.9	40.5	1.7	76.54	-1,005.8	-8,810.7	9,281.5	9,239.9	41.60	223.097	
8,000.0	6,625.0	6,400.0	6,398.9	41.1	1.7	76.54	-1,005.8	-8,810.7	9,308.8	9,266.6	42.20	220.599	
8,070.8	6,624.1	6,400.0	6,398.9	42.7	1.7	76.54	-1,005.8	-8,810.7	9,378.9	9,335.2	43.77	214.255	
8,100.0	6,623.7	6,400.0	6,398.9	43.4	1.7	76.54	-1,005.8	-8,810.7	9,407.8	9,363.4	44.42	211.776	
8,169.3	6,622.8	6,400.0	6,398.9	45.0	1.7	76.54	-1,005.8	-8,810.7	9,476.4	9,430.4	46.00	205.988	
8,200.0	6,622.4	6,400.0	6,398.9	45.7	1.7	76.53	-1,005.8	-8,810.7	9,506.8	9,460.1	46.71	203.546	
8,267.7	6,621.6	6,400.0	6,398.9	47.4	1.7	76.53	-1,005.8	-8,810.7	9,573.8	9,525.5	48.28	198.281	
8,300.0	6,621.1	6,400.0	6,398.9	48.1	1.7	76.53	-1,005.8	-8,810.7	9,605.8	9,556.8	49.04	195.889	
8,366.1	6,620.3	6,400.0	6,398.9	49.7	1.7	76.53	-1,005.8	-8,810.7	9,671.3	9,620.7	50.61	191.108	
8,400.0	6,619.9	6,400.0	6,398.9	50.6	1.7	76.53	-1,005.8	-8,810.7	9,704.8	9,653.4	51.41	188.773	
8,464.5	6,619.0	6,400.0	6,398.9	52.2	1.7	76.53	-1,005.8	-8,810.7	9,768.8	9,715.8	52.97	184.436	
8,500.0	6,618.6	6,400.0	6,398.9	53.0	1.7	76.53	-1,005.8	-8,810.7	9,803.9	9,750.1	53.82	182.163	
8,563.0	6,617.8	6,400.0	6,398.9	54.6	1.7	76.53	-1,005.8	-8,810.7	9,866.3	9,810.9	55.36	178.232	
8,600.0	6,617.3	6,400.0	6,398.9	55.5	1.7	76.53	-1,005.8	-8,810.7	9,903.0	9,846.7	56.26	176.022	
8,661.4	6,616.5	6,400.0	6,398.9	57.1	1.7	76.53	-1,005.8	-8,810.7	9,963.8	9,906.0	57.78	172.458 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-86.29	627.1	-9,674.2	9,694.6				
98.4	98.4	81.4	81.4	0.1	0.0	-86.29	627.1	-9,674.2	9,694.5				
100.0	100.0	83.0	83.0	0.1	0.0	-86.29	627.1	-9,674.2	9,694.5	9,694.4	0.10	N/A	
196.8	196.8	179.8	179.8	0.3	1.0	-86.29	627.1	-9,674.2	9,694.5	9,693.2	1.30	7,433.706	
200.0	200.0	183.0	183.0	0.3	1.0	-86.29	627.1	-9,674.2	9,694.5	9,693.2	1.35	7,179.996	
295.3	295.3	278.3	278.3	0.5	3.0	-86.29	627.1	-9,674.2	9,694.5	9,691.0	3.56	2,723.007	
300.0	300.0	283.0	283.0	0.5	3.1	-86.29	627.1	-9,674.2	9,694.5	9,690.9	3.68	2,635.369	
393.7	393.7	376.7	376.7	0.8	5.1	-86.29	627.1	-9,674.2	9,694.5	9,688.7	5.87	1,651.403	
400.0	400.0	383.0	383.0	0.8	5.2	-86.29	627.1	-9,674.2	9,694.5	9,688.5	6.02	1,611.584	
492.1	492.1	475.1	475.1	1.0	7.1	-86.29	627.1	-9,674.2	9,694.5	9,686.4	8.11	1,195.406	
500.0	500.0	483.0	483.0	1.0	7.3	-86.29	627.1	-9,674.2	9,694.5	9,686.2	8.29	1,169.660	
590.5	590.5	573.5	573.5	1.2	9.1	-86.29	627.1	-9,674.2	9,694.5	9,684.2	10.33	938.364	
600.0	600.0	583.0	583.0	1.2	9.3	-86.29	627.1	-9,674.2	9,694.5	9,684.0	10.54	919.411	
689.0	689.0	672.0	672.0	1.4	11.1	-86.29	627.1	-9,674.2	9,694.5	9,682.0	12.55	772.776	
700.0	700.0	683.0	683.0	1.4	11.3	-86.29	627.1	-9,674.2	9,694.5	9,681.7	12.79	757.808	
787.4	787.4	770.4	770.4	1.6	13.1	-86.29	627.1	-9,674.2	9,694.5	9,679.8	14.75	657.045	
800.0	800.0	783.0	783.0	1.7	13.4	-86.29	627.1	-9,674.2	9,694.5	9,679.5	15.04	644.691	
885.8	885.8	868.8	868.8	1.9	15.1	-86.29	627.1	-9,674.2	9,694.5	9,677.6	16.96	571.545	
900.0	900.0	883.0	883.0	1.9	15.4	-86.29	627.1	-9,674.2	9,694.5	9,677.3	17.28	561.034	
984.2	984.2	967.2	967.2	2.1	17.1	-86.29	627.1	-9,674.2	9,694.5	9,675.4	19.17	505.777	
1,000.0	1,000.0	983.0	983.0	2.1	17.4	-86.29	627.1	-9,674.2	9,694.5	9,675.0	19.52	496.634	
1,082.7	1,082.7	1,065.7	1,065.7	2.3	19.1	-86.29	627.1	-9,674.2	9,694.5	9,673.2	21.37	453.605	
1,100.0	1,100.0	1,083.0	1,083.0	2.3	19.4	-86.29	627.1	-9,674.2	9,694.5	9,672.8	21.76	445.517	
1,181.1	1,181.1	1,164.1	1,164.1	2.5	21.0	-86.29	627.1	-9,674.2	9,694.5	9,671.0	23.58	411.204	
1,200.0	1,200.0	1,183.0	1,183.0	2.6	21.4	-86.29	627.1	-9,674.2	9,694.5	9,670.5	24.00	403.954	
1,279.5	1,279.5	1,262.5	1,262.5	2.7	23.0	-86.29	627.1	-9,674.2	9,694.5	9,668.8	25.78	376.060	
1,300.0	1,300.0	1,283.0	1,283.0	2.8	23.4	-86.29	627.1	-9,674.2	9,694.5	9,668.3	26.24	369.492	
1,377.9	1,377.9	1,360.9	1,360.9	3.0	25.0	-86.29	627.1	-9,674.2	9,694.5	9,666.6	27.98	346.456	
1,400.0	1,400.0	1,383.0	1,383.0	3.0	25.5	-86.29	627.1	-9,674.2	9,694.5	9,666.1	28.48	340.453	
1,476.4	1,476.4	1,459.4	1,459.4	3.2	27.0	-11.17	627.1	-9,674.2	9,693.5	9,663.4	30.17	321.336	
1,500.0	1,500.0	1,483.0	1,483.0	3.2	27.5	-11.17	627.1	-9,674.2	9,692.8	9,662.1	30.68	315.885	
1,574.8	1,574.7	1,557.7	1,557.7	3.4	29.0	-11.19	627.1	-9,674.2	9,689.3	9,657.0	32.30	299.944	
1,600.0	1,599.8	1,582.8	1,582.8	3.4	29.5	-11.20	627.1	-9,674.2	9,687.7	9,654.8	32.84	294.972	
1,673.2	1,672.8	1,655.8	1,655.8	3.6	30.9	-11.23	627.1	-9,674.2	9,681.8	9,647.4	34.39	281.508	
1,700.0	1,699.5	1,682.5	1,682.5	3.7	31.5	-11.24	627.1	-9,674.2	9,679.1	9,644.2	34.95	276.934	
1,771.6	1,770.6	1,753.6	1,753.6	3.8	32.9	-11.29	627.1	-9,674.2	9,670.9	9,634.5	36.43	265.488	
1,800.0	1,798.7	1,781.7	1,781.7	3.9	33.5	-11.30	627.1	-9,674.2	9,667.2	9,630.2	37.00	261.268	
1,870.1	1,868.0	1,851.0	1,851.0	4.1	34.9	-11.36	627.1	-9,674.2	9,656.8	9,618.4	38.40	251.484	
1,900.0	1,897.5	1,880.5	1,880.5	4.2	35.5	-11.38	627.1	-9,674.2	9,651.8	9,612.9	38.98	247.580	
1,968.5	1,964.8	1,947.8	1,947.8	4.4	36.8	-11.45	627.1	-9,674.2	9,639.4	9,599.1	40.30	239.177	
2,000.0	1,995.6	1,978.6	1,978.6	4.5	37.4	-11.48	627.1	-9,674.2	9,633.1	9,592.2	40.89	235.560	
2,066.9	2,060.9	2,043.9	2,043.9	4.7	38.8	-11.56	627.1	-9,674.2	9,618.7	9,576.6	42.13	228.313	
2,100.0	2,093.1	2,076.1	2,076.1	4.8	39.4	-11.60	627.1	-9,674.2	9,611.1	9,568.3	42.72	224.957	
2,165.3	2,156.3	2,139.3	2,139.3	5.1	40.7	-11.69	627.1	-9,674.2	9,594.9	9,551.0	43.87	218.687	
2,200.0	2,189.6	2,172.6	2,172.6	5.2	41.3	-11.74	627.1	-9,674.2	9,585.7	9,541.2	44.47	215.569	
2,263.8	2,250.7	2,233.7	2,233.7	5.5	42.6	-11.83	627.1	-9,674.2	9,567.8	9,522.2	45.53	210.132	
2,280.0	2,266.2	2,249.2	2,249.2	5.6	42.9	-11.86	627.1	-9,674.2	9,563.0	9,517.2	45.80	208.819	
2,300.0	2,285.3	2,268.3	2,268.3	5.7	43.3	-11.87	627.1	-9,674.2	9,557.1	9,510.9	46.21	206.805	
2,362.2	2,344.6	2,327.6	2,327.6	6.0	44.5	-11.89	627.1	-9,674.2	9,538.6	9,491.1	47.51	200.780	
2,400.0	2,380.6	2,363.6	2,363.6	6.2	45.2	-11.91	627.1	-9,674.2	9,527.4	9,479.1	48.31	197.230	
2,460.6	2,438.4	2,421.4	2,421.4	6.5	46.3	-11.93	627.1	-9,674.2	9,509.5	9,459.9	49.58	191.804	
2,500.0	2,475.9	2,458.9	2,458.9	6.7	47.1	-11.94	627.1	-9,674.2	9,497.8	9,447.4	50.41	188.422	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,515.2	2,515.2	7.0	48.2	-11.97	627.1	-9,674.2	9,480.3	9,428.6	51.65	183.545	
2,600.0	2,571.2	2,554.2	2,554.2	7.2	49.0	-11.98	627.1	-9,674.2	9,468.2	9,415.6	52.51	180.296	
2,657.5	2,626.0	2,609.0	2,609.0	7.5	50.1	-12.00	627.1	-9,674.2	9,451.1	9,397.4	53.73	175.904	
2,700.0	2,666.6	2,649.6	2,649.6	7.8	50.9	-12.02	627.1	-9,674.2	9,438.5	9,383.9	54.63	172.779	
2,755.9	2,719.8	2,702.8	2,702.8	8.1	52.0	-12.04	627.1	-9,674.2	9,421.9	9,366.1	55.81	168.817	
2,800.0	2,761.9	2,744.9	2,744.9	8.3	52.9	-12.06	627.1	-9,674.2	9,408.9	9,352.1	56.75	165.808	
2,854.3	2,813.7	2,796.7	2,796.7	8.7	53.9	-12.08	627.1	-9,674.2	9,392.8	9,334.9	57.90	162.228	
2,900.0	2,857.2	2,840.2	2,840.2	8.9	54.8	-12.10	627.1	-9,674.2	9,379.3	9,320.4	58.87	159.326	
2,952.7	2,907.5	2,890.5	2,890.5	9.2	55.8	-12.12	627.1	-9,674.2	9,363.6	9,303.6	59.99	156.087	
3,000.0	2,952.5	2,935.5	2,935.5	9.5	56.7	-12.13	627.1	-9,674.2	9,349.6	9,288.6	60.99	153.287	
3,051.2	3,001.3	2,984.3	2,984.3	9.8	57.7	-12.15	627.1	-9,674.2	9,334.5	9,272.4	62.08	150.352	
3,100.0	3,047.8	3,030.8	3,030.8	10.1	58.6	-12.17	627.1	-9,674.2	9,320.0	9,256.9	63.12	147.646	
3,149.6	3,095.1	3,078.1	3,078.1	10.4	59.6	-12.19	627.1	-9,674.2	9,305.3	9,241.1	64.18	144.984	
3,200.0	3,143.2	3,126.2	3,126.2	10.7	60.5	-12.21	627.1	-9,674.2	9,290.4	9,225.1	65.26	142.366	
3,248.0	3,188.9	3,171.9	3,171.9	11.0	61.4	-12.23	627.1	-9,674.2	9,276.2	9,209.9	66.28	139.949	
3,300.0	3,238.5	3,221.5	3,221.5	11.3	62.4	-12.25	627.1	-9,674.2	9,260.8	9,193.4	67.39	137.416	
3,346.4	3,282.8	3,265.8	3,265.8	11.6	63.3	-12.27	627.1	-9,674.2	9,247.0	9,178.6	68.39	135.219	
3,400.0	3,333.8	3,316.8	3,316.8	11.9	64.4	-12.29	627.1	-9,674.2	9,231.2	9,161.6	69.53	132.765	
3,444.9	3,376.6	3,359.6	3,359.6	12.2	65.2	-12.31	627.1	-9,674.2	9,217.9	9,147.4	70.49	130.767	
3,500.0	3,429.1	3,412.1	3,412.1	12.6	66.3	-12.33	627.1	-9,674.2	9,201.6	9,129.9	71.67	128.387	
3,543.3	3,470.4	3,453.4	3,453.4	12.8	67.1	-12.35	627.1	-9,674.2	9,188.8	9,116.2	72.60	126.570	
3,600.0	3,524.4	3,507.4	3,507.4	13.2	68.2	-12.37	627.1	-9,674.2	9,172.0	9,098.2	73.81	124.260	
3,641.7	3,564.2	3,547.2	3,547.2	13.4	69.0	-12.39	627.1	-9,674.2	9,159.6	9,084.9	74.71	122.606	
3,700.0	3,619.8	3,602.8	3,602.8	13.8	70.1	-12.41	627.1	-9,674.2	9,142.4	9,066.4	75.96	120.362	
3,740.1	3,658.0	3,641.0	3,641.0	14.0	70.9	-12.43	627.1	-9,674.2	9,130.5	9,053.7	76.82	118.858	
3,800.0	3,715.1	3,698.1	3,698.1	14.4	72.0	-12.45	627.1	-9,674.2	9,112.8	9,034.7	78.10	116.677	
3,838.6	3,751.8	3,734.8	3,734.8	14.7	72.8	-12.47	627.1	-9,674.2	9,101.4	9,022.4	78.93	115.307	
3,900.0	3,810.4	3,793.4	3,793.4	15.0	73.9	-12.50	627.1	-9,674.2	9,083.2	9,002.9	80.25	113.186	
3,937.0	3,845.7	3,828.7	3,828.7	15.3	74.7	-12.51	627.1	-9,674.2	9,072.3	8,991.2	81.05	111.940	
4,000.0	3,905.7	3,888.7	3,888.7	15.7	75.9	-12.54	627.1	-9,674.2	9,053.6	8,971.2	82.40	109.875	
4,035.4	3,939.5	3,922.5	3,922.5	15.9	76.5	-12.55	627.1	-9,674.2	9,043.1	8,960.0	83.16	108.742	
4,100.0	4,001.0	3,984.0	3,984.0	16.3	77.8	-12.58	627.1	-9,674.2	9,024.0	8,939.5	84.55	106.730	
4,133.8	4,033.3	4,016.3	4,016.3	16.5	78.4	-12.59	627.1	-9,674.2	9,014.0	8,928.7	85.28	105.701	
4,200.0	4,096.3	4,079.3	4,079.3	16.9	79.7	-12.62	627.1	-9,674.2	8,994.5	8,907.8	86.70	103.740	
4,232.3	4,127.1	4,110.1	4,110.1	17.1	80.3	-12.63	627.1	-9,674.2	8,984.9	8,897.5	87.40	102.806	
4,300.0	4,191.7	4,174.7	4,174.7	17.6	81.6	-12.66	627.1	-9,674.2	8,964.9	8,876.0	88.85	100.894	
4,330.7	4,220.9	4,203.9	4,203.9	17.8	82.2	-12.67	627.1	-9,674.2	8,955.8	8,866.3	89.52	100.047	
4,400.0	4,287.0	4,270.0	4,270.0	18.2	83.5	-12.70	627.1	-9,674.2	8,935.3	8,844.3	91.01	98.181	
4,429.1	4,314.7	4,297.7	4,297.7	18.4	84.1	-12.72	627.1	-9,674.2	8,926.7	8,835.1	91.64	97.415	
4,500.0	4,382.3	4,365.3	4,365.3	18.8	85.4	-12.75	627.1	-9,674.2	8,905.8	8,812.6	93.16	95.592	
4,527.5	4,408.6	4,391.6	4,391.6	19.0	86.0	-12.76	627.1	-9,674.2	8,897.6	8,803.9	93.76	94.900	
4,600.0	4,477.6	4,460.6	4,460.6	19.5	87.4	-12.79	627.1	-9,674.2	8,876.2	8,780.9	95.32	93.120	
4,626.0	4,502.4	4,485.4	4,485.4	19.6	87.9	-12.80	627.1	-9,674.2	8,868.5	8,772.7	95.88	92.496	
4,700.0	4,572.9	4,555.9	4,555.9	20.1	89.3	-12.83	627.1	-9,674.2	8,846.7	8,749.2	97.48	90.756	
4,724.4	4,596.2	4,579.2	4,579.2	20.3	89.7	-12.84	627.1	-9,674.2	8,839.4	8,741.4	98.00	90.195	
4,800.0	4,668.3	4,651.3	4,651.3	20.7	91.2	-12.88	627.1	-9,674.2	8,817.1	8,717.5	99.64	88.493	
4,822.8	4,690.0	4,673.0	4,673.0	20.9	91.6	-12.89	627.1	-9,674.2	8,810.4	8,710.2	100.13	87.991	
4,900.0	4,763.6	4,746.6	4,746.6	21.4	93.1	-12.92	627.1	-9,674.2	8,787.6	8,685.8	101.79	86.326	
4,921.2	4,783.8	4,766.8	4,766.8	21.5	93.5	-12.93	627.1	-9,674.2	8,781.3	8,679.0	102.25	85.877	
5,000.0	4,858.9	4,841.9	4,841.9	22.0	95.0	-12.96	627.1	-9,674.2	8,758.0	8,654.1	103.95	84.248	
5,019.7	4,877.7	4,860.7	4,860.7	22.1	95.4	-12.97	627.1	-9,674.2	8,752.2	8,647.8	104.38	83.849	
5,100.0	4,954.2	4,937.2	4,937.2	22.6	96.9	-13.01	627.1	-9,674.2	8,728.5	8,622.4	106.12	82.254	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,954.5	4,954.5	22.8	97.3	-13.02	627.1	-9,674.2	8,723.2	8,616.6	106.51	81.902	
5,171.8	5,022.7	5,005.7	5,005.7	23.1	98.3	-13.04	627.1	-9,674.2	8,707.3	8,599.6	107.67	80.872	
5,200.0	5,049.6	5,032.6	5,032.6	23.3	98.9	-13.02	627.1	-9,674.2	8,699.1	8,590.6	108.55	80.140	
5,216.5	5,065.4	5,048.4	5,048.4	23.3	99.2	-13.00	627.1	-9,674.2	8,694.4	8,585.4	109.06	79.722	
5,300.0	5,145.7	5,128.7	5,128.7	23.7	100.8	-12.93	627.1	-9,674.2	8,672.1	8,560.5	111.61	77.703	
5,314.9	5,160.1	5,143.1	5,143.1	23.8	101.1	-12.92	627.1	-9,674.2	8,668.4	8,556.3	112.05	77.358	
5,400.0	5,242.7	5,225.7	5,225.7	24.1	102.7	-12.86	627.1	-9,674.2	8,648.5	8,533.9	114.58	75.482	
5,413.4	5,255.7	5,238.7	5,238.7	24.2	103.0	-12.85	627.1	-9,674.2	8,645.5	8,530.6	114.97	75.201	
5,500.0	5,340.5	5,323.5	5,323.5	24.5	104.7	-12.80	627.1	-9,674.2	8,628.1	8,510.7	117.45	73.463	
5,511.8	5,352.1	5,335.1	5,335.1	24.5	104.9	-12.79	627.1	-9,674.2	8,625.9	8,508.1	117.78	73.238	
5,600.0	5,439.0	5,422.0	5,422.0	24.8	106.7	-12.74	627.1	-9,674.2	8,611.1	8,490.9	120.21	71.632	
5,610.2	5,449.1	5,432.1	5,432.1	24.8	106.9	-12.74	627.1	-9,674.2	8,609.5	8,489.1	120.49	71.455	
5,700.0	5,538.0	5,521.0	5,521.0	25.1	108.7	-12.70	627.1	-9,674.2	8,597.4	8,474.6	122.86	69.978	
5,708.6	5,546.6	5,529.6	5,529.6	25.1	108.9	-12.70	627.1	-9,674.2	8,596.4	8,473.3	123.08	69.843	
5,800.0	5,637.4	5,620.4	5,620.4	25.3	110.7	-12.67	627.1	-9,674.2	8,587.2	8,461.8	125.38	68.491	
5,807.1	5,644.5	5,627.5	5,627.5	25.3	110.8	-12.67	627.1	-9,674.2	8,586.6	8,461.0	125.55	68.392	
5,900.0	5,737.2	5,720.2	5,720.2	25.5	112.7	-12.65	627.1	-9,674.2	8,580.3	8,452.6	127.76	67.161	
5,905.5	5,742.6	5,725.6	5,725.6	25.5	112.8	-12.65	627.1	-9,674.2	8,580.0	8,452.2	127.88	67.092	
6,000.0	5,837.1	5,820.1	5,820.1	25.6	114.7	-12.64	627.1	-9,674.2	8,576.9	8,446.9	129.99	65.981	
6,003.9	5,841.0	5,824.0	5,824.0	25.6	114.8	-12.64	627.1	-9,674.2	8,576.8	8,446.7	130.07	65.937	
6,051.8	5,888.9	5,871.9	5,871.9	25.7	115.7	-87.77	627.1	-9,674.2	8,576.4	8,435.3	141.05	60.805	
6,081.8	5,918.9	5,901.9	5,901.9	25.7	116.3	-87.77	627.1	-9,674.2	8,576.4	8,434.7	141.68	60.533 CC, ES, SF	
6,100.0	5,937.1	5,920.1	5,920.1	25.7	116.7	-177.77	627.1	-9,674.2	8,576.6	8,444.6	132.03	64.962	
6,102.3	5,939.4	5,922.4	5,922.4	25.7	116.8	-177.77	627.1	-9,674.2	8,576.7	8,444.6	132.06	64.948	
6,150.0	5,987.0	5,970.0	5,970.0	25.7	117.7	-177.76	627.1	-9,674.2	8,579.6	8,447.3	132.36	64.819	
6,200.0	6,036.5	6,019.5	6,019.5	25.7	118.7	-177.74	627.1	-9,674.2	8,586.1	8,454.1	132.04	65.028	
6,200.8	6,037.3	6,020.3	6,020.3	25.7	118.7	-177.74	627.1	-9,674.2	8,586.2	8,454.2	132.03	65.034	
6,250.0	6,085.5	6,068.5	6,068.5	25.7	119.7	-177.71	627.1	-9,674.2	8,596.0	8,465.0	131.04	65.600	
6,299.2	6,133.0	6,116.0	6,116.0	25.6	120.7	-177.67	627.1	-9,674.2	8,609.1	8,479.7	129.39	66.537	
6,300.0	6,133.7	6,116.7	6,116.7	25.6	120.7	-177.67	627.1	-9,674.2	8,609.3	8,480.0	129.36	66.555	
6,350.0	6,180.9	6,163.9	6,163.9	25.5	121.6	-177.62	627.1	-9,674.2	8,626.0	8,499.0	126.99	67.924	
6,397.6	6,224.6	6,207.6	6,207.6	25.4	122.5	-177.55	627.1	-9,674.2	8,644.9	8,520.7	124.11	69.653	
6,400.0	6,226.7	6,209.7	6,209.7	25.4	122.5	-177.55	627.1	-9,674.2	8,645.9	8,521.9	123.95	69.751	
6,450.0	6,271.1	6,254.1	6,254.1	25.2	123.4	-177.47	627.1	-9,674.2	8,668.9	8,548.7	120.25	72.093	
6,496.0	6,310.4	6,293.4	6,293.4	25.1	124.2	-177.37	627.1	-9,674.2	8,692.8	8,576.5	116.26	74.773	
6,500.0	6,313.7	6,296.7	6,296.7	25.1	124.3	-177.36	627.1	-9,674.2	8,695.0	8,579.1	115.89	75.029	
6,550.0	6,354.4	6,337.4	6,337.4	25.0	125.1	-177.24	627.1	-9,674.2	8,723.9	8,613.0	110.90	78.662	
6,594.5	6,388.9	6,371.9	6,371.9	24.9	125.8	-177.10	627.1	-9,674.2	8,752.1	8,646.1	105.97	82.590	
6,600.0	6,393.0	6,376.0	6,376.0	24.9	125.9	-177.09	627.1	-9,674.2	8,755.7	8,650.4	105.33	83.130	
6,650.0	6,429.3	6,412.3	6,412.3	24.8	126.6	-176.90	627.1	-9,674.2	8,790.0	8,690.9	99.20	88.614	
6,692.9	6,458.5	6,441.5	6,441.5	24.7	127.2	-176.70	627.1	-9,674.2	8,821.5	8,728.0	93.53	94.313	
6,700.0	6,463.1	6,446.1	6,446.1	24.7	127.3	-176.67	627.1	-9,674.2	8,826.9	8,734.3	92.56	95.358	
6,750.0	6,494.3	6,477.3	6,477.3	24.7	127.9	-176.38	627.1	-9,674.2	8,865.9	8,780.4	85.50	103.692	
6,791.3	6,517.9	6,500.9	6,500.9	24.7	128.4	-176.08	627.1	-9,674.2	8,899.8	8,820.4	79.40	112.088	
6,800.0	6,522.6	6,505.6	6,505.6	24.7	128.5	-176.01	627.1	-9,674.2	8,907.1	8,829.0	78.09	114.056	
6,850.0	6,548.0	6,531.0	6,531.0	24.7	129.0	-175.53	627.1	-9,674.2	8,950.1	8,879.6	70.45	127.034	
6,889.7	6,566.0	6,549.0	6,549.0	24.8	129.4	-175.04	627.1	-9,674.2	8,985.5	8,921.2	64.32	139.689	
6,900.0	6,570.4	6,553.4	6,553.4	24.9	129.4	-174.89	627.1	-9,674.2	8,994.8	8,932.0	62.75	143.342	
6,950.0	6,589.5	6,572.5	6,572.5	25.1	129.8	-173.99	627.1	-9,674.2	9,040.9	8,985.7	55.26	163.603	
6,988.2	6,602.0	6,585.0	6,585.0	25.3	130.1	-173.02	627.1	-9,674.2	9,077.0	9,027.0	50.02	181.456	
7,000.0	6,605.4	6,588.4	6,588.4	25.3	130.2	-172.64	627.1	-9,674.2	9,088.3	9,039.7	48.56	187.148	
7,050.0	6,618.0	6,601.0	6,601.0	25.6	130.4	-170.44	627.1	-9,674.2	9,136.6	9,092.5	44.13	207.039	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT PJ #5 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	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	6,625.0	6,608.0	6,608.0	25.9	130.5	-167.70	627.1	-9,674.2	9,172.5	9,128.0	44.57	205.800	
7,100.0	6,627.1	6,610.1	6,610.1	26.0	130.6	-166.24	627.1	-9,674.2	9,185.8	9,139.5	46.24	198.642	
7,150.0	6,632.8	6,615.8	6,615.8	26.5	130.7	-155.45	627.1	-9,674.2	9,235.4	9,167.3	68.11	135.589	
7,185.0	6,634.7	6,617.7	6,617.7	26.8	130.7	-130.10	627.1	-9,674.2	9,270.3	9,149.7	120.67	76.821	
7,200.0	6,635.0	6,618.0	6,618.0	27.0	130.7	-104.70	627.1	-9,674.2	9,285.3	9,133.1	152.23	60.997	
7,215.9	6,635.0	6,618.0	6,618.0	27.1	130.7	-70.43	627.1	-9,674.2	9,301.2	9,152.1	149.11	62.376	
7,283.4	6,634.1	6,617.1	6,617.1	27.9	130.7	-70.30	627.1	-9,674.2	9,368.7	9,218.9	149.78	62.549	
7,300.0	6,633.9	6,616.9	6,616.9	28.1	130.7	-70.26	627.1	-9,674.2	9,385.2	9,235.3	149.94	62.593	
7,381.9	6,632.9	6,615.9	6,615.9	29.3	130.7	-70.10	627.1	-9,674.2	9,467.0	9,316.1	150.90	62.739	
7,400.0	6,632.6	6,615.6	6,615.6	29.5	130.7	-70.06	627.1	-9,674.2	9,485.2	9,334.1	151.10	62.773	
7,480.3	6,631.6	6,614.6	6,614.6	30.8	130.7	-69.91	627.1	-9,674.2	9,565.4	9,413.2	152.18	62.856	
7,500.0	6,631.4	6,614.4	6,614.4	31.1	130.7	-69.86	627.1	-9,674.2	9,585.1	9,432.7	152.44	62.879	
7,578.7	6,630.4	6,613.4	6,613.4	32.5	130.7	-69.71	627.1	-9,674.2	9,663.8	9,510.2	153.60	62.913	
7,600.0	6,630.1	6,613.1	6,613.1	32.9	130.7	-69.66	627.1	-9,674.2	9,685.0	9,531.1	153.91	62.925	
7,677.1	6,629.1	6,612.1	6,612.1	34.3	130.6	-69.52	627.1	-9,674.2	9,762.1	9,607.0	155.15	62.920	
7,700.0	6,628.8	6,611.8	6,611.8	34.8	130.6	-69.47	627.1	-9,674.2	9,785.0	9,629.4	155.51	62.921	
7,775.6	6,627.8	6,610.8	6,610.8	36.3	130.6	-69.32	627.1	-9,674.2	9,860.5	9,703.7	156.80	62.885	
7,800.0	6,627.5	6,610.5	6,610.5	36.8	130.6	-69.27	627.1	-9,674.2	9,884.9	9,727.7	157.21	62.876	
7,874.0	6,626.6	6,609.6	6,609.6	38.4	130.6	-69.13	627.1	-9,674.2	9,958.8	9,800.3	158.54	62.818	
7,900.0	6,626.3	6,609.3	6,609.3	38.9	130.6	-69.07	627.1	-9,674.2	9,984.8	9,825.8	158.99	62.800	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	101.42	-822.3	4,072.0	4,154.2				
98.4	98.4	88.9	88.9	0.1	0.0	101.42	-822.2	4,072.0	4,154.2	4,154.1	0.10	N/A	
100.0	100.0	90.5	90.5	0.1	0.0	101.42	-822.2	4,072.0	4,154.2	4,154.1	0.10	N/A	
181.9	181.9	167.9	167.9	0.3	0.1	101.42	-822.3	4,071.9	4,154.1	4,153.8	0.35	N/A	
196.8	196.8	181.8	181.8	0.3	0.1	101.42	-822.3	4,071.9	4,154.1	4,153.7	0.39	N/A	
200.0	200.0	184.8	184.8	0.3	0.1	101.42	-822.3	4,071.9	4,154.1	4,153.7	0.40	N/A	
295.3	295.3	283.2	283.2	0.5	0.2	101.42	-822.4	4,071.9	4,154.1	4,153.4	0.70	5,971.634	
300.0	300.0	288.2	288.2	0.5	0.2	101.42	-822.4	4,071.9	4,154.1	4,153.4	0.71	5,850.398	
344.8	344.8	330.8	330.8	0.6	0.2	101.42	-822.4	4,071.9	4,154.1	4,153.3	0.82	5,050.431	
393.7	393.7	375.6	375.6	0.8	0.2	101.42	-822.3	4,071.9	4,154.1	4,153.2	0.94	4,436.865	
400.0	400.0	381.4	381.4	0.8	0.2	101.42	-822.3	4,071.9	4,154.1	4,153.2	0.95	4,368.446	
492.1	492.1	476.9	476.9	1.0	0.2	101.41	-822.1	4,072.1	4,154.2	4,153.0	1.22	3,392.292	
500.0	500.0	485.3	485.3	1.0	0.3	101.41	-822.1	4,072.1	4,154.2	4,153.0	1.25	3,324.915	
590.5	590.5	567.7	567.7	1.2	0.3	101.41	-821.8	4,072.2	4,154.3	4,152.8	1.51	2,755.861	
600.0	600.0	576.1	576.1	1.2	0.3	101.41	-821.8	4,072.2	4,154.3	4,152.8	1.53	2,708.415	
689.0	689.0	663.1	663.1	1.4	0.4	101.41	-821.6	4,072.5	4,154.6	4,152.8	1.79	2,324.721	
700.0	700.0	674.3	674.3	1.4	0.4	101.41	-821.6	4,072.6	4,154.6	4,152.8	1.82	2,284.311	
787.4	787.4	760.9	760.9	1.6	0.4	101.40	-821.5	4,072.8	4,154.9	4,152.8	2.06	2,013.984	
800.0	800.0	773.2	773.2	1.7	0.4	101.40	-821.5	4,072.9	4,154.9	4,152.8	2.10	1,980.563	
885.8	885.8	860.9	860.8	1.9	0.5	101.40	-821.5	4,073.1	4,155.2	4,152.8	2.33	1,781.289	
900.0	900.0	875.6	875.6	1.9	0.5	101.40	-821.5	4,073.2	4,155.2	4,152.8	2.37	1,752.310	
984.2	984.2	960.4	960.4	2.1	0.5	101.40	-821.4	4,073.4	4,155.4	4,152.8	2.59	1,601.554	
1,000.0	1,000.0	976.0	976.0	2.1	0.5	101.40	-821.4	4,073.4	4,155.4	4,152.8	2.64	1,576.467	
1,082.7	1,082.7	1,061.8	1,061.8	2.3	0.6	101.40	-821.4	4,073.6	4,155.6	4,152.8	2.85	1,458.529	
1,100.0	1,100.0	1,080.1	1,080.1	2.3	0.6	101.40	-821.4	4,073.7	4,155.7	4,152.8	2.89	1,436.169	
1,181.1	1,181.1	1,159.3	1,159.3	2.5	0.6	101.40	-821.3	4,073.8	4,155.8	4,152.7	3.09	1,345.536	
1,200.0	1,200.0	1,177.3	1,177.3	2.6	0.6	101.40	-821.4	4,073.8	4,155.8	4,152.7	3.13	1,326.418	
1,279.5	1,279.5	1,266.6	1,266.6	2.7	0.6	101.40	-821.5	4,073.9	4,155.9	4,152.6	3.31	1,253.870	
1,300.0	1,300.0	1,291.1	1,291.1	2.8	0.6	101.40	-821.5	4,073.9	4,155.9	4,152.5	3.36	1,236.692	
1,377.9	1,377.9	1,367.0	1,367.0	3.0	0.6	101.40	-821.4	4,073.8	4,155.8	4,152.3	3.56	1,168.934	
1,400.0	1,400.0	1,388.0	1,388.0	3.0	0.6	101.40	-821.4	4,073.8	4,155.8	4,152.2	3.61	1,150.910	
1,401.3	1,401.3	1,389.3	1,389.3	3.0	0.6	176.53	-821.4	4,073.8	4,155.8	4,152.2	3.63	1,145.216	
1,476.4	1,476.4	1,459.1	1,459.1	3.2	0.6	176.53	-821.4	4,073.8	4,156.8	4,153.0	3.80	1,093.848	
1,500.0	1,500.0	1,481.0	1,481.0	3.2	0.6	176.53	-821.5	4,073.8	4,157.6	4,153.7	3.85	1,078.628	
1,574.8	1,574.7	1,564.0	1,564.0	3.4	0.6	176.53	-821.7	4,073.8	4,161.2	4,157.2	4.03	1,032.440	
1,600.0	1,599.8	1,593.7	1,593.7	3.4	0.6	176.53	-821.7	4,073.8	4,162.8	4,158.7	4.09	1,017.632	
1,673.2	1,672.8	1,680.3	1,680.3	3.6	0.7	176.53	-821.8	4,073.5	4,168.6	4,164.3	4.27	975.188	
1,700.0	1,699.5	1,710.5	1,710.5	3.7	0.7	176.53	-821.8	4,073.3	4,171.1	4,166.8	4.34	960.816	
1,771.6	1,770.6	1,784.9	1,784.9	3.8	0.7	176.53	-821.7	4,072.8	4,179.0	4,174.5	4.52	924.065	
1,800.0	1,798.7	1,814.8	1,814.8	3.9	0.7	176.52	-821.6	4,072.6	4,182.6	4,178.0	4.59	910.380	
1,870.1	1,868.0	1,889.7	1,889.7	4.1	0.7	176.52	-821.4	4,072.1	4,192.7	4,187.9	4.78	877.482	
1,900.0	1,897.5	1,917.6	1,917.5	4.2	0.7	176.52	-821.3	4,071.8	4,197.4	4,192.6	4.86	864.475	
1,968.5	1,964.8	1,976.6	1,976.6	4.4	0.7	176.51	-821.2	4,071.5	4,209.6	4,204.6	5.04	835.761	
2,000.0	1,995.6	2,004.8	2,004.8	4.5	0.7	176.51	-821.1	4,071.3	4,215.8	4,210.7	5.12	823.378	
2,066.9	2,060.9	2,080.8	2,080.8	4.7	0.8	176.50	-820.7	4,070.9	4,230.0	4,224.7	5.31	796.986	
2,100.0	2,093.1	2,112.9	2,112.9	4.8	0.8	176.50	-820.6	4,070.6	4,237.6	4,232.2	5.40	785.068	
2,165.3	2,156.3	2,165.2	2,165.1	5.1	0.8	176.48	-820.4	4,070.3	4,253.7	4,248.1	5.58	762.363	
2,200.0	2,189.6	2,200.0	2,200.0	5.2	0.8	176.48	-820.2	4,070.2	4,262.8	4,257.2	5.68	750.921	
2,263.8	2,250.7	2,248.3	2,248.3	5.5	0.8	176.47	-819.9	4,070.1	4,280.9	4,275.0	5.86	730.525	
2,280.0	2,266.2	2,262.6	2,262.6	5.6	0.8	176.46	-819.9	4,070.1	4,285.7	4,279.8	5.91	725.655	
2,300.0	2,285.3	2,280.2	2,280.1	5.7	0.8	176.46	-819.7	4,070.0	4,291.7	4,285.7	5.96	720.001	
2,362.2	2,344.6	2,337.9	2,337.8	6.0	0.8	176.47	-819.3	4,070.0	4,310.3	4,304.2	6.13	703.516	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,380.6	2,374.0	2,373.9	6.2	0.9	176.48	-819.0	4,070.0	4,321.7	4,315.5	6.24	692.683	
2,460.6	2,438.4	2,430.0	2,430.0	6.5	0.9	176.49	-818.6	4,070.0	4,339.9	4,333.5	6.41	677.001	
2,500.0	2,475.9	2,465.4	2,465.4	6.7	0.9	176.49	-818.4	4,070.0	4,351.7	4,345.2	6.52	667.205	
2,559.0	2,532.2	2,520.6	2,520.6	7.0	0.9	176.50	-818.0	4,070.1	4,369.5	4,362.8	6.69	652.896	
2,600.0	2,571.2	2,561.7	2,561.6	7.2	0.9	176.51	-817.7	4,070.1	4,381.9	4,375.1	6.81	643.286	
2,657.5	2,626.0	2,619.3	2,619.3	7.5	0.9	176.52	-817.3	4,070.1	4,399.2	4,392.2	6.98	630.172	
2,700.0	2,666.6	2,662.1	2,662.0	7.8	0.9	176.52	-816.9	4,070.1	4,411.9	4,404.8	7.11	620.843	
2,755.9	2,719.8	2,716.7	2,716.7	8.1	1.0	176.53	-816.5	4,070.0	4,428.7	4,421.4	7.27	608.969	
2,800.0	2,761.9	2,757.4	2,757.3	8.3	1.0	176.54	-816.2	4,070.0	4,441.9	4,434.5	7.40	599.966	
2,854.3	2,813.7	2,807.6	2,807.6	8.7	1.0	176.55	-815.9	4,070.0	4,458.2	4,450.6	7.57	589.155	
2,900.0	2,857.2	2,850.7	2,850.7	8.9	1.0	176.55	-815.6	4,070.0	4,471.9	4,464.2	7.71	580.372	
2,952.7	2,907.5	2,900.0	2,900.0	9.2	1.0	176.56	-815.2	4,070.0	4,487.7	4,479.9	7.87	570.511	
3,000.0	2,952.5	2,943.2	2,943.2	9.5	1.0	176.57	-815.0	4,070.0	4,501.9	4,493.9	8.01	562.023	
3,051.2	3,001.3	2,989.5	2,989.5	9.8	1.1	176.58	-814.7	4,070.0	4,517.3	4,509.2	8.17	553.091	
3,100.0	3,047.8	3,036.9	3,036.9	10.1	1.1	176.58	-814.5	4,070.0	4,532.1	4,523.7	8.32	544.835	
3,149.6	3,095.1	3,086.1	3,086.1	10.4	1.1	176.59	-814.3	4,070.0	4,547.0	4,538.5	8.47	536.654	
3,200.0	3,143.2	3,132.1	3,132.1	10.7	1.1	176.60	-814.1	4,070.0	4,562.2	4,553.5	8.63	528.702	
3,248.0	3,188.9	3,174.5	3,174.5	11.0	1.1	176.61	-813.9	4,070.0	4,576.7	4,567.9	8.78	521.368	
3,300.0	3,238.5	3,235.6	3,235.5	11.3	1.1	176.62	-813.6	4,070.0	4,592.3	4,583.4	8.94	513.536	
3,346.4	3,282.8	3,300.0	3,300.0	11.6	1.1	176.63	-813.2	4,069.8	4,606.1	4,597.0	9.09	506.760	
3,400.0	3,333.8	3,333.0	3,333.0	11.9	1.1	176.63	-813.0	4,069.7	4,622.0	4,612.8	9.25	499.603	
3,444.9	3,376.6	3,358.3	3,358.3	12.2	1.2	176.64	-812.9	4,069.7	4,635.5	4,626.1	9.39	493.825	
3,500.0	3,429.1	3,400.0	3,400.0	12.6	1.2	176.65	-812.7	4,069.9	4,652.4	4,642.8	9.55	486.908	
3,543.3	3,470.4	3,430.1	3,430.1	12.8	1.2	176.65	-812.7	4,070.1	4,665.7	4,656.0	9.69	481.534	
3,600.0	3,524.4	3,500.0	3,500.0	13.2	1.2	176.66	-812.4	4,070.4	4,683.0	4,673.1	9.88	474.123	
3,641.7	3,564.2	3,531.4	3,531.4	13.4	1.2	176.67	-812.3	4,070.5	4,695.7	4,685.7	10.01	469.181	
3,700.0	3,619.8	3,574.5	3,574.5	13.8	1.2	176.67	-812.0	4,070.8	4,713.6	4,703.4	10.19	462.518	
3,740.1	3,658.0	3,605.9	3,605.8	14.0	1.2	176.68	-811.9	4,071.1	4,726.0	4,715.7	10.32	458.045	
3,800.0	3,715.1	3,668.5	3,668.4	14.4	1.2	176.69	-811.8	4,071.6	4,744.5	4,734.0	10.51	451.331	
3,838.6	3,751.8	3,709.0	3,709.0	14.7	1.2	176.70	-811.8	4,071.8	4,756.4	4,745.8	10.64	447.133	
3,900.0	3,810.4	3,774.7	3,774.7	15.0	1.2	176.71	-811.7	4,072.2	4,775.3	4,764.4	10.84	440.724	
3,937.0	3,845.7	3,814.3	3,814.2	15.3	1.2	176.72	-811.5	4,072.4	4,786.6	4,775.6	10.95	436.956	
4,000.0	3,905.7	3,881.5	3,881.4	15.7	1.3	176.73	-811.4	4,072.6	4,805.8	4,794.6	11.16	430.721	
4,035.4	3,939.5	3,919.5	3,919.5	15.9	1.3	176.74	-811.4	4,072.7	4,816.5	4,805.3	11.27	427.315	
4,100.0	4,001.0	3,989.4	3,989.3	16.3	1.3	176.76	-811.7	4,072.7	4,836.0	4,824.6	11.48	421.279	
4,133.8	4,033.3	4,018.5	4,018.4	16.5	1.3	176.76	-811.8	4,072.6	4,846.3	4,834.7	11.59	418.188	
4,200.0	4,096.3	4,069.2	4,069.1	16.9	1.3	176.78	-812.2	4,072.6	4,866.3	4,854.5	11.80	412.328	
4,232.3	4,127.1	4,100.0	4,099.9	17.1	1.3	176.79	-812.5	4,072.7	4,876.2	4,864.3	11.91	409.464	
4,300.0	4,191.7	4,174.0	4,173.9	17.6	1.3	176.82	-813.4	4,072.7	4,896.8	4,884.7	12.13	403.537	
4,330.7	4,220.9	4,213.2	4,213.1	17.8	1.3	176.83	-814.1	4,072.5	4,906.1	4,893.8	12.24	400.862	
4,400.0	4,287.0	4,300.0	4,299.9	18.2	1.3	176.87	-815.6	4,071.9	4,926.7	4,914.2	12.47	395.100	
4,429.1	4,314.7	4,326.0	4,325.9	18.4	1.3	176.88	-816.0	4,071.6	4,935.3	4,922.8	12.57	392.771	
4,500.0	4,382.3	4,378.9	4,378.8	18.8	1.3	176.90	-817.0	4,071.2	4,956.5	4,943.7	12.80	387.365	
4,527.5	4,408.6	4,400.0	4,399.9	19.0	1.3	176.91	-817.5	4,071.1	4,964.8	4,951.9	12.89	385.310	
4,600.0	4,477.6	4,491.8	4,491.7	19.5	1.3	176.95	-819.2	4,070.4	4,986.4	4,973.3	13.13	379.660	
4,626.0	4,502.4	4,518.7	4,518.6	19.6	1.3	176.97	-819.7	4,070.1	4,994.1	4,980.9	13.22	377.743	
4,700.0	4,572.9	4,589.4	4,589.2	20.1	1.3	176.99	-820.9	4,069.5	5,016.1	5,002.6	13.47	372.483	
4,724.4	4,596.2	4,616.4	4,616.2	20.3	1.3	177.00	-821.3	4,069.2	5,023.3	5,009.7	13.55	370.752	
4,800.0	4,668.3	4,708.3	4,708.1	20.7	1.3	177.04	-822.3	4,068.1	5,045.5	5,031.7	13.81	365.433	
4,822.8	4,690.0	4,732.0	4,731.8	20.9	1.3	177.04	-822.6	4,067.8	5,052.1	5,038.3	13.88	363.889	
4,900.0	4,763.6	4,811.5	4,811.3	21.4	1.3	177.07	-823.3	4,066.7	5,074.6	5,060.4	14.14	358.794	
4,921.2	4,783.8	4,832.4	4,832.2	21.5	1.3	177.08	-823.5	4,066.4	5,080.8	5,066.5	14.22	357.419	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,858.9	4,910.1	4,909.9	22.0	1.3	177.10	-824.1	4,065.3	5,103.6	5,089.1	14.48	352.432	
5,019.7	4,877.7	4,929.8	4,929.6	22.1	1.3	177.11	-824.2	4,065.0	5,109.3	5,094.8	14.55	351.205	
5,100.0	4,954.2	5,010.3	5,010.1	22.6	1.3	177.13	-824.6	4,063.9	5,132.5	5,117.7	14.82	346.301	
5,118.1	4,971.5	5,028.7	5,028.5	22.8	1.4	177.13	-824.6	4,063.6	5,137.8	5,122.9	14.88	345.214	
5,171.8	5,022.7	5,083.2	5,082.9	23.1	1.4	177.15	-824.8	4,062.8	5,153.3	5,138.2	15.07	342.041	
5,200.0	5,049.6	5,111.9	5,111.7	23.3	1.4	177.16	-825.0	4,062.3	5,161.3	5,146.1	15.13	341.027	
5,216.5	5,065.4	5,128.9	5,128.7	23.3	1.4	177.17	-825.0	4,062.0	5,165.8	5,150.6	15.17	340.533	
5,300.0	5,145.7	5,247.0	5,246.8	23.7	1.4	177.22	-825.3	4,059.9	5,187.3	5,172.0	15.35	337.919	
5,314.9	5,160.1	5,295.2	5,295.0	23.8	1.4	177.23	-825.1	4,058.7	5,190.8	5,175.4	15.39	337.334	
5,400.0	5,242.7	5,465.8	5,465.4	24.1	1.4	177.27	-823.9	4,052.2	5,207.8	5,192.3	15.56	334.773	
5,413.4	5,255.7	5,484.0	5,483.6	24.2	1.4	177.28	-823.8	4,051.4	5,210.2	5,194.7	15.58	334.456	
5,500.0	5,340.5	5,609.3	5,608.7	24.5	1.5	177.30	-822.6	4,045.2	5,223.8	5,208.1	15.72	332.320	
5,511.8	5,352.1	5,621.9	5,621.3	24.5	1.5	177.31	-822.4	4,044.6	5,225.4	5,209.6	15.74	332.081	
5,600.0	5,439.0	5,712.3	5,711.6	24.8	1.5	177.32	-821.4	4,039.7	5,235.8	5,219.9	15.85	330.285	
5,610.2	5,449.1	5,720.5	5,719.8	24.8	1.5	177.33	-821.2	4,039.3	5,236.8	5,220.9	15.86	330.109	
5,700.0	5,538.0	5,800.0	5,799.2	25.1	1.5	177.33	-820.0	4,035.3	5,244.5	5,228.5	15.97	328.460	
5,708.6	5,546.6	5,800.0	5,799.2	25.1	1.5	177.33	-820.0	4,035.3	5,245.1	5,229.1	15.97	328.356	
5,800.0	5,637.4	5,852.5	5,851.6	25.3	1.5	177.34	-819.1	4,032.9	5,250.2	5,234.2	16.06	326.870	
5,807.1	5,644.5	5,856.6	5,855.7	25.3	1.5	177.34	-819.0	4,032.8	5,250.6	5,234.5	16.07	326.765	
5,900.0	5,737.2	5,900.0	5,899.1	25.5	1.5	177.34	-818.5	4,031.1	5,253.4	5,237.2	16.15	325.315	
5,905.5	5,742.6	5,900.0	5,899.1	25.5	1.5	177.34	-818.5	4,031.1	5,253.5	5,237.3	16.15	325.248	
6,000.0	5,837.1	5,974.3	5,973.3	25.6	1.6	177.34	-817.7	4,028.8	5,253.7	5,237.4	16.24	323.562	
6,003.9	5,841.0	5,976.8	5,975.8	25.6	1.6	177.34	-817.7	4,028.7	5,253.6	5,237.4	16.24	323.495	
6,051.8	5,888.9	6,000.0	5,999.0	25.7	1.6	102.21	-817.5	4,028.1	5,252.8	5,225.6	27.16	193.431	
6,081.8	5,918.9	6,031.0	6,030.0	25.7	1.6	102.21	-817.2	4,027.4	5,252.0	5,224.8	27.19	193.155	
6,100.0	5,937.1	6,044.7	6,043.7	25.7	1.6	12.22	-817.0	4,027.1	5,251.4	5,235.1	16.31	321.949	
6,102.3	5,939.4	6,046.4	6,045.4	25.7	1.6	12.22	-817.0	4,027.1	5,251.3	5,234.9	16.31	322.013	
6,150.0	5,987.0	6,082.2	6,081.2	25.7	1.6	12.29	-816.6	4,026.4	5,247.3	5,231.1	16.25	322.846	
6,200.0	6,036.5	6,119.0	6,118.0	25.7	1.6	12.43	-816.2	4,025.7	5,240.0	5,223.8	16.21	323.228	
6,200.8	6,037.3	6,119.6	6,118.6	25.7	1.6	12.43	-816.2	4,025.7	5,239.9	5,223.7	16.21	323.233	
6,250.0	6,085.5	6,154.9	6,153.9	25.7	1.6	12.63	-815.8	4,025.2	5,229.5	5,213.3	16.17	323.484	
6,299.2	6,133.0	6,200.0	6,199.0	25.6	1.6	12.90	-815.4	4,024.6	5,216.0	5,199.9	16.11	323.831	
6,300.0	6,133.7	6,200.0	6,199.0	25.6	1.6	12.91	-815.4	4,024.6	5,215.8	5,199.7	16.11	323.844	
6,350.0	6,180.9	6,235.7	6,234.7	25.5	1.6	13.26	-815.2	4,024.2	5,198.9	5,182.9	16.02	324.618	
6,397.6	6,224.6	6,281.8	6,280.8	25.4	1.6	13.70	-814.8	4,023.7	5,179.9	5,164.0	15.91	325.574	
6,400.0	6,226.7	6,284.1	6,283.0	25.4	1.6	13.72	-814.8	4,023.6	5,178.9	5,163.0	15.90	325.626	
6,450.0	6,271.1	6,324.7	6,323.6	25.2	1.6	14.28	-814.5	4,023.1	5,155.8	5,140.0	15.77	327.031	
6,496.0	6,310.4	6,357.9	6,356.9	25.1	1.6	14.90	-814.3	4,022.8	5,131.9	5,116.3	15.62	328.511	
6,500.0	6,313.7	6,360.7	6,359.7	25.1	1.6	14.96	-814.2	4,022.7	5,129.8	5,114.2	15.61	328.633	
6,550.0	6,354.4	6,400.0	6,399.0	25.0	1.7	15.79	-814.0	4,022.4	5,101.0	5,085.5	15.46	329.932	
6,594.5	6,388.9	6,424.0	6,422.9	24.9	1.7	16.64	-813.8	4,022.2	5,073.2	5,057.9	15.34	330.709	
6,600.0	6,393.0	6,427.4	6,426.4	24.9	1.7	16.76	-813.8	4,022.1	5,069.6	5,054.3	15.33	330.728	
6,650.0	6,429.3	6,457.8	6,456.7	24.8	1.7	17.95	-813.6	4,021.9	5,035.7	5,020.5	15.27	329.886	
6,692.9	6,458.5	6,482.2	6,481.1	24.7	1.7	19.18	-813.5	4,021.7	5,004.8	4,989.5	15.30	327.170	
6,700.0	6,463.1	6,486.1	6,485.0	24.7	1.7	19.41	-813.5	4,021.7	4,999.6	4,984.3	15.31	326.509	
6,750.0	6,494.3	6,512.8	6,511.7	24.7	1.7	21.19	-813.4	4,021.5	4,961.2	4,945.7	15.53	319.468	
6,791.3	6,517.9	6,533.6	6,532.5	24.7	1.7	22.99	-813.3	4,021.4	4,928.1	4,912.2	15.89	310.203	
6,800.0	6,522.6	6,537.7	6,536.6	24.7	1.7	23.41	-813.3	4,021.4	4,920.9	4,905.0	15.98	307.880	
6,850.0	6,548.0	6,560.0	6,559.0	24.7	1.7	26.20	-813.2	4,021.3	4,878.9	4,862.1	16.74	291.523	
6,889.7	6,566.0	6,575.9	6,574.9	24.8	1.7	28.96	-813.2	4,021.2	4,844.3	4,826.7	17.59	275.445	
6,900.0	6,570.4	6,579.7	6,578.7	24.9	1.7	29.76	-813.2	4,021.2	4,835.2	4,817.4	17.84	271.006	
6,950.0	6,589.5	6,600.0	6,598.9	25.1	1.7	34.44	-813.1	4,021.1	4,790.2	4,770.8	19.36	247.484	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,602.0	6,608.4	6,607.3	25.3	1.7	38.90	-813.1	4,021.1	4,755.0	4,734.3	20.76	229.055	
7,000.0	6,605.4	6,611.8	6,610.7	25.3	1.7	40.51	-813.1	4,021.1	4,744.0	4,722.8	21.24	223.364	
7,050.0	6,618.0	6,624.0	6,622.9	25.6	1.7	48.68	-813.0	4,021.0	4,696.9	4,673.5	23.46	200.180	
7,086.6	6,625.0	6,630.8	6,629.8	25.9	1.7	56.30	-813.0	4,021.0	4,662.0	4,636.9	25.16	185.329	
7,100.0	6,627.1	6,632.9	6,631.8	26.0	1.7	59.48	-813.0	4,021.0	4,649.1	4,623.4	25.74	180.647	
7,150.0	6,632.8	6,638.3	6,637.3	26.5	1.7	73.15	-813.0	4,021.0	4,600.9	4,573.4	27.48	167.427	
7,185.0	6,634.7	6,640.1	6,639.1	26.8	1.7	84.01	-813.0	4,021.0	4,567.0	4,538.8	28.15	162.238	
7,200.0	6,635.0	6,640.4	6,639.3	27.0	1.7	88.79	-813.0	4,021.0	4,552.4	4,524.1	28.37	160.472	
7,215.9	6,635.0	6,640.3	6,639.2	27.1	1.7	93.85	-813.0	4,021.0	4,537.0	4,508.4	28.64	158.432	
7,283.4	6,634.1	6,639.2	6,638.1	27.9	1.7	93.79	-813.0	4,021.0	4,471.5	4,442.1	29.47	151.736	
7,300.0	6,633.9	6,638.9	6,637.9	28.1	1.7	93.78	-813.0	4,021.0	4,455.5	4,425.8	29.67	150.153	
7,381.9	6,632.9	6,637.6	6,636.5	29.3	1.7	93.71	-813.0	4,021.0	4,376.3	4,345.4	30.85	141.879	
7,400.0	6,632.6	6,637.3	6,636.3	29.5	1.7	93.70	-813.0	4,021.0	4,358.7	4,327.6	31.10	140.132	
7,480.3	6,631.6	6,636.0	6,635.0	30.8	1.7	93.63	-813.0	4,021.0	4,281.1	4,248.7	32.40	132.113	
7,500.0	6,631.4	6,635.7	6,634.6	31.1	1.7	93.61	-813.0	4,021.0	4,262.1	4,229.4	32.72	130.244	
7,578.7	6,630.4	6,634.4	6,633.4	32.5	1.7	93.55	-813.0	4,021.0	4,186.1	4,152.0	34.13	122.670	
7,600.0	6,630.1	6,634.1	6,633.0	32.9	1.7	93.53	-813.0	4,021.0	4,165.6	4,131.1	34.50	120.729	
7,677.1	6,629.1	6,632.8	6,631.8	34.3	1.7	93.47	-813.0	4,021.0	4,091.3	4,055.3	35.98	113.705	
7,700.0	6,628.8	6,632.5	6,631.4	34.8	1.7	93.45	-813.0	4,021.0	4,069.3	4,032.9	36.42	111.734	
7,775.6	6,627.8	6,631.2	6,630.2	36.3	1.7	93.38	-813.0	4,021.0	3,996.6	3,958.7	37.95	105.303	
7,800.0	6,627.5	6,630.9	6,629.8	36.8	1.7	93.37	-813.0	4,021.0	3,973.2	3,934.7	38.45	103.334	
7,874.0	6,626.6	6,629.7	6,628.6	38.4	1.7	93.30	-813.0	4,021.0	3,902.2	3,862.1	40.02	97.497	
7,900.0	6,626.3	6,629.2	6,628.2	38.9	1.7	93.28	-813.0	4,021.0	3,877.2	3,836.7	40.58	95.554	
7,972.4	6,625.3	6,628.1	6,627.0	40.5	1.7	93.22	-813.0	4,021.0	3,807.9	3,765.7	42.18	90.285	
8,000.0	6,625.0	6,627.6	6,626.6	41.1	1.7	93.20	-813.0	4,021.0	3,781.5	3,738.7	42.79	88.383	
8,070.8	6,624.1	6,626.5	6,625.4	42.7	1.7	93.14	-813.0	4,021.0	3,713.8	3,669.4	44.40	83.646	
8,100.0	6,623.7	6,626.0	6,624.9	43.4	1.7	93.12	-813.0	4,021.0	3,686.0	3,641.0	45.06	81.796	
8,169.3	6,622.8	6,624.9	6,623.8	45.0	1.7	93.06	-813.0	4,021.0	3,620.0	3,573.3	46.68	77.545	
8,200.0	6,622.4	6,624.4	6,623.3	45.7	1.7	93.03	-813.0	4,021.0	3,590.8	3,543.4	47.40	75.754	
8,267.7	6,621.6	6,623.3	6,622.2	47.4	1.7	92.98	-813.0	4,021.0	3,526.4	3,477.4	49.02	71.943	
8,300.0	6,621.1	6,622.7	6,621.7	48.1	1.7	92.95	-813.1	4,021.0	3,495.8	3,446.0	49.79	70.213	
8,366.1	6,620.3	6,621.7	6,620.6	49.7	1.7	92.90	-813.1	4,021.1	3,433.1	3,381.7	51.40	66.798	
8,400.0	6,619.9	6,621.1	6,620.1	50.6	1.7	92.87	-813.1	4,021.1	3,401.1	3,348.9	52.22	65.131	
8,464.5	6,619.0	6,620.1	6,619.0	52.2	1.7	92.81	-813.1	4,021.1	3,340.1	3,286.3	53.81	62.069	
8,500.0	6,618.6	6,619.5	6,618.4	53.0	1.7	92.78	-813.1	4,021.1	3,306.7	3,252.0	54.69	60.465	
8,563.0	6,617.8	6,618.5	6,617.4	54.6	1.7	92.73	-813.1	4,021.1	3,247.4	3,191.2	56.26	57.719	
8,600.0	6,617.3	6,617.9	6,616.8	55.5	1.7	92.70	-813.1	4,021.1	3,212.7	3,155.5	57.19	56.176	
8,661.4	6,616.5	6,616.9	6,615.8	57.1	1.7	92.65	-813.1	4,021.1	3,155.1	3,096.4	58.74	53.711	
8,700.0	6,616.0	6,616.2	6,615.2	58.1	1.7	92.62	-813.1	4,021.1	3,119.0	3,059.3	59.72	52.228	
8,759.8	6,615.2	6,615.3	6,614.2	59.6	1.7	92.57	-813.1	4,021.1	3,063.1	3,001.9	61.25	50.013	
8,800.0	6,614.7	6,614.6	6,613.6	60.6	1.7	92.53	-813.1	4,021.1	3,025.7	2,963.4	62.27	48.588	
8,858.2	6,614.0	6,613.7	6,612.6	62.1	1.7	92.48	-813.1	4,021.1	2,971.6	2,907.8	63.77	46.596	
8,900.0	6,613.4	6,613.0	6,611.9	63.2	1.7	92.45	-813.1	4,021.1	2,932.9	2,868.0	64.85	45.227	
8,956.7	6,612.7	6,612.1	6,611.0	64.7	1.7	92.40	-813.1	4,021.1	2,880.5	2,814.2	66.32	43.433	
9,000.0	6,612.2	6,611.3	6,610.3	65.8	1.7	92.37	-813.1	4,021.1	2,840.5	2,773.1	67.44	42.117	
9,055.1	6,611.5	6,610.4	6,609.4	67.3	1.7	92.32	-813.1	4,021.1	2,789.9	2,721.0	68.88	40.502	
9,100.0	6,610.9	6,609.7	6,608.7	68.4	1.7	92.28	-813.1	4,021.1	2,748.7	2,678.7	70.06	39.236	
9,153.5	6,610.2	6,608.8	6,607.8	69.8	1.7	92.24	-813.1	4,021.1	2,699.8	2,628.3	71.46	37.780	
9,200.0	6,609.6	6,608.1	6,607.0	71.1	1.7	92.20	-813.1	4,021.1	2,657.5	2,584.8	72.68	36.563	
9,251.9	6,608.9	6,607.2	6,606.2	72.4	1.7	92.15	-813.1	4,021.1	2,610.4	2,536.3	74.06	35.249	
9,300.0	6,608.3	6,606.4	6,605.4	73.7	1.7	92.11	-813.1	4,021.1	2,566.9	2,491.6	75.32	34.078	
9,350.4	6,607.7	6,605.6	6,604.5	75.0	1.7	92.07	-813.1	4,021.1	2,521.6	2,444.9	76.66	32.892	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,607.0	6,604.8	6,603.7	76.4	1.7	92.03	-813.1	4,021.1	2,477.1	2,399.1	77.98	31.766		
9,448.8	6,606.4	6,604.0	6,602.9	77.7	1.7	91.99	-813.1	4,021.1	2,433.5	2,354.2	79.28	30.696		
9,500.0	6,605.7	6,603.1	6,602.1	79.0	1.7	91.94	-813.1	4,021.1	2,388.0	2,307.4	80.64	29.613		
9,547.2	6,605.1	6,602.4	6,601.3	80.3	1.7	91.90	-813.1	4,021.1	2,346.3	2,264.4	81.90	28.647		
9,600.0	6,604.5	6,601.5	6,600.4	81.7	1.7	91.86	-813.1	4,021.1	2,299.9	2,216.6	83.32	27.604		
9,645.6	6,603.9	6,600.8	6,599.7	82.9	1.7	91.82	-813.1	4,021.1	2,260.0	2,175.4	84.54	26.732		
9,700.0	6,603.2	6,600.0	6,598.9	84.4	1.7	91.78	-813.1	4,021.1	2,212.8	2,126.8	86.00	25.730		
9,744.1	6,602.6	6,600.0	6,598.9	85.6	1.7	91.78	-813.1	4,021.1	2,174.7	2,087.5	87.18	24.944		
9,800.0	6,601.9	6,600.0	6,598.9	87.1	1.7	91.78	-813.1	4,021.1	2,126.8	2,038.1	88.69	23.980		
9,842.5	6,601.3	6,600.0	6,598.9	88.2	1.7	91.78	-813.1	4,021.1	2,090.6	2,000.8	89.84	23.271		
9,900.0	6,600.6	6,596.7	6,595.7	89.8	1.7	91.61	-813.1	4,021.1	2,042.0	1,950.6	91.39	22.344		
9,940.9	6,600.1	6,596.1	6,595.0	90.9	1.7	91.58	-813.1	4,021.1	2,007.8	1,915.3	92.50	21.707		
10,000.0	6,599.3	6,595.2	6,594.1	92.5	1.7	91.53	-813.1	4,021.1	1,958.8	1,864.7	94.09	20.817		
10,039.3	6,598.8	6,594.6	6,593.5	93.5	1.7	91.50	-813.1	4,021.2	1,926.4	1,831.3	95.16	20.244		
10,100.0	6,598.0	6,593.6	6,592.5	95.2	1.7	91.45	-813.1	4,021.2	1,877.1	1,780.3	96.81	19.390		
10,137.8	6,597.5	6,593.0	6,591.9	96.2	1.7	91.42	-813.1	4,021.2	1,846.7	1,748.9	97.83	18.876		
10,200.0	6,596.7	6,592.0	6,591.0	97.9	1.7	91.37	-813.1	4,021.2	1,797.3	1,697.8	99.52	18.059		
10,236.2	6,596.3	6,591.4	6,590.4	98.9	1.7	91.34	-813.1	4,021.2	1,768.9	1,668.4	100.51	17.600		
10,300.0	6,595.4	6,590.4	6,589.4	100.6	1.7	91.29	-813.1	4,021.2	1,719.6	1,617.4	102.25	16.818		
10,334.6	6,595.0	6,589.9	6,588.8	101.6	1.7	91.26	-813.1	4,021.2	1,693.3	1,590.1	103.19	16.409		
10,400.0	6,594.2	6,588.8	6,587.8	103.4	1.7	91.21	-813.1	4,021.2	1,644.3	1,539.4	104.97	15.664		
10,433.0	6,593.7	6,588.3	6,587.2	104.3	1.7	91.18	-813.1	4,021.2	1,620.0	1,514.2	105.87	15.301		
10,500.0	6,592.9	6,587.2	6,586.2	106.1	1.7	91.12	-813.1	4,021.2	1,571.8	1,464.1	107.70	14.594		
10,531.5	6,592.5	6,586.7	6,585.6	106.9	1.7	91.10	-813.1	4,021.2	1,549.6	1,441.0	108.56	14.274		
10,600.0	6,591.6	6,585.6	6,584.5	108.8	1.7	91.04	-813.1	4,021.2	1,502.4	1,392.0	110.44	13.604		
10,629.9	6,591.2	6,585.1	6,584.1	109.6	1.7	91.01	-813.1	4,021.2	1,482.4	1,371.1	111.26	13.324		
10,700.0	6,590.3	6,584.0	6,582.9	111.6	1.7	90.96	-813.1	4,021.2	1,436.7	1,323.5	113.18	12.694		
10,728.3	6,589.9	6,583.5	6,582.5	112.3	1.7	90.93	-813.1	4,021.2	1,418.8	1,304.8	113.95	12.451		
10,800.0	6,589.0	6,582.3	6,581.3	114.3	1.7	90.87	-813.2	4,021.2	1,375.1	1,259.2	115.92	11.862		
10,826.7	6,588.7	6,581.9	6,580.8	115.0	1.7	90.85	-813.2	4,021.2	1,359.4	1,242.7	116.66	11.653		
10,900.0	6,587.7	6,580.7	6,579.6	117.1	1.7	90.79	-813.2	4,021.2	1,318.2	1,199.5	118.67	11.108		
10,925.2	6,587.4	6,580.3	6,579.2	117.7	1.7	90.77	-813.2	4,021.2	1,304.7	1,185.3	119.36	10.931		
11,000.0	6,586.4	6,579.1	6,578.0	119.8	1.7	90.70	-813.2	4,021.2	1,266.6	1,145.2	121.41	10.432		
11,023.6	6,586.1	6,578.7	6,577.6	120.4	1.7	90.68	-813.2	4,021.2	1,255.3	1,133.2	122.06	10.284		
11,100.0	6,585.1	6,577.4	6,576.3	122.6	1.7	90.62	-813.2	4,021.2	1,221.1	1,096.9	124.17	9.834		
11,122.0	6,584.8	6,577.0	6,576.0	123.2	1.7	90.60	-813.2	4,021.2	1,211.9	1,087.2	124.77	9.713		
11,200.0	6,583.8	6,575.7	6,574.7	125.3	1.7	90.53	-813.2	4,021.2	1,182.3	1,055.4	126.92	9.315		
11,220.4	6,583.6	6,575.4	6,574.3	125.9	1.7	90.51	-813.2	4,021.2	1,175.2	1,047.7	127.48	9.219		
11,300.0	6,582.5	6,574.1	6,573.0	128.1	1.7	90.44	-813.2	4,021.2	1,150.9	1,021.2	129.68	8.875		
11,318.9	6,582.3	6,573.8	6,572.7	128.6	1.7	90.43	-813.2	4,021.2	1,145.8	1,015.6	130.20	8.801		
11,400.0	6,581.2	6,572.4	6,571.3	130.8	1.7	90.36	-813.2	4,021.2	1,127.5	995.0	132.43	8.513		
11,417.3	6,581.0	6,572.1	6,571.0	131.3	1.7	90.34	-813.2	4,021.2	1,124.3	991.4	132.91	8.459		
11,500.0	6,580.0	6,570.7	6,569.7	133.6	1.7	90.27	-813.2	4,021.2	1,112.6	977.4	135.19	8.230		
11,515.7	6,579.7	6,570.4	6,569.4	134.0	1.7	90.26	-813.2	4,021.2	1,111.1	975.4	135.63	8.192		
11,600.0	6,578.7	6,569.0	6,568.0	136.3	1.7	90.18	-813.2	4,021.3	1,106.6	968.7	137.96	8.021		
11,614.1	6,578.5	6,568.8	6,567.7	136.7	1.7	90.17	-813.2	4,021.3	1,106.5	968.2	138.35	7.998		
11,616.5	6,578.4	6,568.7	6,567.7	136.8	1.7	90.17	-813.2	4,021.3	1,106.5	968.1	138.41	7.994 CC, ES		
11,700.0	6,577.4	6,567.3	6,566.3	139.1	1.7	90.09	-813.2	4,021.3	1,109.6	968.9	140.72	7.885		
11,712.6	6,577.2	6,567.1	6,566.0	139.5	1.7	90.08	-813.2	4,021.3	1,110.7	969.6	141.07	7.873		
11,800.0	6,576.1	6,565.6	6,564.6	141.9	1.7	90.01	-813.2	4,021.3	1,121.6	978.1	143.49	7.817		
11,811.0	6,575.9	6,565.4	6,564.4	142.2	1.7	90.00	-813.2	4,021.3	1,123.5	979.7	143.79	7.813		
11,882.7	6,575.0	6,564.2	6,563.1	144.2	1.7	89.93	-813.2	4,021.3	1,138.0	992.3	145.77	7.807 SF		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT SLW RANCH #1-10 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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
11,883.5	6,575.0	6,564.2	6,563.1	144.2	1.7	89.93	-813.2	4,021.3	1,138.2	992.5	145.79	7.808	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	125.20	-1,180.3	1,673.3	2,047.8				
98.4	98.4	77.4	77.4	0.1	0.0	125.20	-1,180.4	1,673.3	2,047.7	2,047.6	0.10	N/A	
100.0	100.0	79.0	79.0	0.1	0.0	125.20	-1,180.4	1,673.3	2,047.7	2,047.6	0.10	N/A	
164.4	164.4	142.4	142.4	0.2	0.0	125.20	-1,180.5	1,673.2	2,047.7	2,047.4	0.29	7,159.590	
196.8	196.8	173.9	173.9	0.3	0.1	125.21	-1,180.5	1,673.1	2,047.7	2,047.3	0.39	5,232.913	
200.0	200.0	176.9	176.9	0.3	0.1	125.21	-1,180.5	1,673.1	2,047.7	2,047.3	0.40	5,099.753	
295.3	295.3	261.4	261.4	0.5	0.2	125.21	-1,180.7	1,673.3	2,047.9	2,047.2	0.72	2,861.121	
300.0	300.0	265.4	265.4	0.5	0.2	125.21	-1,180.7	1,673.3	2,048.0	2,047.2	0.73	2,799.875	
393.7	393.7	356.5	356.5	0.8	0.3	125.22	-1,181.5	1,673.6	2,048.7	2,047.7	1.03	1,983.903	
400.0	400.0	363.2	363.1	0.8	0.3	125.22	-1,181.5	1,673.7	2,048.8	2,047.7	1.05	1,946.680	
492.1	492.1	454.6	454.6	1.0	0.4	125.23	-1,182.2	1,674.0	2,049.4	2,048.1	1.33	1,545.217	
500.0	500.0	462.1	462.1	1.0	0.4	125.23	-1,182.3	1,674.0	2,049.4	2,048.1	1.35	1,519.356	
590.5	590.5	548.5	548.5	1.2	0.4	125.24	-1,182.9	1,674.5	2,050.2	2,048.6	1.61	1,277.314	
600.0	600.0	557.5	557.5	1.2	0.4	125.24	-1,183.0	1,674.5	2,050.3	2,048.7	1.63	1,256.681	
689.0	689.0	646.1	646.1	1.4	0.5	125.25	-1,183.8	1,675.1	2,051.3	2,049.4	1.88	1,091.348	
700.0	700.0	657.6	657.5	1.4	0.5	125.25	-1,183.9	1,675.1	2,051.4	2,049.5	1.91	1,073.904	
787.4	787.4	747.0	746.9	1.6	0.5	125.26	-1,184.6	1,675.7	2,052.2	2,050.1	2.15	954.614	
800.0	800.0	759.7	759.7	1.7	0.5	125.26	-1,184.7	1,675.8	2,052.3	2,050.1	2.18	939.753	
885.8	885.8	846.2	846.2	1.9	0.6	125.26	-1,185.2	1,676.3	2,053.1	2,050.6	2.41	850.277	
900.0	900.0	860.5	860.4	1.9	0.6	125.26	-1,185.3	1,676.4	2,053.2	2,050.7	2.45	837.200	
984.2	984.2	944.6	944.6	2.1	0.6	125.27	-1,185.9	1,676.8	2,053.9	2,051.2	2.68	767.257	
1,000.0	1,000.0	960.3	960.3	2.1	0.6	125.27	-1,186.0	1,676.9	2,054.0	2,051.3	2.72	755.487	
1,082.7	1,082.7	1,046.4	1,046.4	2.3	0.7	125.28	-1,186.6	1,677.4	2,054.7	2,051.8	2.94	699.043	
1,100.0	1,100.0	1,065.3	1,065.2	2.3	0.7	125.28	-1,186.8	1,677.4	2,054.8	2,051.8	2.99	688.232	
1,181.1	1,181.1	1,153.4	1,153.4	2.5	0.7	125.29	-1,187.2	1,677.6	2,055.2	2,052.0	3.20	641.684	
1,200.0	1,200.0	1,173.9	1,173.9	2.6	0.7	125.29	-1,187.3	1,677.6	2,055.2	2,052.0	3.25	631.709	
1,279.5	1,279.5	1,255.8	1,255.7	2.7	0.8	125.29	-1,187.5	1,677.6	2,055.3	2,051.9	3.46	593.337	
1,300.0	1,300.0	1,276.3	1,276.3	2.8	0.8	125.29	-1,187.5	1,677.6	2,055.3	2,051.8	3.52	584.247	
1,377.9	1,377.9	1,357.0	1,357.0	3.0	0.8	125.30	-1,187.8	1,677.4	2,055.4	2,051.7	3.72	552.272	
1,400.0	1,400.0	1,380.1	1,380.1	3.0	0.8	125.31	-1,187.9	1,677.4	2,055.4	2,051.6	3.78	543.877	
1,403.4	1,403.4	1,383.7	1,383.6	3.0	0.8	-159.57	-1,187.9	1,677.3	2,055.4	2,051.5	3.81	538.948	
1,476.4	1,476.4	1,457.1	1,457.0	3.2	0.8	-159.57	-1,187.9	1,677.2	2,056.2	2,052.2	3.99	515.718	
1,500.0	1,500.0	1,480.5	1,480.5	3.2	0.8	-159.57	-1,188.0	1,677.1	2,056.9	2,052.8	4.04	508.696	
1,574.8	1,574.7	1,555.0	1,555.0	3.4	0.9	-159.57	-1,188.2	1,676.9	2,060.1	2,055.9	4.22	488.322	
1,600.0	1,599.8	1,580.1	1,580.1	3.4	0.9	-159.58	-1,188.2	1,676.8	2,061.7	2,057.4	4.28	481.908	
1,673.2	1,672.8	1,653.1	1,653.0	3.6	0.9	-159.59	-1,188.4	1,676.6	2,067.2	2,062.8	4.46	463.976	
1,700.0	1,699.5	1,679.7	1,679.7	3.7	0.9	-159.59	-1,188.5	1,676.5	2,069.7	2,065.2	4.52	457.890	
1,771.6	1,770.6	1,755.2	1,755.2	3.8	0.9	-159.61	-1,188.8	1,676.1	2,077.4	2,072.8	4.70	442.131	
1,800.0	1,798.7	1,785.7	1,785.7	3.9	0.9	-159.62	-1,189.0	1,675.8	2,080.9	2,076.1	4.77	436.344	
1,870.1	1,868.0	1,859.5	1,859.5	4.1	0.9	-159.64	-1,189.3	1,675.1	2,090.5	2,085.5	4.95	422.634	
1,900.0	1,897.5	1,890.8	1,890.8	4.2	1.0	-159.65	-1,189.4	1,674.8	2,095.0	2,090.0	5.02	417.211	
1,968.5	1,964.8	1,952.6	1,952.6	4.4	1.0	-159.67	-1,189.5	1,674.2	2,106.5	2,101.3	5.20	404.997	
2,000.0	1,995.6	1,980.3	1,980.3	4.5	1.0	-159.67	-1,189.7	1,674.0	2,112.4	2,107.1	5.28	399.720	
2,066.9	2,060.9	2,037.6	2,037.6	4.7	1.0	-159.68	-1,190.1	1,673.6	2,126.1	2,120.6	5.47	388.441	
2,100.0	2,093.1	2,065.5	2,065.5	4.8	1.0	-159.68	-1,190.3	1,673.5	2,133.5	2,128.0	5.57	383.296	
2,165.3	2,156.3	2,122.5	2,122.4	5.1	1.0	-159.69	-1,191.0	1,673.3	2,149.4	2,143.6	5.76	372.981	
2,200.0	2,189.6	2,154.5	2,154.4	5.2	1.0	-159.70	-1,191.4	1,673.3	2,158.4	2,152.5	5.87	367.872	
2,263.8	2,250.7	2,213.1	2,213.1	5.5	1.1	-159.71	-1,192.2	1,673.2	2,176.0	2,169.9	6.07	358.472	
2,280.0	2,266.2	2,228.0	2,228.0	5.6	1.1	-159.71	-1,192.4	1,673.2	2,180.7	2,174.6	6.12	356.293	
2,300.0	2,285.3	2,246.3	2,246.3	5.7	1.1	-159.76	-1,192.7	1,673.1	2,186.5	2,180.4	6.18	353.683	
2,362.2	2,344.6	2,303.5	2,303.4	6.0	1.1	-159.90	-1,193.6	1,673.1	2,204.8	2,198.4	6.37	345.946	
2,400.0	2,380.6	2,339.4	2,339.3	6.2	1.1	-159.99	-1,194.1	1,673.1	2,215.9	2,209.4	6.50	341.062	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,438.4	2,396.9	2,396.8	6.5	1.1	-160.14	-1,194.9	1,673.3	2,233.7	2,227.0	6.69	333.747	
2,500.0	2,475.9	2,434.9	2,434.8	6.7	1.1	-160.23	-1,195.3	1,673.4	2,245.3	2,238.5	6.82	329.217	
2,559.0	2,532.2	2,491.9	2,491.8	7.0	1.2	-160.38	-1,196.0	1,673.5	2,262.7	2,255.7	7.02	322.549	
2,600.0	2,571.2	2,533.4	2,533.3	7.2	1.2	-160.48	-1,196.5	1,673.5	2,274.7	2,267.6	7.15	318.200	
2,657.5	2,626.0	2,592.4	2,592.3	7.5	1.2	-160.62	-1,197.1	1,673.5	2,291.5	2,284.2	7.34	312.157	
2,700.0	2,666.6	2,634.2	2,634.1	7.8	1.2	-160.72	-1,197.6	1,673.4	2,303.9	2,296.4	7.48	307.917	
2,755.9	2,719.8	2,688.6	2,688.4	8.1	1.2	-160.84	-1,198.3	1,673.3	2,320.2	2,312.5	7.67	302.511	
2,800.0	2,761.9	2,731.6	2,731.5	8.3	1.2	-160.93	-1,198.8	1,673.1	2,333.0	2,325.2	7.82	298.432	
2,854.3	2,813.7	2,784.6	2,784.5	8.7	1.3	-161.05	-1,199.4	1,673.0	2,348.8	2,340.8	8.00	293.511	
2,900.0	2,857.2	2,827.1	2,827.0	8.9	1.3	-161.15	-1,199.7	1,672.9	2,362.1	2,353.9	8.16	289.541	
2,952.7	2,907.5	2,874.8	2,874.6	9.2	1.3	-161.26	-1,200.1	1,672.9	2,377.4	2,369.1	8.34	285.093	
3,000.0	2,952.5	2,920.9	2,920.8	9.5	1.3	-161.37	-1,200.3	1,673.0	2,391.3	2,382.8	8.50	281.376	
3,051.2	3,001.3	2,976.5	2,976.4	9.8	1.3	-161.50	-1,200.5	1,673.1	2,406.1	2,397.5	8.67	277.528	
3,100.0	3,047.8	3,026.3	3,026.2	10.1	1.3	-161.62	-1,200.5	1,673.1	2,420.2	2,411.4	8.83	274.082	
3,149.6	3,095.1	3,074.3	3,074.2	10.4	1.3	-161.73	-1,200.5	1,673.1	2,434.5	2,425.5	8.99	270.705	
3,200.0	3,143.2	3,122.0	3,121.9	10.7	1.3	-161.84	-1,200.6	1,673.0	2,449.0	2,439.9	9.16	267.314	
3,248.0	3,188.9	3,166.2	3,166.1	11.0	1.3	-161.94	-1,200.6	1,673.0	2,462.9	2,453.6	9.33	264.047	
3,300.0	3,238.5	3,214.0	3,213.9	11.3	1.3	-162.05	-1,200.7	1,673.0	2,477.9	2,468.4	9.51	260.633	
3,346.4	3,282.8	3,256.9	3,256.8	11.6	1.3	-162.14	-1,200.8	1,672.9	2,491.4	2,481.7	9.67	257.610	
3,400.0	3,333.8	3,306.8	3,306.7	11.9	1.4	-162.25	-1,201.0	1,672.9	2,507.0	2,497.1	9.86	254.266	
3,444.9	3,376.6	3,351.0	3,350.9	12.2	1.4	-162.34	-1,201.3	1,672.9	2,520.0	2,510.0	10.02	251.556	
3,500.0	3,429.1	3,405.8	3,405.7	12.6	1.4	-162.45	-1,201.5	1,672.8	2,536.1	2,525.8	10.21	248.361	
3,543.3	3,470.4	3,452.0	3,451.9	12.8	1.4	-162.54	-1,201.6	1,672.7	2,548.6	2,538.2	10.36	245.971	
3,600.0	3,524.4	3,510.4	3,510.3	13.2	1.4	-162.66	-1,201.9	1,672.4	2,564.9	2,554.3	10.56	242.953	
3,641.7	3,564.2	3,547.2	3,547.0	13.4	1.4	-162.73	-1,202.0	1,672.2	2,576.9	2,566.2	10.70	240.781	
3,700.0	3,619.8	3,600.0	3,599.9	13.8	1.5	-162.83	-1,202.3	1,671.9	2,593.7	2,582.8	10.90	237.862	
3,740.1	3,658.0	3,637.2	3,637.1	14.0	1.5	-162.90	-1,202.5	1,671.8	2,605.3	2,594.3	11.05	235.869	
3,800.0	3,715.1	3,695.0	3,694.9	14.4	1.5	-163.01	-1,202.8	1,671.6	2,622.7	2,611.4	11.26	232.999	
3,838.6	3,751.8	3,732.4	3,732.3	14.7	1.5	-163.08	-1,202.9	1,671.5	2,633.9	2,622.5	11.39	231.210	
3,900.0	3,810.4	3,792.1	3,791.9	15.0	1.5	-163.19	-1,203.2	1,671.3	2,651.6	2,640.0	11.61	228.460	
3,937.0	3,845.7	3,826.9	3,826.7	15.3	1.5	-163.26	-1,203.3	1,671.1	2,662.3	2,650.6	11.74	226.840	
4,000.0	3,905.7	3,885.6	3,885.5	15.7	1.5	-163.36	-1,203.7	1,670.8	2,680.6	2,668.6	11.96	224.170	
4,035.4	3,939.5	3,917.5	3,917.4	15.9	1.6	-163.42	-1,203.9	1,670.7	2,690.9	2,678.8	12.08	222.699	
4,100.0	4,001.0	3,974.3	3,974.2	16.3	1.6	-163.52	-1,204.3	1,670.5	2,709.7	2,697.4	12.31	220.092	
4,133.8	4,033.3	4,004.1	4,003.9	16.5	1.6	-163.57	-1,204.6	1,670.4	2,719.7	2,707.2	12.43	218.762	
4,200.0	4,096.3	4,062.6	4,062.5	16.9	1.6	-163.67	-1,205.1	1,670.3	2,739.1	2,726.5	12.67	216.214	
4,232.3	4,127.1	4,091.1	4,091.0	17.1	1.6	-163.71	-1,205.4	1,670.3	2,748.7	2,735.9	12.78	215.007	
4,300.0	4,191.7	4,150.9	4,150.7	17.6	1.6	-163.81	-1,206.1	1,670.3	2,768.8	2,755.8	13.03	212.539	
4,330.7	4,220.9	4,177.9	4,177.8	17.8	1.6	-163.85	-1,206.5	1,670.4	2,778.0	2,764.8	13.14	211.450	
4,400.0	4,287.0	4,244.9	4,244.7	18.2	1.7	-163.96	-1,207.4	1,670.4	2,798.7	2,785.3	13.39	209.057	
4,429.1	4,314.7	4,274.4	4,274.3	18.4	1.7	-164.00	-1,207.7	1,670.5	2,807.4	2,793.9	13.49	208.072	
4,500.0	4,382.3	4,346.9	4,346.7	18.8	1.7	-164.12	-1,208.5	1,670.5	2,828.4	2,814.7	13.75	205.758	
4,527.5	4,408.6	4,375.2	4,375.1	19.0	1.7	-164.16	-1,208.8	1,670.4	2,836.6	2,822.8	13.85	204.882	
4,600.0	4,477.6	4,442.6	4,442.4	19.5	1.7	-164.26	-1,209.5	1,670.3	2,858.0	2,843.9	14.10	202.643	
4,626.0	4,502.4	4,465.4	4,465.3	19.6	1.7	-164.30	-1,209.8	1,670.3	2,865.7	2,851.5	14.20	201.860	
4,700.0	4,572.9	4,537.9	4,537.8	20.1	1.8	-164.41	-1,210.6	1,670.3	2,887.8	2,873.3	14.46	199.677	
4,724.4	4,596.2	4,564.6	4,564.4	20.3	1.8	-164.45	-1,210.9	1,670.3	2,895.0	2,880.4	14.55	198.967	
4,800.0	4,668.3	4,640.7	4,640.5	20.7	1.8	-164.56	-1,211.4	1,670.2	2,917.2	2,902.4	14.82	196.839	
4,822.8	4,690.0	4,662.2	4,662.0	20.9	1.8	-164.60	-1,211.6	1,670.2	2,924.0	2,909.1	14.90	196.216	
4,900.0	4,763.6	4,739.5	4,739.3	21.4	1.8	-164.72	-1,211.9	1,670.1	2,946.7	2,931.5	15.18	194.170	
4,921.2	4,783.8	4,762.2	4,762.0	21.5	1.8	-164.75	-1,211.9	1,670.1	2,952.9	2,937.7	15.25	193.618	
5,000.0	4,858.9	4,834.5	4,834.4	22.0	1.9	-164.86	-1,212.2	1,669.9	2,975.9	2,960.4	15.53	191.628	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,877.7	4,850.2	4,850.0	22.1	1.9	-164.88	-1,212.3	1,669.9	2,981.7	2,966.1	15.60	191.147	
5,100.0	4,954.2	4,915.6	4,915.4	22.6	1.9	-164.98	-1,212.6	1,670.0	3,005.5	2,989.7	15.88	189.213	
5,118.1	4,971.5	4,931.8	4,931.6	22.8	1.9	-165.01	-1,212.7	1,670.1	3,010.9	2,995.0	15.95	188.768	
5,171.8	5,022.7	4,979.7	4,979.6	23.1	1.9	-165.08	-1,212.9	1,670.3	3,027.0	3,010.9	16.14	187.492	
5,200.0	5,049.6	5,000.0	4,999.8	23.3	1.9	-165.15	-1,213.0	1,670.4	3,035.3	3,019.1	16.21	187.228	
5,216.5	5,065.4	5,017.5	5,017.3	23.3	1.9	-165.21	-1,213.1	1,670.5	3,040.1	3,023.9	16.25	187.128	
5,300.0	5,145.7	5,084.0	5,083.8	23.7	1.9	-165.41	-1,213.7	1,671.0	3,063.1	3,046.7	16.41	186.666	
5,314.9	5,160.1	5,100.0	5,099.8	23.8	1.9	-165.45	-1,213.9	1,671.2	3,067.0	3,050.6	16.44	186.590	
5,400.0	5,242.7	5,168.9	5,168.7	24.1	1.9	-165.63	-1,214.7	1,671.9	3,088.1	3,071.5	16.59	186.184	
5,413.4	5,255.7	5,180.5	5,180.3	24.2	1.9	-165.66	-1,214.9	1,672.1	3,091.2	3,074.6	16.61	186.135	
5,500.0	5,340.5	5,258.1	5,257.9	24.5	2.0	-165.82	-1,216.0	1,673.1	3,110.1	3,093.4	16.74	185.767	
5,511.8	5,352.1	5,268.8	5,268.6	24.5	2.0	-165.84	-1,216.1	1,673.2	3,112.5	3,095.8	16.76	185.730	
5,600.0	5,439.0	5,348.7	5,348.5	24.8	2.0	-165.97	-1,217.6	1,674.4	3,129.1	3,112.2	16.88	185.394	
5,610.2	5,449.1	5,357.9	5,357.7	24.8	2.0	-165.98	-1,217.7	1,674.5	3,130.9	3,114.0	16.89	185.365	
5,700.0	5,538.0	5,439.3	5,439.0	25.1	2.0	-166.09	-1,219.4	1,675.7	3,145.0	3,128.0	17.00	185.040	
5,708.6	5,546.6	5,447.1	5,446.8	25.1	2.0	-166.10	-1,219.6	1,675.9	3,146.2	3,129.2	17.00	185.016	
5,800.0	5,637.4	5,526.6	5,526.3	25.3	2.0	-166.17	-1,221.5	1,677.2	3,157.8	3,140.7	17.10	184.682	
5,807.1	5,644.5	5,532.3	5,532.0	25.3	2.0	-166.17	-1,221.6	1,677.3	3,158.5	3,141.4	17.10	184.662	
5,900.0	5,737.2	5,608.1	5,607.7	25.5	2.1	-166.22	-1,223.7	1,678.9	3,167.7	3,150.5	17.19	184.311	
5,905.5	5,742.6	5,613.2	5,612.8	25.5	2.1	-166.22	-1,223.9	1,679.0	3,168.2	3,151.0	17.19	184.291	
6,000.0	5,837.1	5,700.0	5,699.6	25.6	2.1	-166.23	-1,227.1	1,680.7	3,174.7	3,157.4	17.27	183.838	
6,003.9	5,841.0	5,700.0	5,699.6	25.6	2.1	-166.23	-1,227.1	1,680.7	3,174.9	3,157.6	17.27	183.830	
6,051.8	5,888.9	5,745.6	5,745.1	25.7	2.1	118.65	-1,229.0	1,681.6	3,177.0	3,149.9	27.11	117.202	
6,081.8	5,918.9	5,771.9	5,771.4	25.7	2.1	118.66	-1,230.0	1,682.2	3,178.2	3,151.1	27.14	117.089	
6,100.0	5,937.1	5,787.9	5,787.3	25.7	2.1	28.65	-1,230.6	1,682.6	3,178.7	3,161.4	17.33	183.386	
6,102.3	5,939.4	5,789.9	5,789.4	25.7	2.1	28.65	-1,230.7	1,682.6	3,178.8	3,161.4	17.33	183.433	
6,150.0	5,987.0	5,831.9	5,831.3	25.7	2.1	28.71	-1,232.3	1,683.7	3,178.1	3,160.9	17.27	184.074	
6,200.0	6,036.5	5,875.8	5,875.2	25.7	2.1	28.92	-1,234.0	1,685.0	3,174.6	3,157.4	17.23	184.247	
6,200.8	6,037.3	5,876.5	5,875.9	25.7	2.1	28.92	-1,234.0	1,685.0	3,174.5	3,157.3	17.23	184.247	
6,250.0	6,085.5	5,921.1	5,920.4	25.7	2.2	29.27	-1,235.8	1,686.3	3,168.1	3,150.9	17.22	183.928	
6,299.2	6,133.0	5,967.3	5,966.5	25.6	2.2	29.77	-1,237.5	1,687.7	3,158.8	3,141.6	17.25	183.164	
6,300.0	6,133.7	5,968.0	5,967.3	25.6	2.2	29.78	-1,237.5	1,687.8	3,158.6	3,141.4	17.25	183.147	
6,350.0	6,180.9	6,015.3	6,014.5	25.5	2.2	30.45	-1,239.2	1,689.3	3,146.3	3,129.0	17.30	181.909	
6,397.6	6,224.6	6,061.8	6,061.0	25.4	2.2	31.27	-1,240.7	1,690.9	3,131.8	3,114.4	17.38	180.239	
6,400.0	6,226.7	6,064.1	6,063.3	25.4	2.2	31.31	-1,240.8	1,691.0	3,131.0	3,113.6	17.38	180.140	
6,450.0	6,271.1	6,109.2	6,108.3	25.2	2.2	32.35	-1,242.2	1,692.5	3,113.0	3,095.5	17.51	177.820	
6,496.0	6,310.4	6,143.1	6,142.1	25.1	2.2	33.46	-1,243.3	1,693.7	3,094.0	3,076.4	17.66	175.194	
6,500.0	6,313.7	6,145.9	6,145.0	25.1	2.2	33.56	-1,243.4	1,693.8	3,092.3	3,074.6	17.68	174.939	
6,550.0	6,354.4	6,181.2	6,180.2	25.0	2.2	34.98	-1,244.5	1,695.1	3,069.2	3,051.3	17.92	171.274	
6,594.5	6,388.9	6,212.7	6,211.6	24.9	2.2	36.46	-1,245.6	1,696.3	3,046.7	3,028.5	18.22	167.229	
6,600.0	6,393.0	6,216.8	6,215.8	24.9	2.2	36.67	-1,245.7	1,696.5	3,043.7	3,025.5	18.26	166.673	
6,650.0	6,429.3	6,252.9	6,251.8	24.8	2.3	38.64	-1,247.0	1,697.9	3,016.0	2,997.3	18.73	161.070	
6,692.9	6,458.5	6,282.1	6,281.0	24.7	2.3	40.58	-1,248.0	1,699.1	2,990.6	2,971.4	19.23	155.536	
6,700.0	6,463.1	6,286.7	6,285.6	24.7	2.3	40.93	-1,248.1	1,699.3	2,986.3	2,966.9	19.32	154.578	
6,750.0	6,494.3	6,317.5	6,316.3	24.7	2.3	43.55	-1,249.2	1,700.5	2,954.5	2,934.5	20.05	147.379	
6,791.3	6,517.9	6,340.6	6,339.4	24.7	2.3	45.98	-1,250.0	1,701.5	2,927.0	2,906.2	20.75	141.046	
6,800.0	6,522.6	6,345.3	6,344.1	24.7	2.3	46.53	-1,250.1	1,701.7	2,921.1	2,900.2	20.91	139.717	
6,850.0	6,548.0	6,370.4	6,369.2	24.7	2.3	49.90	-1,251.0	1,702.7	2,886.0	2,864.2	21.88	131.881	
6,889.7	6,566.0	6,388.5	6,387.2	24.8	2.3	52.89	-1,251.7	1,703.4	2,857.2	2,834.5	22.73	125.707	
6,900.0	6,570.4	6,392.8	6,391.6	24.9	2.3	53.70	-1,251.8	1,703.6	2,849.7	2,826.7	22.95	124.178	
6,950.0	6,589.5	6,411.5	6,410.2	25.1	2.3	57.90	-1,252.5	1,704.4	2,812.1	2,788.1	24.06	116.896	
6,988.2	6,602.0	6,423.6	6,422.3	25.3	2.3	61.37	-1,253.0	1,704.9	2,782.8	2,757.9	24.91	111.712	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.4	6,427.0	6,425.7	25.3	2.3	62.49	-1,253.1	1,705.1	2,773.6	2,748.5	25.16	110.220		
7,050.0	6,618.0	6,439.6	6,438.3	25.6	2.3	67.45	-1,253.6	1,705.6	2,734.4	2,708.2	26.23	104.259		
7,086.6	6,625.0	6,447.1	6,445.7	25.9	2.3	71.26	-1,253.9	1,705.9	2,705.4	2,678.4	26.96	100.348		
7,100.0	6,627.1	6,449.4	6,448.0	26.0	2.3	72.69	-1,254.0	1,706.0	2,694.7	2,667.5	27.21	99.043		
7,150.0	6,632.8	6,456.2	6,454.8	26.5	2.3	78.11	-1,254.3	1,706.3	2,654.6	2,626.5	28.09	94.508		
7,185.0	6,634.7	6,459.2	6,457.8	26.8	2.3	81.94	-1,254.4	1,706.4	2,626.5	2,597.8	28.66	91.648		
7,200.0	6,635.0	6,460.0	6,458.6	27.0	2.3	83.58	-1,254.4	1,706.5	2,614.4	2,585.5	28.88	90.515		
7,215.9	6,635.0	6,460.6	6,459.2	27.1	2.3	85.30	-1,254.4	1,706.5	2,601.7	2,572.5	29.12	89.333		
7,283.4	6,634.1	6,462.4	6,461.0	27.9	2.3	85.37	-1,254.5	1,706.6	2,547.8	2,517.8	29.96	85.051		
7,300.0	6,633.9	6,462.8	6,461.4	28.1	2.3	85.39	-1,254.5	1,706.6	2,534.7	2,504.5	30.16	84.041		
7,381.9	6,632.9	6,465.0	6,463.6	29.3	2.3	85.47	-1,254.6	1,706.7	2,470.5	2,439.2	31.33	78.844		
7,400.0	6,632.6	6,465.5	6,464.1	29.5	2.3	85.49	-1,254.6	1,706.7	2,456.4	2,424.8	31.59	77.750		
7,480.3	6,631.6	6,467.7	6,466.3	30.8	2.3	85.57	-1,254.7	1,706.8	2,394.7	2,361.8	32.90	72.796		
7,500.0	6,631.4	6,468.2	6,466.8	31.1	2.3	85.58	-1,254.8	1,706.8	2,379.8	2,346.5	33.22	71.645		
7,578.7	6,630.4	6,470.3	6,468.9	32.5	2.3	85.66	-1,254.8	1,706.9	2,320.7	2,286.1	34.62	67.032		
7,600.0	6,630.1	6,470.9	6,469.5	32.9	2.3	85.69	-1,254.9	1,707.0	2,304.9	2,269.9	35.00	65.855		
7,677.1	6,629.1	6,473.0	6,471.6	34.3	2.3	85.76	-1,255.0	1,707.1	2,248.5	2,212.0	36.48	61.635		
7,700.0	6,628.8	6,473.6	6,472.2	34.8	2.3	85.79	-1,255.0	1,707.1	2,232.0	2,195.1	36.92	60.456		
7,775.6	6,627.8	6,475.7	6,474.3	36.3	2.3	85.86	-1,255.1	1,707.2	2,178.3	2,139.9	38.46	56.643		
7,800.0	6,627.5	6,476.4	6,475.0	36.8	2.3	85.89	-1,255.1	1,707.2	2,161.3	2,122.3	38.95	55.482		
7,874.0	6,626.6	6,478.4	6,477.0	38.4	2.3	85.96	-1,255.2	1,707.3	2,110.5	2,069.9	40.53	52.069		
7,900.0	6,626.3	6,479.1	6,477.7	38.9	2.3	85.99	-1,255.2	1,707.3	2,092.9	2,051.8	41.09	50.940		
7,972.4	6,625.3	6,481.1	6,479.7	40.5	2.3	86.06	-1,255.3	1,707.4	2,045.1	2,002.4	42.69	47.905		
8,000.0	6,625.0	6,481.9	6,480.5	41.1	2.3	86.09	-1,255.3	1,707.4	2,027.2	1,983.9	43.30	46.818		
8,070.8	6,624.1	6,483.8	6,482.4	42.7	2.3	86.16	-1,255.4	1,707.5	1,982.4	1,937.5	44.92	44.133		
8,100.0	6,623.7	6,484.6	6,483.2	43.4	2.3	86.19	-1,255.4	1,707.6	1,964.4	1,918.8	45.58	43.094		
8,169.3	6,622.8	6,486.6	6,485.1	45.0	2.3	86.26	-1,255.5	1,707.6	1,922.7	1,875.5	47.21	40.730		
8,200.0	6,622.4	6,487.4	6,486.0	45.7	2.3	86.30	-1,255.6	1,707.7	1,904.7	1,856.8	47.93	39.743		
8,267.7	6,621.6	6,489.3	6,487.9	47.4	2.3	86.36	-1,255.6	1,707.8	1,866.3	1,816.8	49.55	37.668		
8,300.0	6,621.1	6,490.2	6,488.8	48.1	2.3	86.40	-1,255.7	1,707.8	1,848.6	1,798.2	50.32	36.737		
8,366.1	6,620.3	6,492.1	6,490.6	49.7	2.3	86.47	-1,255.8	1,707.9	1,813.5	1,761.6	51.93	34.922		
8,400.0	6,619.9	6,493.0	6,491.6	50.6	2.3	86.50	-1,255.8	1,707.9	1,796.2	1,743.4	52.76	34.047		
8,464.5	6,619.0	6,500.0	6,498.5	52.2	2.3	86.76	-1,256.1	1,708.2	1,764.6	1,710.2	54.36	32.459		
8,500.0	6,618.6	6,500.0	6,498.5	53.0	2.3	86.76	-1,256.1	1,708.2	1,748.0	1,692.8	55.24	31.644		
8,563.0	6,617.8	6,500.0	6,498.5	54.6	2.3	86.76	-1,256.1	1,708.2	1,719.9	1,663.1	56.81	30.273		
8,600.0	6,617.3	6,500.0	6,498.5	55.5	2.3	86.76	-1,256.1	1,708.2	1,704.3	1,646.5	57.74	29.517		
8,661.4	6,616.5	6,500.5	6,499.1	57.1	2.3	86.78	-1,256.1	1,708.3	1,679.8	1,620.5	59.29	28.331		
8,700.0	6,616.0	6,501.9	6,500.4	58.1	2.3	86.83	-1,256.2	1,708.3	1,665.4	1,605.2	60.27	27.632		
8,759.8	6,615.2	6,504.0	6,502.6	59.6	2.3	86.91	-1,256.3	1,708.4	1,644.7	1,582.9	61.80	26.611		
8,800.0	6,614.7	6,505.5	6,504.0	60.6	2.3	86.96	-1,256.3	1,708.5	1,631.8	1,569.0	62.83	25.970		
8,858.2	6,614.0	6,507.6	6,506.1	62.1	2.3	87.04	-1,256.4	1,708.6	1,614.7	1,550.4	64.34	25.097		
8,900.0	6,613.4	6,509.1	6,507.6	63.2	2.3	87.10	-1,256.5	1,708.7	1,603.7	1,538.3	65.42	24.515		
8,956.7	6,612.7	6,511.2	6,509.7	64.7	2.3	87.17	-1,256.6	1,708.7	1,590.3	1,523.4	66.89	23.774		
9,000.0	6,612.2	6,512.8	6,511.3	65.8	2.3	87.23	-1,256.6	1,708.8	1,581.4	1,513.4	68.02	23.249		
9,055.1	6,611.5	6,514.8	6,513.4	67.3	2.3	87.31	-1,256.7	1,708.9	1,571.7	1,502.3	69.46	22.626		
9,100.0	6,610.9	6,516.5	6,515.0	68.4	2.3	87.37	-1,256.8	1,709.0	1,565.2	1,494.6	70.64	22.157		
9,153.5	6,610.2	6,518.5	6,517.0	69.8	2.3	87.44	-1,256.9	1,709.1	1,559.1	1,487.1	72.05	21.639		
9,200.0	6,609.6	6,520.3	6,518.8	71.1	2.3	87.51	-1,256.9	1,709.2	1,555.3	1,482.0	73.28	21.225		
9,251.9	6,608.9	6,522.3	6,520.8	72.4	2.3	87.58	-1,257.0	1,709.2	1,552.6	1,478.0	74.65	20.798		
9,300.0	6,608.3	6,524.1	6,522.6	73.7	2.3	87.65	-1,257.1	1,709.3	1,551.7	1,475.8	75.93	20.437		
9,305.3	6,608.2	6,524.3	6,522.8	73.8	2.3	87.66	-1,257.1	1,709.3	1,551.7	1,475.6	76.07	20.400 CC		
9,350.4	6,607.7	6,526.1	6,524.6	75.0	2.3	87.72	-1,257.2	1,709.4	1,552.4	1,475.1	77.27	20.091 ES		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,607.0	6,528.0	6,526.5	76.4	2.3	87.79	-1,257.3	1,709.5	1,554.6	1,476.0	78.59	19.782	
9,448.8	6,606.4	6,529.9	6,528.4	77.7	2.3	87.86	-1,257.3	1,709.6	1,558.3	1,478.4	79.89	19.506	
9,500.0	6,605.7	6,531.9	6,530.4	79.0	2.3	87.94	-1,257.4	1,709.7	1,563.9	1,482.6	81.26	19.245	
9,547.2	6,605.1	6,533.8	6,532.3	80.3	2.3	88.01	-1,257.5	1,709.8	1,570.4	1,487.9	82.53	19.029	
9,600.0	6,604.5	6,535.9	6,534.4	81.7	2.3	88.09	-1,257.6	1,709.9	1,579.4	1,495.5	83.94	18.815	
9,645.6	6,603.9	6,537.8	6,536.3	82.9	2.3	88.15	-1,257.7	1,710.0	1,588.6	1,503.4	85.17	18.651	
9,700.0	6,603.2	6,540.0	6,538.5	84.4	2.3	88.24	-1,257.7	1,710.1	1,601.1	1,514.4	86.63	18.481	
9,744.1	6,602.6	6,541.8	6,540.3	85.6	2.3	88.30	-1,257.8	1,710.2	1,612.5	1,524.7	87.82	18.360	
9,800.0	6,601.9	6,544.1	6,542.5	87.1	2.3	88.39	-1,257.9	1,710.3	1,628.6	1,539.2	89.33	18.230	
9,842.5	6,601.3	6,545.8	6,544.3	88.2	2.3	88.45	-1,258.0	1,710.3	1,642.0	1,551.5	90.48	18.146	
9,900.0	6,600.6	6,548.2	6,546.7	89.8	2.3	88.54	-1,258.1	1,710.5	1,661.6	1,569.6	92.04	18.053	
9,940.9	6,600.1	6,550.0	6,548.4	90.9	2.3	88.60	-1,258.1	1,710.5	1,676.7	1,583.6	93.15	18.000	
10,000.0	6,599.3	6,552.5	6,550.9	92.5	2.3	88.70	-1,258.2	1,710.7	1,699.9	1,605.2	94.75	17.940	
10,039.3	6,598.8	6,554.1	6,552.6	93.5	2.3	88.76	-1,258.3	1,710.7	1,716.4	1,620.6	95.83	17.912	
10,100.0	6,598.0	6,556.8	6,555.2	95.2	2.3	88.85	-1,258.4	1,710.9	1,743.1	1,645.7	97.47	17.883	
10,137.8	6,597.5	6,558.4	6,556.8	96.2	2.3	88.91	-1,258.5	1,710.9	1,760.7	1,662.2	98.50	17.874	
10,200.0	6,596.7	6,561.1	6,559.5	97.9	2.3	89.01	-1,258.6	1,711.1	1,790.9	1,690.7	100.20	17.873 SF	
10,236.2	6,596.3	6,562.7	6,561.1	98.9	2.3	89.07	-1,258.6	1,711.1	1,809.2	1,708.0	101.19	17.880	
10,300.0	6,595.4	6,565.5	6,563.9	100.6	2.3	89.18	-1,258.7	1,711.3	1,842.8	1,739.9	102.93	17.904	
10,334.6	6,595.0	6,567.1	6,565.5	101.6	2.3	89.23	-1,258.8	1,711.4	1,861.7	1,757.8	103.88	17.922	
10,400.0	6,594.2	6,570.0	6,568.4	103.4	2.3	89.34	-1,258.9	1,711.5	1,898.6	1,792.9	105.66	17.968	
10,433.0	6,593.7	6,571.5	6,569.9	104.3	2.3	89.40	-1,258.9	1,711.6	1,917.8	1,811.2	106.57	17.996	
10,500.0	6,592.9	6,574.5	6,572.9	106.1	2.3	89.51	-1,259.0	1,711.7	1,957.9	1,849.5	108.40	18.061	
10,531.5	6,592.5	6,576.0	6,574.4	106.9	2.3	89.56	-1,259.1	1,711.8	1,977.2	1,867.9	109.27	18.095	
10,600.0	6,591.6	6,579.1	6,577.5	108.8	2.3	89.68	-1,259.2	1,711.9	2,020.3	1,909.2	111.15	18.178	
10,629.9	6,591.2	6,580.5	6,578.9	109.6	2.3	89.73	-1,259.3	1,712.0	2,039.6	1,927.6	111.97	18.216	
10,700.0	6,590.3	6,583.8	6,582.2	111.6	2.3	89.85	-1,259.4	1,712.2	2,085.7	1,971.9	113.89	18.314	
10,728.3	6,589.9	6,585.2	6,583.5	112.3	2.3	89.90	-1,259.4	1,712.2	2,104.8	1,990.1	114.67	18.355	
10,800.0	6,589.0	6,588.6	6,586.9	114.3	2.3	90.03	-1,259.5	1,712.4	2,153.8	2,037.2	116.64	18.466	
10,826.7	6,588.7	6,589.8	6,588.2	115.0	2.3	90.07	-1,259.6	1,712.5	2,172.4	2,055.0	117.37	18.508	
10,900.0	6,587.7	6,593.4	6,591.8	117.1	2.3	90.20	-1,259.7	1,712.7	2,224.3	2,104.9	119.39	18.630	
10,925.2	6,587.4	6,594.6	6,593.0	117.7	2.3	90.25	-1,259.8	1,712.7	2,242.4	2,122.3	120.08	18.673	
11,000.0	6,586.4	6,598.3	6,596.6	119.8	2.3	90.38	-1,259.9	1,712.9	2,296.9	2,174.8	122.14	18.805	
11,023.6	6,586.1	6,599.5	6,597.8	120.4	2.3	90.43	-1,259.9	1,713.0	2,314.3	2,191.6	122.79	18.848	
11,100.0	6,585.1	6,602.8	6,601.2	122.6	2.4	90.55	-1,260.0	1,713.1	2,371.5	2,246.6	124.90	18.988	
11,122.0	6,584.8	6,603.8	6,602.2	123.2	2.4	90.59	-1,260.1	1,713.2	2,388.2	2,262.7	125.50	19.029	
11,200.0	6,583.8	6,607.2	6,605.6	125.3	2.4	90.71	-1,260.2	1,713.4	2,448.0	2,320.3	127.65	19.177	
11,220.4	6,583.6	6,608.2	6,606.5	125.9	2.4	90.75	-1,260.2	1,713.4	2,463.8	2,335.6	128.22	19.216	
11,300.0	6,582.5	6,611.7	6,610.0	128.1	2.4	90.88	-1,260.3	1,713.6	2,526.0	2,395.6	130.41	19.370	
11,318.9	6,582.3	6,612.6	6,610.9	128.6	2.4	90.91	-1,260.4	1,713.6	2,541.0	2,410.0	130.93	19.407	
11,400.0	6,581.2	6,616.2	6,614.6	130.8	2.4	91.04	-1,260.5	1,713.8	2,605.6	2,472.4	133.17	19.566	
11,417.3	6,581.0	6,617.0	6,615.3	131.3	2.4	91.07	-1,260.5	1,713.9	2,619.5	2,485.9	133.65	19.600	
11,500.0	6,580.0	6,620.8	6,619.1	133.6	2.4	91.21	-1,260.6	1,714.0	2,686.5	2,550.6	135.93	19.764	
11,515.7	6,579.7	6,621.5	6,619.9	134.0	2.4	91.24	-1,260.7	1,714.1	2,699.4	2,563.0	136.36	19.796	
11,600.0	6,578.7	6,625.5	6,623.8	136.3	2.4	91.38	-1,260.8	1,714.3	2,768.7	2,630.0	138.69	19.963	
11,614.1	6,578.5	6,626.1	6,624.4	136.7	2.4	91.41	-1,260.8	1,714.3	2,780.4	2,641.3	139.08	19.992	
11,700.0	6,577.4	6,630.2	6,628.5	139.1	2.4	91.55	-1,261.0	1,714.5	2,852.0	2,710.6	141.45	20.163	
11,712.6	6,577.2	6,630.8	6,629.1	139.5	2.4	91.58	-1,261.0	1,714.6	2,862.6	2,720.8	141.80	20.188	
11,800.0	6,576.1	6,635.0	6,633.3	141.9	2.4	91.73	-1,261.1	1,714.8	2,936.3	2,792.1	144.21	20.361	
11,811.0	6,575.9	6,635.5	6,633.8	142.2	2.4	91.75	-1,261.1	1,714.8	2,945.7	2,801.2	144.52	20.383	
11,882.7	6,575.0	6,639.0	6,637.3	144.2	2.4	91.88	-1,261.2	1,715.0	3,006.8	2,860.3	146.50	20.525	
11,883.5	6,575.0	6,639.0	6,637.3	144.2	2.4	91.88	-1,261.2	1,715.0	3,007.5	2,861.0	146.51	20.528	

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

## Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	112.25	-1,148.1	2,805.9	3,031.7				
98.4	98.4	85.7	85.7	0.1	0.0	112.25	-1,148.0	2,805.9	3,031.6	3,031.5	0.10	N/A	
100.0	100.0	87.4	87.4	0.1	0.0	112.25	-1,148.0	2,805.9	3,031.6	3,031.5	0.10	N/A	
196.8	196.8	181.1	181.1	0.3	0.1	112.25	-1,147.7	2,805.8	3,031.5	3,031.1	0.40	7,648.515	
200.0	200.0	184.1	184.1	0.3	0.1	112.25	-1,147.7	2,805.8	3,031.5	3,031.1	0.41	7,458.892	
295.3	295.3	294.2	294.2	0.5	0.2	112.24	-1,147.4	2,805.6	3,031.2	3,030.5	0.74	4,087.919	
300.0	300.0	299.9	299.9	0.5	0.2	112.24	-1,147.4	2,805.6	3,031.2	3,030.4	0.76	3,996.667	
364.3	364.3	346.3	346.3	0.7	0.2	112.24	-1,147.2	2,805.5	3,031.0	3,030.1	0.92	3,307.117	
393.7	393.7	367.5	367.5	0.8	0.2	112.24	-1,147.1	2,805.6	3,031.1	3,030.1	0.99	3,065.334	
400.0	400.0	372.1	372.1	0.8	0.2	112.24	-1,147.1	2,805.6	3,031.1	3,030.1	1.00	3,018.097	
492.1	492.1	460.4	460.4	1.0	0.3	112.22	-1,146.6	2,806.3	3,031.6	3,030.3	1.27	2,392.442	
500.0	500.0	469.3	469.3	1.0	0.3	112.22	-1,146.5	2,806.4	3,031.6	3,030.3	1.29	2,346.597	
590.5	590.5	551.6	551.6	1.2	0.4	112.20	-1,145.6	2,807.2	3,032.0	3,030.5	1.55	1,952.416	
600.0	600.0	559.3	559.3	1.2	0.4	112.20	-1,145.6	2,807.3	3,032.1	3,030.5	1.58	1,920.114	
689.0	689.0	647.0	647.0	1.4	0.4	112.18	-1,145.0	2,808.4	3,032.9	3,031.1	1.83	1,655.394	
700.0	700.0	660.3	660.3	1.4	0.4	112.18	-1,144.9	2,808.5	3,033.0	3,031.1	1.86	1,626.658	
787.4	787.4	756.9	756.8	1.6	0.5	112.16	-1,144.1	2,809.4	3,033.4	3,031.3	2.11	1,434.327	
800.0	800.0	770.0	770.0	1.7	0.5	112.16	-1,144.0	2,809.5	3,033.5	3,031.3	2.15	1,410.665	
885.8	885.8	863.9	863.8	1.9	0.5	112.14	-1,143.3	2,810.0	3,033.7	3,031.3	2.39	1,268.488	
900.0	900.0	879.7	879.7	1.9	0.5	112.14	-1,143.2	2,810.1	3,033.7	3,031.3	2.43	1,247.737	
984.2	984.2	951.7	951.7	2.1	0.6	112.13	-1,142.7	2,810.4	3,033.9	3,031.3	2.65	1,143.167	
1,000.0	1,000.0	964.0	964.0	2.1	0.6	112.12	-1,142.6	2,810.5	3,034.0	3,031.3	2.69	1,125.852	
1,082.7	1,082.7	1,039.9	1,039.8	2.3	0.6	112.11	-1,142.0	2,811.5	3,034.7	3,031.7	2.91	1,041.278	
1,100.0	1,100.0	1,058.7	1,058.7	2.3	0.6	112.10	-1,141.8	2,811.7	3,034.8	3,031.8	2.96	1,024.700	
1,181.1	1,181.1	1,146.3	1,146.2	2.5	0.7	112.08	-1,141.0	2,812.7	3,035.3	3,032.2	3.18	954.253	
1,200.0	1,200.0	1,166.6	1,166.5	2.6	0.7	112.08	-1,140.9	2,812.8	3,035.4	3,032.2	3.23	939.329	
1,279.5	1,279.5	1,249.4	1,249.3	2.7	0.7	112.07	-1,140.6	2,813.3	3,035.8	3,032.3	3.44	881.769	
1,300.0	1,300.0	1,270.3	1,270.2	2.8	0.7	112.07	-1,140.5	2,813.4	3,035.9	3,032.4	3.50	868.145	
1,377.9	1,377.9	1,348.8	1,348.8	3.0	0.8	112.06	-1,140.2	2,813.9	3,036.2	3,032.5	3.70	819.979	
1,400.0	1,400.0	1,370.9	1,370.8	3.0	0.8	112.05	-1,140.1	2,814.0	3,036.2	3,032.5	3.76	807.319	
1,476.4	1,476.4	1,445.3	1,445.2	3.2	0.8	-172.83	-1,139.8	2,814.5	3,037.5	3,033.6	3.90	778.173	
1,500.0	1,500.0	1,467.9	1,467.8	3.2	0.8	-172.83	-1,139.7	2,814.6	3,038.4	3,034.4	3.96	766.702	
1,574.8	1,574.7	1,541.6	1,541.6	3.4	0.8	-172.83	-1,139.6	2,815.0	3,042.3	3,038.2	4.15	733.303	
1,600.0	1,599.8	1,567.0	1,567.0	3.4	0.8	-172.83	-1,139.6	2,815.2	3,044.1	3,039.8	4.21	722.750	
1,673.2	1,672.8	1,644.8	1,644.7	3.6	0.9	-172.83	-1,139.6	2,815.6	3,050.4	3,046.0	4.40	693.696	
1,700.0	1,699.5	1,674.3	1,674.3	3.7	0.9	-172.84	-1,139.5	2,815.7	3,053.1	3,048.6	4.46	683.905	
1,771.6	1,770.6	1,743.5	1,743.4	3.8	0.9	-172.84	-1,139.3	2,815.9	3,061.6	3,056.9	4.65	658.881	
1,800.0	1,798.7	1,768.9	1,768.8	3.9	0.9	-172.84	-1,139.2	2,816.1	3,065.4	3,060.7	4.72	649.705	
1,870.1	1,868.0	1,838.8	1,838.7	4.1	0.9	-172.85	-1,138.8	2,816.5	3,076.3	3,071.4	4.90	627.595	
1,900.0	1,897.5	1,871.6	1,871.5	4.2	1.0	-172.85	-1,138.7	2,816.7	3,081.4	3,076.4	4.98	618.726	
1,968.5	1,964.8	1,935.4	1,935.3	4.4	1.0	-172.85	-1,138.4	2,817.0	3,094.1	3,089.0	5.16	599.424	
2,000.0	1,995.6	1,961.4	1,961.4	4.5	1.0	-172.85	-1,138.4	2,817.1	3,100.6	3,095.4	5.24	591.317	
2,066.9	2,060.9	2,019.6	2,019.5	4.7	1.0	-172.85	-1,138.3	2,817.6	3,115.6	3,110.2	5.43	574.163	
2,100.0	2,093.1	2,051.6	2,051.5	4.8	1.0	-172.85	-1,138.3	2,817.8	3,123.6	3,118.1	5.52	566.070	
2,165.3	2,156.3	2,115.9	2,115.8	5.1	1.0	-172.84	-1,138.4	2,818.3	3,140.5	3,134.8	5.71	550.405	
2,200.0	2,189.6	2,152.1	2,152.0	5.2	1.1	-172.84	-1,138.4	2,818.6	3,150.0	3,144.2	5.80	542.784	
2,263.8	2,250.7	2,215.8	2,215.7	5.5	1.1	-172.84	-1,138.5	2,818.9	3,168.5	3,162.5	5.99	529.003	
2,280.0	2,266.2	2,230.3	2,230.2	5.6	1.1	-172.84	-1,138.6	2,819.0	3,173.4	3,167.4	6.04	525.816	
2,300.0	2,285.3	2,248.1	2,248.0	5.7	1.1	-172.85	-1,138.7	2,819.0	3,179.5	3,173.4	6.09	521.998	
2,362.2	2,344.6	2,300.0	2,299.9	6.0	1.1	-172.88	-1,139.0	2,819.3	3,198.6	3,192.3	6.26	510.892	
2,400.0	2,380.6	2,335.0	2,334.9	6.2	1.1	-172.90	-1,139.3	2,819.5	3,210.2	3,203.8	6.38	503.458	
2,460.6	2,438.4	2,385.9	2,385.8	6.5	1.1	-172.93	-1,139.6	2,819.9	3,229.0	3,222.4	6.55	492.700	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,475.9	2,426.6	2,426.5	6.7	1.1	-172.96	-1,139.8	2,820.2	3,241.2	3,234.5	6.67	485.894	
2,559.0	2,532.2	2,496.3	2,496.2	7.0	1.1	-173.00	-1,140.3	2,820.6	3,259.4	3,252.5	6.85	475.834	
2,600.0	2,571.2	2,538.4	2,538.4	7.2	1.1	-173.03	-1,140.6	2,820.7	3,271.9	3,264.9	6.97	469.375	
2,657.5	2,626.0	2,597.0	2,596.8	7.5	1.2	-173.06	-1,141.0	2,820.8	3,289.3	3,282.2	7.14	460.482	
2,700.0	2,666.6	2,638.3	2,638.2	7.8	1.2	-173.08	-1,141.3	2,820.8	3,302.2	3,295.0	7.27	454.143	
2,755.9	2,719.8	2,692.5	2,692.4	8.1	1.2	-173.11	-1,141.7	2,820.9	3,319.2	3,311.7	7.44	446.000	
2,800.0	2,761.9	2,732.1	2,732.0	8.3	1.2	-173.13	-1,142.0	2,820.9	3,332.6	3,325.0	7.58	439.822	
2,854.3	2,813.7	2,780.1	2,780.0	8.7	1.2	-173.16	-1,142.3	2,821.0	3,349.1	3,341.4	7.75	432.396	
2,900.0	2,857.2	2,822.0	2,821.9	8.9	1.2	-173.18	-1,142.6	2,821.1	3,363.0	3,355.2	7.89	426.375	
2,952.7	2,907.5	2,872.1	2,872.0	9.2	1.2	-173.21	-1,143.1	2,821.2	3,379.2	3,371.1	8.05	419.557	
3,000.0	2,952.5	2,918.1	2,918.0	9.5	1.2	-173.23	-1,143.6	2,821.2	3,393.6	3,385.4	8.20	413.695	
3,051.2	3,001.3	2,970.1	2,970.0	9.8	1.2	-173.25	-1,144.0	2,821.3	3,409.2	3,400.8	8.37	407.511	
3,100.0	3,047.8	3,016.8	3,016.7	10.1	1.2	-173.28	-1,144.4	2,821.4	3,424.0	3,415.5	8.52	401.855	
3,149.6	3,095.1	3,059.6	3,059.5	10.4	1.2	-173.30	-1,144.7	2,821.4	3,439.1	3,430.4	8.68	396.286	
3,200.0	3,143.2	3,103.9	3,103.8	10.7	1.2	-173.32	-1,145.1	2,821.5	3,454.5	3,445.7	8.84	390.842	
3,248.0	3,188.9	3,156.6	3,156.4	11.0	1.2	-173.34	-1,145.7	2,821.6	3,469.2	3,460.2	8.99	385.684	
3,300.0	3,238.5	3,210.7	3,210.6	11.3	1.3	-173.37	-1,146.1	2,821.6	3,485.0	3,475.8	9.16	380.334	
3,346.4	3,282.8	3,250.8	3,250.7	11.6	1.3	-173.39	-1,146.5	2,821.6	3,499.1	3,489.8	9.31	375.765	
3,400.0	3,333.8	3,300.0	3,299.9	11.9	1.3	-173.41	-1,147.0	2,821.7	3,515.4	3,506.0	9.48	370.672	
3,444.9	3,376.6	3,336.7	3,336.6	12.2	1.3	-173.42	-1,147.5	2,821.7	3,529.2	3,519.5	9.63	366.467	
3,500.0	3,429.1	3,385.5	3,385.4	12.6	1.3	-173.44	-1,148.1	2,821.9	3,546.1	3,536.3	9.81	361.493	
3,543.3	3,470.4	3,428.4	3,428.2	12.8	1.3	-173.46	-1,148.6	2,822.0	3,559.4	3,549.5	9.95	357.636	
3,600.0	3,524.4	3,488.1	3,488.0	13.2	1.3	-173.49	-1,149.3	2,822.1	3,576.8	3,566.6	10.14	352.729	
3,641.7	3,564.2	3,524.2	3,524.1	13.4	1.3	-173.50	-1,149.8	2,822.1	3,589.5	3,579.3	10.28	349.272	
3,700.0	3,619.8	3,570.5	3,570.4	13.8	1.3	-173.52	-1,150.4	2,822.3	3,607.5	3,597.0	10.47	344.641	
3,740.1	3,658.0	3,603.0	3,602.9	14.0	1.3	-173.53	-1,150.9	2,822.4	3,619.9	3,609.3	10.60	341.526	
3,800.0	3,715.1	3,663.0	3,662.8	14.4	1.3	-173.55	-1,151.7	2,822.7	3,638.5	3,627.7	10.80	336.875	
3,838.6	3,751.8	3,700.0	3,699.8	14.7	1.4	-173.56	-1,152.2	2,822.9	3,650.4	3,639.5	10.93	333.965	
3,900.0	3,810.4	3,755.8	3,755.6	15.0	1.4	-173.59	-1,153.0	2,823.1	3,669.4	3,658.3	11.14	329.529	
3,937.0	3,845.7	3,788.5	3,788.3	15.3	1.4	-173.60	-1,153.5	2,823.3	3,680.9	3,669.6	11.26	326.933	
4,000.0	3,905.7	3,851.5	3,851.3	15.7	1.4	-173.62	-1,154.4	2,823.7	3,700.5	3,689.0	11.47	322.570	
4,035.4	3,939.5	3,888.0	3,887.8	15.9	1.4	-173.63	-1,154.9	2,823.9	3,711.4	3,699.9	11.59	320.163	
4,100.0	4,001.0	3,951.7	3,951.6	16.3	1.4	-173.66	-1,155.6	2,824.2	3,731.4	3,719.6	11.81	315.937	
4,133.8	4,033.3	3,984.8	3,984.7	16.5	1.4	-173.67	-1,156.0	2,824.3	3,741.8	3,729.9	11.93	313.777	
4,200.0	4,096.3	4,059.4	4,059.2	16.9	1.4	-173.70	-1,156.7	2,824.6	3,762.2	3,750.0	12.15	309.630	
4,232.3	4,127.1	4,097.2	4,097.0	17.1	1.4	-173.72	-1,157.0	2,824.7	3,772.0	3,759.7	12.26	307.640	
4,300.0	4,191.7	4,167.5	4,167.3	17.6	1.5	-173.75	-1,157.6	2,824.6	3,792.5	3,780.0	12.49	303.704	
4,330.7	4,220.9	4,199.2	4,199.0	17.8	1.5	-173.76	-1,157.9	2,824.6	3,801.8	3,789.2	12.59	301.954	
4,400.0	4,287.0	4,251.4	4,251.2	18.2	1.5	-173.78	-1,158.4	2,824.5	3,822.8	3,810.0	12.82	298.173	
4,429.1	4,314.7	4,273.2	4,273.0	18.4	1.5	-173.79	-1,158.6	2,824.6	3,831.7	3,818.8	12.92	296.625	
4,500.0	4,382.3	4,334.9	4,334.7	18.8	1.5	-173.81	-1,159.1	2,824.9	3,853.6	3,840.4	13.16	292.850	
4,527.5	4,408.6	4,362.3	4,362.1	19.0	1.5	-173.82	-1,159.3	2,825.0	3,862.1	3,848.8	13.25	291.370	
4,600.0	4,477.6	4,438.2	4,438.0	19.5	1.5	-173.86	-1,159.8	2,825.4	3,884.3	3,870.8	13.51	287.602	
4,626.0	4,502.4	4,466.9	4,466.7	19.6	1.5	-173.87	-1,160.1	2,825.4	3,892.2	3,878.7	13.60	286.289	
4,700.0	4,572.9	4,538.5	4,538.2	20.1	1.5	-173.89	-1,160.7	2,825.5	3,914.8	3,900.9	13.85	282.689	
4,724.4	4,596.2	4,559.8	4,559.6	20.3	1.6	-173.90	-1,160.9	2,825.5	3,922.2	3,908.3	13.93	281.542	
4,800.0	4,668.3	4,633.3	4,633.1	20.7	1.6	-173.93	-1,161.4	2,825.7	3,945.3	3,931.2	14.19	278.026	
4,822.8	4,690.0	4,659.1	4,658.9	20.9	1.6	-173.94	-1,161.6	2,825.8	3,952.3	3,938.0	14.27	276.962	
4,900.0	4,763.6	4,732.1	4,731.9	21.4	1.6	-173.97	-1,162.0	2,825.8	3,975.7	3,961.2	14.53	273.529	
4,921.2	4,783.8	4,748.8	4,748.5	21.5	1.6	-173.98	-1,162.2	2,825.8	3,982.2	3,967.6	14.61	272.627	
5,000.0	4,858.9	4,813.5	4,813.3	22.0	1.6	-174.00	-1,163.0	2,825.9	4,006.3	3,991.4	14.87	269.341	
5,019.7	4,877.7	4,833.6	4,833.4	22.1	1.6	-174.00	-1,163.3	2,826.0	4,012.4	3,997.4	14.94	268.507	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,954.2	4,914.4	4,914.2	22.6	1.6	-174.03	-1,164.4	2,826.0	4,037.0	4,021.8	15.22	265.187	
5,118.1	4,971.5	4,931.5	4,931.2	22.8	1.6	-174.03	-1,164.7	2,826.1	4,042.5	4,027.2	15.29	264.466	
5,171.8	5,022.7	4,981.9	4,981.7	23.1	1.7	-174.04	-1,165.4	2,826.1	4,059.0	4,043.5	15.47	262.364	
5,200.0	5,049.6	5,011.5	5,011.3	23.3	1.7	-174.07	-1,165.8	2,826.1	4,067.5	4,051.9	15.54	261.692	
5,216.5	5,065.4	5,032.7	5,032.4	23.3	1.7	-174.09	-1,166.0	2,826.1	4,072.3	4,056.7	15.58	261.372	
5,300.0	5,145.7	5,134.0	5,133.8	23.7	1.7	-174.16	-1,167.0	2,825.8	4,095.1	4,079.3	15.76	259.877	
5,314.9	5,160.1	5,150.4	5,150.1	23.8	1.7	-174.18	-1,167.1	2,825.8	4,098.9	4,083.1	15.78	259.673	
5,400.0	5,242.7	5,238.3	5,238.0	24.1	1.7	-174.25	-1,167.2	2,825.5	4,118.9	4,103.0	15.93	258.541	
5,413.4	5,255.7	5,251.2	5,251.0	24.2	1.7	-174.26	-1,167.2	2,825.4	4,121.9	4,105.9	15.95	258.394	
5,500.0	5,340.5	5,333.9	5,333.7	24.5	1.7	-174.31	-1,167.1	2,825.2	4,139.4	4,123.3	16.08	257.451	
5,511.8	5,352.1	5,345.0	5,344.8	24.5	1.7	-174.32	-1,167.1	2,825.1	4,141.6	4,125.5	16.09	257.348	
5,600.0	5,439.0	5,426.1	5,425.9	24.8	1.7	-174.37	-1,166.9	2,825.1	4,156.5	4,140.3	16.20	256.516	
5,610.2	5,449.1	5,435.1	5,434.9	24.8	1.7	-174.38	-1,166.8	2,825.1	4,158.1	4,141.9	16.22	256.427	
5,700.0	5,538.0	5,518.5	5,518.2	25.1	1.7	-174.42	-1,166.4	2,825.2	4,170.4	4,154.1	16.32	255.599	
5,708.6	5,546.6	5,528.5	5,528.2	25.1	1.7	-174.43	-1,166.4	2,825.2	4,171.5	4,155.2	16.33	255.526	
5,800.0	5,637.4	5,630.2	5,630.0	25.3	1.7	-174.47	-1,165.6	2,825.4	4,180.8	4,164.4	16.41	254.712	
5,807.1	5,644.5	5,637.5	5,637.2	25.3	1.7	-174.48	-1,165.5	2,825.4	4,181.4	4,164.9	16.42	254.662	
5,900.0	5,737.2	5,741.3	5,741.0	25.5	1.7	-174.51	-1,164.6	2,825.4	4,187.5	4,171.0	16.49	253.928	
5,905.5	5,742.6	5,748.4	5,748.1	25.5	1.7	-174.51	-1,164.5	2,825.3	4,187.7	4,171.2	16.49	253.892	
6,000.0	5,837.1	5,843.9	5,843.6	25.6	1.7	-174.53	-1,163.8	2,824.9	4,190.3	4,173.7	16.55	253.134	
6,003.9	5,841.0	5,847.0	5,846.8	25.6	1.7	-174.53	-1,163.8	2,824.9	4,190.3	4,173.8	16.56	253.102	
6,051.8	5,888.9	5,885.5	5,885.2	25.7	1.7	110.34	-1,163.4	2,824.8	4,190.5	4,163.4	27.10	154.612	
6,081.8	5,918.9	5,915.2	5,914.9	25.7	1.7	110.34	-1,163.0	2,824.9	4,190.4	4,163.3	27.14	154.420	
6,100.0	5,937.1	5,938.3	5,938.1	25.7	1.7	20.34	-1,162.8	2,824.9	4,190.2	4,173.5	16.60	252.387	
6,102.3	5,939.4	5,941.3	5,941.0	25.7	1.7	20.34	-1,162.7	2,824.9	4,190.1	4,173.5	16.60	252.454	
6,150.0	5,987.0	6,000.0	5,999.7	25.7	1.7	20.44	-1,162.0	2,824.7	4,187.0	4,170.5	16.52	253.406	
6,200.0	6,036.5	6,035.4	6,035.1	25.7	1.7	20.64	-1,161.6	2,824.7	4,180.7	4,164.2	16.47	253.905	
6,200.8	6,037.3	6,035.9	6,035.6	25.7	1.7	20.64	-1,161.6	2,824.7	4,180.5	4,164.1	16.46	253.911	
6,250.0	6,085.5	6,069.4	6,069.1	25.7	1.7	20.94	-1,161.3	2,824.7	4,171.2	4,154.8	16.42	254.027	
6,299.2	6,133.0	6,100.0	6,099.7	25.6	1.7	21.34	-1,161.1	2,824.8	4,159.0	4,142.7	16.38	253.937	
6,300.0	6,133.7	6,100.0	6,099.7	25.6	1.7	21.35	-1,161.1	2,824.8	4,158.8	4,142.4	16.38	253.936	
6,350.0	6,180.9	6,142.9	6,142.6	25.5	1.7	21.90	-1,161.0	2,825.0	4,143.4	4,127.1	16.34	253.573	
6,397.6	6,224.6	6,179.4	6,179.1	25.4	1.7	22.55	-1,161.2	2,825.2	4,126.0	4,109.7	16.31	253.038	
6,400.0	6,226.7	6,181.2	6,180.9	25.4	1.7	22.58	-1,161.2	2,825.2	4,125.1	4,108.8	16.30	253.001	
6,450.0	6,271.1	6,220.8	6,220.5	25.2	1.7	23.43	-1,161.6	2,825.4	4,103.8	4,087.5	16.29	251.978	
6,496.0	6,310.4	6,258.2	6,257.9	25.1	1.7	24.38	-1,162.1	2,825.5	4,081.8	4,065.5	16.30	250.409	
6,500.0	6,313.7	6,261.3	6,261.0	25.1	1.7	24.46	-1,162.1	2,825.5	4,079.8	4,063.5	16.30	250.239	
6,550.0	6,354.4	6,300.0	6,299.7	25.0	1.7	25.70	-1,162.7	2,825.7	4,053.1	4,036.7	16.38	247.501	
6,594.5	6,388.9	6,333.4	6,333.1	24.9	1.7	27.01	-1,163.2	2,825.8	4,027.2	4,010.7	16.51	243.859	
6,600.0	6,393.0	6,337.4	6,337.1	24.9	1.7	27.18	-1,163.2	2,825.8	4,023.8	4,007.3	16.54	243.320	
6,650.0	6,429.3	6,372.6	6,372.3	24.8	1.8	28.94	-1,163.8	2,826.0	3,992.1	3,975.3	16.82	237.342	
6,692.9	6,458.5	6,400.0	6,399.7	24.7	1.8	30.71	-1,164.2	2,826.1	3,963.1	3,946.0	17.19	230.593	
6,700.0	6,463.1	6,405.3	6,405.0	24.7	1.8	31.03	-1,164.3	2,826.1	3,958.2	3,940.9	17.26	229.309	
6,750.0	6,494.3	6,434.5	6,434.2	24.7	1.8	33.51	-1,164.7	2,826.3	3,922.2	3,904.3	17.89	219.224	
6,791.3	6,517.9	6,456.7	6,456.4	24.7	1.8	35.92	-1,165.0	2,826.4	3,891.0	3,872.4	18.57	209.482	
6,800.0	6,522.6	6,461.1	6,460.8	24.7	1.8	36.47	-1,165.1	2,826.5	3,884.3	3,865.6	18.73	207.342	
6,850.0	6,548.0	6,485.1	6,484.8	24.7	1.8	39.99	-1,165.5	2,826.6	3,844.7	3,825.0	19.79	194.231	
6,889.7	6,566.0	6,502.7	6,502.4	24.8	1.8	43.27	-1,165.7	2,826.7	3,812.2	3,791.4	20.79	183.362	
6,900.0	6,570.4	6,507.9	6,507.6	24.9	1.8	44.22	-1,165.8	2,826.8	3,803.7	3,782.6	21.07	180.563	
6,950.0	6,589.5	6,531.0	6,530.7	25.1	1.8	49.32	-1,166.1	2,826.9	3,761.3	3,738.8	22.51	167.092	
6,988.2	6,602.0	6,545.9	6,545.6	25.3	1.8	53.82	-1,166.4	2,827.0	3,728.2	3,704.5	23.67	157.497	
7,000.0	6,605.4	6,550.1	6,549.7	25.3	1.8	55.33	-1,166.4	2,827.0	3,717.8	3,693.8	24.02	154.751	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,618.0	6,565.1	6,564.7	25.6	1.8	62.31	-1,166.7	2,827.0	3,673.5	3,648.0	25.48	144.167		
7,086.6	6,625.0	6,573.5	6,573.1	25.9	1.8	67.99	-1,166.8	2,827.1	3,640.7	3,614.2	26.43	137.752		
7,100.0	6,627.1	6,576.0	6,575.7	26.0	1.8	70.18	-1,166.9	2,827.1	3,628.6	3,601.8	26.73	135.751		
7,150.0	6,632.8	6,582.8	6,582.5	26.5	1.8	78.72	-1,167.0	2,827.1	3,583.2	3,555.5	27.67	129.502		
7,185.0	6,634.7	6,585.2	6,584.8	26.8	1.8	84.91	-1,167.0	2,827.1	3,551.3	3,523.1	28.19	125.992		
7,200.0	6,635.0	6,585.5	6,585.2	27.0	1.8	87.56	-1,167.0	2,827.1	3,537.7	3,509.3	28.39	124.599		
7,215.9	6,635.0	6,585.5	6,585.2	27.1	1.8	90.36	-1,167.0	2,827.1	3,523.2	3,494.6	28.62	123.093		
7,283.4	6,634.1	6,584.7	6,584.4	27.9	1.8	90.33	-1,167.0	2,827.1	3,461.8	3,432.4	29.46	117.527		
7,300.0	6,633.9	6,584.5	6,584.2	28.1	1.8	90.32	-1,167.0	2,827.1	3,446.8	3,417.2	29.66	116.213		
7,381.9	6,632.9	6,583.5	6,583.2	29.3	1.8	90.28	-1,167.0	2,827.1	3,372.9	3,342.0	30.83	109.389		
7,400.0	6,632.6	6,583.3	6,583.0	29.5	1.8	90.27	-1,167.0	2,827.1	3,356.5	3,325.4	31.09	107.950		
7,480.3	6,631.6	6,582.3	6,582.0	30.8	1.8	90.23	-1,167.0	2,827.1	3,284.4	3,252.0	32.40	101.383		
7,500.0	6,631.4	6,582.1	6,581.8	31.1	1.8	90.23	-1,167.0	2,827.1	3,266.8	3,234.1	32.72	99.853		
7,578.7	6,630.4	6,581.2	6,580.8	32.5	1.8	90.19	-1,167.0	2,827.1	3,196.5	3,162.4	34.12	93.687		
7,600.0	6,630.1	6,580.9	6,580.6	32.9	1.8	90.18	-1,167.0	2,827.1	3,177.6	3,143.1	34.50	92.108		
7,677.1	6,629.1	6,580.0	6,579.7	34.3	1.8	90.14	-1,166.9	2,827.1	3,109.3	3,073.3	35.98	86.419		
7,700.0	6,628.8	6,579.8	6,579.4	34.8	1.8	90.13	-1,166.9	2,827.1	3,089.2	3,052.7	36.42	84.825		
7,775.6	6,627.8	6,578.9	6,578.5	36.3	1.8	90.10	-1,166.9	2,827.1	3,022.8	2,984.8	37.96	79.641		
7,800.0	6,627.5	6,578.6	6,578.3	36.8	1.8	90.09	-1,166.9	2,827.1	3,001.4	2,963.0	38.45	78.056		
7,874.0	6,626.6	6,577.8	6,577.4	38.4	1.8	90.06	-1,166.9	2,827.1	2,937.0	2,897.0	40.03	73.372		
7,900.0	6,626.3	6,577.5	6,577.1	38.9	1.8	90.04	-1,166.9	2,827.1	2,914.5	2,873.9	40.58	71.815		
7,972.4	6,625.3	6,576.6	6,576.3	40.5	1.8	90.01	-1,166.9	2,827.1	2,852.0	2,809.8	42.18	67.607		
8,000.0	6,625.0	6,576.3	6,576.0	41.1	1.8	90.00	-1,166.9	2,827.1	2,828.4	2,785.6	42.79	66.091		
8,070.8	6,624.1	6,575.5	6,575.2	42.7	1.8	89.97	-1,166.9	2,827.1	2,767.9	2,723.5	44.41	62.325		
8,100.0	6,623.7	6,575.2	6,574.9	43.4	1.8	89.96	-1,166.9	2,827.1	2,743.2	2,698.1	45.08	60.857		
8,169.3	6,622.8	6,574.5	6,574.1	45.0	1.8	89.93	-1,166.8	2,827.1	2,684.8	2,638.1	46.70	57.494		
8,200.0	6,622.4	6,574.1	6,573.8	45.7	1.8	89.91	-1,166.8	2,827.1	2,659.1	2,611.7	47.42	56.079		
8,267.7	6,621.6	6,573.4	6,573.1	47.4	1.8	89.89	-1,166.8	2,827.1	2,602.8	2,553.7	49.03	53.080		
8,300.0	6,621.1	6,573.0	6,572.7	48.1	1.8	89.87	-1,166.8	2,827.1	2,576.1	2,526.3	49.81	51.721		
8,366.1	6,620.3	6,572.3	6,572.0	49.7	1.8	89.84	-1,166.8	2,827.1	2,521.9	2,470.5	51.42	49.048		
8,400.0	6,619.9	6,572.0	6,571.6	50.6	1.8	89.83	-1,166.8	2,827.1	2,494.3	2,442.1	52.24	47.747		
8,464.5	6,619.0	6,571.3	6,571.0	52.2	1.8	89.80	-1,166.8	2,827.1	2,442.3	2,388.5	53.84	45.366		
8,500.0	6,618.6	6,570.9	6,570.6	53.0	1.8	89.79	-1,166.8	2,827.1	2,414.0	2,359.3	54.71	44.122		
8,563.0	6,617.8	6,570.2	6,569.9	54.6	1.8	89.76	-1,166.8	2,827.1	2,364.1	2,307.8	56.29	42.001		
8,600.0	6,617.3	6,569.9	6,569.5	55.5	1.8	89.75	-1,166.8	2,827.1	2,335.1	2,277.9	57.21	40.814		
8,661.4	6,616.5	6,569.2	6,568.9	57.1	1.8	89.72	-1,166.8	2,827.1	2,287.5	2,228.8	58.77	38.924		
8,700.0	6,616.0	6,568.8	6,568.5	58.1	1.8	89.71	-1,166.8	2,827.1	2,257.9	2,198.2	59.75	37.793		
8,759.8	6,615.2	6,568.2	6,567.9	59.6	1.8	89.68	-1,166.7	2,827.1	2,212.6	2,151.4	61.27	36.111		
8,800.0	6,614.7	6,567.8	6,567.5	60.6	1.8	89.67	-1,166.7	2,827.1	2,182.6	2,120.3	62.30	35.034		
8,858.2	6,614.0	6,567.2	6,566.9	62.1	1.8	89.65	-1,166.7	2,827.1	2,139.7	2,075.9	63.80	33.536		
8,900.0	6,613.4	6,566.8	6,566.5	63.2	1.8	89.63	-1,166.7	2,827.1	2,109.4	2,044.5	64.88	32.513		
8,956.7	6,612.7	6,566.2	6,565.9	64.7	1.8	89.61	-1,166.7	2,827.1	2,068.8	2,002.5	66.35	31.181		
9,000.0	6,612.2	6,565.8	6,565.5	65.8	1.8	89.59	-1,166.7	2,827.1	2,038.4	1,970.9	67.47	30.209		
9,055.1	6,611.5	6,565.2	6,564.9	67.3	1.8	89.57	-1,166.7	2,827.1	2,000.3	1,931.4	68.91	29.026		
9,100.0	6,610.9	6,564.8	6,564.5	68.4	1.8	89.55	-1,166.7	2,827.0	1,969.9	1,899.8	70.09	28.106		
9,153.5	6,610.2	6,564.3	6,563.9	69.8	1.8	89.53	-1,166.7	2,827.0	1,934.4	1,862.9	71.49	27.056		
9,200.0	6,609.6	6,563.8	6,563.5	71.1	1.8	89.51	-1,166.7	2,827.0	1,904.2	1,831.5	72.71	26.187		
9,251.9	6,608.9	6,563.3	6,563.0	72.4	1.8	89.49	-1,166.7	2,827.0	1,871.3	1,797.2	74.09	25.258		
9,300.0	6,608.3	6,562.9	6,562.5	73.7	1.8	89.48	-1,166.7	2,827.0	1,841.6	1,766.2	75.36	24.439		
9,350.4	6,607.7	6,562.4	6,562.0	75.0	1.8	89.46	-1,166.6	2,827.0	1,811.3	1,734.6	76.69	23.618		
9,400.0	6,607.0	6,561.9	6,561.6	76.4	1.8	89.44	-1,166.6	2,827.0	1,782.4	1,704.4	78.01	22.849		
9,448.8	6,606.4	6,561.4	6,561.1	77.7	1.8	89.42	-1,166.6	2,827.0	1,754.9	1,675.6	79.31	22.127		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.7	6,561.0	6,560.6	79.0	1.8	89.40	-1,166.6	2,827.0	1,727.0	1,646.3	80.67	21.407	
9,547.2	6,605.1	6,560.5	6,560.2	80.3	1.8	89.38	-1,166.6	2,827.0	1,702.2	1,620.3	81.94	20.775	
9,600.0	6,604.5	6,560.0	6,559.7	81.7	1.8	89.36	-1,166.6	2,827.0	1,675.7	1,592.4	83.35	20.105	
9,645.6	6,603.9	6,559.6	6,559.3	82.9	1.8	89.35	-1,166.6	2,827.0	1,653.8	1,569.2	84.57	19.555	
9,700.0	6,603.2	6,559.1	6,558.8	84.4	1.8	89.33	-1,166.6	2,827.0	1,629.0	1,542.9	86.03	18.935	
9,744.1	6,602.6	6,558.7	6,558.4	85.6	1.8	89.31	-1,166.6	2,827.0	1,609.9	1,522.7	87.22	18.459	
9,800.0	6,601.9	6,558.2	6,557.9	87.1	1.8	89.29	-1,166.6	2,827.0	1,587.1	1,498.4	88.72	17.889	
9,842.5	6,601.3	6,557.8	6,557.5	88.2	1.8	89.28	-1,166.6	2,827.0	1,571.0	1,481.1	89.87	17.481	
9,900.0	6,600.6	6,557.3	6,556.9	89.8	1.8	89.26	-1,166.6	2,827.0	1,550.7	1,459.2	91.42	16.962	
9,940.9	6,600.1	6,556.9	6,556.6	90.9	1.8	89.24	-1,166.6	2,827.0	1,537.3	1,444.8	92.52	16.616	
10,000.0	6,599.3	6,556.4	6,556.0	92.5	1.8	89.22	-1,166.5	2,827.0	1,519.9	1,425.8	94.12	16.148	
10,039.3	6,598.8	6,556.0	6,555.7	93.5	1.8	89.21	-1,166.5	2,827.0	1,509.4	1,414.2	95.19	15.857	
10,100.0	6,598.0	6,555.5	6,555.2	95.2	1.8	89.19	-1,166.5	2,827.0	1,495.2	1,398.3	96.83	15.441	
10,137.8	6,597.5	6,555.2	6,554.8	96.2	1.8	89.17	-1,166.5	2,827.0	1,487.5	1,389.6	97.86	15.200	
10,200.0	6,596.7	6,554.6	6,554.3	97.9	1.8	89.15	-1,166.5	2,827.0	1,476.8	1,377.3	99.55	14.836	
10,236.2	6,596.3	6,554.3	6,554.0	98.9	1.8	89.14	-1,166.5	2,827.0	1,471.8	1,371.3	100.53	14.640	
10,300.0	6,595.4	6,553.7	6,553.4	100.6	1.8	89.12	-1,166.5	2,827.0	1,465.1	1,362.8	102.27	14.326	
10,334.6	6,595.0	6,553.5	6,553.1	101.6	1.8	89.11	-1,166.5	2,827.0	1,462.6	1,359.4	103.21	14.171	
10,400.0	6,594.2	6,552.9	6,552.6	103.4	1.8	89.09	-1,166.5	2,827.0	1,460.2	1,355.2	104.99	13.907	
10,422.5	6,593.9	6,552.7	6,552.4	104.0	1.8	89.08	-1,166.5	2,827.0	1,460.0	1,354.4	105.61	13.825 CC	
10,433.0	6,593.7	6,552.6	6,552.3	104.3	1.8	89.07	-1,166.5	2,827.0	1,460.0	1,354.1	105.90	13.787 ES	
10,500.0	6,592.9	6,552.0	6,551.7	106.1	1.8	89.05	-1,166.5	2,827.0	1,462.0	1,354.3	107.72	13.572	
10,531.5	6,592.5	6,551.8	6,551.4	106.9	1.8	89.04	-1,166.5	2,827.0	1,464.0	1,355.5	108.58	13.483	
10,600.0	6,591.6	6,551.2	6,550.9	108.8	1.8	89.02	-1,166.5	2,827.0	1,470.7	1,360.3	110.46	13.315	
10,629.9	6,591.2	6,551.0	6,550.6	109.6	1.8	89.01	-1,166.5	2,827.0	1,474.6	1,363.4	111.28	13.252	
10,700.0	6,590.3	6,550.4	6,550.0	111.6	1.8	88.99	-1,166.5	2,827.0	1,486.1	1,372.9	113.19	13.129	
10,728.3	6,589.9	6,550.1	6,549.8	112.3	1.8	88.98	-1,166.4	2,827.0	1,491.7	1,377.7	113.97	13.088	
10,800.0	6,589.0	6,549.5	6,549.2	114.3	1.8	88.95	-1,166.4	2,827.0	1,508.0	1,392.1	115.93	13.007	
10,826.7	6,588.7	6,549.3	6,549.0	115.0	1.8	88.95	-1,166.4	2,827.0	1,514.9	1,398.2	116.67	12.985	
10,900.0	6,587.7	6,548.7	6,548.4	117.1	1.8	88.92	-1,166.4	2,827.0	1,536.1	1,417.4	118.68	12.943	
10,925.2	6,587.4	6,548.5	6,548.2	117.7	1.8	88.91	-1,166.4	2,827.0	1,544.1	1,424.7	119.37	12.935	
11,000.0	6,586.4	6,547.9	6,547.6	119.8	1.8	88.89	-1,166.4	2,827.0	1,570.0	1,448.6	121.43	12.930 SF	
11,023.6	6,586.1	6,547.7	6,547.4	120.4	1.8	88.88	-1,166.4	2,827.0	1,578.9	1,456.8	122.07	12.934	
11,100.0	6,585.1	6,547.1	6,546.8	122.6	1.8	88.86	-1,166.4	2,827.0	1,609.5	1,485.3	124.17	12.962	
11,122.0	6,584.8	6,547.0	6,546.6	123.2	1.8	88.85	-1,166.4	2,827.0	1,618.9	1,494.1	124.78	12.974	
11,200.0	6,583.8	6,546.3	6,546.0	125.3	1.8	88.83	-1,166.4	2,827.0	1,654.1	1,527.2	126.93	13.032	
11,220.4	6,583.6	6,546.2	6,545.8	125.9	1.8	88.82	-1,166.4	2,827.0	1,663.8	1,536.3	127.49	13.050	
11,300.0	6,582.5	6,545.6	6,545.2	128.1	1.8	88.80	-1,166.4	2,827.0	1,703.4	1,573.7	129.68	13.135	
11,318.9	6,582.3	6,545.4	6,545.1	128.6	1.8	88.79	-1,166.4	2,827.0	1,713.2	1,583.0	130.20	13.158	
11,400.0	6,581.2	6,544.8	6,544.5	130.8	1.8	88.77	-1,166.4	2,827.0	1,757.0	1,624.5	132.44	13.266	
11,417.3	6,581.0	6,544.6	6,544.3	131.3	1.8	88.76	-1,166.4	2,827.0	1,766.7	1,633.7	132.92	13.292	
11,500.0	6,580.0	6,544.0	6,543.7	133.6	1.8	88.74	-1,166.3	2,827.0	1,814.5	1,679.3	135.20	13.421	
11,515.7	6,579.7	6,543.9	6,543.6	134.0	1.8	88.73	-1,166.3	2,827.0	1,823.9	1,688.3	135.63	13.447	
11,600.0	6,578.7	6,543.3	6,542.9	136.3	1.8	88.71	-1,166.3	2,827.0	1,875.6	1,737.7	137.96	13.596	
11,614.1	6,578.5	6,543.1	6,542.8	136.7	1.8	88.70	-1,166.3	2,827.0	1,884.5	1,746.2	138.35	13.622	
11,700.0	6,577.4	6,542.5	6,542.2	139.1	1.8	88.68	-1,166.3	2,827.0	1,939.9	1,799.2	140.72	13.786	
11,712.6	6,577.2	6,542.4	6,542.1	139.5	1.8	88.67	-1,166.3	2,827.0	1,948.3	1,807.2	141.07	13.811	
11,800.0	6,576.1	6,541.8	6,541.4	141.9	1.8	88.65	-1,166.3	2,827.0	2,007.2	1,863.7	143.48	13.989	
11,811.0	6,575.9	6,541.7	6,541.3	142.2	1.8	88.64	-1,166.3	2,827.0	2,014.8	1,871.0	143.79	14.012	
11,882.7	6,575.0	6,541.1	6,540.8	144.2	1.8	88.62	-1,166.3	2,827.0	2,064.8	1,919.1	145.77	14.165	
11,883.5	6,575.0	6,541.1	6,540.8	144.2	1.8	88.62	-1,166.3	2,827.0	2,065.4	1,919.6	145.78	14.167	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #1 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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	11.17	301.7	59.6	307.8				
98.4	98.4	86.4	86.4	0.1	0.0	11.16	301.5	59.5	307.4	307.3	0.10	3,201.520	
100.0	100.0	88.0	88.0	0.1	0.0	11.16	301.5	59.5	307.4	307.3	0.10	3,143.509	
196.8	196.8	185.1	185.1	0.3	0.1	11.13	301.2	59.3	307.0	306.6	0.40	775.984	
200.0	200.0	188.3	188.3	0.3	0.1	11.13	301.2	59.3	307.0	306.6	0.41	756.728	
295.3	295.3	283.4	283.4	0.5	0.2	11.09	300.9	59.0	306.6	305.8	0.75	411.112	
300.0	300.0	288.1	288.1	0.5	0.2	11.09	300.8	59.0	306.6	305.8	0.76	401.864	
393.7	393.7	381.3	381.3	0.8	0.3	11.04	300.6	58.6	306.3	305.2	1.05	290.964	
400.0	400.0	387.6	387.6	0.8	0.3	11.03	300.6	58.6	306.3	305.2	1.07	285.793	
492.1	492.1	479.8	479.8	1.0	0.4	10.95	300.5	58.1	306.1	304.8	1.35	227.561	
500.0	500.0	487.7	487.7	1.0	0.4	10.94	300.5	58.1	306.1	304.7	1.37	223.670	
590.5	590.5	578.4	578.4	1.2	0.4	10.86	300.4	57.6	305.8	304.2	1.63	187.769	
600.0	600.0	587.9	587.9	1.2	0.4	10.86	300.3	57.6	305.8	304.2	1.66	184.686	
689.0	689.0	676.6	676.6	1.4	0.5	10.79	300.2	57.2	305.6	303.7	1.91	160.322	
700.0	700.0	687.6	687.6	1.4	0.5	10.79	300.2	57.2	305.6	303.6	1.94	157.752	
787.4	787.4	775.2	775.2	1.6	0.5	10.72	300.0	56.8	305.4	303.2	2.18	140.105	
800.0	800.0	787.8	787.8	1.7	0.5	10.71	300.0	56.8	305.3	303.1	2.21	137.881	
885.8	885.8	873.5	873.5	1.9	0.6	10.65	299.9	56.4	305.1	302.7	2.45	124.544	
900.0	900.0	887.6	887.6	1.9	0.6	10.64	299.8	56.3	305.1	302.6	2.49	122.591	
984.2	984.2	972.2	972.2	2.1	0.6	10.56	299.7	55.9	304.9	302.2	2.72	112.187	
1,000.0	1,000.0	988.0	988.0	2.1	0.6	10.55	299.7	55.8	304.8	302.1	2.76	110.432	
1,082.7	1,082.7	1,070.7	1,070.7	2.3	0.7	10.49	299.5	55.5	304.6	301.6	2.98	102.098	
1,100.0	1,100.0	1,088.0	1,088.0	2.3	0.7	10.48	299.4	55.4	304.5	301.5	3.03	100.509	
1,181.1	1,181.1	1,168.9	1,168.9	2.5	0.7	10.44	299.2	55.1	304.2	301.0	3.25	93.725	
1,200.0	1,200.0	1,187.8	1,187.7	2.6	0.7	10.42	299.2	55.0	304.2	300.9	3.30	92.276	
1,279.5	1,279.5	1,267.4	1,267.4	2.7	0.8	10.36	299.0	54.7	304.0	300.5	3.51	86.623	
1,300.0	1,300.0	1,287.9	1,287.9	2.8	0.8	10.34	299.0	54.6	303.9	300.4	3.56	85.274	
1,377.9	1,377.9	1,366.1	1,366.1	3.0	0.8	10.28	298.8	54.2	303.7	299.9	3.77	80.527	
1,400.0	1,400.0	1,388.3	1,388.3	3.0	0.8	10.27	298.7	54.1	303.6	299.8	3.83	79.276	
1,476.4	1,476.4	1,464.2	1,464.2	3.2	0.8	85.56	298.5	53.9	303.2	299.3	3.97	76.414	
1,500.0	1,500.0	1,487.7	1,487.7	3.2	0.9	85.70	298.4	53.9	303.1	299.1	4.03	75.274	
1,574.8	1,574.7	1,561.4	1,561.4	3.4	0.9	86.40	298.3	54.0	302.8	298.6	4.20	72.118	
1,600.0	1,599.8	1,586.2	1,586.2	3.4	0.9	86.72	298.3	54.1	302.7	298.5	4.26	71.132	
1,649.4	1,649.1	1,635.0	1,635.0	3.6	0.9	87.50	298.4	54.4	302.7	298.3	4.38	69.176	
1,673.2	1,672.8	1,658.5	1,658.4	3.6	0.9	87.93	298.5	54.6	302.7	298.3	4.43	68.274	
1,700.0	1,699.5	1,684.8	1,684.8	3.7	0.9	88.46	298.6	54.8	302.8	298.3	4.50	67.293	
1,771.6	1,770.6	1,755.4	1,755.3	3.8	0.9	90.10	298.9	55.4	303.1	298.4	4.69	64.697	
1,800.0	1,798.7	1,783.2	1,783.2	3.9	0.9	90.85	299.1	55.6	303.4	298.6	4.76	63.749	
1,870.1	1,868.0	1,851.3	1,851.3	4.1	0.9	92.89	299.5	56.5	304.4	299.5	4.96	61.409	
1,900.0	1,897.5	1,880.2	1,880.2	4.2	0.9	93.85	299.8	56.9	305.1	300.1	5.04	60.514	
1,968.5	1,964.8	1,946.7	1,946.6	4.4	0.9	96.24	300.5	58.0	307.4	302.1	5.26	58.449	
2,000.0	1,995.6	1,977.3	1,977.2	4.5	0.9	97.42	300.9	58.5	308.7	303.3	5.36	57.611	
2,066.9	2,060.9	2,041.6	2,041.6	4.7	0.9	100.07	301.7	59.6	312.3	306.7	5.60	55.806	
2,100.0	2,093.1	2,073.2	2,073.1	4.8	0.9	101.44	302.1	60.3	314.5	308.8	5.71	55.052	
2,165.3	2,156.3	2,135.5	2,135.4	5.1	0.9	104.28	302.9	61.8	319.9	313.9	5.97	53.555	
2,200.0	2,189.6	2,168.5	2,168.4	5.2	0.9	105.84	303.4	62.7	323.3	317.2	6.11	52.917	
2,263.8	2,250.7	2,229.2	2,229.1	5.5	0.9	108.79	304.2	64.3	330.7	324.3	6.39	51.774	
2,280.0	2,266.2	2,244.7	2,244.6	5.6	1.0	109.55	304.4	64.8	332.8	326.3	6.46	51.544	
2,300.0	2,285.3	2,263.7	2,263.6	5.7	1.0	110.54	304.6	65.3	335.5	328.9	6.54	51.260	
2,362.2	2,344.6	2,323.1	2,322.9	6.0	1.0	113.54	305.2	67.1	344.5	337.6	6.82	50.509	
2,400.0	2,380.6	2,359.3	2,359.1	6.2	1.0	115.31	305.4	68.1	350.3	343.4	6.98	50.159	
2,460.6	2,438.4	2,417.6	2,417.4	6.5	1.0	118.04	305.7	69.8	360.4	353.1	7.25	49.712	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,475.9	2,455.6	2,455.3	6.7	1.0	119.73	305.9	70.7	367.2	359.8	7.41	49.520	
2,559.0	2,532.2	2,512.4	2,512.2	7.0	1.0	122.15	306.1	72.0	377.9	370.2	7.66	49.310	
2,600.0	2,571.2	2,551.5	2,551.2	7.2	1.0	123.72	306.3	72.9	385.6	377.8	7.83	49.241	
2,657.5	2,626.0	2,606.3	2,606.1	7.5	1.0	125.82	306.6	73.9	396.9	388.8	8.06	49.214	
2,700.0	2,666.6	2,646.9	2,646.6	7.8	1.0	127.30	306.8	74.6	405.5	397.3	8.23	49.256	
2,755.9	2,719.8	2,700.3	2,700.0	8.1	1.0	129.15	307.1	75.5	417.2	408.8	8.45	49.364	
2,800.0	2,761.9	2,742.8	2,742.5	8.3	1.0	130.55	307.2	76.2	426.7	418.1	8.62	49.504	
2,854.3	2,813.7	2,795.2	2,794.9	8.7	1.1	132.19	307.5	76.9	438.6	429.8	8.82	49.707	
2,900.0	2,857.2	2,839.4	2,839.1	8.9	1.1	133.50	307.7	77.4	448.8	439.8	8.99	49.916	
2,952.7	2,907.5	2,890.4	2,890.1	9.2	1.1	134.94	307.8	78.0	460.8	451.6	9.18	50.180	
3,000.0	2,952.5	2,935.4	2,935.1	9.5	1.1	136.16	307.9	78.4	471.6	462.3	9.35	50.439	
3,051.2	3,001.3	2,983.8	2,983.5	9.8	1.1	137.42	308.0	78.9	483.7	474.1	9.53	50.742	
3,100.0	3,047.8	3,030.8	3,030.4	10.1	1.1	138.59	308.0	79.4	495.3	485.6	9.70	51.066	
3,149.6	3,095.1	3,078.9	3,078.6	10.4	1.1	139.73	307.9	79.8	507.3	497.4	9.87	51.406	
3,200.0	3,143.2	3,127.2	3,126.9	10.7	1.1	140.84	307.8	80.2	519.6	509.5	10.04	51.763	
3,248.0	3,188.9	3,172.8	3,172.5	11.0	1.1	141.84	307.7	80.6	531.4	521.2	10.20	52.112	
3,300.0	3,238.5	3,222.2	3,221.9	11.3	1.1	142.87	307.5	81.0	544.4	534.1	10.37	52.507	
3,346.4	3,282.8	3,266.6	3,266.2	11.6	1.2	143.76	307.4	81.3	556.2	545.7	10.52	52.864	
3,400.0	3,333.8	3,317.7	3,317.3	11.9	1.2	144.74	307.3	81.7	569.8	559.2	10.69	53.285	
3,444.9	3,376.6	3,360.4	3,360.1	12.2	1.2	145.52	307.1	82.1	581.4	570.6	10.84	53.642	
3,500.0	3,429.1	3,412.7	3,412.4	12.6	1.2	146.45	306.9	82.5	595.8	584.7	11.01	54.087	
3,543.3	3,470.4	3,453.5	3,453.1	12.8	1.2	147.14	306.8	82.8	607.2	596.0	11.15	54.436	
3,600.0	3,524.4	3,506.8	3,506.5	13.2	1.2	148.01	306.6	83.3	622.2	610.9	11.33	54.903	
3,641.7	3,564.2	3,546.6	3,546.3	13.4	1.2	148.62	306.5	83.6	633.4	622.0	11.47	55.246	
3,700.0	3,619.8	3,602.2	3,601.8	13.8	1.2	149.44	306.4	84.1	649.2	637.5	11.65	55.724	
3,740.1	3,658.0	3,640.0	3,639.7	14.0	1.3	149.97	306.4	84.4	660.1	648.3	11.78	56.047	
3,800.0	3,715.1	3,696.3	3,696.0	14.4	1.3	150.73	306.4	84.9	676.5	664.5	11.97	56.531	
3,838.6	3,751.8	3,733.1	3,732.7	14.7	1.3	151.21	306.4	85.2	687.1	675.0	12.09	56.841	
3,900.0	3,810.4	3,791.7	3,791.3	15.0	1.3	151.95	306.4	85.7	704.2	691.9	12.28	57.334	
3,937.0	3,845.7	3,826.7	3,826.4	15.3	1.3	152.37	306.4	86.1	714.5	702.1	12.40	57.626	
4,000.0	3,905.7	3,886.3	3,885.9	15.7	1.3	153.06	306.4	86.6	732.1	719.5	12.60	58.119	
4,035.4	3,939.5	3,919.7	3,919.3	15.9	1.3	153.43	306.4	86.9	742.1	729.4	12.71	58.391	
4,100.0	4,001.0	3,980.4	3,980.0	16.3	1.3	154.08	306.5	87.5	760.4	747.5	12.91	58.884	
4,133.8	4,033.3	4,012.3	4,011.9	16.5	1.3	154.40	306.5	87.9	770.1	757.0	13.02	59.140	
4,200.0	4,096.3	4,075.0	4,074.7	16.9	1.4	155.03	306.6	88.6	789.0	775.8	13.23	59.637	
4,232.3	4,127.1	4,105.7	4,105.3	17.1	1.4	155.33	306.6	88.9	798.3	784.9	13.33	59.876	
4,300.0	4,191.7	4,170.6	4,170.3	17.6	1.4	155.94	306.6	89.6	817.8	804.2	13.54	60.376	
4,330.7	4,220.9	4,200.1	4,199.7	17.8	1.4	156.21	306.5	89.9	826.6	813.0	13.64	60.598	
4,400.0	4,287.0	4,266.5	4,266.1	18.2	1.4	156.79	306.4	90.6	846.6	832.7	13.86	61.090	
4,429.1	4,314.7	4,294.4	4,294.1	18.4	1.4	157.03	306.4	90.8	855.0	841.1	13.95	61.293	
4,500.0	4,382.3	4,360.3	4,360.0	18.8	1.4	157.58	306.2	91.5	875.6	861.4	14.17	61.772	
4,527.5	4,408.6	4,385.9	4,385.5	19.0	1.4	157.78	306.2	91.8	883.6	869.4	14.26	61.957	
4,600.0	4,477.6	4,455.7	4,455.3	19.5	1.5	158.33	306.0	92.6	904.9	890.4	14.49	62.443	
4,626.0	4,502.4	4,481.0	4,480.6	19.6	1.5	158.52	306.0	92.8	912.5	897.9	14.57	62.611	
4,700.0	4,572.9	4,552.1	4,551.7	20.1	1.5	159.03	306.0	93.5	934.1	919.3	14.81	63.078	
4,724.4	4,596.2	4,575.4	4,575.0	20.3	1.5	159.18	306.1	93.7	941.3	926.4	14.89	63.227	
4,800.0	4,668.3	4,648.2	4,647.8	20.7	1.5	159.65	306.4	94.3	963.4	948.3	15.13	63.675	
4,822.8	4,690.0	4,670.3	4,669.9	20.9	1.5	159.79	306.5	94.4	970.1	954.9	15.20	63.806	
4,900.0	4,763.6	4,744.2	4,743.8	21.4	1.5	160.23	306.9	94.9	992.6	977.2	15.45	64.235	
4,921.2	4,783.8	4,764.4	4,764.0	21.5	1.5	160.35	307.1	95.0	998.8	983.3	15.52	64.350	
5,000.0	4,858.9	4,839.2	4,838.8	22.0	1.6	160.76	307.7	95.5	1,021.9	1,006.2	15.78	64.768	
5,019.7	4,877.7	4,857.9	4,857.5	22.1	1.6	160.86	307.9	95.6	1,027.7	1,011.9	15.84	64.870	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,954.2	4,934.9	4,934.5	22.6	1.6	161.25	308.7	96.1	1,051.3	1,035.2	16.11	65.279	
5,118.1	4,971.5	4,952.4	4,952.0	22.8	1.6	161.34	308.9	96.2	1,056.6	1,040.5	16.16	65.369	
5,171.8	5,022.7	5,004.0	5,003.6	23.1	1.6	161.58	309.5	96.5	1,072.4	1,056.1	16.34	65.630	
5,200.0	5,049.6	5,030.0	5,029.6	23.3	1.6	161.75	309.8	96.6	1,080.6	1,064.2	16.40	65.877	
5,216.5	5,065.4	5,045.2	5,044.8	23.3	1.6	161.85	310.0	96.7	1,085.3	1,068.8	16.43	66.036	
5,300.0	5,145.7	5,123.3	5,122.9	23.7	1.6	162.30	311.0	97.3	1,107.7	1,091.1	16.59	66.760	
5,314.9	5,160.1	5,137.7	5,137.3	23.8	1.6	162.37	311.2	97.4	1,111.5	1,094.9	16.62	66.885	
5,400.0	5,242.7	5,220.2	5,219.8	24.1	1.6	162.75	312.4	98.1	1,131.8	1,115.0	16.76	67.510	
5,413.4	5,255.7	5,233.4	5,233.0	24.2	1.6	162.80	312.5	98.2	1,134.7	1,118.0	16.79	67.604	
5,500.0	5,340.5	5,319.6	5,319.2	24.5	1.7	163.12	313.6	98.9	1,152.5	1,135.6	16.92	68.132	
5,511.8	5,352.1	5,331.6	5,331.2	24.5	1.7	163.16	313.8	99.0	1,154.8	1,137.8	16.93	68.200	
5,600.0	5,439.0	5,420.6	5,420.2	24.8	1.7	163.42	314.8	99.4	1,169.8	1,152.8	17.05	68.614	
5,610.2	5,449.1	5,430.6	5,430.1	24.8	1.7	163.44	315.0	99.5	1,171.4	1,154.3	17.06	68.658	
5,700.0	5,538.0	5,518.6	5,518.2	25.1	1.7	163.62	316.2	99.9	1,183.8	1,166.6	17.17	68.956	
5,708.6	5,546.6	5,527.2	5,526.8	25.1	1.7	163.64	316.3	100.0	1,184.8	1,167.6	17.18	68.981	
5,800.0	5,637.4	5,618.7	5,618.2	25.3	1.7	163.76	317.6	100.5	1,194.4	1,177.2	17.27	69.151	
5,807.1	5,644.5	5,625.9	5,625.5	25.3	1.7	163.76	317.7	100.5	1,195.1	1,177.8	17.28	69.161	
5,900.0	5,737.2	5,720.2	5,719.7	25.5	1.7	163.83	318.9	100.8	1,201.6	1,184.2	17.37	69.188	
5,905.5	5,742.6	5,725.6	5,725.1	25.5	1.7	163.83	319.0	100.9	1,201.9	1,184.5	17.37	69.188	
6,000.0	5,837.1	5,819.0	5,818.5	25.6	1.8	163.84	320.1	101.3	1,205.5	1,188.0	17.45	69.067	
6,003.9	5,841.0	5,823.1	5,822.6	25.6	1.8	163.84	320.1	101.3	1,205.6	1,188.1	17.46	69.059	
6,051.8	5,888.9	5,873.5	5,873.0	25.7	1.8	88.70	320.6	101.5	1,206.1	1,179.5	26.64	45.282	
6,081.8	5,918.9	5,904.9	5,904.4	25.7	1.8	88.69	320.8	101.5	1,206.2	1,179.5	26.67	45.224	
6,100.0	5,937.1	5,923.3	5,922.8	25.7	1.8	-1.32	321.0	101.5	1,205.9	1,188.4	17.52	68.839	
6,102.3	5,939.4	5,925.7	5,925.2	25.7	1.8	-1.32	321.0	101.5	1,205.9	1,188.4	17.51	68.853	
6,150.0	5,987.0	5,973.9	5,973.4	25.7	1.8	-1.34	321.4	101.5	1,203.0	1,185.5	17.43	69.008	
6,200.0	6,036.5	6,023.5	6,023.0	25.7	1.8	-1.38	321.7	101.6	1,196.5	1,179.1	17.36	68.935	
6,200.8	6,037.3	6,024.3	6,023.8	25.7	1.8	-1.38	321.8	101.6	1,196.4	1,179.0	17.36	68.932	
6,250.0	6,085.5	6,071.9	6,071.4	25.7	1.8	-1.43	322.1	101.6	1,186.6	1,169.3	17.28	68.671	
6,299.2	6,133.0	6,119.8	6,119.2	25.6	1.8	-1.49	322.4	101.6	1,173.6	1,156.4	17.19	68.276	
6,300.0	6,133.7	6,120.5	6,120.0	25.6	1.8	-1.49	322.4	101.6	1,173.3	1,156.2	17.19	68.268	
6,350.0	6,180.9	6,169.7	6,169.2	25.5	1.8	-1.56	322.6	101.6	1,156.7	1,139.6	17.07	67.762	
6,397.6	6,224.6	6,214.1	6,213.6	25.4	1.8	-1.65	322.8	101.5	1,137.7	1,120.8	16.93	67.209	
6,400.0	6,226.7	6,216.2	6,215.7	25.4	1.8	-1.65	322.8	101.5	1,136.7	1,119.8	16.92	67.179	
6,450.0	6,271.1	6,259.1	6,258.6	25.2	1.8	-1.76	323.0	101.5	1,113.6	1,096.9	16.74	66.540	
6,496.0	6,310.4	6,297.2	6,296.7	25.1	1.8	-1.87	323.1	101.5	1,089.7	1,073.2	16.54	65.895	
6,500.0	6,313.7	6,300.4	6,299.9	25.1	1.8	-1.88	323.1	101.5	1,087.6	1,071.0	16.52	65.836	
6,550.0	6,354.4	6,341.4	6,340.9	25.0	1.8	-2.04	323.2	101.5	1,058.6	1,042.3	16.28	65.038	
6,594.5	6,388.9	6,376.2	6,375.6	24.9	1.8	-2.21	323.3	101.5	1,030.5	1,014.4	16.04	64.225	
6,600.0	6,393.0	6,380.3	6,379.8	24.9	1.8	-2.23	323.3	101.5	1,026.8	1,010.8	16.02	64.115	
6,650.0	6,429.3	6,415.9	6,415.4	24.8	1.8	-2.46	323.3	101.5	992.5	976.7	15.75	63.022	
6,692.9	6,458.5	6,443.7	6,443.1	24.7	1.8	-2.71	323.2	101.6	961.1	945.6	15.53	61.903	
6,700.0	6,463.1	6,448.1	6,447.6	24.7	1.9	-2.75	323.2	101.6	955.7	940.2	15.49	61.698	
6,750.0	6,494.3	6,477.9	6,477.3	24.7	1.9	-3.12	323.2	101.7	916.8	901.5	15.27	60.054	
6,791.3	6,517.9	6,500.6	6,500.1	24.7	1.9	-3.50	323.1	101.8	883.0	867.9	15.12	58.381	
6,800.0	6,522.6	6,505.3	6,504.8	24.7	1.9	-3.59	323.1	101.8	875.8	860.7	15.10	57.988	
6,850.0	6,548.0	6,531.0	6,530.5	24.7	1.9	-4.23	323.0	102.0	832.9	817.8	15.04	55.386	
6,889.7	6,566.0	6,549.2	6,548.7	24.8	1.9	-4.90	322.9	102.1	797.6	782.5	15.08	52.881	
6,900.0	6,570.4	6,553.6	6,553.1	24.9	1.9	-5.11	322.9	102.1	788.3	773.2	15.11	52.172	
6,950.0	6,589.5	6,573.0	6,572.5	25.1	1.9	-6.38	322.8	102.2	742.3	726.9	15.37	48.290	
6,988.2	6,602.0	6,585.7	6,585.2	25.3	1.9	-7.78	322.8	102.3	706.3	690.5	15.75	44.856	
7,000.0	6,605.4	6,589.2	6,588.7	25.3	1.9	-8.32	322.7	102.3	695.0	679.1	15.90	43.711	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,618.0	6,602.1	6,601.5	25.6	1.9	-11.57	322.7	102.4	646.7	629.9	16.86	38.368	
7,086.6	6,625.0	6,609.4	6,608.9	25.9	1.9	-15.62	322.7	102.4	610.9	592.8	18.06	33.825	
7,100.0	6,627.1	6,611.6	6,611.1	26.0	1.9	-17.75	322.7	102.4	597.7	579.0	18.68	31.988	
7,150.0	6,632.8	6,617.6	6,617.1	26.5	1.9	-32.49	322.6	102.4	548.1	525.3	22.77	24.076	
7,185.0	6,634.7	6,619.7	6,619.2	26.8	1.9	-58.35	322.6	102.5	513.2	485.6	27.64	18.569	
7,200.0	6,635.0	6,620.1	6,619.6	27.0	1.9	-76.32	322.6	102.5	498.3	469.6	28.65	17.392	
7,215.9	6,635.0	6,620.2	6,619.6	27.1	1.9	-97.35	322.6	102.5	482.4	453.9	28.53	16.906	
7,283.4	6,634.1	6,619.6	6,619.1	27.9	1.9	-96.36	322.6	102.5	415.0	385.6	29.37	14.128	
7,300.0	6,633.9	6,619.5	6,619.0	28.1	1.9	-96.11	322.6	102.5	398.5	368.9	29.58	13.472	
7,381.9	6,632.9	6,618.9	6,618.4	29.3	1.9	-94.90	322.6	102.4	316.9	286.1	30.76	10.301	
7,400.0	6,632.6	6,618.7	6,618.2	29.5	1.9	-94.64	322.6	102.4	298.8	267.8	31.03	9.632	
7,480.3	6,631.6	6,618.1	6,617.6	30.8	1.9	-93.45	322.6	102.4	219.1	186.7	32.34	6.773	
7,500.0	6,631.4	6,618.0	6,617.5	31.1	1.9	-93.16	322.6	102.4	199.6	166.9	32.67	6.109	
7,578.7	6,630.4	6,617.4	6,616.9	32.5	1.9	-91.99	322.6	102.4	122.3	88.2	34.09	3.586	
7,600.0	6,630.1	6,617.2	6,616.7	32.9	1.9	-91.68	322.6	102.4	101.7	67.3	34.47	2.951	
7,677.1	6,629.1	6,616.6	6,616.1	34.3	1.9	-90.54	322.6	102.4	35.7	-0.3	35.97	0.991 Level 1	
7,697.4	6,628.8	6,616.5	6,616.0	34.7	1.9	-90.24	322.6	102.4	29.3	-7.0	36.37	0.807 Level 1, CC, ES, SF	
7,700.0	6,628.8	6,616.5	6,616.0	34.8	1.9	-90.20	322.6	102.4	29.4	-7.0	36.42	0.809 Level 1	
7,775.6	6,627.8	6,615.9	6,615.4	36.3	1.9	-89.08	322.6	102.4	83.5	45.5	37.97	2.199	
7,800.0	6,627.5	6,615.7	6,615.2	36.8	1.9	-88.72	322.6	102.4	106.7	68.2	38.47	2.773	
7,874.0	6,626.6	6,615.2	6,614.6	38.4	1.9	-87.64	322.6	102.4	179.0	138.9	40.06	4.468	
7,900.0	6,626.3	6,615.0	6,614.4	38.9	1.9	-87.26	322.6	102.4	204.7	164.1	40.62	5.039	
7,972.4	6,625.3	6,614.4	6,613.9	40.5	1.9	-86.20	322.6	102.4	276.6	234.3	42.23	6.549	
8,000.0	6,625.0	6,614.2	6,613.7	41.1	1.9	-85.80	322.6	102.4	304.0	261.2	42.84	7.096	
8,070.8	6,624.1	6,613.7	6,613.2	42.7	1.9	-84.77	322.6	102.4	374.6	330.1	44.45	8.426	
8,100.0	6,623.7	6,613.5	6,612.9	43.4	1.9	-84.35	322.6	102.4	403.6	358.5	45.12	8.947	
8,169.3	6,622.8	6,612.9	6,612.4	45.0	1.9	-83.35	322.6	102.4	472.8	426.0	46.72	10.119	
8,200.0	6,622.4	6,612.7	6,612.2	45.7	1.9	-82.91	322.6	102.4	503.4	456.0	47.43	10.615	
8,267.7	6,621.6	6,612.2	6,611.7	47.4	1.9	-81.95	322.7	102.4	571.0	522.0	49.01	11.652	
8,300.0	6,621.1	6,612.0	6,611.5	48.1	1.9	-81.48	322.7	102.4	603.3	553.5	49.76	12.124	
8,366.1	6,620.3	6,611.5	6,611.0	49.7	1.9	-80.55	322.7	102.4	669.3	618.0	51.31	13.044	
8,400.0	6,619.9	6,611.2	6,610.7	50.6	1.9	-80.07	322.7	102.4	703.2	651.1	52.10	13.496	
8,464.5	6,619.0	6,610.8	6,610.2	52.2	1.9	-79.18	322.7	102.4	767.7	714.1	53.62	14.316	
8,500.0	6,618.6	6,610.5	6,610.0	53.0	1.9	-78.68	322.7	102.4	803.1	748.7	54.45	14.750	
8,563.0	6,617.8	6,610.0	6,609.5	54.6	1.9	-77.81	322.7	102.4	866.0	810.1	55.93	15.485	
8,600.0	6,617.3	6,609.8	6,609.2	55.5	1.9	-77.30	322.7	102.4	903.0	846.3	56.79	15.903	
8,661.4	6,616.5	6,609.3	6,608.8	57.1	1.9	-76.47	322.7	102.4	964.4	906.2	58.21	16.566	
8,700.0	6,616.0	6,609.0	6,608.5	58.1	1.9	-75.94	322.7	102.4	1,003.0	943.9	59.10	16.970	
8,759.8	6,615.2	6,608.6	6,608.1	59.6	1.9	-75.14	322.7	102.4	1,062.8	1,002.3	60.48	17.572	
8,800.0	6,614.7	6,608.3	6,607.8	60.6	1.9	-74.60	322.7	102.4	1,102.9	1,041.5	61.40	17.964	
8,858.2	6,614.0	6,607.9	6,607.4	62.1	1.9	-73.84	322.7	102.4	1,161.2	1,098.5	62.73	18.512	
8,900.0	6,613.4	6,607.6	6,607.1	63.2	1.9	-73.29	322.7	102.4	1,202.9	1,139.2	63.66	18.895	
8,956.7	6,612.7	6,607.2	6,606.6	64.7	1.9	-72.55	322.7	102.4	1,259.6	1,194.6	64.94	19.397	
9,000.0	6,612.2	6,606.8	6,606.3	65.8	1.9	-71.99	322.7	102.4	1,302.9	1,237.0	65.89	19.772	
9,055.1	6,611.5	6,606.4	6,605.9	67.3	1.9	-71.29	322.7	102.4	1,358.0	1,290.9	67.11	20.235	
9,100.0	6,610.9	6,606.1	6,605.6	68.4	1.9	-70.72	322.7	102.4	1,402.9	1,334.8	68.09	20.604	
9,153.5	6,610.2	6,605.7	6,605.2	69.8	1.9	-70.05	322.7	102.4	1,456.4	1,387.1	69.25	21.032	
9,200.0	6,609.6	6,605.4	6,604.9	71.1	1.9	-69.47	322.7	102.4	1,502.8	1,432.6	70.24	21.397	
9,251.9	6,608.9	6,605.0	6,604.5	72.4	1.9	-68.83	322.7	102.4	1,554.8	1,483.4	71.34	21.794	
9,300.0	6,608.3	6,604.7	6,604.2	73.7	1.9	-68.24	322.7	102.4	1,602.8	1,530.5	72.34	22.156	
9,350.4	6,607.7	6,604.3	6,603.8	75.0	1.9	-67.63	322.7	102.4	1,653.2	1,579.8	73.39	22.526	
9,400.0	6,607.0	6,604.0	6,603.5	76.4	1.9	-67.03	322.7	102.4	1,702.8	1,628.4	74.40	22.886	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,606.4	6,603.6	6,603.1	77.7	1.9	-66.46	322.7	102.4	1,751.6	1,676.2	75.39	23.232	
9,500.0	6,605.7	6,603.3	6,602.7	79.0	1.9	-65.85	322.7	102.4	1,802.8	1,726.4	76.42	23.592	
9,547.2	6,605.1	6,602.9	6,602.4	80.3	1.9	-65.31	322.7	102.4	1,850.0	1,772.6	77.35	23.916	
9,600.0	6,604.5	6,602.5	6,602.0	81.7	1.9	-64.70	322.7	102.4	1,902.8	1,824.4	78.38	24.276	
9,645.6	6,603.9	6,602.2	6,601.7	82.9	1.9	-64.19	322.7	102.4	1,948.4	1,869.1	79.26	24.581	
9,700.0	6,603.2	6,600.0	6,599.5	84.4	1.9	-60.79	322.7	102.3	2,002.7	1,923.9	78.88	25.390	
9,744.1	6,602.6	6,600.0	6,599.5	85.6	1.9	-60.79	322.7	102.3	2,046.8	1,966.9	79.93	25.609	
9,800.0	6,601.9	6,600.0	6,599.5	87.1	1.9	-60.78	322.7	102.3	2,102.7	2,021.5	81.25	25.880	
9,842.5	6,601.3	6,600.0	6,599.5	88.2	1.9	-60.78	322.7	102.3	2,145.2	2,063.0	82.26	26.079	
9,900.0	6,600.6	6,600.0	6,599.5	89.8	1.9	-60.76	322.7	102.3	2,202.7	2,119.1	83.62	26.342	
9,940.9	6,600.1	6,600.0	6,599.5	90.9	1.9	-60.76	322.7	102.3	2,243.6	2,159.0	84.60	26.521	
10,000.0	6,599.3	6,599.7	6,599.2	92.5	1.9	-60.31	322.7	102.3	2,302.7	2,217.0	85.73	26.859	
10,039.3	6,598.8	6,599.4	6,598.9	93.5	1.9	-59.89	322.7	102.3	2,342.1	2,255.6	86.41	27.104	
10,100.0	6,598.0	6,599.0	6,598.5	95.2	1.9	-59.23	322.7	102.3	2,402.7	2,315.3	87.42	27.484	
10,137.8	6,597.5	6,598.7	6,598.2	96.2	1.9	-58.84	322.7	102.3	2,440.5	2,352.4	88.05	27.717	
10,200.0	6,596.7	6,598.2	6,597.7	97.9	1.9	-58.18	322.7	102.3	2,502.7	2,413.6	89.06	28.102	
10,236.2	6,596.3	6,598.0	6,597.5	98.9	1.9	-57.81	322.7	102.3	2,538.9	2,449.2	89.64	28.322	
10,300.0	6,595.4	6,597.5	6,597.0	100.6	1.9	-57.15	322.7	102.3	2,602.7	2,512.0	90.64	28.713	
10,334.6	6,595.0	6,597.2	6,596.7	101.6	1.9	-56.80	322.7	102.3	2,637.3	2,546.1	91.18	28.923	
10,400.0	6,594.2	6,596.8	6,596.3	103.4	1.9	-56.14	322.7	102.3	2,702.7	2,610.5	92.18	29.321	
10,433.0	6,593.7	6,596.5	6,596.0	104.3	1.9	-55.82	322.7	102.3	2,735.7	2,643.0	92.68	29.519	
10,500.0	6,592.9	6,596.0	6,595.5	106.1	1.9	-55.16	322.7	102.3	2,802.7	2,709.0	93.66	29.924	
10,531.5	6,592.5	6,595.8	6,595.3	106.9	1.9	-54.85	322.7	102.3	2,834.1	2,740.0	94.12	30.111	
10,600.0	6,591.6	6,595.3	6,594.8	108.8	1.9	-54.19	322.7	102.3	2,902.7	2,807.6	95.10	30.523	
10,629.9	6,591.2	6,595.1	6,594.6	109.6	1.9	-53.91	322.7	102.3	2,932.6	2,837.0	95.52	30.701	
10,700.0	6,590.3	6,594.6	6,594.1	111.6	1.9	-53.25	322.7	102.3	3,002.7	2,906.2	96.48	31.121	
10,728.3	6,589.9	6,594.4	6,593.8	112.3	1.9	-52.99	322.7	102.3	3,031.0	2,934.1	96.87	31.288	
10,800.0	6,589.0	6,593.8	6,593.3	114.3	1.9	-52.33	322.7	102.3	3,102.6	3,004.8	97.83	31.716	
10,826.7	6,588.7	6,593.6	6,593.1	115.0	1.9	-52.09	322.7	102.3	3,129.4	3,031.2	98.18	31.873	
10,900.0	6,587.7	6,593.1	6,592.6	117.1	1.9	-51.43	322.7	102.3	3,202.6	3,103.5	99.12	32.309	
10,925.2	6,587.4	6,592.9	6,592.4	117.7	1.9	-51.21	322.7	102.3	3,227.8	3,128.4	99.45	32.457	
11,000.0	6,586.4	6,592.4	6,591.8	119.8	1.9	-50.56	322.7	102.3	3,302.6	3,202.2	100.38	32.901	
11,023.6	6,586.1	6,592.2	6,591.7	120.4	1.9	-50.36	322.7	102.3	3,326.2	3,225.6	100.67	33.040	
11,100.0	6,585.1	6,591.6	6,591.1	122.6	1.9	-49.70	322.7	102.3	3,402.6	3,301.0	101.59	33.492	
11,122.0	6,584.8	6,591.5	6,591.0	123.2	1.9	-49.52	322.7	102.3	3,424.6	3,322.8	101.86	33.621	
11,200.0	6,583.8	6,590.9	6,590.4	125.3	1.9	-48.87	322.7	102.3	3,502.6	3,399.8	102.77	34.083	
11,220.4	6,583.6	6,590.7	6,590.2	125.9	1.9	-48.70	322.7	102.3	3,523.1	3,420.1	103.01	34.202	
11,300.0	6,582.5	6,590.2	6,589.6	128.1	1.9	-48.05	322.7	102.3	3,602.6	3,498.7	103.90	34.672	
11,318.9	6,582.3	6,590.0	6,589.5	128.6	1.9	-47.90	322.7	102.3	3,621.5	3,517.4	104.12	34.782	
11,400.0	6,581.2	6,589.4	6,588.9	130.8	1.9	-47.26	322.7	102.3	3,702.6	3,597.6	105.00	35.261	
11,417.3	6,581.0	6,589.3	6,588.8	131.3	1.9	-47.12	322.7	102.3	3,719.9	3,614.7	105.19	35.362	
11,500.0	6,580.0	6,588.7	6,588.2	133.6	1.9	-46.48	322.8	102.3	3,802.6	3,696.5	106.07	35.850	
11,515.7	6,579.7	6,588.6	6,588.1	134.0	1.9	-46.36	322.8	102.3	3,818.3	3,712.1	106.24	35.942	
11,600.0	6,578.7	6,587.9	6,587.4	136.3	1.9	-45.72	322.8	102.3	3,902.6	3,795.5	107.10	36.439	
11,614.1	6,578.5	6,587.8	6,587.3	136.7	1.9	-45.62	322.8	102.3	3,916.7	3,809.5	107.25	36.521	
11,700.0	6,577.4	6,587.2	6,586.7	139.1	1.9	-44.98	322.8	102.3	4,002.6	3,894.5	108.10	37.027	
11,712.6	6,577.2	6,587.1	6,586.6	139.5	1.9	-44.89	322.8	102.3	4,015.2	3,906.9	108.23	37.100	
11,800.0	6,576.1	6,586.5	6,586.0	141.9	1.9	-44.26	322.8	102.3	4,102.6	3,993.5	109.07	37.615	
11,811.0	6,575.9	6,586.4	6,585.9	142.2	1.9	-44.19	322.8	102.3	4,113.6	4,004.4	109.18	37.679	
11,882.7	6,575.0	6,585.9	6,585.3	144.2	1.9	-43.68	322.8	102.3	4,185.3	4,075.4	109.85	38.101	
11,883.5	6,575.0	6,585.8	6,585.3	144.2	1.9	-43.68	322.8	102.3	4,186.1	4,076.2	109.85	38.108	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	49.95	754.2	897.2	1,172.1				
98.4	98.4	87.9	87.9	0.1	0.0	49.95	754.1	897.1	1,171.9	1,171.8	0.10	N/A	
100.0	100.0	89.6	89.6	0.1	0.0	49.95	754.1	897.1	1,171.9	1,171.8	0.10	N/A	
196.8	196.8	186.2	186.2	0.3	0.1	49.95	753.9	896.9	1,171.7	1,171.3	0.40	2,960.488	
200.0	200.0	189.3	189.3	0.3	0.1	49.95	753.9	896.9	1,171.7	1,171.3	0.41	2,887.528	
295.3	295.3	284.8	284.8	0.5	0.2	49.95	753.8	896.8	1,171.5	1,170.8	0.75	1,572.154	
300.0	300.0	289.6	289.6	0.5	0.2	49.95	753.8	896.8	1,171.5	1,170.8	0.76	1,536.947	
393.7	393.7	387.7	387.7	0.8	0.3	49.96	753.4	896.6	1,171.2	1,170.1	1.06	1,106.726	
400.0	400.0	394.3	394.3	0.8	0.3	49.96	753.4	896.6	1,171.1	1,170.0	1.08	1,086.630	
492.1	492.1	486.5	486.5	1.0	0.4	49.97	752.9	896.2	1,170.5	1,169.2	1.34	870.382	
500.0	500.0	494.3	494.3	1.0	0.4	49.97	752.8	896.2	1,170.5	1,169.1	1.37	855.883	
590.5	590.5	585.1	585.1	1.2	0.4	49.98	752.3	895.9	1,169.9	1,168.3	1.62	721.625	
600.0	600.0	594.5	594.5	1.2	0.5	49.98	752.3	895.9	1,169.8	1,168.2	1.65	710.021	
689.0	689.0	683.7	683.6	1.4	0.5	49.99	751.7	895.5	1,169.3	1,167.4	1.89	618.309	
700.0	700.0	694.7	694.7	1.4	0.5	49.99	751.7	895.5	1,169.2	1,167.3	1.92	608.580	
787.4	787.4	782.2	782.1	1.6	0.6	50.00	751.2	895.2	1,168.6	1,166.5	2.16	541.953	
800.0	800.0	794.8	794.7	1.7	0.6	50.00	751.1	895.1	1,168.5	1,166.3	2.19	533.539	
885.8	885.8	880.9	880.9	1.9	0.6	50.00	750.7	894.7	1,168.0	1,165.5	2.42	483.062	
900.0	900.0	895.1	895.1	1.9	0.6	50.00	750.6	894.6	1,167.9	1,165.4	2.46	475.633	
984.2	984.2	980.2	980.2	2.1	0.7	50.00	750.2	894.2	1,167.2	1,164.6	2.68	436.003	
1,000.0	1,000.0	996.1	996.1	2.1	0.7	50.00	750.2	894.1	1,167.1	1,164.4	2.72	429.314	
1,082.7	1,082.7	1,078.8	1,078.8	2.3	0.7	50.00	749.7	893.6	1,166.5	1,163.5	2.93	397.583	
1,100.0	1,100.0	1,096.1	1,096.1	2.3	0.7	50.00	749.6	893.5	1,166.3	1,163.4	2.98	391.520	
1,181.1	1,181.1	1,175.9	1,175.9	2.5	0.7	50.01	749.2	893.1	1,165.7	1,162.6	3.19	365.639	
1,200.0	1,200.0	1,194.5	1,194.5	2.6	0.7	50.01	749.1	893.0	1,165.6	1,162.4	3.24	360.097	
1,279.5	1,279.5	1,272.4	1,272.4	2.7	0.8	50.01	748.7	892.7	1,165.2	1,161.7	3.44	338.634	
1,300.0	1,300.0	1,292.5	1,292.4	2.8	0.8	50.01	748.7	892.7	1,165.1	1,161.6	3.49	333.523	
1,377.9	1,377.9	1,370.8	1,370.8	3.0	0.8	50.01	748.4	892.4	1,164.7	1,161.0	3.69	315.406	
1,400.0	1,400.0	1,393.1	1,393.0	3.0	0.8	50.01	748.4	892.3	1,164.6	1,160.8	3.75	310.631	
1,426.5	1,426.5	1,419.7	1,419.7	3.1	0.8	125.15	748.3	892.2	1,164.5	1,160.6	3.92	297.140	
1,476.4	1,476.4	1,469.9	1,469.8	3.2	0.9	125.18	748.1	892.0	1,164.8	1,160.7	4.05	287.822	
1,500.0	1,500.0	1,493.6	1,493.6	3.2	0.9	125.21	748.0	891.9	1,165.0	1,160.9	4.11	283.653	
1,574.8	1,574.7	1,568.5	1,568.5	3.4	0.9	125.33	747.6	891.6	1,166.7	1,162.4	4.29	271.687	
1,600.0	1,599.8	1,593.8	1,593.7	3.4	0.9	125.38	747.5	891.5	1,167.5	1,163.1	4.36	267.950	
1,673.2	1,672.8	1,670.7	1,670.7	3.6	0.9	125.59	747.1	891.1	1,170.5	1,165.9	4.55	257.443	
1,700.0	1,699.5	1,699.0	1,698.9	3.7	1.0	125.68	746.9	890.9	1,171.8	1,167.1	4.62	253.851	
1,771.6	1,770.6	1,773.1	1,773.1	3.8	1.0	125.97	746.2	890.3	1,175.8	1,171.0	4.81	244.557	
1,800.0	1,798.7	1,802.4	1,802.4	3.9	1.0	126.09	745.9	890.0	1,177.7	1,172.8	4.88	241.131	
1,870.1	1,868.0	1,875.8	1,875.7	4.1	1.0	126.46	745.0	889.3	1,182.9	1,177.8	5.08	232.737	
1,900.0	1,897.5	1,906.8	1,906.7	4.2	1.0	126.63	744.5	889.0	1,185.4	1,180.2	5.17	229.400	
1,968.5	1,964.8	1,976.1	1,976.0	4.4	1.1	127.05	743.2	888.3	1,191.7	1,186.4	5.37	221.748	
2,000.0	1,995.6	2,007.7	2,007.6	4.5	1.1	127.27	742.5	888.0	1,195.0	1,189.5	5.47	218.476	
2,066.9	2,060.9	2,074.3	2,074.2	4.7	1.1	127.74	741.0	887.3	1,202.6	1,196.9	5.69	211.372	
2,100.0	2,093.1	2,106.7	2,106.6	4.8	1.1	127.99	740.2	887.0	1,206.8	1,201.0	5.80	208.110	
2,165.3	2,156.3	2,168.3	2,168.2	5.1	1.1	128.46	738.9	886.3	1,215.8	1,209.8	6.04	201.439	
2,200.0	2,189.6	2,200.9	2,200.8	5.2	1.2	128.71	738.4	886.0	1,221.1	1,214.9	6.16	198.202	
2,263.8	2,250.7	2,264.9	2,264.8	5.5	1.2	129.24	737.3	885.0	1,231.5	1,225.1	6.41	191.989	
2,280.0	2,266.2	2,281.2	2,281.1	5.6	1.2	129.37	737.1	884.8	1,234.3	1,227.8	6.48	190.518	
2,300.0	2,285.3	2,301.2	2,301.0	5.7	1.2	129.59	736.8	884.4	1,237.8	1,231.2	6.56	188.679	
2,362.2	2,344.6	2,360.3	2,360.1	6.0	1.2	130.23	736.1	883.3	1,248.8	1,241.9	6.82	183.202	
2,400.0	2,380.6	2,396.2	2,396.0	6.2	1.2	130.62	735.7	882.6	1,255.5	1,248.5	6.98	179.942	
2,460.6	2,438.4	2,455.5	2,455.3	6.5	1.2	131.24	735.0	881.4	1,266.4	1,259.2	7.24	174.986	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,475.9	2,494.1	2,493.9	6.7	1.3	131.64	734.5	880.6	1,273.6	1,266.2	7.41	171.957	
2,559.0	2,532.2	2,549.3	2,549.1	7.0	1.3	132.20	733.8	879.4	1,284.4	1,276.7	7.66	167.591	
2,600.0	2,571.2	2,587.4	2,587.2	7.2	1.3	132.58	733.5	878.6	1,292.0	1,284.2	7.84	164.754	
2,657.5	2,626.0	2,642.4	2,642.1	7.5	1.3	133.12	733.1	877.5	1,302.8	1,294.8	8.10	160.930	
2,700.0	2,666.6	2,683.4	2,683.1	7.8	1.3	133.52	732.8	876.6	1,310.9	1,302.7	8.28	158.273	
2,755.9	2,719.8	2,737.3	2,737.0	8.1	1.3	134.03	732.4	875.4	1,321.6	1,313.1	8.53	154.935	
2,800.0	2,761.9	2,779.7	2,779.5	8.3	1.4	134.43	732.0	874.5	1,330.2	1,321.4	8.72	152.464	
2,854.3	2,813.7	2,832.3	2,832.0	8.7	1.4	134.91	731.5	873.3	1,340.7	1,331.8	8.96	149.553	
2,900.0	2,857.2	2,876.5	2,876.2	8.9	1.4	135.32	731.1	872.4	1,349.7	1,340.5	9.17	147.251	
2,952.7	2,907.5	2,926.4	2,926.1	9.2	1.4	135.78	730.5	871.4	1,360.1	1,350.7	9.40	144.709	
3,000.0	2,952.5	2,970.2	2,969.9	9.5	1.4	136.18	730.0	870.5	1,369.5	1,359.9	9.61	142.570	
3,051.2	3,001.3	3,017.2	3,016.8	9.8	1.4	136.60	729.3	869.7	1,379.9	1,370.0	9.83	140.363	
3,100.0	3,047.8	3,061.4	3,061.0	10.1	1.5	137.00	728.6	869.1	1,389.9	1,379.9	10.04	138.384	
3,149.6	3,095.1	3,106.3	3,106.0	10.4	1.5	137.40	727.9	868.5	1,400.3	1,390.0	10.26	136.476	
3,200.0	3,143.2	3,152.8	3,152.5	10.7	1.5	137.82	727.2	868.1	1,410.9	1,400.5	10.48	134.659	
3,248.0	3,188.9	3,197.1	3,196.7	11.0	1.5	138.21	726.5	867.6	1,421.2	1,410.5	10.68	133.012	
3,300.0	3,238.5	3,244.3	3,243.9	11.3	1.5	138.61	725.8	867.3	1,432.5	1,421.6	10.91	131.343	
3,346.4	3,282.8	3,286.3	3,285.9	11.6	1.5	138.98	725.2	867.0	1,442.7	1,431.6	11.10	129.928	
3,400.0	3,333.8	3,335.1	3,334.7	11.9	1.6	139.39	724.4	866.8	1,454.7	1,443.4	11.33	128.403	
3,444.9	3,376.6	3,376.1	3,375.7	12.2	1.6	139.74	723.7	866.7	1,464.8	1,453.3	11.52	127.190	
3,500.0	3,429.1	3,427.8	3,427.4	12.6	1.6	140.17	723.0	866.6	1,477.4	1,465.7	11.74	125.791	
3,543.3	3,470.4	3,469.3	3,468.8	12.8	1.6	140.50	722.4	866.5	1,487.4	1,475.4	11.92	124.746	
3,600.0	3,524.4	3,523.8	3,523.3	13.2	1.6	140.94	721.7	866.4	1,500.4	1,488.3	12.15	123.447	
3,641.7	3,564.2	3,564.0	3,563.6	13.4	1.6	141.25	721.1	866.2	1,510.1	1,497.8	12.32	122.535	
3,700.0	3,619.8	3,619.8	3,619.3	13.8	1.7	141.69	720.3	866.1	1,523.7	1,511.1	12.56	121.321	
3,740.1	3,658.0	3,657.7	3,657.2	14.0	1.7	141.98	719.8	865.9	1,533.1	1,520.3	12.72	120.517	
3,800.0	3,715.1	3,714.8	3,714.4	14.4	1.7	142.40	719.1	865.7	1,547.1	1,534.2	12.96	119.376	
3,838.6	3,751.8	3,753.0	3,752.6	14.7	1.7	142.69	718.6	865.6	1,556.2	1,543.1	13.11	118.670	
3,900.0	3,810.4	3,813.2	3,812.7	15.0	1.7	143.12	717.9	865.3	1,570.7	1,557.4	13.36	117.594	
3,937.0	3,845.7	3,848.0	3,847.6	15.3	1.7	143.37	717.5	865.1	1,579.5	1,566.0	13.50	116.966	
4,000.0	3,905.7	3,907.3	3,906.9	15.7	1.7	143.79	716.7	864.8	1,594.5	1,580.8	13.75	115.948	
4,035.4	3,939.5	3,940.8	3,940.3	15.9	1.8	144.02	716.3	864.6	1,603.0	1,589.1	13.89	115.394	
4,100.0	4,001.0	4,001.8	4,001.4	16.3	1.8	144.43	715.7	864.3	1,618.6	1,604.4	14.15	114.427	
4,133.8	4,033.3	4,035.3	4,034.9	16.5	1.8	144.65	715.4	864.1	1,626.8	1,612.5	14.28	113.938	
4,200.0	4,096.3	4,100.9	4,100.4	16.9	1.8	145.08	714.8	863.6	1,642.7	1,628.2	14.53	113.021	
4,232.3	4,127.1	4,134.3	4,133.8	17.1	1.8	145.29	714.5	863.3	1,650.5	1,635.9	14.66	112.593	
4,300.0	4,191.7	4,204.6	4,204.1	17.6	1.9	145.74	713.8	862.5	1,666.7	1,651.8	14.92	111.727	
4,330.7	4,220.9	4,236.8	4,236.3	17.8	1.9	145.94	713.5	862.1	1,674.0	1,659.0	15.03	111.345	
4,400.0	4,287.0	4,308.8	4,308.3	18.2	1.9	146.37	712.8	860.9	1,690.4	1,675.1	15.30	110.498	
4,429.1	4,314.7	4,336.9	4,336.4	18.4	1.9	146.53	712.6	860.4	1,697.3	1,681.9	15.41	110.139	
4,500.0	4,382.3	4,405.1	4,404.6	18.8	1.9	146.93	712.1	859.0	1,714.0	1,698.3	15.68	109.297	
4,527.5	4,408.6	4,431.3	4,430.8	19.0	1.9	147.07	712.0	858.5	1,720.6	1,704.8	15.79	108.976	
4,600.0	4,477.6	4,500.0	4,499.5	19.5	1.9	147.45	711.7	857.1	1,737.8	1,721.7	16.07	108.161	
4,626.0	4,502.4	4,520.8	4,520.3	19.6	2.0	147.57	711.7	856.8	1,744.0	1,727.9	16.17	107.866	
4,700.0	4,572.9	4,579.5	4,579.0	20.1	2.0	147.88	711.5	855.9	1,762.2	1,745.7	16.46	107.076	
4,724.4	4,596.2	4,600.0	4,599.4	20.3	2.0	147.99	711.5	855.7	1,768.3	1,751.7	16.55	106.835	
4,800.0	4,668.3	4,658.0	4,657.5	20.7	2.0	148.31	711.2	855.5	1,787.6	1,770.7	16.84	106.178	
4,822.8	4,690.0	4,675.8	4,675.3	20.9	2.0	148.40	711.1	855.5	1,793.5	1,776.6	16.92	105.996	
4,900.0	4,763.6	4,743.8	4,743.2	21.4	2.0	148.77	710.7	855.9	1,813.9	1,796.7	17.20	105.470	
4,921.2	4,783.8	4,764.0	4,763.4	21.5	2.0	148.88	710.5	856.0	1,819.6	1,802.3	17.27	105.340	
5,000.0	4,858.9	4,842.3	4,841.8	22.0	2.0	149.30	709.9	856.5	1,840.6	1,823.0	17.55	104.893	
5,019.7	4,877.7	4,862.8	4,862.2	22.1	2.0	149.41	709.7	856.6	1,845.8	1,828.2	17.61	104.787	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,954.2	4,942.3	4,941.8	22.6	2.0	149.82	709.0	856.8	1,867.0	1,849.1	17.89	104.338		
5,118.1	4,971.5	4,959.6	4,959.0	22.8	2.0	149.91	708.9	856.8	1,871.8	1,853.8	17.96	104.235		
5,171.8	5,022.7	5,010.9	5,010.3	23.1	2.1	150.17	708.5	856.9	1,886.0	1,867.8	18.15	103.936		
5,200.0	5,049.6	5,038.2	5,037.6	23.3	2.1	150.38	708.3	856.9	1,893.3	1,875.1	18.21	103.974		
5,216.5	5,065.4	5,054.3	5,053.7	23.3	2.1	150.49	708.2	856.9	1,897.5	1,879.3	18.24	104.031		
5,300.0	5,145.7	5,135.4	5,134.8	23.7	2.1	151.05	707.4	857.0	1,917.6	1,899.2	18.40	104.243		
5,314.9	5,160.1	5,149.8	5,149.3	23.8	2.1	151.15	707.3	857.0	1,920.9	1,902.5	18.42	104.287		
5,400.0	5,242.7	5,235.5	5,234.9	24.1	2.1	151.65	706.3	857.1	1,938.9	1,920.3	18.56	104.465		
5,413.4	5,255.7	5,249.7	5,249.1	24.2	2.1	151.72	706.2	857.1	1,941.5	1,922.9	18.58	104.498		
5,500.0	5,340.5	5,338.5	5,338.0	24.5	2.2	152.16	705.2	856.9	1,956.9	1,938.2	18.71	104.598		
5,511.8	5,352.1	5,350.1	5,349.5	24.5	2.2	152.21	705.1	856.9	1,958.8	1,940.1	18.72	104.612		
5,600.0	5,439.0	5,439.4	5,438.8	24.8	2.2	152.56	704.2	856.6	1,971.8	1,953.0	18.85	104.627		
5,610.2	5,449.1	5,450.2	5,449.6	24.8	2.2	152.60	704.1	856.5	1,973.2	1,954.3	18.86	104.630		
5,700.0	5,538.0	5,544.4	5,543.8	25.1	2.2	152.89	703.3	855.9	1,983.5	1,964.5	18.97	104.537		
5,708.6	5,546.6	5,553.4	5,552.8	25.1	2.2	152.91	703.2	855.8	1,984.3	1,965.3	18.98	104.528		
5,800.0	5,637.4	5,645.4	5,644.8	25.3	2.3	153.12	702.5	855.0	1,991.8	1,972.7	19.09	104.317		
5,807.1	5,644.5	5,652.3	5,651.7	25.3	2.3	153.13	702.4	854.9	1,992.3	1,973.2	19.10	104.301		
5,900.0	5,737.2	5,745.4	5,744.8	25.5	2.3	153.27	701.9	854.1	1,997.1	1,977.9	19.21	103.969		
5,905.5	5,742.6	5,751.1	5,750.5	25.5	2.3	153.28	701.9	854.0	1,997.3	1,978.1	19.21	103.949		
6,000.0	5,837.1	5,846.0	5,845.4	25.6	2.3	153.34	701.4	853.1	1,999.2	1,979.9	19.32	103.488		
6,003.9	5,841.0	5,849.9	5,849.2	25.6	2.3	153.34	701.4	853.0	1,999.2	1,979.9	19.32	103.468		
6,051.8	5,888.9	5,896.8	5,896.2	25.7	2.3	78.23	701.1	852.6	1,999.1	1,973.2	25.92	77.121		
6,081.8	5,918.9	5,926.9	5,926.3	25.7	2.3	78.23	700.9	852.3	1,998.8	1,972.8	25.96	76.994		
6,100.0	5,937.1	5,945.2	5,944.6	25.7	2.3	-11.77	700.7	852.2	1,998.4	1,979.0	19.41	102.968		
6,102.3	5,939.4	5,947.6	5,947.0	25.7	2.3	-11.77	700.7	852.2	1,998.3	1,978.9	19.41	102.976		
6,150.0	5,987.0	5,995.4	5,994.8	25.7	2.4	-11.84	700.3	851.7	1,994.9	1,975.5	19.37	102.998		
6,200.0	6,036.5	6,048.0	6,047.4	25.7	2.4	-11.98	699.9	851.2	1,988.0	1,968.7	19.34	102.788		
6,200.8	6,037.3	6,048.8	6,048.2	25.7	2.4	-11.99	699.9	851.2	1,987.9	1,968.5	19.34	102.784		
6,250.0	6,085.5	6,100.3	6,099.6	25.7	2.4	-12.21	699.4	850.6	1,977.7	1,958.3	19.32	102.373		
6,299.2	6,133.0	6,148.4	6,147.8	25.6	2.4	-12.53	698.9	850.1	1,964.2	1,944.9	19.29	101.814		
6,300.0	6,133.7	6,149.2	6,148.6	25.6	2.4	-12.53	698.9	850.1	1,964.0	1,944.7	19.29	101.803		
6,350.0	6,180.9	6,197.1	6,196.4	25.5	2.4	-12.94	698.2	849.5	1,947.0	1,927.7	19.26	101.099		
6,397.6	6,224.6	6,239.9	6,239.3	25.4	2.4	-13.43	697.6	849.0	1,927.9	1,908.7	19.22	100.321		
6,400.0	6,226.7	6,242.0	6,241.4	25.4	2.4	-13.46	697.6	849.0	1,926.9	1,907.6	19.22	100.277		
6,450.0	6,271.1	6,285.4	6,284.7	25.2	2.5	-14.10	696.9	848.5	1,903.7	1,884.5	19.17	99.308		
6,496.0	6,310.4	6,324.3	6,323.7	25.1	2.5	-14.82	696.3	848.1	1,879.8	1,860.7	19.13	98.244		
6,500.0	6,313.7	6,327.6	6,327.0	25.1	2.5	-14.89	696.2	848.0	1,877.6	1,858.5	19.13	98.142		
6,550.0	6,354.4	6,368.2	6,367.6	25.0	2.5	-15.85	695.5	847.6	1,848.7	1,829.6	19.12	96.711		
6,594.5	6,388.9	6,402.6	6,401.9	24.9	2.5	-16.88	694.8	847.3	1,820.8	1,801.7	19.14	95.147		
6,600.0	6,393.0	6,406.9	6,406.2	24.9	2.5	-17.03	694.7	847.2	1,817.2	1,798.1	19.14	94.928		
6,650.0	6,429.3	6,443.8	6,443.1	24.8	2.5	-18.47	694.0	846.8	1,783.2	1,763.9	19.24	92.670		
6,692.9	6,458.5	6,473.5	6,472.8	24.7	2.5	-19.97	693.3	846.5	1,752.1	1,732.7	19.41	90.273		
6,700.0	6,463.1	6,478.2	6,477.5	24.7	2.5	-20.24	693.2	846.5	1,746.8	1,727.3	19.44	89.833		
6,750.0	6,494.3	6,511.1	6,510.3	24.7	2.5	-22.46	692.4	846.1	1,708.2	1,688.4	19.80	86.284		
6,791.3	6,517.9	6,537.9	6,537.2	24.7	2.5	-24.74	691.7	845.8	1,674.9	1,654.6	20.25	82.723		
6,800.0	6,522.6	6,543.2	6,542.5	24.7	2.5	-25.28	691.5	845.7	1,667.7	1,647.3	20.36	81.915		
6,850.0	6,548.0	6,571.8	6,571.0	24.7	2.6	-28.86	690.7	845.3	1,625.4	1,604.2	21.16	76.804		
6,889.7	6,566.0	6,591.8	6,591.0	24.8	2.6	-32.40	690.2	845.0	1,590.7	1,568.7	22.00	72.290		
6,900.0	6,570.4	6,596.5	6,595.8	24.9	2.6	-33.44	690.0	844.9	1,581.6	1,559.3	22.25	71.088		
6,950.0	6,589.5	6,613.0	6,612.2	25.1	2.6	-39.11	689.5	844.6	1,536.5	1,512.9	23.57	65.197		
6,988.2	6,602.0	6,623.1	6,622.3	25.3	2.6	-44.47	689.3	844.4	1,501.4	1,476.6	24.73	60.716		
7,000.0	6,605.4	6,625.9	6,625.1	25.3	2.6	-46.35	689.2	844.4	1,490.4	1,465.3	25.10	59.379		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,618.0	6,636.0	6,635.2	25.6	2.6	-55.50	688.9	844.3	1,443.5	1,416.9	26.68	54.100	
7,086.6	6,625.0	6,641.6	6,640.8	25.9	2.6	-63.47	688.7	844.2	1,408.9	1,381.2	27.69	50.875	
7,100.0	6,627.1	6,643.3	6,642.5	26.0	2.6	-66.64	688.7	844.2	1,396.2	1,368.2	27.99	49.881	
7,150.0	6,632.8	6,647.6	6,646.8	26.5	2.6	-79.24	688.6	844.1	1,348.5	1,319.8	28.71	46.964	
7,185.0	6,634.7	6,648.9	6,648.1	26.8	2.6	-88.31	688.5	844.1	1,315.1	1,286.1	28.95	45.431	
7,200.0	6,635.0	6,649.0	6,648.2	27.0	2.6	-92.10	688.5	844.1	1,300.8	1,271.8	29.02	44.824	
7,215.9	6,635.0	6,648.8	6,648.0	27.1	2.6	-96.01	688.5	844.1	1,285.7	1,256.6	29.10	44.179	
7,283.4	6,634.1	6,647.3	6,646.5	27.9	2.6	-95.80	688.6	844.1	1,221.6	1,191.7	29.94	40.808	
7,300.0	6,633.9	6,646.9	6,646.2	28.1	2.6	-95.75	688.6	844.1	1,206.0	1,175.8	30.14	40.012	
7,381.9	6,632.9	6,645.1	6,644.3	29.3	2.6	-95.48	688.6	844.1	1,129.0	1,097.7	31.32	36.051	
7,400.0	6,632.6	6,644.7	6,643.9	29.5	2.6	-95.42	688.6	844.1	1,112.0	1,080.4	31.58	35.217	
7,480.3	6,631.6	6,642.9	6,642.1	30.8	2.6	-95.16	688.7	844.2	1,037.4	1,004.5	32.88	31.550	
7,500.0	6,631.4	6,642.4	6,641.6	31.1	2.6	-95.10	688.7	844.2	1,019.2	986.0	33.20	30.698	
7,578.7	6,630.4	6,640.6	6,639.8	32.5	2.6	-94.83	688.8	844.2	947.2	912.6	34.61	27.368	
7,600.0	6,630.1	6,640.1	6,639.3	32.9	2.6	-94.76	688.8	844.2	928.0	893.0	34.99	26.520	
7,677.1	6,629.1	6,638.3	6,637.5	34.3	2.6	-94.50	688.8	844.2	858.8	822.4	36.48	23.545	
7,700.0	6,628.8	6,637.7	6,636.9	34.8	2.6	-94.42	688.8	844.2	838.6	801.7	36.92	22.717	
7,775.6	6,627.8	6,635.9	6,635.1	36.3	2.6	-94.16	688.9	844.3	772.9	734.4	38.46	20.096	
7,800.0	6,627.5	6,635.3	6,634.5	36.8	2.6	-94.07	688.9	844.3	752.0	713.1	38.96	19.303	
7,874.0	6,626.6	6,633.5	6,632.7	38.4	2.6	-93.81	689.0	844.3	690.3	649.7	40.54	17.025	
7,900.0	6,626.3	6,632.8	6,632.0	38.9	2.6	-93.71	689.0	844.3	669.1	628.0	41.10	16.281	
7,972.4	6,625.3	6,631.0	6,630.2	40.5	2.6	-93.45	689.0	844.3	612.3	569.6	42.71	14.337	
8,000.0	6,625.0	6,630.3	6,629.5	41.1	2.6	-93.35	689.0	844.3	591.6	548.2	43.32	13.655	
8,070.8	6,624.1	6,628.5	6,627.7	42.7	2.6	-93.09	689.1	844.4	541.1	496.1	44.95	12.038	
8,100.0	6,623.7	6,627.7	6,626.9	43.4	2.6	-92.98	689.1	844.4	521.7	476.0	45.61	11.436	
8,169.3	6,622.8	6,625.9	6,625.1	45.0	2.6	-92.72	689.2	844.4	479.5	432.3	47.24	10.149	
8,200.0	6,622.4	6,625.1	6,624.3	45.7	2.6	-92.60	689.2	844.4	462.9	414.9	47.97	9.650	
8,267.7	6,621.6	6,623.3	6,622.5	47.4	2.6	-92.34	689.2	844.4	431.8	382.2	49.59	8.707	
8,300.0	6,621.1	6,622.4	6,621.6	48.1	2.6	-92.21	689.3	844.5	420.0	369.7	50.37	8.339	
8,366.1	6,620.3	6,620.6	6,619.8	49.7	2.6	-91.95	689.3	844.5	403.0	351.0	51.99	7.751	
8,400.0	6,619.9	6,619.7	6,618.9	50.6	2.6	-91.81	689.4	844.5	398.2	345.4	52.82	7.539	
8,439.4	6,619.4	6,618.6	6,617.8	51.5	2.6	-91.66	689.4	844.5	396.2	342.5	53.80	7.366 CC, ES	
8,464.5	6,619.0	6,617.9	6,617.1	52.2	2.6	-91.55	689.4	844.5	397.0	342.6	54.42	7.296	
8,500.0	6,618.6	6,616.9	6,616.1	53.0	2.6	-91.41	689.4	844.5	400.9	345.6	55.30	7.248 SF	
8,563.0	6,617.8	6,615.1	6,614.3	54.6	2.6	-91.15	689.5	844.6	415.1	358.2	56.89	7.296	
8,600.0	6,617.3	6,614.0	6,613.2	55.5	2.6	-90.99	689.5	844.6	427.5	369.7	57.82	7.395	
8,661.4	6,616.5	6,612.2	6,611.4	57.1	2.6	-90.74	689.6	844.6	454.2	394.8	59.38	7.648	
8,700.0	6,616.0	6,611.1	6,610.3	58.1	2.6	-90.57	689.6	844.6	474.2	413.8	60.36	7.856	
8,759.8	6,615.2	6,609.3	6,608.5	59.6	2.6	-90.31	689.7	844.7	509.5	447.6	61.90	8.232	
8,800.0	6,614.7	6,608.1	6,607.3	60.6	2.6	-90.14	689.7	844.7	535.7	472.7	62.93	8.513	
8,858.2	6,614.0	6,606.3	6,605.5	62.1	2.6	-89.88	689.7	844.7	576.5	512.0	64.43	8.947	
8,900.0	6,613.4	6,605.0	6,604.3	63.2	2.6	-89.70	689.8	844.7	607.4	541.9	65.51	9.272	
8,956.7	6,612.7	6,603.3	6,602.5	64.7	2.6	-89.44	689.8	844.8	651.4	584.4	66.99	9.725	
9,000.0	6,612.2	6,601.9	6,601.1	65.8	2.6	-89.24	689.9	844.8	686.3	618.2	68.12	10.076	
9,055.1	6,611.5	6,600.1	6,599.4	67.3	2.6	-88.99	689.9	844.8	732.0	662.4	69.56	10.523	
9,100.0	6,610.9	6,600.0	6,599.2	68.4	2.6	-88.97	689.9	844.8	770.1	699.4	70.73	10.887	
9,153.5	6,610.2	6,597.2	6,596.4	69.8	2.6	-88.57	690.0	844.9	816.4	744.3	72.14	11.317	
9,200.0	6,609.6	6,595.8	6,595.1	71.1	2.6	-88.37	690.1	844.9	857.3	784.0	73.36	11.687	
9,251.9	6,608.9	6,594.3	6,593.6	72.4	2.6	-88.15	690.1	844.9	903.7	829.0	74.73	12.093	
9,300.0	6,608.3	6,592.9	6,592.2	73.7	2.6	-87.95	690.1	844.9	947.1	871.1	76.00	12.462	
9,350.4	6,607.7	6,591.5	6,590.7	75.0	2.6	-87.75	690.2	845.0	993.1	915.7	77.33	12.842	
9,400.0	6,607.0	6,590.1	6,589.3	76.4	2.6	-87.54	690.2	845.0	1,038.7	960.1	78.64	13.208	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,606.4	6,588.7	6,587.9	77.7	2.6	-87.34	690.3	845.0	1,084.0	1,004.0	79.94	13.560		
9,500.0	6,605.7	6,587.3	6,586.5	79.0	2.6	-87.13	690.3	845.0	1,131.8	1,050.5	81.30	13.921		
9,547.2	6,605.1	6,585.9	6,585.2	80.3	2.6	-86.94	690.3	845.1	1,176.1	1,093.5	82.55	14.247		
9,600.0	6,604.5	6,584.5	6,583.7	81.7	2.6	-86.73	690.4	845.1	1,225.9	1,141.9	83.96	14.602		
9,645.6	6,603.9	6,583.2	6,582.4	82.9	2.6	-86.55	690.4	845.1	1,269.2	1,184.0	85.17	14.901		
9,700.0	6,603.2	6,581.7	6,580.9	84.4	2.6	-86.34	690.5	845.1	1,320.9	1,234.3	86.62	15.249		
9,744.1	6,602.6	6,580.5	6,579.7	85.6	2.6	-86.16	690.5	845.2	1,363.0	1,275.2	87.79	15.525		
9,800.0	6,601.9	6,579.0	6,578.2	87.1	2.6	-85.95	690.5	845.2	1,416.6	1,327.3	89.28	15.866		
9,842.5	6,601.3	6,577.8	6,577.1	88.2	2.6	-85.78	690.6	845.2	1,457.4	1,367.0	90.42	16.118		
9,900.0	6,600.6	6,576.3	6,575.5	89.8	2.6	-85.56	690.6	845.2	1,512.8	1,420.8	91.95	16.452		
9,940.9	6,600.1	6,575.2	6,574.5	90.9	2.6	-85.41	690.6	845.2	1,552.3	1,459.2	93.05	16.683		
10,000.0	6,599.3	6,573.7	6,572.9	92.5	2.6	-85.18	690.7	845.3	1,609.5	1,514.8	94.62	17.009		
10,039.3	6,598.8	6,572.6	6,571.9	93.5	2.6	-85.04	690.7	845.3	1,647.6	1,551.9	95.67	17.221		
10,100.0	6,598.0	6,571.0	6,570.3	95.2	2.6	-84.81	690.8	845.3	1,706.5	1,609.2	97.29	17.540		
10,137.8	6,597.5	6,570.1	6,569.3	96.2	2.6	-84.67	690.8	845.3	1,743.3	1,645.0	98.30	17.734		
10,200.0	6,596.7	6,568.4	6,567.7	97.9	2.6	-84.44	690.8	845.3	1,803.9	1,703.9	99.96	18.045		
10,236.2	6,596.3	6,567.5	6,566.8	98.9	2.6	-84.31	690.9	845.4	1,839.2	1,738.3	100.93	18.222		
10,300.0	6,595.4	6,565.9	6,565.1	100.6	2.6	-84.08	690.9	845.4	1,901.5	1,798.9	102.63	18.527		
10,334.6	6,595.0	6,565.0	6,564.3	101.6	2.6	-83.95	690.9	845.4	1,935.4	1,831.8	103.56	18.689		
10,400.0	6,594.2	6,563.4	6,562.6	103.4	2.6	-83.72	691.0	845.4	1,999.4	1,894.1	105.30	18.987		
10,433.0	6,593.7	6,562.6	6,561.8	104.3	2.6	-83.60	691.0	845.4	2,031.8	1,925.6	106.19	19.134		
10,500.0	6,592.9	6,560.9	6,560.1	106.1	2.6	-83.36	691.1	845.5	2,097.5	1,989.5	107.97	19.426		
10,531.5	6,592.5	6,560.1	6,559.4	106.9	2.6	-83.25	691.1	845.5	2,128.4	2,019.6	108.81	19.560		
10,600.0	6,591.6	6,558.4	6,557.7	108.8	2.6	-83.01	691.1	845.5	2,195.7	2,085.1	110.64	19.846		
10,629.9	6,591.2	6,557.7	6,557.0	109.6	2.6	-82.91	691.1	845.5	2,225.1	2,113.7	111.43	19.968		
10,700.0	6,590.3	6,556.0	6,555.3	111.6	2.6	-82.67	691.2	845.5	2,294.1	2,180.8	113.30	20.248		
10,728.3	6,589.9	6,555.3	6,554.6	112.3	2.6	-82.57	691.2	845.5	2,322.0	2,208.0	114.06	20.359		
10,800.0	6,589.0	6,553.6	6,552.9	114.3	2.6	-82.33	691.3	845.6	2,392.6	2,276.7	115.96	20.633		
10,826.7	6,588.7	6,553.0	6,552.2	115.0	2.6	-82.24	691.3	845.6	2,419.0	2,302.3	116.67	20.733		
10,900.0	6,587.7	6,551.2	6,550.5	117.1	2.6	-82.00	691.3	845.6	2,491.3	2,372.7	118.62	21.002		
10,925.2	6,587.4	6,550.6	6,549.9	117.7	2.6	-81.91	691.3	845.6	2,516.1	2,396.8	119.29	21.093		
11,000.0	6,586.4	6,548.9	6,548.1	119.8	2.6	-81.67	691.4	845.6	2,590.0	2,468.7	121.27	21.357		
11,023.6	6,586.1	6,548.3	6,547.6	120.4	2.6	-81.59	691.4	845.6	2,613.3	2,491.4	121.90	21.438		
11,100.0	6,585.1	6,546.6	6,545.8	122.6	2.6	-81.34	691.4	845.7	2,688.8	2,564.9	123.92	21.697		
11,122.0	6,584.8	6,546.1	6,545.3	123.2	2.6	-81.27	691.5	845.7	2,710.6	2,586.1	124.51	21.771		
11,200.0	6,583.8	6,544.3	6,543.5	125.3	2.6	-81.02	691.5	845.7	2,787.8	2,661.2	126.57	22.025		
11,220.4	6,583.6	6,543.8	6,543.1	125.9	2.5	-80.95	691.5	845.7	2,808.0	2,680.9	127.11	22.091		
11,300.0	6,582.5	6,542.0	6,541.3	128.1	2.5	-80.70	691.6	845.7	2,886.7	2,757.5	129.21	22.341		
11,318.9	6,582.3	6,541.6	6,540.9	128.6	2.5	-80.64	691.6	845.7	2,905.4	2,775.7	129.71	22.399		
11,400.0	6,581.2	6,539.8	6,539.1	130.8	2.5	-80.39	691.6	845.8	2,985.8	2,853.9	131.85	22.645		
11,417.3	6,581.0	6,539.4	6,538.7	131.3	2.5	-80.34	691.6	845.8	3,002.9	2,870.6	132.31	22.696		
11,500.0	6,580.0	6,537.6	6,536.8	133.6	2.5	-80.08	691.7	845.8	3,084.9	2,950.4	134.49	22.938		
11,515.7	6,579.7	6,537.2	6,536.5	134.0	2.5	-80.03	691.7	845.8	3,100.5	2,965.6	134.90	22.983		
11,600.0	6,578.7	6,535.4	6,534.7	136.3	2.5	-79.78	691.7	845.8	3,184.1	3,046.9	137.12	23.221		
11,614.1	6,578.5	6,535.1	6,534.4	136.7	2.5	-79.73	691.7	845.8	3,198.1	3,060.6	137.49	23.261		
11,700.0	6,577.4	6,533.2	6,532.5	139.1	2.5	-79.48	691.8	845.8	3,283.3	3,143.5	139.74	23.495		
11,712.6	6,577.2	6,533.0	6,532.2	139.5	2.5	-79.44	691.8	845.8	3,295.8	3,155.7	140.07	23.529		
11,800.0	6,576.1	6,531.1	6,530.4	141.9	2.5	-79.18	691.9	845.9	3,382.5	3,240.2	142.36	23.760		
11,811.0	6,575.9	6,530.9	6,530.1	142.2	2.5	-79.15	691.9	845.9	3,393.5	3,250.8	142.65	23.789		
11,882.7	6,575.0	6,529.4	6,528.6	144.2	2.5	-78.94	691.9	845.9	3,464.6	3,320.1	144.52	23.973		
11,883.5	6,575.0	6,529.3	6,528.6	144.2	2.5	-78.94	691.9	845.9	3,465.4	3,320.9	144.54	23.976		

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-INC													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	55.16	1,216.5	1,747.5	2,129.3					
98.4	98.4	90.4	90.4	0.1	1.1	55.16	1,216.5	1,747.5	2,129.3	2,128.0	1.24	1,717.573		
100.0	100.0	92.0	92.0	0.1	1.2	55.16	1,216.5	1,747.5	2,129.3	2,128.0	1.26	1,688.038		
196.8	196.8	188.8	188.8	0.3	3.3	55.16	1,216.5	1,747.5	2,129.3	2,125.7	3.60	591.173		
200.0	200.0	192.0	192.0	0.3	3.4	55.16	1,216.5	1,747.5	2,129.3	2,125.6	3.68	578.524		
295.3	295.3	287.3	287.3	0.5	5.4	55.16	1,216.5	1,747.5	2,129.3	2,123.4	5.89	361.541		
300.0	300.0	292.0	292.0	0.5	5.5	55.16	1,216.5	1,747.5	2,129.3	2,123.3	6.00	354.985		
393.7	393.7	385.7	385.7	0.8	7.4	55.16	1,216.5	1,747.5	2,129.3	2,121.1	8.12	262.069		
400.0	400.0	392.0	392.0	0.8	7.5	55.16	1,216.5	1,747.5	2,129.3	2,121.0	8.27	257.543		
492.1	492.1	484.1	484.1	1.0	9.4	55.16	1,216.5	1,747.5	2,129.3	2,118.9	10.34	205.828		
500.0	500.0	492.0	492.0	1.0	9.5	55.16	1,216.5	1,747.5	2,129.3	2,118.7	10.52	202.357		
590.5	590.5	582.5	582.5	1.2	11.4	55.16	1,216.5	1,747.5	2,129.3	2,116.7	12.56	169.555		
600.0	600.0	592.0	592.0	1.2	11.5	55.16	1,216.5	1,747.5	2,129.3	2,116.5	12.77	166.735		
689.0	689.0	681.0	681.0	1.4	13.3	55.16	1,216.5	1,747.5	2,129.3	2,114.5	14.77	144.189		
700.0	700.0	692.0	692.0	1.4	13.6	55.16	1,216.5	1,747.5	2,129.3	2,114.2	15.01	141.813		
787.4	787.4	779.4	779.4	1.6	15.3	55.16	1,216.5	1,747.5	2,129.3	2,112.3	16.97	125.441		
800.0	800.0	792.0	792.0	1.7	15.6	55.16	1,216.5	1,747.5	2,129.3	2,112.0	17.26	123.388		
885.8	885.8	877.8	877.8	1.9	17.3	55.16	1,216.5	1,747.5	2,129.3	2,110.1	19.18	111.016		
900.0	900.0	892.0	892.0	1.9	17.6	55.16	1,216.5	1,747.5	2,129.3	2,109.8	19.50	109.208		
984.2	984.2	976.2	976.2	2.1	19.3	55.16	1,216.5	1,747.5	2,129.3	2,107.9	21.38	99.572		
1,000.0	1,000.0	992.0	992.0	2.1	19.6	55.16	1,216.5	1,747.5	2,129.3	2,107.5	21.74	97.956		
1,082.7	1,082.7	1,074.7	1,074.7	2.3	21.3	55.16	1,216.5	1,747.5	2,129.3	2,105.7	23.59	90.269		
1,100.0	1,100.0	1,092.0	1,092.0	2.3	21.6	55.16	1,216.5	1,747.5	2,129.3	2,105.3	23.98	88.809		
1,181.1	1,181.1	1,173.1	1,173.1	2.5	23.3	55.16	1,216.5	1,747.5	2,129.3	2,103.5	25.79	82.558		
1,200.0	1,200.0	1,192.0	1,192.0	2.6	23.6	55.16	1,216.5	1,747.5	2,129.3	2,103.0	26.21	81.226		
1,279.5	1,279.5	1,271.5	1,271.5	2.7	25.2	55.16	1,216.5	1,747.5	2,129.3	2,101.3	27.99	76.062		
1,300.0	1,300.0	1,292.0	1,292.0	2.8	25.7	55.16	1,216.5	1,747.5	2,129.3	2,100.8	28.45	74.837		
1,377.9	1,377.9	1,369.9	1,369.9	3.0	27.2	55.16	1,216.5	1,747.5	2,129.3	2,099.1	30.20	70.514		
1,400.0	1,400.0	1,392.0	1,392.0	3.0	27.7	55.16	1,216.5	1,747.5	2,129.3	2,098.6	30.69	69.381		
1,476.4	1,476.4	1,468.4	1,468.4	3.2	29.2	130.29	1,216.5	1,747.5	2,129.9	2,097.5	32.39	65.767		
1,500.0	1,500.0	1,492.0	1,492.0	3.2	29.7	130.30	1,216.5	1,747.5	2,130.4	2,097.5	32.91	64.737		
1,574.8	1,574.7	1,566.7	1,566.7	3.4	31.2	130.34	1,216.5	1,747.5	2,132.7	2,098.2	34.55	61.730		
1,600.0	1,599.8	1,591.8	1,591.8	3.4	31.7	130.36	1,216.5	1,747.5	2,133.8	2,098.7	35.10	60.794		
1,673.2	1,672.8	1,664.8	1,664.8	3.6	33.2	130.42	1,216.5	1,747.5	2,137.7	2,101.0	36.69	58.263		
1,700.0	1,699.5	1,691.5	1,691.5	3.7	33.7	130.45	1,216.5	1,747.5	2,139.4	2,102.2	37.27	57.406		
1,771.6	1,770.6	1,762.6	1,762.6	3.8	35.1	130.53	1,216.5	1,747.5	2,144.9	2,106.1	38.81	55.266		
1,800.0	1,798.7	1,790.7	1,790.7	3.9	35.7	130.57	1,216.5	1,747.5	2,147.4	2,108.0	39.42	54.480		
1,870.1	1,868.0	1,860.0	1,860.0	4.1	37.1	130.68	1,216.5	1,747.5	2,154.3	2,113.4	40.91	52.662		
1,900.0	1,897.5	1,889.5	1,889.5	4.2	37.7	130.73	1,216.5	1,747.5	2,157.7	2,116.1	41.54	51.942		
1,968.5	1,964.8	1,956.8	1,956.8	4.4	39.0	130.85	1,216.5	1,747.5	2,166.0	2,123.1	42.98	50.393		
2,000.0	1,995.6	1,987.6	1,987.6	4.5	39.7	130.92	1,216.5	1,747.5	2,170.3	2,126.6	43.64	49.731		
2,066.9	2,060.9	2,052.9	2,052.9	4.7	41.0	131.06	1,216.5	1,747.5	2,180.0	2,135.0	45.03	48.407		
2,100.0	2,093.1	2,085.1	2,085.1	4.8	41.6	131.13	1,216.5	1,747.5	2,185.2	2,139.5	45.72	47.800		
2,165.3	2,156.3	2,148.3	2,148.3	5.1	42.9	131.28	1,216.5	1,747.5	2,196.3	2,149.3	47.06	46.667		
2,200.0	2,189.6	2,181.6	2,181.6	5.2	43.6	131.36	1,216.5	1,747.5	2,202.6	2,154.9	47.77	46.110		
2,263.8	2,250.7	2,242.7	2,242.7	5.5	44.8	131.52	1,216.5	1,747.5	2,215.0	2,165.9	49.07	45.142		
2,280.0	2,266.2	2,258.2	2,258.2	5.6	45.1	131.56	1,216.5	1,747.5	2,218.3	2,168.9	49.39	44.910		
2,300.0	2,285.3	2,277.3	2,277.3	5.7	45.5	131.67	1,216.5	1,747.5	2,222.4	2,172.6	49.84	44.592		
2,362.2	2,344.6	2,336.6	2,336.6	6.0	46.7	132.02	1,216.5	1,747.5	2,235.3	2,184.1	51.23	43.635		
2,400.0	2,380.6	2,372.6	2,372.6	6.2	47.4	132.23	1,216.5	1,747.5	2,243.2	2,191.1	52.08	43.074		
2,460.6	2,438.4	2,430.4	2,430.4	6.5	48.6	132.57	1,216.5	1,747.5	2,255.9	2,202.4	53.44	42.212		
2,500.0	2,475.9	2,467.9	2,467.9	6.7	49.3	132.79	1,216.5	1,747.5	2,264.2	2,209.8	54.33	41.676		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,524.2	2,524.2	7.0	50.4	133.11	1,216.5	1,747.5	2,276.6	2,221.0	55.66	40.901	
2,600.0	2,571.2	2,563.2	2,563.2	7.2	51.2	133.33	1,216.5	1,747.5	2,285.3	2,228.7	56.59	40.386	
2,657.5	2,626.0	2,618.0	2,618.0	7.5	52.3	133.64	1,216.5	1,747.5	2,297.6	2,239.7	57.89	39.689	
2,700.0	2,666.6	2,658.6	2,658.6	7.8	53.2	133.86	1,216.5	1,747.5	2,306.7	2,247.8	58.85	39.194	
2,755.9	2,719.8	2,711.8	2,711.8	8.1	54.2	134.16	1,216.5	1,747.5	2,318.7	2,258.6	60.12	38.567	
2,800.0	2,761.9	2,753.9	2,753.9	8.3	55.1	134.39	1,216.5	1,747.5	2,328.3	2,267.1	61.12	38.092	
2,854.3	2,813.7	2,805.7	2,805.7	8.7	56.1	134.67	1,216.5	1,747.5	2,340.1	2,277.7	62.36	37.527	
2,900.0	2,857.2	2,849.2	2,849.2	8.9	57.0	134.90	1,216.5	1,747.5	2,350.0	2,286.6	63.39	37.070	
2,952.7	2,907.5	2,899.5	2,899.5	9.2	58.0	135.17	1,216.5	1,747.5	2,361.6	2,297.0	64.59	36.560	
3,000.0	2,952.5	2,944.5	2,944.5	9.5	58.9	135.41	1,216.5	1,747.5	2,372.0	2,306.3	65.67	36.121	
3,051.2	3,001.3	2,993.3	2,993.3	9.8	59.9	135.66	1,216.5	1,747.5	2,383.3	2,316.4	66.83	35.661	
3,100.0	3,047.8	3,039.8	3,039.8	10.1	60.8	135.90	1,216.5	1,747.5	2,394.1	2,326.1	67.94	35.239	
3,149.6	3,095.1	3,087.1	3,087.1	10.4	61.8	136.15	1,216.5	1,747.5	2,405.1	2,336.1	69.07	34.823	
3,200.0	3,143.2	3,135.2	3,135.2	10.7	62.7	136.39	1,216.5	1,747.5	2,416.4	2,346.2	70.21	34.416	
3,248.0	3,188.9	3,180.9	3,180.9	11.0	63.7	136.62	1,216.5	1,747.5	2,427.2	2,355.9	71.30	34.041	
3,300.0	3,238.5	3,230.5	3,230.5	11.3	64.7	136.87	1,216.5	1,747.5	2,438.9	2,366.4	72.48	33.649	
3,346.4	3,282.8	3,274.8	3,274.8	11.6	65.5	137.09	1,216.5	1,747.5	2,449.3	2,375.8	73.53	33.309	
3,400.0	3,333.8	3,325.8	3,325.8	11.9	66.6	137.34	1,216.5	1,747.5	2,461.5	2,386.7	74.75	32.931	
3,444.9	3,376.6	3,368.6	3,368.6	12.2	67.4	137.55	1,216.5	1,747.5	2,471.7	2,395.9	75.76	32.624	
3,500.0	3,429.1	3,421.1	3,421.1	12.6	68.5	137.81	1,216.5	1,747.5	2,484.3	2,407.3	77.01	32.258	
3,543.3	3,470.4	3,462.4	3,462.4	12.8	69.3	138.00	1,216.5	1,747.5	2,494.2	2,416.2	77.99	31.980	
3,600.0	3,524.4	3,516.4	3,516.4	13.2	70.4	138.26	1,216.5	1,747.5	2,507.2	2,428.0	79.27	31.628	
3,641.7	3,564.2	3,556.2	3,556.2	13.4	71.2	138.45	1,216.5	1,747.5	2,516.9	2,436.7	80.22	31.376	
3,700.0	3,619.8	3,611.8	3,611.8	13.8	72.3	138.71	1,216.5	1,747.5	2,530.4	2,448.8	81.53	31.035	
3,740.1	3,658.0	3,650.0	3,650.0	14.0	73.1	138.88	1,216.5	1,747.5	2,539.7	2,457.2	82.44	30.807	
3,800.0	3,715.1	3,707.1	3,707.1	14.4	74.2	139.15	1,216.5	1,747.5	2,553.6	2,469.8	83.79	30.477	
3,838.6	3,751.8	3,743.8	3,743.8	14.7	75.0	139.31	1,216.5	1,747.5	2,562.6	2,478.0	84.66	30.270	
3,900.0	3,810.4	3,802.4	3,802.4	15.0	76.2	139.58	1,216.5	1,747.5	2,577.0	2,491.0	86.04	29.951	
3,937.0	3,845.7	3,837.7	3,837.7	15.3	76.9	139.73	1,216.5	1,747.5	2,585.7	2,498.8	86.87	29.764	
4,000.0	3,905.7	3,897.7	3,897.7	15.7	78.1	140.00	1,216.5	1,747.5	2,600.6	2,512.3	88.29	29.454	
4,035.4	3,939.5	3,931.5	3,931.5	15.9	78.8	140.15	1,216.5	1,747.5	2,608.9	2,519.9	89.09	29.285	
4,100.0	4,001.0	3,993.0	3,993.0	16.3	80.0	140.42	1,216.5	1,747.5	2,624.2	2,533.7	90.54	28.985	
4,133.8	4,033.3	4,025.3	4,025.3	16.5	80.6	140.56	1,216.5	1,747.5	2,632.3	2,541.0	91.30	28.832	
4,200.0	4,096.3	4,088.3	4,088.3	16.9	81.9	140.83	1,216.5	1,747.5	2,648.1	2,555.3	92.78	28.541	
4,232.3	4,127.1	4,119.1	4,119.1	17.1	82.5	140.96	1,216.5	1,747.5	2,655.8	2,562.3	93.50	28.403	
4,300.0	4,191.7	4,183.7	4,183.7	17.6	83.8	141.23	1,216.5	1,747.5	2,672.0	2,577.0	95.02	28.121	
4,330.7	4,220.9	4,212.9	4,212.9	17.8	84.4	141.35	1,216.5	1,747.5	2,679.4	2,583.7	95.71	27.996	
4,400.0	4,287.0	4,279.0	4,279.0	18.2	85.7	141.62	1,216.5	1,747.5	2,696.1	2,598.8	97.25	27.722	
4,429.1	4,314.7	4,306.7	4,306.7	18.4	86.3	141.74	1,216.5	1,747.5	2,703.1	2,605.2	97.91	27.610	
4,500.0	4,382.3	4,374.3	4,374.3	18.8	87.7	142.01	1,216.5	1,747.5	2,720.3	2,620.8	99.49	27.343	
4,527.5	4,408.6	4,400.6	4,400.6	19.0	88.2	142.12	1,216.5	1,747.5	2,727.0	2,626.9	100.10	27.242	
4,600.0	4,477.6	4,469.6	4,469.6	19.5	89.6	142.39	1,216.5	1,747.5	2,744.6	2,642.9	101.72	26.983	
4,626.0	4,502.4	4,494.4	4,494.4	19.6	90.1	142.49	1,216.5	1,747.5	2,750.9	2,648.6	102.29	26.892	
4,700.0	4,572.9	4,564.9	4,564.9	20.1	91.5	142.77	1,216.5	1,747.5	2,769.0	2,665.1	103.94	26.640	
4,724.4	4,596.2	4,588.2	4,588.2	20.3	92.0	142.86	1,216.5	1,747.5	2,775.0	2,670.5	104.48	26.559	
4,800.0	4,668.3	4,660.3	4,660.3	20.7	93.4	143.14	1,216.5	1,747.5	2,793.6	2,687.4	106.16	26.314	
4,822.8	4,690.0	4,682.0	4,682.0	20.9	93.8	143.22	1,216.5	1,747.5	2,799.2	2,692.5	106.67	26.241	
4,900.0	4,763.6	4,755.6	4,755.6	21.4	95.3	143.50	1,216.5	1,747.5	2,818.2	2,709.8	108.38	26.002	
4,921.2	4,783.8	4,775.8	4,775.8	21.5	95.7	143.58	1,216.5	1,747.5	2,823.5	2,714.6	108.85	25.938	
5,000.0	4,858.9	4,850.9	4,850.9	22.0	97.2	143.86	1,216.5	1,747.5	2,843.0	2,732.4	110.60	25.705	
5,019.7	4,877.7	4,869.7	4,869.7	22.1	97.6	143.93	1,216.5	1,747.5	2,847.9	2,736.8	111.04	25.648	
5,100.0	4,954.2	4,946.2	4,946.2	22.6	99.2	144.21	1,216.5	1,747.5	2,867.9	2,755.0	112.81	25.421	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,963.5	4,963.5	22.8	99.5	144.27	1,216.5	1,747.5	2,872.4	2,759.2	113.21	25.371	
5,171.8	5,022.7	5,014.7	5,014.7	23.1	100.5	144.46	1,216.5	1,747.5	2,885.8	2,771.4	114.40	25.225	
5,200.0	5,049.6	5,041.6	5,041.6	23.3	101.1	144.63	1,216.5	1,747.5	2,892.7	2,777.5	115.19	25.112	
5,216.5	5,065.4	5,057.4	5,057.4	23.3	101.4	144.74	1,216.5	1,747.5	2,896.7	2,781.0	115.65	25.048	
5,300.0	5,145.7	5,137.7	5,137.7	23.7	103.0	145.21	1,216.5	1,747.5	2,915.6	2,797.7	117.94	24.721	
5,314.9	5,160.1	5,152.1	5,152.1	23.8	103.3	145.29	1,216.5	1,747.5	2,918.8	2,800.5	118.35	24.663	
5,400.0	5,242.7	5,234.7	5,234.7	24.1	105.0	145.71	1,216.5	1,747.5	2,935.8	2,815.1	120.65	24.333	
5,413.4	5,255.7	5,247.7	5,247.7	24.2	105.2	145.78	1,216.5	1,747.5	2,938.3	2,817.3	121.01	24.282	
5,500.0	5,340.5	5,332.5	5,332.5	24.5	106.9	146.14	1,216.5	1,747.5	2,953.2	2,829.9	123.30	23.951	
5,511.8	5,352.1	5,344.1	5,344.1	24.5	107.2	146.18	1,216.5	1,747.5	2,955.0	2,831.4	123.61	23.906	
5,600.0	5,439.0	5,431.0	5,431.0	24.8	108.9	146.49	1,216.5	1,747.5	2,967.7	2,841.9	125.89	23.574	
5,610.2	5,449.1	5,441.1	5,441.1	24.8	109.1	146.52	1,216.5	1,747.5	2,969.1	2,842.9	126.15	23.537	
5,700.0	5,538.0	5,530.0	5,530.0	25.1	110.9	146.77	1,216.5	1,747.5	2,979.5	2,851.1	128.39	23.206	
5,708.6	5,546.6	5,538.6	5,538.6	25.1	111.1	146.79	1,216.5	1,747.5	2,980.3	2,851.7	128.61	23.174	
5,800.0	5,637.4	5,629.4	5,629.4	25.3	112.9	146.97	1,216.5	1,747.5	2,988.3	2,857.5	130.81	22.845	
5,807.1	5,644.5	5,636.5	5,636.5	25.3	113.0	146.98	1,216.5	1,747.5	2,988.8	2,857.8	130.98	22.819	
5,900.0	5,737.2	5,729.2	5,729.2	25.5	114.9	147.11	1,216.5	1,747.5	2,994.2	2,861.1	133.12	22.492	
5,905.5	5,742.6	5,734.6	5,734.6	25.5	115.0	147.12	1,216.5	1,747.5	2,994.4	2,861.2	133.25	22.473	
6,000.0	5,837.1	5,829.1	5,829.1	25.6	116.9	147.18	1,216.5	1,747.5	2,997.2	2,861.8	135.33	22.147	
6,003.9	5,841.0	5,833.0	5,833.0	25.6	117.0	147.18	1,216.5	1,747.5	2,997.2	2,861.8	135.41	22.134	
6,051.8	5,888.9	5,880.9	5,880.9	25.7	118.0	72.06	1,216.5	1,747.5	2,997.6	2,856.5	141.08	21.248	
6,081.8	5,918.9	5,910.9	5,910.9	25.7	118.6	72.06	1,216.5	1,747.5	2,997.6	2,855.9	141.71	21.152	
6,100.0	5,937.1	5,929.1	5,929.1	25.7	118.9	-17.94	1,216.5	1,747.5	2,997.3	2,860.0	137.38	21.818	
6,102.3	5,939.4	5,931.4	5,931.4	25.7	119.0	-17.95	1,216.5	1,747.5	2,997.3	2,859.9	137.41	21.812	
6,150.0	5,987.0	5,979.0	5,979.0	25.7	119.9	-18.03	1,216.5	1,747.5	2,994.5	2,856.7	137.82	21.727	
6,200.0	6,036.5	6,028.5	6,028.5	25.7	120.9	-18.23	1,216.5	1,747.5	2,988.3	2,850.6	137.68	21.705	
6,200.8	6,037.3	6,029.3	6,029.3	25.7	120.9	-18.23	1,216.5	1,747.5	2,988.2	2,850.5	137.67	21.705	
6,250.0	6,085.5	6,077.5	6,077.5	25.7	121.9	-18.53	1,216.5	1,747.5	2,978.9	2,841.9	136.95	21.752	
6,299.2	6,133.0	6,125.0	6,125.0	25.6	122.9	-18.94	1,216.5	1,747.5	2,966.4	2,830.8	135.67	21.866	
6,300.0	6,133.7	6,125.7	6,125.7	25.6	122.9	-18.95	1,216.5	1,747.5	2,966.2	2,830.6	135.64	21.868	
6,350.0	6,180.9	6,172.9	6,172.9	25.5	123.8	-19.49	1,216.5	1,747.5	2,950.4	2,816.6	133.79	22.053	
6,397.6	6,224.6	6,216.6	6,216.6	25.4	124.7	-20.14	1,216.5	1,747.5	2,932.5	2,800.9	131.56	22.291	
6,400.0	6,226.7	6,218.7	6,218.7	25.4	124.8	-20.18	1,216.5	1,747.5	2,931.5	2,800.1	131.43	22.304	
6,450.0	6,271.1	6,263.1	6,263.1	25.2	125.6	-21.02	1,216.5	1,747.5	2,909.6	2,781.0	128.65	22.617	
6,496.0	6,310.4	6,302.4	6,302.4	25.1	126.4	-21.95	1,216.5	1,747.5	2,887.0	2,761.2	125.77	22.954	
6,500.0	6,313.7	6,305.7	6,305.7	25.1	126.5	-22.04	1,216.5	1,747.5	2,884.9	2,759.4	125.52	22.984	
6,550.0	6,354.4	6,346.4	6,346.4	25.0	127.3	-23.27	1,216.5	1,747.5	2,857.4	2,735.3	122.18	23.387	
6,594.5	6,388.9	6,380.9	6,380.9	24.9	128.0	-24.57	1,216.5	1,747.5	2,830.8	2,711.7	119.18	23.752	
6,600.0	6,393.0	6,385.0	6,385.0	24.9	128.1	-24.75	1,216.5	1,747.5	2,827.4	2,708.6	118.82	23.796	
6,650.0	6,429.3	6,421.3	6,421.3	24.8	128.8	-26.52	1,216.5	1,747.5	2,794.9	2,679.3	115.67	24.163	
6,692.9	6,458.5	6,450.5	6,450.5	24.7	129.4	-28.31	1,216.5	1,747.5	2,765.3	2,651.9	113.38	24.390	
6,700.0	6,463.1	6,455.1	6,455.1	24.7	129.5	-28.64	1,216.5	1,747.5	2,760.2	2,647.1	113.05	24.415	
6,750.0	6,494.3	6,486.3	6,486.3	24.7	130.1	-31.18	1,216.5	1,747.5	2,723.4	2,612.0	111.37	24.453	
6,791.3	6,517.9	6,509.9	6,509.9	24.7	130.6	-33.67	1,216.5	1,747.5	2,691.5	2,580.5	111.03	24.242	
6,800.0	6,522.6	6,514.6	6,514.6	24.7	130.7	-34.25	1,216.5	1,747.5	2,684.7	2,573.6	111.10	24.164	
6,850.0	6,548.0	6,540.0	6,540.0	24.7	131.2	-37.95	1,216.5	1,747.5	2,644.3	2,531.6	112.73	23.457	
6,889.7	6,566.0	6,558.0	6,558.0	24.8	131.6	-41.43	1,216.5	1,747.5	2,611.1	2,495.5	115.66	22.577	
6,900.0	6,570.4	6,562.4	6,562.4	24.9	131.7	-42.41	1,216.5	1,747.5	2,602.4	2,485.8	116.66	22.309	
6,950.0	6,589.5	6,581.5	6,581.5	25.1	132.0	-47.78	1,216.5	1,747.5	2,559.3	2,436.3	123.00	20.808	
6,988.2	6,602.0	6,594.0	6,594.0	25.3	132.3	-52.58	1,216.5	1,747.5	2,525.7	2,396.4	129.28	19.536	
7,000.0	6,605.4	6,597.4	6,597.4	25.3	132.4	-54.19	1,216.5	1,747.5	2,515.2	2,383.7	131.41	19.139	
7,050.0	6,618.0	6,610.0	6,610.0	25.6	132.6	-61.68	1,216.5	1,747.5	2,470.2	2,329.3	140.93	17.528	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,625.0	6,617.0	6,617.0	25.9	132.8	-67.81	1,216.5	1,747.5	2,436.9	2,289.2	147.71	16.498	
7,100.0	6,627.1	6,619.1	6,619.1	26.0	132.8	-70.17	1,216.5	1,747.5	2,424.7	2,274.7	149.97	16.168	
7,150.0	6,632.8	6,624.8	6,624.8	26.5	132.9	-79.35	1,216.5	1,747.5	2,378.9	2,222.2	156.70	15.181	
7,185.0	6,634.7	6,626.7	6,626.7	26.8	133.0	-85.94	1,216.5	1,747.5	2,346.7	2,187.4	159.24	14.736	
7,200.0	6,635.0	6,627.0	6,627.0	27.0	133.0	-88.75	1,216.5	1,747.5	2,332.9	2,173.2	159.71	14.607	
7,215.9	6,635.0	6,627.0	6,627.0	27.1	133.0	-91.68	1,216.5	1,747.5	2,318.3	2,158.5	159.81	14.507	
7,283.4	6,634.1	6,626.1	6,626.1	27.9	132.9	-91.63	1,216.5	1,747.5	2,256.5	2,095.9	160.63	14.048	
7,300.0	6,633.9	6,625.9	6,625.9	28.1	132.9	-91.62	1,216.5	1,747.5	2,241.4	2,080.6	160.83	13.937	
7,381.9	6,632.9	6,624.9	6,624.9	29.3	132.9	-91.55	1,216.5	1,747.5	2,167.1	2,005.1	161.99	13.378	
7,400.0	6,632.6	6,624.6	6,624.6	29.5	132.9	-91.54	1,216.5	1,747.5	2,150.7	1,988.5	162.24	13.256	
7,480.3	6,631.6	6,623.6	6,623.6	30.8	132.9	-91.48	1,216.5	1,747.5	2,078.5	1,914.9	163.53	12.710	
7,500.0	6,631.4	6,623.4	6,623.4	31.1	132.9	-91.46	1,216.5	1,747.5	2,060.8	1,897.0	163.85	12.578	
7,578.7	6,630.4	6,622.4	6,622.4	32.5	132.9	-91.40	1,216.5	1,747.5	1,990.8	1,825.5	165.24	12.048	
7,600.0	6,630.1	6,622.1	6,622.1	32.9	132.9	-91.38	1,216.5	1,747.5	1,972.0	1,806.3	165.61	11.907	
7,677.1	6,629.1	6,621.1	6,621.1	34.3	132.8	-91.32	1,216.5	1,747.5	1,904.1	1,737.0	167.08	11.397	
7,700.0	6,628.8	6,620.8	6,620.8	34.8	132.8	-91.30	1,216.5	1,747.5	1,884.2	1,716.7	167.51	11.248	
7,775.6	6,627.8	6,619.8	6,619.8	36.3	132.8	-91.24	1,216.5	1,747.5	1,818.7	1,649.6	169.04	10.759	
7,800.0	6,627.5	6,619.5	6,619.5	36.8	132.8	-91.22	1,216.5	1,747.5	1,797.7	1,628.1	169.53	10.604	
7,874.0	6,626.6	6,618.6	6,618.6	38.4	132.8	-91.17	1,216.5	1,747.5	1,734.6	1,563.5	171.09	10.138	
7,900.0	6,626.3	6,618.3	6,618.3	38.9	132.8	-91.15	1,216.5	1,747.5	1,712.6	1,541.0	171.64	9.978	
7,972.4	6,625.3	6,617.3	6,617.3	40.5	132.8	-91.09	1,216.5	1,747.5	1,652.1	1,478.9	173.23	9.537	
8,000.0	6,625.0	6,617.0	6,617.0	41.1	132.8	-91.07	1,216.5	1,747.5	1,629.3	1,455.5	173.83	9.373	
8,070.8	6,624.1	6,616.1	6,616.1	42.7	132.7	-91.01	1,216.5	1,747.5	1,571.5	1,396.0	175.44	8.957	
8,100.0	6,623.7	6,615.7	6,615.7	43.4	132.7	-90.99	1,216.5	1,747.5	1,548.0	1,371.9	176.10	8.790	
8,169.3	6,622.8	6,614.8	6,614.8	45.0	132.7	-90.93	1,216.5	1,747.5	1,492.9	1,315.2	177.70	8.401	
8,200.0	6,622.4	6,614.4	6,614.4	45.7	132.7	-90.91	1,216.5	1,747.5	1,468.9	1,290.5	178.42	8.233	
8,267.7	6,621.6	6,613.6	6,613.6	47.4	132.7	-90.85	1,216.5	1,747.5	1,416.9	1,236.9	180.02	7.871	
8,300.0	6,621.1	6,613.1	6,613.1	48.1	132.7	-90.83	1,216.5	1,747.5	1,392.6	1,211.8	180.79	7.703	
8,366.1	6,620.3	6,612.3	6,612.3	49.7	132.7	-90.78	1,216.5	1,747.5	1,343.8	1,161.4	182.38	7.368	
8,400.0	6,619.9	6,611.9	6,611.9	50.6	132.7	-90.75	1,216.5	1,747.5	1,319.4	1,136.2	183.20	7.202	
8,464.5	6,619.0	6,611.0	6,611.0	52.2	132.6	-90.70	1,216.5	1,747.5	1,274.1	1,089.3	184.78	6.895	
8,500.0	6,618.6	6,610.6	6,610.6	53.0	132.6	-90.67	1,216.5	1,747.5	1,249.9	1,064.2	185.65	6.733	
8,563.0	6,617.8	6,609.8	6,609.8	54.6	132.6	-90.62	1,216.5	1,747.5	1,208.3	1,021.1	187.21	6.454	
8,600.0	6,617.3	6,609.3	6,609.3	55.5	132.6	-90.59	1,216.5	1,747.5	1,184.8	996.7	188.13	6.298	
8,661.4	6,616.5	6,608.5	6,608.5	57.1	132.6	-90.54	1,216.5	1,747.5	1,147.3	957.6	189.67	6.049	
8,700.0	6,616.0	6,608.0	6,608.0	58.1	132.6	-90.51	1,216.5	1,747.5	1,124.8	934.2	190.64	5.900	
8,759.8	6,615.2	6,607.2	6,607.2	59.6	132.6	-90.46	1,216.5	1,747.5	1,091.8	899.6	192.16	5.682	
8,800.0	6,614.7	6,606.7	6,606.7	60.6	132.6	-90.43	1,216.5	1,747.5	1,070.9	877.7	193.18	5.543	
8,858.2	6,614.0	6,606.0	6,606.0	62.1	132.5	-90.39	1,216.5	1,747.5	1,042.6	847.9	194.67	5.356	
8,900.0	6,613.4	6,605.4	6,605.4	63.2	132.5	-90.35	1,216.5	1,747.5	1,023.8	828.1	195.73	5.231	
8,956.7	6,612.7	6,604.7	6,604.7	64.7	132.5	-90.31	1,216.5	1,747.5	1,000.6	803.4	197.19	5.074	
9,000.0	6,612.2	6,604.2	6,604.2	65.8	132.5	-90.27	1,216.5	1,747.5	984.7	786.4	198.31	4.966	
9,055.1	6,611.5	6,603.5	6,603.5	67.3	132.5	-90.23	1,216.5	1,747.5	966.9	767.2	199.73	4.841	
9,100.0	6,610.9	6,602.9	6,602.9	68.4	132.5	-90.19	1,216.5	1,747.5	954.6	753.7	200.90	4.751	
9,153.5	6,610.2	6,602.2	6,602.2	69.8	132.5	-90.15	1,216.5	1,747.5	942.4	740.1	202.29	4.659	
9,200.0	6,609.6	6,601.6	6,601.6	71.1	132.5	-90.11	1,216.5	1,747.5	934.2	730.7	203.50	4.590	
9,251.9	6,608.9	6,600.9	6,600.9	72.4	132.4	-90.07	1,216.5	1,747.5	927.7	722.8	204.86	4.528	
9,300.0	6,608.3	6,600.3	6,600.3	73.7	132.4	-90.03	1,216.5	1,747.5	924.2	718.1	206.12	4.484	
9,342.6	6,607.8	6,599.8	6,599.8	74.8	132.4	-90.00	1,216.5	1,747.5	923.2	716.0	207.24	4.455 CC	
9,350.4	6,607.7	6,599.7	6,599.7	75.0	132.4	-89.99	1,216.5	1,747.5	923.3	715.8	207.45	4.451 ES	
9,400.0	6,607.0	6,599.0	6,599.0	76.4	132.4	-89.95	1,216.5	1,747.5	925.0	716.2	208.75	4.431	
9,448.8	6,606.4	6,598.4	6,598.4	77.7	132.4	-89.92	1,216.5	1,747.5	929.3	719.3	210.04	4.424 SF	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.7	6,597.7	6,597.7	79.0	132.4	-89.87	1,216.5	1,747.5	936.5	725.1	211.39	4.430	
9,547.2	6,605.1	6,597.1	6,597.1	80.3	132.4	-89.84	1,216.5	1,747.5	945.6	733.0	212.64	4.447	
9,600.0	6,604.5	6,596.5	6,596.5	81.7	132.3	-89.79	1,216.5	1,747.5	958.4	744.4	214.04	4.478	
9,645.6	6,603.9	6,595.9	6,595.9	82.9	132.3	-89.76	1,216.5	1,747.5	971.7	756.4	215.25	4.514	
9,700.0	6,603.2	6,595.2	6,595.2	84.4	132.3	-89.71	1,216.5	1,747.5	990.0	773.3	216.70	4.568	
9,744.1	6,602.6	6,594.6	6,594.6	85.6	132.3	-89.68	1,216.5	1,747.5	1,006.7	788.8	217.87	4.621	
9,800.0	6,601.9	6,593.9	6,593.9	87.1	132.3	-89.63	1,216.5	1,747.5	1,030.3	810.9	219.36	4.697	
9,842.5	6,601.3	6,593.3	6,593.3	88.2	132.3	-89.60	1,216.5	1,747.5	1,049.8	829.3	220.50	4.761	
9,900.0	6,600.6	6,592.6	6,592.6	89.8	132.3	-89.55	1,216.5	1,747.5	1,078.4	856.4	222.04	4.857	
9,940.9	6,600.1	6,592.1	6,592.1	90.9	132.3	-89.52	1,216.5	1,747.5	1,100.1	877.0	223.13	4.930	
10,000.0	6,599.3	6,591.3	6,591.3	92.5	132.2	-89.47	1,216.5	1,747.5	1,133.3	908.6	224.72	5.043	
10,039.3	6,598.8	6,590.8	6,590.8	93.5	132.2	-89.44	1,216.5	1,747.5	1,156.6	930.8	225.77	5.123	
10,100.0	6,598.0	6,590.0	6,590.0	95.2	132.2	-89.39	1,216.5	1,747.5	1,194.1	966.7	227.40	5.251	
10,137.8	6,597.5	6,589.5	6,589.5	96.2	132.2	-89.36	1,216.5	1,747.5	1,218.4	990.0	228.42	5.334	
10,200.0	6,596.7	6,588.7	6,588.7	97.9	132.2	-89.31	1,216.5	1,747.5	1,259.9	1,029.8	230.09	5.476	
10,236.2	6,596.3	6,588.3	6,588.3	98.9	132.2	-89.29	1,216.5	1,747.5	1,284.8	1,053.7	231.06	5.560	
10,300.0	6,595.4	6,587.4	6,587.4	100.6	132.2	-89.23	1,216.5	1,747.5	1,329.9	1,097.2	232.78	5.713	
10,334.6	6,595.0	6,587.0	6,587.0	101.6	132.2	-89.21	1,216.5	1,747.5	1,355.1	1,121.4	233.72	5.798	
10,400.0	6,594.2	6,586.2	6,586.2	103.4	132.1	-89.15	1,216.5	1,747.5	1,403.6	1,168.1	235.48	5.961	
10,433.0	6,593.7	6,585.7	6,585.7	104.3	132.1	-89.13	1,216.5	1,747.5	1,428.7	1,192.3	236.37	6.044	
10,500.0	6,592.9	6,584.9	6,584.9	106.1	132.1	-89.07	1,216.5	1,747.5	1,480.4	1,242.2	238.18	6.215	
10,531.5	6,592.5	6,584.5	6,584.5	106.9	132.1	-89.05	1,216.5	1,747.5	1,505.1	1,266.1	239.03	6.297	
10,600.0	6,591.6	6,583.6	6,583.6	108.8	132.1	-88.99	1,216.5	1,747.5	1,559.8	1,318.9	240.89	6.475	
10,629.9	6,591.2	6,583.2	6,583.2	109.6	132.1	-88.97	1,216.5	1,747.5	1,584.0	1,342.3	241.70	6.554	
10,700.0	6,590.3	6,582.3	6,582.3	111.6	132.1	-88.91	1,216.5	1,747.5	1,641.5	1,397.9	243.60	6.739	
10,728.3	6,589.9	6,581.9	6,581.9	112.3	132.1	-88.89	1,216.5	1,747.5	1,665.0	1,420.6	244.36	6.814	
10,800.0	6,589.0	6,581.0	6,581.0	114.3	132.0	-88.83	1,216.5	1,747.5	1,725.1	1,478.8	246.31	7.004	
10,826.7	6,588.7	6,580.7	6,580.7	115.0	132.0	-88.81	1,216.5	1,747.5	1,747.7	1,500.7	247.03	7.075	
10,900.0	6,587.7	6,579.7	6,579.7	117.1	132.0	-88.75	1,216.5	1,747.5	1,810.3	1,561.3	249.02	7.270	
10,925.2	6,587.4	6,579.4	6,579.4	117.7	132.0	-88.73	1,216.5	1,747.5	1,832.0	1,582.3	249.70	7.337	
11,000.0	6,586.4	6,578.4	6,578.4	119.8	132.0	-88.67	1,216.5	1,747.5	1,897.0	1,645.3	251.74	7.536	
11,023.6	6,586.1	6,578.1	6,578.1	120.4	132.0	-88.65	1,216.5	1,747.5	1,917.7	1,665.3	252.38	7.598	
11,100.0	6,585.1	6,577.1	6,577.1	122.6	132.0	-88.59	1,216.5	1,747.5	1,985.0	1,730.5	254.46	7.801	
11,122.0	6,584.8	6,576.8	6,576.8	123.2	132.0	-88.57	1,216.5	1,747.5	2,004.5	1,749.5	255.05	7.859	
11,200.0	6,583.8	6,575.8	6,575.8	125.3	131.9	-88.51	1,216.5	1,747.5	2,074.0	1,816.8	257.18	8.065	
11,220.4	6,583.6	6,575.6	6,575.6	125.9	131.9	-88.49	1,216.5	1,747.5	2,092.4	1,834.6	257.73	8.118	
11,300.0	6,582.5	6,574.5	6,574.5	128.1	131.9	-88.43	1,216.5	1,747.5	2,164.0	1,904.1	259.90	8.326	
11,318.9	6,582.3	6,574.3	6,574.3	128.6	131.9	-88.42	1,216.5	1,747.5	2,181.1	1,920.7	260.41	8.376	
11,400.0	6,581.2	6,573.2	6,573.2	130.8	131.9	-88.35	1,216.5	1,747.5	2,254.9	1,992.2	262.62	8.586	
11,417.3	6,581.0	6,573.0	6,573.0	131.3	131.9	-88.34	1,216.5	1,747.5	2,270.7	2,007.6	263.09	8.631	
11,500.0	6,580.0	6,572.0	6,572.0	133.6	131.9	-88.27	1,216.5	1,747.5	2,346.4	2,081.1	265.35	8.843	
11,515.7	6,579.7	6,571.7	6,571.7	134.0	131.9	-88.26	1,216.5	1,747.5	2,360.9	2,095.1	265.78	8.883	
11,600.0	6,578.7	6,570.7	6,570.7	136.3	131.8	-88.19	1,216.5	1,747.5	2,438.7	2,170.6	268.07	9.097	
11,614.1	6,578.5	6,570.5	6,570.5	136.7	131.8	-88.18	1,216.5	1,747.5	2,451.8	2,183.3	268.46	9.133	
11,700.0	6,577.4	6,569.4	6,569.4	139.1	131.8	-88.11	1,216.5	1,747.5	2,531.5	2,260.7	270.80	9.348	
11,712.6	6,577.2	6,569.2	6,569.2	139.5	131.8	-88.10	1,216.5	1,747.5	2,543.2	2,272.1	271.14	9.380	
11,800.0	6,576.1	6,568.1	6,568.1	141.9	131.8	-88.03	1,216.5	1,747.5	2,624.9	2,351.4	273.53	9.596	
11,811.0	6,575.9	6,567.9	6,567.9	142.2	131.8	-88.02	1,216.5	1,747.5	2,635.2	2,361.3	273.83	9.623	
11,882.7	6,575.0	6,567.0	6,567.0	144.2	131.8	-87.96	1,216.5	1,747.5	2,702.4	2,426.6	275.79	9.799	
11,883.5	6,575.0	6,567.0	6,567.0	144.2	131.8	-87.96	1,216.5	1,747.5	2,703.2	2,427.4	275.80	9.801	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	90.73	-21.4	1,683.8	1,684.0				
98.4	98.4	86.0	86.0	0.1	0.0	90.73	-21.6	1,683.9	1,684.1	1,684.0	0.10	N/A	
100.0	100.0	87.5	87.5	0.1	0.0	90.73	-21.6	1,683.9	1,684.1	1,684.0	0.10	N/A	
196.8	196.8	183.6	183.6	0.3	0.1	90.74	-21.9	1,684.2	1,684.3	1,683.9	0.39	4,309.918	
200.0	200.0	186.8	186.8	0.3	0.1	90.74	-21.9	1,684.2	1,684.3	1,683.9	0.40	4,203.338	
295.3	295.3	282.1	282.1	0.5	0.2	90.75	-22.1	1,684.4	1,684.6	1,683.8	0.74	2,268.159	
300.0	300.0	286.9	286.9	0.5	0.2	90.75	-22.1	1,684.4	1,684.6	1,683.8	0.76	2,216.546	
393.7	393.7	376.9	376.9	0.8	0.3	90.77	-22.6	1,684.7	1,684.9	1,683.8	1.05	1,597.856	
400.0	400.0	382.9	382.9	0.8	0.3	90.77	-22.7	1,684.7	1,684.9	1,683.8	1.07	1,569.207	
492.1	492.1	473.8	473.8	1.0	0.4	90.80	-23.7	1,685.2	1,685.4	1,684.1	1.35	1,250.338	
500.0	500.0	481.7	481.7	1.0	0.4	90.81	-23.8	1,685.3	1,685.4	1,684.1	1.37	1,229.136	
590.5	590.5	573.2	573.2	1.2	0.4	90.85	-24.9	1,685.7	1,685.9	1,684.3	1.63	1,032.335	
600.0	600.0	582.8	582.8	1.2	0.4	90.85	-25.0	1,685.8	1,686.0	1,684.3	1.66	1,015.466	
689.0	689.0	670.2	670.2	1.4	0.5	90.90	-26.4	1,686.2	1,686.4	1,684.5	1.91	882.565	
700.0	700.0	680.9	680.9	1.4	0.5	90.90	-26.5	1,686.3	1,686.5	1,684.6	1.94	868.558	
787.4	787.4	768.3	768.2	1.6	0.5	90.95	-27.9	1,686.8	1,687.0	1,684.9	2.19	772.070	
800.0	800.0	780.9	780.9	1.7	0.6	90.96	-28.1	1,686.8	1,687.1	1,684.9	2.22	759.925	
885.8	885.8	866.2	866.1	1.9	0.6	91.00	-29.5	1,687.3	1,687.6	1,685.2	2.46	687.089	
900.0	900.0	880.2	880.2	1.9	0.6	91.01	-29.8	1,687.4	1,687.7	1,685.2	2.50	676.418	
984.2	984.2	963.7	963.7	2.1	0.6	91.06	-31.2	1,688.0	1,688.3	1,685.6	2.72	619.594	
1,000.0	1,000.0	979.4	979.3	2.1	0.6	91.07	-31.4	1,688.1	1,688.4	1,685.6	2.77	610.036	
1,082.7	1,082.7	1,062.2	1,062.1	2.3	0.7	91.11	-32.8	1,688.6	1,689.0	1,686.0	2.99	564.510	
1,100.0	1,100.0	1,079.6	1,079.5	2.3	0.7	91.12	-33.0	1,688.7	1,689.1	1,686.1	3.04	555.831	
1,181.1	1,181.1	1,159.2	1,159.1	2.5	0.7	91.16	-34.2	1,689.3	1,689.7	1,686.4	3.26	518.814	
1,200.0	1,200.0	1,177.6	1,177.5	2.6	0.7	91.17	-34.5	1,689.4	1,689.8	1,686.5	3.31	510.913	
1,279.5	1,279.5	1,253.7	1,253.6	2.7	0.8	91.21	-35.6	1,690.1	1,690.5	1,687.0	3.52	480.416	
1,300.0	1,300.0	1,273.1	1,273.0	2.8	0.8	91.22	-35.9	1,690.3	1,690.7	1,687.2	3.57	473.180	
1,377.9	1,377.9	1,348.8	1,348.7	3.0	0.8	91.25	-37.0	1,691.1	1,691.6	1,687.9	3.78	447.544	
1,400.0	1,400.0	1,370.5	1,370.3	3.0	0.8	91.26	-37.3	1,691.4	1,691.9	1,688.1	3.84	440.795	
1,476.4	1,476.4	1,446.3	1,446.2	3.2	0.9	166.42	-38.4	1,692.3	1,693.8	1,689.9	3.96	427.660	
1,500.0	1,500.0	1,469.9	1,469.8	3.2	0.9	166.44	-38.7	1,692.6	1,694.8	1,690.8	4.02	421.506	
1,574.8	1,574.7	1,545.1	1,544.9	3.4	0.9	166.48	-39.8	1,693.5	1,699.3	1,695.0	4.21	403.936	
1,600.0	1,599.8	1,570.5	1,570.3	3.4	0.9	166.50	-40.2	1,693.8	1,701.2	1,696.9	4.27	398.474	
1,673.2	1,672.8	1,647.2	1,647.0	3.6	0.9	166.55	-41.3	1,694.6	1,707.9	1,703.4	4.45	383.448	
1,700.0	1,699.5	1,676.0	1,675.8	3.7	1.0	166.57	-41.7	1,694.9	1,710.7	1,706.2	4.52	378.372	
1,771.6	1,770.6	1,750.6	1,750.4	3.8	1.0	166.63	-42.7	1,695.4	1,719.4	1,714.7	4.70	365.591	
1,800.0	1,798.7	1,779.7	1,779.5	3.9	1.0	166.66	-43.0	1,695.6	1,723.3	1,718.5	4.77	360.939	
1,870.1	1,868.0	1,851.6	1,851.4	4.1	1.0	166.72	-43.8	1,695.9	1,733.9	1,729.0	4.95	349.994	
1,900.0	1,897.5	1,882.3	1,882.1	4.2	1.0	166.75	-44.2	1,696.0	1,739.0	1,733.9	5.03	345.679	
1,968.5	1,964.8	1,953.0	1,952.8	4.4	1.1	166.82	-45.0	1,696.2	1,751.5	1,746.3	5.21	336.271	
2,000.0	1,995.6	1,985.6	1,985.4	4.5	1.1	166.85	-45.3	1,696.2	1,757.8	1,752.5	5.29	332.281	
2,066.9	2,060.9	2,057.1	2,056.9	4.7	1.1	166.92	-45.9	1,696.1	1,772.0	1,766.6	5.47	324.252	
2,100.0	2,093.1	2,092.6	2,092.4	4.8	1.1	166.95	-46.1	1,696.0	1,779.6	1,774.0	5.55	320.665	
2,165.3	2,156.3	2,164.2	2,164.0	5.1	1.1	167.02	-46.3	1,695.5	1,795.2	1,789.5	5.72	313.788	
2,200.0	2,189.6	2,202.2	2,202.0	5.2	1.1	167.06	-46.3	1,695.1	1,804.0	1,798.2	5.81	310.467	
2,263.8	2,250.7	2,271.7	2,271.4	5.5	1.1	167.12	-46.2	1,694.1	1,821.0	1,815.0	5.99	304.227	
2,280.0	2,266.2	2,289.3	2,289.1	5.6	1.1	167.14	-46.1	1,693.8	1,825.5	1,819.5	6.03	302.783	
2,300.0	2,285.3	2,310.0	2,309.8	5.7	1.1	167.18	-46.0	1,693.4	1,831.0	1,825.0	6.08	301.021	
2,362.2	2,344.6	2,371.3	2,371.1	6.0	1.1	167.30	-45.6	1,692.3	1,848.3	1,842.1	6.25	295.854	
2,400.0	2,380.6	2,408.2	2,408.0	6.2	1.1	167.38	-45.4	1,691.6	1,858.8	1,852.4	6.36	292.306	
2,460.6	2,438.4	2,465.6	2,465.3	6.5	1.1	167.49	-45.1	1,690.5	1,875.6	1,869.0	6.53	287.126	
2,500.0	2,475.9	2,502.7	2,502.4	6.7	1.1	167.56	-44.8	1,689.8	1,886.5	1,879.9	6.65	283.850	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,557.1	2,556.8	7.0	1.2	167.66	-44.4	1,688.8	1,903.0	1,896.1	6.82	279.020	
2,600.0	2,571.2	2,594.8	2,594.5	7.2	1.2	167.73	-44.1	1,688.2	1,914.4	1,907.5	6.94	275.796	
2,657.5	2,626.0	2,650.0	2,649.7	7.5	1.2	167.82	-43.7	1,687.3	1,930.5	1,923.4	7.11	271.357	
2,700.0	2,666.6	2,691.0	2,690.7	7.8	1.2	167.90	-43.4	1,686.6	1,942.4	1,935.1	7.24	268.194	
2,755.9	2,719.8	2,742.0	2,741.7	8.1	1.2	167.98	-43.0	1,685.8	1,958.1	1,950.7	7.41	264.139	
2,800.0	2,761.9	2,781.8	2,781.5	8.3	1.2	168.05	-42.7	1,685.2	1,970.5	1,962.9	7.55	261.072	
2,854.3	2,813.7	2,830.7	2,830.4	8.7	1.2	168.13	-42.3	1,684.6	1,985.9	1,978.2	7.72	257.364	
2,900.0	2,857.2	2,871.8	2,871.5	8.9	1.2	168.20	-42.0	1,684.1	1,998.9	1,991.0	7.86	254.363	
2,952.7	2,907.5	2,918.4	2,918.1	9.2	1.2	168.28	-41.7	1,683.6	2,014.0	2,006.0	8.02	250.988	
3,000.0	2,952.5	2,959.1	2,958.7	9.5	1.2	168.35	-41.4	1,683.3	2,027.6	2,019.4	8.17	248.087	
3,051.2	3,001.3	3,000.0	2,999.7	9.8	1.2	168.41	-41.2	1,683.0	2,042.5	2,034.2	8.33	245.063	
3,100.0	3,047.8	3,043.0	3,042.6	10.1	1.2	168.48	-40.9	1,682.9	2,056.8	2,048.3	8.49	242.275	
3,149.6	3,095.1	3,083.6	3,083.3	10.4	1.2	168.55	-40.7	1,682.9	2,071.5	2,062.9	8.65	239.577	
3,200.0	3,143.2	3,123.1	3,122.8	10.7	1.2	168.61	-40.5	1,683.0	2,086.7	2,077.9	8.81	236.922	
3,248.0	3,188.9	3,159.6	3,159.2	11.0	1.2	168.66	-40.2	1,683.3	2,101.3	2,092.3	8.96	234.498	
3,300.0	3,238.5	3,200.0	3,199.7	11.3	1.2	168.72	-39.9	1,683.8	2,117.3	2,108.2	9.13	231.840	
3,346.4	3,282.8	3,237.6	3,237.2	11.6	1.2	168.77	-39.5	1,684.5	2,131.8	2,122.5	9.28	229.599	
3,400.0	3,333.8	3,282.2	3,281.8	11.9	1.2	168.83	-39.0	1,685.3	2,148.7	2,139.2	9.46	227.093	
3,444.9	3,376.6	3,319.0	3,318.7	12.2	1.2	168.88	-38.6	1,686.2	2,162.9	2,153.3	9.61	225.068	
3,500.0	3,429.1	3,363.7	3,363.3	12.6	1.2	168.93	-38.0	1,687.3	2,180.6	2,170.8	9.79	222.700	
3,543.3	3,470.4	3,400.0	3,399.6	12.8	1.2	168.97	-37.6	1,688.3	2,194.6	2,184.7	9.94	220.886	
3,600.0	3,524.4	3,449.8	3,449.3	13.2	1.2	169.03	-36.9	1,689.8	2,213.0	2,202.9	10.12	218.605	
3,641.7	3,564.2	3,487.4	3,486.9	13.4	1.3	169.07	-36.3	1,691.0	2,226.6	2,216.4	10.26	216.963	
3,700.0	3,619.8	3,541.7	3,541.2	13.8	1.3	169.13	-35.5	1,692.8	2,245.7	2,235.2	10.46	214.764	
3,740.1	3,658.0	3,579.6	3,579.1	14.0	1.3	169.17	-34.9	1,694.0	2,258.8	2,248.2	10.59	213.290	
3,800.0	3,715.1	3,635.0	3,634.4	14.4	1.3	169.22	-34.0	1,695.8	2,278.4	2,267.6	10.79	211.165	
3,838.6	3,751.8	3,670.4	3,669.8	14.7	1.3	169.26	-33.4	1,697.0	2,291.0	2,280.1	10.92	209.831	
3,900.0	3,810.4	3,730.2	3,729.6	15.0	1.3	169.32	-32.3	1,699.0	2,311.2	2,300.1	11.12	207.762	
3,937.0	3,845.7	3,768.7	3,768.0	15.3	1.3	169.35	-31.7	1,700.2	2,323.3	2,312.0	11.25	206.532	
4,000.0	3,905.7	3,844.5	3,843.8	15.7	1.3	169.43	-30.5	1,702.4	2,343.6	2,332.2	11.46	204.492	
4,035.4	3,939.5	3,892.6	3,891.9	15.9	1.3	169.48	-29.8	1,703.3	2,354.8	2,343.3	11.58	203.350	
4,100.0	4,001.0	3,964.1	3,963.4	16.3	1.3	169.55	-28.9	1,704.4	2,374.9	2,363.1	11.79	201.367	
4,133.8	4,033.3	4,000.8	4,000.1	16.5	1.3	169.59	-28.5	1,704.9	2,385.4	2,373.5	11.91	200.343	
4,200.0	4,096.3	4,066.8	4,066.1	16.9	1.3	169.66	-27.8	1,705.6	2,405.7	2,393.5	12.13	198.358	
4,232.3	4,127.1	4,099.1	4,098.4	17.1	1.4	169.70	-27.5	1,705.9	2,415.5	2,403.3	12.24	197.409	
4,300.0	4,191.7	4,164.5	4,163.8	17.6	1.4	169.77	-26.9	1,706.4	2,436.2	2,423.8	12.46	195.454	
4,330.7	4,220.9	4,194.2	4,193.4	17.8	1.4	169.80	-26.6	1,706.7	2,445.6	2,433.0	12.57	194.588	
4,400.0	4,287.0	4,263.6	4,262.8	18.2	1.4	169.87	-26.0	1,707.2	2,466.7	2,453.9	12.80	192.670	
4,429.1	4,314.7	4,292.9	4,292.1	18.4	1.4	169.91	-25.7	1,707.4	2,475.6	2,462.7	12.90	191.880	
4,500.0	4,382.3	4,359.9	4,359.2	18.8	1.4	169.98	-25.1	1,707.9	2,497.1	2,483.9	13.14	190.015	
4,527.5	4,408.6	4,385.8	4,385.0	19.0	1.4	170.00	-24.9	1,708.0	2,505.4	2,492.2	13.23	189.307	
4,600.0	4,477.6	4,453.6	4,452.9	19.5	1.4	170.08	-24.4	1,708.5	2,527.5	2,514.0	13.48	187.480	
4,626.0	4,502.4	4,477.9	4,477.2	19.6	1.4	170.10	-24.2	1,708.7	2,535.4	2,521.8	13.57	186.839	
4,700.0	4,572.9	4,543.5	4,542.8	20.1	1.4	170.17	-23.8	1,709.2	2,558.0	2,544.1	13.82	185.061	
4,724.4	4,596.2	4,564.6	4,563.8	20.3	1.4	170.19	-23.7	1,709.4	2,565.4	2,551.5	13.91	184.491	
4,800.0	4,668.3	4,626.8	4,626.0	20.7	1.4	170.26	-23.4	1,710.0	2,588.8	2,574.6	14.16	182.774	
4,822.8	4,690.0	4,644.5	4,643.8	20.9	1.5	170.28	-23.4	1,710.3	2,595.9	2,581.6	14.24	182.269	
4,900.0	4,763.6	4,700.0	4,699.2	21.4	1.5	170.34	-23.3	1,711.2	2,620.2	2,605.6	14.50	180.642	
4,921.2	4,783.8	4,722.8	4,722.0	21.5	1.5	170.37	-23.3	1,711.7	2,626.9	2,612.3	14.58	180.168	
5,000.0	4,858.9	4,789.5	4,788.7	22.0	1.5	170.44	-23.4	1,713.1	2,652.0	2,637.2	14.85	178.546	
5,019.7	4,877.7	4,807.2	4,806.4	22.1	1.5	170.46	-23.5	1,713.5	2,658.3	2,643.4	14.92	178.149	
5,100.0	4,954.2	4,887.7	4,886.9	22.6	1.5	170.56	-23.8	1,715.3	2,684.0	2,668.8	15.20	176.552	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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 Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,118.1	4,971.5	4,906.1	4,905.2	22.8	1.5	170.58	-23.9	1,715.7	2,689.8	2,674.6	15.27	176.200	
5,171.8	5,022.7	4,962.0	4,961.1	23.1	1.5	170.65	-24.3	1,716.8	2,706.9	2,691.4	15.45	175.175	
5,200.0	5,049.6	4,991.4	4,990.6	23.3	1.5	170.71	-24.5	1,717.3	2,715.7	2,700.2	15.52	174.931	
5,216.5	5,065.4	5,009.0	5,008.2	23.3	1.5	170.75	-24.7	1,717.7	2,720.7	2,705.2	15.56	174.835	
5,300.0	5,145.7	5,100.2	5,099.3	23.7	1.6	170.93	-25.7	1,719.0	2,744.5	2,728.8	15.74	174.318	
5,314.9	5,160.1	5,114.9	5,114.0	23.8	1.6	170.96	-25.8	1,719.2	2,748.5	2,732.8	15.77	174.246	
5,400.0	5,242.7	5,198.8	5,197.9	24.1	1.6	171.12	-27.1	1,720.1	2,769.8	2,753.9	15.94	173.810	
5,413.4	5,255.7	5,211.5	5,210.6	24.2	1.6	171.15	-27.3	1,720.3	2,772.9	2,757.0	15.96	173.755	
5,500.0	5,340.5	5,293.9	5,293.0	24.5	1.6	171.29	-28.8	1,721.2	2,791.7	2,775.6	16.10	173.369	
5,511.8	5,352.1	5,305.6	5,304.7	24.5	1.6	171.31	-29.0	1,721.4	2,794.1	2,778.0	16.12	173.327	
5,600.0	5,439.0	5,396.6	5,395.6	24.8	1.6	171.44	-30.7	1,722.4	2,810.2	2,794.0	16.25	172.959	
5,610.2	5,449.1	5,406.6	5,405.7	24.8	1.6	171.45	-30.9	1,722.5	2,811.9	2,795.7	16.26	172.926	
5,700.0	5,538.0	5,493.3	5,492.4	25.1	1.7	171.56	-32.4	1,723.4	2,825.3	2,808.9	16.37	172.572	
5,708.6	5,546.6	5,500.0	5,499.1	25.1	1.7	171.56	-32.5	1,723.5	2,826.5	2,810.1	16.38	172.548	
5,800.0	5,637.4	5,581.6	5,580.7	25.3	1.7	171.64	-33.5	1,724.6	2,837.2	2,820.7	16.48	172.170	
5,807.1	5,644.5	5,587.9	5,586.9	25.3	1.7	171.64	-33.6	1,724.7	2,837.9	2,821.4	16.49	172.145	
5,900.0	5,737.2	5,672.6	5,671.6	25.5	1.7	171.70	-34.5	1,726.2	2,846.0	2,829.4	16.57	171.711	
5,905.5	5,742.6	5,677.6	5,676.7	25.5	1.7	171.70	-34.5	1,726.3	2,846.4	2,829.8	16.58	171.687	
6,000.0	5,837.1	5,759.6	5,758.6	25.6	1.7	171.74	-35.2	1,728.0	2,851.7	2,835.0	16.66	171.191	
6,003.9	5,841.0	5,762.9	5,761.9	25.6	1.7	171.74	-35.3	1,728.1	2,851.9	2,835.2	16.66	171.170	
6,051.8	5,888.9	5,804.5	5,803.5	25.7	1.7	96.62	-35.4	1,729.1	2,853.5	2,826.4	27.10	105.287	
6,081.8	5,918.9	5,836.4	5,835.4	25.7	1.8	96.62	-35.5	1,730.0	2,854.3	2,827.1	27.14	105.182	
6,100.0	5,937.1	5,855.8	5,854.7	25.7	1.8	6.62	-35.6	1,730.5	2,854.5	2,837.8	16.72	170.730	
6,102.3	5,939.4	5,858.3	5,857.2	25.7	1.8	6.62	-35.6	1,730.5	2,854.5	2,837.8	16.71	170.784	
6,150.0	5,987.0	5,908.5	5,907.5	25.7	1.8	6.64	-35.7	1,731.8	2,852.8	2,836.2	16.62	171.683	
6,200.0	6,036.5	5,958.7	5,957.6	25.7	1.8	6.70	-35.8	1,733.0	2,847.6	2,831.0	16.52	172.378	
6,200.8	6,037.3	5,959.5	5,958.4	25.7	1.8	6.70	-35.8	1,733.0	2,847.5	2,830.9	16.52	172.388	
6,250.0	6,085.5	6,008.5	6,007.4	25.7	1.8	6.81	-35.9	1,734.2	2,838.9	2,822.5	16.42	172.931	
6,299.2	6,133.0	6,057.2	6,056.1	25.6	1.8	6.96	-36.2	1,735.4	2,827.1	2,810.8	16.30	173.474	
6,300.0	6,133.7	6,058.0	6,056.9	25.6	1.8	6.96	-36.2	1,735.4	2,826.8	2,810.6	16.29	173.482	
6,350.0	6,180.9	6,105.9	6,104.8	25.5	1.8	7.17	-36.7	1,736.5	2,811.4	2,795.3	16.14	174.150	
6,397.6	6,224.6	6,147.2	6,146.1	25.4	1.8	7.43	-37.5	1,737.4	2,793.8	2,777.8	15.97	174.986	
6,400.0	6,226.7	6,149.3	6,148.1	25.4	1.8	7.44	-37.6	1,737.5	2,792.8	2,776.8	15.96	175.030	
6,450.0	6,271.1	6,191.3	6,190.2	25.2	1.8	7.78	-38.6	1,738.4	2,771.1	2,755.3	15.73	176.137	
6,496.0	6,310.4	6,225.2	6,224.0	25.1	1.9	8.15	-39.6	1,739.2	2,748.4	2,732.9	15.49	177.384	
6,500.0	6,313.7	6,227.9	6,226.7	25.1	1.9	8.18	-39.7	1,739.3	2,746.3	2,730.8	15.47	177.497	
6,550.0	6,354.4	6,262.0	6,260.8	25.0	1.9	8.67	-40.9	1,740.1	2,718.8	2,703.6	15.19	179.022	
6,594.5	6,388.9	6,291.0	6,289.7	24.9	1.9	9.19	-42.1	1,740.9	2,692.0	2,677.1	14.92	180.402	
6,600.0	6,393.0	6,300.0	6,298.7	24.9	1.9	9.28	-42.4	1,741.2	2,688.5	2,673.6	14.89	180.506	
6,650.0	6,429.3	6,321.3	6,320.0	24.8	1.9	9.96	-43.4	1,741.8	2,655.7	2,641.1	14.60	181.943	
6,692.9	6,458.5	6,342.4	6,341.0	24.7	1.9	10.67	-44.5	1,742.5	2,625.7	2,611.3	14.37	182.678	
6,700.0	6,463.1	6,345.7	6,344.4	24.7	1.9	10.80	-44.7	1,742.7	2,620.6	2,606.2	14.34	182.739	
6,750.0	6,494.3	6,368.5	6,367.1	24.7	1.9	11.84	-46.0	1,743.5	2,583.2	2,569.0	14.16	182.380	
6,791.3	6,517.9	6,400.0	6,398.5	24.7	1.9	13.02	-48.1	1,744.8	2,550.8	2,536.7	14.15	180.329	
6,800.0	6,522.6	6,400.0	6,398.5	24.7	1.9	13.23	-48.1	1,744.8	2,543.8	2,529.7	14.14	179.856	
6,850.0	6,548.0	6,400.0	6,398.5	24.7	1.9	14.65	-48.1	1,744.8	2,502.5	2,488.2	14.26	175.523	
6,889.7	6,566.0	6,424.6	6,423.0	24.8	1.9	16.39	-49.9	1,745.8	2,468.4	2,453.8	14.62	168.892	
6,900.0	6,570.4	6,428.3	6,426.7	24.9	1.9	16.87	-50.1	1,746.0	2,459.4	2,444.7	14.73	166.945	
6,950.0	6,589.5	6,444.7	6,443.1	25.1	1.9	19.64	-51.4	1,746.7	2,414.9	2,399.3	15.54	155.365	
6,988.2	6,602.0	6,455.7	6,454.0	25.3	1.9	22.39	-52.3	1,747.2	2,379.9	2,363.5	16.46	144.561	
7,000.0	6,605.4	6,458.8	6,457.1	25.3	1.9	23.39	-52.5	1,747.4	2,369.0	2,352.2	16.80	140.975	
7,050.0	6,618.0	6,470.4	6,468.6	25.6	1.9	28.65	-53.5	1,747.9	2,322.0	2,303.3	18.62	124.711	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #22-10 - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
7,086.6	6,625.0	6,477.3	6,475.5	25.9	1.9	33.98	-54.0	1,748.3	2,286.9	2,266.6	20.37	112.256			
7,100.0	6,627.1	6,479.4	6,477.6	26.0	1.9	36.36	-54.2	1,748.4	2,274.0	2,252.9	21.11	107.736			
7,150.0	6,632.8	6,485.8	6,484.0	26.5	1.9	48.03	-54.8	1,748.7	2,225.4	2,201.1	24.27	91.683			
7,185.0	6,634.7	6,488.7	6,486.9	26.8	1.9	59.61	-55.0	1,748.8	2,191.1	2,164.5	26.58	82.422			
7,200.0	6,635.0	6,489.6	6,487.7	27.0	1.9	65.53	-55.1	1,748.9	2,176.3	2,148.9	27.42	79.360			
7,215.9	6,635.0	6,500.0	6,498.1	27.1	1.9	73.91	-56.0	1,749.4	2,160.7	2,132.5	28.22	76.577			
7,283.4	6,634.1	6,500.0	6,498.1	27.9	1.9	73.91	-56.0	1,749.4	2,094.1	2,065.1	29.02	72.166			
7,300.0	6,633.9	6,500.0	6,498.1	28.1	1.9	73.91	-56.0	1,749.4	2,077.9	2,048.6	29.21	71.123			
7,381.9	6,632.9	6,500.0	6,498.1	29.3	1.9	73.91	-56.0	1,749.4	1,997.3	1,966.9	30.35	65.816			
7,400.0	6,632.6	6,500.0	6,498.1	29.5	1.9	73.92	-56.0	1,749.4	1,979.5	1,948.9	30.60	64.695			
7,480.3	6,631.6	6,500.0	6,498.1	30.8	1.9	73.92	-56.0	1,749.4	1,900.6	1,868.7	31.85	59.667			
7,500.0	6,631.4	6,500.0	6,498.1	31.1	1.9	73.92	-56.0	1,749.4	1,881.3	1,849.1	32.16	58.494			
7,578.7	6,630.4	6,500.0	6,498.1	32.5	1.9	73.92	-56.0	1,749.4	1,804.1	1,770.6	33.52	53.827			
7,600.0	6,630.1	6,500.0	6,498.1	32.9	1.9	73.92	-56.0	1,749.4	1,783.2	1,749.4	33.88	52.631			
7,677.1	6,629.1	6,500.0	6,498.1	34.3	1.9	73.92	-56.0	1,749.4	1,707.8	1,672.5	35.31	48.364			
7,700.0	6,628.8	6,500.0	6,498.1	34.8	1.9	73.92	-56.0	1,749.4	1,685.5	1,649.7	35.73	47.167			
7,775.6	6,627.8	6,500.0	6,498.1	36.3	1.9	73.92	-56.0	1,749.4	1,611.8	1,574.5	37.22	43.307			
7,800.0	6,627.5	6,508.4	6,506.5	36.8	1.9	75.23	-56.7	1,749.8	1,587.9	1,550.1	37.81	41.994			
7,874.0	6,626.6	6,510.9	6,508.9	38.4	1.9	75.61	-57.0	1,750.0	1,516.0	1,476.6	39.38	38.498			
7,900.0	6,626.3	6,511.7	6,509.8	38.9	1.9	75.75	-57.0	1,750.0	1,490.7	1,450.8	39.93	37.335			
7,972.4	6,625.3	6,514.2	6,512.2	40.5	1.9	76.13	-57.3	1,750.1	1,420.6	1,379.1	41.52	34.212			
8,000.0	6,625.0	6,515.1	6,513.1	41.1	1.9	76.28	-57.3	1,750.2	1,393.9	1,351.8	42.13	33.085			
8,070.8	6,624.1	6,517.6	6,515.6	42.7	1.9	76.66	-57.6	1,750.3	1,325.6	1,281.9	43.74	30.304			
8,100.0	6,623.7	6,518.6	6,516.6	43.4	1.9	76.82	-57.7	1,750.4	1,297.6	1,253.2	44.41	29.219			
8,169.3	6,622.8	6,521.0	6,519.0	45.0	1.9	77.20	-57.9	1,750.5	1,231.2	1,185.2	46.03	26.747			
8,200.0	6,622.4	6,522.1	6,520.0	45.7	1.9	77.37	-58.0	1,750.6	1,201.9	1,155.1	46.75	25.707			
8,267.7	6,621.6	6,524.5	6,522.4	47.4	1.9	77.75	-58.2	1,750.7	1,137.4	1,089.1	48.38	23.513			
8,300.0	6,621.1	6,525.6	6,523.6	48.1	1.9	77.94	-58.3	1,750.8	1,106.8	1,057.7	49.15	22.519			
8,366.1	6,620.3	6,528.0	6,526.0	49.7	1.9	78.31	-58.5	1,750.9	1,044.5	993.8	50.77	20.573			
8,400.0	6,619.9	6,529.3	6,527.2	50.6	1.9	78.51	-58.6	1,750.9	1,012.8	961.2	51.60	19.627			
8,464.5	6,619.0	6,531.7	6,529.6	52.2	2.0	78.89	-58.8	1,751.1	952.7	899.5	53.21	17.905			
8,500.0	6,618.6	6,533.0	6,530.9	53.0	2.0	79.10	-59.0	1,751.1	920.0	865.9	54.09	17.007			
8,563.0	6,617.8	6,535.3	6,533.2	54.6	2.0	79.47	-59.2	1,751.3	862.3	806.6	55.69	15.485			
8,600.0	6,617.3	6,536.7	6,534.6	55.5	2.0	79.70	-59.3	1,751.4	828.8	772.2	56.63	14.636			
8,661.4	6,616.5	6,539.1	6,537.0	57.1	2.0	80.07	-59.5	1,751.5	773.9	715.7	58.20	13.297			
8,700.0	6,616.0	6,540.6	6,538.4	58.1	2.0	80.31	-59.7	1,751.6	739.9	680.7	59.19	12.500			
8,759.8	6,615.2	6,542.9	6,540.8	59.6	2.0	80.68	-59.9	1,751.7	688.1	627.4	60.74	11.329			
8,800.0	6,614.7	6,544.5	6,542.3	60.6	2.0	80.93	-60.0	1,751.8	654.1	592.4	61.79	10.587			
8,858.2	6,614.0	6,546.8	6,544.6	62.1	2.0	81.30	-60.2	1,751.9	606.2	542.9	63.31	9.575			
8,900.0	6,613.4	6,548.5	6,546.3	63.2	2.0	81.57	-60.4	1,752.0	573.0	508.6	64.41	8.897			
8,956.7	6,612.7	6,550.8	6,548.6	64.7	2.0	81.94	-60.6	1,752.1	529.9	464.0	65.90	8.040			
9,000.0	6,612.2	6,552.5	6,550.3	65.8	2.0	82.22	-60.8	1,752.2	498.8	431.7	67.05	7.439			
9,055.1	6,611.5	6,554.8	6,552.6	67.3	2.0	82.59	-61.0	1,752.4	462.0	393.5	68.52	6.743			
9,100.0	6,610.9	6,556.7	6,554.5	68.4	2.0	82.89	-61.1	1,752.5	434.9	365.2	69.72	6.239			
9,153.5	6,610.2	6,558.9	6,556.7	69.8	2.0	83.25	-61.4	1,752.6	406.8	335.6	71.15	5.717			
9,200.0	6,609.6	6,560.9	6,558.7	71.1	2.0	83.56	-61.5	1,752.7	386.7	314.3	72.40	5.341			
9,251.9	6,608.9	6,563.1	6,560.9	72.4	2.0	83.92	-61.8	1,752.8	369.9	296.1	73.80	5.012			
9,300.0	6,608.3	6,565.2	6,562.9	73.7	2.0	84.25	-61.9	1,753.0	360.3	285.2	75.10	4.798			
9,348.6	6,607.7	6,567.3	6,565.1	75.0	2.0	84.59	-62.1	1,753.1	357.0	280.6	76.41	4.672 CC			
9,350.4	6,607.7	6,567.4	6,565.1	75.0	2.0	84.61	-62.2	1,753.1	357.0	280.6	76.46	4.669 ES			
9,400.0	6,607.0	6,569.6	6,567.3	76.4	2.0	84.96	-62.4	1,753.2	360.7	282.9	77.81	4.636 SF			
9,448.8	6,606.4	6,571.8	6,569.5	77.7	2.0	85.31	-62.6	1,753.3	370.8	291.7	79.14	4.686			

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #22-10 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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	6,605.7	6,574.1	6,571.8	79.0	2.0	85.68	-62.8	1,753.5	387.7	307.2	80.53	4.815	
9,547.2	6,605.1	6,576.2	6,573.9	80.3	2.0	86.02	-63.0	1,753.6	408.5	326.6	81.82	4.992	
9,600.0	6,604.5	6,578.7	6,576.3	81.7	2.0	86.41	-63.2	1,753.7	436.5	353.2	83.26	5.243	
9,645.6	6,603.9	6,580.8	6,578.4	82.9	2.0	86.75	-63.4	1,753.9	464.2	379.7	84.51	5.493	
9,700.0	6,603.2	6,583.3	6,580.9	84.4	2.0	87.16	-63.7	1,754.0	500.7	414.7	85.99	5.822	
9,744.1	6,602.6	6,585.4	6,583.0	85.6	2.0	87.49	-63.9	1,754.1	532.5	445.3	87.20	6.106	
9,800.0	6,601.9	6,588.1	6,585.7	87.1	2.0	87.92	-64.1	1,754.3	575.1	486.4	88.73	6.482	
9,842.5	6,601.3	6,590.2	6,587.7	88.2	2.0	88.25	-64.3	1,754.4	609.0	519.1	89.90	6.774	
9,900.0	6,600.6	6,593.0	6,590.5	89.8	2.0	88.69	-64.6	1,754.6	656.4	564.9	91.47	7.176	
9,940.9	6,600.1	6,595.0	6,592.5	90.9	2.0	89.02	-64.8	1,754.7	691.1	598.5	92.59	7.463	
10,000.0	6,599.3	6,597.9	6,595.5	92.5	2.0	89.49	-65.1	1,754.9	742.2	648.0	94.21	7.878	
10,039.3	6,598.8	6,599.9	6,597.4	93.5	2.0	89.80	-65.3	1,755.0	776.9	681.6	95.29	8.153	
10,100.0	6,598.0	6,602.9	6,600.4	95.2	2.0	90.27	-65.5	1,755.2	831.2	734.2	96.94	8.574	
10,137.8	6,597.5	6,604.8	6,602.2	96.2	2.0	90.57	-65.7	1,755.3	865.4	767.4	97.98	8.833	
10,200.0	6,596.7	6,607.8	6,605.3	97.9	2.0	91.05	-66.0	1,755.5	922.4	822.7	99.67	9.254	
10,236.2	6,596.3	6,609.6	6,607.1	98.9	2.0	91.34	-66.2	1,755.6	955.8	855.1	100.66	9.495	
10,300.0	6,595.4	6,612.8	6,610.2	100.6	2.0	91.84	-66.5	1,755.8	1,015.2	912.8	102.39	9.915	
10,334.6	6,595.0	6,614.5	6,611.9	101.6	2.0	92.11	-66.7	1,755.9	1,047.6	944.3	103.33	10.138	
10,400.0	6,594.2	6,617.9	6,615.2	103.4	2.0	92.63	-67.0	1,756.1	1,109.2	1,004.1	105.10	10.554	
10,433.0	6,593.7	6,619.5	6,616.9	104.3	2.0	92.89	-67.2	1,756.2	1,140.6	1,034.6	106.00	10.760	
10,500.0	6,592.9	6,623.0	6,620.3	106.1	2.0	93.43	-67.5	1,756.5	1,204.2	1,096.4	107.80	11.171	
10,531.5	6,592.5	6,624.6	6,621.9	106.9	2.0	93.68	-67.7	1,756.6	1,234.3	1,125.7	108.65	11.360	
10,600.0	6,591.6	6,628.1	6,625.4	108.8	2.0	94.24	-68.0	1,756.8	1,300.0	1,189.5	110.49	11.766	
10,629.9	6,591.2	6,629.7	6,627.0	109.6	2.0	94.48	-68.2	1,756.9	1,328.7	1,217.4	111.29	11.940	
10,700.0	6,590.3	6,633.4	6,630.6	111.6	2.0	95.05	-68.6	1,757.1	1,396.3	1,283.1	113.15	12.340	
10,728.3	6,589.9	6,634.9	6,632.1	112.3	2.0	95.28	-68.7	1,757.2	1,423.6	1,309.7	113.90	12.499	
10,800.0	6,589.0	6,638.7	6,635.9	114.3	2.0	95.86	-69.1	1,757.4	1,493.0	1,377.2	115.80	12.893	
10,826.7	6,588.7	6,640.1	6,637.3	115.0	2.0	96.08	-69.2	1,757.5	1,519.0	1,402.5	116.50	13.038	
10,900.0	6,587.7	6,644.0	6,641.2	117.1	2.0	96.68	-69.6	1,757.8	1,590.2	1,471.8	118.42	13.428	
10,925.2	6,587.4	6,645.4	6,642.6	117.7	2.0	96.89	-69.8	1,757.9	1,614.7	1,495.6	119.08	13.560	
11,000.0	6,586.4	6,649.4	6,646.6	119.8	2.0	97.51	-70.2	1,758.1	1,687.7	1,566.7	121.02	13.945	
11,023.6	6,586.1	6,650.7	6,647.9	120.4	2.0	97.70	-70.3	1,758.2	1,710.7	1,589.1	121.64	14.064	
11,100.0	6,585.1	6,654.9	6,652.0	122.6	2.0	98.34	-70.7	1,758.5	1,785.4	1,661.8	123.60	14.445	
11,122.0	6,584.8	6,656.1	6,653.3	123.2	2.0	98.52	-70.9	1,758.6	1,807.0	1,682.8	124.16	14.553	
11,200.0	6,583.8	6,660.5	6,657.6	125.3	2.0	99.17	-71.3	1,758.8	1,883.4	1,757.2	126.14	14.930	
11,220.4	6,583.6	6,661.6	6,658.7	125.9	2.0	99.34	-71.4	1,758.9	1,903.4	1,776.8	126.66	15.028	
11,300.0	6,582.5	6,666.1	6,663.2	128.1	2.0	100.01	-71.9	1,759.2	1,981.5	1,852.9	128.66	15.401	
11,318.9	6,582.3	6,667.2	6,664.2	128.6	2.0	100.17	-72.0	1,759.3	2,000.1	1,870.9	129.13	15.489	
11,400.0	6,581.2	6,671.8	6,668.8	130.8	2.0	100.85	-72.5	1,759.6	2,079.8	1,948.7	131.14	15.860	
11,417.3	6,581.0	6,672.8	6,669.8	131.3	2.0	101.00	-72.6	1,759.7	2,096.9	1,965.3	131.57	15.938	
11,500.0	6,580.0	6,677.6	6,674.6	133.6	2.0	101.70	-73.1	1,760.0	2,178.3	2,044.7	133.59	16.306	
11,515.7	6,579.7	6,678.5	6,675.5	134.0	2.0	101.83	-73.2	1,760.0	2,193.8	2,059.8	133.97	16.375	
11,600.0	6,578.7	6,683.5	6,680.4	136.3	2.0	102.54	-73.7	1,760.4	2,276.9	2,140.9	135.99	16.742	
11,614.1	6,578.5	6,684.3	6,681.2	136.7	2.0	102.66	-73.8	1,760.4	2,290.8	2,154.5	136.33	16.803	
11,700.0	6,577.4	6,689.4	6,686.2	139.1	2.0	103.39	-74.3	1,760.7	2,375.5	2,237.2	138.36	17.169	
11,712.6	6,577.2	6,690.1	6,687.0	139.5	2.0	103.50	-74.4	1,760.8	2,387.9	2,249.3	138.66	17.222	
11,800.0	6,576.1	6,695.4	6,692.2	141.9	2.0	104.24	-75.0	1,761.1	2,474.3	2,333.6	140.69	17.587	
11,811.0	6,575.9	6,696.1	6,692.9	142.2	2.0	104.34	-75.1	1,761.2	2,485.2	2,344.2	140.94	17.633	
11,882.7	6,575.0	6,700.4	6,697.2	144.2	2.0	104.95	-75.5	1,761.5	2,556.0	2,413.5	142.58	17.927	
11,883.5	6,575.0	6,700.5	6,697.2	144.2	2.0	104.95	-75.5	1,761.5	2,556.8	2,414.2	142.59	17.932	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	60.55	1,502.9	2,661.6	3,057.0				
98.4	98.4	54.4	54.4	0.1	0.1	60.55	1,502.9	2,661.6	3,056.6	3,056.4	0.24	N/A	
100.0	100.0	56.0	56.0	0.1	0.1	60.55	1,502.9	2,661.6	3,056.6	3,056.4	0.25	N/A	
196.8	196.8	152.8	152.8	0.3	1.6	60.55	1,502.9	2,661.6	3,056.6	3,054.7	1.93	1,581.297	
200.0	200.0	156.0	156.0	0.3	1.7	60.55	1,502.9	2,661.6	3,056.6	3,054.6	2.02	1,512.728	
295.3	295.3	251.3	251.3	0.5	3.9	60.55	1,502.9	2,661.6	3,056.6	3,052.2	4.42	691.254	
300.0	300.0	256.0	256.0	0.5	4.0	60.55	1,502.9	2,661.6	3,056.6	3,052.1	4.53	674.699	
393.7	393.7	349.7	349.7	0.8	5.9	60.55	1,502.9	2,661.6	3,056.6	3,050.0	6.66	458.662	
400.0	400.0	356.0	356.0	0.8	6.0	60.55	1,502.9	2,661.6	3,056.6	3,049.8	6.81	449.065	
492.1	492.1	448.1	448.1	1.0	7.9	60.55	1,502.9	2,661.6	3,056.6	3,047.8	8.88	344.066	
500.0	500.0	456.0	456.0	1.0	8.1	60.55	1,502.9	2,661.6	3,056.6	3,047.6	9.06	337.340	
590.5	590.5	546.5	546.5	1.2	9.9	60.55	1,502.9	2,661.6	3,056.6	3,045.6	11.10	275.485	
600.0	600.0	556.0	556.0	1.2	10.1	60.55	1,502.9	2,661.6	3,056.6	3,045.3	11.31	270.318	
689.0	689.0	645.0	645.0	1.4	11.9	60.55	1,502.9	2,661.6	3,056.6	3,043.3	13.30	229.766	
700.0	700.0	656.0	656.0	1.4	12.1	60.55	1,502.9	2,661.6	3,056.6	3,043.1	13.55	225.575	
787.4	787.4	743.4	743.4	1.6	13.9	60.55	1,502.9	2,661.6	3,056.6	3,041.1	15.51	197.089	
800.0	800.0	756.0	756.0	1.7	14.1	60.55	1,502.9	2,661.6	3,056.6	3,040.9	15.79	193.566	
885.8	885.8	841.8	841.8	1.9	15.8	60.55	1,502.9	2,661.6	3,056.6	3,038.9	17.71	172.562	
900.0	900.0	856.0	856.0	1.9	16.1	60.55	1,502.9	2,661.6	3,056.6	3,038.6	18.03	169.524	
984.2	984.2	940.2	940.2	2.1	17.8	60.55	1,502.9	2,661.6	3,056.6	3,036.7	19.92	153.471	
1,000.0	1,000.0	956.0	956.0	2.1	18.1	60.55	1,502.9	2,661.6	3,056.6	3,036.4	20.27	150.801	
1,082.7	1,082.7	1,038.7	1,038.7	2.3	19.8	60.55	1,502.9	2,661.6	3,056.6	3,034.5	22.12	138.187	
1,100.0	1,100.0	1,056.0	1,056.0	2.3	20.2	60.55	1,502.9	2,661.6	3,056.6	3,034.1	22.51	135.806	
1,181.1	1,181.1	1,137.1	1,137.1	2.5	21.8	60.55	1,502.9	2,661.6	3,056.6	3,032.3	24.32	125.673	
1,200.0	1,200.0	1,156.0	1,156.0	2.6	22.2	60.55	1,502.9	2,661.6	3,056.6	3,031.9	24.75	123.526	
1,279.5	1,279.5	1,235.5	1,235.5	2.7	23.8	60.55	1,502.9	2,661.6	3,056.6	3,030.1	26.52	115.240	
1,300.0	1,300.0	1,256.0	1,256.0	2.8	24.2	60.55	1,502.9	2,661.6	3,056.6	3,029.7	26.98	113.283	
1,377.9	1,377.9	1,333.9	1,333.9	3.0	25.8	60.55	1,502.9	2,661.6	3,056.6	3,027.9	28.73	106.406	
1,400.0	1,400.0	1,356.0	1,356.0	3.0	26.2	60.55	1,502.9	2,661.6	3,056.6	3,027.4	29.22	104.610	
1,476.4	1,476.4	1,432.4	1,432.4	3.2	27.7	135.68	1,502.9	2,661.6	3,057.4	3,026.5	30.91	98.898	
1,500.0	1,500.0	1,456.0	1,456.0	3.2	28.2	135.68	1,502.9	2,661.6	3,057.9	3,026.5	31.44	97.273	
1,574.8	1,574.7	1,530.7	1,530.7	3.4	29.7	135.69	1,502.9	2,661.6	3,060.5	3,027.4	33.07	92.535	
1,600.0	1,599.8	1,555.8	1,555.8	3.4	30.2	135.70	1,502.9	2,661.6	3,061.6	3,028.0	33.62	91.063	
1,673.2	1,672.8	1,628.8	1,628.8	3.6	31.7	135.71	1,502.9	2,661.6	3,066.0	3,030.8	35.21	87.086	
1,700.0	1,699.5	1,655.5	1,655.5	3.7	32.2	135.72	1,502.9	2,661.6	3,067.9	3,032.1	35.78	85.740	
1,771.6	1,770.6	1,726.6	1,726.6	3.8	33.7	135.75	1,502.9	2,661.6	3,073.9	3,036.6	37.31	82.381	
1,800.0	1,798.7	1,754.7	1,754.7	3.9	34.2	135.76	1,502.9	2,661.6	3,076.7	3,038.7	37.91	81.148	
1,870.1	1,868.0	1,824.0	1,824.0	4.1	35.6	135.79	1,502.9	2,661.6	3,084.3	3,044.9	39.39	78.297	
1,900.0	1,897.5	1,853.5	1,853.5	4.2	36.2	135.80	1,502.9	2,661.6	3,087.9	3,047.9	40.02	77.166	
1,968.5	1,964.8	1,920.8	1,920.8	4.4	37.6	135.83	1,502.9	2,661.6	3,097.1	3,055.7	41.44	74.734	
2,000.0	1,995.6	1,951.6	1,951.6	4.5	38.2	135.85	1,502.9	2,661.6	3,101.7	3,059.6	42.09	73.694	
2,066.9	2,060.9	2,016.9	2,016.9	4.7	39.5	135.89	1,502.9	2,661.6	3,112.4	3,068.9	43.46	71.611	
2,100.0	2,093.1	2,049.1	2,049.1	4.8	40.1	135.90	1,502.9	2,661.6	3,118.1	3,074.0	44.13	70.653	
2,165.3	2,156.3	2,112.3	2,112.3	5.1	41.4	135.94	1,502.9	2,661.6	3,130.2	3,084.7	45.46	68.863	
2,200.0	2,189.6	2,145.6	2,145.6	5.2	42.1	135.96	1,502.9	2,661.6	3,137.0	3,090.8	46.15	67.981	
2,263.8	2,250.7	2,206.7	2,206.7	5.5	43.3	136.00	1,502.9	2,661.6	3,150.4	3,103.0	47.42	66.441	
2,280.0	2,266.2	2,222.2	2,222.2	5.6	43.6	136.01	1,502.9	2,661.6	3,154.0	3,106.2	47.74	66.072	
2,300.0	2,285.3	2,241.3	2,241.3	5.7	44.0	136.08	1,502.9	2,661.6	3,158.4	3,110.2	48.18	65.558	
2,362.2	2,344.6	2,300.6	2,300.6	6.0	45.2	136.31	1,502.9	2,661.6	3,172.3	3,122.7	49.56	64.015	
2,400.0	2,380.6	2,336.6	2,336.6	6.2	45.9	136.45	1,502.9	2,661.6	3,180.8	3,130.4	50.40	63.110	
2,460.6	2,438.4	2,394.4	2,394.4	6.5	47.1	136.67	1,502.9	2,661.6	3,194.4	3,142.6	51.76	61.720	
2,500.0	2,475.9	2,431.9	2,431.9	6.7	47.8	136.81	1,502.9	2,661.6	3,203.2	3,150.6	52.64	60.855	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,488.2	2,488.2	7.0	49.0	137.03	1,502.9	2,661.6	3,216.6	3,162.6	53.96	59.607	
2,600.0	2,571.2	2,527.2	2,527.2	7.2	49.8	137.17	1,502.9	2,661.6	3,225.8	3,170.9	54.88	58.776	
2,657.5	2,626.0	2,582.0	2,582.0	7.5	50.9	137.38	1,502.9	2,661.6	3,238.9	3,182.7	56.18	57.653	
2,700.0	2,666.6	2,622.6	2,622.6	7.8	51.7	137.53	1,502.9	2,661.6	3,248.6	3,191.4	57.14	56.855	
2,755.9	2,719.8	2,675.8	2,675.8	8.1	52.7	137.72	1,502.9	2,661.6	3,261.3	3,202.9	58.40	55.844	
2,800.0	2,761.9	2,717.9	2,717.9	8.3	53.6	137.88	1,502.9	2,661.6	3,271.4	3,212.0	59.40	55.077	
2,854.3	2,813.7	2,769.7	2,769.7	8.7	54.6	138.07	1,502.9	2,661.6	3,283.9	3,223.2	60.63	54.166	
2,900.0	2,857.2	2,813.2	2,813.2	8.9	55.5	138.22	1,502.9	2,661.6	3,294.4	3,232.7	61.66	53.428	
2,952.7	2,907.5	2,863.5	2,863.5	9.2	56.5	138.40	1,502.9	2,661.6	3,306.5	3,243.7	62.86	52.605	
3,000.0	2,952.5	2,908.5	2,908.5	9.5	57.4	138.57	1,502.9	2,661.6	3,317.4	3,253.5	63.93	51.895	
3,051.2	3,001.3	2,957.3	2,957.3	9.8	58.4	138.74	1,502.9	2,661.6	3,329.3	3,264.2	65.09	51.152	
3,100.0	3,047.8	3,003.8	3,003.8	10.1	59.3	138.90	1,502.9	2,661.6	3,340.6	3,274.4	66.19	50.469	
3,149.6	3,095.1	3,051.1	3,051.1	10.4	60.3	139.07	1,502.9	2,661.6	3,352.2	3,284.9	67.32	49.797	
3,200.0	3,143.2	3,099.2	3,099.2	10.7	61.3	139.23	1,502.9	2,661.6	3,363.9	3,295.5	68.46	49.137	
3,248.0	3,188.9	3,144.9	3,144.9	11.0	62.2	139.39	1,502.9	2,661.6	3,375.2	3,305.6	69.55	48.529	
3,300.0	3,238.5	3,194.5	3,194.5	11.3	63.2	139.56	1,502.9	2,661.6	3,387.4	3,316.6	70.73	47.893	
3,346.4	3,282.8	3,238.8	3,238.8	11.6	64.1	139.71	1,502.9	2,661.6	3,398.3	3,326.5	71.78	47.342	
3,400.0	3,333.8	3,289.8	3,289.8	11.9	65.1	139.88	1,502.9	2,661.6	3,410.9	3,337.9	72.99	46.728	
3,444.9	3,376.6	3,332.6	3,332.6	12.2	66.0	140.03	1,502.9	2,661.6	3,421.5	3,347.5	74.01	46.229	
3,500.0	3,429.1	3,385.1	3,385.1	12.6	67.0	140.20	1,502.9	2,661.6	3,434.5	3,359.2	75.26	45.635	
3,543.3	3,470.4	3,426.4	3,426.4	12.8	67.8	140.34	1,502.9	2,661.6	3,444.8	3,368.5	76.24	45.182	
3,600.0	3,524.4	3,480.4	3,480.4	13.2	68.9	140.52	1,502.9	2,661.6	3,458.2	3,380.7	77.53	44.608	
3,641.7	3,564.2	3,520.2	3,520.2	13.4	69.7	140.65	1,502.9	2,661.6	3,468.2	3,389.7	78.47	44.198	
3,700.0	3,619.8	3,575.8	3,575.8	13.8	70.8	140.83	1,502.9	2,661.6	3,482.1	3,402.3	79.79	43.641	
3,740.1	3,658.0	3,614.0	3,614.0	14.0	71.6	140.95	1,502.9	2,661.6	3,491.7	3,411.0	80.70	43.269	
3,800.0	3,715.1	3,671.1	3,671.1	14.4	72.8	141.13	1,502.9	2,661.6	3,506.0	3,424.0	82.05	42.730	
3,838.6	3,751.8	3,707.8	3,707.8	14.7	73.5	141.25	1,502.9	2,661.6	3,515.3	3,432.3	82.92	42.393	
3,900.0	3,810.4	3,766.4	3,766.4	15.0	74.7	141.44	1,502.9	2,661.6	3,530.0	3,445.7	84.31	41.870	
3,937.0	3,845.7	3,801.7	3,801.7	15.3	75.4	141.55	1,502.9	2,661.6	3,538.9	3,453.8	85.14	41.564	
4,000.0	3,905.7	3,861.7	3,861.7	15.7	76.6	141.74	1,502.9	2,661.6	3,554.2	3,467.6	86.57	41.057	
4,035.4	3,939.5	3,895.5	3,895.5	15.9	77.3	141.84	1,502.9	2,661.6	3,562.7	3,475.4	87.37	40.779	
4,100.0	4,001.0	3,957.0	3,957.0	16.3	78.5	142.03	1,502.9	2,661.6	3,578.4	3,489.5	88.82	40.287	
4,133.8	4,033.3	3,989.3	3,989.3	16.5	79.2	142.13	1,502.9	2,661.6	3,586.6	3,497.0	89.58	40.036	
4,200.0	4,096.3	4,052.3	4,052.3	16.9	80.4	142.32	1,502.9	2,661.6	3,602.7	3,511.6	91.07	39.558	
4,232.3	4,127.1	4,083.1	4,083.1	17.1	81.1	142.41	1,502.9	2,661.6	3,610.5	3,518.7	91.80	39.330	
4,300.0	4,191.7	4,147.7	4,147.7	17.6	82.3	142.61	1,502.9	2,661.6	3,627.1	3,533.7	93.32	38.865	
4,330.7	4,220.9	4,176.9	4,176.9	17.8	82.9	142.70	1,502.9	2,661.6	3,634.6	3,540.6	94.02	38.659	
4,400.0	4,287.0	4,243.0	4,243.0	18.2	84.3	142.89	1,502.9	2,661.6	3,651.6	3,556.0	95.57	38.207	
4,429.1	4,314.7	4,270.7	4,270.7	18.4	84.8	142.97	1,502.9	2,661.6	3,658.7	3,562.5	96.23	38.021	
4,500.0	4,382.3	4,338.3	4,338.3	18.8	86.2	143.17	1,502.9	2,661.6	3,676.1	3,578.3	97.82	37.581	
4,527.5	4,408.6	4,364.6	4,364.6	19.0	86.7	143.25	1,502.9	2,661.6	3,682.9	3,584.5	98.44	37.414	
4,600.0	4,477.6	4,433.6	4,433.6	19.5	88.1	143.45	1,502.9	2,661.6	3,700.8	3,600.7	100.06	36.985	
4,626.0	4,502.4	4,458.4	4,458.4	19.6	88.6	143.52	1,502.9	2,661.6	3,707.2	3,606.5	100.64	36.834	
4,700.0	4,572.9	4,528.9	4,528.9	20.1	90.0	143.72	1,502.9	2,661.6	3,725.5	3,623.2	102.30	36.416	
4,724.4	4,596.2	4,552.2	4,552.2	20.3	90.5	143.79	1,502.9	2,661.6	3,731.6	3,628.7	102.85	36.282	
4,800.0	4,668.3	4,624.3	4,624.3	20.7	91.9	143.99	1,502.9	2,661.6	3,750.3	3,645.8	104.54	35.874	
4,822.8	4,690.0	4,646.0	4,646.0	20.9	92.4	144.05	1,502.9	2,661.6	3,756.0	3,650.9	105.05	35.754	
4,900.0	4,763.6	4,719.6	4,719.6	21.4	93.9	144.25	1,502.9	2,661.6	3,775.2	3,668.4	106.78	35.356	
4,921.2	4,783.8	4,739.8	4,739.8	21.5	94.3	144.31	1,502.9	2,661.6	3,780.5	3,673.3	107.25	35.249	
5,000.0	4,858.9	4,814.9	4,814.9	22.0	95.8	144.52	1,502.9	2,661.6	3,800.2	3,691.2	109.01	34.860	
5,019.7	4,877.7	4,833.7	4,833.7	22.1	96.1	144.57	1,502.9	2,661.6	3,805.1	3,695.7	109.45	34.765	
5,100.0	4,954.2	4,910.2	4,910.2	22.6	97.7	144.78	1,502.9	2,661.6	3,825.2	3,714.0	111.24	34.386	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,927.5	4,927.5	22.8	98.0	144.82	1,502.9	2,661.6	3,829.8	3,718.1	111.65	34.303	
5,171.8	5,022.7	4,978.7	4,978.7	23.1	99.1	144.96	1,502.9	2,661.6	3,843.3	3,730.4	112.84	34.058	
5,200.0	5,049.6	5,005.6	5,005.6	23.3	99.6	145.11	1,502.9	2,661.6	3,850.3	3,736.6	113.64	33.881	
5,216.5	5,065.4	5,021.4	5,021.4	23.3	99.9	145.20	1,502.9	2,661.6	3,854.2	3,740.1	114.10	33.780	
5,300.0	5,145.7	5,101.7	5,101.7	23.7	101.5	145.61	1,502.9	2,661.6	3,873.3	3,756.9	116.41	33.274	
5,314.9	5,160.1	5,116.1	5,116.1	23.8	101.8	145.68	1,502.9	2,661.6	3,876.5	3,759.7	116.81	33.185	
5,400.0	5,242.7	5,198.7	5,198.7	24.1	103.5	146.04	1,502.9	2,661.6	3,893.5	3,774.4	119.13	32.684	
5,413.4	5,255.7	5,211.7	5,211.7	24.2	103.7	146.10	1,502.9	2,661.6	3,896.0	3,776.5	119.48	32.607	
5,500.0	5,340.5	5,296.5	5,296.5	24.5	105.5	146.41	1,502.9	2,661.6	3,911.0	3,789.2	121.79	32.113	
5,511.8	5,352.1	5,308.1	5,308.1	24.5	105.7	146.45	1,502.9	2,661.6	3,912.8	3,790.7	122.10	32.047	
5,600.0	5,439.0	5,395.0	5,395.0	24.8	107.4	146.71	1,502.9	2,661.6	3,925.6	3,801.2	124.38	31.561	
5,610.2	5,449.1	5,405.1	5,405.1	24.8	107.6	146.74	1,502.9	2,661.6	3,926.9	3,802.3	124.64	31.506	
5,700.0	5,538.0	5,494.0	5,494.0	25.1	109.4	146.95	1,502.9	2,661.6	3,937.3	3,810.4	126.89	31.030	
5,708.6	5,546.6	5,502.6	5,502.6	25.1	109.6	146.97	1,502.9	2,661.6	3,938.2	3,811.1	127.10	30.985	
5,800.0	5,637.4	5,593.4	5,593.4	25.3	111.4	147.13	1,502.9	2,661.6	3,946.2	3,816.9	129.31	30.518	
5,807.1	5,644.5	5,600.5	5,600.5	25.3	111.6	147.14	1,502.9	2,661.6	3,946.7	3,817.2	129.47	30.483	
5,900.0	5,737.2	5,693.2	5,693.2	25.5	113.4	147.25	1,502.9	2,661.6	3,952.1	3,820.5	131.62	30.026	
5,905.5	5,742.6	5,698.6	5,698.6	25.5	113.5	147.26	1,502.9	2,661.6	3,952.3	3,820.6	131.75	29.999	
6,000.0	5,837.1	5,793.1	5,793.1	25.6	115.4	147.31	1,502.9	2,661.6	3,955.1	3,821.2	133.83	29.553	
6,003.9	5,841.0	5,797.0	5,797.0	25.6	115.5	147.31	1,502.9	2,661.6	3,955.1	3,821.2	133.91	29.535	
6,051.8	5,888.9	5,844.9	5,844.9	25.7	116.5	147.19	1,502.9	2,661.6	3,955.5	3,815.8	139.62	28.330	
6,081.8	5,918.9	5,874.9	5,874.9	25.7	117.1	147.19	1,502.9	2,661.6	3,955.5	3,815.2	140.26	28.202	
6,100.0	5,937.1	5,893.1	5,893.1	25.7	117.5	-17.81	1,502.9	2,661.6	3,955.2	3,819.4	135.88	29.109	
6,102.3	5,939.4	5,895.4	5,895.4	25.7	117.5	-17.82	1,502.9	2,661.6	3,955.2	3,819.3	135.91	29.101	
6,150.0	5,987.0	5,943.0	5,943.0	25.7	118.5	-17.90	1,502.9	2,661.6	3,952.4	3,816.0	136.33	28.992	
6,200.0	6,036.5	5,992.5	5,992.5	25.7	119.5	-18.08	1,502.9	2,661.6	3,946.2	3,810.0	136.19	28.976	
6,200.8	6,037.3	5,993.3	5,993.3	25.7	119.5	-18.08	1,502.9	2,661.6	3,946.1	3,809.9	136.18	28.976	
6,250.0	6,085.5	6,041.5	6,041.5	25.7	120.4	-18.37	1,502.9	2,661.6	3,936.8	3,801.3	135.47	29.060	
6,299.2	6,133.0	6,089.0	6,089.0	25.6	121.4	-18.75	1,502.9	2,661.6	3,924.3	3,790.1	134.20	29.242	
6,300.0	6,133.7	6,089.7	6,089.7	25.6	121.4	-18.76	1,502.9	2,661.6	3,924.1	3,789.9	134.18	29.246	
6,350.0	6,180.9	6,136.9	6,136.9	25.5	122.4	-19.28	1,502.9	2,661.6	3,908.2	3,775.9	132.34	29.533	
6,397.6	6,224.6	6,180.6	6,180.6	25.4	123.2	-19.89	1,502.9	2,661.6	3,890.3	3,760.2	130.11	29.899	
6,400.0	6,226.7	6,182.7	6,182.7	25.4	123.3	-19.92	1,502.9	2,661.6	3,889.3	3,759.3	129.99	29.920	
6,450.0	6,271.1	6,227.1	6,227.1	25.2	124.2	-20.72	1,502.9	2,661.6	3,867.4	3,740.2	127.21	30.403	
6,496.0	6,310.4	6,266.4	6,266.4	25.1	125.0	-21.60	1,502.9	2,661.6	3,844.7	3,720.4	124.33	30.924	
6,500.0	6,313.7	6,269.7	6,269.7	25.1	125.0	-21.68	1,502.9	2,661.6	3,842.7	3,718.6	124.07	30.972	
6,550.0	6,354.4	6,310.4	6,310.4	25.0	125.8	-22.84	1,502.9	2,661.6	3,815.1	3,694.4	120.70	31.608	
6,594.5	6,388.9	6,344.9	6,344.9	24.9	126.5	-24.06	1,502.9	2,661.6	3,788.5	3,670.8	117.65	32.202	
6,600.0	6,393.0	6,349.0	6,349.0	24.9	126.6	-24.23	1,502.9	2,661.6	3,785.0	3,667.8	117.27	32.275	
6,650.0	6,429.3	6,385.3	6,385.3	24.8	127.3	-25.90	1,502.9	2,661.6	3,752.5	3,638.5	114.01	32.912	
6,692.9	6,458.5	6,414.5	6,414.5	24.7	127.9	-27.59	1,502.9	2,661.6	3,722.7	3,611.1	111.58	33.363	
6,700.0	6,463.1	6,419.1	6,419.1	24.7	128.0	-27.90	1,502.9	2,661.6	3,717.6	3,606.4	111.23	33.424	
6,750.0	6,494.3	6,450.3	6,450.3	24.7	128.7	-30.30	1,502.9	2,661.6	3,680.7	3,571.4	109.30	33.676	
6,791.3	6,517.9	6,473.9	6,473.9	24.7	129.1	-32.67	1,502.9	2,661.6	3,648.7	3,540.0	108.68	33.571	
6,800.0	6,522.6	6,478.6	6,478.6	24.7	129.2	-33.21	1,502.9	2,661.6	3,641.8	3,533.1	108.70	33.505	
6,850.0	6,548.0	6,504.0	6,504.0	24.7	129.7	-36.74	1,502.9	2,661.6	3,601.2	3,491.3	109.93	32.759	
6,889.7	6,566.0	6,522.0	6,522.0	24.8	130.1	-40.08	1,502.9	2,661.6	3,567.9	3,455.3	112.53	31.705	
6,900.0	6,570.4	6,526.4	6,526.4	24.9	130.2	-41.02	1,502.9	2,661.6	3,559.1	3,445.7	113.45	31.371	
6,950.0	6,589.5	6,545.5	6,545.5	25.1	130.6	-46.24	1,502.9	2,661.6	3,515.7	3,396.2	119.50	29.421	
6,988.2	6,602.0	6,558.0	6,558.0	25.3	130.8	-50.95	1,502.9	2,661.6	3,481.9	3,356.2	125.71	27.698	
7,000.0	6,605.4	6,561.4	6,561.4	25.3	130.9	-52.55	1,502.9	2,661.6	3,471.3	3,343.4	127.86	27.150	
7,050.0	6,618.0	6,574.0	6,574.0	25.6	131.1	-60.08	1,502.9	2,661.6	3,426.0	3,288.3	137.68	24.884	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #31-10 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	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	6,625.0	6,581.0	6,581.0	25.9	131.3	-66.37	1,502.9	2,661.6	3,392.4	3,247.5	144.91	23.411	
7,100.0	6,627.1	6,583.1	6,583.1	26.0	131.3	-68.82	1,502.9	2,661.6	3,380.0	3,232.7	147.37	22.936	
7,150.0	6,632.8	6,588.8	6,588.8	26.5	131.4	-78.51	1,502.9	2,661.6	3,333.7	3,178.9	154.83	21.532	
7,185.0	6,634.7	6,590.7	6,590.7	26.8	131.5	-85.59	1,502.9	2,661.6	3,301.1	3,143.4	157.71	20.932	
7,200.0	6,635.0	6,591.0	6,591.0	27.0	131.5	-88.63	1,502.9	2,661.6	3,287.2	3,129.0	158.23	20.775	
7,215.9	6,635.0	6,591.0	6,591.0	27.1	131.5	-91.84	1,502.9	2,661.6	3,272.4	3,114.1	158.32	20.670	
7,283.4	6,634.1	6,590.1	6,590.1	27.9	131.5	-91.80	1,502.9	2,661.6	3,209.8	3,050.6	159.14	20.170	
7,300.0	6,633.9	6,589.9	6,589.9	28.1	131.5	-91.79	1,502.9	2,661.6	3,194.5	3,035.1	159.34	20.048	
7,381.9	6,632.9	6,588.9	6,588.9	29.3	131.4	-91.74	1,502.9	2,661.6	3,118.8	2,958.3	160.49	19.433	
7,400.0	6,632.6	6,588.6	6,588.6	29.5	131.4	-91.73	1,502.9	2,661.6	3,102.1	2,941.4	160.75	19.298	
7,480.3	6,631.6	6,587.6	6,587.6	30.8	131.4	-91.68	1,502.9	2,661.6	3,028.4	2,866.3	162.04	18.689	
7,500.0	6,631.4	6,587.4	6,587.4	31.1	131.4	-91.67	1,502.9	2,661.6	3,010.3	2,848.0	162.35	18.542	
7,578.7	6,630.4	6,586.4	6,586.4	32.5	131.4	-91.62	1,502.9	2,661.6	2,938.4	2,774.7	163.74	17.945	
7,600.0	6,630.1	6,586.1	6,586.1	32.9	131.4	-91.61	1,502.9	2,661.6	2,919.0	2,754.9	164.12	17.786	
7,677.1	6,629.1	6,585.1	6,585.1	34.3	131.4	-91.56	1,502.9	2,661.6	2,849.0	2,683.4	165.58	17.206	
7,700.0	6,628.8	6,584.8	6,584.8	34.8	131.4	-91.55	1,502.9	2,661.6	2,828.3	2,662.3	166.02	17.036	
7,775.6	6,627.8	6,583.8	6,583.8	36.3	131.3	-91.50	1,502.9	2,661.6	2,760.2	2,592.7	167.54	16.475	
7,800.0	6,627.5	6,583.5	6,583.5	36.8	131.3	-91.49	1,502.9	2,661.6	2,738.3	2,570.2	168.03	16.296	
7,874.0	6,626.6	6,582.6	6,582.6	38.4	131.3	-91.44	1,502.9	2,661.6	2,672.1	2,502.5	169.59	15.756	
7,900.0	6,626.3	6,582.3	6,582.3	38.9	131.3	-91.43	1,502.9	2,661.6	2,648.9	2,478.8	170.14	15.569	
7,972.4	6,625.3	6,581.3	6,581.3	40.5	131.3	-91.38	1,502.9	2,661.6	2,584.7	2,413.0	171.73	15.051	
8,000.0	6,625.0	6,581.0	6,581.0	41.1	131.3	-91.37	1,502.9	2,661.6	2,560.4	2,388.1	172.33	14.857	
8,070.8	6,624.1	6,580.1	6,580.1	42.7	131.3	-91.32	1,502.9	2,661.6	2,498.2	2,324.2	173.94	14.363	
8,100.0	6,623.7	6,579.7	6,579.7	43.4	131.3	-91.31	1,502.9	2,661.6	2,472.7	2,298.1	174.60	14.163	
8,169.3	6,622.8	6,578.8	6,578.8	45.0	131.2	-91.27	1,502.9	2,661.6	2,412.5	2,236.3	176.20	13.692	
8,200.0	6,622.4	6,578.4	6,578.4	45.7	131.2	-91.25	1,502.9	2,661.6	2,386.0	2,209.1	176.92	13.487	
8,267.7	6,621.6	6,577.6	6,577.6	47.4	131.2	-91.21	1,502.9	2,661.6	2,327.9	2,149.4	178.52	13.040	
8,300.0	6,621.1	6,577.1	6,577.1	48.1	131.2	-91.19	1,502.9	2,661.6	2,300.4	2,121.1	179.29	12.831	
8,366.1	6,620.3	6,576.3	6,576.3	49.7	131.2	-91.15	1,502.9	2,661.6	2,244.4	2,063.5	180.88	12.408	
8,400.0	6,619.9	6,575.9	6,575.9	50.6	131.2	-91.13	1,502.9	2,661.6	2,215.9	2,034.2	181.70	12.196	
8,464.5	6,619.0	6,575.0	6,575.0	52.2	131.2	-91.09	1,502.9	2,661.6	2,162.2	1,978.9	183.28	11.797	
8,500.0	6,618.6	6,574.6	6,574.6	53.0	131.2	-91.07	1,502.9	2,661.6	2,132.9	1,948.7	184.15	11.582	
8,563.0	6,617.8	6,573.8	6,573.8	54.6	131.1	-91.03	1,502.9	2,661.6	2,081.3	1,895.6	185.71	11.207	
8,600.0	6,617.3	6,573.3	6,573.3	55.5	131.1	-91.01	1,502.9	2,661.6	2,051.3	1,864.7	186.63	10.991	
8,661.4	6,616.5	6,572.5	6,572.5	57.1	131.1	-90.97	1,502.9	2,661.6	2,002.0	1,813.9	188.17	10.639	
8,700.0	6,616.0	6,572.0	6,572.0	58.1	131.1	-90.95	1,502.9	2,661.6	1,971.4	1,782.3	189.14	10.423	
8,759.8	6,615.2	6,571.2	6,571.2	59.6	131.1	-90.91	1,502.9	2,661.6	1,924.5	1,733.9	190.66	10.094	
8,800.0	6,614.7	6,570.7	6,570.7	60.6	131.1	-90.88	1,502.9	2,661.6	1,893.5	1,701.8	191.68	9.878	
8,858.2	6,614.0	6,570.0	6,570.0	62.1	131.1	-90.85	1,502.9	2,661.6	1,849.0	1,655.9	193.17	9.572	
8,900.0	6,613.4	6,569.4	6,569.4	63.2	131.1	-90.82	1,502.9	2,661.6	1,817.7	1,623.4	194.23	9.358	
8,956.7	6,612.7	6,568.7	6,568.7	64.7	131.0	-90.79	1,502.9	2,661.6	1,775.8	1,580.1	195.69	9.074	
9,000.0	6,612.2	6,568.2	6,568.2	65.8	131.0	-90.76	1,502.9	2,661.6	1,744.3	1,547.5	196.81	8.863	
9,055.1	6,611.5	6,567.5	6,567.5	67.3	131.0	-90.73	1,502.9	2,661.6	1,705.0	1,506.8	198.24	8.601	
9,100.0	6,610.9	6,566.9	6,566.9	68.4	131.0	-90.70	1,502.9	2,661.6	1,673.7	1,474.3	199.40	8.394	
9,153.5	6,610.2	6,566.2	6,566.2	69.8	131.0	-90.67	1,502.9	2,661.6	1,637.2	1,436.4	200.79	8.153	
9,200.0	6,609.6	6,565.6	6,565.6	71.1	131.0	-90.64	1,502.9	2,661.6	1,606.2	1,404.2	202.01	7.951	
9,251.9	6,608.9	6,564.9	6,564.9	72.4	131.0	-90.61	1,502.9	2,661.6	1,572.5	1,369.2	203.37	7.732	
9,300.0	6,608.3	6,564.3	6,564.3	73.7	130.9	-90.58	1,502.9	2,661.6	1,542.3	1,337.6	204.63	7.537	
9,350.4	6,607.7	6,563.7	6,563.7	75.0	130.9	-90.55	1,502.9	2,661.6	1,511.5	1,305.6	205.95	7.339	
9,400.0	6,607.0	6,563.0	6,563.0	76.4	130.9	-90.52	1,502.9	2,661.6	1,482.3	1,275.1	207.26	7.152	
9,448.8	6,606.4	6,562.4	6,562.4	77.7	130.9	-90.49	1,502.9	2,661.6	1,454.7	1,246.1	208.55	6.975	
9,500.0	6,605.7	6,561.7	6,561.7	79.0	130.9	-90.46	1,502.9	2,661.6	1,426.9	1,217.0	209.90	6.798	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.1	6,561.1	6,561.1	80.3	130.9	-90.43	1,502.9	2,661.6	1,402.4	1,191.2	211.15	6.642	
9,600.0	6,604.5	6,560.5	6,560.5	81.7	130.9	-90.40	1,502.9	2,661.6	1,376.4	1,163.9	212.55	6.476	
9,645.6	6,603.9	6,559.9	6,559.9	82.9	130.9	-90.37	1,502.9	2,661.6	1,355.2	1,141.5	213.77	6.340	
9,700.0	6,603.2	6,559.2	6,559.2	84.4	130.8	-90.34	1,502.9	2,661.6	1,331.6	1,116.4	215.21	6.188	
9,744.1	6,602.6	6,558.6	6,558.6	85.6	130.8	-90.31	1,502.9	2,661.6	1,313.8	1,097.4	216.39	6.072	
9,800.0	6,601.9	6,557.9	6,557.9	87.1	130.8	-90.28	1,502.9	2,661.6	1,293.0	1,075.1	217.88	5.935	
9,842.5	6,601.3	6,557.3	6,557.3	88.2	130.8	-90.25	1,502.9	2,661.6	1,278.6	1,059.6	219.02	5.838	
9,900.0	6,600.6	6,556.6	6,556.6	89.8	130.8	-90.22	1,502.9	2,661.6	1,261.2	1,040.6	220.55	5.718	
9,940.9	6,600.1	6,556.1	6,556.1	90.9	130.8	-90.19	1,502.9	2,661.6	1,250.2	1,028.6	221.65	5.640	
10,000.0	6,599.3	6,555.3	6,555.3	92.5	130.8	-90.16	1,502.9	2,661.6	1,236.6	1,013.4	223.24	5.539	
10,039.3	6,598.8	6,554.8	6,554.8	93.5	130.8	-90.13	1,502.9	2,661.6	1,229.0	1,004.7	224.29	5.480	
10,100.0	6,598.0	6,554.0	6,554.0	95.2	130.7	-90.10	1,502.9	2,661.6	1,219.8	993.8	225.92	5.399	
10,137.8	6,597.5	6,553.5	6,553.5	96.2	130.7	-90.07	1,502.9	2,661.6	1,215.5	988.5	226.94	5.356	
10,200.0	6,596.7	6,552.7	6,552.7	97.9	130.7	-90.03	1,502.9	2,661.6	1,211.0	982.4	228.62	5.297	
10,236.2	6,596.3	6,552.3	6,552.3	98.9	130.7	-90.01	1,502.9	2,661.6	1,209.8	980.2	229.59	5.269	
10,256.8	6,596.0	6,552.0	6,552.0	99.5	130.7	-90.00	1,502.9	2,661.6	1,209.6	979.5	230.15	5.256 CC	
10,300.0	6,595.4	6,551.4	6,551.4	100.6	130.7	-89.97	1,502.9	2,661.6	1,210.4	979.1	231.31	5.233 ES	
10,334.6	6,595.0	6,551.0	6,551.0	101.6	130.7	-89.95	1,502.9	2,661.6	1,212.1	979.9	232.25	5.219	
10,400.0	6,594.2	6,550.2	6,550.2	103.4	130.7	-89.91	1,502.9	2,661.6	1,218.1	984.1	234.02	5.205	
10,433.0	6,593.7	6,549.7	6,549.7	104.3	130.7	-89.89	1,502.9	2,661.6	1,222.4	987.5	234.91	5.204 SF	
10,500.0	6,592.9	6,548.9	6,548.9	106.1	130.6	-89.85	1,502.9	2,661.6	1,233.8	997.1	236.72	5.212	
10,531.5	6,592.5	6,548.5	6,548.5	106.9	130.6	-89.83	1,502.9	2,661.6	1,240.4	1,002.9	237.58	5.221	
10,600.0	6,591.6	6,547.6	6,547.6	108.8	130.6	-89.79	1,502.9	2,661.6	1,257.4	1,018.0	239.43	5.252	
10,629.9	6,591.2	6,547.2	6,547.2	109.6	130.6	-89.77	1,502.9	2,661.6	1,265.9	1,025.6	240.24	5.269	
10,700.0	6,590.3	6,546.3	6,546.3	111.6	130.6	-89.73	1,502.9	2,661.6	1,288.3	1,046.1	242.15	5.320	
10,728.3	6,589.9	6,545.9	6,545.9	112.3	130.6	-89.71	1,502.9	2,661.6	1,298.3	1,055.4	242.91	5.345	
10,800.0	6,589.0	6,545.0	6,545.0	114.3	130.6	-89.67	1,502.9	2,661.6	1,326.0	1,081.1	244.86	5.415	
10,826.7	6,588.7	6,544.7	6,544.7	115.0	130.6	-89.65	1,502.9	2,661.6	1,337.2	1,091.6	245.59	5.445	
10,900.0	6,587.7	6,543.7	6,543.7	117.1	130.5	-89.61	1,502.9	2,661.6	1,370.0	1,122.4	247.58	5.534	
10,925.2	6,587.4	6,543.4	6,543.4	117.7	130.5	-89.59	1,502.9	2,661.6	1,382.0	1,133.7	248.27	5.567	
11,000.0	6,586.4	6,542.4	6,542.4	119.8	130.5	-89.55	1,502.9	2,661.6	1,419.7	1,169.4	250.30	5.672	
11,023.6	6,586.1	6,542.1	6,542.1	120.4	130.5	-89.53	1,502.9	2,661.6	1,432.2	1,181.2	250.95	5.707	
11,100.0	6,585.1	6,541.1	6,541.1	122.6	130.5	-89.48	1,502.9	2,661.6	1,474.5	1,221.5	253.03	5.827	
11,122.0	6,584.8	6,540.8	6,540.8	123.2	130.5	-89.47	1,502.9	2,661.6	1,487.2	1,233.6	253.63	5.864	
11,200.0	6,583.8	6,539.8	6,539.8	125.3	130.5	-89.42	1,502.9	2,661.6	1,533.9	1,278.1	255.75	5.997	
11,220.4	6,583.6	6,539.6	6,539.6	125.9	130.5	-89.41	1,502.9	2,661.6	1,546.5	1,290.2	256.31	6.034	
11,300.0	6,582.5	6,538.5	6,538.5	128.1	130.4	-89.36	1,502.9	2,661.6	1,597.3	1,338.8	258.48	6.179	
11,318.9	6,582.3	6,538.3	6,538.3	128.6	130.4	-89.35	1,502.9	2,661.6	1,609.7	1,350.7	259.00	6.215	
11,400.0	6,581.2	6,537.2	6,537.2	130.8	130.4	-89.30	1,502.9	2,661.6	1,664.3	1,403.1	261.21	6.371	
11,417.3	6,581.0	6,537.0	6,537.0	131.3	130.4	-89.29	1,502.9	2,661.6	1,676.2	1,414.5	261.69	6.405	
11,500.0	6,580.0	6,536.0	6,536.0	133.6	130.4	-89.24	1,502.9	2,661.6	1,734.5	1,470.6	263.95	6.571	
11,515.7	6,579.7	6,535.7	6,535.7	134.0	130.4	-89.23	1,502.9	2,661.6	1,745.8	1,481.4	264.38	6.603	
11,600.0	6,578.7	6,534.7	6,534.7	136.3	130.4	-89.18	1,502.9	2,661.6	1,807.5	1,540.8	266.68	6.778	
11,614.1	6,578.5	6,534.5	6,534.5	136.7	130.3	-89.17	1,502.9	2,661.6	1,818.1	1,551.0	267.07	6.807	
11,700.0	6,577.4	6,533.4	6,533.4	139.1	130.3	-89.12	1,502.9	2,661.6	1,883.0	1,613.6	269.42	6.989	
11,712.6	6,577.2	6,533.2	6,533.2	139.5	130.3	-89.11	1,502.9	2,661.6	1,892.7	1,622.9	269.76	7.016	
11,800.0	6,576.1	6,532.1	6,532.1	141.9	130.3	-89.05	1,502.9	2,661.6	1,960.7	1,688.5	272.15	7.204	
11,811.0	6,575.9	6,531.9	6,531.9	142.2	130.3	-89.05	1,502.9	2,661.6	1,969.4	1,696.9	272.46	7.228	
11,882.7	6,575.0	6,531.0	6,531.0	144.2	130.3	-89.00	1,502.9	2,661.6	2,026.4	1,752.0	274.42	7.384	
11,883.5	6,575.0	6,531.0	6,531.0	144.2	130.3	-89.00	1,502.9	2,661.6	2,027.0	1,752.6	274.43	7.386	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	83.43	305.1	2,650.9	2,668.4				
98.4	98.4	94.4	94.4	0.1	0.0	83.43	305.1	2,650.9	2,668.4	2,668.3	0.10	N/A	
100.0	100.0	96.0	96.0	0.1	0.0	83.43	305.1	2,650.9	2,668.4	2,668.3	0.10	N/A	
196.8	196.8	192.8	192.8	0.3	1.0	83.43	305.1	2,650.9	2,668.4	2,667.1	1.30	2,045.696	
200.0	200.0	196.0	196.0	0.3	1.0	83.43	305.1	2,650.9	2,668.4	2,667.0	1.35	1,983.899	
295.3	295.3	291.3	291.3	0.5	3.2	83.43	305.1	2,650.9	2,668.4	2,664.7	3.72	717.415	
300.0	300.0	296.0	296.0	0.5	3.3	83.43	305.1	2,650.9	2,668.4	2,664.5	3.84	694.948	
393.7	393.7	389.7	389.7	0.8	5.3	83.43	305.1	2,650.9	2,668.4	2,662.4	6.01	444.051	
400.0	400.0	396.0	396.0	0.8	5.4	83.43	305.1	2,650.9	2,668.4	2,662.2	6.15	433.573	
492.1	492.1	488.1	488.1	1.0	7.3	83.43	305.1	2,650.9	2,668.4	2,660.1	8.24	323.646	
500.0	500.0	496.0	496.0	1.0	7.4	83.43	305.1	2,650.9	2,668.4	2,660.0	8.42	316.786	
590.5	590.5	586.5	586.5	1.2	9.3	83.43	305.1	2,650.9	2,668.4	2,657.9	10.46	254.987	
600.0	600.0	596.0	596.0	1.2	9.5	83.43	305.1	2,650.9	2,668.4	2,657.7	10.68	249.901	
689.0	689.0	685.0	685.0	1.4	11.3	83.43	305.1	2,650.9	2,668.4	2,655.7	12.68	210.477	
700.0	700.0	696.0	696.0	1.4	11.5	83.43	305.1	2,650.9	2,668.4	2,655.5	12.93	206.442	
787.4	787.4	783.4	783.4	1.6	13.2	83.43	305.1	2,650.9	2,668.4	2,653.5	14.89	179.242	
800.0	800.0	796.0	796.0	1.7	13.5	83.43	305.1	2,650.9	2,668.4	2,653.2	15.17	175.901	
885.8	885.8	881.8	881.8	1.9	15.2	83.43	305.1	2,650.9	2,668.4	2,651.3	17.09	156.101	
900.0	900.0	896.0	896.0	1.9	15.5	83.43	305.1	2,650.9	2,668.4	2,651.0	17.41	153.252	
984.2	984.2	980.2	980.2	2.1	17.2	83.43	305.1	2,650.9	2,668.4	2,649.1	19.30	138.263	
1,000.0	1,000.0	996.0	996.0	2.1	17.5	83.43	305.1	2,650.9	2,668.4	2,648.7	19.65	135.780	
1,082.7	1,082.7	1,078.7	1,078.7	2.3	19.2	83.43	305.1	2,650.9	2,668.4	2,646.9	21.50	124.089	
1,100.0	1,100.0	1,096.0	1,096.0	2.3	19.5	83.43	305.1	2,650.9	2,668.4	2,646.5	21.89	121.890	
1,181.1	1,181.1	1,177.1	1,177.1	2.5	21.2	83.43	305.1	2,650.9	2,668.4	2,644.7	23.71	112.555	
1,200.0	1,200.0	1,196.0	1,196.0	2.6	21.6	83.43	305.1	2,650.9	2,668.4	2,644.3	24.13	110.581	
1,279.5	1,279.5	1,275.5	1,275.5	2.7	23.2	83.43	305.1	2,650.9	2,668.4	2,642.5	25.91	102.984	
1,300.0	1,300.0	1,296.0	1,296.0	2.8	23.6	83.43	305.1	2,650.9	2,668.4	2,642.0	26.37	101.194	
1,377.9	1,377.9	1,373.9	1,373.9	3.0	25.1	83.43	305.1	2,650.9	2,668.4	2,640.3	28.11	94.915	
1,400.0	1,400.0	1,396.0	1,396.0	3.0	25.6	83.43	305.1	2,650.9	2,668.4	2,639.8	28.61	93.278	
1,476.4	1,476.4	1,472.4	1,472.4	3.2	27.1	158.56	305.1	2,650.9	2,669.3	2,639.0	30.30	88.101	
1,500.0	1,500.0	1,496.0	1,496.0	3.2	27.6	158.56	305.1	2,650.9	2,670.0	2,639.2	30.82	86.639	
1,574.8	1,574.7	1,570.7	1,570.7	3.4	29.1	158.57	305.1	2,650.9	2,673.4	2,640.9	32.44	82.408	
1,600.0	1,599.8	1,595.8	1,595.8	3.4	29.6	158.57	305.1	2,650.9	2,674.9	2,641.9	32.98	81.103	
1,673.2	1,672.8	1,668.8	1,668.8	3.6	31.1	158.57	305.1	2,650.9	2,680.5	2,646.0	34.54	77.610	
1,700.0	1,699.5	1,695.5	1,695.5	3.7	31.6	158.58	305.1	2,650.9	2,683.0	2,647.9	35.10	76.438	
1,771.6	1,770.6	1,766.6	1,766.6	3.8	33.0	158.58	305.1	2,650.9	2,690.8	2,654.2	36.59	73.544	
1,800.0	1,798.7	1,794.7	1,794.7	3.9	33.6	158.59	305.1	2,650.9	2,694.4	2,657.2	37.17	72.493	
1,870.1	1,868.0	1,864.0	1,864.0	4.1	35.0	158.60	305.1	2,650.9	2,704.2	2,665.7	38.58	70.091	
1,900.0	1,897.5	1,893.5	1,893.5	4.2	35.6	158.60	305.1	2,650.9	2,708.9	2,669.8	39.18	69.149	
1,968.5	1,964.8	1,960.8	1,960.8	4.4	37.0	158.61	305.1	2,650.9	2,720.8	2,680.3	40.51	67.156	
2,000.0	1,995.6	1,991.6	1,991.6	4.5	37.6	158.62	305.1	2,650.9	2,726.8	2,685.6	41.12	66.315	
2,066.9	2,060.9	2,056.9	2,056.9	4.7	38.9	158.63	305.1	2,650.9	2,740.5	2,698.1	42.38	64.662	
2,100.0	2,093.1	2,089.1	2,089.1	4.8	39.5	158.63	305.1	2,650.9	2,747.8	2,704.8	42.99	63.915	
2,165.3	2,156.3	2,152.3	2,152.3	5.1	40.8	158.64	305.1	2,650.9	2,763.2	2,719.1	44.18	62.550	
2,200.0	2,189.6	2,185.6	2,185.6	5.2	41.5	158.64	305.1	2,650.9	2,772.0	2,727.2	44.79	61.890	
2,263.8	2,250.7	2,246.7	2,246.7	5.5	42.7	158.65	305.1	2,650.9	2,789.1	2,743.2	45.90	60.771	
2,280.0	2,266.2	2,262.2	2,262.2	5.6	43.0	158.65	305.1	2,650.9	2,793.6	2,747.5	46.17	60.508	
2,300.0	2,285.3	2,281.3	2,281.3	5.7	43.4	158.70	305.1	2,650.9	2,799.3	2,752.7	46.59	60.082	
2,362.2	2,344.6	2,340.6	2,340.6	6.0	44.6	158.83	305.1	2,650.9	2,816.9	2,769.0	47.90	58.809	
2,400.0	2,380.6	2,376.6	2,376.6	6.2	45.3	158.92	305.1	2,650.9	2,827.7	2,779.0	48.71	58.055	
2,460.6	2,438.4	2,434.4	2,434.4	6.5	46.5	159.05	305.1	2,650.9	2,844.9	2,794.9	49.99	56.906	
2,500.0	2,475.9	2,471.9	2,471.9	6.7	47.2	159.13	305.1	2,650.9	2,856.1	2,805.2	50.83	56.189	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,528.2	2,528.2	7.0	48.4	159.26	305.1	2,650.9	2,872.9	2,820.8	52.09	55.155	
2,600.0	2,571.2	2,567.2	2,567.2	7.2	49.2	159.35	305.1	2,650.9	2,884.5	2,831.5	52.96	54.466	
2,657.5	2,626.0	2,622.0	2,622.0	7.5	50.3	159.47	305.1	2,650.9	2,900.9	2,846.7	54.19	53.535	
2,700.0	2,666.6	2,662.6	2,662.6	7.8	51.1	159.56	305.1	2,650.9	2,913.0	2,857.9	55.10	52.872	
2,755.9	2,719.8	2,715.8	2,715.8	8.1	52.1	159.67	305.1	2,650.9	2,928.9	2,872.6	56.29	52.032	
2,800.0	2,761.9	2,757.9	2,757.9	8.3	53.0	159.76	305.1	2,650.9	2,941.5	2,884.3	57.23	51.394	
2,854.3	2,813.7	2,809.7	2,809.7	8.7	54.0	159.87	305.1	2,650.9	2,957.0	2,898.6	58.40	50.635	
2,900.0	2,857.2	2,853.2	2,853.2	8.9	54.9	159.96	305.1	2,650.9	2,970.0	2,910.7	59.38	50.019	
2,952.7	2,907.5	2,903.5	2,903.5	9.2	55.9	160.07	305.1	2,650.9	2,985.1	2,924.6	60.51	49.333	
3,000.0	2,952.5	2,948.5	2,948.5	9.5	56.8	160.16	305.1	2,650.9	2,998.6	2,937.1	61.52	48.739	
3,051.2	3,001.3	2,997.3	2,997.3	9.8	57.8	160.26	305.1	2,650.9	3,013.3	2,950.6	62.62	48.118	
3,100.0	3,047.8	3,043.8	3,043.8	10.1	58.7	160.35	305.1	2,650.9	3,027.2	2,963.6	63.67	47.545	
3,149.6	3,095.1	3,091.1	3,091.1	10.4	59.7	160.45	305.1	2,650.9	3,041.4	2,976.7	64.74	46.981	
3,200.0	3,143.2	3,139.2	3,139.2	10.7	60.7	160.54	305.1	2,650.9	3,055.9	2,990.0	65.82	46.427	
3,248.0	3,188.9	3,184.9	3,184.9	11.0	61.6	160.63	305.1	2,650.9	3,069.6	3,002.8	66.85	45.916	
3,300.0	3,238.5	3,234.5	3,234.5	11.3	62.6	160.73	305.1	2,650.9	3,084.5	3,016.6	67.97	45.380	
3,346.4	3,282.8	3,278.8	3,278.8	11.6	63.5	160.81	305.1	2,650.9	3,097.9	3,028.9	68.97	44.915	
3,400.0	3,333.8	3,329.8	3,329.8	11.9	64.5	160.91	305.1	2,650.9	3,113.2	3,043.1	70.12	44.397	
3,444.9	3,376.6	3,372.6	3,372.6	12.2	65.4	160.99	305.1	2,650.9	3,126.1	3,055.0	71.09	43.974	
3,500.0	3,429.1	3,425.1	3,425.1	12.6	66.4	161.09	305.1	2,650.9	3,142.0	3,069.7	72.28	43.472	
3,543.3	3,470.4	3,466.4	3,466.4	12.8	67.2	161.17	305.1	2,650.9	3,154.4	3,081.2	73.21	43.088	
3,600.0	3,524.4	3,520.4	3,520.4	13.2	68.3	161.27	305.1	2,650.9	3,170.7	3,096.3	74.43	42.601	
3,641.7	3,564.2	3,560.2	3,560.2	13.4	69.1	161.34	305.1	2,650.9	3,182.7	3,107.4	75.33	42.252	
3,700.0	3,619.8	3,615.8	3,615.8	13.8	70.2	161.44	305.1	2,650.9	3,199.5	3,122.9	76.58	41.779	
3,740.1	3,658.0	3,654.0	3,654.0	14.0	71.0	161.51	305.1	2,650.9	3,211.1	3,133.6	77.45	41.461	
3,800.0	3,715.1	3,711.1	3,711.1	14.4	72.2	161.61	305.1	2,650.9	3,228.3	3,149.6	78.74	41.002	
3,838.6	3,751.8	3,747.8	3,747.8	14.7	72.9	161.67	305.1	2,650.9	3,239.4	3,159.9	79.57	40.713	
3,900.0	3,810.4	3,806.4	3,806.4	15.0	74.1	161.78	305.1	2,650.9	3,257.2	3,176.3	80.89	40.266	
3,937.0	3,845.7	3,841.7	3,841.7	15.3	74.8	161.84	305.1	2,650.9	3,267.8	3,186.2	81.69	40.004	
4,000.0	3,905.7	3,901.7	3,901.7	15.7	76.0	161.94	305.1	2,650.9	3,286.0	3,203.0	83.04	39.570	
4,035.4	3,939.5	3,935.5	3,935.5	15.9	76.7	162.00	305.1	2,650.9	3,296.3	3,212.4	83.81	39.331	
4,100.0	4,001.0	3,997.0	3,997.0	16.3	77.9	162.10	305.1	2,650.9	3,314.9	3,229.7	85.20	38.908	
4,133.8	4,033.3	4,029.3	4,029.3	16.5	78.6	162.16	305.1	2,650.9	3,324.7	3,238.8	85.93	38.692	
4,200.0	4,096.3	4,092.3	4,092.3	16.9	79.8	162.26	305.1	2,650.9	3,343.8	3,256.5	87.35	38.280	
4,232.3	4,127.1	4,123.1	4,123.1	17.1	80.4	162.31	305.1	2,650.9	3,353.2	3,265.1	88.05	38.084	
4,300.0	4,191.7	4,187.7	4,187.7	17.6	81.7	162.42	305.1	2,650.9	3,372.8	3,283.3	89.50	37.683	
4,330.7	4,220.9	4,216.9	4,216.9	17.8	82.3	162.46	305.1	2,650.9	3,381.6	3,291.5	90.17	37.505	
4,400.0	4,287.0	4,283.0	4,283.0	18.2	83.7	162.57	305.1	2,650.9	3,401.7	3,310.1	91.66	37.113	
4,429.1	4,314.7	4,310.7	4,310.7	18.4	84.2	162.61	305.1	2,650.9	3,410.2	3,317.9	92.28	36.953	
4,500.0	4,382.3	4,378.3	4,378.3	18.8	85.6	162.72	305.1	2,650.9	3,430.7	3,336.9	93.81	36.571	
4,527.5	4,408.6	4,404.6	4,404.6	19.0	86.1	162.76	305.1	2,650.9	3,438.7	3,344.3	94.40	36.425	
4,600.0	4,477.6	4,473.6	4,473.6	19.5	87.5	162.87	305.1	2,650.9	3,459.7	3,363.7	95.96	36.052	
4,626.0	4,502.4	4,498.4	4,498.4	19.6	88.0	162.91	305.1	2,650.9	3,467.2	3,370.7	96.52	35.922	
4,700.0	4,572.9	4,568.9	4,568.9	20.1	89.4	163.01	305.1	2,650.9	3,488.7	3,390.6	98.11	35.558	
4,724.4	4,596.2	4,592.2	4,592.2	20.3	89.9	163.05	305.1	2,650.9	3,495.8	3,397.2	98.64	35.440	
4,800.0	4,668.3	4,664.3	4,664.3	20.7	91.3	163.16	305.1	2,650.9	3,517.8	3,417.5	100.27	35.084	
4,822.8	4,690.0	4,686.0	4,686.0	20.9	91.8	163.19	305.1	2,650.9	3,524.4	3,423.6	100.76	34.979	
4,900.0	4,763.6	4,759.6	4,759.6	21.4	93.2	163.30	305.1	2,650.9	3,546.8	3,444.4	102.42	34.631	
4,921.2	4,783.8	4,779.8	4,779.8	21.5	93.7	163.33	305.1	2,650.9	3,553.0	3,450.1	102.87	34.537	
5,000.0	4,858.9	4,854.9	4,854.9	22.0	95.2	163.44	305.1	2,650.9	3,575.9	3,471.3	104.57	34.197	
5,019.7	4,877.7	4,873.7	4,873.7	22.1	95.5	163.46	305.1	2,650.9	3,581.6	3,476.6	104.99	34.113	
5,100.0	4,954.2	4,950.2	4,950.2	22.6	97.1	163.57	305.1	2,650.9	3,605.0	3,498.3	106.72	33.780	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #32-10 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	4,971.5	4,967.5	4,967.5	22.8	97.4	163.60	305.1	2,650.9	3,610.3	3,503.2	107.11	33.707	
5,171.8	5,022.7	5,018.7	5,018.7	23.1	98.5	163.67	305.1	2,650.9	3,625.9	3,517.6	108.26	33.492	
5,200.0	5,049.6	5,045.6	5,045.6	23.3	99.0	163.75	305.1	2,650.9	3,634.0	3,524.9	109.13	33.300	
5,216.5	5,065.4	5,061.4	5,061.4	23.3	99.3	163.80	305.1	2,650.9	3,638.6	3,529.0	109.63	33.190	
5,300.0	5,145.7	5,141.7	5,141.7	23.7	100.9	164.03	305.1	2,650.9	3,660.6	3,548.5	112.14	32.643	
5,314.9	5,160.1	5,156.1	5,156.1	23.8	101.2	164.06	305.1	2,650.9	3,664.3	3,551.7	112.58	32.548	
5,400.0	5,242.7	5,238.7	5,238.7	24.1	102.9	164.26	305.1	2,650.9	3,684.0	3,568.9	115.07	32.015	
5,413.4	5,255.7	5,251.7	5,251.7	24.2	103.1	164.29	305.1	2,650.9	3,686.9	3,571.4	115.46	31.933	
5,500.0	5,340.5	5,336.5	5,336.5	24.5	104.8	164.46	305.1	2,650.9	3,704.1	3,586.2	117.91	31.414	
5,511.8	5,352.1	5,348.1	5,348.1	24.5	105.1	164.48	305.1	2,650.9	3,706.3	3,588.0	118.24	31.345	
5,600.0	5,439.0	5,435.0	5,435.0	24.8	106.8	164.62	305.1	2,650.9	3,720.9	3,600.3	120.65	30.840	
5,610.2	5,449.1	5,445.1	5,445.1	24.8	107.0	164.64	305.1	2,650.9	3,722.5	3,601.5	120.93	30.783	
5,700.0	5,538.0	5,534.0	5,534.0	25.1	108.8	164.75	305.1	2,650.9	3,734.4	3,611.1	123.28	30.292	
5,708.6	5,546.6	5,542.6	5,542.6	25.1	109.0	164.76	305.1	2,650.9	3,735.4	3,611.9	123.50	30.246	
5,800.0	5,637.4	5,633.4	5,633.4	25.3	110.8	164.85	305.1	2,650.9	3,744.6	3,618.8	125.79	29.770	
5,807.1	5,644.5	5,640.5	5,640.5	25.3	111.0	164.85	305.1	2,650.9	3,745.2	3,619.2	125.96	29.734	
5,900.0	5,737.2	5,733.2	5,733.2	25.5	112.8	164.91	305.1	2,650.9	3,751.4	3,623.2	128.16	29.272	
5,905.5	5,742.6	5,738.6	5,738.6	25.5	112.9	164.91	305.1	2,650.9	3,751.6	3,623.4	128.28	29.245	
6,000.0	5,837.1	5,833.1	5,833.1	25.6	114.8	164.94	305.1	2,650.9	3,754.8	3,624.4	130.39	28.798	
6,003.9	5,841.0	5,837.0	5,837.0	25.6	114.9	164.94	305.1	2,650.9	3,754.9	3,624.4	130.47	28.779	
6,051.8	5,888.9	5,884.9	5,884.9	25.7	115.9	89.82	305.1	2,650.9	3,755.2	3,614.2	141.02	26.630	
6,081.8	5,918.9	5,914.9	5,914.9	25.7	116.5	89.82	305.1	2,650.9	3,755.2	3,613.6	141.65	26.511	
6,100.0	5,937.1	5,933.1	5,933.1	25.7	116.8	-0.18	305.1	2,650.9	3,755.0	3,622.6	132.42	28.357	
6,102.3	5,939.4	5,935.4	5,935.4	25.7	116.9	-0.18	305.1	2,650.9	3,755.0	3,622.5	132.45	28.350	
6,150.0	5,987.0	5,983.0	5,983.0	25.7	117.8	-0.18	305.1	2,650.9	3,752.0	3,619.2	132.76	28.261	
6,200.0	6,036.5	6,032.5	6,032.5	25.7	118.8	-0.18	305.1	2,650.9	3,745.5	3,613.1	132.44	28.281	
6,200.8	6,037.3	6,033.3	6,033.3	25.7	118.9	-0.18	305.1	2,650.9	3,745.4	3,613.0	132.43	28.282	
6,250.0	6,085.5	6,081.5	6,081.5	25.7	119.8	-0.19	305.1	2,650.9	3,735.6	3,604.1	131.44	28.420	
6,299.2	6,133.0	6,129.0	6,129.0	25.6	120.8	-0.19	305.1	2,650.9	3,722.5	3,592.7	129.79	28.680	
6,300.0	6,133.7	6,129.7	6,129.7	25.6	120.8	-0.19	305.1	2,650.9	3,722.3	3,592.5	129.76	28.686	
6,350.0	6,180.9	6,176.9	6,176.9	25.5	121.7	-0.20	305.1	2,650.9	3,705.6	3,578.2	127.40	29.087	
6,397.6	6,224.6	6,220.6	6,220.6	25.4	122.6	-0.20	305.1	2,650.9	3,686.7	3,562.2	124.52	29.609	
6,400.0	6,226.7	6,222.7	6,222.7	25.4	122.7	-0.20	305.1	2,650.9	3,685.7	3,561.4	124.36	29.639	
6,450.0	6,271.1	6,267.1	6,267.1	25.2	123.6	-0.21	305.1	2,650.9	3,662.7	3,542.0	120.64	30.359	
6,496.0	6,310.4	6,306.4	6,306.4	25.1	124.4	-0.22	305.1	2,650.9	3,638.8	3,522.1	116.65	31.194	
6,500.0	6,313.7	6,309.7	6,309.7	25.1	124.4	-0.22	305.1	2,650.9	3,636.6	3,520.3	116.28	31.274	
6,550.0	6,354.4	6,350.4	6,350.4	25.0	125.2	-0.24	305.1	2,650.9	3,607.6	3,496.3	111.29	32.417	
6,594.5	6,388.9	6,384.9	6,384.9	24.9	125.9	-0.25	305.1	2,650.9	3,579.5	3,473.1	106.34	33.661	
6,600.0	6,393.0	6,389.0	6,389.0	24.9	126.0	-0.25	305.1	2,650.9	3,575.8	3,470.1	105.69	33.833	
6,650.0	6,429.3	6,425.3	6,425.3	24.8	126.7	-0.27	305.1	2,650.9	3,541.4	3,441.9	99.53	35.581	
6,692.9	6,458.5	6,454.5	6,454.5	24.7	127.3	-0.29	305.1	2,650.9	3,510.0	3,416.1	93.84	37.406	
6,700.0	6,463.1	6,459.1	6,459.1	24.7	127.4	-0.30	305.1	2,650.9	3,504.6	3,411.7	92.86	37.742	
6,750.0	6,494.3	6,490.3	6,490.3	24.7	128.1	-0.33	305.1	2,650.9	3,465.5	3,379.8	85.72	40.428	
6,791.3	6,517.9	6,513.9	6,513.9	24.7	128.5	-0.36	305.1	2,650.9	3,431.6	3,352.1	79.52	43.155	
6,800.0	6,522.6	6,518.6	6,518.6	24.7	128.6	-0.37	305.1	2,650.9	3,424.3	3,346.1	78.19	43.797	
6,850.0	6,548.0	6,544.0	6,544.0	24.7	129.1	-0.42	305.1	2,650.9	3,381.3	3,310.9	70.32	48.081	
6,889.7	6,566.0	6,562.0	6,562.0	24.8	129.5	-0.47	305.1	2,650.9	3,345.8	3,282.0	63.90	52.364	
6,900.0	6,570.4	6,566.4	6,566.4	24.9	129.6	-0.49	305.1	2,650.9	3,336.6	3,274.3	62.22	53.628	
6,950.0	6,589.5	6,585.5	6,585.5	25.1	130.0	-0.58	305.1	2,650.9	3,290.4	3,236.4	53.95	60.991	
6,988.2	6,602.0	6,598.0	6,598.0	25.3	130.2	-0.69	305.1	2,650.9	3,254.3	3,206.7	47.58	68.391	
7,000.0	6,605.4	6,601.4	6,601.4	25.3	130.3	-0.73	305.1	2,650.9	3,243.0	3,197.4	45.61	71.104	
7,050.0	6,618.0	6,614.0	6,614.0	25.6	130.5	-0.97	305.1	2,650.9	3,194.6	3,157.3	37.32	85.606	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,625.0	6,621.0	6,621.0	25.9	130.7	-1.28	305.1	2,650.9	3,158.7	3,127.3	31.41	100.563	
7,100.0	6,627.1	6,623.1	6,623.1	26.0	130.7	-1.45	305.1	2,650.9	3,145.5	3,116.1	29.33	107.247	
7,150.0	6,632.8	6,628.8	6,628.8	26.5	130.8	-2.75	305.1	2,650.9	3,095.8	3,072.8	23.04	134.374	
7,185.0	6,634.7	6,630.7	6,630.7	26.8	130.9	-7.23	305.1	2,650.9	3,060.8	3,032.4	28.40	107.773	
7,200.0	6,635.0	6,631.0	6,631.0	27.0	130.9	-22.30	305.1	2,650.9	3,045.8	2,981.7	64.13	47.492	
7,215.9	6,635.0	6,631.0	6,631.0	27.1	130.9	-163.05	305.1	2,650.9	3,029.9	2,979.7	50.26	60.289	
7,283.4	6,634.1	6,630.1	6,630.1	27.9	130.9	-162.69	305.1	2,650.9	2,962.4	2,910.9	51.52	57.498	
7,300.0	6,633.9	6,629.9	6,629.9	28.1	130.9	-162.60	305.1	2,650.9	2,945.9	2,894.0	51.83	56.838	
7,381.9	6,632.9	6,628.9	6,628.9	29.3	130.8	-162.13	305.1	2,650.9	2,864.0	2,810.5	53.48	53.551	
7,400.0	6,632.6	6,628.6	6,628.6	29.5	130.8	-162.03	305.1	2,650.9	2,845.9	2,792.0	53.84	52.853	
7,480.3	6,631.6	6,627.6	6,627.6	30.8	130.8	-161.54	305.1	2,650.9	2,765.6	2,710.0	55.60	49.744	
7,500.0	6,631.4	6,627.4	6,627.4	31.1	130.8	-161.43	305.1	2,650.9	2,745.9	2,689.9	56.02	49.012	
7,578.7	6,630.4	6,626.4	6,626.4	32.5	130.8	-160.92	305.1	2,650.9	2,667.2	2,609.3	57.88	46.085	
7,600.0	6,630.1	6,626.1	6,626.1	32.9	130.8	-160.78	305.1	2,650.9	2,645.9	2,587.5	58.38	45.325	
7,677.1	6,629.1	6,625.1	6,625.1	34.3	130.8	-160.25	305.1	2,650.9	2,568.7	2,508.4	60.33	42.580	
7,700.0	6,628.8	6,624.8	6,624.8	34.8	130.8	-160.09	305.1	2,650.9	2,545.9	2,485.0	60.91	41.799	
7,775.6	6,627.8	6,623.8	6,623.8	36.3	130.7	-159.53	305.1	2,650.9	2,470.3	2,407.4	62.96	39.236	
7,800.0	6,627.5	6,623.5	6,623.5	36.8	130.7	-159.35	305.1	2,650.9	2,445.9	2,382.3	63.63	38.439	
7,874.0	6,626.6	6,622.6	6,622.6	38.4	130.7	-158.76	305.1	2,650.9	2,371.9	2,306.1	65.79	36.052	
7,900.0	6,626.3	6,622.3	6,622.3	38.9	130.7	-158.55	305.1	2,650.9	2,345.9	2,279.4	66.56	35.245	
7,972.4	6,625.3	6,621.3	6,621.3	40.5	130.7	-157.94	305.1	2,650.9	2,273.5	2,204.7	68.83	33.029	
8,000.0	6,625.0	6,621.0	6,621.0	41.1	130.7	-157.70	305.1	2,650.9	2,245.9	2,176.2	69.71	32.217	
8,070.8	6,624.1	6,620.1	6,620.1	42.7	130.7	-157.04	305.1	2,650.9	2,175.1	2,103.0	72.10	30.166	
8,100.0	6,623.7	6,619.7	6,619.7	43.4	130.7	-156.77	305.1	2,650.9	2,145.9	2,072.8	73.10	29.354	
8,169.3	6,622.8	6,618.8	6,618.8	45.0	130.6	-156.08	305.1	2,650.9	2,076.7	2,001.0	75.62	27.461	
8,200.0	6,622.4	6,618.4	6,618.4	45.7	130.6	-155.77	305.1	2,650.9	2,045.9	1,969.2	76.76	26.653	
8,267.7	6,621.6	6,617.6	6,617.6	47.4	130.6	-155.04	305.1	2,650.9	1,978.2	1,898.8	79.42	24.910	
8,300.0	6,621.1	6,617.1	6,617.1	48.1	130.6	-154.69	305.1	2,650.9	1,946.0	1,865.2	80.71	24.110	
8,366.1	6,620.3	6,616.3	6,616.3	49.7	130.6	-153.91	305.1	2,650.9	1,879.8	1,796.3	83.51	22.510	
8,400.0	6,619.9	6,615.9	6,615.9	50.6	130.6	-153.51	305.1	2,650.9	1,846.0	1,761.0	84.98	21.723	
8,464.5	6,619.0	6,615.0	6,615.0	52.2	130.6	-152.68	305.1	2,650.9	1,781.4	1,693.5	87.93	20.259	
8,500.0	6,618.6	6,614.6	6,614.6	53.0	130.5	-152.22	305.1	2,650.9	1,746.0	1,656.4	89.60	19.486	
8,563.0	6,617.8	6,613.8	6,613.8	54.6	130.5	-151.34	305.1	2,650.9	1,683.0	1,590.3	92.72	18.151	
8,600.0	6,617.3	6,613.3	6,613.3	55.5	130.5	-150.81	305.1	2,650.9	1,646.0	1,551.4	94.61	17.397	
8,661.4	6,616.5	6,612.5	6,612.5	57.1	130.5	-149.87	305.1	2,650.9	1,584.6	1,486.7	97.91	16.184	
8,700.0	6,616.0	6,612.0	6,612.0	58.1	130.5	-149.26	305.1	2,650.9	1,546.0	1,445.9	100.05	15.452	
8,759.8	6,615.2	6,611.2	6,611.2	59.6	130.5	-148.26	305.1	2,650.9	1,486.2	1,382.6	103.54	14.353	
8,800.0	6,614.7	6,610.7	6,610.7	60.6	130.5	-147.56	305.1	2,650.9	1,446.0	1,340.0	105.97	13.646	
8,858.2	6,614.0	6,610.0	6,610.0	62.1	130.5	-146.49	305.1	2,650.9	1,387.8	1,278.1	109.66	12.655	
8,900.0	6,613.4	6,609.4	6,609.4	63.2	130.4	-145.68	305.1	2,650.9	1,346.0	1,233.6	112.40	11.975	
8,956.7	6,612.7	6,608.7	6,608.7	64.7	130.4	-144.53	305.1	2,650.9	1,289.3	1,173.0	116.31	11.086	
9,000.0	6,612.2	6,608.2	6,608.2	65.8	130.4	-143.61	305.1	2,650.9	1,246.0	1,126.6	119.40	10.436	
9,055.1	6,611.5	6,607.5	6,607.5	67.3	130.4	-142.36	305.1	2,650.9	1,190.9	1,067.4	123.52	9.642	
9,100.0	6,610.9	6,606.9	6,606.9	68.4	130.4	-141.30	305.1	2,650.9	1,146.0	1,019.0	127.00	9.024	
9,153.5	6,610.2	6,606.2	6,606.2	69.8	130.4	-139.96	305.1	2,650.9	1,092.5	961.2	131.34	8.318	
9,200.0	6,609.6	6,605.6	6,605.6	71.1	130.4	-138.73	305.1	2,650.9	1,046.1	910.8	135.24	7.735	
9,251.9	6,608.9	6,604.9	6,604.9	72.4	130.4	-137.28	305.1	2,650.9	994.1	854.3	139.79	7.111	
9,300.0	6,608.3	6,604.3	6,604.3	73.7	130.3	-135.87	305.1	2,650.9	946.1	801.9	144.13	6.564	
9,350.4	6,607.7	6,603.7	6,603.7	75.0	130.3	-134.31	305.1	2,650.9	895.7	746.8	148.87	6.017	
9,400.0	6,607.0	6,603.0	6,603.0	76.4	130.3	-132.68	305.1	2,650.9	846.1	692.4	153.67	5.506	
9,448.8	6,606.4	6,602.4	6,602.4	77.7	130.3	-130.99	305.1	2,650.9	797.3	638.8	158.55	5.029	
9,500.0	6,605.7	6,601.7	6,601.7	79.0	130.3	-129.13	305.1	2,650.9	746.1	582.3	163.78	4.556	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.1	6,601.1	6,601.1	80.3	130.3	-127.31	305.1	2,650.9	698.9	530.2	168.73	4.142	
9,600.0	6,604.5	6,600.5	6,600.5	81.7	130.3	-125.17	305.1	2,650.9	646.1	471.8	174.34	3.706	
9,645.6	6,603.9	6,599.9	6,599.9	82.9	130.3	-123.22	305.1	2,650.9	600.5	421.2	179.27	3.350	
9,700.0	6,603.2	6,599.2	6,599.2	84.4	130.2	-120.79	305.1	2,650.9	546.2	361.0	185.14	2.950	
9,744.1	6,602.6	6,598.6	6,598.6	85.6	130.2	-118.71	305.1	2,650.9	502.1	312.2	189.90	2.644	
9,800.0	6,601.9	6,597.9	6,597.9	87.1	130.2	-115.96	305.1	2,650.9	446.2	250.4	195.84	2.278	
9,842.5	6,601.3	6,597.3	6,597.3	88.2	130.2	-113.77	305.1	2,650.9	403.7	203.5	200.26	2.016	
9,900.0	6,600.6	6,596.6	6,596.6	89.8	130.2	-110.70	305.1	2,650.9	346.2	140.3	206.00	1.681	
9,940.9	6,600.1	6,596.1	6,596.1	90.9	130.2	-108.43	305.1	2,650.9	305.4	95.5	209.88	1.455 Level 3	
10,000.0	6,599.3	6,595.3	6,595.3	92.5	130.2	-105.04	305.1	2,650.9	246.3	31.3	215.07	1.145 Level 2	
10,039.3	6,598.8	6,594.8	6,594.8	93.5	130.2	-102.72	305.1	2,650.9	207.0	-11.2	218.21	0.949 Level 1	
10,100.0	6,598.0	6,594.0	6,594.0	95.2	130.1	-99.07	305.1	2,650.9	146.5	-75.9	222.47	0.659 Level 1	
10,137.8	6,597.5	6,593.5	6,593.5	96.2	130.1	-96.75	305.1	2,650.9	108.9	-115.8	224.72	0.485 Level 1	
10,200.0	6,596.7	6,592.7	6,592.7	97.9	130.1	-92.88	305.1	2,650.9	47.6	-180.1	227.69	0.209 Level 1	
10,236.2	6,596.3	6,592.3	6,592.3	98.9	130.1	-90.62	305.1	2,650.9	15.4	-213.6	228.96	0.067 Level 1	
10,246.0	6,596.1	6,592.1	6,592.1	99.2	130.1	-90.00	305.1	2,650.9	11.8	-217.5	229.25	0.051 Level 1, CC, ES, SF	
10,300.0	6,595.4	6,591.4	6,591.4	100.6	130.1	-86.63	305.1	2,650.9	55.2	-175.2	230.38	0.240 Level 1	
10,334.6	6,595.0	6,591.0	6,591.0	101.6	130.1	-84.47	305.1	2,650.9	89.3	-141.4	230.70	0.387 Level 1	
10,400.0	6,594.2	6,590.2	6,590.2	103.4	130.1	-80.45	305.1	2,650.9	154.4	-76.1	230.47	0.670 Level 1	
10,433.0	6,593.7	6,589.7	6,589.7	104.3	130.1	-78.45	305.1	2,650.9	187.3	-42.6	229.94	0.815 Level 1	
10,500.0	6,592.9	6,588.9	6,588.9	106.1	130.0	-74.48	305.1	2,650.9	254.2	26.1	228.12	1.114 Level 2	
10,531.5	6,592.5	6,588.5	6,588.5	106.9	130.0	-72.66	305.1	2,650.9	285.6	58.7	226.94	1.259 Level 3	
10,600.0	6,591.6	6,587.6	6,587.6	108.8	130.0	-68.83	305.1	2,650.9	354.1	130.3	223.75	1.583	
10,629.9	6,591.2	6,587.2	6,587.2	109.6	130.0	-67.22	305.1	2,650.9	384.0	161.8	222.12	1.729	
10,700.0	6,590.3	6,586.3	6,586.3	111.6	130.0	-63.58	305.1	2,650.9	454.0	236.2	217.85	2.084	
10,728.3	6,589.9	6,585.9	6,585.9	112.3	130.0	-62.18	305.1	2,650.9	482.4	266.4	215.98	2.233	
10,800.0	6,589.0	6,585.0	6,585.0	114.3	130.0	-58.77	305.1	2,650.9	554.0	343.1	210.95	2.626	
10,826.7	6,588.7	6,584.7	6,584.7	115.0	129.9	-57.56	305.1	2,650.9	580.7	371.7	209.00	2.779	
10,900.0	6,587.7	6,583.7	6,583.7	117.1	129.9	-54.39	305.1	2,650.9	654.0	450.5	203.51	3.213	
10,925.2	6,587.4	6,583.4	6,583.4	117.7	129.9	-53.36	305.1	2,650.9	679.1	477.5	201.60	3.369	
11,000.0	6,586.4	6,582.4	6,582.4	119.8	129.9	-50.45	305.1	2,650.9	754.0	558.1	195.89	3.849	
11,023.6	6,586.1	6,582.1	6,582.1	120.4	129.9	-49.58	305.1	2,650.9	777.5	583.4	194.11	4.006	
11,100.0	6,585.1	6,581.1	6,581.1	122.6	129.9	-46.90	305.1	2,650.9	853.9	665.6	188.36	4.533	
11,122.0	6,584.8	6,580.8	6,580.8	123.2	129.9	-46.17	305.1	2,650.9	876.0	689.2	186.74	4.691	
11,200.0	6,583.8	6,579.8	6,579.8	125.3	129.9	-43.72	305.1	2,650.9	953.9	772.8	181.10	5.267	
11,220.4	6,583.6	6,579.6	6,579.6	125.9	129.8	-43.12	305.1	2,650.9	974.4	794.7	179.67	5.423	
11,300.0	6,582.5	6,578.5	6,578.5	128.1	129.8	-40.87	305.1	2,650.9	1,053.9	879.7	174.22	6.049	
11,318.9	6,582.3	6,578.3	6,578.3	128.6	129.8	-40.37	305.1	2,650.9	1,072.8	899.8	172.98	6.202	
11,400.0	6,581.2	6,577.2	6,577.2	130.8	129.8	-38.31	305.1	2,650.9	1,153.9	986.1	167.78	6.877	
11,417.3	6,581.0	6,577.0	6,577.0	131.3	129.8	-37.90	305.1	2,650.9	1,171.2	1,004.5	166.72	7.025	
11,500.0	6,580.0	6,576.0	6,576.0	133.6	129.8	-36.01	305.1	2,650.9	1,253.9	1,092.1	161.80	7.750	
11,515.7	6,579.7	6,575.7	6,575.7	134.0	129.8	-35.68	305.1	2,650.9	1,269.6	1,108.7	160.90	7.890	
11,600.0	6,578.7	6,574.7	6,574.7	136.3	129.7	-33.94	305.1	2,650.9	1,353.9	1,197.6	156.28	8.663	
11,614.1	6,578.5	6,574.5	6,574.5	136.7	129.7	-33.67	305.1	2,650.9	1,368.0	1,212.5	155.54	8.795	
11,700.0	6,577.4	6,573.4	6,573.4	139.1	129.7	-32.07	305.1	2,650.9	1,453.9	1,302.7	151.20	9.615	
11,712.6	6,577.2	6,573.2	6,573.2	139.5	129.7	-31.85	305.1	2,650.9	1,466.4	1,315.8	150.60	9.738	
11,800.0	6,576.1	6,572.1	6,572.1	141.9	129.7	-30.37	305.1	2,650.9	1,553.8	1,407.3	146.55	10.603	
11,811.0	6,575.9	6,571.9	6,571.9	142.2	129.7	-30.20	305.1	2,650.9	1,564.8	1,418.8	146.06	10.714	
11,882.7	6,575.0	6,571.0	6,571.0	144.2	129.7	-29.09	305.1	2,650.9	1,636.5	1,493.5	143.00	11.444	
11,883.5	6,575.0	6,571.0	6,571.0	144.2	129.7	-29.08	305.1	2,650.9	1,637.3	1,494.4	142.96	11.453	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	71.62	1,434.7	4,317.0	4,549.2				
98.4	98.4	77.7	77.7	0.1	0.0	71.61	1,435.0	4,316.9	4,549.1	4,549.0	0.10	N/A	
100.0	100.0	79.3	79.3	0.1	0.0	71.61	1,435.0	4,316.9	4,549.1	4,549.0	0.10	N/A	
196.8	196.8	182.4	182.4	0.3	0.1	71.60	1,435.8	4,316.6	4,549.1	4,548.7	0.40	N/A	
200.0	200.0	185.8	185.8	0.3	0.1	71.60	1,435.8	4,316.6	4,549.1	4,548.7	0.41	N/A	
295.3	295.3	291.6	291.6	0.5	0.2	71.59	1,436.2	4,316.2	4,548.9	4,548.1	0.76	5,971.181	
300.0	300.0	296.9	296.9	0.5	0.2	71.59	1,436.2	4,316.1	4,548.8	4,548.1	0.78	5,835.738	
369.6	369.6	349.6	349.6	0.7	0.3	71.59	1,436.6	4,315.9	4,548.7	4,547.7	0.98	4,663.625	
393.7	393.7	367.5	367.5	0.8	0.3	71.59	1,436.7	4,315.9	4,548.7	4,547.7	1.04	4,364.913	
400.0	400.0	372.2	372.2	0.8	0.3	71.59	1,436.7	4,315.9	4,548.7	4,547.7	1.06	4,292.916	
492.1	492.1	459.2	459.2	1.0	0.3	71.58	1,437.6	4,315.9	4,549.0	4,547.7	1.33	3,424.153	
500.0	500.0	467.8	467.8	1.0	0.4	71.58	1,437.6	4,315.9	4,549.0	4,547.7	1.35	3,363.987	
590.5	590.5	557.9	557.9	1.2	0.4	71.57	1,438.3	4,315.9	4,549.3	4,547.7	1.60	2,835.913	
600.0	600.0	566.9	566.9	1.2	0.4	71.57	1,438.3	4,315.9	4,549.3	4,547.7	1.63	2,792.063	
689.0	689.0	690.6	690.5	1.4	0.4	71.57	1,438.6	4,315.9	4,549.4	4,547.5	1.86	2,448.918	
700.0	700.0	700.0	700.0	1.4	0.4	71.56	1,438.6	4,315.8	4,549.3	4,547.4	1.88	2,414.810	
787.4	787.4	769.6	769.6	1.6	0.5	71.56	1,438.9	4,315.5	4,549.0	4,546.9	2.11	2,154.536	
796.3	796.3	776.3	776.3	1.7	0.5	71.56	1,439.0	4,315.5	4,549.0	4,546.9	2.13	2,131.383	
800.0	800.0	779.1	779.1	1.7	0.5	71.56	1,439.0	4,315.4	4,549.0	4,546.9	2.14	2,121.824	
885.8	885.8	862.8	862.8	1.9	0.5	71.55	1,439.5	4,315.4	4,549.1	4,546.8	2.38	1,911.854	
900.0	900.0	878.2	878.2	1.9	0.5	71.55	1,439.6	4,315.4	4,549.2	4,546.7	2.42	1,880.256	
984.2	984.2	983.2	983.2	2.1	0.6	71.55	1,439.9	4,315.1	4,549.0	4,546.4	2.65	1,715.181	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	0.6	71.55	1,439.9	4,315.0	4,549.0	4,546.3	2.69	1,688.486	
1,082.7	1,082.7	1,066.6	1,066.6	2.3	0.6	71.54	1,440.0	4,314.7	4,548.7	4,545.8	2.90	1,568.085	
1,100.0	1,100.0	1,080.1	1,080.0	2.3	0.6	71.54	1,440.1	4,314.7	4,548.7	4,545.8	2.94	1,545.079	
1,100.2	1,100.2	1,080.2	1,080.2	2.3	0.6	71.54	1,440.1	4,314.7	4,548.7	4,545.8	2.94	1,544.787	
1,181.1	1,181.1	1,148.5	1,148.5	2.5	0.6	71.54	1,440.4	4,314.8	4,548.8	4,545.7	3.15	1,443.967	
1,200.0	1,200.0	1,165.0	1,165.0	2.6	0.6	71.54	1,440.4	4,314.8	4,548.9	4,545.7	3.20	1,422.087	
1,279.5	1,279.5	1,239.6	1,239.6	2.7	0.7	71.54	1,440.7	4,315.0	4,549.2	4,545.8	3.40	1,336.272	
1,300.0	1,300.0	1,260.2	1,260.2	2.8	0.7	71.54	1,440.8	4,315.1	4,549.3	4,545.8	3.46	1,315.658	
1,377.9	1,377.9	1,335.9	1,335.9	3.0	0.7	71.53	1,441.0	4,315.4	4,549.7	4,546.0	3.66	1,243.712	
1,400.0	1,400.0	1,356.7	1,356.6	3.0	0.7	71.53	1,441.1	4,315.5	4,549.8	4,546.1	3.71	1,225.047	
1,476.4	1,476.4	1,432.1	1,432.1	3.2	0.7	146.65	1,441.2	4,315.8	4,551.0	4,547.2	3.86	1,180.180	
1,500.0	1,500.0	1,457.2	1,457.2	3.2	0.7	146.65	1,441.3	4,315.9	4,551.8	4,547.8	3.92	1,162.184	
1,574.8	1,574.7	1,528.6	1,528.6	3.4	0.8	146.63	1,441.6	4,316.2	4,555.1	4,551.0	4.10	1,111.094	
1,600.0	1,599.8	1,549.5	1,549.5	3.4	0.8	146.63	1,441.7	4,316.3	4,556.7	4,552.5	4.16	1,095.246	
1,673.2	1,672.8	1,611.9	1,611.9	3.6	0.8	146.60	1,441.9	4,316.8	4,562.3	4,557.9	4.34	1,050.114	
1,700.0	1,699.5	1,637.7	1,637.6	3.7	0.8	146.59	1,442.0	4,317.0	4,564.8	4,560.4	4.41	1,034.399	
1,771.6	1,770.6	1,708.5	1,708.4	3.8	0.8	146.56	1,442.5	4,317.5	4,572.4	4,567.8	4.60	993.573	
1,800.0	1,798.7	1,743.7	1,743.7	3.9	0.8	146.55	1,442.8	4,317.7	4,575.9	4,571.2	4.68	978.297	
1,870.1	1,868.0	1,821.2	1,821.2	4.1	0.9	146.52	1,443.6	4,318.0	4,585.2	4,580.3	4.87	941.822	
1,900.0	1,897.5	1,846.9	1,846.9	4.2	0.9	146.50	1,443.9	4,318.0	4,589.6	4,584.6	4.95	927.501	
1,968.5	1,964.8	1,906.9	1,906.8	4.4	0.9	146.44	1,444.8	4,318.2	4,600.7	4,595.6	5.14	894.967	
2,000.0	1,995.6	1,940.5	1,940.4	4.5	0.9	146.42	1,445.3	4,318.4	4,606.3	4,601.1	5.23	880.550	
2,066.9	2,060.9	2,013.1	2,013.0	4.7	0.9	146.37	1,446.6	4,318.5	4,619.1	4,613.7	5.43	850.038	
2,100.0	2,093.1	2,052.0	2,052.0	4.8	1.0	146.35	1,447.3	4,318.4	4,625.8	4,620.3	5.53	835.913	
2,165.3	2,156.3	2,116.7	2,116.6	5.1	1.0	146.29	1,448.4	4,318.3	4,640.0	4,634.2	5.74	807.745	
2,200.0	2,189.6	2,140.2	2,140.1	5.2	1.0	146.24	1,448.8	4,318.3	4,648.0	4,642.2	5.85	794.052	
2,263.8	2,250.7	2,183.1	2,183.0	5.5	1.0	146.13	1,449.6	4,318.5	4,663.9	4,657.8	6.07	768.222	
2,280.0	2,266.2	2,200.0	2,199.9	5.6	1.0	146.12	1,449.9	4,318.6	4,668.2	4,662.1	6.13	761.740	
2,300.0	2,285.3	2,210.8	2,210.7	5.7	1.0	146.14	1,450.1	4,318.6	4,673.5	4,667.3	6.20	754.346	
2,362.2	2,344.6	2,271.5	2,271.3	6.0	1.0	146.25	1,451.4	4,318.9	4,690.0	4,683.6	6.41	731.379	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,380.6	2,300.0	2,299.9	6.2	1.1	146.31	1,452.1	4,319.1	4,700.1	4,693.6	6.55	717.368		
2,460.6	2,438.4	2,352.6	2,352.4	6.5	1.1	146.40	1,453.3	4,319.4	4,716.3	4,709.6	6.77	696.333		
2,500.0	2,475.9	2,382.4	2,382.3	6.7	1.1	146.46	1,454.0	4,319.6	4,727.0	4,720.1	6.92	683.349		
2,559.0	2,532.2	2,430.7	2,430.5	7.0	1.1	146.55	1,455.1	4,320.1	4,743.0	4,735.9	7.14	664.346		
2,600.0	2,571.2	2,465.7	2,465.5	7.2	1.1	146.61	1,456.0	4,320.5	4,754.2	4,746.9	7.30	651.691		
2,657.5	2,626.0	2,514.4	2,514.2	7.5	1.1	146.70	1,457.3	4,321.0	4,770.0	4,762.5	7.52	634.535		
2,700.0	2,666.6	2,549.9	2,549.7	7.8	1.2	146.76	1,458.3	4,321.5	4,781.7	4,774.0	7.68	622.474		
2,755.9	2,719.8	2,600.0	2,599.8	8.1	1.2	146.85	1,459.7	4,322.1	4,797.2	4,789.3	7.90	607.085		
2,800.0	2,761.9	2,643.8	2,643.6	8.3	1.2	146.93	1,461.0	4,322.7	4,809.4	4,801.4	8.08	595.520		
2,854.3	2,813.7	2,700.0	2,699.7	8.7	1.2	147.03	1,462.6	4,323.4	4,824.4	4,816.2	8.29	581.726		
2,900.0	2,857.2	2,729.4	2,729.1	8.9	1.2	147.08	1,463.5	4,323.8	4,837.1	4,828.6	8.47	570.826		
2,952.7	2,907.5	2,761.0	2,760.7	9.2	1.2	147.13	1,464.5	4,324.3	4,851.9	4,843.3	8.68	558.728		
3,000.0	2,952.5	2,800.0	2,799.7	9.5	1.2	147.20	1,465.7	4,325.0	4,865.4	4,856.5	8.88	548.196		
3,051.2	3,001.3	2,822.8	2,822.4	9.8	1.3	147.24	1,466.5	4,325.6	4,880.1	4,871.1	9.08	537.426		
3,100.0	3,047.8	2,856.3	2,855.9	10.1	1.3	147.29	1,467.9	4,326.4	4,894.3	4,885.1	9.28	527.363		
3,149.6	3,095.1	2,900.0	2,899.5	10.4	1.3	147.36	1,469.8	4,327.5	4,908.9	4,899.4	9.49	517.317		
3,200.0	3,143.2	2,938.3	2,937.8	10.7	1.3	147.42	1,471.6	4,328.5	4,923.8	4,914.1	9.70	507.826		
3,248.0	3,188.9	2,989.0	2,988.4	11.0	1.3	147.50	1,473.9	4,329.7	4,937.9	4,928.0	9.90	498.910		
3,300.0	3,238.5	3,059.4	3,058.7	11.3	1.3	147.61	1,477.1	4,331.4	4,953.1	4,943.0	10.11	489.702		
3,346.4	3,282.8	3,145.5	3,144.8	11.6	1.4	147.74	1,480.5	4,333.0	4,966.5	4,956.2	10.31	481.731		
3,400.0	3,333.8	3,236.9	3,236.1	11.9	1.4	147.89	1,482.7	4,334.1	4,981.3	4,970.8	10.53	473.011		
3,444.9	3,376.6	3,288.8	3,288.0	12.2	1.4	147.99	1,483.6	4,334.6	4,993.6	4,982.9	10.72	466.036		
3,500.0	3,429.1	3,357.0	3,356.1	12.6	1.4	148.11	1,484.3	4,335.3	5,008.6	4,997.6	10.94	457.665		
3,543.3	3,470.4	3,411.7	3,410.9	12.8	1.5	148.21	1,484.5	4,335.8	5,020.2	5,009.1	11.12	451.279		
3,600.0	3,524.4	3,485.5	3,484.7	13.2	1.5	148.35	1,484.7	4,336.2	5,035.3	5,024.0	11.36	443.193		
3,641.7	3,564.2	3,538.7	3,537.9	13.4	1.5	148.45	1,484.8	4,336.3	5,046.3	5,034.8	11.53	437.721		
3,700.0	3,619.8	3,608.3	3,607.5	13.8	1.5	148.58	1,484.6	4,336.3	5,061.5	5,049.7	11.76	430.444		
3,740.1	3,658.0	3,642.4	3,641.6	14.0	1.5	148.64	1,484.5	4,336.3	5,072.0	5,060.0	11.92	425.468		
3,800.0	3,715.1	3,693.1	3,692.3	14.4	1.5	148.74	1,484.4	4,336.3	5,087.6	5,075.4	12.16	418.309		
3,838.6	3,751.8	3,732.5	3,731.7	14.7	1.5	148.81	1,484.3	4,336.4	5,097.7	5,085.4	12.32	413.919		
3,900.0	3,810.4	3,798.1	3,797.3	15.0	1.5	148.93	1,484.3	4,336.3	5,113.8	5,101.2	12.56	407.188		
3,937.0	3,845.7	3,834.8	3,834.0	15.3	1.5	149.00	1,484.2	4,336.3	5,123.4	5,110.7	12.71	403.238		
4,000.0	3,905.7	3,897.1	3,896.2	15.7	1.5	149.11	1,484.1	4,336.2	5,139.9	5,126.9	12.96	396.728		
4,035.4	3,939.5	3,931.9	3,931.1	15.9	1.5	149.17	1,484.0	4,336.2	5,149.1	5,136.0	13.10	393.126		
4,100.0	4,001.0	3,995.3	3,994.5	16.3	1.5	149.29	1,483.8	4,336.0	5,165.9	5,152.6	13.36	386.757		
4,133.8	4,033.3	4,019.4	4,018.5	16.5	1.5	149.33	1,483.8	4,336.0	5,174.8	5,161.3	13.49	383.502		
4,200.0	4,096.3	4,063.3	4,062.5	16.9	1.5	149.41	1,483.7	4,336.1	5,192.2	5,178.5	13.76	377.343		
4,232.3	4,127.1	4,084.7	4,083.9	17.1	1.5	149.45	1,483.6	4,336.2	5,200.9	5,187.0	13.89	374.425		
4,300.0	4,191.7	4,161.6	4,160.8	17.6	1.5	149.59	1,483.5	4,336.5	5,219.0	5,204.8	14.16	368.466		
4,330.7	4,220.9	4,202.9	4,202.1	17.8	1.5	149.66	1,483.6	4,336.5	5,227.1	5,212.8	14.29	365.827		
4,400.0	4,287.0	4,272.7	4,271.8	18.2	1.5	149.78	1,483.7	4,336.5	5,245.4	5,230.8	14.57	360.078		
4,429.1	4,314.7	4,300.0	4,299.2	18.4	1.5	149.82	1,483.7	4,336.4	5,253.1	5,238.4	14.68	357.724		
4,500.0	4,382.3	4,350.2	4,349.4	18.8	1.5	149.91	1,483.8	4,336.4	5,271.9	5,256.9	14.97	352.156		
4,527.5	4,408.6	4,369.1	4,368.3	19.0	1.5	149.94	1,483.8	4,336.5	5,279.2	5,264.2	15.08	350.051		
4,600.0	4,477.6	4,466.5	4,465.7	19.5	1.5	150.10	1,484.0	4,336.8	5,298.7	5,283.3	15.37	344.727		
4,626.0	4,502.4	4,526.9	4,526.1	19.6	1.5	150.20	1,484.2	4,336.4	5,305.5	5,290.0	15.47	342.946		
4,700.0	4,572.9	4,630.6	4,629.7	20.1	1.5	150.37	1,484.8	4,334.9	5,324.1	5,308.4	15.76	337.728		
4,724.4	4,596.2	4,648.7	4,647.9	20.3	1.5	150.39	1,484.9	4,334.6	5,330.3	5,314.4	15.86	336.041		
4,800.0	4,668.3	4,706.8	4,706.0	20.7	1.5	150.49	1,484.8	4,333.9	5,349.5	5,333.4	16.16	330.966		
4,822.8	4,690.0	4,731.5	4,730.7	20.9	1.5	150.53	1,484.7	4,333.6	5,355.4	5,339.1	16.26	329.455		
4,900.0	4,763.6	4,813.7	4,812.8	21.4	1.5	150.67	1,484.5	4,332.7	5,375.0	5,358.4	16.57	324.473		
4,921.2	4,783.8	4,834.4	4,833.6	21.5	1.5	150.70	1,484.5	4,332.4	5,380.4	5,363.7	16.65	323.137		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,858.9	4,909.8	4,908.9	22.0	1.6	150.82	1,484.2	4,331.4	5,400.4	5,383.4	16.97	318.307		
5,019.7	4,877.7	4,926.3	4,925.4	22.1	1.6	150.85	1,484.2	4,331.2	5,405.4	5,388.4	17.05	317.123		
5,100.0	4,954.2	4,993.5	4,992.7	22.6	1.6	150.96	1,483.9	4,330.5	5,425.9	5,408.6	17.37	312.411		
5,118.1	4,971.5	5,009.7	5,008.8	22.8	1.6	150.98	1,483.8	4,330.3	5,430.6	5,413.2	17.44	311.372		
5,171.8	5,022.7	5,059.7	5,058.9	23.1	1.6	151.07	1,483.5	4,329.9	5,444.4	5,426.7	17.66	308.341		
5,200.0	5,049.6	5,086.0	5,085.2	23.3	1.6	151.18	1,483.4	4,329.6	5,451.6	5,433.8	17.73	307.462		
5,216.5	5,065.4	5,100.0	5,099.1	23.3	1.6	151.24	1,483.3	4,329.5	5,455.6	5,437.9	17.77	307.071		
5,300.0	5,145.7	5,165.7	5,164.8	23.7	1.6	151.53	1,482.8	4,329.0	5,475.1	5,457.2	17.95	305.071		
5,314.9	5,160.1	5,177.2	5,176.4	23.8	1.6	151.58	1,482.7	4,329.0	5,478.4	5,460.5	17.98	304.771		
5,400.0	5,242.7	5,288.8	5,287.9	24.1	1.6	151.89	1,481.9	4,328.2	5,495.9	5,477.7	18.14	303.029		
5,413.4	5,255.7	5,314.2	5,313.3	24.2	1.6	151.94	1,481.8	4,327.9	5,498.4	5,480.2	18.16	302.806		
5,500.0	5,340.5	5,442.6	5,441.7	24.5	1.6	152.22	1,480.5	4,325.6	5,512.5	5,494.2	18.30	301.251		
5,511.8	5,352.1	5,453.1	5,452.1	24.5	1.6	152.24	1,480.4	4,325.4	5,514.2	5,495.9	18.32	301.074		
5,600.0	5,439.0	5,540.8	5,539.9	24.8	1.6	152.43	1,479.5	4,323.6	5,525.8	5,507.4	18.44	299.652		
5,610.2	5,449.1	5,552.6	5,551.7	24.8	1.6	152.45	1,479.4	4,323.4	5,527.0	5,508.5	18.45	299.512		
5,700.0	5,538.0	5,644.5	5,643.6	25.1	1.6	152.60	1,478.5	4,321.4	5,536.0	5,517.4	18.57	298.178		
5,708.6	5,546.6	5,652.4	5,651.5	25.1	1.6	152.61	1,478.5	4,321.3	5,536.7	5,518.1	18.58	298.071		
5,800.0	5,637.4	5,742.0	5,741.1	25.3	1.6	152.71	1,477.9	4,319.4	5,543.1	5,524.4	18.68	296.790		
5,807.1	5,644.5	5,749.6	5,748.6	25.3	1.6	152.72	1,477.9	4,319.2	5,543.5	5,524.8	18.68	296.704		
5,900.0	5,737.2	5,853.4	5,852.4	25.5	1.6	152.79	1,477.4	4,316.8	5,547.1	5,528.3	18.78	295.379		
5,905.5	5,742.6	5,859.8	5,858.8	25.5	1.6	152.79	1,477.4	4,316.7	5,547.2	5,528.4	18.78	295.308		
6,000.0	5,837.1	6,000.0	5,998.9	25.6	1.6	152.80	1,478.0	4,312.5	5,547.4	5,528.6	18.88	293.756		
6,003.9	5,841.0	6,006.0	6,004.9	25.6	1.6	152.80	1,478.1	4,312.3	5,547.4	5,528.5	18.89	293.688		
6,051.8	5,888.9	6,050.0	6,048.9	25.7	1.7	77.65	1,478.9	4,310.6	5,546.2	5,520.6	25.56	217.027		
6,081.8	5,918.9	6,077.6	6,076.4	25.7	1.7	77.64	1,479.5	4,309.6	5,545.2	5,519.6	25.59	216.671		
6,100.0	5,937.1	6,216.0	6,214.5	25.7	1.7	-12.46	1,486.2	4,302.2	5,544.3	5,525.3	19.01	291.606		
6,102.3	5,939.4	6,218.6	6,217.0	25.7	1.7	-12.47	1,486.3	4,302.0	5,544.1	5,525.1	19.01	291.606		
6,150.0	5,987.0	6,270.1	6,268.3	25.7	1.7	-12.62	1,490.1	4,298.3	5,538.7	5,519.6	19.03	291.008		
6,200.0	6,036.5	6,316.5	6,314.4	25.7	1.7	-12.84	1,493.8	4,294.9	5,529.6	5,510.6	19.09	289.703		
6,200.8	6,037.3	6,317.0	6,314.9	25.7	1.7	-12.84	1,493.8	4,294.9	5,529.5	5,510.4	19.09	289.682		
6,250.0	6,085.5	6,353.3	6,351.0	25.7	1.8	-13.12	1,496.5	4,292.3	5,517.4	5,498.2	19.15	288.156		
6,299.2	6,133.0	6,400.0	6,397.5	25.6	1.8	-13.49	1,499.7	4,289.2	5,502.2	5,483.0	19.21	286.447		
6,300.0	6,133.7	6,400.0	6,397.5	25.6	1.8	-13.49	1,499.7	4,289.2	5,502.0	5,482.8	19.21	286.427		
6,350.0	6,180.9	6,426.3	6,423.7	25.5	1.8	-13.92	1,501.4	4,287.5	5,483.4	5,464.2	19.24	285.018		
6,397.6	6,224.6	6,461.2	6,458.5	25.4	1.8	-14.43	1,503.5	4,285.4	5,463.0	5,443.7	19.26	283.644		
6,400.0	6,226.7	6,463.0	6,460.2	25.4	1.8	-14.46	1,503.6	4,285.3	5,461.9	5,442.6	19.26	283.573		
6,450.0	6,271.1	6,500.0	6,497.1	25.2	1.8	-15.11	1,505.6	4,283.1	5,437.4	5,418.1	19.27	282.137		
6,496.0	6,310.4	6,521.3	6,518.4	25.1	1.8	-15.80	1,506.7	4,281.9	5,412.4	5,393.1	19.26	280.980		
6,500.0	6,313.7	6,523.2	6,520.3	25.1	1.8	-15.86	1,506.7	4,281.8	5,410.2	5,390.9	19.26	280.869		
6,550.0	6,354.4	6,546.5	6,543.5	25.0	1.8	-16.77	1,507.8	4,280.6	5,380.3	5,361.0	19.26	279.326		
6,594.5	6,388.9	6,566.2	6,563.2	24.9	1.8	-17.73	1,508.7	4,279.6	5,351.6	5,332.3	19.28	277.527		
6,600.0	6,393.0	6,568.6	6,565.6	24.9	1.8	-17.86	1,508.8	4,279.5	5,347.9	5,328.6	19.29	277.264		
6,650.0	6,429.3	6,600.0	6,596.9	24.8	1.8	-19.21	1,510.1	4,278.1	5,313.2	5,293.8	19.39	274.036		
6,692.9	6,458.5	6,600.0	6,596.9	24.7	1.8	-20.48	1,510.1	4,278.1	5,281.7	5,262.2	19.48	271.073		
6,700.0	6,463.1	6,600.0	6,596.9	24.7	1.8	-20.71	1,510.1	4,278.1	5,276.3	5,256.8	19.51	270.491		
6,750.0	6,494.3	6,630.3	6,627.1	24.7	1.8	-22.72	1,511.2	4,276.9	5,237.3	5,217.5	19.82	264.287		
6,791.3	6,517.9	6,645.6	6,642.4	24.7	1.8	-24.69	1,511.7	4,276.3	5,203.7	5,183.5	20.17	257.932		
6,800.0	6,522.6	6,648.6	6,645.5	24.7	1.8	-25.15	1,511.8	4,276.2	5,196.5	5,176.2	20.26	256.431		
6,850.0	6,548.0	6,665.0	6,661.9	24.7	1.8	-28.19	1,512.4	4,275.6	5,154.0	5,133.1	20.92	246.391		
6,889.7	6,566.0	6,676.6	6,673.4	24.8	1.8	-31.20	1,512.9	4,275.2	5,119.1	5,097.5	21.61	236.840		
6,900.0	6,570.4	6,679.4	6,676.2	24.9	1.8	-32.08	1,513.0	4,275.1	5,110.0	5,088.2	21.82	234.206		
6,950.0	6,589.5	6,700.0	6,696.8	25.1	1.8	-37.25	1,513.7	4,274.4	5,064.8	5,041.7	23.04	219.869		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,602.0	6,700.0	6,696.8	25.3	1.8	-41.98	1,513.7	4,274.4	5,029.5	5,005.4	24.08	208.860	
7,000.0	6,605.4	6,700.0	6,696.8	25.3	1.8	-43.66	1,513.7	4,274.4	5,018.4	4,994.0	24.43	205.451	
7,050.0	6,618.0	6,711.0	6,707.8	25.6	1.8	-52.43	1,514.1	4,274.1	4,971.2	4,945.2	26.03	190.981	
7,086.6	6,625.0	6,715.9	6,712.7	25.9	1.8	-60.44	1,514.2	4,273.9	4,936.3	4,909.1	27.12	182.031	
7,100.0	6,627.1	6,717.4	6,714.1	26.0	1.8	-63.74	1,514.3	4,273.9	4,923.4	4,896.0	27.45	179.373	
7,150.0	6,632.8	6,720.8	6,717.6	26.5	1.8	-77.57	1,514.4	4,273.8	4,875.2	4,847.0	28.22	172.765	
7,185.0	6,634.7	6,721.5	6,718.3	26.8	1.8	-88.19	1,514.4	4,273.7	4,841.3	4,812.9	28.43	170.280	
7,200.0	6,635.0	6,721.4	6,718.2	27.0	1.8	-92.77	1,514.4	4,273.7	4,826.8	4,798.3	28.54	169.102	
7,215.9	6,635.0	6,721.0	6,717.7	27.1	1.8	-97.56	1,514.4	4,273.8	4,811.5	4,782.8	28.69	167.723	
7,283.4	6,634.1	6,718.5	6,715.2	27.9	1.8	-97.45	1,514.3	4,273.8	4,746.2	4,716.7	29.51	160.814	
7,300.0	6,633.9	6,717.9	6,714.6	28.1	1.8	-97.42	1,514.3	4,273.8	4,730.2	4,700.5	29.72	159.180	
7,381.9	6,632.9	6,714.8	6,711.6	29.3	1.8	-97.28	1,514.2	4,273.9	4,651.2	4,620.3	30.88	150.613	
7,400.0	6,632.6	6,714.1	6,710.9	29.5	1.8	-97.25	1,514.2	4,274.0	4,633.7	4,602.6	31.14	148.803	
7,480.3	6,631.6	6,711.1	6,707.9	30.8	1.8	-97.11	1,514.1	4,274.1	4,556.4	4,523.9	32.44	140.475	
7,500.0	6,631.4	6,710.4	6,707.2	31.1	1.8	-97.08	1,514.0	4,274.1	4,537.4	4,504.6	32.75	138.533	
7,578.7	6,630.4	6,707.4	6,704.2	32.5	1.8	-96.94	1,513.9	4,274.2	4,461.7	4,427.5	34.15	130.650	
7,600.0	6,630.1	6,706.6	6,703.4	32.9	1.8	-96.91	1,513.9	4,274.2	4,441.2	4,406.7	34.53	128.629	
7,677.1	6,629.1	6,703.7	6,700.4	34.3	1.8	-96.77	1,513.8	4,274.3	4,367.1	4,331.1	36.00	121.304	
7,700.0	6,628.8	6,702.8	6,699.6	34.8	1.8	-96.73	1,513.8	4,274.3	4,345.2	4,308.8	36.44	119.249	
7,775.6	6,627.8	6,700.0	6,696.8	36.3	1.8	-96.60	1,513.7	4,274.4	4,272.8	4,234.8	37.97	112.532	
7,800.0	6,627.5	6,700.0	6,696.8	36.8	1.8	-96.60	1,513.7	4,274.4	4,249.4	4,210.9	38.46	110.479	
7,874.0	6,626.6	6,700.0	6,696.8	38.4	1.8	-96.60	1,513.7	4,274.4	4,178.6	4,138.6	40.03	104.383	
7,900.0	6,626.3	6,700.0	6,696.8	38.9	1.8	-96.60	1,513.7	4,274.4	4,153.8	4,113.2	40.58	102.354	
7,972.4	6,625.3	6,700.0	6,696.8	40.5	1.8	-96.60	1,513.7	4,274.4	4,084.6	4,042.5	42.18	96.848	
8,000.0	6,625.0	6,700.0	6,696.8	41.1	1.8	-96.60	1,513.7	4,274.4	4,058.3	4,015.6	42.78	94.860	
8,070.8	6,624.1	6,700.0	6,696.8	42.7	1.8	-96.60	1,513.7	4,274.4	3,990.9	3,946.5	44.39	89.905	
8,100.0	6,623.7	6,700.0	6,696.8	43.4	1.8	-96.61	1,513.7	4,274.4	3,963.1	3,918.1	45.05	87.970	
8,169.3	6,622.8	6,686.5	6,683.3	45.0	1.8	-95.98	1,513.2	4,274.9	3,897.3	3,850.6	46.69	83.481	
8,200.0	6,622.4	6,685.5	6,682.3	45.7	1.8	-95.94	1,513.2	4,274.9	3,868.2	3,820.8	47.40	81.602	
8,267.7	6,621.6	6,683.1	6,679.9	47.4	1.8	-95.83	1,513.1	4,275.0	3,804.0	3,755.0	49.02	77.604	
8,300.0	6,621.1	6,681.9	6,678.7	48.1	1.8	-95.77	1,513.0	4,275.0	3,773.4	3,723.7	49.79	75.789	
8,366.1	6,620.3	6,679.6	6,676.4	49.7	1.8	-95.66	1,513.0	4,275.1	3,711.0	3,659.6	51.40	72.204	
8,400.0	6,619.9	6,678.4	6,675.2	50.6	1.8	-95.61	1,512.9	4,275.1	3,679.0	3,626.8	52.22	70.453	
8,464.5	6,619.0	6,676.0	6,672.8	52.2	1.8	-95.50	1,512.8	4,275.2	3,618.2	3,564.4	53.81	67.238	
8,500.0	6,618.6	6,674.7	6,671.5	53.0	1.8	-95.44	1,512.8	4,275.3	3,584.9	3,530.2	54.69	65.552	
8,563.0	6,617.8	6,672.4	6,669.2	54.6	1.8	-95.33	1,512.7	4,275.3	3,525.8	3,469.5	56.26	62.666	
8,600.0	6,617.3	6,671.0	6,667.9	55.5	1.8	-95.27	1,512.7	4,275.4	3,491.1	3,433.9	57.19	61.044	
8,661.4	6,616.5	6,668.7	6,665.6	57.1	1.8	-95.16	1,512.6	4,275.5	3,433.6	3,374.9	58.74	58.452	
8,700.0	6,616.0	6,667.3	6,664.1	58.1	1.8	-95.10	1,512.5	4,275.5	3,397.6	3,337.9	59.72	56.892	
8,759.8	6,615.2	6,665.0	6,661.9	59.6	1.8	-94.99	1,512.4	4,275.6	3,341.9	3,280.6	61.25	54.562	
8,800.0	6,614.7	6,663.5	6,660.3	60.6	1.8	-94.92	1,512.4	4,275.6	3,304.5	3,242.2	62.28	53.062	
8,858.2	6,614.0	6,661.3	6,658.1	62.1	1.8	-94.82	1,512.3	4,275.7	3,250.5	3,186.7	63.78	50.965	
8,900.0	6,613.4	6,659.6	6,656.5	63.2	1.8	-94.74	1,512.2	4,275.8	3,211.8	3,147.0	64.85	49.523	
8,956.7	6,612.7	6,657.4	6,654.3	64.7	1.8	-94.64	1,512.2	4,275.9	3,159.5	3,093.2	66.33	47.635	
9,000.0	6,612.2	6,655.7	6,652.6	65.8	1.8	-94.56	1,512.1	4,275.9	3,119.6	3,052.1	67.45	46.248	
9,055.1	6,611.5	6,653.5	6,650.4	67.3	1.8	-94.46	1,512.0	4,276.0	3,069.0	3,000.1	68.89	44.546	
9,100.0	6,610.9	6,651.7	6,648.6	68.4	1.8	-94.38	1,512.0	4,276.1	3,027.8	2,957.8	70.07	43.212	
9,153.5	6,610.2	6,649.6	6,646.4	69.8	1.8	-94.28	1,511.9	4,276.1	2,978.9	2,907.5	71.48	41.676	
9,200.0	6,609.6	6,647.7	6,644.6	71.1	1.8	-94.19	1,511.8	4,276.2	2,936.6	2,863.9	72.70	40.392	
9,251.9	6,608.9	6,645.6	6,642.4	72.4	1.8	-94.09	1,511.7	4,276.3	2,889.5	2,815.4	74.08	39.006	
9,300.0	6,608.3	6,643.6	6,640.5	73.7	1.8	-94.00	1,511.7	4,276.4	2,846.0	2,770.6	75.35	37.771	
9,350.4	6,607.7	6,641.5	6,638.4	75.0	1.8	-93.90	1,511.6	4,276.5	2,800.6	2,723.9	76.69	36.519	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,607.0	6,639.4	6,636.3	76.4	1.8	-93.81	1,511.5	4,276.5	2,756.0	2,678.0	78.01	35.329	
9,448.8	6,606.4	6,637.4	6,634.2	77.7	1.8	-93.71	1,511.4	4,276.6	2,712.3	2,633.0	79.31	34.198	
9,500.0	6,605.7	6,635.2	6,632.1	79.0	1.8	-93.61	1,511.4	4,276.7	2,666.7	2,586.0	80.68	33.053	
9,547.2	6,605.1	6,633.2	6,630.0	80.3	1.8	-93.51	1,511.3	4,276.8	2,624.8	2,542.9	81.95	32.031	
9,600.0	6,604.5	6,630.9	6,627.8	81.7	1.8	-93.41	1,511.2	4,276.9	2,578.2	2,494.8	83.36	30.928	
9,645.6	6,603.9	6,628.9	6,625.8	82.9	1.8	-93.31	1,511.1	4,276.9	2,538.1	2,453.5	84.59	30.005	
9,700.0	6,603.2	6,626.5	6,623.4	84.4	1.8	-93.20	1,511.0	4,277.0	2,490.5	2,404.5	86.05	28.942	
9,744.1	6,602.6	6,624.6	6,621.4	85.6	1.8	-93.11	1,511.0	4,277.1	2,452.2	2,365.0	87.24	28.108	
9,800.0	6,601.9	6,622.1	6,619.0	87.1	1.8	-93.00	1,510.9	4,277.2	2,403.9	2,315.1	88.75	27.085	
9,842.5	6,601.3	6,620.2	6,617.0	88.2	1.8	-92.91	1,510.8	4,277.3	2,367.3	2,277.4	89.90	26.332	
9,900.0	6,600.6	6,617.6	6,614.4	89.8	1.8	-92.79	1,510.7	4,277.4	2,318.2	2,226.8	91.46	25.347	
9,940.9	6,600.1	6,615.7	6,612.6	90.9	1.8	-92.70	1,510.6	4,277.5	2,283.5	2,190.9	92.57	24.668	
10,000.0	6,599.3	6,613.0	6,609.9	92.5	1.8	-92.57	1,510.5	4,277.6	2,233.8	2,139.6	94.17	23.720	
10,039.3	6,598.8	6,611.1	6,608.0	93.5	1.8	-92.49	1,510.5	4,277.6	2,200.9	2,105.7	95.24	23.108	
10,100.0	6,598.0	6,608.3	6,605.2	95.2	1.8	-92.35	1,510.4	4,277.8	2,150.6	2,053.8	96.89	22.196	
10,137.8	6,597.5	6,606.5	6,603.4	96.2	1.8	-92.27	1,510.3	4,277.8	2,119.6	2,021.7	97.92	21.646	
10,200.0	6,596.7	6,600.0	6,596.9	97.9	1.8	-91.96	1,510.1	4,278.1	2,069.0	1,969.4	99.63	20.768	
10,236.2	6,596.3	6,600.0	6,596.9	98.9	1.8	-91.96	1,510.1	4,278.1	2,039.8	1,939.2	100.61	20.275	
10,300.0	6,595.4	6,600.0	6,596.9	100.6	1.8	-91.96	1,510.1	4,278.1	1,989.0	1,886.7	102.35	19.434	
10,334.6	6,595.0	6,600.0	6,596.9	101.6	1.8	-91.96	1,510.1	4,278.1	1,961.8	1,858.5	103.29	18.993	
10,400.0	6,594.2	6,593.5	6,590.4	103.4	1.8	-91.66	1,509.8	4,278.4	1,910.9	1,805.8	105.09	18.184	
10,433.0	6,593.7	6,591.7	6,588.7	104.3	1.8	-91.58	1,509.7	4,278.4	1,885.5	1,779.6	105.99	17.790	
10,500.0	6,592.9	6,588.2	6,585.1	106.1	1.8	-91.41	1,509.6	4,278.6	1,834.9	1,727.1	107.83	17.017	
10,531.5	6,592.5	6,586.4	6,583.4	106.9	1.8	-91.33	1,509.5	4,278.7	1,811.5	1,702.8	108.69	16.667	
10,600.0	6,591.6	6,582.7	6,579.6	108.8	1.8	-91.15	1,509.4	4,278.8	1,761.3	1,650.7	110.57	15.929	
10,629.9	6,591.2	6,581.0	6,577.9	109.6	1.8	-91.07	1,509.3	4,278.9	1,739.8	1,628.4	111.39	15.619	
10,700.0	6,590.3	6,577.0	6,574.0	111.6	1.8	-90.89	1,509.2	4,279.1	1,690.4	1,577.1	113.31	14.917	
10,728.3	6,589.9	6,575.4	6,572.3	112.3	1.8	-90.81	1,509.1	4,279.2	1,670.8	1,556.7	114.09	14.644	
10,800.0	6,589.0	6,571.1	6,568.1	114.3	1.8	-90.61	1,508.9	4,279.4	1,622.5	1,506.4	116.06	13.979	
10,826.7	6,588.7	6,569.5	6,566.5	115.0	1.8	-90.54	1,508.8	4,279.4	1,604.9	1,488.1	116.80	13.741	
10,900.0	6,587.7	6,565.1	6,562.1	117.1	1.8	-90.33	1,508.7	4,279.7	1,558.1	1,439.2	118.81	13.113	
10,925.2	6,587.4	6,563.5	6,560.5	117.7	1.8	-90.25	1,508.6	4,279.7	1,542.4	1,422.9	119.51	12.907	
11,000.0	6,586.4	6,558.8	6,555.8	119.8	1.8	-90.03	1,508.4	4,279.9	1,497.5	1,375.9	121.57	12.318	
11,023.6	6,586.1	6,557.3	6,554.3	120.4	1.8	-89.96	1,508.3	4,280.0	1,483.8	1,361.6	122.22	12.141	
11,100.0	6,585.1	6,552.4	6,549.4	122.6	1.8	-89.73	1,508.1	4,280.3	1,441.3	1,317.0	124.32	11.594	
11,122.0	6,584.8	6,550.9	6,547.9	123.2	1.8	-89.66	1,508.0	4,280.3	1,429.6	1,304.7	124.92	11.444	
11,200.0	6,583.8	6,545.7	6,542.7	125.3	1.8	-89.42	1,507.8	4,280.6	1,390.1	1,263.0	127.07	10.939	
11,220.4	6,583.6	6,544.3	6,541.3	125.9	1.8	-89.35	1,507.7	4,280.7	1,380.2	1,252.6	127.63	10.814	
11,300.0	6,582.5	6,538.7	6,535.8	128.1	1.8	-89.09	1,507.5	4,281.0	1,344.2	1,214.4	129.82	10.355	
11,318.9	6,582.3	6,537.4	6,534.5	128.6	1.8	-89.03	1,507.4	4,281.0	1,336.3	1,205.9	130.34	10.252	
11,400.0	6,581.2	6,531.6	6,528.6	130.8	1.8	-88.75	1,507.1	4,281.3	1,304.5	1,171.9	132.57	9.840	
11,417.3	6,581.0	6,530.3	6,527.4	131.3	1.8	-88.69	1,507.1	4,281.4	1,298.2	1,165.2	133.05	9.758	
11,500.0	6,580.0	6,524.1	6,521.2	133.6	1.8	-88.40	1,506.8	4,281.7	1,271.3	1,136.0	135.32	9.395	
11,515.7	6,579.7	6,522.9	6,520.0	134.0	1.8	-88.34	1,506.7	4,281.8	1,266.7	1,131.0	135.75	9.331	
11,600.0	6,578.7	6,516.4	6,513.5	136.3	1.8	-88.04	1,506.4	4,282.1	1,245.3	1,107.2	138.06	9.019	
11,614.1	6,578.5	6,515.3	6,512.4	136.7	1.8	-87.98	1,506.4	4,282.2	1,242.2	1,103.7	138.45	8.972	
11,700.0	6,577.4	6,508.4	6,505.5	139.1	1.8	-87.66	1,506.0	4,282.6	1,226.8	1,086.0	140.80	8.713	
11,712.6	6,577.2	6,507.3	6,504.5	139.5	1.8	-87.61	1,506.0	4,282.7	1,225.0	1,083.9	141.15	8.679	
11,800.0	6,576.1	6,500.0	6,497.2	141.9	1.8	-87.27	1,505.6	4,283.1	1,216.2	1,072.7	143.54	8.473	
11,811.0	6,575.9	6,499.1	6,496.3	142.2	1.8	-87.22	1,505.5	4,283.1	1,215.6	1,071.7	143.84	8.451	
11,879.6	6,575.0	6,493.3	6,490.5	144.1	1.8	-86.95	1,505.2	4,283.5	1,213.6	1,067.9	145.71	8.329 CC	
11,882.7	6,575.0	6,493.1	6,490.2	144.2	1.8	-86.94	1,505.2	4,283.5	1,213.6	1,067.8	145.80	8.324	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #41-10 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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
11,883.5	6,575.0	6,493.0	6,490.2	144.2	1.8	-86.94	1,505.2	4,283.5	1,213.6	1,067.8	145.81	8.323 ES, SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	86.97	219.7	4,151.5	4,157.3				
98.4	98.4	80.5	80.5	0.1	0.0	86.97	219.6	4,151.5	4,157.3	4,157.2	0.10	N/A	
100.0	100.0	82.0	82.0	0.1	0.0	86.97	219.6	4,151.5	4,157.3	4,157.2	0.10	N/A	
114.0	114.0	96.0	96.0	0.1	0.0	86.97	219.6	4,151.5	4,157.3	4,157.2	0.13	N/A	
196.8	196.8	178.2	178.2	0.3	0.1	86.97	219.4	4,151.5	4,157.3	4,156.9	0.39	N/A	
200.0	200.0	181.3	181.3	0.3	0.1	86.97	219.4	4,151.5	4,157.3	4,156.9	0.40	N/A	
295.3	295.3	275.6	275.6	0.5	0.2	86.98	219.2	4,151.6	4,157.3	4,156.6	0.74	5,627.753	
300.0	300.0	280.3	280.3	0.5	0.2	86.98	219.2	4,151.6	4,157.3	4,156.6	0.76	5,501.552	
393.7	393.7	373.9	373.9	0.8	0.3	86.98	219.1	4,151.6	4,157.4	4,156.3	1.06	3,933.921	
400.0	400.0	380.2	380.2	0.8	0.3	86.98	219.1	4,151.6	4,157.4	4,156.3	1.08	3,862.225	
492.1	492.1	471.7	471.7	1.0	0.4	86.98	218.9	4,151.7	4,157.4	4,156.1	1.35	3,077.032	
500.0	500.0	479.6	479.6	1.0	0.4	86.98	218.8	4,151.7	4,157.4	4,156.1	1.37	3,025.093	
590.5	590.5	569.8	569.8	1.2	0.4	86.99	218.5	4,151.7	4,157.5	4,155.9	1.64	2,541.883	
600.0	600.0	579.2	579.2	1.2	0.4	86.99	218.5	4,151.8	4,157.5	4,155.8	1.66	2,500.456	
689.0	689.0	671.3	671.3	1.4	0.5	86.99	218.1	4,151.8	4,157.5	4,155.6	1.92	2,170.832	
700.0	700.0	682.8	682.8	1.4	0.5	86.99	218.1	4,151.8	4,157.5	4,155.6	1.95	2,136.050	
787.4	787.4	772.1	772.1	1.6	0.5	87.00	217.7	4,151.8	4,157.5	4,155.3	2.19	1,898.396	
800.0	800.0	784.9	784.9	1.7	0.6	87.00	217.6	4,151.8	4,157.5	4,155.3	2.23	1,868.525	
885.8	885.8	879.0	879.0	1.9	0.6	87.01	217.0	4,151.7	4,157.3	4,154.9	2.46	1,687.552	
900.0	900.0	894.8	894.8	1.9	0.6	87.01	216.9	4,151.6	4,157.3	4,154.8	2.50	1,660.966	
984.2	984.2	978.1	978.1	2.1	0.6	87.02	216.3	4,151.4	4,157.1	4,154.3	2.73	1,522.599	
1,000.0	1,000.0	993.6	993.6	2.1	0.7	87.02	216.1	4,151.4	4,157.0	4,154.2	2.77	1,499.281	
1,082.7	1,082.7	1,077.4	1,077.4	2.3	0.7	87.03	215.4	4,151.2	4,156.8	4,153.8	3.00	1,387.785	
1,100.0	1,100.0	1,095.0	1,095.0	2.3	0.7	87.03	215.3	4,151.1	4,156.7	4,153.7	3.04	1,366.475	
1,181.1	1,181.1	1,169.4	1,169.4	2.5	0.7	87.04	214.6	4,151.0	4,156.5	4,153.3	3.26	1,276.593	
1,200.0	1,200.0	1,186.7	1,186.7	2.6	0.7	87.04	214.5	4,151.0	4,156.5	4,153.2	3.31	1,257.344	
1,260.0	1,260.0	1,242.0	1,242.0	2.7	0.8	87.05	214.0	4,151.0	4,156.5	4,153.0	3.46	1,199.869	
1,279.5	1,279.5	1,260.1	1,260.1	2.7	0.8	87.05	213.9	4,151.0	4,156.5	4,153.0	3.52	1,182.252	
1,300.0	1,300.0	1,279.1	1,279.0	2.8	0.8	87.05	213.8	4,151.0	4,156.5	4,152.9	3.57	1,164.346	
1,377.9	1,377.9	1,348.8	1,348.8	3.0	0.8	87.06	213.3	4,151.1	4,156.6	4,152.8	3.77	1,101.910	
1,400.0	1,400.0	1,368.3	1,368.2	3.0	0.8	87.06	213.3	4,151.2	4,156.7	4,152.8	3.83	1,085.548	
1,476.4	1,476.4	1,439.2	1,439.2	3.2	0.8	162.19	213.0	4,151.5	4,158.0	4,154.0	3.92	1,059.731	
1,500.0	1,500.0	1,462.1	1,462.1	3.2	0.8	162.18	212.9	4,151.6	4,158.8	4,154.8	3.98	1,044.309	
1,574.8	1,574.7	1,548.2	1,548.2	3.4	0.9	162.18	212.7	4,152.0	4,162.5	4,158.3	4.16	1,000.512	
1,600.0	1,599.8	1,582.2	1,582.2	3.4	0.9	162.18	212.6	4,152.0	4,164.1	4,159.9	4.22	986.995	
1,673.2	1,672.8	1,671.8	1,671.8	3.6	0.9	162.18	212.4	4,151.8	4,169.7	4,165.3	4.40	947.859	
1,700.0	1,699.5	1,703.2	1,703.2	3.7	0.9	162.18	212.2	4,151.7	4,172.1	4,167.6	4.46	934.533	
1,771.6	1,770.6	1,776.6	1,776.5	3.8	0.9	162.18	211.9	4,151.3	4,179.7	4,175.0	4.64	900.108	
1,800.0	1,798.7	1,805.5	1,805.5	3.9	1.0	162.18	211.7	4,151.1	4,183.2	4,178.4	4.71	887.321	
1,870.1	1,868.0	1,876.3	1,876.2	4.1	1.0	162.17	211.2	4,150.7	4,192.8	4,187.9	4.89	856.584	
1,900.0	1,897.5	1,906.3	1,906.3	4.2	1.0	162.16	210.9	4,150.5	4,197.5	4,192.5	4.97	844.280	
1,968.5	1,964.8	1,974.0	1,974.0	4.4	1.0	162.15	210.3	4,150.1	4,209.1	4,204.0	5.15	816.837	
2,000.0	1,995.6	2,005.3	2,005.3	4.5	1.0	162.15	209.9	4,150.0	4,215.0	4,209.8	5.24	804.962	
2,066.9	2,060.9	2,074.3	2,074.3	4.7	1.1	162.14	209.0	4,149.5	4,228.6	4,223.1	5.42	780.127	
2,100.0	2,093.1	2,107.6	2,107.6	4.8	1.1	162.14	208.4	4,149.3	4,235.8	4,230.3	5.51	768.620	
2,165.3	2,156.3	2,169.4	2,169.4	5.1	1.1	162.12	207.5	4,148.9	4,251.1	4,245.4	5.70	746.157	
2,200.0	2,189.6	2,202.0	2,201.9	5.2	1.1	162.11	207.0	4,148.6	4,259.8	4,254.0	5.80	735.041	
2,263.8	2,250.7	2,261.4	2,261.4	5.5	1.1	162.08	206.5	4,148.3	4,276.8	4,270.8	5.98	714.815	
2,280.0	2,266.2	2,276.5	2,276.5	5.6	1.1	162.07	206.4	4,148.2	4,281.3	4,275.3	6.03	709.993	
2,300.0	2,285.3	2,295.1	2,295.0	5.7	1.1	162.09	206.4	4,148.0	4,287.0	4,280.9	6.09	704.227	
2,362.2	2,344.6	2,363.5	2,363.5	6.0	1.1	162.18	206.7	4,147.5	4,304.5	4,298.2	6.27	687.042	
2,400.0	2,380.6	2,405.3	2,405.3	6.2	1.1	162.22	207.2	4,147.1	4,315.1	4,308.7	6.38	675.838	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,460.6	2,438.4	2,467.5	2,467.5	6.5	1.1	162.29	208.2	4,146.4	4,332.0	4,325.5	6.57	659.471	
2,500.0	2,475.9	2,507.6	2,507.5	6.7	1.1	162.33	209.0	4,146.0	4,343.0	4,336.3	6.69	649.168	
2,559.0	2,532.2	2,565.6	2,565.5	7.0	1.1	162.38	210.3	4,145.2	4,359.4	4,352.5	6.87	634.158	
2,600.0	2,571.2	2,605.4	2,605.2	7.2	1.2	162.42	211.2	4,144.7	4,370.8	4,363.8	7.00	624.139	
2,657.5	2,626.0	2,657.3	2,657.2	7.5	1.2	162.47	212.4	4,144.1	4,386.8	4,379.6	7.19	610.492	
2,700.0	2,666.6	2,695.8	2,695.6	7.8	1.2	162.51	213.2	4,143.6	4,398.7	4,391.4	7.32	600.795	
2,755.9	2,719.8	2,745.9	2,745.7	8.1	1.2	162.55	214.1	4,143.1	4,414.3	4,406.8	7.50	588.374	
2,800.0	2,761.9	2,785.4	2,785.2	8.3	1.2	162.59	214.7	4,142.7	4,426.7	4,419.0	7.65	578.968	
2,854.3	2,813.7	2,829.5	2,829.3	8.7	1.2	162.64	215.3	4,142.3	4,442.0	4,434.1	7.82	567.757	
2,900.0	2,857.2	2,864.8	2,864.6	8.9	1.2	162.68	215.7	4,142.0	4,454.9	4,446.9	7.97	558.730	
2,952.7	2,907.5	2,900.0	2,899.8	9.2	1.2	162.72	216.0	4,141.9	4,470.0	4,461.8	8.15	548.734	
3,000.0	2,952.5	2,936.3	2,936.1	9.5	1.2	162.76	216.2	4,141.8	4,483.6	4,475.3	8.30	540.115	
3,051.2	3,001.3	2,970.2	2,970.1	9.8	1.2	162.79	216.4	4,141.8	4,498.5	4,490.0	8.47	531.218	
3,100.0	3,047.8	3,000.0	2,999.8	10.1	1.2	162.83	216.5	4,142.0	4,512.9	4,504.2	8.63	523.148	
3,149.6	3,095.1	3,033.3	3,033.1	10.4	1.2	162.87	216.6	4,142.2	4,527.6	4,518.8	8.79	515.094	
3,200.0	3,143.2	3,064.5	3,064.3	10.7	1.2	162.90	216.8	4,142.6	4,542.8	4,533.8	8.96	507.138	
3,248.0	3,188.9	3,100.0	3,099.8	11.0	1.2	162.94	217.1	4,143.1	4,557.4	4,548.3	9.12	499.488	
3,300.0	3,238.5	3,133.6	3,133.4	11.3	1.2	162.97	217.4	4,143.7	4,573.4	4,564.1	9.30	491.838	
3,346.4	3,282.8	3,170.1	3,169.9	11.6	1.2	163.01	217.8	4,144.4	4,587.8	4,578.3	9.46	485.098	
3,400.0	3,333.8	3,211.8	3,211.6	11.9	1.2	163.05	218.2	4,145.3	4,604.4	4,594.8	9.64	477.622	
3,444.9	3,376.6	3,246.0	3,245.7	12.2	1.2	163.09	218.7	4,146.1	4,618.5	4,608.7	9.79	471.593	
3,500.0	3,429.1	3,287.9	3,287.6	12.6	1.2	163.13	219.2	4,147.2	4,635.8	4,625.9	9.98	464.448	
3,543.3	3,470.4	3,326.9	3,326.7	12.8	1.2	163.17	219.8	4,148.2	4,649.6	4,639.4	10.13	458.953	
3,600.0	3,524.4	3,382.8	3,382.5	13.2	1.2	163.22	220.7	4,149.7	4,667.5	4,657.2	10.33	451.965	
3,641.7	3,564.2	3,419.1	3,418.8	13.4	1.2	163.25	221.2	4,150.7	4,680.7	4,670.2	10.47	447.010	
3,700.0	3,619.8	3,465.0	3,464.6	13.8	1.2	163.30	221.9	4,151.9	4,699.2	4,688.5	10.67	440.365	
3,740.1	3,658.0	3,500.0	3,499.6	14.0	1.2	163.33	222.5	4,153.0	4,712.0	4,701.2	10.81	435.885	
3,800.0	3,715.1	3,552.0	3,551.6	14.4	1.2	163.38	223.4	4,154.6	4,731.2	4,720.1	11.02	429.395	
3,838.6	3,751.8	3,588.1	3,587.7	14.7	1.2	163.41	224.0	4,155.7	4,743.5	4,732.4	11.15	425.299	
3,900.0	3,810.4	3,654.6	3,654.1	15.0	1.3	163.47	225.0	4,157.7	4,763.2	4,751.8	11.37	418.958	
3,937.0	3,845.7	3,696.0	3,695.6	15.3	1.3	163.50	225.7	4,158.8	4,774.9	4,763.4	11.50	415.237	
4,000.0	3,905.7	3,753.7	3,753.2	15.7	1.3	163.56	226.5	4,160.4	4,794.9	4,783.2	11.72	409.164	
4,035.4	3,939.5	3,785.6	3,785.1	15.9	1.3	163.59	226.9	4,161.3	4,806.2	4,794.4	11.84	405.844	
4,100.0	4,001.0	3,888.2	3,887.6	16.3	1.3	163.69	227.6	4,163.8	4,826.6	4,814.5	12.07	399.719	
4,133.8	4,033.3	3,956.3	3,955.7	16.5	1.3	163.76	227.6	4,164.9	4,836.9	4,824.8	12.19	396.648	
4,200.0	4,096.3	4,067.2	4,066.6	16.9	1.3	163.89	226.7	4,165.7	4,856.6	4,844.2	12.43	390.869	
4,232.3	4,127.1	4,112.0	4,111.4	17.1	1.3	163.94	226.2	4,165.8	4,866.1	4,853.5	12.54	388.116	
4,300.0	4,191.7	4,190.2	4,189.6	17.6	1.4	164.03	225.6	4,165.6	4,885.7	4,872.9	12.77	382.499	
4,330.7	4,220.9	4,233.8	4,233.2	17.8	1.4	164.07	225.4	4,165.4	4,894.5	4,881.6	12.88	379.995	
4,400.0	4,287.0	4,323.5	4,322.9	18.2	1.4	164.17	225.1	4,164.6	4,914.1	4,901.0	13.12	374.441	
4,429.1	4,314.7	4,350.0	4,349.4	18.4	1.4	164.19	225.0	4,164.3	4,922.3	4,909.1	13.23	372.181	
4,500.0	4,382.3	4,433.3	4,432.7	18.8	1.4	164.28	224.5	4,163.4	4,942.3	4,928.8	13.47	366.792	
4,527.5	4,408.6	4,490.8	4,490.2	19.0	1.4	164.35	223.6	4,162.4	4,949.9	4,936.3	13.58	364.630	
4,600.0	4,477.6	4,562.3	4,561.6	19.5	1.4	164.44	221.9	4,160.9	4,969.6	4,955.8	13.83	359.428	
4,626.0	4,502.4	4,586.0	4,585.4	19.6	1.4	164.47	221.3	4,160.4	4,976.7	4,962.7	13.92	357.620	
4,700.0	4,572.9	4,648.7	4,648.0	20.1	1.4	164.55	219.7	4,159.2	4,996.9	4,982.7	14.17	352.540	
4,724.4	4,596.2	4,668.9	4,668.2	20.3	1.4	164.57	219.3	4,158.8	5,003.6	4,989.4	14.26	350.898	
4,800.0	4,668.3	4,723.0	4,722.3	20.7	1.5	164.64	218.6	4,157.9	5,024.5	5,010.0	14.52	345.951	
4,822.8	4,690.0	4,736.8	4,736.1	20.9	1.5	164.65	218.4	4,157.7	5,030.9	5,016.3	14.60	344.499	
4,900.0	4,763.6	4,800.0	4,799.3	21.4	1.5	164.71	218.1	4,157.2	5,052.8	5,037.9	14.88	339.621	
4,921.2	4,783.8	4,800.0	4,799.3	21.5	1.5	164.71	218.1	4,157.2	5,058.8	5,043.9	14.95	338.427	
5,000.0	4,858.9	4,837.9	4,837.2	22.0	1.5	164.75	217.9	4,157.1	5,081.7	5,066.5	15.22	333.863	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #42-10 - Wellbore #1 - Wellbore #1												Offset Site Error: 0.0 usft	
Survey Program: 100-GYD_CT												Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,019.7	4,877.7	4,848.2	4,847.5	22.1	1.5	164.76	217.8	4,157.1	5,087.5	5,072.2	15.29	332.772	
5,100.0	4,954.2	4,900.0	4,899.3	22.6	1.5	164.82	217.3	4,157.4	5,111.4	5,095.9	15.57	328.306	
5,118.1	4,971.5	4,900.0	4,899.3	22.8	1.5	164.82	217.3	4,157.4	5,116.9	5,101.3	15.63	327.394	
5,171.8	5,022.7	5,027.3	5,026.5	23.1	1.5	164.96	215.1	4,157.6	5,132.5	5,116.7	15.83	324.155	
5,200.0	5,049.6	5,052.0	5,051.2	23.3	1.5	165.03	214.6	4,157.5	5,140.6	5,124.7	15.90	323.293	
5,216.5	5,065.4	5,066.5	5,065.8	23.3	1.5	165.07	214.3	4,157.4	5,145.2	5,129.2	15.93	322.885	
5,300.0	5,145.7	5,131.7	5,130.9	23.7	1.5	165.26	212.9	4,157.3	5,167.1	5,151.0	16.11	320.837	
5,314.9	5,160.1	5,142.1	5,141.4	23.8	1.5	165.29	212.7	4,157.2	5,170.8	5,154.7	16.13	320.521	
5,400.0	5,242.7	5,203.7	5,202.9	24.1	1.6	165.45	211.3	4,157.4	5,190.8	5,174.5	16.29	318.733	
5,413.4	5,255.7	5,223.6	5,222.8	24.2	1.6	165.48	210.8	4,157.4	5,193.7	5,177.4	16.31	318.463	
5,500.0	5,340.5	5,348.2	5,347.4	24.5	1.6	165.68	207.8	4,157.3	5,210.9	5,194.5	16.45	316.768	
5,511.8	5,352.1	5,364.4	5,363.5	24.5	1.6	165.70	207.5	4,157.2	5,213.1	5,196.6	16.47	316.576	
5,600.0	5,439.0	5,445.4	5,444.6	24.8	1.6	165.82	206.4	4,156.6	5,227.3	5,210.7	16.59	315.170	
5,610.2	5,449.1	5,452.9	5,452.1	24.8	1.6	165.83	206.3	4,156.6	5,228.7	5,212.2	16.60	315.039	
5,700.0	5,538.0	5,541.9	5,541.1	25.1	1.6	165.93	205.4	4,156.4	5,240.6	5,223.9	16.70	313.768	
5,708.6	5,546.6	5,556.1	5,555.3	25.1	1.7	165.94	205.2	4,156.3	5,241.5	5,224.8	16.71	313.649	
5,800.0	5,637.4	5,645.7	5,644.9	25.3	1.7	166.03	203.8	4,155.7	5,250.1	5,233.3	16.80	312.462	
5,807.1	5,644.5	5,650.7	5,649.9	25.3	1.7	166.03	203.7	4,155.7	5,250.7	5,233.9	16.81	312.388	
5,900.0	5,737.2	5,719.5	5,718.6	25.5	1.7	166.08	202.9	4,155.5	5,256.7	5,239.8	16.89	311.296	
5,905.5	5,742.6	5,724.1	5,723.2	25.5	1.7	166.08	202.8	4,155.5	5,257.0	5,240.1	16.89	311.240	
6,000.0	5,837.1	5,800.0	5,799.1	25.6	1.7	166.11	202.3	4,155.6	5,260.3	5,243.4	16.96	310.109	
6,003.9	5,841.0	5,806.9	5,806.0	25.6	1.7	166.11	202.3	4,155.7	5,260.4	5,243.5	16.97	310.053	
6,051.8	5,888.9	5,850.5	5,849.6	25.7	1.7	90.99	202.1	4,155.8	5,261.0	5,234.0	26.95	195.219	
6,081.8	5,918.9	5,877.8	5,877.0	25.7	1.7	90.99	202.0	4,155.9	5,261.1	5,234.1	26.99	194.955	
6,100.0	5,937.1	5,894.4	5,893.5	25.7	1.7	1.00	201.8	4,156.0	5,261.0	5,243.9	17.02	309.074	
6,102.3	5,939.4	5,900.0	5,899.1	25.7	1.7	1.00	201.8	4,156.0	5,260.9	5,243.9	17.02	309.144	
6,150.0	5,987.0	5,995.9	5,995.1	25.7	1.8	1.01	201.0	4,156.0	5,258.0	5,241.0	16.95	310.187	
6,200.0	6,036.5	6,032.3	6,031.4	25.7	1.8	1.03	200.6	4,155.9	5,251.3	5,234.4	16.89	310.886	
6,200.8	6,037.3	6,032.8	6,032.0	25.7	1.8	1.03	200.6	4,155.9	5,251.2	5,234.3	16.89	310.896	
6,250.0	6,085.5	6,065.5	6,064.6	25.7	1.8	1.05	200.2	4,155.8	5,241.3	5,224.5	16.83	311.474	
6,299.2	6,133.0	6,100.0	6,099.1	25.6	1.8	1.07	199.7	4,155.9	5,228.4	5,211.6	16.74	312.264	
6,300.0	6,133.7	6,100.0	6,099.1	25.6	1.8	1.07	199.7	4,155.9	5,228.1	5,211.4	16.74	312.283	
6,350.0	6,180.9	6,137.9	6,137.0	25.5	1.8	1.11	199.1	4,156.0	5,211.7	5,195.0	16.62	313.547	
6,397.6	6,224.6	6,175.2	6,174.3	25.4	1.8	1.15	198.6	4,156.2	5,193.0	5,176.6	16.47	315.301	
6,400.0	6,226.7	6,177.0	6,176.2	25.4	1.8	1.15	198.5	4,156.3	5,192.0	5,175.6	16.46	315.400	
6,450.0	6,271.1	6,218.3	6,217.5	25.2	1.8	1.21	197.9	4,156.5	5,169.3	5,153.0	16.26	317.870	
6,496.0	6,310.4	6,259.7	6,258.8	25.1	1.8	1.27	197.3	4,156.8	5,145.6	5,129.6	16.05	320.655	
6,500.0	6,313.7	6,263.1	6,262.2	25.1	1.8	1.28	197.3	4,156.8	5,143.5	5,127.5	16.03	320.915	
6,550.0	6,354.4	6,305.2	6,304.3	25.0	1.8	1.36	196.6	4,157.1	5,114.8	5,099.0	15.76	324.597	
6,594.5	6,388.9	6,337.1	6,336.2	24.9	1.9	1.44	196.1	4,157.3	5,086.9	5,071.4	15.49	328.394	
6,600.0	6,393.0	6,341.0	6,340.1	24.9	1.9	1.45	196.0	4,157.3	5,083.2	5,067.8	15.46	328.887	
6,650.0	6,429.3	6,374.7	6,373.8	24.8	1.9	1.57	195.4	4,157.5	5,049.1	5,034.0	15.14	333.551	
6,692.9	6,458.5	6,402.2	6,401.3	24.7	1.9	1.69	194.9	4,157.7	5,017.9	5,003.0	14.86	337.623	
6,700.0	6,463.1	6,407.4	6,406.5	24.7	1.9	1.72	194.8	4,157.8	5,012.6	4,997.8	14.82	338.263	
6,750.0	6,494.3	6,442.4	6,441.4	24.7	1.9	1.90	194.2	4,158.0	4,973.7	4,959.2	14.52	342.464	
6,791.3	6,517.9	6,468.9	6,467.9	24.7	1.9	2.08	193.8	4,158.2	4,940.0	4,925.7	14.31	345.221	
6,800.0	6,522.6	6,474.1	6,473.2	24.7	1.9	2.13	193.7	4,158.2	4,932.7	4,918.5	14.27	345.689	
6,850.0	6,548.0	6,502.6	6,501.7	24.7	1.9	2.43	193.2	4,158.4	4,889.8	4,875.8	14.08	347.176	
6,889.7	6,566.0	6,500.0	6,499.1	24.8	1.9	2.70	193.3	4,158.4	4,854.6	4,840.6	13.98	347.310	
6,900.0	6,570.4	6,500.0	6,499.1	24.9	1.9	2.78	193.3	4,158.4	4,845.3	4,831.4	13.96	347.032	
6,950.0	6,589.5	6,500.0	6,499.1	25.1	1.9	3.27	193.3	4,158.4	4,799.4	4,785.4	13.98	343.422	
6,988.2	6,602.0	6,500.0	6,499.1	25.3	1.9	3.79	193.3	4,158.4	4,763.5	4,749.5	14.09	338.059	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.4	6,500.0	6,499.1	25.3	1.9	3.98	193.3	4,158.4	4,752.3	4,738.2	14.14	335.971	
7,050.0	6,618.0	6,500.0	6,499.1	25.6	1.9	5.11	193.3	4,158.4	4,704.2	4,689.7	14.49	324.577	
7,086.6	6,625.0	6,500.0	6,499.1	25.9	1.9	6.44	193.3	4,158.4	4,668.4	4,653.6	14.89	313.537	
7,100.0	6,627.1	6,500.0	6,499.1	26.0	1.9	7.13	193.3	4,158.4	4,655.3	4,640.2	15.07	308.822	
7,150.0	6,632.8	6,500.0	6,499.1	26.5	1.9	11.78	193.3	4,158.4	4,605.8	4,589.6	16.20	284.228	
7,185.0	6,634.7	6,500.0	6,499.1	26.8	1.9	21.33	193.3	4,158.4	4,570.9	4,552.3	18.58	246.030	
7,200.0	6,635.0	6,500.0	6,499.1	27.0	1.9	31.86	193.3	4,158.4	4,555.9	4,534.6	21.36	213.321	
7,215.9	6,635.0	6,500.0	6,499.1	27.1	1.9	59.04	193.3	4,158.4	4,540.0	4,513.0	27.00	168.148	
7,283.4	6,634.1	6,500.0	6,499.1	27.9	1.9	59.04	193.3	4,158.4	4,472.5	4,444.8	27.73	161.296	
7,300.0	6,633.9	6,500.0	6,499.1	28.1	1.9	59.05	193.3	4,158.4	4,456.0	4,428.0	27.91	159.666	
7,381.9	6,632.9	6,500.0	6,499.1	29.3	1.9	59.05	193.3	4,158.4	4,374.1	4,345.2	28.93	151.178	
7,400.0	6,632.6	6,500.0	6,499.1	29.5	1.9	59.05	193.3	4,158.4	4,356.0	4,326.8	29.16	149.374	
7,480.3	6,631.6	6,500.0	6,499.1	30.8	1.9	59.05	193.3	4,158.4	4,275.7	4,245.4	30.30	141.116	
7,500.0	6,631.4	6,500.0	6,499.1	31.1	1.9	59.06	193.3	4,158.4	4,256.0	4,225.4	30.58	139.178	
7,578.7	6,630.4	6,500.0	6,499.1	32.5	1.9	59.06	193.3	4,158.4	4,177.3	4,145.5	31.80	131.343	
7,600.0	6,630.1	6,500.0	6,499.1	32.9	1.9	59.07	193.3	4,158.4	4,156.1	4,123.9	32.14	129.323	
7,677.1	6,629.1	6,500.0	6,499.1	34.3	1.9	59.07	193.3	4,158.4	4,078.9	4,045.5	33.43	122.019	
7,700.0	6,628.8	6,500.0	6,499.1	34.8	1.9	59.07	193.3	4,158.4	4,056.1	4,022.3	33.81	119.959	
7,775.6	6,627.8	6,500.0	6,499.1	36.3	1.9	59.07	193.3	4,158.4	3,980.6	3,945.4	35.15	113.237	
7,800.0	6,627.5	6,500.0	6,499.1	36.8	1.9	59.08	193.3	4,158.4	3,956.1	3,920.6	35.59	111.168	
7,874.0	6,626.6	6,500.0	6,499.1	38.4	1.9	59.08	193.3	4,158.4	3,882.2	3,845.2	36.96	105.035	
7,900.0	6,626.3	6,500.0	6,499.1	38.9	1.9	59.09	193.3	4,158.4	3,856.2	3,818.7	37.45	102.983	
7,972.4	6,625.3	6,500.0	6,499.1	40.5	1.9	59.09	193.3	4,158.4	3,783.8	3,745.0	38.84	97.418	
8,000.0	6,625.0	6,500.0	6,499.1	41.1	1.9	59.09	193.3	4,158.4	3,756.2	3,716.9	39.37	95.400	
8,070.8	6,624.1	6,500.0	6,499.1	42.7	1.9	59.09	193.3	4,158.4	3,685.4	3,644.6	40.78	90.371	
8,100.0	6,623.7	6,500.0	6,499.1	43.4	1.9	59.10	193.3	4,158.4	3,656.3	3,614.9	41.36	88.398	
8,169.3	6,622.8	6,500.0	6,499.1	45.0	1.9	59.10	193.3	4,158.4	3,587.1	3,544.3	42.77	83.862	
8,200.0	6,622.4	6,500.0	6,499.1	45.7	1.9	59.11	193.3	4,158.4	3,556.3	3,512.9	43.40	81.942	
8,267.7	6,621.6	6,500.0	6,499.1	47.4	1.9	59.11	193.3	4,158.4	3,488.7	3,443.9	44.81	77.856	
8,300.0	6,621.1	6,500.0	6,499.1	48.1	1.9	59.11	193.3	4,158.4	3,456.4	3,410.9	45.48	75.993	
8,366.1	6,620.3	6,500.0	6,499.1	49.7	1.9	59.11	193.3	4,158.4	3,390.3	3,343.4	46.88	72.314	
8,400.0	6,619.9	6,500.0	6,499.1	50.6	1.9	59.12	193.3	4,158.4	3,356.5	3,308.9	47.60	70.510	
8,464.5	6,619.0	6,500.0	6,499.1	52.2	1.9	59.12	193.3	4,158.4	3,291.9	3,243.0	48.99	67.196	
8,500.0	6,618.6	6,500.0	6,499.1	53.0	1.9	59.12	193.3	4,158.4	3,256.5	3,206.8	49.75	65.453	
8,563.0	6,617.8	6,500.0	6,499.1	54.6	1.9	59.12	193.3	4,158.4	3,193.6	3,142.5	51.12	62.466	
8,600.0	6,617.3	6,500.0	6,499.1	55.5	1.9	59.13	193.3	4,158.4	3,156.6	3,104.7	51.93	60.782	
8,661.4	6,616.5	6,500.0	6,499.1	57.1	1.9	59.13	193.3	4,158.4	3,095.2	3,041.9	53.28	58.088	
8,700.0	6,616.0	6,500.0	6,499.1	58.1	1.9	59.13	193.3	4,158.4	3,056.7	3,002.5	54.14	56.462	
8,759.8	6,615.2	6,500.0	6,499.1	59.6	1.9	59.13	193.3	4,158.4	2,996.9	2,941.4	55.47	54.031	
8,800.0	6,614.7	6,500.0	6,499.1	60.6	1.9	59.14	193.3	4,158.4	2,956.7	2,900.4	56.36	52.461	
8,858.2	6,614.0	6,500.0	6,499.1	62.1	1.9	59.14	193.3	4,158.4	2,898.5	2,840.9	57.67	50.264	
8,900.0	6,613.4	6,500.0	6,499.1	63.2	1.9	59.14	193.3	4,158.4	2,856.8	2,798.2	58.60	48.748	
8,956.7	6,612.7	6,500.0	6,499.1	64.7	1.9	59.14	193.3	4,158.4	2,800.2	2,740.3	59.88	46.761	
9,000.0	6,612.2	6,500.0	6,499.1	65.8	1.9	59.15	193.3	4,158.4	2,756.9	2,696.0	60.86	45.297	
9,055.1	6,611.5	6,500.0	6,499.1	67.3	1.9	59.15	193.3	4,158.4	2,701.8	2,639.7	62.11	43.498	
9,100.0	6,610.9	6,500.0	6,499.1	68.4	1.9	59.15	193.3	4,158.4	2,657.0	2,593.9	63.14	42.083	
9,153.5	6,610.2	6,500.0	6,499.1	69.8	1.9	59.15	193.3	4,158.4	2,603.5	2,539.2	64.36	40.452	
9,200.0	6,609.6	6,500.0	6,499.1	71.1	1.9	59.16	193.3	4,158.4	2,557.1	2,491.7	65.42	39.085	
9,251.9	6,608.9	6,500.0	6,499.1	72.4	1.9	59.16	193.3	4,158.4	2,505.2	2,438.6	66.62	37.606	
9,300.0	6,608.3	6,500.0	6,499.1	73.7	1.9	59.16	193.3	4,158.4	2,457.2	2,389.5	67.72	36.284	
9,350.4	6,607.7	6,500.0	6,499.1	75.0	1.9	59.16	193.3	4,158.4	2,406.9	2,338.0	68.88	34.941	
9,400.0	6,607.0	6,500.0	6,499.1	76.4	1.9	59.16	193.3	4,158.4	2,357.3	2,287.3	70.03	33.661	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,606.4	6,500.0	6,499.1	77.7	1.9	59.16	193.3	4,158.4	2,308.6	2,237.4	71.16	32.442	
9,500.0	6,605.7	6,500.0	6,499.1	79.0	1.9	59.17	193.3	4,158.4	2,257.4	2,185.1	72.35	31.202	
9,547.2	6,605.1	6,500.0	6,499.1	80.3	1.9	59.17	193.3	4,158.4	2,210.3	2,136.8	73.45	30.094	
9,600.0	6,604.5	6,500.0	6,499.1	81.7	1.9	59.17	193.3	4,158.4	2,157.6	2,082.9	74.68	28.893	
9,645.6	6,603.9	6,500.0	6,499.1	82.9	1.9	59.17	193.3	4,158.4	2,112.0	2,036.3	75.74	27.885	
9,700.0	6,603.2	6,500.0	6,499.1	84.4	1.9	59.18	193.3	4,158.4	2,057.7	1,980.7	77.01	26.721	
9,744.1	6,602.6	6,500.0	6,499.1	85.6	1.9	59.18	193.3	4,158.4	2,013.7	1,935.7	78.04	25.804	
9,800.0	6,601.9	6,500.0	6,499.1	87.1	1.9	59.18	193.3	4,158.4	1,957.9	1,878.6	79.35	24.674	
9,842.5	6,601.3	6,500.0	6,499.1	88.2	1.9	59.18	193.3	4,158.4	1,915.5	1,835.1	80.35	23.840	
9,900.0	6,600.6	6,500.0	6,499.1	89.8	1.9	59.18	193.3	4,158.4	1,858.1	1,776.4	81.70	22.744	
9,940.9	6,600.1	6,500.0	6,499.1	90.9	1.9	59.18	193.3	4,158.4	1,817.2	1,734.6	82.66	21.985	
10,000.0	6,599.3	6,500.0	6,499.1	92.5	1.9	59.19	193.3	4,158.4	1,758.3	1,674.2	84.05	20.920	
10,039.3	6,598.8	6,500.0	6,499.1	93.5	1.9	59.19	193.3	4,158.4	1,719.0	1,634.1	84.98	20.229	
10,100.0	6,598.0	6,500.0	6,499.1	95.2	1.9	59.19	193.3	4,158.4	1,658.5	1,572.1	86.41	19.194	
10,137.8	6,597.5	6,500.0	6,499.1	96.2	1.9	59.19	193.3	4,158.4	1,620.9	1,533.6	87.30	18.567	
10,200.0	6,596.7	6,500.0	6,499.1	97.9	1.9	59.19	193.3	4,158.4	1,558.8	1,470.0	88.77	17.560	
10,236.2	6,596.3	6,500.0	6,499.1	98.9	1.9	59.19	193.3	4,158.4	1,522.7	1,433.1	89.63	16.989	
10,300.0	6,595.4	6,500.0	6,499.1	100.6	1.9	59.19	193.3	4,158.4	1,459.1	1,368.0	91.14	16.010	
10,334.6	6,595.0	6,500.0	6,499.1	101.6	1.9	59.19	193.3	4,158.4	1,424.6	1,332.6	91.96	15.492	
10,400.0	6,594.2	6,500.0	6,499.1	103.4	1.9	59.20	193.3	4,158.4	1,359.4	1,265.9	93.51	14.538	
10,433.0	6,593.7	6,500.0	6,499.1	104.3	1.9	59.20	193.3	4,158.4	1,326.5	1,232.2	94.29	14.068	
10,500.0	6,592.9	6,500.0	6,499.1	106.1	1.9	59.20	193.3	4,158.4	1,259.8	1,163.9	95.88	13.139	
10,531.5	6,592.5	6,500.0	6,499.1	106.9	1.9	59.20	193.3	4,158.4	1,228.5	1,131.9	96.63	12.713	
10,600.0	6,591.6	6,500.0	6,499.1	108.8	1.9	59.20	193.3	4,158.4	1,160.3	1,062.0	98.26	11.808	
10,629.9	6,591.2	6,500.0	6,499.1	109.6	1.9	59.20	193.3	4,158.4	1,130.6	1,031.6	98.97	11.423	
10,700.0	6,590.3	6,500.0	6,499.1	111.6	1.9	59.20	193.3	4,158.4	1,060.8	960.2	100.64	10.541	
10,728.3	6,589.9	6,500.0	6,499.1	112.3	1.9	59.20	193.3	4,158.4	1,032.7	931.4	101.32	10.193	
10,800.0	6,589.0	6,500.0	6,499.1	114.3	1.9	59.20	193.3	4,158.4	961.5	858.5	103.03	9.333	
10,826.7	6,588.7	6,500.0	6,499.1	115.0	1.9	59.20	193.3	4,158.4	935.0	831.3	103.66	9.019	
10,900.0	6,587.7	6,500.0	6,499.1	117.1	1.9	59.20	193.3	4,158.4	862.3	756.9	105.41	8.181	
10,925.2	6,587.4	6,500.0	6,499.1	117.7	1.9	59.20	193.3	4,158.4	837.4	731.4	106.01	7.899	
11,000.0	6,586.4	6,500.0	6,499.1	119.8	1.9	59.21	193.3	4,158.4	763.4	655.6	107.80	7.081	
11,023.6	6,586.1	6,500.0	6,499.1	120.4	1.9	59.21	193.3	4,158.4	740.1	631.7	108.37	6.829	
11,100.0	6,585.1	6,500.0	6,499.1	122.6	1.9	59.21	193.3	4,158.4	664.7	554.5	110.19	6.032	
11,122.0	6,584.8	6,500.0	6,499.1	123.2	1.9	59.21	193.3	4,158.4	643.0	532.3	110.72	5.808	
11,200.0	6,583.8	6,500.0	6,499.1	125.3	1.9	59.21	193.3	4,158.4	566.5	453.9	112.59	5.032	
11,220.4	6,583.6	6,500.0	6,499.1	125.9	1.9	59.21	193.3	4,158.4	546.5	433.5	113.08	4.833	
11,300.0	6,582.5	6,500.0	6,499.1	128.1	1.9	59.21	193.3	4,158.4	469.1	354.1	114.98	4.080	
11,318.9	6,582.3	6,500.0	6,499.1	128.6	1.9	59.21	193.3	4,158.4	450.9	335.4	115.44	3.906	
11,400.0	6,581.2	6,500.0	6,499.1	130.8	1.9	59.21	193.3	4,158.4	373.1	255.7	117.38	3.178	
11,417.3	6,581.0	6,500.0	6,499.1	131.3	1.9	59.21	193.3	4,158.4	356.7	238.9	117.80	3.028	
11,500.0	6,580.0	6,500.0	6,499.1	133.6	1.9	59.21	193.3	4,158.4	279.8	160.0	119.78	2.336	
11,515.7	6,579.7	6,500.0	6,499.1	134.0	1.9	59.21	193.3	4,158.4	265.6	145.4	120.16	2.210	
11,600.0	6,578.7	6,500.0	6,499.1	136.3	1.9	59.21	193.3	4,158.4	193.4	71.2	122.18	1.583	
11,614.1	6,578.5	6,500.0	6,499.1	136.7	1.9	59.21	193.3	4,158.4	182.3	59.8	122.52	1.488 Level 3	
11,700.0	6,577.4	6,500.0	6,499.1	139.1	1.9	59.21	193.3	4,158.4	128.5	4.0	124.58	1.032 Level 2	
11,712.6	6,577.2	6,500.0	6,499.1	139.5	1.9	59.21	193.3	4,158.4	123.7	-1.1	124.89	0.991 Level 1	
11,754.4	6,576.7	6,500.0	6,499.1	140.6	1.9	59.21	193.3	4,158.4	116.4	-9.5	125.89	0.925 Level 1, CC, ES, SF	
11,800.0	6,576.1	6,500.0	6,499.1	141.9	1.9	59.21	193.3	4,158.4	125.0	-2.0	126.99	0.985 Level 1	
11,811.0	6,575.9	6,500.0	6,499.1	142.2	1.9	59.21	193.3	4,158.4	129.4	2.2	127.25	1.017 Level 2	
11,882.7	6,575.0	6,500.0	6,499.1	144.2	1.9	59.21	193.3	4,158.4	173.2	44.2	128.97	1.343 Level 3	
11,883.5	6,575.0	6,500.0	6,499.1	144.2	1.9	59.21	193.3	4,158.4	173.8	44.8	128.99	1.348 Level 3	

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

## Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-140.31	-1,141.4	-947.4	1,483.8				
98.4	98.4	60.3	60.3	0.1	0.0	-140.30	-1,141.3	-947.4	1,483.3	1,483.2	0.11	N/A	
100.0	100.0	61.9	61.9	0.1	0.0	-140.30	-1,141.3	-947.4	1,483.3	1,483.2	0.11	N/A	
196.6	196.6	156.6	156.6	0.3	0.0	-140.30	-1,141.1	-947.4	1,483.1	1,482.8	0.33	4,435.951	
196.8	196.8	156.8	156.8	0.3	0.0	-140.30	-1,141.1	-947.4	1,483.1	1,482.8	0.33	4,429.802	
200.0	200.0	159.8	159.8	0.3	0.0	-140.30	-1,141.1	-947.4	1,483.1	1,482.8	0.34	4,336.978	
295.3	295.3	253.9	253.9	0.5	0.1	-140.31	-1,141.3	-947.3	1,483.2	1,482.6	0.66	2,251.979	
300.0	300.0	258.7	258.7	0.5	0.1	-140.31	-1,141.3	-947.3	1,483.2	1,482.6	0.68	2,186.674	
393.7	393.7	361.1	361.1	0.8	0.3	-140.32	-1,141.5	-946.9	1,483.2	1,482.1	1.01	1,469.205	
400.0	400.0	368.4	368.4	0.8	0.3	-140.32	-1,141.5	-946.9	1,483.1	1,482.1	1.03	1,441.694	
492.1	492.1	465.5	465.4	1.0	0.3	-140.34	-1,141.2	-946.0	1,482.4	1,481.1	1.31	1,134.240	
500.0	500.0	473.4	473.4	1.0	0.3	-140.35	-1,141.2	-945.9	1,482.3	1,481.0	1.33	1,114.009	
590.5	590.5	571.2	571.2	1.2	0.4	-140.36	-1,140.6	-944.9	1,481.3	1,479.7	1.60	928.588	
600.0	600.0	581.7	581.7	1.2	0.4	-140.36	-1,140.5	-944.8	1,481.2	1,479.5	1.62	912.786	
689.0	689.0	665.5	665.4	1.4	0.4	-140.37	-1,139.8	-943.9	1,479.9	1,478.1	1.87	792.413	
700.0	700.0	675.4	675.4	1.4	0.5	-140.37	-1,139.7	-943.8	1,479.8	1,477.9	1.90	779.878	
787.4	787.4	760.1	760.0	1.6	0.5	-140.39	-1,139.4	-942.9	1,479.0	1,476.9	2.14	692.015	
800.0	800.0	772.6	772.6	1.7	0.5	-140.39	-1,139.4	-942.8	1,478.9	1,476.8	2.17	680.884	
885.8	885.8	859.0	859.0	1.9	0.6	-140.42	-1,139.2	-941.9	1,478.2	1,475.8	2.41	613.988	
900.0	900.0	873.4	873.3	1.9	0.6	-140.42	-1,139.2	-941.7	1,478.1	1,475.6	2.45	604.205	
984.2	984.2	955.0	955.0	2.1	0.6	-140.45	-1,139.1	-940.7	1,477.4	1,474.7	2.67	552.469	
1,000.0	1,000.0	970.0	969.9	2.1	0.6	-140.46	-1,139.1	-940.5	1,477.2	1,474.5	2.72	543.814	
1,082.7	1,082.7	1,051.8	1,051.8	2.3	0.6	-140.49	-1,139.3	-939.6	1,476.7	1,473.8	2.94	502.350	
1,100.0	1,100.0	1,069.4	1,069.3	2.3	0.7	-140.49	-1,139.3	-939.4	1,476.6	1,473.7	2.99	494.427	
1,181.1	1,181.1	1,145.9	1,145.9	2.5	0.7	-140.52	-1,139.4	-938.5	1,476.2	1,473.0	3.20	461.131	
1,200.0	1,200.0	1,163.0	1,162.9	2.6	0.7	-140.53	-1,139.5	-938.4	1,476.1	1,472.9	3.25	454.118	
1,229.9	1,229.9	1,190.0	1,189.9	2.6	0.7	-140.54	-1,139.7	-938.1	1,476.1	1,472.8	3.33	443.455	
1,279.5	1,279.5	1,238.4	1,238.3	2.7	0.7	-140.56	-1,140.0	-937.7	1,476.1	1,472.7	3.46	426.569	
1,300.0	1,300.0	1,258.8	1,258.7	2.8	0.7	-140.57	-1,140.2	-937.6	1,476.2	1,472.7	3.51	420.002	
1,377.9	1,377.9	1,336.7	1,336.7	3.0	0.8	-140.60	-1,140.7	-937.1	1,476.2	1,472.5	3.72	396.520	
1,400.0	1,400.0	1,358.8	1,358.8	3.0	0.8	-140.60	-1,140.8	-936.9	1,476.3	1,472.5	3.78	390.368	
1,476.4	1,476.4	1,433.3	1,433.2	3.2	0.8	-65.54	-1,141.3	-936.5	1,475.9	1,472.0	3.93	375.921	
1,500.0	1,500.0	1,455.5	1,455.5	3.2	0.8	-65.58	-1,141.4	-936.4	1,475.7	1,471.7	3.98	370.526	
1,574.8	1,574.7	1,527.5	1,527.4	3.4	0.8	-65.74	-1,142.0	-936.2	1,474.5	1,470.4	4.16	354.670	
1,600.0	1,599.8	1,552.6	1,552.5	3.4	0.8	-65.82	-1,142.3	-936.1	1,474.0	1,469.8	4.22	349.578	
1,673.2	1,672.8	1,626.2	1,626.1	3.6	0.9	-66.10	-1,142.9	-935.8	1,471.9	1,467.5	4.39	334.949	
1,700.0	1,699.5	1,653.5	1,653.5	3.7	0.9	-66.22	-1,143.1	-935.8	1,470.9	1,466.4	4.46	329.804	
1,771.6	1,770.6	1,725.2	1,725.2	3.8	0.9	-66.60	-1,143.7	-935.5	1,467.8	1,463.1	4.64	316.037	
1,800.0	1,798.7	1,752.6	1,752.5	3.9	0.9	-66.76	-1,143.9	-935.4	1,466.4	1,461.7	4.72	310.852	
1,870.1	1,868.0	1,821.8	1,821.7	4.1	0.9	-67.23	-1,144.4	-935.2	1,462.5	1,457.6	4.91	297.735	
1,900.0	1,897.5	1,853.0	1,852.9	4.2	0.9	-67.46	-1,144.6	-935.2	1,460.7	1,455.7	5.00	292.347	
1,968.5	1,964.8	1,923.3	1,923.2	4.4	1.0	-68.04	-1,145.0	-934.9	1,455.9	1,450.7	5.21	279.505	
2,000.0	1,995.6	1,954.7	1,954.6	4.5	1.0	-68.33	-1,145.1	-934.8	1,453.5	1,448.2	5.31	273.840	
2,066.9	2,060.9	2,020.7	2,020.6	4.7	1.0	-68.98	-1,145.4	-934.5	1,448.1	1,442.6	5.54	261.249	
2,100.0	2,093.1	2,052.8	2,052.7	4.8	1.0	-69.32	-1,145.5	-934.4	1,445.3	1,439.6	5.66	255.334	
2,165.3	2,156.3	2,116.8	2,116.7	5.1	1.0	-70.05	-1,145.7	-934.0	1,439.4	1,433.4	5.92	243.023	
2,200.0	2,189.6	2,152.0	2,151.9	5.2	1.1	-70.48	-1,145.9	-933.8	1,436.1	1,430.0	6.06	236.840	
2,263.8	2,250.7	2,216.4	2,216.3	5.5	1.1	-71.33	-1,146.1	-933.2	1,429.7	1,423.3	6.36	224.954	
2,280.0	2,266.2	2,232.7	2,232.6	5.6	1.1	-71.55	-1,146.1	-933.0	1,428.0	1,421.6	6.43	222.062	
2,300.0	2,285.3	2,252.7	2,252.6	5.7	1.1	-71.79	-1,146.1	-932.8	1,425.9	1,419.4	6.53	218.440	
2,362.2	2,344.6	2,313.5	2,313.4	6.0	1.1	-72.52	-1,146.1	-932.2	1,419.5	1,412.7	6.84	207.543	
2,400.0	2,380.6	2,347.4	2,347.3	6.2	1.1	-72.93	-1,146.1	-931.8	1,415.7	1,408.7	7.03	201.355	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,438.4	2,401.9	2,401.8	6.5	1.1	-73.60	-1,146.3	-931.2	1,410.0	1,402.6	7.35	191.803	
2,500.0	2,475.9	2,439.3	2,439.2	6.7	1.2	-74.05	-1,146.4	-930.9	1,406.4	1,398.9	7.56	185.995	
2,559.0	2,532.2	2,495.6	2,495.5	7.0	1.2	-74.74	-1,146.5	-930.5	1,401.3	1,393.4	7.89	177.627	
2,600.0	2,571.2	2,534.1	2,534.0	7.2	1.2	-75.21	-1,146.5	-930.2	1,397.8	1,389.7	8.12	172.202	
2,657.5	2,626.0	2,588.0	2,587.9	7.5	1.2	-75.88	-1,146.6	-929.9	1,393.2	1,384.7	8.45	164.927	
2,700.0	2,666.6	2,629.2	2,629.1	7.8	1.2	-76.39	-1,146.7	-929.6	1,389.9	1,381.2	8.69	159.879	
2,755.9	2,719.8	2,683.9	2,683.8	8.1	1.2	-77.08	-1,146.9	-929.0	1,385.7	1,376.7	9.02	153.544	
2,800.0	2,761.9	2,726.5	2,726.4	8.3	1.3	-77.62	-1,147.0	-928.6	1,382.5	1,373.2	9.29	148.860	
2,854.3	2,813.7	2,778.8	2,778.7	8.7	1.3	-78.28	-1,147.1	-928.0	1,378.7	1,369.1	9.62	143.370	
2,900.0	2,857.2	2,822.8	2,822.7	8.9	1.3	-78.84	-1,147.1	-927.6	1,375.7	1,365.8	9.89	139.036	
2,952.7	2,907.5	2,873.6	2,873.5	9.2	1.3	-79.49	-1,147.1	-927.1	1,372.3	1,362.1	10.22	134.276	
3,000.0	2,952.5	2,917.7	2,917.6	9.5	1.3	-80.05	-1,147.1	-926.6	1,369.4	1,358.9	10.51	130.278	
3,051.2	3,001.3	2,963.3	2,963.2	9.8	1.3	-80.64	-1,147.2	-926.2	1,366.6	1,355.7	10.83	126.187	
3,100.0	3,047.8	3,007.3	3,007.2	10.1	1.4	-81.21	-1,147.3	-925.8	1,364.1	1,353.0	11.13	122.516	
3,149.6	3,095.1	3,054.4	3,054.3	10.4	1.4	-81.82	-1,147.5	-925.4	1,361.8	1,350.4	11.45	118.959	
3,200.0	3,143.2	3,102.3	3,102.2	10.7	1.4	-82.45	-1,147.8	-924.9	1,359.7	1,347.9	11.77	115.549	
3,248.0	3,188.9	3,148.5	3,148.4	11.0	1.4	-83.06	-1,148.1	-924.4	1,357.8	1,345.7	12.07	112.453	
3,300.0	3,238.5	3,198.5	3,198.4	11.3	1.4	-83.72	-1,148.3	-923.8	1,355.9	1,343.5	12.41	109.286	
3,346.4	3,282.8	3,243.5	3,243.3	11.6	1.4	-84.31	-1,148.5	-923.3	1,354.4	1,341.6	12.71	106.591	
3,400.0	3,333.8	3,295.3	3,295.2	11.9	1.5	-85.00	-1,148.7	-922.7	1,352.7	1,339.7	13.05	103.649	
3,444.9	3,376.6	3,338.0	3,337.9	12.2	1.5	-85.56	-1,148.8	-922.3	1,351.5	1,338.2	13.34	101.303	
3,500.0	3,429.1	3,390.3	3,390.1	12.6	1.5	-86.25	-1,148.9	-921.7	1,350.2	1,336.5	13.70	98.574	
3,543.3	3,470.4	3,431.2	3,431.0	12.8	1.5	-86.80	-1,149.1	-921.2	1,349.4	1,335.4	13.98	96.533	
3,600.0	3,524.4	3,484.7	3,484.5	13.2	1.5	-87.51	-1,149.3	-920.6	1,348.4	1,334.1	14.35	93.998	
3,641.7	3,564.2	3,524.2	3,524.1	13.4	1.5	-88.04	-1,149.4	-920.1	1,347.9	1,333.3	14.62	92.220	
3,700.0	3,619.8	3,579.7	3,579.6	13.8	1.6	-88.77	-1,149.6	-919.5	1,347.4	1,332.4	14.99	89.862	
3,740.1	3,658.0	3,618.7	3,618.6	14.0	1.6	-89.29	-1,149.7	-919.1	1,347.2	1,332.0	15.26	88.312	
3,800.0	3,715.1	3,678.2	3,678.0	14.4	1.6	-90.09	-1,149.8	-918.4	1,347.0	1,331.4	15.64	86.109	
3,838.6	3,751.8	3,716.4	3,716.2	14.7	1.6	-90.60	-1,149.8	-917.9	1,347.0	1,331.1	15.89	84.752	
3,840.6	3,753.7	3,718.4	3,718.2	14.7	1.6	-90.62	-1,149.8	-917.9	1,347.0	1,331.1	15.91	84.683 CC	
3,900.0	3,810.4	3,776.9	3,776.7	15.0	1.6	-91.41	-1,149.8	-917.1	1,347.1	1,330.8	16.29	82.693	
3,937.0	3,845.7	3,812.5	3,812.3	15.3	1.6	-91.89	-1,149.7	-916.6	1,347.2	1,330.7	16.53	81.508 ES	
4,000.0	3,905.7	3,870.9	3,870.7	15.7	1.7	-92.67	-1,149.7	-915.7	1,347.7	1,330.8	16.93	79.591	
4,035.4	3,939.5	3,904.1	3,903.9	15.9	1.7	-93.12	-1,149.7	-915.2	1,348.2	1,331.0	17.16	78.563	
4,100.0	4,001.0	3,969.2	3,969.0	16.3	1.7	-93.99	-1,149.6	-914.1	1,349.1	1,331.6	17.57	76.773	
4,133.8	4,033.3	4,003.3	4,003.1	16.5	1.7	-94.45	-1,149.4	-913.6	1,349.7	1,331.9	17.79	75.874	
4,200.0	4,096.3	4,070.3	4,070.1	16.9	1.7	-95.35	-1,149.1	-912.3	1,350.9	1,332.7	18.21	74.193	
4,232.3	4,127.1	4,103.1	4,102.9	17.1	1.7	-95.80	-1,148.8	-911.7	1,351.5	1,333.1	18.41	73.407	
4,300.0	4,191.7	4,173.1	4,172.8	17.6	1.7	-96.74	-1,148.0	-910.3	1,352.9	1,334.0	18.83	71.829	
4,330.7	4,220.9	4,204.6	4,204.3	17.8	1.8	-97.16	-1,147.6	-909.7	1,353.5	1,334.5	19.03	71.142	
4,400.0	4,287.0	4,272.8	4,272.5	18.2	1.8	-98.07	-1,146.5	-908.5	1,355.1	1,335.7	19.45	69.655	
4,429.1	4,314.7	4,301.4	4,301.1	18.4	1.8	-98.45	-1,146.0	-908.0	1,355.9	1,336.2	19.63	69.057	
4,500.0	4,382.3	4,370.4	4,370.1	18.8	1.8	-99.36	-1,144.8	-906.8	1,357.9	1,337.8	20.07	67.665	
4,527.5	4,408.6	4,397.2	4,396.9	19.0	1.8	-99.72	-1,144.2	-906.3	1,358.7	1,338.5	20.24	67.146	
4,600.0	4,477.6	4,463.4	4,463.1	19.5	1.8	-100.59	-1,143.0	-905.1	1,361.2	1,340.6	20.67	65.843	
4,626.0	4,502.4	4,487.1	4,486.8	19.6	1.8	-100.90	-1,142.6	-904.8	1,362.3	1,341.5	20.83	65.398	
4,700.0	4,572.9	4,556.7	4,556.3	20.1	1.8	-101.81	-1,141.5	-903.7	1,365.6	1,344.3	21.27	64.190	
4,724.4	4,596.2	4,579.8	4,579.4	20.3	1.8	-102.11	-1,141.1	-903.4	1,366.7	1,345.3	21.42	63.810	
4,800.0	4,668.3	4,649.0	4,648.7	20.7	1.9	-103.00	-1,140.0	-902.5	1,370.6	1,348.8	21.87	62.685	
4,822.8	4,690.0	4,669.6	4,669.3	20.9	1.9	-103.26	-1,139.7	-902.2	1,371.9	1,349.9	22.00	62.361	
4,900.0	4,763.6	4,739.9	4,739.5	21.4	1.9	-104.17	-1,138.8	-901.2	1,376.7	1,354.3	22.45	61.321	
4,921.2	4,783.8	4,759.4	4,759.0	21.5	1.9	-104.41	-1,138.6	-900.9	1,378.1	1,355.5	22.57	61.048	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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
5,000.0	4,858.9	4,831.7	4,831.3	22.0	1.9	-105.33	-1,137.9	-900.1	1,383.7	1,360.7	23.03	60.087	
5,019.7	4,877.7	4,849.8	4,849.4	22.1	1.9	-105.55	-1,137.7	-900.0	1,385.2	1,362.0	23.14	59.859	
5,100.0	4,954.2	4,923.0	4,922.6	22.6	1.9	-106.45	-1,137.2	-899.5	1,391.5	1,367.9	23.60	58.970	
5,118.1	4,971.5	4,939.2	4,938.8	22.8	1.9	-106.65	-1,137.1	-899.5	1,393.1	1,369.4	23.70	58.779	
5,171.8	5,022.7	4,987.2	4,986.8	23.1	1.9	-107.23	-1,136.9	-899.3	1,397.8	1,373.8	24.00	58.234	
5,200.0	5,049.6	5,013.5	5,013.0	23.3	1.9	-107.59	-1,136.8	-899.2	1,400.3	1,376.2	24.13	58.027	
5,216.5	5,065.4	5,029.4	5,029.0	23.3	2.0	-107.80	-1,136.7	-899.1	1,401.8	1,377.6	24.19	57.947	
5,300.0	5,145.7	5,110.6	5,110.1	23.7	2.0	-108.81	-1,136.5	-898.9	1,409.0	1,384.5	24.49	57.543	
5,314.9	5,160.1	5,125.2	5,124.8	23.8	2.0	-108.98	-1,136.4	-898.9	1,410.2	1,385.7	24.53	57.487	
5,400.0	5,242.7	5,208.1	5,207.6	24.1	2.0	-109.87	-1,136.1	-898.9	1,416.9	1,392.1	24.79	57.155	
5,413.4	5,255.7	5,220.2	5,219.8	24.2	2.0	-109.99	-1,136.1	-898.9	1,417.8	1,393.0	24.83	57.113	
5,500.0	5,340.5	5,300.0	5,299.6	24.5	2.0	-110.72	-1,136.1	-899.1	1,424.1	1,399.1	25.06	56.834	
5,511.8	5,352.1	5,310.4	5,310.0	24.5	2.0	-110.81	-1,136.1	-899.2	1,424.9	1,399.8	25.08	56.805	
5,600.0	5,439.0	5,395.4	5,394.9	24.8	2.0	-111.46	-1,136.3	-899.3	1,430.7	1,405.4	25.29	56.572	
5,610.2	5,449.1	5,400.0	5,399.6	24.8	2.0	-111.50	-1,136.3	-899.3	1,431.3	1,406.0	25.31	56.548	
5,700.0	5,538.0	5,480.7	5,480.2	25.1	2.0	-112.03	-1,136.8	-898.8	1,436.6	1,411.1	25.50	56.348	
5,708.6	5,546.6	5,488.0	5,487.6	25.1	2.0	-112.07	-1,136.9	-898.7	1,437.1	1,411.6	25.51	56.335	
5,800.0	5,637.4	5,569.7	5,569.3	25.3	2.0	-112.53	-1,138.1	-897.4	1,442.3	1,416.6	25.67	56.195	
5,807.1	5,644.5	5,576.1	5,575.6	25.3	2.0	-112.56	-1,138.2	-897.3	1,442.6	1,417.0	25.67	56.189	
5,900.0	5,737.2	5,659.7	5,659.2	25.5	2.0	-112.94	-1,139.8	-894.9	1,447.3	1,421.5	25.80	56.093	
5,905.5	5,742.6	5,664.7	5,664.2	25.5	2.0	-112.96	-1,140.0	-894.8	1,447.5	1,421.7	25.81	56.091	
6,000.0	5,837.1	5,755.1	5,754.5	25.6	2.1	-113.25	-1,142.1	-891.6	1,451.5	1,425.6	25.91	56.027	
6,003.9	5,841.0	5,759.0	5,758.4	25.6	2.1	-113.26	-1,142.2	-891.5	1,451.7	1,425.8	25.91	56.026	
6,051.8	5,888.9	5,807.4	5,806.8	25.7	2.1	171.50	-1,143.4	-889.5	1,453.2	1,434.4	18.85	77.114	
6,081.8	5,918.9	5,840.0	5,839.4	25.7	2.1	171.45	-1,144.1	-888.2	1,454.1	1,435.2	18.91	76.905	
6,100.0	5,937.1	5,859.8	5,859.1	25.7	2.1	81.39	-1,144.5	-887.3	1,454.5	1,428.5	26.00	55.952	
6,102.3	5,939.4	5,862.4	5,861.7	25.7	2.1	81.39	-1,144.5	-887.2	1,454.6	1,428.6	26.00	55.954	
6,150.0	5,987.0	5,914.0	5,913.3	25.7	2.1	81.38	-1,145.5	-885.2	1,455.3	1,429.3	26.01	55.942	
6,200.0	6,036.5	5,967.3	5,966.5	25.7	2.1	81.57	-1,146.4	-883.2	1,455.4	1,429.4	26.02	55.929	
6,200.8	6,037.3	5,968.1	5,967.3	25.7	2.1	81.57	-1,146.4	-883.2	1,455.4	1,429.4	26.02	55.929	
6,250.0	6,085.5	6,019.7	6,018.9	25.7	2.2	81.95	-1,147.2	-881.6	1,455.0	1,429.0	26.02	55.907	
6,299.2	6,133.0	6,070.0	6,069.1	25.6	2.2	82.50	-1,147.9	-880.2	1,454.0	1,428.0	26.02	55.882	
6,300.0	6,133.7	6,070.8	6,069.9	25.6	2.2	82.51	-1,147.9	-880.2	1,454.0	1,428.0	26.02	55.881	
6,350.0	6,180.9	6,117.3	6,116.4	25.5	2.2	83.18	-1,148.5	-879.1	1,452.7	1,426.7	26.00	55.865	
6,397.6	6,224.6	6,155.9	6,155.0	25.4	2.2	83.87	-1,149.1	-878.3	1,451.3	1,425.3	25.97	55.878	
6,400.0	6,226.7	6,157.8	6,156.9	25.4	2.2	83.90	-1,149.2	-878.3	1,451.2	1,425.3	25.97	55.878	
6,450.0	6,271.1	6,200.0	6,199.1	25.2	2.2	84.76	-1,150.1	-877.7	1,449.9	1,424.0	25.94	55.900	
6,496.0	6,310.4	6,236.5	6,235.6	25.1	2.2	85.58	-1,150.9	-877.2	1,448.9	1,423.0	25.90	55.934	
6,500.0	6,313.7	6,239.9	6,239.0	25.1	2.2	85.66	-1,151.0	-877.1	1,448.8	1,422.9	25.90	55.937	
6,550.0	6,354.4	6,281.6	6,280.6	25.0	2.2	86.67	-1,151.9	-876.6	1,447.8	1,422.0	25.87	55.969	
6,594.5	6,388.9	6,315.5	6,314.6	24.9	2.2	87.54	-1,152.7	-876.1	1,447.4	1,421.5	25.84	56.006	
6,600.0	6,393.0	6,319.4	6,318.5	24.9	2.2	87.65	-1,152.8	-876.1	1,447.3	1,421.5	25.84	56.014	
6,616.3	6,405.1	6,330.9	6,329.9	24.8	2.2	87.95	-1,153.1	-875.9	1,447.3	1,421.5	25.83	56.024	
6,650.0	6,429.3	6,353.8	6,352.8	24.8	2.2	88.56	-1,153.6	-875.6	1,447.5	1,421.6	25.82	56.062	
6,692.9	6,458.5	6,381.5	6,380.5	24.7	2.3	89.29	-1,154.3	-875.2	1,448.2	1,422.4	25.82	56.088	
6,700.0	6,463.1	6,385.9	6,384.9	24.7	2.3	89.40	-1,154.5	-875.1	1,448.4	1,422.6	25.82	56.096	
6,750.0	6,494.3	6,417.2	6,416.2	24.7	2.3	90.20	-1,155.3	-874.6	1,450.3	1,424.5	25.85	56.098	
6,791.3	6,517.9	6,442.2	6,441.2	24.7	2.3	90.81	-1,156.0	-874.2	1,452.7	1,426.8	25.91	56.058	
6,800.0	6,522.6	6,447.2	6,446.2	24.7	2.3	90.93	-1,156.1	-874.1	1,453.4	1,427.4	25.93	56.056	
6,850.0	6,548.0	6,474.2	6,473.2	24.7	2.3	91.49	-1,156.8	-873.6	1,457.6	1,431.5	26.05	55.964	
6,889.7	6,566.0	6,493.4	6,492.4	24.8	2.3	91.82	-1,157.3	-873.3	1,461.9	1,435.7	26.18	55.839	
6,900.0	6,570.4	6,498.1	6,497.1	24.9	2.3	91.88	-1,157.4	-873.2	1,463.2	1,437.0	26.21	55.815	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	
6,950.0	6,589.5	6,518.1	6,517.1	25.1	2.3	92.03	-1,157.9	-872.8	1,470.2	1,443.8	26.44	55.609	
6,988.2	6,602.0	6,531.1	6,530.1	25.3	2.3	91.99	-1,158.2	-872.6	1,476.6	1,450.0	26.65	55.399	
7,000.0	6,605.4	6,534.7	6,533.7	25.3	2.3	91.95	-1,158.3	-872.6	1,478.8	1,452.1	26.72	55.343	
7,050.0	6,618.0	6,547.9	6,546.9	25.6	2.3	91.62	-1,158.7	-872.4	1,489.0	1,462.0	27.06	55.022	
7,086.6	6,625.0	6,555.3	6,554.3	25.9	2.3	91.21	-1,158.8	-872.3	1,497.5	1,470.1	27.36	54.743	
7,100.0	6,627.1	6,557.6	6,556.6	26.0	2.3	91.02	-1,158.9	-872.2	1,500.8	1,473.4	27.46	54.651	
7,150.0	6,632.8	6,563.9	6,562.8	26.5	2.3	90.15	-1,159.0	-872.2	1,514.2	1,486.3	27.92	54.239	
7,185.0	6,634.7	6,566.2	6,565.1	26.8	2.3	89.39	-1,159.1	-872.1	1,524.5	1,496.2	28.27	53.922	
7,200.0	6,635.0	6,566.7	6,565.6	27.0	2.3	89.02	-1,159.1	-872.1	1,529.1	1,500.7	28.42	53.796	
7,215.9	6,635.0	6,566.8	6,565.8	27.1	2.3	88.60	-1,159.1	-872.1	1,534.1	1,505.5	28.60	53.649	
7,283.4	6,634.1	6,566.8	6,565.8	27.9	2.3	88.60	-1,159.1	-872.1	1,557.1	1,527.7	29.43	52.912	
7,300.0	6,633.9	6,566.8	6,565.8	28.1	2.3	88.60	-1,159.1	-872.1	1,563.2	1,533.5	29.63	52.751	
7,381.9	6,632.9	6,566.8	6,565.7	29.3	2.3	88.60	-1,159.1	-872.1	1,595.2	1,564.4	30.81	51.780	
7,400.0	6,632.6	6,566.8	6,565.7	29.5	2.3	88.60	-1,159.1	-872.1	1,602.8	1,571.7	31.07	51.590	
7,480.3	6,631.6	6,566.8	6,565.7	30.8	2.3	88.60	-1,159.1	-872.1	1,638.3	1,605.9	32.37	50.611	
7,500.0	6,631.4	6,566.7	6,565.7	31.1	2.3	88.60	-1,159.1	-872.1	1,647.5	1,614.8	32.69	50.397	
7,578.7	6,630.4	6,566.7	6,565.7	32.5	2.3	88.60	-1,159.1	-872.1	1,686.0	1,651.9	34.09	49.452	
7,600.0	6,630.1	6,566.7	6,565.7	32.9	2.3	88.59	-1,159.1	-872.1	1,696.9	1,662.4	34.47	49.224	
7,677.1	6,629.1	6,566.7	6,565.7	34.3	2.3	88.59	-1,159.1	-872.1	1,738.0	1,702.1	35.95	48.340	
7,700.0	6,628.8	6,566.7	6,565.7	34.8	2.3	88.59	-1,159.1	-872.1	1,750.7	1,714.3	36.39	48.105	
7,775.6	6,627.8	6,566.7	6,565.6	36.3	2.3	88.59	-1,159.1	-872.1	1,793.9	1,756.0	37.93	47.296	
7,800.0	6,627.5	6,566.7	6,565.6	36.8	2.3	88.59	-1,159.1	-872.1	1,808.4	1,770.0	38.43	47.060	
7,874.0	6,626.6	6,566.7	6,565.6	38.4	2.3	88.59	-1,159.1	-872.1	1,853.4	1,813.4	40.00	46.330	
7,900.0	6,626.3	6,566.7	6,565.6	38.9	2.3	88.59	-1,159.1	-872.1	1,869.6	1,829.1	40.56	46.098	
7,972.4	6,625.3	6,566.6	6,565.6	40.5	2.3	88.59	-1,159.1	-872.1	1,916.1	1,873.9	42.16	45.446	
8,000.0	6,625.0	6,566.6	6,565.6	41.1	2.3	88.59	-1,159.1	-872.1	1,934.2	1,891.4	42.77	45.221	
8,070.8	6,624.1	6,566.6	6,565.6	42.7	2.3	88.59	-1,159.1	-872.1	1,981.6	1,937.2	44.39	44.643	
8,100.0	6,623.7	6,566.6	6,565.6	43.4	2.3	88.59	-1,159.1	-872.1	2,001.6	1,956.5	45.05	44.427	
8,169.3	6,622.8	6,566.6	6,565.5	45.0	2.3	88.59	-1,159.1	-872.1	2,049.8	2,003.2	46.67	43.918	
8,200.0	6,622.4	6,566.6	6,565.5	45.7	2.3	88.59	-1,159.1	-872.1	2,071.6	2,024.2	47.39	43.711	
8,267.7	6,621.6	6,566.6	6,565.5	47.4	2.3	88.59	-1,159.1	-872.1	2,120.4	2,071.4	49.01	43.263	
8,300.0	6,621.1	6,566.6	6,565.5	48.1	2.3	88.59	-1,159.1	-872.1	2,144.1	2,094.3	49.78	43.067	
8,366.1	6,620.3	6,566.5	6,565.5	49.7	2.3	88.59	-1,159.1	-872.1	2,193.2	2,141.8	51.39	42.673	
8,400.0	6,619.9	6,566.5	6,565.5	50.6	2.3	88.59	-1,159.1	-872.1	2,218.6	2,166.4	52.22	42.487	
8,464.5	6,619.0	6,566.5	6,565.5	52.2	2.3	88.58	-1,159.1	-872.1	2,267.8	2,214.0	53.81	42.142	
8,500.0	6,618.6	6,566.5	6,565.5	53.0	2.3	88.58	-1,159.1	-872.1	2,295.2	2,240.5	54.69	41.966	
8,563.0	6,617.8	6,566.5	6,565.4	54.6	2.3	88.58	-1,159.1	-872.1	2,344.2	2,288.0	56.27	41.663	
8,600.0	6,617.3	6,566.5	6,565.4	55.5	2.3	88.58	-1,159.1	-872.1	2,373.4	2,316.2	57.19	41.498	
8,661.4	6,616.5	6,566.5	6,565.4	57.1	2.3	88.58	-1,159.1	-872.1	2,422.3	2,363.5	58.75	41.231	
8,700.0	6,616.0	6,566.5	6,565.4	58.1	2.3	88.58	-1,159.1	-872.1	2,453.2	2,393.5	59.72	41.076	
8,759.8	6,615.2	6,566.4	6,565.4	59.6	2.3	88.58	-1,159.1	-872.1	2,501.7	2,440.5	61.25	40.841	
8,800.0	6,614.7	6,566.4	6,565.4	60.6	2.3	88.58	-1,159.1	-872.1	2,534.5	2,472.2	62.28	40.695	
8,858.2	6,614.0	6,566.4	6,565.4	62.1	2.3	88.58	-1,159.1	-872.1	2,582.5	2,518.7	63.78	40.489	
8,900.0	6,613.4	6,566.4	6,565.4	63.2	2.3	88.58	-1,159.1	-872.1	2,617.1	2,552.2	64.86	40.351	
8,956.7	6,612.7	6,566.4	6,565.3	64.7	2.3	88.58	-1,159.1	-872.1	2,664.4	2,598.1	66.33	40.169	
9,000.0	6,612.2	6,566.4	6,565.3	65.8	2.3	88.58	-1,159.1	-872.1	2,700.8	2,633.4	67.45	40.039	
9,055.1	6,611.5	6,566.4	6,565.3	67.3	2.3	88.58	-1,159.1	-872.1	2,747.4	2,678.5	68.89	39.879	
9,100.0	6,610.9	6,566.4	6,565.3	68.4	2.3	88.58	-1,159.1	-872.1	2,785.6	2,715.6	70.07	39.756	
9,153.5	6,610.2	6,566.3	6,565.3	69.8	2.3	88.58	-1,159.1	-872.1	2,831.5	2,760.0	71.47	39.615	
9,200.0	6,609.6	6,566.3	6,565.3	71.1	2.3	88.58	-1,159.1	-872.1	2,871.4	2,798.7	72.70	39.499	
9,251.9	6,608.9	6,566.3	6,565.3	72.4	2.3	88.57	-1,159.1	-872.1	2,916.4	2,842.3	74.07	39.374	
9,300.0	6,608.3	6,566.3	6,565.3	73.7	2.3	88.57	-1,159.1	-872.1	2,958.1	2,882.8	75.34	39.265	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,350.4	6,607.7	6,566.3	6,565.2	75.0	2.3	88.57	-1,159.1	-872.1	3,002.1	2,925.4	76.67	39.154	
9,400.0	6,607.0	6,566.3	6,565.2	76.4	2.3	88.57	-1,159.1	-872.1	3,045.6	2,967.6	77.99	39.051	
9,448.8	6,606.4	6,566.3	6,565.2	77.7	2.3	88.57	-1,159.1	-872.1	3,088.6	3,009.3	79.29	38.952	
9,500.0	6,605.7	6,566.3	6,565.2	79.0	2.3	88.57	-1,159.1	-872.1	3,133.9	3,053.2	80.66	38.855	
9,547.2	6,605.1	6,566.2	6,565.2	80.3	2.3	88.57	-1,159.1	-872.1	3,175.8	3,093.9	81.92	38.768	
9,600.0	6,604.5	6,566.2	6,565.2	81.7	2.3	88.57	-1,159.1	-872.1	3,222.8	3,139.5	83.33	38.675	
9,645.6	6,603.9	6,566.2	6,565.2	82.9	2.3	88.57	-1,159.1	-872.1	3,263.6	3,179.1	84.56	38.598	
9,700.0	6,603.2	6,566.2	6,565.2	84.4	2.3	88.57	-1,159.1	-872.1	3,312.4	3,226.4	86.01	38.510	
9,744.1	6,602.6	6,566.2	6,565.2	85.6	2.3	88.57	-1,159.1	-872.1	3,352.1	3,264.9	87.20	38.441	
9,800.0	6,601.9	6,566.2	6,565.1	87.1	2.3	88.57	-1,159.1	-872.1	3,402.5	3,313.8	88.70	38.358	
9,842.5	6,601.3	6,566.2	6,565.1	88.2	2.3	88.57	-1,159.1	-872.1	3,441.0	3,351.2	89.85	38.297	
9,900.0	6,600.6	6,566.2	6,565.1	89.8	2.3	88.57	-1,159.1	-872.1	3,493.2	3,401.8	91.40	38.218	
9,940.9	6,600.1	6,566.1	6,565.1	90.9	2.3	88.57	-1,159.1	-872.1	3,530.5	3,438.0	92.51	38.164	
10,000.0	6,599.3	6,566.1	6,565.1	92.5	2.3	88.56	-1,159.1	-872.1	3,584.4	3,490.3	94.11	38.089	
10,039.3	6,598.8	6,566.1	6,565.1	93.5	2.3	88.56	-1,159.1	-872.1	3,620.4	3,525.2	95.17	38.040	
10,100.0	6,598.0	6,566.1	6,565.1	95.2	2.3	88.56	-1,159.1	-872.1	3,676.1	3,579.2	96.82	37.969	
10,137.8	6,597.5	6,566.1	6,565.1	96.2	2.3	88.56	-1,159.1	-872.1	3,710.8	3,612.9	97.84	37.925	
10,200.0	6,596.7	6,566.1	6,565.0	97.9	2.3	88.56	-1,159.1	-872.1	3,768.1	3,668.6	99.53	37.857	
10,236.2	6,596.3	6,566.1	6,565.0	98.9	2.3	88.56	-1,159.1	-872.1	3,801.5	3,701.0	100.52	37.819	
10,300.0	6,595.4	6,566.1	6,565.0	100.6	2.3	88.56	-1,159.1	-872.1	3,860.6	3,758.3	102.26	37.754	
10,334.6	6,595.0	6,566.1	6,565.0	101.6	2.3	88.56	-1,159.1	-872.1	3,892.7	3,789.5	103.20	37.720	
10,400.0	6,594.2	6,566.0	6,565.0	103.4	2.3	88.56	-1,159.1	-872.1	3,953.4	3,848.4	104.98	37.658	
10,433.0	6,593.7	6,566.0	6,565.0	104.3	2.3	88.56	-1,159.1	-872.1	3,984.2	3,878.3	105.88	37.627	
10,500.0	6,592.9	6,566.0	6,565.0	106.1	2.3	88.56	-1,159.1	-872.1	4,046.6	3,938.9	107.71	37.568	
10,531.5	6,592.5	6,566.0	6,565.0	106.9	2.3	88.56	-1,159.1	-872.1	4,076.0	3,967.4	108.57	37.541	
10,600.0	6,591.6	6,566.0	6,564.9	108.8	2.3	88.55	-1,159.1	-872.1	4,140.1	4,029.6	110.45	37.484	
10,629.9	6,591.2	6,566.0	6,564.9	109.6	2.3	88.55	-1,159.1	-872.1	4,168.1	4,056.8	111.27	37.460	
10,700.0	6,590.3	6,566.0	6,564.9	111.6	2.3	88.55	-1,159.1	-872.1	4,233.9	4,120.7	113.19	37.406	
10,728.3	6,589.9	6,566.0	6,564.9	112.3	2.3	88.55	-1,159.1	-872.1	4,260.5	4,146.5	113.96	37.385	
10,800.0	6,589.0	6,565.9	6,564.9	114.3	2.3	88.55	-1,159.1	-872.1	4,327.9	4,212.0	115.93	37.333	
10,826.7	6,588.7	6,565.9	6,564.9	115.0	2.3	88.55	-1,159.1	-872.1	4,353.1	4,236.5	116.66	37.314	
10,900.0	6,587.7	6,565.9	6,564.9	117.1	2.3	88.55	-1,159.1	-872.1	4,422.2	4,303.6	118.67	37.264	
10,925.2	6,587.4	6,565.9	6,564.9	117.7	2.3	88.55	-1,159.1	-872.1	4,446.0	4,326.7	119.36	37.247	
11,000.0	6,586.4	6,565.9	6,564.8	119.8	2.3	88.55	-1,159.1	-872.1	4,516.8	4,395.4	121.42	37.200	
11,023.6	6,586.1	6,565.9	6,564.8	120.4	2.3	88.55	-1,159.1	-872.1	4,539.2	4,417.1	122.07	37.185	
11,100.0	6,585.1	6,565.9	6,564.8	122.6	2.3	88.55	-1,159.1	-872.1	4,611.6	4,487.4	124.17	37.139	
11,122.0	6,584.8	6,565.9	6,564.8	123.2	2.3	88.55	-1,159.1	-872.1	4,632.5	4,507.7	124.78	37.126	
11,200.0	6,583.8	6,565.8	6,564.8	125.3	2.3	88.55	-1,159.1	-872.1	4,706.6	4,579.7	126.92	37.082	
11,220.4	6,583.6	6,565.8	6,564.8	125.9	2.3	88.54	-1,159.1	-872.1	4,726.1	4,598.6	127.49	37.071	
11,300.0	6,582.5	6,565.8	6,564.8	128.1	2.3	88.54	-1,159.1	-872.1	4,801.8	4,672.2	129.68	37.028	
11,318.9	6,582.3	6,565.8	6,564.8	128.6	2.3	88.54	-1,159.1	-872.1	4,819.8	4,689.6	130.20	37.018	
11,400.0	6,581.2	6,565.8	6,564.7	130.8	2.3	88.54	-1,159.1	-872.1	4,897.2	4,764.8	132.44	36.977	
11,417.3	6,581.0	6,565.8	6,564.7	131.3	2.3	88.54	-1,159.1	-872.1	4,913.8	4,780.9	132.92	36.969	
11,500.0	6,580.0	6,565.8	6,564.7	133.6	2.3	88.54	-1,159.1	-872.1	4,992.8	4,857.6	135.20	36.930	
11,515.7	6,579.7	6,565.8	6,564.7	134.0	2.3	88.54	-1,159.1	-872.1	5,007.9	4,872.2	135.63	36.922	
11,600.0	6,578.7	6,565.7	6,564.7	136.3	2.3	88.54	-1,159.1	-872.1	5,088.6	4,950.6	137.96	36.884	
11,614.1	6,578.5	6,565.7	6,564.7	136.7	2.3	88.54	-1,159.1	-872.1	5,102.1	4,963.8	138.35	36.878	
11,700.0	6,577.4	6,565.7	6,564.7	139.1	2.3	88.54	-1,159.1	-872.1	5,184.5	5,043.8	140.73	36.841	
11,712.6	6,577.2	6,565.7	6,564.7	139.5	2.3	88.54	-1,159.1	-872.1	5,196.6	5,055.5	141.07	36.836	
11,800.0	6,576.1	6,565.7	6,564.7	141.9	2.3	88.53	-1,159.1	-872.1	5,280.6	5,137.1	143.49	36.801	
11,811.0	6,575.9	6,565.7	6,564.6	142.2	2.3	88.53	-1,159.1	-872.1	5,291.1	5,147.3	143.80	36.796	
11,882.7	6,575.0	6,565.7	6,564.6	144.2	2.3	88.53	-1,159.1	-872.1	5,360.1	5,214.3	145.78	36.769 SF	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WILLIAMS #1 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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
11,883.5	6,575.0	6,565.7	6,564.6	144.2	2.3	88.53	-1,159.1	-872.1	5,360.9	5,215.1	145.79	36.771	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	59.8	0.6	59.8				
98.4	98.4	98.4	98.4	0.1	0.1	0.53	59.8	0.6	59.8	59.6	0.19	310.877	
100.0	100.0	100.0	100.0	0.1	0.1	0.53	59.8	0.6	59.8	59.6	0.20	305.615	
196.8	196.8	196.8	196.8	0.3	0.3	0.53	59.8	0.6	59.8	59.1	0.63	94.722	
200.0	200.0	200.0	200.0	0.3	0.3	0.53	59.8	0.6	59.8	59.1	0.65	92.643	
295.3	295.3	295.3	295.3	0.5	0.5	0.53	59.8	0.6	59.8	58.7	1.07	55.677	
300.0	300.0	300.0	300.0	0.5	0.5	0.53	59.8	0.6	59.8	58.7	1.09	54.597	
393.7	393.7	393.7	393.7	0.8	0.8	0.53	59.8	0.6	59.8	58.2	1.52	39.426	
400.0	400.0	400.0	400.0	0.8	0.8	0.53	59.8	0.6	59.8	58.2	1.54	38.702	
492.1	492.1	492.1	492.1	1.0	1.0	0.53	59.8	0.6	59.8	57.8	1.96	30.518	
500.0	500.0	500.0	500.0	1.0	1.0	0.53	59.8	0.6	59.8	57.8	1.99	29.976	
590.5	590.5	590.5	590.5	1.2	1.2	0.53	59.8	0.6	59.8	57.4	2.40	24.893	
600.0	600.0	600.0	600.0	1.2	1.2	0.53	59.8	0.6	59.8	57.3	2.44	24.460	
689.0	689.0	689.0	689.0	1.4	1.4	0.53	59.8	0.6	59.8	56.9	2.84	21.019	
700.0	700.0	700.0	700.0	1.4	1.4	0.53	59.8	0.6	59.8	56.9	2.89	20.659	
787.4	787.4	787.4	787.4	1.6	1.6	0.53	59.8	0.6	59.8	56.5	3.29	18.189	
800.0	800.0	800.0	800.0	1.7	1.7	0.53	59.8	0.6	59.8	56.4	3.34	17.881	
885.8	885.8	885.8	885.8	1.9	1.9	0.53	59.8	0.6	59.8	56.0	3.73	16.030	
900.0	900.0	900.0	900.0	1.9	1.9	0.53	59.8	0.6	59.8	56.0	3.79	15.761	
984.2	984.2	984.2	984.2	2.1	2.1	0.53	59.8	0.6	59.8	55.6	4.17	14.330	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.53	59.8	0.6	59.8	55.5	4.24	14.090 CC, ES	
1,082.7	1,082.7	1,081.1	1,081.1	2.3	2.3	1.02	60.8	1.1	60.8	56.2	4.61	13.198	
1,100.0	1,100.0	1,098.1	1,098.1	2.3	2.3	1.23	61.3	1.3	61.3	56.6	4.68	13.085	
1,181.1	1,181.1	1,177.6	1,177.4	2.5	2.5	2.70	64.7	3.1	64.8	59.8	5.04	12.855	
1,200.0	1,200.0	1,196.0	1,195.9	2.6	2.6	3.14	65.7	3.6	66.0	60.8	5.13	12.865	
1,279.5	1,279.5	1,273.6	1,273.2	2.7	2.7	5.19	71.4	6.5	72.0	66.5	5.48	13.128	
1,300.0	1,300.0	1,293.5	1,293.0	2.8	2.8	5.76	73.1	7.4	73.8	68.3	5.57	13.251	
1,377.9	1,377.9	1,369.0	1,367.9	3.0	3.0	7.97	80.9	11.3	82.3	76.4	5.93	13.884	
1,400.0	1,400.0	1,390.2	1,389.0	3.0	3.0	8.59	83.4	12.6	85.1	79.0	6.03	14.111	
1,476.4	1,476.4	1,463.5	1,461.5	3.2	3.2	86.17	93.1	17.5	95.8	89.5	6.37	15.047	
1,500.0	1,500.0	1,486.0	1,483.7	3.2	3.3	87.09	96.4	19.2	99.6	93.1	6.47	15.381	
1,574.8	1,574.7	1,556.8	1,553.3	3.4	3.5	90.29	107.8	25.0	112.7	105.9	6.80	16.574	
1,600.0	1,599.8	1,580.5	1,576.5	3.4	3.6	91.42	112.0	27.2	117.6	110.7	6.91	17.025	
1,673.2	1,672.8	1,650.8	1,645.3	3.6	3.8	94.82	124.9	33.8	133.0	125.8	7.24	18.381	
1,700.0	1,699.5	1,676.7	1,670.7	3.7	3.9	96.06	129.8	36.2	138.8	131.5	7.36	18.873	
1,771.6	1,770.6	1,746.0	1,738.4	3.8	4.1	99.31	142.6	42.8	154.9	147.2	7.69	20.158	
1,800.0	1,798.7	1,773.3	1,765.1	3.9	4.2	100.57	147.6	45.3	161.5	153.7	7.81	20.669	
1,870.1	1,868.0	1,840.6	1,830.9	4.1	4.5	103.60	160.1	51.7	178.4	170.3	8.15	21.897	
1,900.0	1,897.5	1,869.2	1,858.9	4.2	4.6	104.86	165.4	54.4	185.9	177.7	8.29	22.426	
1,968.5	1,964.8	1,934.5	1,922.8	4.4	4.8	107.66	177.5	60.6	203.8	195.2	8.64	23.604	
2,000.0	1,995.6	1,964.4	1,952.0	4.5	4.9	108.90	183.0	63.4	212.4	203.6	8.79	24.155	
2,066.9	2,060.9	2,027.6	2,013.9	4.7	5.2	111.44	194.8	69.3	231.4	222.3	9.15	25.289	
2,100.0	2,093.1	2,058.7	2,044.3	4.8	5.3	112.65	200.5	72.3	241.2	231.9	9.33	25.862	
2,165.3	2,156.3	2,119.8	2,104.1	5.1	5.5	114.95	211.8	78.0	261.3	251.6	9.70	26.951	
2,200.0	2,189.6	2,152.1	2,135.6	5.2	5.7	116.11	217.8	81.1	272.5	262.6	9.89	27.546	
2,263.8	2,250.7	2,211.0	2,193.3	5.5	5.9	118.16	228.7	86.7	293.8	283.5	10.27	28.603	
2,280.0	2,266.2	2,226.0	2,207.9	5.6	6.0	118.67	231.5	88.1	299.4	289.0	10.37	28.879	
2,300.0	2,285.3	2,244.3	2,225.9	5.7	6.0	119.39	234.9	89.8	306.3	295.8	10.49	29.196	
2,362.2	2,344.6	2,301.5	2,281.8	6.0	6.3	121.47	245.5	95.2	328.3	317.4	10.89	30.151	
2,400.0	2,380.6	2,336.3	2,315.8	6.2	6.4	122.60	251.9	98.5	341.8	330.6	11.13	30.700	
2,460.6	2,438.4	2,392.0	2,370.3	6.5	6.7	124.25	262.3	103.7	363.6	352.1	11.53	31.538	
2,500.0	2,475.9	2,428.2	2,405.7	6.7	6.8	125.22	269.0	107.1	378.0	366.2	11.79	32.061	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,482.4	2,458.8	7.0	7.0	126.54	279.0	112.3	399.6	387.4	12.18	32.799	
2,600.0	2,571.2	2,520.1	2,495.6	7.2	7.2	127.38	286.0	115.8	414.7	402.3	12.46	33.291	
2,657.5	2,626.0	2,574.9	2,549.2	7.5	7.4	128.49	296.2	120.9	436.0	423.2	12.85	33.931	
2,700.0	2,666.6	2,617.9	2,591.3	7.8	7.6	129.22	304.4	124.3	451.6	438.4	13.15	34.352	
2,755.9	2,719.8	2,671.9	2,644.1	8.1	7.8	129.98	315.1	127.9	471.6	458.1	13.54	34.844	
2,800.0	2,761.9	2,712.8	2,684.1	8.3	8.0	130.51	323.1	130.6	487.5	473.6	13.85	35.209	
2,854.3	2,813.7	2,763.2	2,733.5	8.7	8.2	131.12	333.1	134.0	507.1	492.8	14.24	35.619	
2,900.0	2,857.2	2,805.7	2,774.9	8.9	8.3	131.59	341.5	136.7	523.5	509.0	14.56	35.949	
2,952.7	2,907.5	2,854.6	2,822.8	9.2	8.5	132.11	351.1	140.0	542.6	527.7	14.95	36.305	
3,000.0	2,952.5	2,898.5	2,865.7	9.5	8.7	132.54	359.8	142.8	559.7	544.4	15.29	36.611	
3,051.2	3,001.3	2,946.0	2,912.2	9.8	8.9	132.97	369.1	146.0	578.3	562.6	15.66	36.923	
3,100.0	3,047.8	2,991.3	2,956.6	10.1	9.1	133.37	378.1	148.9	596.0	580.0	16.02	37.208	
3,149.6	3,095.1	3,037.4	3,001.6	10.4	9.3	133.74	387.2	152.0	614.1	597.7	16.38	37.480	
3,200.0	3,143.2	3,084.2	3,047.4	10.7	9.5	134.10	396.4	155.0	632.4	615.7	16.75	37.746	
3,248.0	3,188.9	3,128.8	3,091.0	11.0	9.7	134.43	405.2	158.0	649.9	632.8	17.11	37.986	
3,300.0	3,238.5	3,177.0	3,138.2	11.3	9.9	134.76	414.7	161.1	668.9	651.4	17.49	38.235	
3,346.4	3,282.8	3,220.2	3,180.4	11.6	10.1	135.04	423.2	164.0	685.9	668.1	17.84	38.447	
3,400.0	3,333.8	3,269.9	3,229.0	11.9	10.3	135.35	433.0	167.2	705.5	687.2	18.24	38.680	
3,444.9	3,376.6	3,311.6	3,269.8	12.2	10.5	135.59	441.2	170.0	721.9	703.3	18.57	38.867	
3,500.0	3,429.1	3,362.7	3,319.8	12.6	10.7	135.88	451.3	173.3	742.1	723.1	18.99	39.087	
3,543.3	3,470.4	3,402.9	3,359.2	12.8	10.9	136.09	459.3	176.0	758.0	738.6	19.31	39.253	
3,600.0	3,524.4	3,455.6	3,410.7	13.2	11.1	136.36	469.7	179.4	778.7	759.0	19.73	39.461	
3,641.7	3,564.2	3,494.3	3,448.6	13.4	11.3	136.55	477.3	182.0	794.1	774.0	20.05	39.607	
3,700.0	3,619.8	3,548.4	3,501.5	13.8	11.5	136.80	488.0	185.5	815.5	795.0	20.49	39.804	
3,740.1	3,658.0	3,585.7	3,537.9	14.0	11.7	136.96	495.3	188.0	830.2	809.4	20.79	39.934	
3,800.0	3,715.1	3,641.3	3,592.3	14.4	11.9	137.20	506.3	191.6	852.2	831.0	21.24	40.120	
3,838.6	3,751.8	3,677.1	3,627.3	14.7	12.1	137.34	513.4	194.0	866.4	844.8	21.53	40.236	
3,900.0	3,810.4	3,734.1	3,683.1	15.0	12.3	137.56	524.6	197.7	889.0	867.0	22.00	40.413	
3,937.0	3,845.7	3,768.5	3,716.7	15.3	12.5	137.69	531.4	200.0	902.6	880.3	22.28	40.516	
4,000.0	3,905.7	3,827.0	3,773.9	15.7	12.7	137.90	542.9	203.8	925.8	903.0	22.75	40.685	
4,035.4	3,939.5	3,859.9	3,806.1	15.9	12.9	138.01	549.4	206.0	938.8	915.8	23.02	40.776	
4,100.0	4,001.0	3,919.8	3,864.7	16.3	13.1	138.21	561.2	209.9	962.6	939.1	23.51	40.937	
4,133.8	4,033.3	3,951.2	3,895.5	16.5	13.3	138.31	567.4	212.0	975.1	951.3	23.77	41.019	
4,200.0	4,096.3	4,012.7	3,955.6	16.9	13.5	138.50	579.5	216.0	999.5	975.2	24.27	41.173	
4,232.3	4,127.1	4,042.6	3,984.9	17.1	13.7	138.59	585.5	218.0	1,011.4	986.8	24.52	41.245	
4,300.0	4,191.7	4,105.5	4,046.4	17.6	14.0	138.77	597.9	222.1	1,036.3	1,011.3	25.04	41.392	
4,330.7	4,220.9	4,134.0	4,074.3	17.8	14.1	138.85	603.5	224.0	1,047.7	1,022.4	25.27	41.457	
4,400.0	4,287.0	4,198.4	4,137.2	18.2	14.4	139.02	616.2	228.2	1,073.2	1,047.4	25.80	41.598	
4,429.1	4,314.7	4,225.4	4,163.7	18.4	14.5	139.09	621.5	230.0	1,084.0	1,058.0	26.02	41.655	
4,500.0	4,382.3	4,291.2	4,228.0	18.8	14.8	139.26	634.5	234.3	1,110.1	1,083.6	26.56	41.791	
4,527.5	4,408.6	4,316.8	4,253.0	19.0	14.9	139.32	639.5	236.0	1,120.3	1,093.5	26.77	41.841	
4,600.0	4,477.6	4,384.1	4,318.8	19.5	15.2	139.47	652.8	240.4	1,147.1	1,119.7	27.33	41.972	
4,626.0	4,502.4	4,408.2	4,342.4	19.6	15.3	139.53	657.6	242.0	1,156.7	1,129.1	27.53	42.017	
4,700.0	4,572.9	4,476.9	4,409.7	20.1	15.6	139.68	671.1	246.5	1,184.0	1,155.9	28.10	42.142	
4,724.4	4,596.2	4,499.6	4,431.8	20.3	15.7	139.73	675.6	248.0	1,193.0	1,164.7	28.28	42.182	
4,800.0	4,668.3	4,569.7	4,500.5	20.7	16.0	139.87	689.4	252.6	1,220.9	1,192.1	28.86	42.302	
4,822.8	4,690.0	4,590.9	4,521.2	20.9	16.1	139.91	693.6	254.0	1,229.4	1,200.3	29.04	42.337	
4,900.0	4,763.6	4,662.6	4,591.3	21.4	16.4	140.05	707.8	258.7	1,257.9	1,228.3	29.63	42.453	
4,921.2	4,783.8	4,682.3	4,610.6	21.5	16.5	140.09	711.6	260.0	1,265.8	1,236.0	29.79	42.484	
5,000.0	4,858.9	4,755.4	4,682.1	22.0	16.8	140.22	726.1	264.8	1,294.9	1,264.5	30.40	42.596	
5,019.7	4,877.7	4,773.7	4,700.0	22.1	16.9	140.26	729.7	266.0	1,302.2	1,271.6	30.55	42.624	
5,100.0	4,954.2	4,848.3	4,772.9	22.6	17.2	140.39	744.4	270.9	1,331.9	1,300.7	31.17	42.732	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,865.1	4,789.4	22.8	17.3	140.41	747.7	272.0	1,338.6	1,307.2	31.31	42.755		
5,171.8	5,022.7	4,919.5	4,842.6	23.1	17.5	140.51	758.4	275.6	1,358.4	1,326.7	31.73	42.813		
5,200.0	5,049.6	4,957.6	4,880.0	23.3	17.7	140.71	765.5	278.0	1,368.5	1,336.5	31.99	42.785		
5,216.5	5,065.4	4,980.1	4,902.1	23.3	17.7	140.83	769.5	279.3	1,374.3	1,342.1	32.13	42.775		
5,300.0	5,145.7	5,095.6	5,016.0	23.7	18.1	141.44	787.2	285.2	1,401.0	1,368.2	32.79	42.724		
5,314.9	5,160.1	5,116.5	5,036.7	23.8	18.2	141.54	790.0	286.1	1,405.3	1,372.4	32.90	42.717		
5,400.0	5,242.7	5,237.0	5,156.4	24.1	18.4	142.14	803.1	290.5	1,427.8	1,394.3	33.49	42.628		
5,413.4	5,255.7	5,256.2	5,175.5	24.2	18.5	142.24	804.7	291.0	1,430.9	1,397.3	33.58	42.613		
5,500.0	5,340.5	7,767.7	6,644.2	24.5	36.8	102.35	815.0	-1,054.7	1,409.3	1,349.5	59.84	23.553		
5,511.8	5,352.1	7,769.9	6,644.2	24.5	36.8	101.58	815.0	-1,056.9	1,398.4	1,338.3	60.07	23.279		
5,600.0	5,439.0	7,784.4	6,644.2	24.8	37.2	95.94	815.0	-1,071.4	1,317.0	1,255.4	61.54	21.399		
5,610.2	5,449.1	7,786.0	6,644.2	24.8	37.2	95.31	815.0	-1,073.0	1,307.6	1,245.9	61.68	21.200		
5,700.0	5,538.0	7,797.8	6,644.2	25.1	37.5	89.99	815.0	-1,084.8	1,225.4	1,162.9	62.58	19.582		
5,708.6	5,546.6	7,798.8	6,644.2	25.1	37.6	89.50	815.0	-1,085.8	1,217.6	1,154.9	62.64	19.439		
5,800.0	5,637.4	7,807.9	6,644.2	25.3	37.8	84.71	815.0	-1,094.9	1,135.2	1,072.2	63.03	18.010		
5,807.1	5,644.5	7,808.5	6,644.2	25.3	37.8	84.36	815.0	-1,095.5	1,128.9	1,065.8	63.04	17.906		
5,900.0	5,737.2	7,814.6	6,644.2	25.5	38.0	80.22	815.0	-1,101.6	1,046.9	983.8	63.05	16.604		
5,905.5	5,742.6	7,814.8	6,644.2	25.5	38.0	80.00	815.0	-1,101.8	1,042.1	979.0	63.04	16.531		
6,000.0	5,837.1	7,817.9	6,644.2	25.6	38.0	76.58	815.0	-1,104.9	961.1	898.3	62.78	15.309		
6,003.9	5,841.0	7,817.9	6,644.2	25.6	38.0	76.45	815.0	-1,104.9	957.8	895.0	62.76	15.260		
6,051.8	5,888.9	7,818.3	6,644.2	25.7	38.0	-0.10	815.0	-1,105.3	917.9	882.5	35.39	25.936		
6,081.8	5,918.9	7,818.2	6,644.2	25.7	38.0	-0.10	815.0	-1,105.2	893.4	858.0	35.44	25.209		
6,100.0	5,937.1	7,818.0	6,644.2	25.7	38.0	-92.06	815.0	-1,105.0	878.7	816.5	62.24	14.118		
6,102.3	5,939.4	7,817.9	6,644.2	25.7	38.0	-92.31	815.0	-1,104.9	876.8	814.6	62.19	14.100		
6,150.0	5,987.0	7,814.9	6,644.2	25.7	38.0	-96.91	815.0	-1,101.9	839.1	778.1	61.01	13.752		
6,200.0	6,036.5	7,808.4	6,644.2	25.7	37.8	-100.91	815.0	-1,095.3	800.9	741.2	59.63	13.429		
6,200.8	6,037.3	7,808.2	6,644.2	25.7	37.8	-100.96	815.0	-1,095.2	800.3	740.7	59.61	13.425		
6,250.0	6,085.5	7,798.4	6,644.2	25.7	37.5	-104.06	815.0	-1,085.4	764.4	706.1	58.25	13.122		
6,299.2	6,133.0	7,785.2	6,644.2	25.6	37.2	-106.39	815.0	-1,072.2	730.4	673.4	56.98	12.818		
6,300.0	6,133.7	7,785.0	6,644.2	25.6	37.2	-106.42	815.0	-1,072.0	729.9	672.9	56.96	12.813		
6,350.0	6,180.9	7,768.3	6,644.2	25.5	36.8	-108.05	815.0	-1,055.3	697.8	641.9	55.82	12.500		
6,397.6	6,224.6	7,749.3	6,644.2	25.4	36.3	-109.00	815.0	-1,036.3	669.5	614.6	54.89	12.198		
6,400.0	6,226.7	7,748.3	6,644.3	25.4	36.3	-109.03	815.0	-1,035.3	668.2	613.3	54.85	12.183		
6,450.0	6,271.1	7,725.2	6,644.3	25.2	35.7	-109.42	815.0	-1,012.2	641.4	587.4	54.03	11.871		
6,496.0	6,310.4	7,701.2	6,644.3	25.1	35.1	-109.32	815.0	-988.2	619.4	566.0	53.42	11.594		
6,500.0	6,313.7	7,699.1	6,644.3	25.1	35.1	-109.29	815.0	-986.1	617.6	564.2	53.38	11.571		
6,550.0	6,354.4	7,670.0	6,644.3	25.0	34.4	-108.70	815.0	-957.0	596.8	544.0	52.87	11.289		
6,594.5	6,388.9	7,641.9	6,644.4	24.9	33.7	-107.84	815.0	-928.8	580.9	528.4	52.50	11.064		
6,600.0	6,393.0	7,638.2	6,644.4	24.9	33.6	-107.71	815.0	-925.2	579.1	526.6	52.46	11.038		
6,650.0	6,429.3	7,603.8	6,644.4	24.8	32.8	-106.39	815.0	-890.8	564.3	512.2	52.13	10.825		
6,692.9	6,458.5	7,572.3	6,644.5	24.7	32.0	-105.05	815.0	-859.3	553.8	501.9	51.89	10.673		
6,700.0	6,463.1	7,566.9	6,644.5	24.7	31.9	-104.81	815.0	-853.9	552.3	500.4	51.85	10.652		
6,750.0	6,494.3	7,527.8	6,644.5	24.7	31.0	-103.04	815.0	-814.8	542.9	491.3	51.58	10.526		
6,791.3	6,517.9	7,493.9	6,644.6	24.7	30.2	-101.49	815.0	-780.8	536.8	485.5	51.34	10.457		
6,800.0	6,522.6	7,486.6	6,644.6	24.7	30.0	-101.16	815.0	-773.6	535.7	484.5	51.28	10.446		
6,850.0	6,548.0	7,443.5	6,644.6	24.7	29.1	-99.25	815.0	-730.5	530.5	479.6	50.96	10.410 SF		
6,889.7	6,566.0	7,408.0	6,644.7	24.8	28.3	-97.76	815.0	-695.0	527.6	476.9	50.66	10.413		
6,900.0	6,570.4	7,398.7	6,644.7	24.9	28.1	-97.39	815.0	-685.7	526.9	476.4	50.57	10.419		
6,950.0	6,589.5	7,352.5	6,644.7	25.1	27.1	-95.66	815.0	-639.5	524.6	474.4	50.17	10.457		
6,988.2	6,602.0	7,316.4	6,644.8	25.3	26.3	-94.48	815.0	-603.4	523.4	473.6	49.82	10.506		
7,000.0	6,605.4	7,305.1	6,644.8	25.3	26.0	-94.14	815.0	-592.1	523.1	473.4	49.70	10.526		
7,050.0	6,618.0	7,256.7	6,644.9	25.6	25.1	-92.88	815.0	-543.7	522.4	473.1	49.24	10.607		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,625.0	7,220.8	6,644.9	25.9	24.3	-92.15	815.0	-507.8	522.0	473.1	48.90	10.675	
7,100.0	6,627.1	7,207.6	6,644.9	26.0	24.1	-91.93	815.0	-494.5	522.0	473.2	48.77	10.703	
7,150.0	6,632.8	7,157.9	6,645.0	26.5	23.1	-91.33	815.0	-444.9	521.8	473.5	48.34	10.795	
7,185.0	6,634.7	7,122.7	6,644.9	26.8	22.5	-91.12	815.0	-409.7	521.8	473.7	48.06	10.856	
7,200.0	6,635.0	7,107.6	6,644.5	27.0	22.3	-91.04	815.0	-394.6	521.7	473.8	47.95	10.882	
7,215.9	6,635.0	7,091.5	6,643.7	27.1	22.0	-90.96	815.0	-378.5	521.7	473.9	47.84	10.906	
7,283.4	6,634.1	7,023.7	6,636.4	27.9	21.0	-90.25	815.0	-311.1	521.7	474.1	47.54	10.972	
7,299.1	6,633.9	7,008.2	6,633.8	28.1	20.8	-89.99	815.0	-295.9	521.7	474.2	47.49	10.983	
7,300.0	6,633.9	7,007.3	6,633.7	28.1	20.8	-89.97	815.0	-295.0	521.7	474.2	47.49	10.984	
7,381.9	6,632.9	6,928.4	6,615.5	29.3	20.1	-88.08	815.0	-218.2	522.0	474.4	47.56	10.974	
7,400.0	6,632.6	6,911.5	6,610.5	29.5	20.0	-87.56	815.0	-202.1	522.2	474.6	47.61	10.969	
7,480.3	6,631.6	6,839.7	6,585.1	30.8	19.7	-84.87	815.0	-135.0	524.1	476.1	48.05	10.907	
7,500.0	6,631.4	6,822.9	6,578.2	31.1	19.7	-84.14	815.0	-119.7	524.9	476.8	48.19	10.894	
7,578.7	6,630.4	6,759.4	6,548.9	32.5	19.6	-81.06	814.9	-63.3	530.1	481.2	48.86	10.849	
7,600.0	6,630.1	6,743.2	6,540.6	32.9	19.6	-80.19	814.9	-49.4	532.1	483.0	49.05	10.848	
7,677.1	6,629.1	6,688.0	6,510.1	34.3	19.6	-77.04	814.9	-3.4	541.9	492.0	49.83	10.874	
7,700.0	6,628.8	6,672.7	6,501.1	34.8	19.6	-76.11	814.9	8.9	545.6	495.5	50.06	10.900	
7,775.6	6,627.8	6,625.4	6,471.4	36.3	19.6	-73.13	814.9	45.8	561.1	510.2	50.86	11.033	
7,800.0	6,627.5	6,611.1	6,461.9	36.8	19.6	-72.20	814.9	56.5	567.1	516.0	51.10	11.098	
7,874.0	6,626.6	6,570.7	6,434.1	38.4	19.6	-69.51	814.9	85.7	588.6	536.8	51.89	11.345	
7,900.0	6,626.3	6,557.5	6,424.7	38.9	19.6	-68.62	814.9	95.0	597.4	545.2	52.15	11.455	
7,972.4	6,625.3	6,523.2	6,399.4	40.5	19.7	-66.27	814.9	118.2	624.8	571.9	52.92	11.806	
8,000.0	6,625.0	6,511.0	6,390.1	41.1	19.7	-65.44	814.9	126.1	636.5	583.2	53.21	11.962	
8,070.8	6,624.1	6,481.8	6,367.4	42.7	19.7	-63.43	814.9	144.4	669.2	615.2	53.97	12.400	
8,100.0	6,623.7	6,470.6	6,358.4	43.4	19.7	-62.66	814.9	151.2	683.8	629.5	54.28	12.598	
8,169.3	6,622.8	6,450.0	6,341.8	45.0	19.7	-61.25	814.9	163.3	721.1	665.9	55.16	13.072	
8,200.0	6,622.4	6,435.3	6,329.7	45.7	19.7	-60.24	814.9	171.7	738.6	683.2	55.38	13.337	
8,267.7	6,621.6	6,413.9	6,311.8	47.4	19.7	-58.80	814.9	183.4	779.4	723.2	56.15	13.881	
8,300.0	6,621.1	6,400.0	6,300.0	48.1	19.7	-57.86	814.9	190.7	799.8	743.4	56.37	14.188	
8,366.1	6,620.3	6,386.0	6,288.0	49.7	19.7	-56.93	814.9	197.9	843.3	786.0	57.29	14.719	
8,400.0	6,619.9	6,377.2	6,280.3	50.6	19.7	-56.35	814.9	202.2	866.4	808.7	57.69	15.018	
8,464.5	6,619.0	6,350.0	6,256.4	52.2	19.7	-54.58	814.9	215.1	912.1	854.0	58.07	15.705	
8,500.0	6,618.6	6,350.0	6,256.4	53.0	19.7	-54.58	814.9	215.1	937.6	878.8	58.80	15.946	
8,563.0	6,617.8	6,350.0	6,256.4	54.6	19.7	-54.58	814.9	215.1	984.6	924.5	60.11	16.381	
8,600.0	6,617.3	6,331.8	6,240.1	55.5	19.7	-53.41	814.9	223.3	1,012.6	952.5	60.18	16.827	
8,661.4	6,616.5	6,319.8	6,229.2	57.1	19.7	-52.66	814.9	228.4	1,060.3	999.3	60.98	17.388	
8,700.0	6,616.0	6,300.0	6,211.1	58.1	19.7	-51.43	814.9	236.4	1,091.0	1,030.1	60.98	17.893	
8,759.8	6,615.2	6,300.0	6,211.1	59.6	19.7	-51.43	814.9	236.4	1,139.0	1,076.8	62.20	18.312	
8,800.0	6,614.7	6,300.0	6,211.1	60.6	19.7	-51.43	814.9	236.4	1,171.7	1,108.7	63.02	18.594	
8,858.2	6,614.0	6,300.0	6,211.1	62.1	19.7	-51.43	814.9	236.4	1,220.1	1,155.9	64.22	19.000	
8,900.0	6,613.4	6,280.1	6,192.8	63.2	19.7	-50.22	814.9	244.0	1,254.8	1,190.6	64.21	19.543	
8,956.7	6,612.7	6,272.0	6,185.2	64.7	19.7	-49.74	814.9	246.9	1,302.8	1,237.8	65.01	20.041	
9,000.0	6,612.2	6,266.2	6,179.7	65.8	19.7	-49.39	814.9	249.0	1,339.8	1,274.2	65.62	20.418	
9,055.1	6,611.5	6,250.0	6,164.5	67.3	19.7	-48.45	814.9	254.5	1,387.5	1,321.5	66.00	21.023	
9,100.0	6,610.9	6,250.0	6,164.5	68.4	19.7	-48.45	814.9	254.5	1,426.5	1,359.6	66.90	21.323	
9,153.5	6,610.2	6,250.0	6,164.5	69.8	19.7	-48.45	814.9	254.5	1,473.4	1,405.4	67.98	21.674	
9,200.0	6,609.6	6,250.0	6,164.5	71.1	19.7	-48.45	814.9	254.5	1,514.5	1,445.6	68.92	21.976	
9,251.9	6,608.9	6,250.0	6,164.5	72.4	19.7	-48.45	814.9	254.5	1,560.8	1,490.8	69.97	22.306	
9,300.0	6,608.3	6,231.3	6,146.8	73.7	19.7	-47.38	814.9	260.5	1,603.6	1,533.6	70.01	22.904	
9,350.4	6,607.7	6,226.3	6,142.0	75.0	19.7	-47.10	814.9	262.0	1,648.9	1,578.1	70.77	23.299	
9,400.0	6,607.0	6,221.5	6,137.5	76.4	19.7	-46.83	814.9	263.4	1,693.8	1,622.3	71.52	23.682	
9,448.8	6,606.4	6,200.0	6,116.8	77.7	19.7	-45.65	814.9	269.3	1,738.4	1,667.0	71.39	24.352	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.7	6,200.0	6,116.8	79.0	19.7	-45.65	814.9	269.3	1,785.0	1,712.6	72.39	24.657	
9,547.2	6,605.1	6,200.0	6,116.8	80.3	19.7	-45.65	814.9	269.3	1,828.2	1,754.9	73.33	24.933	
9,600.0	6,604.5	6,200.0	6,116.8	81.7	19.7	-45.65	814.9	269.3	1,876.7	1,802.3	74.37	25.236	
9,645.6	6,603.9	6,200.0	6,116.8	82.9	19.7	-45.65	814.9	269.3	1,918.9	1,843.6	75.27	25.493	
9,700.0	6,603.2	6,200.0	6,116.8	84.4	19.7	-45.65	814.9	269.3	1,969.2	1,892.9	76.35	25.793	
9,744.1	6,602.6	6,200.0	6,116.8	85.6	19.7	-45.65	814.9	269.3	2,010.2	1,933.0	77.22	26.032	
9,800.0	6,601.9	6,200.0	6,116.8	87.1	19.7	-45.65	814.9	269.3	2,062.5	1,984.1	78.33	26.329	
9,842.5	6,601.3	6,200.0	6,116.8	88.2	19.7	-45.65	814.9	269.3	2,102.3	2,023.1	79.18	26.550	
9,900.0	6,600.6	6,200.0	6,116.8	89.8	19.7	-45.65	814.9	269.3	2,156.3	2,076.0	80.33	26.844	
9,940.9	6,600.1	6,180.2	6,097.6	90.9	19.7	-44.59	814.9	274.2	2,194.5	2,114.5	79.97	27.440	
10,000.0	6,599.3	6,176.6	6,094.1	92.5	19.7	-44.41	814.9	275.1	2,250.1	2,169.2	80.92	27.807	
10,039.3	6,598.8	6,174.3	6,091.8	93.5	19.7	-44.28	814.9	275.6	2,287.3	2,205.7	81.55	28.047	
10,100.0	6,598.0	6,170.8	6,088.5	95.2	19.7	-44.10	814.9	276.4	2,344.7	2,262.2	82.53	28.410	
10,137.8	6,597.5	6,150.0	6,068.1	96.2	19.7	-43.05	814.9	280.7	2,380.8	2,298.8	82.01	29.032	
10,200.0	6,596.7	6,150.0	6,068.1	97.9	19.7	-43.05	814.9	280.7	2,439.8	2,356.6	83.21	29.323	
10,236.2	6,596.3	6,150.0	6,068.1	98.9	19.7	-43.05	814.9	280.7	2,474.2	2,390.3	83.90	29.489	
10,300.0	6,595.4	6,150.0	6,068.1	100.6	19.7	-43.05	814.9	280.7	2,535.0	2,449.9	85.13	29.776	
10,334.6	6,595.0	6,150.0	6,068.1	101.6	19.7	-43.05	814.9	280.7	2,568.0	2,482.2	85.80	29.929	
10,400.0	6,594.2	6,150.0	6,068.1	103.4	19.7	-43.04	814.9	280.7	2,630.5	2,543.5	87.07	30.212	
10,433.0	6,593.7	6,150.0	6,068.1	104.3	19.7	-43.04	814.9	280.7	2,662.2	2,574.5	87.71	30.353	
10,500.0	6,592.9	6,150.0	6,068.1	106.1	19.7	-43.04	814.9	280.7	2,726.4	2,637.4	89.00	30.632	
10,531.5	6,592.5	6,150.0	6,068.1	106.9	19.7	-43.04	814.9	280.7	2,756.6	2,667.0	89.61	30.761	
10,600.0	6,591.6	6,150.0	6,068.1	108.8	19.7	-43.04	814.9	280.7	2,822.5	2,731.6	90.94	31.036	
10,629.9	6,591.2	6,150.0	6,068.1	109.6	19.7	-43.04	814.9	280.7	2,851.3	2,759.8	91.52	31.154	
10,700.0	6,590.3	6,150.0	6,068.1	111.6	19.7	-43.04	814.9	280.7	2,918.9	2,826.0	92.88	31.425	
10,728.3	6,589.9	6,150.0	6,068.1	112.3	19.7	-43.04	814.9	280.7	2,946.2	2,852.8	93.44	31.532	
10,800.0	6,589.0	6,150.0	6,068.1	114.3	19.7	-43.04	814.9	280.7	3,015.5	2,920.7	94.83	31.800	
10,826.7	6,588.7	6,150.0	6,068.1	115.0	19.7	-43.04	814.9	280.7	3,041.4	2,946.0	95.35	31.897	
10,900.0	6,587.7	6,150.0	6,068.1	117.1	19.7	-43.04	814.9	280.7	3,112.3	3,015.6	96.78	32.161	
10,925.2	6,587.4	6,150.0	6,068.1	117.7	19.7	-43.04	814.9	280.7	3,136.8	3,039.5	97.27	32.249	
11,000.0	6,586.4	6,150.0	6,068.1	119.8	19.7	-43.04	814.9	280.7	3,209.4	3,110.7	98.72	32.509	
11,023.6	6,586.1	6,150.0	6,068.1	120.4	19.7	-43.04	814.9	280.7	3,232.3	3,133.1	99.18	32.589	
11,100.0	6,585.1	6,128.4	6,046.9	122.6	19.7	-41.98	814.9	284.6	3,306.2	3,207.1	99.06	33.376	
11,122.0	6,584.8	6,127.7	6,046.2	123.2	19.7	-41.94	814.9	284.7	3,327.6	3,228.2	99.43	33.467	
11,200.0	6,583.8	6,125.3	6,043.8	125.3	19.7	-41.83	814.9	285.1	3,403.4	3,302.7	100.74	33.784	
11,220.4	6,583.6	6,124.7	6,043.2	125.9	19.7	-41.80	814.9	285.2	3,423.4	3,322.3	101.09	33.866	
11,300.0	6,582.5	6,122.3	6,040.9	128.1	19.7	-41.68	814.9	285.6	3,500.8	3,398.4	102.43	34.178	
11,318.9	6,582.3	6,121.8	6,040.3	128.6	19.7	-41.66	814.9	285.7	3,519.2	3,416.5	102.75	34.251	
11,400.0	6,581.2	6,100.0	6,018.8	130.8	19.7	-40.63	814.9	288.8	3,598.7	3,496.1	102.62	35.069	
11,417.3	6,581.0	6,100.0	6,018.8	131.3	19.7	-40.63	814.9	288.8	3,615.5	3,512.6	102.94	35.122	
11,500.0	6,580.0	6,100.0	6,018.8	133.6	19.7	-40.63	814.9	288.8	3,696.2	3,591.7	104.50	35.371	
11,515.7	6,579.7	6,100.0	6,018.8	134.0	19.7	-40.63	814.9	288.8	3,711.6	3,606.8	104.79	35.418	
11,600.0	6,578.7	6,100.0	6,018.8	136.3	19.7	-40.63	814.9	288.8	3,793.9	3,687.5	106.38	35.664	
11,614.1	6,578.5	6,100.0	6,018.8	136.7	19.7	-40.63	814.9	288.8	3,807.8	3,701.1	106.65	35.705	
11,700.0	6,577.4	6,100.0	6,018.8	139.1	19.7	-40.63	814.9	288.8	3,891.7	3,783.5	108.26	35.947	
11,712.6	6,577.2	6,100.0	6,018.8	139.5	19.7	-40.63	814.9	288.8	3,904.0	3,795.5	108.50	35.982	
11,800.0	6,576.1	6,100.0	6,018.8	141.9	19.7	-40.63	814.9	288.8	3,989.6	3,879.5	110.15	36.221	
11,811.0	6,575.9	6,100.0	6,018.8	142.2	19.7	-40.63	814.9	288.8	4,000.4	3,890.1	110.35	36.251	
11,882.7	6,575.0	6,100.0	6,018.8	144.2	19.7	-40.63	814.9	288.8	4,070.7	3,959.0	111.70	36.441	
11,883.5	6,575.0	6,100.0	6,018.8	144.2	19.7	-40.63	814.9	288.8	4,071.5	3,959.7	111.71	36.445	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	1.07	14.9	0.3	15.0				
98.4	98.4	98.4	98.4	0.1	0.1	1.07	14.9	0.3	15.0	14.8	0.19	77.777	
100.0	100.0	100.0	100.0	0.1	0.1	1.07	14.9	0.3	15.0	14.8	0.20	76.461	
196.8	196.8	196.8	196.8	0.3	0.3	1.07	14.9	0.3	15.0	14.3	0.63	23.698	
200.0	200.0	200.0	200.0	0.3	0.3	1.07	14.9	0.3	15.0	14.3	0.65	23.178	
295.3	295.3	295.3	295.3	0.5	0.5	1.07	14.9	0.3	15.0	13.9	1.07	13.930	
300.0	300.0	300.0	300.0	0.5	0.5	1.07	14.9	0.3	15.0	13.9	1.09	13.659	
393.7	393.7	393.7	393.7	0.8	0.8	1.07	14.9	0.3	15.0	13.4	1.52	9.864	
400.0	400.0	400.0	400.0	0.8	0.8	1.07	14.9	0.3	15.0	13.4	1.54	9.683	
492.1	492.1	492.1	492.1	1.0	1.0	1.07	14.9	0.3	15.0	13.0	1.96	7.635	
500.0	500.0	500.0	500.0	1.0	1.0	1.07	14.9	0.3	15.0	13.0	1.99	7.500	
590.5	590.5	590.5	590.5	1.2	1.2	1.07	14.9	0.3	15.0	12.6	2.40	6.228	
600.0	600.0	600.0	600.0	1.2	1.2	1.07	14.9	0.3	15.0	12.5	2.44	6.120	
689.0	689.0	689.0	689.0	1.4	1.4	1.07	14.9	0.3	15.0	12.1	2.84	5.259	
700.0	700.0	700.0	700.0	1.4	1.4	1.07	14.9	0.3	15.0	12.1	2.89	5.169	
787.4	787.4	787.4	787.4	1.6	1.6	1.07	14.9	0.3	15.0	11.7	3.29	4.551	
800.0	800.0	800.0	800.0	1.7	1.7	1.07	14.9	0.3	15.0	11.6	3.34	4.473	
885.8	885.8	885.8	885.8	1.9	1.9	1.07	14.9	0.3	15.0	11.2	3.73	4.011	
900.0	900.0	900.0	900.0	1.9	1.9	1.07	14.9	0.3	15.0	11.2	3.79	3.943	
984.2	984.2	984.2	984.2	2.1	2.1	1.07	14.9	0.3	15.0	10.8	4.17	3.585	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	1.07	14.9	0.3	15.0	10.7	4.24	3.525	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	1.07	14.9	0.3	15.0	10.3	4.61	3.241	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	1.07	14.9	0.3	15.0	10.3	4.69	3.187	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	1.07	14.9	0.3	15.0	9.9	5.06	2.958	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	1.07	14.9	0.3	15.0	9.8	5.14	2.909	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	1.07	14.9	0.3	15.0	9.5	5.50	2.720	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	1.07	14.9	0.3	15.0	9.4	5.59	2.675 CC, ES	
1,377.9	1,377.9	1,377.6	1,377.6	3.0	3.0	3.53	15.7	1.0	15.8	9.8	5.94	2.657	
1,400.0	1,400.0	1,399.6	1,399.5	3.0	3.0	4.99	16.3	1.4	16.3	10.3	6.03	2.704	
1,476.4	1,476.4	1,475.4	1,475.3	3.2	3.2	89.41	19.0	3.8	19.4	13.0	6.37	3.040	
1,500.0	1,500.0	1,498.8	1,498.7	3.2	3.2	93.28	20.1	4.8	20.8	14.3	6.47	3.211	
1,574.8	1,574.7	1,572.5	1,572.1	3.4	3.4	105.68	24.7	8.8	27.3	20.5	6.79	4.019	
1,600.0	1,599.8	1,597.3	1,596.7	3.4	3.5	109.44	26.5	10.4	30.3	23.4	6.90	4.388	
1,673.2	1,672.8	1,668.5	1,667.5	3.6	3.6	118.43	32.8	15.9	41.3	34.0	7.22	5.717	
1,700.0	1,699.5	1,694.4	1,693.1	3.7	3.7	121.03	35.3	18.1	46.1	38.8	7.33	6.293	
1,771.6	1,770.6	1,762.9	1,760.9	3.8	3.9	126.49	43.0	24.9	61.4	53.7	7.64	8.031	
1,800.0	1,798.7	1,789.8	1,787.4	3.9	3.9	128.17	46.4	27.8	68.3	60.5	7.76	8.794	
1,870.1	1,868.0	1,855.3	1,851.8	4.1	4.1	131.44	55.3	35.6	87.3	79.3	8.07	10.820	
1,900.0	1,897.5	1,882.9	1,878.9	4.2	4.2	132.54	59.4	39.2	96.3	88.1	8.20	11.746	
1,968.5	1,964.8	1,947.1	1,941.7	4.4	4.4	134.68	69.4	47.9	118.4	109.9	8.51	13.920	
2,000.0	1,995.6	1,976.7	1,970.6	4.5	4.5	135.56	74.1	52.0	129.0	120.4	8.65	14.922	
2,066.9	2,060.9	2,039.2	2,031.8	4.7	4.7	137.25	83.8	60.6	152.4	143.5	8.95	17.033	
2,100.0	2,093.1	2,069.9	2,061.8	4.8	4.8	138.01	88.6	64.8	164.5	155.4	9.10	18.076	
2,165.3	2,156.3	2,130.2	2,120.8	5.1	5.0	139.40	98.1	73.0	189.1	179.7	9.41	20.105	
2,200.0	2,189.6	2,162.0	2,151.9	5.2	5.2	140.07	103.0	77.4	202.7	193.1	9.57	21.183	
2,263.8	2,250.7	2,220.1	2,208.7	5.5	5.4	141.23	112.1	85.3	228.5	218.6	9.87	23.143	
2,280.0	2,266.2	2,234.8	2,223.1	5.6	5.4	141.50	114.4	87.3	235.2	225.3	9.95	23.643	
2,300.0	2,285.3	2,252.8	2,240.8	5.7	5.5	141.94	117.3	89.8	243.6	233.5	10.05	24.226	
2,362.2	2,344.6	2,309.1	2,295.8	6.0	5.7	143.12	126.1	97.5	269.7	259.3	10.38	25.970	
2,400.0	2,380.6	2,343.3	2,329.2	6.2	5.8	143.73	131.4	102.2	285.6	275.0	10.60	26.952	
2,460.6	2,438.4	2,398.1	2,382.9	6.5	6.0	144.59	140.0	109.7	311.1	300.2	10.93	28.460	
2,500.0	2,475.9	2,433.7	2,417.7	6.7	6.2	145.07	145.6	114.6	327.7	316.6	11.15	29.383	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,487.2	2,469.9	7.0	6.4	145.71	153.9	121.9	352.7	341.2	11.49	30.694	
2,600.0	2,571.2	2,524.2	2,506.2	7.2	6.5	146.10	159.7	127.0	370.0	358.3	11.73	31.554	
2,657.5	2,626.0	2,576.2	2,557.0	7.5	6.7	146.60	167.8	134.1	394.3	382.3	12.06	32.696	
2,700.0	2,666.6	2,614.6	2,594.7	7.8	6.9	146.93	173.9	139.3	412.3	400.0	12.31	33.498	
2,755.9	2,719.8	2,665.2	2,644.1	8.1	7.1	147.32	181.8	146.3	436.0	423.4	12.64	34.493	
2,800.0	2,761.9	2,705.1	2,683.1	8.3	7.3	147.60	188.0	151.7	454.7	441.8	12.90	35.242	
2,854.3	2,813.7	2,754.2	2,731.2	8.7	7.5	147.91	195.7	158.5	477.8	464.5	13.23	36.113	
2,900.0	2,857.2	2,795.5	2,771.6	8.9	7.6	148.15	202.2	164.1	497.2	483.7	13.51	36.812	
2,952.7	2,907.5	2,843.3	2,818.3	9.2	7.8	148.41	209.6	170.6	519.6	505.7	13.83	37.576	
3,000.0	2,952.5	2,886.0	2,860.1	9.5	8.0	148.62	216.3	176.5	539.6	525.5	14.12	38.230	
3,051.2	3,001.3	2,932.3	2,905.3	9.8	8.2	148.83	223.6	182.8	561.4	547.0	14.43	38.902	
3,100.0	3,047.8	2,976.4	2,948.5	10.1	8.4	149.02	230.5	188.9	582.1	567.4	14.73	39.515	
3,149.6	3,095.1	3,021.3	2,992.4	10.4	8.6	149.20	237.5	195.0	603.2	588.2	15.04	40.108	
3,200.0	3,143.2	3,066.9	3,037.0	10.7	8.8	149.37	244.6	201.3	624.7	609.3	15.35	40.683	
3,248.0	3,188.9	3,110.3	3,079.5	11.0	8.9	149.52	251.4	207.2	645.1	629.4	15.66	41.207	
3,300.0	3,238.5	3,157.3	3,125.5	11.3	9.1	149.67	258.8	213.6	667.2	651.2	15.98	41.749	
3,346.4	3,282.8	3,199.4	3,166.6	11.6	9.3	149.79	265.3	219.4	687.0	670.7	16.27	42.212	
3,400.0	3,333.8	3,247.8	3,214.0	11.9	9.5	149.93	272.9	226.0	709.8	693.1	16.61	42.723	
3,444.9	3,376.6	3,288.4	3,253.7	12.2	9.7	150.04	279.3	231.6	728.9	712.0	16.90	43.134	
3,500.0	3,429.1	3,338.2	3,302.4	12.6	9.9	150.17	287.1	238.4	752.3	735.1	17.25	43.617	
3,543.3	3,470.4	3,377.4	3,340.7	12.8	10.1	150.26	293.2	243.8	770.7	753.2	17.52	43.981	
3,600.0	3,524.4	3,428.7	3,390.9	13.2	10.3	150.38	301.2	250.8	794.9	777.0	17.89	44.440	
3,641.7	3,564.2	3,466.4	3,427.8	13.4	10.5	150.46	307.1	256.0	812.7	794.5	18.15	44.763	
3,700.0	3,619.8	3,533.4	3,493.4	13.8	10.7	150.62	317.1	264.7	837.1	818.5	18.54	45.153	
3,740.1	3,658.0	3,581.5	3,540.8	14.0	10.9	150.78	323.6	270.4	853.3	834.5	18.80	45.394	
3,800.0	3,715.1	3,654.2	3,612.6	14.4	11.1	151.06	332.3	278.0	876.6	857.4	19.18	45.714	
3,838.6	3,751.8	3,701.7	3,659.6	14.7	11.2	151.27	337.2	282.3	891.0	871.6	19.42	45.889	
3,900.0	3,810.4	3,778.1	3,735.5	15.0	11.4	151.66	343.8	288.1	913.0	893.2	19.79	46.139	
3,937.0	3,845.7	3,824.7	3,781.9	15.3	11.5	151.93	347.2	291.0	925.6	905.6	20.01	46.266	
4,000.0	3,905.7	3,904.7	3,861.7	15.7	11.7	152.44	351.5	294.8	946.1	925.8	20.37	46.448	
4,035.4	3,939.5	3,950.2	3,907.1	15.9	11.8	152.75	353.3	296.3	957.1	936.5	20.57	46.540	
4,100.0	4,001.0	4,033.6	3,990.5	16.3	11.9	153.37	355.0	297.9	976.1	955.2	20.91	46.673	
4,133.8	4,033.3	4,076.4	4,033.3	16.5	12.0	153.71	355.2	298.1	985.5	964.4	21.09	46.732	
4,200.0	4,096.3	4,139.5	4,096.3	16.9	12.1	154.21	355.2	298.1	1,003.6	982.2	21.42	46.863	
4,232.3	4,127.1	4,170.2	4,127.1	17.1	12.1	154.45	355.2	298.1	1,012.5	990.9	21.58	46.923	
4,300.0	4,191.7	4,234.8	4,191.7	17.6	12.2	154.93	355.2	298.1	1,031.2	1,009.2	21.92	47.051	
4,330.7	4,220.9	4,264.0	4,220.9	17.8	12.3	155.15	355.2	298.1	1,039.6	1,017.6	22.07	47.110	
4,400.0	4,287.0	4,330.1	4,287.0	18.2	12.4	155.62	355.2	298.1	1,058.8	1,036.4	22.41	47.243	
4,429.1	4,314.7	4,357.9	4,314.7	18.4	12.4	155.82	355.2	298.1	1,066.9	1,044.4	22.56	47.299	
4,500.0	4,382.3	4,425.4	4,382.3	18.8	12.5	156.28	355.2	298.1	1,086.7	1,063.8	22.91	47.436	
4,527.5	4,408.6	4,451.7	4,408.6	19.0	12.6	156.45	355.2	298.1	1,094.4	1,071.3	23.04	47.490	
4,600.0	4,477.6	4,520.7	4,477.6	19.5	12.7	156.90	355.2	298.1	1,114.6	1,091.2	23.40	47.631	
4,626.0	4,502.4	4,545.5	4,502.4	19.6	12.7	157.05	355.2	298.1	1,121.9	1,098.4	23.53	47.681	
4,700.0	4,572.9	4,616.1	4,572.9	20.1	12.8	157.49	355.2	298.1	1,142.7	1,118.8	23.89	47.825	
4,724.4	4,596.2	4,639.3	4,596.2	20.3	12.9	157.63	355.2	298.1	1,149.6	1,125.5	24.01	47.872	
4,800.0	4,668.3	4,711.4	4,668.3	20.7	13.0	158.05	355.2	298.1	1,170.9	1,146.5	24.38	48.018	
4,822.8	4,690.0	4,733.1	4,690.0	20.9	13.0	158.18	355.2	298.1	1,177.3	1,152.8	24.50	48.062	
4,900.0	4,763.6	4,806.7	4,763.6	21.4	13.2	158.59	355.2	298.1	1,199.1	1,174.3	24.87	48.210	
4,921.2	4,783.8	4,827.0	4,783.8	21.5	13.2	158.70	355.2	298.1	1,205.2	1,180.2	24.98	48.250	
5,000.0	4,858.9	4,902.0	4,858.9	22.0	13.3	159.10	355.2	298.1	1,227.5	1,202.1	25.36	48.400	
5,019.7	4,877.7	4,920.8	4,877.7	22.1	13.4	159.20	355.2	298.1	1,233.1	1,207.6	25.46	48.436	
5,100.0	4,954.2	4,997.3	4,954.2	22.6	13.5	159.59	355.2	298.1	1,256.0	1,230.1	25.85	48.587	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	5,014.6	4,971.5	22.8	13.5	159.68	355.2	298.1	1,261.1	1,235.2	25.94	48.620	
5,171.8	5,022.7	5,065.8	5,022.7	23.1	13.6	159.93	355.2	298.1	1,276.4	1,250.2	26.20	48.719	
5,200.0	5,049.6	5,092.7	5,049.6	23.3	13.7	160.11	355.2	298.1	1,284.4	1,258.0	26.37	48.711	
5,216.5	5,065.4	5,108.5	5,065.4	23.3	13.7	160.22	355.2	298.1	1,288.9	1,262.5	26.46	48.713	
5,300.0	5,145.7	5,188.8	5,145.7	23.7	13.8	160.70	355.2	298.1	1,310.5	1,283.6	26.92	48.680	
5,314.9	5,160.1	5,203.2	5,160.1	23.8	13.9	160.78	355.2	298.1	1,314.2	1,287.2	27.00	48.672	
5,400.0	5,242.7	5,285.8	5,242.7	24.1	14.0	161.20	355.2	298.1	1,333.5	1,306.1	27.45	48.588	
5,413.4	5,255.7	5,298.8	5,255.7	24.2	14.0	161.26	355.2	298.1	1,336.3	1,308.8	27.51	48.573	
5,500.0	5,340.5	7,733.6	6,644.2	24.5	36.3	162.41	355.2	-1,054.8	1,305.9	1,275.2	30.73	42.492	
5,511.8	5,352.1	7,735.7	6,644.2	24.5	36.3	162.00	355.2	-1,056.9	1,294.3	1,263.4	30.88	41.913	
5,600.0	5,439.0	7,750.3	6,644.2	24.8	36.7	158.09	355.2	-1,071.5	1,207.3	1,174.9	32.42	37.240	
5,610.2	5,449.1	7,751.8	6,644.2	24.8	36.7	157.52	355.2	-1,073.0	1,197.2	1,164.6	32.66	36.652	
5,700.0	5,538.0	7,763.7	6,644.2	25.1	37.0	150.99	355.2	-1,084.9	1,108.3	1,072.4	35.83	30.931	
5,708.6	5,546.6	7,764.7	6,644.2	25.1	37.1	150.18	355.2	-1,085.9	1,099.7	1,063.4	36.26	30.326	
5,800.0	5,637.4	7,773.7	6,644.2	25.3	37.3	138.58	355.2	-1,094.9	1,008.8	965.9	42.90	23.516	
5,807.1	5,644.5	7,774.3	6,644.2	25.3	37.3	137.39	355.2	-1,095.5	1,001.8	958.2	43.59	22.980	
5,900.0	5,737.2	7,780.4	6,644.1	25.5	37.5	116.95	355.2	-1,101.6	909.2	854.5	54.64	16.639	
5,905.5	5,742.6	7,780.7	6,644.1	25.5	37.5	115.46	355.2	-1,101.9	903.7	848.4	55.32	16.336	
6,000.0	5,837.1	7,783.7	6,644.1	25.6	37.5	87.78	355.2	-1,104.9	809.4	746.6	62.82	12.885	
6,003.9	5,841.0	7,783.8	6,644.1	25.6	37.5	86.67	355.2	-1,105.0	805.5	742.6	62.90	12.807	
6,051.8	5,888.9	7,784.1	6,644.1	25.7	37.6	-0.88	355.2	-1,105.3	757.8	726.6	31.21	24.279	
6,081.8	5,918.9	7,784.0	6,644.1	25.7	37.6	-0.84	355.2	-1,105.2	727.9	696.6	31.25	23.292	
6,100.0	5,937.1	7,783.8	6,644.1	25.7	37.5	-106.91	355.2	-1,105.0	709.8	651.0	58.75	12.082	
6,102.3	5,939.4	7,783.7	6,644.1	25.7	37.5	-108.80	355.2	-1,104.9	707.4	649.4	58.08	12.181	
6,150.0	5,987.0	7,780.7	6,644.1	25.7	37.5	-135.61	355.2	-1,101.9	660.1	615.2	44.83	14.723	
6,200.0	6,036.5	7,774.2	6,644.2	25.7	37.3	-148.37	355.2	-1,095.4	610.8	573.3	37.44	16.313	
6,200.8	6,037.3	7,774.0	6,644.2	25.7	37.3	-148.50	355.2	-1,095.2	610.0	572.6	37.37	16.325	
6,250.0	6,085.5	7,764.2	6,644.2	25.7	37.0	-154.63	355.2	-1,085.4	562.0	528.1	33.95	16.558	
6,299.2	6,133.0	7,751.0	6,644.2	25.6	36.7	-158.01	355.2	-1,072.2	515.0	482.9	32.02	16.085	
6,300.0	6,133.7	7,750.8	6,644.2	25.6	36.7	-158.05	355.2	-1,072.0	514.2	482.2	31.99	16.074	
6,350.0	6,180.9	7,734.1	6,644.2	25.5	36.3	-159.98	355.2	-1,055.3	467.5	436.8	30.68	15.239	
6,397.6	6,224.6	7,715.2	6,644.2	25.4	35.8	-160.97	355.2	-1,036.4	424.2	394.5	29.70	14.284	
6,400.0	6,226.7	7,714.1	6,644.2	25.4	35.8	-161.00	355.2	-1,035.3	422.1	392.4	29.65	14.234	
6,450.0	6,271.1	7,691.0	6,644.3	25.2	35.2	-161.39	355.2	-1,012.2	378.3	349.5	28.79	13.141	
6,496.0	6,310.4	7,667.1	6,644.3	25.1	34.6	-161.29	355.2	-988.3	339.6	311.5	28.09	12.089	
6,500.0	6,313.7	7,664.9	6,644.3	25.1	34.5	-161.26	355.2	-986.1	336.3	308.3	28.03	11.998	
6,550.0	6,354.4	7,635.8	6,644.3	25.0	33.8	-160.67	355.2	-957.0	296.4	269.0	27.40	10.819	
6,594.5	6,388.9	7,607.7	6,644.4	24.9	33.1	-159.75	355.2	-928.9	262.9	235.9	26.98	9.744	
6,600.0	6,393.0	7,604.0	6,644.4	24.9	33.0	-159.61	355.2	-925.2	258.9	231.9	26.94	9.609	
6,650.0	6,429.3	7,569.6	6,644.4	24.8	32.2	-158.02	355.2	-890.8	223.8	197.1	26.75	8.368	
6,692.9	6,458.5	7,538.1	6,644.4	24.7	31.4	-156.17	355.2	-859.3	196.0	169.1	26.89	7.289	
6,700.0	6,463.1	7,532.7	6,644.5	24.7	31.3	-155.82	355.2	-853.9	191.6	164.7	26.95	7.110	
6,750.0	6,494.3	7,493.6	6,644.5	24.7	30.3	-152.85	355.2	-814.8	162.5	134.8	27.71	5.864	
6,791.3	6,517.9	7,459.7	6,644.5	24.7	29.5	-149.70	355.2	-780.9	141.0	112.1	28.90	4.879	
6,800.0	6,522.6	7,452.4	6,644.6	24.7	29.3	-148.94	355.2	-773.6	136.8	107.6	29.22	4.682	
6,850.0	6,548.0	7,409.3	6,644.6	24.7	28.3	-143.89	355.2	-730.5	114.7	83.2	31.56	3.635	
6,889.7	6,566.0	7,373.8	6,644.7	24.8	27.5	-138.93	355.2	-695.0	100.1	66.1	34.04	2.940	
6,900.0	6,570.4	7,364.5	6,644.7	24.9	27.3	-137.51	355.2	-685.7	96.7	62.0	34.74	2.784	
6,950.0	6,589.5	7,318.3	6,644.7	25.1	26.2	-129.86	355.2	-639.5	83.0	44.5	38.43	2.159	
6,988.2	6,602.0	7,282.2	6,644.8	25.3	25.4	-123.40	355.2	-603.4	75.3	34.1	41.23	1.827	
7,000.0	6,605.4	7,270.9	6,644.8	25.3	25.2	-121.36	355.2	-592.1	73.4	31.4	42.02	1.747	
7,050.0	6,618.0	7,222.5	6,644.8	25.6	24.1	-112.96	355.2	-543.7	67.5	22.7	44.80	1.507	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,086.6	6,625.0	7,186.6	6,644.9	25.9	23.3	-107.57	355.2	-507.8	65.1	19.0	46.09	1.412	Level 3
7,100.0	6,627.1	7,173.4	6,644.9	26.0	23.1	-105.86	355.2	-494.6	64.5	18.0	46.40	1.389	Level 3
7,150.0	6,632.8	7,123.7	6,645.0	26.5	22.1	-101.07	355.2	-444.9	63.1	16.1	46.98	1.344	Level 3
7,185.0	6,634.7	7,088.6	6,645.0	26.8	21.4	-99.36	355.2	-409.8	62.8	15.8	46.99	1.336	Level 3
7,200.0	6,635.0	7,073.4	6,644.6	27.0	21.1	-98.80	355.2	-394.6	62.7	15.7	46.96	1.335	Level 3
7,215.9	6,635.0	7,057.3	6,643.9	27.1	20.8	-98.19	355.2	-378.5	62.6	15.7	46.93	1.334	Level 3
7,283.4	6,634.1	6,989.5	6,637.0	27.9	19.5	-92.61	355.2	-311.1	62.0	14.9	47.11	1.316	Level 3
7,300.0	6,633.9	6,973.1	6,634.3	28.1	19.2	-90.36	355.2	-294.9	62.0	14.8	47.15	1.314	Level 3
7,302.5	6,633.9	6,970.6	6,633.9	28.2	19.2	-90.00	355.2	-292.5	61.9	14.8	47.16	1.314	Level 3, SF
7,381.9	6,632.9	6,894.0	6,616.4	29.3	18.0	-75.08	355.2	-217.9	64.3	18.0	46.24	1.390	Level 3
7,400.0	6,632.6	6,877.0	6,611.5	29.5	17.7	-71.08	355.2	-201.7	65.8	20.2	45.58	1.444	Level 3
7,480.3	6,631.6	6,805.0	6,586.3	30.8	16.8	-53.68	355.2	-134.2	79.2	38.3	40.87	1.938	
7,500.0	6,631.4	6,788.2	6,579.5	31.1	16.6	-49.88	355.2	-118.8	84.3	44.8	39.47	2.135	
7,578.7	6,630.4	6,724.4	6,550.3	32.5	15.9	-37.52	355.2	-62.1	111.2	76.8	34.33	3.239	
7,600.0	6,630.1	6,708.1	6,542.0	32.9	15.8	-34.92	355.2	-48.1	120.1	86.9	33.16	3.621	
7,677.1	6,629.1	6,650.0	6,510.0	34.3	15.5	-27.28	355.2	0.4	157.2	127.5	29.73	5.287	
7,700.0	6,628.8	6,637.3	6,502.5	34.8	15.5	-25.91	355.2	10.6	169.4	140.2	29.19	5.805	
7,775.6	6,627.8	6,589.7	6,472.8	36.3	15.4	-21.56	355.2	47.8	213.4	185.9	27.46	7.771	
7,800.0	6,627.5	6,575.3	6,463.3	36.8	15.4	-20.46	355.2	58.6	228.6	201.5	27.06	8.447	
7,874.0	6,626.6	6,534.8	6,435.5	38.4	15.4	-17.75	355.2	88.1	277.2	251.0	26.22	10.572	
7,900.0	6,626.3	6,521.5	6,426.0	38.9	15.4	-16.98	355.2	97.4	295.0	269.0	26.02	11.340	
7,972.4	6,625.3	6,487.0	6,400.6	40.5	15.4	-15.20	355.2	120.7	346.8	321.1	25.67	13.511	
8,000.0	6,625.0	6,474.7	6,391.3	41.1	15.4	-14.64	355.2	128.7	367.1	341.5	25.59	14.346	
8,070.8	6,624.1	6,450.0	6,372.2	42.7	15.4	-13.60	355.2	144.4	420.9	395.3	25.62	16.432	
8,100.0	6,623.7	6,434.1	6,359.5	43.4	15.4	-12.99	355.2	154.1	443.6	418.1	25.53	17.378	
8,169.3	6,622.8	6,400.0	6,331.8	45.0	15.4	-11.82	355.2	173.9	498.8	473.3	25.46	19.589	
8,200.0	6,622.4	6,400.0	6,331.8	45.7	15.4	-11.82	355.2	173.9	523.5	497.8	25.71	20.366	
8,267.7	6,621.6	6,377.2	6,312.8	47.4	15.4	-11.13	355.2	186.5	579.3	553.4	25.88	22.386	
8,300.0	6,621.1	6,367.6	6,304.6	48.1	15.5	-10.86	355.2	191.5	606.3	580.3	25.99	23.331	
8,366.1	6,620.3	6,350.0	6,289.6	49.7	15.5	-10.39	355.2	200.6	662.3	636.1	26.26	25.225	
8,400.0	6,619.9	6,350.0	6,289.6	50.6	15.5	-10.39	355.2	200.6	691.5	665.0	26.52	26.072	
8,464.5	6,619.0	6,324.3	6,267.2	52.2	15.5	-9.76	355.2	213.1	747.3	720.6	26.69	28.001	
8,500.0	6,618.6	6,316.1	6,259.9	53.0	15.5	-9.57	355.2	217.0	778.4	751.5	26.86	28.976	
8,563.0	6,617.8	6,300.0	6,245.5	54.6	15.5	-9.22	355.2	224.2	834.0	806.8	27.16	30.705	
8,600.0	6,617.3	6,300.0	6,245.5	55.5	15.5	-9.22	355.2	224.2	866.9	839.5	27.45	31.584	
8,661.4	6,616.5	6,282.6	6,229.9	57.1	15.5	-8.86	355.2	231.7	921.9	894.2	27.73	33.250	
8,700.0	6,616.0	6,275.5	6,223.4	58.1	15.5	-8.72	355.2	234.7	956.7	928.8	27.95	34.234	
8,759.8	6,615.2	6,265.0	6,213.8	59.6	15.5	-8.52	355.2	239.0	1,011.0	982.7	28.30	35.728	
8,800.0	6,614.7	6,250.0	6,199.9	60.6	15.5	-8.25	355.2	244.8	1,047.8	1,019.3	28.45	36.825	
8,858.2	6,614.0	6,250.0	6,199.9	62.1	15.5	-8.25	355.2	244.8	1,101.1	1,072.2	28.90	38.097	
8,900.0	6,613.4	6,250.0	6,199.9	63.2	15.5	-8.25	355.2	244.8	1,139.6	1,110.4	29.23	38.994	
8,956.7	6,612.7	6,250.0	6,199.9	64.7	15.5	-8.25	355.2	244.8	1,192.3	1,162.6	29.67	40.189	
9,000.0	6,612.2	6,228.8	6,180.2	65.8	15.5	-7.89	355.2	252.5	1,232.3	1,202.5	29.79	41.372	
9,055.1	6,611.5	6,221.6	6,173.5	67.3	15.5	-7.78	355.2	255.0	1,283.6	1,253.5	30.14	42.587	
9,100.0	6,610.9	6,200.0	6,153.0	68.4	15.5	-7.45	355.2	262.1	1,325.9	1,295.7	30.29	43.781	
9,153.5	6,610.2	6,200.0	6,153.0	69.8	15.5	-7.45	355.2	262.1	1,376.0	1,345.3	30.70	44.825	
9,200.0	6,609.6	6,200.0	6,153.0	71.1	15.5	-7.45	355.2	262.1	1,419.7	1,388.6	31.05	45.715	
9,251.9	6,608.9	6,200.0	6,153.0	72.4	15.5	-7.45	355.2	262.1	1,468.7	1,437.2	31.46	46.691	
9,300.0	6,608.3	6,200.0	6,153.0	73.7	15.5	-7.45	355.2	262.1	1,514.2	1,482.4	31.83	47.576	
9,350.4	6,607.7	6,200.0	6,153.0	75.0	15.5	-7.45	355.2	262.1	1,562.1	1,529.9	32.22	48.486	
9,400.0	6,607.0	6,200.0	6,153.0	76.4	15.5	-7.45	355.2	262.1	1,609.4	1,576.8	32.60	49.366	
9,448.8	6,606.4	6,179.5	6,133.5	77.7	15.5	-7.16	355.2	268.2	1,655.7	1,622.9	32.79	50.499	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.7	6,175.0	6,129.2	79.0	15.5	-7.10	355.2	269.5	1,704.5	1,671.4	33.14	51.435	
9,547.2	6,605.1	6,171.0	6,125.3	80.3	15.4	-7.04	355.2	270.6	1,749.7	1,716.3	33.47	52.280	
9,600.0	6,604.5	6,150.0	6,105.1	81.7	15.4	-6.77	355.2	276.1	1,800.6	1,766.9	33.69	53.444	
9,645.6	6,603.9	6,150.0	6,105.1	82.9	15.4	-6.77	355.2	276.1	1,844.3	1,810.2	34.04	54.177	
9,700.0	6,603.2	6,150.0	6,105.1	84.4	15.4	-6.77	355.2	276.1	1,896.4	1,862.0	34.46	55.033	
9,744.1	6,602.6	6,150.0	6,105.1	85.6	15.4	-6.77	355.2	276.1	1,938.8	1,904.0	34.80	55.714	
9,800.0	6,601.9	6,150.0	6,105.1	87.1	15.4	-6.77	355.2	276.1	1,992.7	1,957.5	35.23	56.562	
9,842.5	6,601.3	6,150.0	6,105.1	88.2	15.4	-6.77	355.2	276.1	2,033.8	1,998.2	35.56	57.193	
9,900.0	6,600.6	6,150.0	6,105.1	89.8	15.4	-6.77	355.2	276.1	2,089.4	2,053.3	36.00	58.032	
9,940.9	6,600.1	6,150.0	6,105.1	90.9	15.4	-6.77	355.2	276.1	2,129.0	2,092.7	36.32	58.617	
10,000.0	6,599.3	6,150.0	6,105.1	92.5	15.4	-6.77	355.2	276.1	2,186.3	2,149.5	36.78	59.446	
10,039.3	6,598.8	6,150.0	6,105.1	93.5	15.4	-6.77	355.2	276.1	2,224.5	2,187.4	37.08	59.987	
10,100.0	6,598.0	6,150.0	6,105.1	95.2	15.4	-6.77	355.2	276.1	2,283.5	2,245.9	37.55	60.807	
10,137.8	6,597.5	6,150.0	6,105.1	96.2	15.4	-6.77	355.2	276.1	2,320.3	2,282.4	37.85	61.307	
10,200.0	6,596.7	6,127.7	6,083.3	97.9	15.4	-6.50	355.2	281.2	2,380.5	2,342.3	38.12	62.446	
10,236.2	6,596.3	6,125.8	6,081.5	98.9	15.4	-6.48	355.2	281.6	2,415.7	2,377.3	38.38	62.937	
10,300.0	6,595.4	6,122.5	6,078.3	100.6	15.4	-6.45	355.2	282.3	2,477.9	2,439.0	38.85	63.785	
10,334.6	6,595.0	6,120.8	6,076.7	101.6	15.4	-6.43	355.2	282.7	2,511.6	2,472.5	39.10	64.237	
10,400.0	6,594.2	6,100.0	6,056.2	103.4	15.4	-6.20	355.2	286.7	2,575.7	2,536.3	39.42	65.338	
10,433.0	6,593.7	6,100.0	6,056.2	104.3	15.4	-6.20	355.2	286.7	2,607.9	2,568.3	39.68	65.731	
10,500.0	6,592.9	6,100.0	6,056.2	106.1	15.4	-6.20	355.2	286.7	2,673.3	2,633.1	40.19	66.513	
10,531.5	6,592.5	6,100.0	6,056.2	106.9	15.4	-6.20	355.2	286.7	2,704.0	2,663.6	40.43	66.874	
10,600.0	6,591.6	6,100.0	6,056.2	108.8	15.4	-6.20	355.2	286.7	2,771.0	2,730.1	40.96	67.647	
10,629.9	6,591.2	6,100.0	6,056.2	109.6	15.4	-6.20	355.2	286.7	2,800.3	2,759.1	41.19	67.978	
10,700.0	6,590.3	6,100.0	6,056.2	111.6	15.4	-6.20	355.2	286.7	2,869.0	2,827.2	41.74	68.742	
10,728.3	6,589.9	6,100.0	6,056.2	112.3	15.4	-6.20	355.2	286.7	2,896.7	2,854.8	41.95	69.045	
10,800.0	6,589.0	6,100.0	6,056.2	114.3	15.4	-6.20	355.2	286.7	2,967.0	2,924.5	42.51	69.798	
10,826.7	6,588.7	6,100.0	6,056.2	115.0	15.4	-6.20	355.2	286.7	2,993.2	2,950.5	42.72	70.075	
10,900.0	6,587.7	6,100.0	6,056.2	117.1	15.4	-6.20	355.2	286.7	3,065.2	3,021.9	43.28	70.819	
10,925.2	6,587.4	6,100.0	6,056.2	117.7	15.4	-6.20	355.2	286.7	3,089.9	3,046.4	43.48	71.070	
11,000.0	6,586.4	6,100.0	6,056.2	119.8	15.4	-6.20	355.2	286.7	3,163.5	3,119.4	44.06	71.805	
11,023.6	6,586.1	6,100.0	6,056.2	120.4	15.4	-6.20	355.2	286.7	3,186.7	3,142.4	44.24	72.032	
11,100.0	6,585.1	6,100.0	6,056.2	122.6	15.4	-6.20	355.2	286.7	3,261.9	3,217.0	44.83	72.758	
11,122.0	6,584.8	6,100.0	6,056.2	123.2	15.4	-6.20	355.2	286.7	3,283.5	3,238.5	45.00	72.963	
11,200.0	6,583.8	6,100.0	6,056.2	125.3	15.4	-6.20	355.2	286.7	3,360.3	3,314.7	45.61	73.679	
11,220.4	6,583.6	6,100.0	6,056.2	125.9	15.4	-6.20	355.2	286.7	3,380.5	3,334.7	45.77	73.864	
11,300.0	6,582.5	6,100.0	6,056.2	128.1	15.4	-6.20	355.2	286.7	3,458.9	3,412.5	46.38	74.571	
11,318.9	6,582.3	6,100.0	6,056.2	128.6	15.4	-6.20	355.2	286.7	3,477.5	3,431.0	46.53	74.736	
11,400.0	6,581.2	6,100.0	6,056.2	130.8	15.4	-6.20	355.2	286.7	3,557.6	3,510.4	47.16	75.434	
11,417.3	6,581.0	6,100.0	6,056.2	131.3	15.4	-6.20	355.2	286.7	3,574.6	3,527.3	47.30	75.581	
11,500.0	6,580.0	6,079.0	6,035.5	133.6	15.4	-5.98	355.2	290.1	3,655.9	3,608.2	47.73	76.601	
11,515.7	6,579.7	6,078.6	6,035.1	134.0	15.4	-5.98	355.2	290.2	3,671.4	3,623.6	47.84	76.737	
11,600.0	6,578.7	6,076.4	6,032.9	136.3	15.4	-5.96	355.2	290.5	3,754.6	3,706.1	48.48	77.453	
11,614.1	6,578.5	6,076.0	6,032.6	136.7	15.4	-5.95	355.2	290.5	3,768.6	3,720.0	48.58	77.572	
11,700.0	6,577.4	6,073.9	6,030.5	139.1	15.4	-5.93	355.2	290.8	3,853.4	3,804.2	49.23	78.279	
11,712.6	6,577.2	6,073.6	6,030.2	139.5	15.4	-5.93	355.2	290.9	3,865.8	3,816.5	49.32	78.381	
11,800.0	6,576.1	6,071.6	6,028.1	141.9	15.4	-5.91	355.2	291.2	3,952.2	3,902.2	49.98	79.080	
11,811.0	6,575.9	6,071.3	6,027.9	142.2	15.4	-5.91	355.2	291.2	3,963.1	3,913.0	50.06	79.167	
11,882.7	6,575.0	6,050.0	6,006.7	144.2	15.4	-5.71	355.2	293.8	4,034.2	3,983.8	50.41	80.029	
11,883.5	6,575.0	6,050.0	6,006.7	144.2	15.4	-5.71	355.2	293.8	4,035.0	3,984.6	50.41	80.040	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	155.492	
100.0	100.0	100.0	100.0	0.1	0.1	0.53	29.9	0.3	29.9	29.7	0.20	152.860	
196.8	196.8	196.8	196.8	0.3	0.3	0.53	29.9	0.3	29.9	29.3	0.63	47.377	
200.0	200.0	200.0	200.0	0.3	0.3	0.53	29.9	0.3	29.9	29.2	0.65	46.337	
295.3	295.3	295.3	295.3	0.5	0.5	0.53	29.9	0.3	29.9	28.8	1.07	27.848	
300.0	300.0	300.0	300.0	0.5	0.5	0.53	29.9	0.3	29.9	28.8	1.09	27.308	
393.7	393.7	393.7	393.7	0.8	0.8	0.53	29.9	0.3	29.9	28.4	1.52	19.719	
400.0	400.0	400.0	400.0	0.8	0.8	0.53	29.9	0.3	29.9	28.3	1.54	19.358	
492.1	492.1	492.1	492.1	1.0	1.0	0.53	29.9	0.3	29.9	27.9	1.96	15.264	
500.0	500.0	500.0	500.0	1.0	1.0	0.53	29.9	0.3	29.9	27.9	1.99	14.993	
590.5	590.5	590.5	590.5	1.2	1.2	0.53	29.9	0.3	29.9	27.5	2.40	12.451	
600.0	600.0	600.0	600.0	1.2	1.2	0.53	29.9	0.3	29.9	27.4	2.44	12.234	
689.0	689.0	689.0	689.0	1.4	1.4	0.53	29.9	0.3	29.9	27.0	2.84	10.513	
700.0	700.0	700.0	700.0	1.4	1.4	0.53	29.9	0.3	29.9	27.0	2.89	10.333	
787.4	787.4	787.4	787.4	1.6	1.6	0.53	29.9	0.3	29.9	26.6	3.29	9.098	
800.0	800.0	800.0	800.0	1.7	1.7	0.53	29.9	0.3	29.9	26.5	3.34	8.943	
885.8	885.8	885.8	885.8	1.9	1.9	0.53	29.9	0.3	29.9	26.2	3.73	8.018	
900.0	900.0	900.0	900.0	1.9	1.9	0.53	29.9	0.3	29.9	26.1	3.79	7.883	
984.2	984.2	984.2	984.2	2.1	2.1	0.53	29.9	0.3	29.9	25.7	4.17	7.167	
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	7.048	
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	6.480	
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	6.372	
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	5.913	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.53	29.9	0.3	29.9	24.8	5.14	5.815 CC	
1,279.5	1,279.5	1,279.2	1,279.2	2.7	2.7	-1.35	30.3	-0.7	30.4	24.9	5.49	5.528	
1,300.0	1,300.0	1,299.5	1,299.5	2.8	2.8	-2.42	30.6	-1.3	30.6	25.1	5.58	5.490	
1,377.9	1,377.9	1,377.0	1,376.9	3.0	3.0	-8.30	32.2	-4.7	32.5	26.6	5.92	5.492	
1,400.0	1,400.0	1,398.8	1,398.7	3.0	3.0	-10.38	32.8	-6.0	33.3	27.3	6.02	5.538	
1,476.4	1,476.4	1,474.5	1,474.0	3.2	3.2	58.10	35.3	-11.7	36.7	30.4	6.35	5.784	
1,500.0	1,500.0	1,497.8	1,497.3	3.2	3.2	56.37	36.3	-13.8	37.9	31.5	6.45	5.879	
1,574.8	1,574.7	1,571.7	1,570.7	3.4	3.4	51.75	39.9	-21.6	42.1	35.3	6.78	6.208	
1,600.0	1,599.8	1,596.6	1,595.3	3.4	3.5	50.46	41.3	-24.7	43.6	36.7	6.89	6.328	
1,673.2	1,672.8	1,668.7	1,666.6	3.6	3.7	47.38	45.8	-34.5	48.2	40.9	7.21	6.677	
1,700.0	1,699.5	1,695.0	1,692.6	3.7	3.7	46.46	47.6	-38.5	49.9	42.6	7.33	6.809	
1,771.6	1,770.6	1,765.5	1,761.8	3.8	3.9	44.46	53.0	-50.3	54.8	47.1	7.66	7.148	
1,800.0	1,798.7	1,793.3	1,789.1	3.9	4.0	43.84	55.3	-55.4	56.7	49.0	7.79	7.285	
1,870.1	1,868.0	1,862.0	1,856.1	4.1	4.3	42.61	61.5	-69.0	61.8	53.6	8.13	7.597	
1,900.0	1,897.5	1,891.3	1,884.6	4.2	4.4	42.20	64.3	-75.2	64.0	55.7	8.27	7.731	
1,968.5	1,964.8	1,958.3	1,949.5	4.4	4.6	41.51	71.3	-90.5	69.1	60.5	8.63	8.006	
2,000.0	1,995.6	1,989.1	1,979.1	4.5	4.8	41.28	74.7	-98.0	71.5	62.7	8.79	8.133	
2,066.9	2,060.9	2,054.3	2,041.7	4.7	5.1	40.96	82.3	-114.8	76.7	67.5	9.17	8.368	
2,100.0	2,093.1	2,087.0	2,073.0	4.8	5.2	40.90	86.4	-123.6	79.2	69.9	9.35	8.472	
2,165.3	2,156.3	2,152.2	2,135.2	5.1	5.5	41.28	94.4	-141.3	83.5	73.7	9.77	8.548	
2,200.0	2,189.6	2,186.8	2,168.2	5.2	5.7	41.74	98.7	-150.7	85.3	75.3	9.99	8.533	
2,263.8	2,250.7	2,250.5	2,229.0	5.5	6.0	43.03	106.6	-167.9	87.8	77.4	10.46	8.392	
2,280.0	2,266.2	2,266.8	2,244.5	5.6	6.1	43.45	108.6	-172.3	88.3	77.7	10.59	8.339	
2,300.0	2,285.3	2,286.7	2,263.6	5.7	6.2	43.99	111.0	-177.7	88.9	78.1	10.76	8.262	
2,362.2	2,344.6	2,348.8	2,322.9	6.0	6.6	45.64	118.7	-194.6	90.7	79.4	11.30	8.027	
2,400.0	2,380.6	2,386.6	2,358.9	6.2	6.8	46.61	123.4	-204.8	91.8	80.2	11.64	7.889	
2,460.6	2,438.4	2,447.1	2,416.7	6.5	7.1	48.11	130.9	-221.2	93.7	81.5	12.21	7.674	
2,500.0	2,475.9	2,486.5	2,454.2	6.7	7.3	49.05	135.7	-231.9	94.9	82.3	12.58	7.543	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,545.4	2,510.5	7.0	7.7	50.42	143.0	-247.9	96.8	83.7	13.17	7.351	
2,600.0	2,571.2	2,586.3	2,549.6	7.2	7.9	51.34	148.1	-259.0	98.2	84.6	13.59	7.226	
2,657.5	2,626.0	2,643.7	2,604.4	7.5	8.2	52.59	155.2	-274.5	100.1	86.0	14.19	7.056	
2,700.0	2,666.6	2,686.2	2,644.9	7.8	8.5	53.48	160.4	-286.0	101.6	87.0	14.65	6.939	
2,755.9	2,719.8	2,742.0	2,698.2	8.1	8.8	54.61	167.3	-301.2	103.6	88.3	15.26	6.790	
2,800.0	2,761.9	2,786.1	2,740.2	8.3	9.1	55.47	172.8	-313.1	105.2	89.4	15.74	6.680	
2,854.3	2,813.7	2,840.3	2,792.0	8.7	9.4	56.50	179.5	-327.8	107.2	90.8	16.36	6.551	
2,900.0	2,857.2	2,885.9	2,835.6	8.9	9.7	57.34	185.1	-340.2	108.9	92.0	16.88	6.449	
2,952.7	2,907.5	2,938.6	2,885.9	9.2	10.0	58.27	191.6	-354.5	110.8	93.3	17.49	6.336	
3,000.0	2,952.5	2,985.8	2,930.9	9.5	10.3	59.08	197.4	-367.3	112.6	94.6	18.04	6.242	
3,051.2	3,001.3	3,036.9	2,979.7	9.8	10.6	59.92	203.8	-381.1	114.6	96.0	18.65	6.144	
3,100.0	3,047.8	3,085.7	3,026.3	10.1	10.9	60.70	209.8	-394.3	116.5	97.3	19.23	6.057	
3,149.6	3,095.1	3,135.2	3,073.5	10.4	11.2	61.47	215.9	-407.8	118.5	98.6	19.83	5.973	
3,200.0	3,143.2	3,185.6	3,121.6	10.7	11.5	62.22	222.1	-421.4	120.5	100.0	20.45	5.893	
3,248.0	3,188.9	3,233.5	3,167.4	11.0	11.7	62.92	228.1	-434.4	122.4	101.4	21.03	5.820	
3,300.0	3,238.5	3,285.4	3,216.9	11.3	12.1	63.64	234.5	-448.5	124.5	102.9	21.67	5.746	
3,346.4	3,282.8	3,331.8	3,261.2	11.6	12.3	64.27	240.2	-461.1	126.4	104.2	22.25	5.683	
3,400.0	3,333.8	3,385.3	3,312.3	11.9	12.7	64.97	246.8	-475.6	128.6	105.7	22.91	5.614	
3,444.9	3,376.6	3,430.1	3,355.0	12.2	12.9	65.54	252.3	-487.7	130.5	107.0	23.48	5.559	
3,500.0	3,429.1	3,485.2	3,407.6	12.6	13.3	66.22	259.1	-502.6	132.8	108.7	24.17	5.496	
3,543.3	3,470.4	3,528.4	3,448.9	12.8	13.6	66.74	264.5	-514.4	134.7	109.9	24.71	5.449	
3,600.0	3,524.4	3,585.0	3,502.9	13.2	13.9	67.39	271.5	-529.7	137.1	111.6	25.43	5.390	
3,641.7	3,564.2	3,626.7	3,542.7	13.4	14.2	67.86	276.6	-541.0	138.9	112.9	25.96	5.349	
3,700.0	3,619.8	3,684.9	3,598.3	13.8	14.5	68.49	283.8	-556.8	141.4	114.7	26.70	5.295	
3,740.1	3,658.0	3,725.0	3,636.6	14.0	14.8	68.92	288.8	-567.6	143.1	115.9	27.21	5.259	
3,800.0	3,715.1	3,784.8	3,693.6	14.4	15.1	69.53	296.2	-583.9	145.7	117.7	27.98	5.209	
3,838.6	3,751.8	3,823.3	3,730.4	14.7	15.4	69.91	300.9	-594.3	147.4	118.9	28.47	5.178	
3,900.0	3,810.4	3,884.7	3,788.9	15.0	15.8	70.51	308.5	-610.9	150.1	120.8	29.26	5.131	
3,937.0	3,845.7	3,921.6	3,824.2	15.3	16.0	70.85	313.1	-620.9	151.7	122.0	29.73	5.104	
4,000.0	3,905.7	3,984.5	3,884.3	15.7	16.4	71.43	320.9	-638.0	154.5	124.0	30.54	5.060	
4,035.4	3,939.5	4,019.9	3,918.1	15.9	16.6	71.74	325.2	-647.6	156.1	125.1	31.00	5.036	
4,100.0	4,001.0	4,084.4	3,979.6	16.3	17.0	72.29	333.2	-665.1	159.0	127.2	31.83	4.996	
4,133.8	4,033.3	4,118.2	4,011.9	16.5	17.2	72.58	337.4	-674.2	160.5	128.3	32.27	4.975	
4,200.0	4,096.3	4,184.3	4,075.0	16.9	17.6	73.12	345.5	-692.1	163.5	130.4	33.12	4.937	
4,232.3	4,127.1	4,216.5	4,105.7	17.1	17.8	73.37	349.5	-700.9	165.0	131.4	33.54	4.919	
4,300.0	4,191.7	4,284.1	4,170.3	17.6	18.2	73.89	357.9	-719.2	168.0	133.6	34.41	4.883	
4,330.7	4,220.9	4,314.8	4,199.6	17.8	18.4	74.12	361.7	-727.5	169.4	134.6	34.81	4.868	
4,400.0	4,287.0	4,384.0	4,265.6	18.2	18.9	74.63	370.2	-746.3	172.6	136.9	35.71	4.834	
4,429.1	4,314.7	4,413.1	4,293.4	18.4	19.0	74.83	373.8	-754.2	173.9	137.9	36.08	4.821	
4,500.0	4,382.3	4,483.9	4,361.0	18.8	19.5	75.33	382.6	-773.4	177.2	140.2	37.00	4.789	
4,527.5	4,408.6	4,511.4	4,387.2	19.0	19.7	75.51	386.0	-780.8	178.5	141.1	37.36	4.777	
4,600.0	4,477.6	4,583.8	4,456.3	19.5	20.1	75.99	394.9	-800.4	181.8	143.5	38.30	4.748	
4,626.0	4,502.4	4,609.7	4,481.1	19.6	20.3	76.15	398.1	-807.5	183.0	144.4	38.63	4.737	
4,700.0	4,572.9	4,683.6	4,551.6	20.1	20.7	76.62	407.3	-827.5	186.5	146.9	39.59	4.709	
4,724.4	4,596.2	4,708.0	4,574.9	20.3	20.9	76.77	410.3	-834.1	187.6	147.7	39.91	4.700	
4,800.0	4,668.3	4,783.5	4,647.0	20.7	21.4	77.22	419.6	-854.6	191.1	150.2	40.89	4.674	
4,822.8	4,690.0	4,806.3	4,668.7	20.9	21.5	77.35	422.4	-860.8	192.2	151.0	41.18	4.666	
4,900.0	4,763.6	4,883.4	4,742.3	21.4	22.0	77.79	431.9	-881.7	195.8	153.6	42.19	4.641	
4,921.2	4,783.8	4,904.6	4,762.6	21.5	22.1	77.90	434.6	-887.4	196.8	154.3	42.46	4.635	
5,000.0	4,858.9	4,983.3	4,837.7	22.0	22.6	78.33	444.3	-908.7	200.5	157.0	43.48	4.611	
5,019.7	4,877.7	5,002.9	4,856.4	22.1	22.7	78.43	446.7	-914.1	201.4	157.7	43.74	4.605	
5,100.0	4,954.2	5,083.1	4,933.0	22.6	23.2	78.85	456.6	-935.8	205.2	160.4	44.78	4.583	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	5,101.2	4,950.2	22.8	23.3	78.94	458.9	-940.7	206.1	161.0	45.01	4.578	
5,171.8	5,022.7	5,154.8	5,001.4	23.1	23.7	79.21	465.5	-955.2	208.6	162.9	45.71	4.564	
5,200.0	5,049.6	5,183.0	5,028.3	23.3	23.9	79.33	469.0	-962.9	210.0	163.9	46.05	4.559	
5,216.5	5,065.4	5,199.5	5,044.1	23.3	24.0	79.37	471.0	-967.4	210.8	164.6	46.23	4.560	
5,300.0	5,145.7	5,282.8	5,123.6	23.7	24.5	79.20	481.3	-989.9	215.2	168.1	47.08	4.572	
5,314.9	5,160.1	5,298.1	5,138.2	23.8	24.6	79.10	483.2	-994.1	216.0	168.8	47.20	4.577	
5,400.0	5,242.7	5,385.3	5,222.0	24.1	25.0	78.58	493.3	-1,016.2	220.5	172.7	47.84	4.609	
5,413.4	5,255.7	5,399.1	5,235.2	24.2	25.0	78.50	494.8	-1,019.5	221.2	173.3	47.94	4.614	
5,500.0	5,340.5	5,488.1	5,321.5	24.5	25.4	77.96	503.8	-1,039.3	225.3	176.8	48.50	4.645	
5,511.8	5,352.1	5,500.2	5,333.4	24.5	25.5	77.89	504.9	-1,041.8	225.8	177.3	48.57	4.649	
5,600.0	5,439.0	5,591.0	5,422.1	24.8	25.8	77.34	512.8	-1,059.1	229.5	180.5	49.06	4.678	
5,610.2	5,449.1	5,601.5	5,432.5	24.8	25.8	77.28	513.7	-1,061.0	229.9	180.8	49.11	4.682	
5,700.0	5,538.0	5,694.1	5,523.6	25.1	26.1	76.72	520.4	-1,075.7	233.2	183.7	49.52	4.709	
5,708.6	5,546.6	5,703.0	5,532.4	25.1	26.1	76.66	521.0	-1,077.0	233.5	183.9	49.56	4.712	
5,800.0	5,637.4	5,797.3	5,625.8	25.3	26.4	76.08	526.4	-1,088.9	236.3	186.4	49.88	4.737	
5,807.1	5,644.5	5,804.6	5,633.0	25.3	26.4	76.03	526.8	-1,089.8	236.5	186.6	49.90	4.739	
5,900.0	5,737.2	5,900.7	5,728.6	25.5	26.6	75.42	530.9	-1,098.9	238.8	188.7	50.14	4.763	
5,905.5	5,742.6	5,906.4	5,734.3	25.5	26.6	75.39	531.1	-1,099.3	239.0	188.8	50.15	4.765	
6,000.0	5,837.1	6,004.3	5,831.9	25.6	26.8	74.75	533.9	-1,105.4	240.8	190.5	50.31	4.787	
6,003.9	5,841.0	6,008.3	5,835.9	25.6	26.8	74.72	534.0	-1,105.6	240.9	190.6	50.31	4.788	
6,051.8	5,888.9	6,058.0	5,885.5	25.7	26.9	-0.74	534.9	-1,107.4	241.6	208.3	33.32	7.251	
6,081.8	5,918.9	6,089.1	5,916.6	25.7	26.9	-0.92	535.2	-1,108.2	242.0	208.5	33.47	7.228	
6,100.0	5,937.1	6,107.9	5,935.5	25.7	26.9	-91.04	535.4	-1,108.5	242.1	191.7	50.40	4.804	
6,102.3	5,939.4	6,110.4	5,937.9	25.7	26.9	-91.06	535.4	-1,108.6	242.1	191.7	50.40	4.804	
6,150.0	5,987.0	6,159.4	5,987.0	25.7	27.0	-91.82	535.5	-1,108.8	242.3	192.0	50.30	4.818	
6,200.0	6,036.5	6,209.5	6,037.1	25.7	27.0	-93.21	535.5	-1,108.3	242.6	192.6	50.01	4.851	
6,200.8	6,037.3	6,210.3	6,037.9	25.7	27.0	-93.23	535.5	-1,108.2	242.6	192.6	50.00	4.851	
6,250.0	6,085.5	6,260.3	6,087.7	25.7	27.0	-94.66	535.5	-1,104.5	243.0	193.4	49.62	4.897	
6,299.2	6,133.0	6,310.8	6,137.6	25.6	27.0	-96.08	535.5	-1,097.2	243.6	194.4	49.17	4.954	
6,300.0	6,133.7	6,311.6	6,138.4	25.6	27.0	-96.10	535.5	-1,097.0	243.6	194.4	49.16	4.955	
6,350.0	6,180.9	6,363.3	6,188.9	25.5	26.9	-97.51	535.5	-1,085.8	244.3	195.7	48.65	5.022	
6,397.6	6,224.6	6,413.1	6,236.6	25.4	26.9	-98.81	535.5	-1,071.7	245.1	197.0	48.12	5.094	
6,400.0	6,226.7	6,415.5	6,238.9	25.4	26.9	-98.87	535.5	-1,070.9	245.2	197.1	48.09	5.098	
6,450.0	6,271.1	6,468.2	6,288.2	25.2	26.7	-100.20	535.5	-1,052.1	246.1	198.6	47.51	5.180	
6,496.0	6,310.4	6,517.2	6,332.5	25.1	26.6	-101.36	535.5	-1,031.5	247.1	200.1	46.97	5.260	
6,500.0	6,313.7	6,521.4	6,336.3	25.1	26.6	-101.46	535.5	-1,029.6	247.2	200.3	46.92	5.268	
6,550.0	6,354.4	6,575.0	6,383.0	25.0	26.5	-102.67	535.5	-1,003.3	248.3	201.9	46.35	5.356	
6,594.5	6,388.9	6,623.1	6,423.1	24.9	26.3	-103.68	535.5	-976.9	249.3	203.4	45.88	5.435	
6,600.0	6,393.0	6,629.1	6,428.0	24.9	26.3	-103.80	535.5	-973.4	249.5	203.6	45.82	5.444	
6,650.0	6,429.3	6,683.6	6,471.0	24.8	26.2	-104.86	535.5	-939.8	250.6	205.3	45.35	5.527	
6,692.9	6,458.5	6,730.7	6,505.9	24.7	26.1	-105.71	535.5	-908.3	251.7	206.6	45.02	5.590	
6,700.0	6,463.1	6,738.5	6,511.5	24.7	26.1	-105.84	535.5	-902.8	251.8	206.9	44.96	5.601	
6,750.0	6,494.3	6,793.8	6,549.4	24.7	26.0	-106.74	535.5	-862.5	253.0	208.3	44.69	5.661	
6,791.3	6,517.9	6,839.8	6,578.4	24.7	25.9	-107.41	535.5	-826.9	253.9	209.3	44.57	5.696	
6,800.0	6,522.6	6,849.5	6,584.3	24.7	25.9	-107.54	535.5	-819.1	254.1	209.5	44.55	5.703	
6,850.0	6,548.0	6,905.5	6,615.8	24.7	25.8	-108.25	535.5	-772.8	255.1	210.5	44.57	5.723	
6,889.7	6,566.0	6,950.3	6,638.4	24.8	25.9	-108.75	535.5	-734.2	255.8	211.1	44.71	5.721	
6,900.0	6,570.4	6,961.9	6,643.8	24.9	25.9	-108.87	535.5	-724.0	256.0	211.2	44.77	5.718	
6,950.0	6,589.5	7,018.4	6,668.0	25.1	26.0	-109.38	535.5	-672.8	256.8	211.6	45.16	5.686	
6,988.2	6,602.0	7,061.8	6,683.8	25.3	26.1	-109.71	535.5	-632.5	257.3	211.7	45.58	5.644	
7,000.0	6,605.4	7,075.2	6,688.1	25.3	26.1	-109.80	535.5	-619.7	257.4	211.7	45.73	5.628	
7,050.0	6,618.0	7,132.2	6,704.0	25.6	26.4	-110.10	535.5	-565.0	257.9	211.4	46.50	5.546	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,625.0	7,174.0	6,712.9	25.9	26.6	-110.26	535.5	-524.2	258.2	211.0	47.19	5.471	
7,100.0	6,627.1	7,189.3	6,715.6	26.0	26.7	-110.31	535.5	-509.1	258.2	210.8	47.46	5.442	
7,150.0	6,632.8	7,246.5	6,722.6	26.5	27.1	-110.41	535.5	-452.4	258.4	209.8	48.58	5.320	
7,185.0	6,634.7	7,286.6	6,724.8	26.8	27.4	-110.41	535.5	-412.4	258.4	209.0	49.46	5.225	
7,200.0	6,635.0	7,303.7	6,725.1	27.0	27.6	-110.40	535.5	-395.3	258.4	208.6	49.84	5.184	
7,215.9	6,635.0	7,321.5	6,725.0	27.1	27.7	-110.38	535.5	-377.5	258.4	208.1	50.27	5.139	
7,283.4	6,634.1	7,389.0	6,723.8	27.9	28.4	-110.32	535.5	-310.0	258.3	206.4	51.84	4.982	
7,300.0	6,633.9	7,405.6	6,723.5	28.1	28.6	-110.30	535.5	-293.4	258.2	206.0	52.24	4.944	
7,381.9	6,632.9	7,487.4	6,722.1	29.3	29.6	-110.23	535.5	-211.6	258.1	203.7	54.45	4.740	
7,400.0	6,632.6	7,505.6	6,721.8	29.5	29.9	-110.21	535.5	-193.4	258.1	203.1	54.95	4.697	
7,480.3	6,631.6	7,585.9	6,720.4	30.8	31.1	-110.14	535.5	-113.1	258.0	200.6	57.42	4.493	
7,500.0	6,631.4	7,605.6	6,720.1	31.1	31.4	-110.13	535.5	-93.4	257.9	199.9	58.03	4.445	
7,578.7	6,630.4	7,684.3	6,718.8	32.5	32.7	-110.06	535.5	-14.7	257.8	197.1	60.69	4.248	
7,600.0	6,630.1	7,705.6	6,718.4	32.9	33.1	-110.04	535.5	6.5	257.8	196.4	61.42	4.197	
7,677.1	6,629.1	7,782.7	6,717.1	34.3	34.5	-109.97	535.5	83.7	257.7	193.5	64.23	4.012	
7,700.0	6,628.8	7,805.6	6,716.7	34.8	34.9	-109.95	535.5	106.5	257.6	192.6	65.07	3.960	
7,775.6	6,627.8	7,881.1	6,715.4	36.3	36.4	-109.88	535.5	182.1	257.5	189.5	67.99	3.788	
7,800.0	6,627.5	7,905.6	6,715.0	36.8	36.9	-109.86	535.5	206.5	257.5	188.6	68.94	3.735	
7,874.0	6,626.6	7,979.6	6,713.7	38.4	38.5	-109.79	535.5	280.5	257.4	185.5	71.94	3.578	
7,900.0	6,626.3	8,005.6	6,713.3	38.9	39.0	-109.77	535.5	306.5	257.4	184.4	73.00	3.525	
7,972.4	6,625.3	8,078.0	6,712.1	40.5	40.6	-109.70	535.5	378.9	257.3	181.2	76.06	3.382	
8,000.0	6,625.0	8,105.6	6,711.6	41.1	41.2	-109.68	535.5	406.5	257.2	180.0	77.22	3.331	
8,070.8	6,624.1	8,176.4	6,710.4	42.7	42.8	-109.62	535.5	477.3	257.1	176.8	80.31	3.202	
8,100.0	6,623.7	8,205.6	6,709.9	43.4	43.5	-109.59	535.5	506.5	257.1	175.5	81.58	3.151	
8,169.3	6,622.8	8,274.8	6,708.7	45.0	45.1	-109.53	535.5	575.7	257.0	172.3	84.68	3.035	
8,200.0	6,622.4	8,305.6	6,708.2	45.7	45.8	-109.50	535.5	606.4	256.9	170.9	86.05	2.986	
8,267.7	6,621.6	8,373.3	6,707.0	47.4	47.4	-109.44	535.5	674.1	256.8	167.7	89.15	2.881	
8,300.0	6,621.1	8,405.6	6,706.5	48.1	48.2	-109.41	535.5	706.4	256.8	166.2	90.63	2.833	
8,366.1	6,620.3	8,471.7	6,705.3	49.7	49.8	-109.35	535.5	772.5	256.7	163.0	93.71	2.739	
8,400.0	6,619.9	8,505.6	6,704.8	50.6	50.6	-109.32	535.5	806.4	256.6	161.4	95.29	2.693	
8,464.5	6,619.0	8,570.1	6,703.7	52.2	52.2	-109.26	535.5	871.0	256.6	158.2	98.34	2.609	
8,500.0	6,618.6	8,605.6	6,703.0	53.0	53.1	-109.23	535.5	906.4	256.5	156.5	100.02	2.564	
8,563.0	6,617.8	8,668.5	6,702.0	54.6	54.6	-109.17	535.5	969.4	256.4	153.4	103.04	2.488	
8,600.0	6,617.3	8,705.6	6,701.3	55.5	55.5	-109.14	535.5	1,006.4	256.4	151.5	104.82	2.446	
8,661.4	6,616.5	8,767.0	6,700.3	57.1	57.1	-109.08	535.5	1,067.8	256.3	148.5	107.80	2.377	
8,700.0	6,616.0	8,805.6	6,699.6	58.1	58.1	-109.05	535.5	1,106.4	256.2	146.5	109.68	2.336	
8,759.8	6,615.2	8,865.4	6,698.6	59.6	59.6	-109.00	535.5	1,166.2	256.1	143.5	112.62	2.274	
8,800.0	6,614.7	8,905.6	6,697.9	60.6	60.6	-108.96	535.5	1,206.4	256.1	141.5	114.59	2.235	
8,858.2	6,614.0	8,963.8	6,696.9	62.1	62.1	-108.91	535.5	1,264.6	256.0	138.5	117.48	2.179	
8,900.0	6,613.4	9,005.6	6,696.2	63.2	63.2	-108.87	535.5	1,306.3	255.9	136.4	119.55	2.141	
8,956.7	6,612.7	9,062.2	6,695.2	64.7	64.7	-108.82	535.5	1,363.0	255.9	133.5	122.38	2.091	
9,000.0	6,612.2	9,105.6	6,694.5	65.8	65.8	-108.78	535.5	1,406.3	255.8	131.3	124.54	2.054	
9,055.1	6,611.5	9,160.7	6,693.6	67.3	67.2	-108.73	535.5	1,461.4	255.7	128.4	127.32	2.009	
9,100.0	6,610.9	9,205.6	6,692.8	68.4	68.4	-108.69	535.5	1,506.3	255.7	126.1	129.58	1.973	
9,153.5	6,610.2	9,259.1	6,691.9	69.8	69.8	-108.64	535.5	1,559.8	255.6	123.3	132.29	1.932	
9,200.0	6,609.6	9,305.6	6,691.1	71.1	71.0	-108.60	535.5	1,606.3	255.5	120.9	134.64	1.898	
9,251.9	6,608.9	9,357.5	6,690.2	72.4	72.4	-108.55	535.5	1,658.2	255.5	118.2	137.29	1.861	
9,300.0	6,608.3	9,405.6	6,689.4	73.7	73.7	-108.51	535.5	1,706.3	255.4	115.7	139.74	1.828	
9,350.4	6,607.7	9,455.9	6,688.5	75.0	75.0	-108.46	535.5	1,756.6	255.3	113.0	142.32	1.794	
9,400.0	6,607.0	9,505.6	6,687.6	76.4	76.3	-108.41	535.5	1,806.3	255.3	110.4	144.86	1.762	
9,448.8	6,606.4	9,554.4	6,686.8	77.7	77.6	-108.37	535.5	1,855.1	255.2	107.8	147.37	1.732	
9,500.0	6,605.7	9,605.6	6,685.9	79.0	79.0	-108.32	535.5	1,906.3	255.1	105.1	150.01	1.701	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.1	9,652.8	6,685.1	80.3	80.3	-108.28	535.5	1,953.5	255.1	102.6	152.45	1.673	
9,600.0	6,604.5	9,705.6	6,684.2	81.7	81.7	-108.23	535.5	2,006.2	255.0	99.8	155.18	1.643	
9,645.6	6,603.9	9,751.2	6,683.4	82.9	82.9	-108.19	535.5	2,051.9	254.9	97.4	157.55	1.618	
9,700.0	6,603.2	9,805.6	6,682.5	84.4	84.3	-108.14	535.5	2,106.2	254.9	94.5	160.38	1.589	
9,744.1	6,602.6	9,849.6	6,681.8	85.6	85.5	-108.10	535.5	2,150.3	254.8	92.1	162.68	1.566	
9,800.0	6,601.9	9,905.6	6,680.8	87.1	87.0	-108.05	535.5	2,206.2	254.7	89.1	165.59	1.538	
9,842.5	6,601.3	9,948.1	6,680.1	88.2	88.2	-108.01	535.5	2,248.7	254.7	86.9	167.82	1.518	
9,900.0	6,600.6	10,005.6	6,679.1	89.8	89.7	-107.96	535.5	2,306.2	254.6	83.8	170.82	1.490 Level 3	
9,940.9	6,600.1	10,046.5	6,678.4	90.9	90.8	-107.92	535.5	2,347.1	254.5	81.6	172.97	1.472 Level 3	
10,000.0	6,599.3	10,105.6	6,677.4	92.5	92.4	-107.87	535.5	2,406.2	254.5	78.4	176.07	1.445 Level 3	
10,039.3	6,598.8	10,144.9	6,676.7	93.5	93.5	-107.83	535.5	2,445.5	254.4	76.3	178.15	1.428 Level 3	
10,100.0	6,598.0	10,205.6	6,675.6	95.2	95.1	-107.77	535.5	2,506.2	254.3	73.0	181.34	1.403 Level 3	
10,137.8	6,597.5	10,243.3	6,675.0	96.2	96.2	-107.74	535.5	2,543.9	254.3	70.9	183.33	1.387 Level 3	
10,200.0	6,596.7	10,305.6	6,673.9	97.9	97.9	-107.68	535.5	2,606.1	254.2	67.6	186.62	1.362 Level 3	
10,236.2	6,596.3	10,341.8	6,673.3	98.9	98.8	-107.65	535.5	2,642.3	254.2	65.6	188.54	1.348 Level 3	
10,300.0	6,595.4	10,405.6	6,672.2	100.6	100.6	-107.59	535.5	2,706.1	254.1	62.2	191.92	1.324 Level 3	
10,334.6	6,595.0	10,440.2	6,671.6	101.6	101.5	-107.56	535.5	2,740.7	254.0	60.3	193.75	1.311 Level 3	
10,400.0	6,594.2	10,505.6	6,670.5	103.4	103.3	-107.50	535.5	2,806.1	253.9	56.7	197.23	1.288 Level 3	
10,433.0	6,593.7	10,538.6	6,669.9	104.3	104.2	-107.47	535.5	2,839.2	253.9	54.9	198.98	1.276 Level 3	
10,500.0	6,592.9	10,605.6	6,668.8	106.1	106.0	-107.41	535.5	2,906.1	253.8	51.3	202.55	1.253 Level 3	
10,531.5	6,592.5	10,637.0	6,668.2	106.9	106.9	-107.38	535.5	2,937.6	253.8	49.5	204.23	1.243 Level 2	
10,600.0	6,591.6	10,705.6	6,667.1	108.8	108.8	-107.31	535.5	3,006.1	253.7	45.8	207.88	1.220 Level 2	
10,629.9	6,591.2	10,735.5	6,666.6	109.6	109.6	-107.29	535.5	3,036.0	253.6	44.2	209.48	1.211 Level 2	
10,700.0	6,590.3	10,805.6	6,665.3	111.6	111.5	-107.22	535.5	3,106.1	253.6	40.3	213.23	1.189 Level 2	
10,728.3	6,589.9	10,833.9	6,664.9	112.3	112.3	-107.20	535.5	3,134.4	253.5	38.8	214.74	1.181 Level 2	
10,800.0	6,589.0	10,905.6	6,663.6	114.3	114.2	-107.13	535.5	3,206.1	253.4	34.8	218.58	1.159 Level 2	
10,826.7	6,588.7	10,932.3	6,663.2	115.0	115.0	-107.10	535.5	3,232.8	253.4	33.4	220.02	1.152 Level 2	
10,900.0	6,587.7	11,005.6	6,661.9	117.1	117.0	-107.04	535.5	3,306.0	253.3	29.4	223.95	1.131 Level 2	
10,925.2	6,587.4	11,030.7	6,661.5	117.7	117.7	-107.01	535.5	3,331.2	253.3	28.0	225.30	1.124 Level 2	
11,000.0	6,586.4	11,105.6	6,660.2	119.8	119.7	-106.94	535.5	3,406.0	253.2	23.9	229.33	1.104 Level 2	
11,023.6	6,586.1	11,129.2	6,659.8	120.4	120.4	-106.92	535.5	3,429.6	253.2	22.6	230.60	1.098 Level 2	
11,100.0	6,585.1	11,205.6	6,658.5	122.6	122.5	-106.85	535.5	3,506.0	253.1	18.3	234.72	1.078 Level 2	
11,122.0	6,584.8	11,227.6	6,658.1	123.2	123.1	-106.83	535.5	3,528.0	253.0	17.1	235.90	1.073 Level 2	
11,200.0	6,583.8	11,305.5	6,656.7	125.3	125.2	-106.76	535.5	3,606.0	252.9	12.8	240.11	1.053 Level 2	
11,220.4	6,583.6	11,326.0	6,656.4	125.9	125.8	-106.74	535.5	3,626.4	252.9	11.7	241.22	1.048 Level 2	
11,300.0	6,582.5	11,405.5	6,655.0	128.1	128.0	-106.66	535.5	3,706.0	252.8	7.3	245.52	1.030 Level 2	
11,318.9	6,582.3	11,424.4	6,654.7	128.6	128.5	-106.65	535.5	3,724.8	252.8	6.2	246.54	1.025 Level 2	
11,400.0	6,581.2	11,505.5	6,653.3	130.8	130.8	-106.57	535.5	3,806.0	252.7	1.8	250.93	1.007 Level 2	
11,417.3	6,581.0	11,522.8	6,653.0	131.3	131.2	-106.56	535.5	3,823.3	252.7	0.8	251.87	1.003 Level 2	
11,500.0	6,580.0	11,605.5	6,651.6	133.6	133.5	-106.48	535.5	3,905.9	252.6	-3.8	256.36	0.985 Level 1	
11,515.7	6,579.7	11,621.3	6,651.3	134.0	134.0	-106.46	535.5	3,921.7	252.5	-4.7	257.21	0.982 Level 1	
11,600.0	6,578.7	11,705.5	6,649.9	136.3	136.3	-106.38	535.5	4,005.9	252.4	-9.3	261.79	0.964 Level 1	
11,614.1	6,578.5	11,719.7	6,649.6	136.7	136.7	-106.37	535.5	4,020.1	252.4	-10.1	262.56	0.961 Level 1	
11,700.0	6,577.4	11,805.5	6,648.1	139.1	139.0	-106.29	535.5	4,105.9	252.3	-14.9	267.23	0.944 Level 1	
11,712.6	6,577.2	11,818.1	6,647.9	139.5	139.4	-106.28	535.5	4,118.5	252.3	-15.6	267.91	0.942 Level 1	
11,800.0	6,576.1	11,905.5	6,646.4	141.9	141.8	-106.20	535.5	4,205.9	252.2	-20.5	272.67	0.925 Level 1	
11,811.0	6,575.9	11,916.5	6,646.2	142.2	142.1	-106.19	535.5	4,216.9	252.2	-21.1	273.27	0.923 Level 1	
11,871.1	6,575.1	11,976.7	6,645.2	143.8	143.8	-106.13	535.5	4,277.0	252.1	-24.4	276.55	0.912 Level 1	
11,882.7	6,575.0	11,987.5	6,645.0	144.2	144.1	-106.12	535.5	4,287.9	252.1	-25.1	277.16	0.910 Level 1	
11,883.5	6,575.0	11,987.5	6,645.0	144.2	144.1	-106.12	535.5	4,287.9	252.1	-25.1	277.17	0.910 Level 1, ES, SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	0.71	44.8	0.6	44.8				
98.4	98.4	98.4	98.4	0.1	0.1	0.71	44.8	0.6	44.8	44.6	0.19	233.203	
100.0	100.0	100.0	100.0	0.1	0.1	0.71	44.8	0.6	44.8	44.6	0.20	229.256	
196.8	196.8	196.8	196.8	0.3	0.3	0.71	44.8	0.6	44.8	44.2	0.63	71.055	
200.0	200.0	200.0	200.0	0.3	0.3	0.71	44.8	0.6	44.8	44.2	0.65	69.496	
295.3	295.3	295.3	295.3	0.5	0.5	0.71	44.8	0.6	44.8	43.8	1.07	41.766	
300.0	300.0	300.0	300.0	0.5	0.5	0.71	44.8	0.6	44.8	43.7	1.09	40.955	
393.7	393.7	393.7	393.7	0.8	0.8	0.71	44.8	0.6	44.8	43.3	1.52	29.575	
400.0	400.0	400.0	400.0	0.8	0.8	0.71	44.8	0.6	44.8	43.3	1.54	29.032	
492.1	492.1	492.1	492.1	1.0	1.0	0.71	44.8	0.6	44.8	42.9	1.96	22.893	
500.0	500.0	500.0	500.0	1.0	1.0	0.71	44.8	0.6	44.8	42.8	1.99	22.486	
590.5	590.5	590.5	590.5	1.2	1.2	0.71	44.8	0.6	44.8	42.4	2.40	18.674	
600.0	600.0	600.0	600.0	1.2	1.2	0.71	44.8	0.6	44.8	42.4	2.44	18.349	
689.0	689.0	689.0	689.0	1.4	1.4	0.71	44.8	0.6	44.8	42.0	2.84	15.768	
700.0	700.0	700.0	700.0	1.4	1.4	0.71	44.8	0.6	44.8	41.9	2.89	15.497	
787.4	787.4	787.4	787.4	1.6	1.6	0.71	44.8	0.6	44.8	41.5	3.29	13.644	
800.0	800.0	800.0	800.0	1.7	1.7	0.71	44.8	0.6	44.8	41.5	3.34	13.413	
885.8	885.8	885.8	885.8	1.9	1.9	0.71	44.8	0.6	44.8	41.1	3.73	12.025	
900.0	900.0	900.0	900.0	1.9	1.9	0.71	44.8	0.6	44.8	41.0	3.79	11.823	
984.2	984.2	984.2	984.2	2.1	2.1	0.71	44.8	0.6	44.8	40.7	4.17	10.749	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.71	44.8	0.6	44.8	40.6	4.24	10.570	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	0.71	44.8	0.6	44.8	40.2	4.61	9.718	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	0.71	44.8	0.6	44.8	40.1	4.69	9.557 CC, ES	
1,181.1	1,181.1	1,180.0	1,180.0	2.5	2.5	1.37	45.8	1.1	45.8	40.8	5.05	9.074	
1,200.0	1,200.0	1,198.6	1,198.6	2.6	2.6	1.70	46.3	1.4	46.4	41.2	5.13	9.028	
1,279.5	1,279.5	1,276.9	1,276.7	2.7	2.7	3.67	49.6	3.2	49.8	44.3	5.49	9.074	
1,300.0	1,300.0	1,297.0	1,296.8	2.8	2.8	4.29	50.8	3.8	51.0	45.4	5.58	9.144	
1,377.9	1,377.9	1,373.3	1,372.9	3.0	3.0	6.91	56.3	6.8	56.9	51.0	5.93	9.600	
1,400.0	1,400.0	1,394.9	1,394.3	3.0	3.0	7.69	58.1	7.8	58.9	52.9	6.02	9.781	
1,476.4	1,476.4	1,469.1	1,468.1	3.2	3.2	86.15	65.7	12.0	67.2	60.8	6.37	10.548	
1,500.0	1,500.0	1,492.0	1,490.8	3.2	3.2	87.42	68.3	13.4	70.1	63.7	6.47	10.837	
1,574.8	1,574.7	1,563.9	1,561.9	3.4	3.4	91.83	77.7	18.6	80.9	74.1	6.80	11.908	
1,600.0	1,599.8	1,588.0	1,585.6	3.4	3.5	93.37	81.2	20.5	85.1	78.2	6.91	12.326	
1,673.2	1,672.8	1,657.3	1,653.8	3.6	3.7	97.78	92.2	26.5	98.9	91.7	7.23	13.682	
1,700.0	1,699.5	1,682.4	1,678.4	3.7	3.8	99.33	96.6	28.9	104.6	97.3	7.35	14.239	
1,771.6	1,770.6	1,750.9	1,745.4	3.8	4.0	103.32	109.0	35.7	121.2	113.5	7.68	15.789	
1,800.0	1,798.7	1,778.2	1,772.1	3.9	4.1	104.81	114.0	38.5	128.1	120.2	7.80	16.407	
1,870.1	1,868.0	1,845.4	1,837.9	4.1	4.3	108.29	126.2	45.2	145.7	137.6	8.13	17.912	
1,900.0	1,897.5	1,874.0	1,865.8	4.2	4.4	109.68	131.5	48.0	153.6	145.3	8.27	18.561	
1,968.5	1,964.8	1,939.2	1,929.6	4.4	4.7	112.70	143.3	54.6	172.4	163.8	8.61	20.016	
2,000.0	1,995.6	1,969.1	1,958.8	4.5	4.8	114.01	148.8	57.5	181.4	172.6	8.77	20.691	
2,066.9	2,060.9	2,032.2	2,020.6	4.7	5.0	116.63	160.3	63.9	201.4	192.3	9.11	22.097	
2,100.0	2,093.1	2,063.3	2,050.9	4.8	5.1	117.85	166.0	67.0	211.7	202.4	9.28	22.801	
2,165.3	2,156.3	2,124.3	2,110.6	5.1	5.4	120.13	177.1	73.1	232.9	223.2	9.64	24.154	
2,200.0	2,189.6	2,156.4	2,142.1	5.2	5.5	121.27	183.0	76.3	244.6	234.7	9.83	24.884	
2,263.8	2,250.7	2,215.3	2,199.7	5.5	5.7	123.25	193.7	82.2	266.9	256.7	10.19	26.192	
2,280.0	2,266.2	2,230.2	2,214.3	5.6	5.8	123.73	196.4	83.6	272.8	262.5	10.28	26.530	
2,300.0	2,285.3	2,248.5	2,232.2	5.7	5.8	124.43	199.8	85.5	280.1	269.7	10.40	26.922	
2,362.2	2,344.6	2,305.6	2,288.0	6.0	6.1	126.40	210.2	91.2	303.0	292.2	10.78	28.099	
2,400.0	2,380.6	2,340.3	2,321.9	6.2	6.2	127.45	216.5	94.6	317.1	306.1	11.02	28.770	
2,460.6	2,438.4	2,395.9	2,376.3	6.5	6.4	128.97	226.6	100.2	339.8	328.4	11.40	29.797	
2,500.0	2,475.9	2,432.0	2,411.6	6.7	6.6	129.85	233.2	103.8	354.7	343.0	11.66	30.431	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		SW NW SEC. 10 T5N R64W 6th P.M. - WACKER 10F-304 - ORIGINAL WELLBORE - PROPOSAL #1											Offset Site Error:		0.0 usft
Survey Program: 0-MWD													Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
2,559.0	2,532.2	2,486.2	2,464.6	7.0	6.8	131.04	243.1	109.2	377.1	365.0	12.04	31.328			
2,600.0	2,571.2	2,523.7	2,501.3	7.2	7.0	131.79	249.9	113.0	392.7	380.4	12.30	31.922			
2,657.5	2,626.0	2,576.5	2,552.9	7.5	7.2	132.75	259.6	118.3	414.7	402.0	12.68	32.707			
2,700.0	2,666.6	2,615.5	2,591.1	7.8	7.3	133.40	266.7	122.2	431.1	418.1	12.96	33.261			
2,755.9	2,719.8	2,666.7	2,641.2	8.1	7.6	134.17	276.0	127.3	452.6	439.3	13.33	33.948			
2,800.0	2,761.9	2,707.2	2,680.8	8.3	7.7	134.74	283.4	131.3	469.7	456.0	13.63	34.467			
2,854.3	2,813.7	2,757.0	2,729.5	8.7	7.9	135.38	292.5	136.3	490.7	476.7	13.99	35.070			
2,900.0	2,857.2	2,798.9	2,770.5	8.9	8.1	135.88	300.1	140.5	508.5	494.2	14.30	35.556			
2,952.7	2,907.5	2,847.3	2,817.8	9.2	8.3	136.41	309.0	145.3	529.0	514.3	14.66	36.085			
3,000.0	2,952.5	2,890.6	2,860.2	9.5	8.5	136.86	316.9	149.7	547.4	532.4	14.98	36.541			
3,051.2	3,001.3	2,937.6	2,906.2	9.8	8.7	137.31	325.4	154.4	567.4	552.0	15.33	37.008			
3,100.0	3,047.8	2,982.4	2,950.0	10.1	8.9	137.71	333.6	158.8	586.4	570.8	15.67	37.435			
3,149.6	3,095.1	3,027.9	2,994.5	10.4	9.1	138.09	341.9	163.4	605.9	589.8	16.01	37.848			
3,200.0	3,143.2	3,074.1	3,039.7	10.7	9.3	138.46	350.3	168.0	625.6	609.2	16.36	38.250			
3,248.0	3,188.9	3,118.2	3,082.8	11.0	9.5	138.78	358.3	172.4	644.4	627.7	16.69	38.616			
3,300.0	3,238.5	3,165.8	3,129.4	11.3	9.7	139.11	367.0	177.2	664.8	647.8	17.05	38.995			
3,346.4	3,282.8	3,208.4	3,171.1	11.6	9.9	139.39	374.8	181.4	683.1	665.7	17.37	39.319			
3,400.0	3,333.8	3,257.6	3,219.1	11.9	10.1	139.70	383.8	186.3	704.1	686.4	17.75	39.677			
3,444.9	3,376.6	3,298.7	3,259.4	12.2	10.2	139.94	391.3	190.5	721.8	703.7	18.06	39.965			
3,500.0	3,429.1	3,349.3	3,308.9	12.6	10.5	140.22	400.5	195.5	743.5	725.0	18.45	40.305			
3,543.3	3,470.4	3,389.0	3,347.7	12.8	10.6	140.43	407.7	199.5	760.5	741.8	18.75	40.560			
3,600.0	3,524.4	3,441.0	3,398.6	13.2	10.9	140.69	417.2	204.7	782.9	763.7	19.15	40.883			
3,641.7	3,564.2	3,479.3	3,436.0	13.4	11.0	140.87	424.2	208.5	799.3	779.9	19.44	41.110			
3,700.0	3,619.8	3,532.8	3,488.3	13.8	11.3	141.12	434.0	213.8	822.3	802.5	19.85	41.417			
3,740.1	3,658.0	3,569.6	3,524.3	14.0	11.4	141.28	440.7	217.5	838.2	818.0	20.14	41.620			
3,800.0	3,715.1	3,624.5	3,578.0	14.4	11.7	141.50	450.7	223.0	861.8	841.2	20.56	41.911			
3,838.6	3,751.8	3,659.9	3,612.6	14.7	11.8	141.64	457.1	226.6	877.0	856.2	20.84	42.092			
3,900.0	3,810.4	3,716.2	3,667.8	15.0	12.1	141.86	467.4	232.2	901.3	880.0	21.27	42.371			
3,937.0	3,845.7	3,750.2	3,701.0	15.3	12.2	141.98	473.6	235.6	915.9	894.4	21.54	42.532			
4,000.0	3,905.7	3,807.9	3,757.5	15.7	12.5	142.18	484.1	241.4	940.8	918.9	21.98	42.798			
4,035.4	3,939.5	3,840.4	3,789.3	15.9	12.6	142.29	490.1	244.6	954.9	932.6	22.24	42.942			
4,100.0	4,001.0	3,899.7	3,847.2	16.3	12.9	142.48	500.9	250.5	980.4	957.7	22.70	43.197			
4,133.8	4,033.3	3,930.7	3,877.6	16.5	13.0	142.57	506.5	253.6	993.8	970.9	22.94	43.325			
4,200.0	4,096.3	3,991.4	3,936.9	16.9	13.3	142.75	517.6	259.7	1,020.0	996.6	23.41	43.569			
4,232.3	4,127.1	4,021.0	3,965.9	17.1	13.4	142.84	523.0	262.7	1,032.8	1,009.1	23.64	43.684			
4,300.0	4,191.7	4,092.0	4,035.3	17.6	13.7	143.04	535.8	269.7	1,059.5	1,035.3	24.14	43.886			
4,330.7	4,220.9	4,131.2	4,073.8	17.8	13.8	143.17	542.3	273.3	1,071.3	1,046.9	24.37	43.965			
4,400.0	4,287.0	4,220.8	4,162.1	18.2	14.1	143.52	555.5	280.5	1,096.8	1,071.9	24.86	44.120			
4,429.1	4,314.7	4,258.8	4,199.8	18.4	14.2	143.70	560.4	283.2	1,107.1	1,082.0	25.06	44.177			
4,500.0	4,382.3	4,352.3	4,292.6	18.8	14.4	144.19	570.5	288.7	1,131.0	1,105.5	25.53	44.294			
4,527.5	4,408.6	4,389.0	4,329.0	19.0	14.5	144.40	573.8	290.5	1,139.9	1,114.1	25.71	44.330			
4,600.0	4,477.6	4,486.2	4,425.9	19.5	14.7	145.03	580.4	294.1	1,162.1	1,135.9	26.16	44.419			
4,626.0	4,502.4	4,521.2	4,460.9	19.6	14.8	145.27	582.1	295.0	1,169.6	1,143.3	26.31	44.448			
4,700.0	4,572.9	4,621.7	4,561.4	20.1	14.9	146.03	584.8	296.5	1,190.0	1,163.3	26.73	44.518			
4,724.4	4,596.2	4,655.0	4,594.6	20.3	15.0	146.30	585.0	296.7	1,196.4	1,169.5	26.86	44.538			
4,800.0	4,668.3	4,728.6	4,668.3	20.7	15.1	146.90	585.0	296.7	1,215.7	1,188.5	27.25	44.620			
4,822.8	4,690.0	4,750.4	4,690.0	20.9	15.1	147.08	585.0	296.7	1,221.6	1,194.2	27.36	44.643			
4,900.0	4,763.6	4,823.9	4,763.6	21.4	15.2	147.66	585.0	296.7	1,241.5	1,213.7	27.76	44.727			
4,921.2	4,783.8	4,844.2	4,783.8	21.5	15.3	147.81	585.0	296.7	1,247.0	1,219.1	27.87	44.751			
5,000.0	4,858.9	4,919.3	4,858.9	22.0	15.4	148.38	585.0	296.7	1,267.5	1,239.2	28.26	44.844			
5,019.7	4,877.7	4,938.0	4,877.7	22.1	15.4	148.52	585.0	296.7	1,272.6	1,244.3	28.36	44.868			
5,100.0	4,954.2	5,014.6	4,954.2	22.6	15.5	149.07	585.0	296.7	1,293.7	1,264.9	28.77	44.970			

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	5,031.8	4,971.5	22.8	15.5	149.19	585.0	296.7	1,298.4	1,269.5	28.86	44.993	
5,171.8	5,022.7	5,083.0	5,022.7	23.1	15.6	149.55	585.0	296.7	1,312.5	1,283.4	29.13	45.064	
5,200.0	5,049.6	5,109.9	5,049.6	23.3	15.7	149.81	585.0	296.7	1,319.9	1,290.6	29.29	45.058	
5,216.5	5,065.4	5,125.7	5,065.4	23.3	15.7	149.96	585.0	296.7	1,324.1	1,294.7	29.38	45.063	
5,300.0	5,145.7	5,206.0	5,145.7	23.7	15.8	150.64	585.0	296.7	1,344.1	1,314.3	29.84	45.049	
5,314.9	5,160.1	5,220.5	5,160.1	23.8	15.8	150.76	585.0	296.7	1,347.5	1,317.5	29.91	45.046	
5,400.0	5,242.7	5,303.0	5,242.7	24.1	16.0	151.35	585.0	296.7	1,365.4	1,335.1	30.35	44.993	
5,413.4	5,255.7	5,316.1	5,255.7	24.2	16.0	151.43	585.0	296.7	1,368.1	1,337.7	30.41	44.984	
5,500.0	5,340.5	5,400.8	5,340.5	24.5	16.1	151.94	585.0	296.7	1,383.9	1,353.1	30.83	44.891	
5,511.8	5,352.1	5,412.4	5,352.1	24.5	16.1	152.00	585.0	296.7	1,385.9	1,355.0	30.88	44.878	
5,600.0	5,439.0	5,539.7	5,439.0	24.8	16.8	152.74	585.0	-1,072.4	1,309.8	1,253.4	56.41	23.220	
5,610.2	5,449.1	5,549.8	5,449.1	24.8	16.9	111.75	585.0	-1,074.0	1,299.9	1,243.1	56.82	22.878	
5,700.0	5,538.0	5,668.0	5,538.0	25.1	17.2	102.98	585.0	-1,085.8	1,212.7	1,152.8	59.95	20.228	
5,708.6	5,546.6	5,676.6	5,546.6	25.1	17.2	102.14	585.0	-1,086.8	1,204.3	1,144.2	60.20	20.006	
5,800.0	5,637.4	5,767.4	5,637.4	25.3	17.4	93.45	585.0	-1,095.7	1,115.9	1,053.7	62.17	17.949	
5,807.1	5,644.5	5,774.6	5,644.5	25.3	17.4	92.81	585.0	-1,096.3	1,109.0	1,046.8	62.27	17.810	
5,900.0	5,737.2	5,867.2	5,737.2	25.5	17.6	84.91	585.0	-1,102.3	1,019.5	956.4	63.01	16.178	
5,905.5	5,742.6	5,872.6	5,742.6	25.5	17.6	84.48	585.0	-1,102.6	1,014.2	951.2	63.03	16.092	
6,000.0	5,837.1	5,977.1	5,837.1	25.6	17.7	77.84	585.0	-1,105.6	923.9	861.0	62.84	14.702	
6,003.9	5,841.0	5,981.0	5,841.0	25.6	17.7	77.59	585.0	-1,105.6	920.2	857.3	62.82	14.647	
6,051.8	5,888.9	5,988.9	5,888.9	25.7	17.7	-0.31	585.0	-1,105.9	874.8	841.8	33.03	26.483	
6,081.8	5,918.9	6,018.9	5,918.9	25.7	17.7	-0.30	585.0	-1,105.9	846.6	813.5	33.08	25.594	
6,100.0	5,937.1	6,037.1	5,937.1	25.7	17.7	-94.16	585.0	-1,105.6	829.6	767.7	61.88	13.407	
6,102.3	5,939.4	6,039.4	5,939.4	25.7	17.7	-94.64	585.0	-1,105.5	827.4	765.6	61.78	13.393	
6,150.0	5,987.0	6,087.0	5,987.0	25.7	17.6	-103.58	585.0	-1,102.5	783.1	723.8	59.30	13.206	
6,200.0	6,036.5	6,136.5	6,036.5	25.7	17.4	-111.09	585.0	-1,095.9	737.3	681.0	56.30	13.096	
6,200.8	6,037.3	6,137.3	6,037.3	25.7	17.4	-111.20	585.0	-1,095.8	736.6	680.4	56.25	13.094	
6,250.0	6,085.5	6,185.5	6,085.5	25.7	17.2	-116.80	585.0	-1,085.9	692.6	639.1	53.45	12.957	
6,299.2	6,133.0	6,233.0	6,133.0	25.6	16.8	-120.91	585.0	-1,072.7	649.9	598.9	51.04	12.734	
6,300.0	6,133.7	6,233.7	6,133.7	25.6	16.8	-120.97	585.0	-1,072.5	649.2	598.2	51.00	12.730	
6,350.0	6,180.9	6,280.9	6,180.9	25.5	16.4	-123.88	585.0	-1,055.7	607.5	558.5	49.00	12.399	
6,397.6	6,224.6	6,314.6	6,224.6	25.4	15.9	-125.71	585.0	-1,036.8	569.6	522.1	47.48	11.996	
6,400.0	6,226.7	6,326.7	6,226.7	25.4	15.9	-125.78	585.0	-1,035.8	567.8	520.3	47.42	11.973	
6,450.0	6,271.1	6,371.1	6,271.1	25.2	15.3	-126.83	585.0	-1,012.6	530.2	484.0	46.23	11.471	
6,496.0	6,310.4	6,410.4	6,310.4	25.1	14.7	-127.18	585.0	-988.6	497.9	452.5	45.42	10.962	
6,500.0	6,313.7	6,413.7	6,313.7	25.1	14.7	-127.18	585.0	-986.5	495.2	449.9	45.36	10.917	
6,550.0	6,354.4	6,454.4	6,354.4	25.0	14.0	-126.92	585.0	-957.4	463.0	418.2	44.79	10.337	
6,594.5	6,388.9	6,488.9	6,388.9	24.9	13.3	-126.24	585.0	-929.2	436.8	392.3	44.50	9.817	
6,600.0	6,393.0	6,493.0	6,393.0	24.9	13.2	-126.13	585.0	-925.5	433.7	389.3	44.47	9.753	
6,650.0	6,429.3	6,529.3	6,429.3	24.8	12.4	-124.88	585.0	-891.1	407.7	363.3	44.39	9.183	
6,692.9	6,458.5	6,548.5	6,458.5	24.7	11.6	-123.48	585.0	-859.6	387.9	343.4	44.47	8.722	
6,700.0	6,463.1	6,563.1	6,463.1	24.7	11.5	-123.22	585.0	-854.2	384.9	340.4	44.49	8.650	
6,750.0	6,494.3	6,594.3	6,494.3	24.7	10.5	-121.24	585.0	-815.0	365.4	320.6	44.74	8.167	
6,791.3	6,517.9	6,617.9	6,517.9	24.7	29.7	-119.41	585.0	-781.1	351.7	306.7	45.01	7.813	
6,800.0	6,522.6	6,622.6	6,522.6	24.7	29.6	-119.01	585.0	-773.8	349.1	304.0	45.07	7.745	
6,850.0	6,548.0	6,648.0	6,548.0	24.7	28.6	-116.64	585.0	-730.7	335.8	290.4	45.42	7.395	
6,889.7	6,566.0	6,666.0	6,566.0	24.8	27.8	-114.71	585.0	-695.2	327.3	281.6	45.70	7.163	
6,900.0	6,570.4	6,670.4	6,570.4	24.9	27.5	-114.22	585.0	-685.9	325.4	279.6	45.75	7.112	
6,950.0	6,589.5	6,689.5	6,589.5	25.1	26.5	-111.89	585.0	-639.7	317.4	271.4	46.00	6.901	
6,988.2	6,602.0	6,702.0	6,602.0	25.3	25.7	-110.24	585.0	-603.6	312.7	266.6	46.14	6.778	
7,000.0	6,605.4	6,705.4	6,605.4	25.3	25.5	-109.76	585.0	-592.3	311.5	265.4	46.16	6.748	
7,050.0	6,618.0	6,718.0	6,618.0	25.6	24.4	-107.95	585.0	-543.9	307.4	261.2	46.19	6.654	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,625.0	7,272.6	6,714.8	25.9	23.7	-106.89	585.0	-507.9	305.2	259.1	46.17	6.611	
7,100.0	6,627.1	7,259.3	6,714.9	26.0	23.4	-106.57	585.0	-494.7	304.6	258.5	46.14	6.602	
7,150.0	6,632.8	7,209.7	6,715.0	26.5	22.4	-105.68	585.0	-445.0	303.1	257.1	45.98	6.592	
7,185.0	6,634.7	7,173.3	6,714.9	26.8	21.7	-105.36	585.0	-408.7	302.5	256.7	45.81	6.605	
7,200.0	6,635.0	7,156.5	6,714.5	27.0	21.4	-105.23	585.0	-391.9	302.4	256.6	45.72	6.614	
7,215.9	6,635.0	7,138.6	6,713.6	27.1	21.1	-105.08	585.0	-374.0	302.2	256.5	45.64	6.621	
7,283.4	6,634.1	7,063.5	6,704.9	27.9	19.7	-103.66	585.0	-299.5	300.4	254.9	45.49	6.605	
7,300.0	6,633.9	7,045.4	6,701.6	28.1	19.4	-103.09	585.0	-281.7	299.8	254.3	45.51	6.587	
7,381.9	6,632.9	6,958.7	6,679.8	29.3	18.1	-99.17	585.0	-197.8	295.9	249.8	46.10	6.418	
7,400.0	6,632.6	6,940.3	6,673.9	29.5	17.9	-98.08	585.0	-180.3	295.0	248.7	46.28	6.374	
7,480.3	6,631.6	6,862.6	6,644.0	30.8	17.3	-92.45	585.0	-108.7	292.1	244.8	47.30	6.175	
7,500.0	6,631.4	6,844.6	6,636.0	31.1	17.2	-90.92	585.0	-92.6	291.8	244.2	47.53	6.139	
7,511.5	6,631.2	6,834.3	6,631.2	31.3	17.2	-90.00	585.0	-83.4	291.7	244.0	47.69	6.117	
7,578.7	6,630.4	6,777.1	6,602.4	32.5	17.2	-84.49	585.0	-34.1	293.6	245.1	48.46	6.059 SF	
7,600.0	6,630.1	6,760.1	6,593.1	32.9	17.2	-82.71	585.0	-19.9	295.1	246.5	48.65	6.067	
7,677.1	6,629.1	6,700.0	6,557.5	34.3	17.2	-76.08	585.0	28.6	305.1	256.0	49.13	6.211	
7,700.0	6,628.8	6,686.9	6,549.2	34.8	17.2	-74.58	585.0	38.7	309.6	260.3	49.27	6.283	
7,775.6	6,627.8	6,638.5	6,517.0	36.3	17.2	-68.96	585.0	74.8	329.5	280.1	49.44	6.665	
7,800.0	6,627.5	6,624.0	6,506.9	36.8	17.2	-67.28	585.0	85.2	337.7	288.2	49.44	6.830	
7,874.0	6,626.6	6,583.5	6,477.5	38.4	17.3	-62.61	585.0	113.1	367.2	317.8	49.39	7.434	
7,900.0	6,626.3	6,570.3	6,467.7	38.9	17.3	-61.12	585.0	121.9	379.2	329.9	49.35	7.684	
7,972.4	6,625.3	6,536.3	6,441.4	40.5	17.3	-57.36	585.0	143.5	416.7	367.4	49.26	8.460	
8,000.0	6,625.0	6,524.3	6,432.0	41.1	17.3	-56.07	585.0	150.8	432.4	383.2	49.22	8.785	
8,070.8	6,624.1	6,500.0	6,412.3	42.7	17.3	-53.52	585.0	165.2	475.8	426.5	49.38	9.636	
8,100.0	6,623.7	6,484.8	6,399.9	43.4	17.3	-51.98	585.0	173.8	494.8	445.7	49.16	10.066	
8,169.3	6,622.8	6,460.7	6,379.7	45.0	17.3	-49.62	585.0	187.0	542.4	493.2	49.20	11.024	
8,200.0	6,622.4	6,450.0	6,370.5	45.7	17.3	-48.61	585.0	192.6	564.4	515.2	49.19	11.474	
8,267.7	6,621.6	6,430.3	6,353.5	47.4	17.3	-46.79	585.0	202.6	614.7	565.3	49.37	12.451	
8,300.0	6,621.1	6,421.2	6,345.6	48.1	17.3	-45.98	585.0	207.1	639.5	590.0	49.45	12.931	
8,366.1	6,620.3	6,400.0	6,326.9	49.7	17.3	-44.16	585.0	217.1	691.5	642.0	49.47	13.978	
8,400.0	6,619.9	6,400.0	6,326.9	50.6	17.3	-44.16	585.0	217.1	718.7	668.6	50.06	14.356	
8,464.5	6,619.0	6,380.3	6,309.3	52.2	17.3	-42.54	585.0	225.8	771.6	721.5	50.10	15.400	
8,500.0	6,618.6	6,372.6	6,302.3	53.0	17.3	-41.92	585.0	229.2	801.1	750.9	50.28	15.933	
8,563.0	6,617.8	6,350.0	6,281.7	54.6	17.4	-40.19	585.0	238.4	854.5	804.4	50.10	17.058	
8,600.0	6,617.3	6,350.0	6,281.7	55.5	17.4	-40.19	585.0	238.4	886.2	835.4	50.72	17.471	
8,661.4	6,616.5	6,350.0	6,281.7	57.1	17.4	-40.19	585.0	238.4	939.5	887.7	51.77	18.146	
8,700.0	6,616.0	6,334.7	6,267.6	58.1	17.4	-39.06	585.0	244.3	973.2	921.7	51.54	18.882	
8,759.8	6,615.2	6,324.9	6,258.5	59.6	17.4	-38.37	585.0	247.9	1,026.1	974.2	51.99	19.738	
8,800.0	6,614.7	6,318.7	6,252.7	60.6	17.4	-37.94	585.0	250.1	1,062.0	1,009.7	52.30	20.306	
8,858.2	6,614.0	6,300.0	6,235.1	62.1	17.4	-36.68	585.0	256.5	1,114.4	1,062.2	52.19	21.355	
8,900.0	6,613.4	6,300.0	6,235.1	63.2	17.4	-36.68	585.0	256.5	1,152.1	1,099.2	52.87	21.792	
8,956.7	6,612.7	6,300.0	6,235.1	64.7	17.4	-36.68	585.0	256.5	1,203.7	1,149.9	53.80	22.374	
9,000.0	6,612.2	6,300.0	6,235.1	65.8	17.4	-36.67	585.0	256.5	1,243.4	1,188.9	54.51	22.810	
9,055.1	6,611.5	6,300.0	6,235.1	67.3	17.4	-36.67	585.0	256.5	1,294.2	1,238.8	55.42	23.353	
9,100.0	6,610.9	6,279.7	6,215.9	68.4	17.3	-35.37	585.0	263.0	1,335.5	1,280.6	54.93	24.313	
9,153.5	6,610.2	6,273.9	6,210.3	69.8	17.3	-35.01	585.0	264.7	1,385.2	1,329.7	55.44	24.983	
9,200.0	6,609.6	6,269.0	6,205.7	71.1	17.3	-34.71	585.0	266.1	1,428.5	1,372.6	55.90	25.555	
9,251.9	6,608.9	6,250.0	6,187.4	72.4	17.3	-33.59	585.0	271.4	1,477.3	1,421.7	55.59	26.574	
9,300.0	6,608.3	6,250.0	6,187.4	73.7	17.3	-33.59	585.0	271.4	1,522.2	1,465.9	56.35	27.016	
9,350.4	6,607.7	6,250.0	6,187.4	75.0	17.3	-33.59	585.0	271.4	1,569.6	1,512.5	57.14	27.469	
9,400.0	6,607.0	6,250.0	6,187.4	76.4	17.3	-33.59	585.0	271.4	1,616.4	1,558.5	57.92	27.906	
9,448.8	6,606.4	6,250.0	6,187.4	77.7	17.3	-33.59	585.0	271.4	1,662.6	1,603.9	58.70	28.326	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.7	6,250.0	6,187.4	79.0	17.3	-33.59	585.0	271.4	1,711.3	1,651.8	59.51	28.757	
9,547.2	6,605.1	6,250.0	6,187.4	80.3	17.3	-33.59	585.0	271.4	1,756.3	1,696.0	60.26	29.146	
9,600.0	6,604.5	6,250.0	6,187.4	81.7	17.3	-33.59	585.0	271.4	1,806.7	1,745.6	61.10	29.571	
9,645.6	6,603.9	6,231.2	6,169.2	82.9	17.3	-32.53	585.0	276.1	1,850.0	1,789.4	60.60	30.528	
9,700.0	6,603.2	6,227.5	6,165.6	84.4	17.3	-32.32	585.0	277.0	1,902.0	1,840.8	61.21	31.076	
9,744.1	6,602.6	6,224.5	6,162.7	85.6	17.3	-32.16	585.0	277.7	1,944.3	1,882.6	61.70	31.510	
9,800.0	6,601.9	6,220.9	6,159.2	87.1	17.3	-31.97	585.0	278.5	1,998.0	1,935.7	62.34	32.052	
9,842.5	6,601.3	6,200.0	6,138.7	88.2	17.3	-30.88	585.0	282.9	2,039.2	1,977.5	61.65	33.076	
9,900.0	6,600.6	6,200.0	6,138.7	89.8	17.3	-30.88	585.0	282.9	2,094.5	2,032.0	62.52	33.500	
9,940.9	6,600.1	6,200.0	6,138.7	90.9	17.3	-30.88	585.0	282.9	2,133.9	2,070.8	63.14	33.795	
10,000.0	6,599.3	6,200.0	6,138.7	92.5	17.3	-30.88	585.0	282.9	2,190.9	2,126.9	64.04	34.213	
10,039.3	6,598.8	6,200.0	6,138.7	93.5	17.3	-30.88	585.0	282.9	2,228.9	2,164.3	64.63	34.485	
10,100.0	6,598.0	6,200.0	6,138.7	95.2	17.3	-30.88	585.0	282.9	2,287.6	2,222.1	65.56	34.896	
10,137.8	6,597.5	6,200.0	6,138.7	96.2	17.3	-30.88	585.0	282.9	2,324.2	2,258.1	66.13	35.146	
10,200.0	6,596.7	6,200.0	6,138.7	97.9	17.3	-30.88	585.0	282.9	2,384.6	2,317.5	67.08	35.550	
10,236.2	6,596.3	6,200.0	6,138.7	98.9	17.3	-30.88	585.0	282.9	2,419.8	2,352.2	67.63	35.780	
10,300.0	6,595.4	6,200.0	6,138.7	100.6	17.3	-30.88	585.0	282.9	2,481.8	2,413.2	68.60	36.178	
10,334.6	6,595.0	6,200.0	6,138.7	101.6	17.3	-30.88	585.0	282.9	2,515.6	2,446.4	69.13	36.388	
10,400.0	6,594.2	6,200.0	6,138.7	103.4	17.3	-30.88	585.0	282.9	2,579.3	2,509.2	70.13	36.779	
10,433.0	6,593.7	6,200.0	6,138.7	104.3	17.3	-30.88	585.0	282.9	2,611.5	2,540.9	70.63	36.972	
10,500.0	6,592.9	6,200.0	6,138.7	106.1	17.3	-30.88	585.0	282.9	2,676.9	2,605.3	71.66	37.356	
10,531.5	6,592.5	6,200.0	6,138.7	106.9	17.3	-30.88	585.0	282.9	2,707.7	2,635.5	72.14	37.533	
10,600.0	6,591.6	6,200.0	6,138.7	108.8	17.3	-30.88	585.0	282.9	2,774.7	2,701.5	73.19	37.911	
10,629.9	6,591.2	6,200.0	6,138.7	109.6	17.3	-30.88	585.0	282.9	2,804.0	2,730.3	73.65	38.072	
10,700.0	6,590.3	6,178.2	6,117.3	111.6	17.3	-29.81	585.0	286.8	2,872.3	2,799.2	73.08	39.303	
10,728.3	6,589.9	6,177.2	6,116.4	112.3	17.3	-29.76	585.0	286.9	2,900.0	2,826.6	73.43	39.494	
10,800.0	6,589.0	6,174.8	6,113.9	114.3	17.3	-29.64	585.0	287.3	2,970.2	2,895.9	74.32	39.967	
10,826.7	6,588.7	6,173.9	6,113.0	115.0	17.3	-29.60	585.0	287.5	2,996.4	2,921.8	74.65	40.140	
10,900.0	6,587.7	6,171.5	6,110.7	117.1	17.3	-29.48	585.0	287.9	3,068.3	2,992.7	75.56	40.607	
10,925.2	6,587.4	6,170.7	6,109.9	117.7	17.3	-29.45	585.0	288.0	3,093.0	3,017.1	75.88	40.764	
11,000.0	6,586.4	6,150.0	6,089.4	119.8	17.3	-28.50	585.0	290.9	3,166.7	3,091.3	75.44	41.979	
11,023.6	6,586.1	6,150.0	6,089.4	120.4	17.3	-28.50	585.0	290.9	3,189.9	3,114.1	75.78	42.094	
11,100.0	6,585.1	6,150.0	6,089.4	122.6	17.3	-28.50	585.0	290.9	3,264.9	3,188.0	76.89	42.460	
11,122.0	6,584.8	6,150.0	6,089.4	123.2	17.3	-28.50	585.0	290.9	3,286.5	3,209.3	77.21	42.564	
11,200.0	6,583.8	6,150.0	6,089.4	125.3	17.3	-28.50	585.0	290.9	3,363.2	3,284.8	78.35	42.924	
11,220.4	6,583.6	6,150.0	6,089.4	125.9	17.3	-28.50	585.0	290.9	3,383.3	3,304.7	78.65	43.017	
11,300.0	6,582.5	6,150.0	6,089.4	128.1	17.3	-28.50	585.0	290.9	3,461.6	3,381.8	79.81	43.371	
11,318.9	6,582.3	6,150.0	6,089.4	128.6	17.3	-28.50	585.0	290.9	3,480.2	3,400.1	80.09	43.454	
11,400.0	6,581.2	6,150.0	6,089.4	130.8	17.3	-28.50	585.0	290.9	3,560.0	3,478.8	81.27	43.803	
11,417.3	6,581.0	6,150.0	6,089.4	131.3	17.3	-28.50	585.0	290.9	3,577.1	3,495.6	81.53	43.876	
11,500.0	6,580.0	6,150.0	6,089.4	133.6	17.3	-28.50	585.0	290.9	3,658.6	3,575.9	82.74	44.220	
11,515.7	6,579.7	6,150.0	6,089.4	134.0	17.3	-28.50	585.0	290.9	3,674.1	3,591.1	82.97	44.284	
11,600.0	6,578.5	6,150.0	6,089.4	136.3	17.3	-28.50	585.0	290.9	3,757.2	3,673.0	84.20	44.623	
11,614.1	6,578.5	6,150.0	6,089.4	136.7	17.3	-28.50	585.0	290.9	3,771.2	3,686.8	84.41	44.678	
11,700.0	6,577.4	6,150.0	6,089.4	139.1	17.3	-28.50	585.0	290.9	3,855.9	3,770.3	85.66	45.012	
11,712.6	6,577.2	6,150.0	6,089.4	139.5	17.3	-28.50	585.0	290.9	3,868.3	3,782.5	85.85	45.060	
11,800.0	6,576.1	6,150.0	6,089.4	141.9	17.3	-28.50	585.0	290.9	3,954.7	3,867.6	87.13	45.388	
11,811.0	6,575.9	6,150.0	6,089.4	142.2	17.3	-28.50	585.0	290.9	3,965.6	3,878.3	87.29	45.429	
11,882.7	6,575.0	6,150.0	6,089.4	144.2	17.3	-28.50	585.0	290.9	4,036.4	3,948.1	88.34	45.690	
11,883.5	6,575.0	6,150.0	6,089.4	144.2	17.3	-28.50	585.0	290.9	4,037.2	3,948.9	88.35	45.696	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-179.47	-60.1	-0.6	60.1				
98.4	98.4	98.4	98.4	0.1	0.1	-179.47	-60.1	-0.6	60.1	59.9	0.19	312.624	
100.0	100.0	100.0	100.0	0.1	0.1	-179.47	-60.1	-0.6	60.1	59.9	0.20	307.332	
196.8	196.8	196.8	196.8	0.3	0.3	-179.47	-60.1	-0.6	60.1	59.5	0.63	95.254	
200.0	200.0	200.0	200.0	0.3	0.3	-179.47	-60.1	-0.6	60.1	59.5	0.65	93.164	
295.3	295.3	295.3	295.3	0.5	0.5	-179.47	-60.1	-0.6	60.1	59.0	1.07	55.990	
300.0	300.0	300.0	300.0	0.5	0.5	-179.47	-60.1	-0.6	60.1	59.0	1.09	54.903	
393.7	393.7	393.7	393.7	0.8	0.8	-179.47	-60.1	-0.6	60.1	58.6	1.52	39.647	
400.0	400.0	400.0	400.0	0.8	0.8	-179.47	-60.1	-0.6	60.1	58.6	1.54	38.920	
492.1	492.1	492.1	492.1	1.0	1.0	-179.47	-60.1	-0.6	60.1	58.1	1.96	30.689	
500.0	500.0	500.0	500.0	1.0	1.0	-179.47	-60.1	-0.6	60.1	58.1	1.99	30.144	
590.5	590.5	590.5	590.5	1.2	1.2	-179.47	-60.1	-0.6	60.1	57.7	2.40	25.033	
600.0	600.0	600.0	600.0	1.2	1.2	-179.47	-60.1	-0.6	60.1	57.7	2.44	24.598	
689.0	689.0	689.0	689.0	1.4	1.4	-179.47	-60.1	-0.6	60.1	57.3	2.84	21.138	
700.0	700.0	700.0	700.0	1.4	1.4	-179.47	-60.1	-0.6	60.1	57.2	2.89	20.775	
787.4	787.4	787.4	787.4	1.6	1.6	-179.47	-60.1	-0.6	60.1	56.8	3.29	18.291	
800.0	800.0	800.0	800.0	1.7	1.7	-179.47	-60.1	-0.6	60.1	56.8	3.34	17.981	
885.8	885.8	885.8	885.8	1.9	1.9	-179.47	-60.1	-0.6	60.1	56.4	3.73	16.120	
900.0	900.0	900.0	900.0	1.9	1.9	-179.47	-60.1	-0.6	60.1	56.3	3.79	15.849	
984.2	984.2	984.2	984.2	2.1	2.1	-179.47	-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	-179.47	-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	-179.47	-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	-179.47	-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	-179.47	-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	-179.47	-60.1	-0.6	60.1	55.0	5.14	11.691 CC	
1,279.5	1,279.5	1,279.3	1,279.3	2.7	2.7	-178.43	-60.2	-1.7	60.2	54.7	5.49	10.977	
1,300.0	1,300.0	1,299.8	1,299.7	2.8	2.8	-177.83	-60.3	-2.3	60.3	54.7	5.57	10.817 ES	
1,377.9	1,377.9	1,377.4	1,377.2	3.0	2.9	-174.32	-60.6	-6.0	60.9	55.0	5.90	10.313	
1,400.0	1,400.0	1,399.3	1,399.1	3.0	3.0	-173.00	-60.7	-7.5	61.2	55.2	6.00	10.201	
1,476.4	1,476.4	1,475.0	1,474.6	3.2	3.1	-93.16	-61.3	-13.7	62.9	56.5	6.33	9.934	
1,500.0	1,500.0	1,498.4	1,497.9	3.2	3.2	-91.78	-61.5	-16.0	63.6	57.2	6.43	9.895	
1,574.8	1,574.7	1,572.4	1,571.4	3.4	3.4	-87.69	-62.3	-24.6	66.6	59.9	6.76	9.862	
1,600.0	1,599.8	1,597.3	1,596.1	3.4	3.4	-86.42	-62.6	-28.0	67.9	61.0	6.87	9.884	
1,673.2	1,672.8	1,669.6	1,667.5	3.6	3.6	-83.11	-63.6	-38.8	72.1	64.9	7.21	9.994	
1,700.0	1,699.5	1,696.0	1,693.5	3.7	3.7	-82.03	-64.0	-43.2	73.8	66.5	7.33	10.061	
1,771.6	1,770.6	1,766.4	1,762.8	3.8	3.9	-79.48	-65.1	-56.1	78.9	71.2	7.70	10.256	
1,800.0	1,798.7	1,794.3	1,790.0	3.9	4.0	-78.60	-65.7	-61.7	81.2	73.3	7.84	10.353	
1,870.1	1,868.0	1,863.0	1,857.1	4.1	4.2	-76.74	-67.0	-76.6	87.1	78.9	8.23	10.587	
1,900.0	1,897.5	1,892.3	1,885.5	4.2	4.3	-76.06	-67.6	-83.5	89.8	81.4	8.39	10.702	
1,968.5	1,964.8	1,959.2	1,950.3	4.4	4.6	-74.75	-69.1	-100.2	96.4	87.6	8.81	10.941	
2,000.0	1,995.6	1,989.9	1,979.9	4.5	4.7	-74.25	-69.9	-108.3	99.6	90.6	9.00	11.062	
2,066.9	2,060.9	2,056.4	2,043.9	4.7	5.0	-73.68	-71.5	-126.4	106.4	96.9	9.47	11.232	
2,100.0	2,093.1	2,089.4	2,075.6	4.8	5.2	-73.71	-72.3	-135.4	109.5	99.8	9.70	11.288	
2,165.3	2,156.3	2,154.4	2,138.2	5.1	5.5	-74.30	-74.0	-153.1	115.5	105.3	10.22	11.304	
2,200.0	2,189.6	2,188.9	2,171.4	5.2	5.6	-74.87	-74.8	-162.5	118.5	108.0	10.50	11.287	
2,263.8	2,250.7	2,252.4	2,232.4	5.5	6.0	-76.33	-76.4	-179.7	123.9	112.8	11.08	11.181	
2,280.0	2,266.2	2,268.5	2,248.0	5.6	6.0	-76.79	-76.8	-184.1	125.2	113.9	11.23	11.148	
2,300.0	2,285.3	2,288.4	2,267.1	5.7	6.1	-77.39	-77.3	-189.5	126.8	115.4	11.42	11.101	
2,362.2	2,344.6	2,350.3	2,326.6	6.0	6.5	-79.16	-78.8	-206.3	131.9	119.9	12.04	10.954	
2,400.0	2,380.6	2,387.9	2,362.8	6.2	6.7	-80.17	-79.7	-216.6	135.1	122.7	12.43	10.872	
2,460.6	2,438.4	2,448.2	2,420.8	6.5	7.0	-81.69	-81.2	-233.0	140.3	127.2	13.06	10.740	
2,500.0	2,475.9	2,487.3	2,458.4	6.7	7.2	-82.63	-82.2	-243.6	143.7	130.2	13.48	10.662	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,546.0	2,514.9	7.0	7.5	-83.94	-83.6	-259.6	148.9	134.8	14.12	10.546	
2,600.0	2,571.2	2,586.8	2,554.1	7.2	7.7	-84.80	-84.6	-270.7	152.5	138.0	14.56	10.473	
2,657.5	2,626.0	2,643.9	2,609.1	7.5	8.0	-85.94	-86.1	-286.2	157.7	142.5	15.20	10.372	
2,700.0	2,666.6	2,686.2	2,649.8	7.8	8.2	-86.74	-87.1	-297.7	161.5	145.9	15.68	10.305	
2,755.9	2,719.8	2,741.8	2,703.3	8.1	8.5	-87.73	-88.5	-312.8	166.6	150.3	16.31	10.219	
2,800.0	2,761.9	2,785.7	2,745.5	8.3	8.8	-88.47	-89.6	-324.8	170.7	153.9	16.81	10.158	
2,854.3	2,813.7	2,839.7	2,797.4	8.7	9.1	-89.33	-90.9	-339.5	175.8	158.3	17.43	10.085	
2,900.0	2,857.2	2,885.1	2,841.1	8.9	9.3	-90.02	-92.0	-351.8	180.0	162.1	17.95	10.029	
2,952.7	2,907.5	2,937.6	2,891.6	9.2	9.6	-90.78	-93.3	-366.1	185.0	166.4	18.56	9.967	
3,000.0	2,952.5	2,984.6	2,936.8	9.5	9.9	-91.42	-94.5	-378.9	189.5	170.4	19.11	9.916	
3,051.2	3,001.3	3,035.5	2,985.8	9.8	10.2	-92.09	-95.7	-392.7	194.3	174.6	19.70	9.863	
3,100.0	3,047.8	3,084.0	3,032.5	10.1	10.4	-92.69	-96.9	-405.9	199.0	178.7	20.27	9.817	
3,149.6	3,095.1	3,133.4	3,079.9	10.4	10.7	-93.27	-98.2	-419.3	203.8	182.9	20.85	9.772	
3,200.0	3,143.2	3,183.5	3,128.1	10.7	11.0	-93.84	-99.4	-433.0	208.6	187.2	21.44	9.730	
3,248.0	3,188.9	3,231.2	3,174.1	11.0	11.3	-94.36	-100.6	-445.9	213.3	191.3	22.01	9.692	
3,300.0	3,238.5	3,282.9	3,223.8	11.3	11.6	-94.89	-101.9	-460.0	218.3	195.7	22.62	9.653	
3,346.4	3,282.8	3,329.1	3,268.2	11.6	11.8	-95.34	-103.0	-472.6	222.9	199.7	23.17	9.621	
3,400.0	3,333.8	3,382.4	3,319.5	11.9	12.1	-95.85	-104.3	-487.1	228.1	204.3	23.80	9.586	
3,444.9	3,376.6	3,427.0	3,362.4	12.2	12.4	-96.25	-105.4	-499.2	232.5	208.2	24.33	9.558	
3,500.0	3,429.1	3,481.8	3,415.2	12.6	12.7	-96.73	-106.8	-514.1	237.9	213.0	24.98	9.526	
3,543.3	3,470.4	3,524.9	3,456.6	12.8	13.0	-97.09	-107.8	-525.8	242.2	216.7	25.49	9.502	
3,600.0	3,524.4	3,581.3	3,510.8	13.2	13.3	-97.54	-109.2	-541.1	247.8	221.7	26.16	9.472	
3,641.7	3,564.2	3,622.8	3,550.7	13.4	13.5	-97.86	-110.3	-552.4	252.0	225.3	26.66	9.452	
3,700.0	3,619.8	3,680.7	3,606.5	13.8	13.8	-98.29	-111.7	-568.2	257.8	230.4	27.35	9.425	
3,740.1	3,658.0	3,720.7	3,644.9	14.0	14.1	-98.57	-112.7	-579.1	261.8	233.9	27.82	9.407	
3,800.0	3,715.1	3,780.2	3,702.2	14.4	14.4	-98.98	-114.1	-595.2	267.7	239.2	28.53	9.382	
3,838.6	3,751.8	3,818.6	3,739.1	14.7	14.6	-99.23	-115.1	-605.7	271.6	242.6	28.99	9.367	
3,900.0	3,810.4	3,879.6	3,797.8	15.0	15.0	-99.62	-116.6	-622.3	277.7	248.0	29.72	9.344	
3,937.0	3,845.7	3,916.4	3,833.2	15.3	15.2	-99.85	-117.5	-632.3	281.4	251.3	30.16	9.331	
4,000.0	3,905.7	3,979.1	3,893.5	15.7	15.6	-100.22	-119.1	-649.3	287.8	256.8	30.91	9.310	
4,035.4	3,939.5	4,014.3	3,927.4	15.9	15.8	-100.42	-119.9	-658.9	291.3	260.0	31.33	9.298	
4,100.0	4,001.0	4,078.5	3,989.2	16.3	16.1	-100.78	-121.5	-676.4	297.8	265.7	32.10	9.278	
4,133.8	4,033.3	4,112.2	4,021.6	16.5	16.3	-100.96	-122.4	-685.6	301.2	268.7	32.50	9.269	
4,200.0	4,096.3	4,178.0	4,084.8	16.9	16.7	-101.30	-124.0	-703.4	307.9	274.6	33.29	9.250	
4,232.3	4,127.1	4,210.1	4,115.7	17.1	16.9	-101.46	-124.8	-712.2	311.2	277.5	33.67	9.242	
4,300.0	4,191.7	4,277.5	4,180.5	17.6	17.3	-101.79	-126.4	-730.5	318.0	283.5	34.48	9.225	
4,330.7	4,220.9	4,308.0	4,209.9	17.8	17.5	-101.93	-127.2	-738.8	321.1	286.3	34.84	9.217	
4,400.0	4,287.0	4,376.9	4,276.2	18.2	17.9	-102.25	-128.9	-757.5	328.2	292.5	35.66	9.201	
4,429.1	4,314.7	4,405.9	4,304.1	18.4	18.0	-102.37	-129.6	-765.4	331.1	295.1	36.01	9.195	
4,500.0	4,382.3	4,476.4	4,371.9	18.8	18.5	-102.68	-131.4	-784.6	338.3	301.5	36.85	9.180	
4,527.5	4,408.6	4,503.8	4,398.2	19.0	18.6	-102.79	-132.0	-792.0	341.1	303.9	37.18	9.174	
4,600.0	4,477.6	4,575.8	4,467.5	19.5	19.0	-103.08	-133.8	-811.6	348.5	310.4	38.04	9.160	
4,626.0	4,502.4	4,601.6	4,492.4	19.6	19.2	-103.18	-134.5	-818.7	351.1	312.8	38.35	9.156	
4,700.0	4,572.9	4,675.3	4,563.2	20.1	19.6	-103.46	-136.3	-838.7	358.7	319.4	39.23	9.143	
4,724.4	4,596.2	4,699.5	4,586.5	20.3	19.8	-103.55	-136.9	-845.3	361.2	321.6	39.52	9.138	
4,800.0	4,668.3	4,774.7	4,658.9	20.7	20.2	-103.83	-138.7	-865.7	368.9	328.5	40.42	9.126	
4,822.8	4,690.0	4,797.4	4,680.7	20.9	20.3	-103.91	-139.3	-871.9	371.2	330.5	40.69	9.122	
4,900.0	4,763.6	4,874.2	4,754.5	21.4	20.8	-104.17	-141.2	-892.8	379.1	337.5	41.61	9.111	
4,921.2	4,783.8	4,895.3	4,774.9	21.5	20.9	-104.24	-141.7	-898.5	381.3	339.4	41.86	9.108	
5,000.0	4,858.9	4,973.6	4,850.2	22.0	21.4	-104.49	-143.7	-919.8	389.3	346.5	42.80	9.097	
5,019.7	4,877.7	4,993.2	4,869.0	22.1	21.5	-104.55	-144.1	-925.2	391.3	348.3	43.03	9.094	
5,100.0	4,954.2	5,073.1	4,945.9	22.6	21.9	-104.80	-146.1	-946.9	399.6	355.6	43.99	9.084	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	5,091.1	4,963.2	22.8	22.0	-104.85	-146.6	-951.8	401.4	357.2	44.20	9.082	
5,171.8	5,022.7	5,144.5	5,014.6	23.1	22.3	-105.01	-147.9	-966.3	406.9	362.1	44.84	9.075	
5,200.0	5,049.6	5,172.5	5,041.6	23.3	22.5	-105.13	-148.6	-973.9	409.8	364.6	45.16	9.075	
5,216.5	5,065.4	5,189.0	5,057.4	23.3	22.6	-105.18	-149.0	-978.4	411.4	366.1	45.33	9.077	
5,300.0	5,145.7	5,272.4	5,137.7	23.7	23.1	-105.25	-151.0	-1,000.9	419.3	373.1	46.16	9.083	
5,314.9	5,160.1	5,287.5	5,152.2	23.8	23.1	-105.26	-151.4	-1,004.8	420.6	374.3	46.30	9.085	
5,400.0	5,242.7	5,373.1	5,235.4	24.1	23.5	-105.27	-153.3	-1,025.5	427.7	380.7	47.00	9.100	
5,413.4	5,255.7	5,386.6	5,248.5	24.2	23.5	-105.27	-153.5	-1,028.6	428.8	381.7	47.10	9.103	
5,500.0	5,340.5	5,474.0	5,334.0	24.5	23.9	-105.28	-155.2	-1,046.7	435.0	387.2	47.73	9.113	
5,511.8	5,352.1	5,485.9	5,345.7	24.5	23.9	-105.28	-155.4	-1,049.0	435.8	387.9	47.81	9.114	
5,600.0	5,439.0	5,575.1	5,433.4	24.8	24.2	-105.30	-156.8	-1,064.5	441.0	392.7	48.37	9.119	
5,610.2	5,449.1	5,585.4	5,443.6	24.8	24.2	-105.30	-156.9	-1,066.1	441.6	393.2	48.42	9.119	
5,700.0	5,538.0	5,676.2	5,533.5	25.1	24.4	-105.31	-158.1	-1,078.7	445.9	397.0	48.91	9.117	
5,708.6	5,546.6	5,684.9	5,542.2	25.1	24.5	-105.31	-158.2	-1,079.8	446.3	397.3	48.95	9.117	
5,800.0	5,637.4	5,777.4	5,634.1	25.3	24.7	-105.32	-159.1	-1,089.5	449.6	400.2	49.36	9.109	
5,807.1	5,644.5	5,784.6	5,641.3	25.3	24.7	-105.32	-159.1	-1,090.1	449.8	400.4	49.38	9.108	
5,900.0	5,737.2	5,878.7	5,735.2	25.5	24.9	-105.32	-159.7	-1,096.6	452.0	402.3	49.71	9.092	
5,905.5	5,742.6	5,884.2	5,740.7	25.5	24.9	-105.32	-159.7	-1,096.9	452.1	402.4	49.73	9.091	
6,000.0	5,837.1	5,980.0	5,836.4	25.6	25.0	-105.33	-160.1	-1,100.3	453.2	403.3	49.98	9.068	
6,003.9	5,841.0	5,984.0	5,840.4	25.6	25.0	-105.33	-160.1	-1,100.3	453.3	403.3	49.99	9.067	
6,051.8	5,888.9	6,032.5	5,888.9	25.7	25.0	179.55	-160.1	-1,100.8	453.4	423.0	30.38	14.925	
6,071.8	5,908.9	6,052.5	5,908.9	25.7	25.1	179.55	-160.1	-1,100.8	453.4	423.0	30.44	14.893	
6,081.8	5,918.9	6,062.5	5,918.9	25.7	25.1	179.55	-160.1	-1,100.8	453.4	422.9	30.48	14.877	
6,100.0	5,937.1	6,080.6	5,937.0	25.7	25.1	89.55	-160.1	-1,100.5	453.4	403.2	50.18	9.035	
6,102.3	5,939.4	6,082.9	5,939.3	25.7	25.1	89.55	-160.1	-1,100.5	453.4	403.2	50.19	9.035	
6,150.0	5,987.0	6,130.3	5,986.6	25.7	25.1	89.55	-160.1	-1,097.5	453.4	403.2	50.21	9.030	
6,200.0	6,036.5	6,180.1	6,036.0	25.7	25.1	89.55	-160.1	-1,091.1	453.4	403.2	50.16	9.038	
6,200.8	6,037.3	6,180.9	6,036.7	25.7	25.1	89.55	-160.1	-1,091.0	453.4	403.2	50.16	9.039	
6,250.0	6,085.5	6,229.8	6,084.7	25.7	25.0	89.56	-160.1	-1,081.3	453.4	403.4	50.06	9.058	
6,299.2	6,133.0	6,278.8	6,131.9	25.6	24.9	89.57	-160.1	-1,068.3	453.4	403.5	49.90	9.087	
6,300.0	6,133.7	6,279.6	6,132.7	25.6	24.9	89.57	-160.1	-1,068.1	453.4	403.5	49.89	9.087	
6,350.0	6,180.9	6,329.4	6,179.6	25.5	24.8	89.58	-160.1	-1,051.6	453.4	403.7	49.69	9.125	
6,397.6	6,224.6	6,376.8	6,223.2	25.4	24.7	89.59	-160.1	-1,032.9	453.4	403.9	49.46	9.167	
6,400.0	6,226.7	6,379.1	6,225.3	25.4	24.7	89.59	-160.1	-1,031.9	453.4	404.0	49.45	9.169	
6,450.0	6,271.1	6,428.9	6,269.5	25.2	24.6	89.61	-160.1	-1,009.0	453.4	404.2	49.19	9.217	
6,496.0	6,310.4	6,474.8	6,308.8	25.1	24.5	89.62	-160.1	-985.3	453.4	404.5	48.95	9.263	
6,500.0	6,313.7	6,478.7	6,312.1	25.1	24.5	89.62	-160.1	-983.2	453.4	404.5	48.93	9.267	
6,550.0	6,354.4	6,528.5	6,352.7	25.0	24.3	89.64	-160.1	-954.4	453.4	404.7	48.67	9.316	
6,594.5	6,388.9	6,572.8	6,387.1	24.9	24.2	89.66	-160.1	-926.5	453.4	404.9	48.47	9.355	
6,600.0	6,393.0	6,578.3	6,391.3	24.9	24.2	89.66	-160.1	-922.9	453.4	405.0	48.44	9.360	
6,650.0	6,429.3	6,628.1	6,427.5	24.8	24.1	89.68	-160.1	-888.8	453.4	405.1	48.26	9.395	
6,692.9	6,458.5	6,670.9	6,456.7	24.7	24.0	89.70	-160.1	-857.5	453.4	405.3	48.15	9.416	
6,700.0	6,463.1	6,678.0	6,461.4	24.7	24.0	89.71	-160.1	-852.2	453.4	405.3	48.14	9.419	
6,750.0	6,494.3	6,727.8	6,492.6	24.7	24.0	89.73	-160.1	-813.3	453.4	405.3	48.09	9.428	
6,791.3	6,517.9	6,769.0	6,516.3	24.7	24.0	89.75	-160.1	-779.6	453.4	405.3	48.13	9.420	
6,800.0	6,522.6	6,777.7	6,521.0	24.7	24.0	89.76	-160.1	-772.4	453.4	405.3	48.15	9.417	
6,850.0	6,548.0	6,827.5	6,546.5	24.7	24.1	89.78	-160.1	-729.5	453.4	405.1	48.31	9.385	
6,889.7	6,566.0	6,867.2	6,564.6	24.8	24.2	89.81	-160.1	-694.3	453.4	404.9	48.53	9.342	
6,900.0	6,570.4	6,877.4	6,569.0	24.9	24.2	89.81	-160.1	-685.0	453.4	404.8	48.60	9.330	
6,950.0	6,589.5	6,927.3	6,588.3	25.1	24.4	89.84	-160.1	-639.0	453.4	404.4	49.02	9.250	
6,988.2	6,602.0	6,965.4	6,600.9	25.3	24.6	89.86	-160.1	-603.1	453.4	404.0	49.43	9.172	
7,000.0	6,605.4	6,977.2	6,604.4	25.3	24.7	89.87	-160.1	-591.8	453.4	403.8	49.57	9.147	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,050.0	6,618.0	7,027.2	6,617.2	25.6	25.0	89.90	-160.1	-543.5	453.4	403.1	50.25	9.022	
7,086.6	6,625.0	7,063.7	6,624.4	25.9	25.3	89.92	-160.1	-507.7	453.4	402.6	50.84	8.918	
7,100.0	6,627.1	7,077.1	6,626.6	26.0	25.4	89.93	-160.1	-494.5	453.4	402.3	51.07	8.878	
7,150.0	6,632.8	7,127.1	6,632.5	26.5	25.8	89.96	-160.1	-444.9	453.4	401.4	52.00	8.719	
7,185.0	6,634.7	7,162.1	6,634.6	26.8	26.2	89.99	-160.1	-409.9	453.4	400.7	52.72	8.600	
7,200.0	6,635.0	7,177.1	6,635.0	27.0	26.3	89.99	-160.1	-394.9	453.4	400.4	53.04	8.548	
7,208.1	6,635.1	7,185.2	6,635.1	27.0	26.4	90.00	-160.1	-386.8	453.4	400.2	53.22	8.520	
7,215.9	6,635.0	7,193.0	6,635.0	27.1	26.5	90.00	-160.1	-379.0	453.4	400.0	53.39	8.493	
7,283.4	6,634.1	7,260.5	6,634.2	27.9	27.3	90.01	-160.1	-311.5	453.4	398.4	55.04	8.237	
7,300.0	6,633.9	7,277.1	6,634.0	28.1	27.5	90.01	-160.1	-294.9	453.4	397.9	55.45	8.177	
7,381.9	6,632.9	7,359.0	6,632.9	29.3	28.6	90.01	-160.1	-213.1	453.4	395.6	57.76	7.849	
7,400.0	6,632.6	7,377.1	6,632.7	29.5	28.9	90.01	-160.1	-195.0	453.4	395.1	58.29	7.779	
7,480.3	6,631.6	7,457.4	6,631.7	30.8	30.2	90.01	-160.1	-114.7	453.4	392.5	60.86	7.449	
7,500.0	6,631.4	7,477.1	6,631.4	31.1	30.5	90.01	-160.1	-95.0	453.4	391.9	61.51	7.371	
7,578.7	6,630.4	7,555.8	6,630.4	32.5	31.9	90.01	-160.1	-16.2	453.4	389.1	64.29	7.052	
7,600.0	6,630.1	7,577.1	6,630.1	32.9	32.2	90.01	-160.1	5.0	453.4	388.3	65.05	6.970	
7,677.1	6,629.1	7,654.2	6,629.2	34.3	33.7	90.01	-160.1	82.2	453.4	385.4	68.00	6.668	
7,700.0	6,628.8	7,677.1	6,628.9	34.8	34.1	90.01	-160.1	105.0	453.4	384.5	68.88	6.583	
7,775.6	6,627.8	7,752.7	6,627.9	36.3	35.7	90.01	-160.1	180.6	453.4	381.5	71.94	6.303	
7,800.0	6,627.5	7,777.1	6,627.6	36.8	36.2	90.01	-160.1	205.0	453.4	380.5	72.94	6.216	
7,874.0	6,626.6	7,851.1	6,626.6	38.4	37.7	90.01	-160.1	279.0	453.4	377.3	76.08	5.960	
7,900.0	6,626.3	7,877.1	6,626.3	38.9	38.3	90.01	-160.1	305.0	453.4	376.2	77.19	5.874	
7,972.4	6,625.3	7,949.5	6,625.4	40.5	39.9	90.01	-160.1	377.4	453.4	373.0	80.39	5.640	
8,000.0	6,625.0	7,977.1	6,625.0	41.1	40.5	90.01	-160.1	405.0	453.4	371.8	81.61	5.556	
8,070.8	6,624.1	8,047.9	6,624.1	42.7	42.1	90.01	-160.1	475.8	453.4	368.6	84.84	5.344	
8,100.0	6,623.7	8,077.1	6,623.7	43.4	42.8	90.01	-160.1	505.0	453.4	367.2	86.17	5.262	
8,169.3	6,622.8	8,146.4	6,622.9	45.0	44.4	90.01	-160.1	574.3	453.4	364.0	89.41	5.071	
8,200.0	6,622.4	8,177.1	6,622.5	45.7	45.1	90.01	-160.1	605.0	453.4	362.5	90.85	4.991	
8,267.7	6,621.6	8,244.8	6,621.6	47.4	46.7	90.01	-160.1	672.7	453.4	359.3	94.08	4.819	
8,300.0	6,621.1	8,277.1	6,621.2	48.1	47.5	90.01	-160.1	705.0	453.4	357.8	95.63	4.741	
8,366.1	6,620.3	8,343.2	6,620.3	49.7	49.1	90.01	-160.1	771.1	453.4	354.6	98.84	4.587	
8,400.0	6,619.9	8,377.1	6,619.9	50.6	49.9	90.01	-160.1	805.0	453.4	352.9	100.50	4.512	
8,464.5	6,619.0	8,441.6	6,619.1	52.2	51.5	90.01	-160.1	869.5	453.4	349.7	103.68	4.373	
8,500.0	6,618.6	8,477.1	6,618.6	53.0	52.4	90.01	-160.1	905.0	453.4	348.0	105.44	4.300	
8,563.0	6,617.8	8,540.1	6,617.8	54.6	54.0	90.01	-160.1	967.9	453.4	344.8	108.59	4.175	
8,600.0	6,617.3	8,577.1	6,617.3	55.5	54.9	90.01	-160.1	1,005.0	453.4	342.9	110.45	4.105	
8,661.4	6,616.5	8,638.5	6,616.5	57.1	56.5	90.01	-160.1	1,066.3	453.4	339.8	113.55	3.993	
8,700.0	6,616.0	8,677.1	6,616.1	58.1	57.4	90.01	-160.1	1,104.9	453.4	337.9	115.51	3.925	
8,759.8	6,615.2	8,736.9	6,615.3	59.6	59.0	90.00	-160.1	1,164.8	453.4	334.8	118.57	3.824	
8,800.0	6,614.7	8,777.1	6,614.8	60.6	60.0	90.00	-160.1	1,204.9	453.4	332.8	120.62	3.759	
8,858.2	6,614.0	8,835.3	6,614.0	62.1	61.5	90.00	-160.1	1,263.2	453.4	329.8	123.63	3.667	
8,900.0	6,613.4	8,877.1	6,613.5	63.2	62.6	90.00	-160.1	1,304.9	453.4	327.6	125.78	3.605	
8,956.7	6,612.7	8,933.8	6,612.8	64.7	64.0	90.00	-160.1	1,361.6	453.4	324.7	128.72	3.522	
9,000.0	6,612.2	8,977.1	6,612.2	65.8	65.2	90.00	-160.1	1,404.9	453.4	322.4	130.98	3.462	
9,055.1	6,611.5	9,032.2	6,611.5	67.3	66.6	90.00	-160.1	1,460.0	453.4	319.5	133.86	3.387	
9,100.0	6,610.9	9,077.1	6,610.9	68.4	67.8	90.00	-160.1	1,504.9	453.4	317.2	136.20	3.329	
9,153.5	6,610.2	9,130.6	6,610.2	69.8	69.2	90.00	-160.1	1,558.4	453.4	314.4	139.02	3.261	
9,200.0	6,609.6	9,177.1	6,609.6	71.1	70.4	90.00	-160.1	1,604.9	453.4	311.9	141.46	3.205	
9,251.9	6,608.9	9,229.0	6,609.0	72.4	71.8	90.00	-160.1	1,656.8	453.4	309.2	144.21	3.144	
9,300.0	6,608.3	9,277.1	6,608.3	73.7	73.1	90.00	-160.1	1,704.9	453.4	306.6	146.75	3.090	
9,350.4	6,607.7	9,327.5	6,607.7	75.0	74.4	90.00	-160.1	1,755.3	453.4	304.0	149.42	3.034	
9,400.0	6,607.0	9,377.1	6,607.1	76.4	75.7	90.00	-160.1	1,804.9	453.4	301.3	152.06	2.982	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	
9,448.8	6,606.4	9,425.9	6,606.4	77.7	77.0	90.00	-160.1	1,853.7	453.4	298.7	154.66	2.932	
9,500.0	6,605.7	9,477.1	6,605.8	79.0	78.4	90.00	-160.1	1,904.9	453.4	296.0	157.39	2.881	
9,547.2	6,605.1	9,524.3	6,605.2	80.3	79.6	90.00	-160.1	1,952.1	453.4	293.5	159.92	2.835	
9,600.0	6,604.5	9,577.1	6,604.5	81.7	81.0	90.00	-160.1	2,004.9	453.4	290.7	162.74	2.786	
9,645.6	6,603.9	9,622.7	6,603.9	82.9	82.3	90.00	-160.1	2,050.5	453.4	288.2	165.19	2.745	
9,700.0	6,603.2	9,677.1	6,603.2	84.4	83.7	90.00	-160.1	2,104.9	453.4	285.3	168.11	2.697	
9,744.1	6,602.6	9,721.2	6,602.6	85.6	84.9	90.00	-160.1	2,148.9	453.4	282.9	170.48	2.659	
9,800.0	6,601.9	9,777.1	6,601.9	87.1	86.4	90.00	-160.1	2,204.9	453.4	279.9	173.49	2.613	
9,842.5	6,601.3	9,819.6	6,601.4	88.2	87.6	90.00	-160.1	2,247.3	453.4	277.6	175.79	2.579	
9,900.0	6,600.6	9,877.1	6,600.6	89.8	89.1	90.00	-160.1	2,304.8	453.4	274.5	178.89	2.534	
9,940.9	6,600.1	9,918.0	6,600.1	90.9	90.2	90.00	-160.1	2,345.8	453.4	272.3	181.11	2.503	
10,000.0	6,599.3	9,977.1	6,599.3	92.5	91.8	90.00	-160.1	2,404.8	453.4	269.1	184.31	2.460	
10,039.3	6,598.8	10,016.4	6,598.8	93.5	92.9	90.00	-160.1	2,444.2	453.4	267.0	186.44	2.432	
10,100.0	6,598.0	10,077.1	6,598.0	95.2	94.5	90.00	-160.1	2,504.8	453.4	263.7	189.73	2.390	
10,137.8	6,597.5	10,114.9	6,597.6	96.2	95.6	90.00	-160.1	2,542.6	453.4	261.6	191.78	2.364	
10,200.0	6,596.7	10,177.1	6,596.8	97.9	97.3	90.00	-160.1	2,604.8	453.4	258.2	195.17	2.323	
10,236.2	6,596.3	10,213.3	6,596.3	98.9	98.3	90.00	-160.1	2,641.0	453.4	256.3	197.14	2.300	
10,300.0	6,595.4	10,277.1	6,595.5	100.6	100.0	90.00	-160.1	2,704.8	453.4	252.8	200.61	2.260	
10,334.6	6,595.0	10,311.7	6,595.0	101.6	100.9	90.00	-160.1	2,739.4	453.4	250.9	202.50	2.239	
10,400.0	6,594.2	10,377.1	6,594.2	103.4	102.7	90.00	-160.1	2,804.8	453.4	247.3	206.07	2.200	
10,433.0	6,593.7	10,410.1	6,593.7	104.3	103.6	90.00	-160.1	2,837.8	453.4	245.5	207.87	2.181	
10,500.0	6,592.9	10,477.1	6,592.9	106.1	105.4	90.00	-160.1	2,904.8	453.4	241.9	211.53	2.143	
10,531.5	6,592.5	10,508.6	6,592.5	106.9	106.3	90.00	-160.1	2,936.3	453.4	240.1	213.25	2.126	
10,600.0	6,591.6	10,577.1	6,591.6	108.8	108.2	90.00	-160.1	3,004.8	453.4	236.4	217.00	2.089	
10,629.9	6,591.2	10,607.0	6,591.2	109.6	109.0	90.00	-160.1	3,034.7	453.4	234.8	218.64	2.074	
10,700.0	6,590.3	10,677.1	6,590.3	111.6	110.9	90.00	-160.1	3,104.8	453.4	230.9	222.48	2.038	
10,728.3	6,589.9	10,705.4	6,589.9	112.3	111.7	90.00	-160.1	3,133.1	453.4	229.4	224.04	2.024	
10,800.0	6,589.0	10,777.1	6,589.0	114.3	113.7	90.00	-160.1	3,204.8	453.4	225.4	227.97	1.989	
10,826.7	6,588.7	10,803.8	6,588.7	115.0	114.4	90.00	-160.1	3,231.5	453.4	224.0	229.44	1.976	
10,900.0	6,587.7	10,877.1	6,587.7	117.1	116.4	90.00	-160.1	3,304.8	453.4	219.9	233.46	1.942	
10,925.2	6,587.4	10,902.3	6,587.4	117.7	117.1	90.00	-160.1	3,329.9	453.4	218.5	234.85	1.931	
11,000.0	6,586.4	10,977.1	6,586.4	119.8	119.2	90.00	-160.1	3,404.8	453.4	214.4	238.96	1.897	
11,023.6	6,586.1	11,000.7	6,586.1	120.4	119.8	90.00	-160.1	3,428.3	453.4	213.1	240.26	1.887	
11,100.0	6,585.1	11,077.1	6,585.1	122.6	121.9	90.00	-160.1	3,504.7	453.4	208.9	244.46	1.855	
11,122.0	6,584.8	11,099.1	6,584.8	123.2	122.5	90.00	-160.1	3,526.8	453.4	207.7	245.68	1.845	
11,200.0	6,583.8	11,177.1	6,583.8	125.3	124.7	90.00	-160.1	3,604.7	453.4	203.4	249.97	1.814	
11,220.4	6,583.6	11,197.5	6,583.6	125.9	125.2	90.00	-160.1	3,625.2	453.4	202.3	251.10	1.806	
11,300.0	6,582.5	11,277.1	6,582.5	128.1	127.4	90.00	-160.1	3,704.7	453.4	197.9	255.49	1.775	
11,318.9	6,582.3	11,296.0	6,582.3	128.6	128.0	90.00	-160.1	3,723.6	453.4	196.9	256.53	1.767	
11,400.0	6,581.2	11,377.1	6,581.2	130.8	130.2	90.00	-160.1	3,804.7	453.4	192.4	261.01	1.737	
11,417.3	6,581.0	11,394.4	6,581.0	131.3	130.7	90.00	-160.1	3,822.0	453.4	191.4	261.96	1.731	
11,500.0	6,580.0	11,477.1	6,579.9	133.6	133.0	90.00	-160.1	3,904.7	453.4	186.9	266.53	1.701	
11,515.7	6,579.7	11,492.8	6,579.7	134.0	133.4	90.00	-160.1	3,920.4	453.4	186.0	267.40	1.696	
11,600.0	6,578.7	11,577.1	6,578.7	136.3	135.7	90.00	-160.1	4,004.7	453.4	181.3	272.06	1.667	
11,614.1	6,578.5	11,591.2	6,578.5	136.7	136.1	90.00	-160.1	4,018.9	453.4	180.6	272.84	1.662	
11,700.0	6,577.4	11,677.1	6,577.4	139.1	138.5	90.00	-160.1	4,104.7	453.4	175.8	277.59	1.633	
11,712.6	6,577.2	11,689.7	6,577.2	139.5	138.8	90.00	-160.1	4,117.3	453.4	175.1	278.28	1.629	
11,800.0	6,576.1	11,777.1	6,576.1	141.9	141.2	90.00	-160.1	4,204.7	453.4	170.3	283.12	1.601	
11,811.0	6,575.9	11,788.1	6,575.9	142.2	141.6	90.00	-160.1	4,215.7	453.4	169.7	283.73	1.598	
11,853.1	6,575.4	11,830.2	6,575.4	143.3	142.7	90.00	-160.1	4,257.8	453.4	167.3	286.06	1.585	
11,882.7	6,575.0	11,859.3	6,575.0	144.2	143.5	90.00	-160.1	4,286.9	453.4	165.7	287.68	1.576	
11,883.5	6,575.0	11,859.3	6,575.0	144.2	143.5	90.00	-160.1	4,286.9	453.4	165.7	287.70	1.576 SF	

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

## Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-179.29	-45.2	-0.6	45.2				
98.4	98.4	98.4	98.4	0.1	0.1	-179.29	-45.2	-0.6	45.2	45.0	0.19	234.928	
100.0	100.0	100.0	100.0	0.1	0.1	-179.29	-45.2	-0.6	45.2	45.0	0.20	230.952	
196.8	196.8	196.8	196.8	0.3	0.3	-179.29	-45.2	-0.6	45.2	44.5	0.63	71.581	
200.0	200.0	200.0	200.0	0.3	0.3	-179.29	-45.2	-0.6	45.2	44.5	0.65	70.010	
295.3	295.3	295.3	295.3	0.5	0.5	-179.29	-45.2	-0.6	45.2	44.1	1.07	42.075	
300.0	300.0	300.0	300.0	0.5	0.5	-179.29	-45.2	-0.6	45.2	44.1	1.09	41.258	
393.7	393.7	393.7	393.7	0.8	0.8	-179.29	-45.2	-0.6	45.2	43.6	1.52	29.794	
400.0	400.0	400.0	400.0	0.8	0.8	-179.29	-45.2	-0.6	45.2	43.6	1.54	29.247	
492.1	492.1	492.1	492.1	1.0	1.0	-179.29	-45.2	-0.6	45.2	43.2	1.96	23.062	
500.0	500.0	500.0	500.0	1.0	1.0	-179.29	-45.2	-0.6	45.2	43.2	1.99	22.653	
590.5	590.5	590.5	590.5	1.2	1.2	-179.29	-45.2	-0.6	45.2	42.8	2.40	18.812	
600.0	600.0	600.0	600.0	1.2	1.2	-179.29	-45.2	-0.6	45.2	42.7	2.44	18.485	
689.0	689.0	689.0	689.0	1.4	1.4	-179.29	-45.2	-0.6	45.2	42.3	2.84	15.884	
700.0	700.0	700.0	700.0	1.4	1.4	-179.29	-45.2	-0.6	45.2	42.3	2.89	15.612	
787.4	787.4	787.4	787.4	1.6	1.6	-179.29	-45.2	-0.6	45.2	41.9	3.29	13.745	
800.0	800.0	800.0	800.0	1.7	1.7	-179.29	-45.2	-0.6	45.2	41.8	3.34	13.512	
885.8	885.8	885.8	885.8	1.9	1.9	-179.29	-45.2	-0.6	45.2	41.4	3.73	12.114	
900.0	900.0	900.0	900.0	1.9	1.9	-179.29	-45.2	-0.6	45.2	41.4	3.79	11.910	
984.2	984.2	984.2	984.2	2.1	2.1	-179.29	-45.2	-0.6	45.2	41.0	4.17	10.829	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-179.29	-45.2	-0.6	45.2	40.9	4.24	10.648	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-179.29	-45.2	-0.6	45.2	40.5	4.61	9.790	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-179.29	-45.2	-0.6	45.2	40.5	4.69	9.628	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	-179.29	-45.2	-0.6	45.2	40.1	5.06	8.933	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-179.29	-45.2	-0.6	45.2	40.0	5.14	8.786	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	-179.29	-45.2	-0.6	45.2	39.7	5.50	8.214	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-179.29	-45.2	-0.6	45.2	39.6	5.59	8.079 CC, ES	
1,377.9	1,377.9	1,377.4	1,377.4	3.0	3.0	179.55	-45.7	0.4	45.7	39.7	5.92	7.710	
1,400.0	1,400.0	1,399.2	1,399.2	3.0	3.0	178.82	-46.0	1.0	46.0	40.0	6.02	7.645	
1,476.4	1,476.4	1,474.8	1,474.7	3.2	3.1	-110.89	-47.7	4.1	48.3	41.9	6.33	7.630 SF	
1,500.0	1,500.0	1,498.1	1,497.9	3.2	3.2	-113.09	-48.4	5.5	49.4	43.0	6.42	7.699	
1,574.8	1,574.7	1,571.4	1,571.0	3.4	3.3	-121.38	-51.3	10.7	55.1	48.4	6.73	8.198	
1,600.0	1,599.8	1,595.9	1,595.4	3.4	3.4	-124.40	-52.5	12.8	57.9	51.0	6.83	8.475	
1,673.2	1,672.8	1,666.5	1,665.5	3.6	3.5	-132.91	-56.4	20.0	68.4	61.3	7.13	9.596	
1,700.0	1,699.5	1,692.0	1,690.8	3.7	3.6	-135.78	-58.0	22.9	73.3	66.1	7.24	10.131	
1,771.6	1,770.6	1,759.4	1,757.5	3.8	3.8	-142.52	-62.8	31.7	89.2	81.6	7.53	11.843	
1,800.0	1,798.7	1,785.7	1,783.4	3.9	3.8	-144.80	-64.9	35.5	96.5	88.9	7.64	12.636	
1,870.1	1,868.0	1,849.7	1,846.4	4.1	4.0	-149.54	-70.4	45.6	117.3	109.4	7.92	14.813	
1,900.0	1,897.5	1,876.6	1,872.7	4.2	4.1	-151.22	-72.9	50.2	127.2	119.2	8.03	15.840	
1,968.5	1,964.8	1,938.9	1,933.6	4.4	4.3	-154.51	-79.0	61.5	152.1	143.8	8.30	18.322	
2,000.0	1,995.6	1,967.7	1,961.9	4.5	4.4	-155.77	-81.9	66.7	164.1	155.7	8.42	19.497	
2,066.9	2,060.9	2,028.6	2,021.5	4.7	4.6	-158.03	-88.0	77.9	190.9	182.3	8.67	22.020	
2,100.0	2,093.1	2,058.5	2,050.7	4.8	4.7	-158.97	-91.0	83.3	204.8	196.0	8.79	23.293	
2,165.3	2,156.3	2,117.0	2,107.9	5.1	4.9	-160.57	-96.8	94.0	233.2	224.2	9.03	25.817	
2,200.0	2,189.6	2,147.8	2,138.0	5.2	5.0	-161.30	-99.9	99.6	248.9	239.7	9.16	27.167	
2,263.8	2,250.7	2,203.8	2,192.8	5.5	5.2	-162.47	-105.5	109.8	278.7	269.3	9.39	29.677	
2,280.0	2,266.2	2,218.0	2,206.7	5.6	5.3	-162.74	-106.9	112.4	286.5	277.1	9.45	30.322	
2,300.0	2,285.3	2,235.4	2,223.7	5.7	5.4	-163.11	-108.6	115.6	296.2	286.7	9.54	31.063	
2,362.2	2,344.6	2,289.6	2,276.7	6.0	5.6	-164.14	-114.0	125.5	326.3	316.5	9.80	33.308	
2,400.0	2,380.6	2,322.5	2,308.9	6.2	5.7	-164.68	-117.3	131.5	344.7	334.7	9.97	34.585	
2,460.6	2,438.4	2,375.4	2,360.6	6.5	5.9	-165.43	-122.6	141.1	374.1	363.9	10.23	36.562	
2,500.0	2,475.9	2,409.7	2,394.1	6.7	6.0	-165.86	-126.0	147.4	393.3	382.9	10.41	37.794	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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 Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,559.0	2,532.2	2,461.1	2,444.5	7.0	6.2	-166.43	-131.1	156.8	422.1	411.4	10.67	39.547	
2,600.0	2,571.2	2,496.8	2,479.4	7.2	6.4	-166.78	-134.7	163.3	442.0	431.2	10.86	40.717	
2,657.5	2,626.0	2,546.9	2,528.3	7.5	6.6	-167.22	-139.7	172.4	470.1	458.9	11.12	42.275	
2,700.0	2,666.6	2,583.9	2,564.6	7.8	6.7	-167.52	-143.4	179.2	490.8	479.5	11.31	43.384	
2,755.9	2,719.8	2,632.6	2,612.2	8.1	6.9	-167.87	-148.2	188.1	518.1	506.6	11.57	44.772	
2,800.0	2,761.9	2,671.0	2,649.8	8.3	7.1	-168.13	-152.1	195.1	539.7	527.9	11.78	45.824	
2,854.3	2,813.7	2,718.4	2,696.1	8.7	7.3	-168.41	-156.8	203.8	566.2	554.2	12.03	47.062	
2,900.0	2,857.2	2,758.2	2,735.0	8.9	7.5	-168.63	-160.7	211.0	588.6	576.3	12.25	48.060	
2,952.7	2,907.5	2,804.1	2,780.0	9.2	7.7	-168.87	-165.3	219.4	614.4	601.9	12.50	49.165	
3,000.0	2,952.5	2,845.3	2,820.2	9.5	7.9	-169.06	-169.4	226.9	637.5	624.8	12.72	50.114	
3,051.2	3,001.3	2,889.9	2,863.9	9.8	8.0	-169.25	-173.9	235.1	662.5	649.6	12.97	51.101	
3,100.0	3,047.8	2,932.4	2,905.5	10.1	8.2	-169.43	-178.1	242.8	686.4	673.2	13.20	52.006	
3,149.6	3,095.1	2,982.9	2,954.9	10.4	8.4	-169.62	-183.1	251.9	710.6	697.1	13.45	52.836	
3,200.0	3,143.2	3,042.2	3,013.2	10.7	8.6	-169.83	-188.4	261.7	734.4	720.7	13.71	53.560	
3,248.0	3,188.9	3,100.0	3,070.1	11.0	8.8	-170.03	-193.1	270.2	756.2	742.2	13.96	54.158	
3,300.0	3,238.5	3,163.8	3,133.2	11.3	9.0	-170.24	-197.6	278.4	778.8	764.5	14.23	54.711	
3,346.4	3,282.8	3,221.9	3,190.9	11.6	9.1	-170.43	-201.1	284.8	798.1	783.6	14.48	55.118	
3,400.0	3,333.8	3,290.3	3,258.9	11.9	9.3	-170.65	-204.5	291.0	819.3	804.5	14.76	55.492	
3,444.9	3,376.6	3,348.6	3,317.0	12.2	9.4	-170.83	-206.7	295.2	836.1	821.1	15.00	55.728	
3,500.0	3,429.1	3,421.6	3,389.8	12.6	9.6	-171.05	-208.8	299.0	855.6	840.4	15.30	55.929	
3,543.3	3,470.4	3,479.9	3,448.1	12.8	9.7	-171.23	-209.8	300.8	870.1	854.5	15.53	56.019	
3,600.0	3,524.4	3,556.2	3,524.4	13.2	9.8	-171.46	-210.3	301.6	887.7	871.9	15.83	56.069	
3,641.7	3,564.2	3,596.0	3,564.2	13.4	9.9	-171.58	-210.3	301.6	900.2	884.2	16.03	56.158	
3,700.0	3,619.8	3,651.5	3,619.8	13.8	10.0	-171.74	-210.3	301.6	917.6	901.3	16.31	56.260	
3,740.1	3,658.0	3,689.8	3,658.0	14.0	10.0	-171.85	-210.3	301.6	929.7	913.2	16.51	56.326	
3,800.0	3,715.1	3,746.9	3,715.1	14.4	10.1	-172.00	-210.3	301.6	947.6	930.8	16.80	56.420	
3,838.6	3,751.8	3,783.6	3,751.8	14.7	10.2	-172.10	-210.3	301.6	959.2	942.2	16.98	56.478	
3,900.0	3,810.4	3,842.2	3,810.4	15.0	10.3	-172.25	-210.3	301.6	977.6	960.3	17.28	56.567	
3,937.0	3,845.7	3,877.5	3,845.7	15.3	10.4	-172.34	-210.3	301.6	988.7	971.2	17.46	56.618	
4,000.0	3,905.7	3,937.5	3,905.7	15.7	10.5	-172.48	-210.3	301.6	1,007.6	989.8	17.77	56.702	
4,035.4	3,939.5	3,971.3	3,939.5	15.9	10.5	-172.56	-210.3	301.6	1,018.2	1,000.3	17.94	56.746	
4,100.0	4,001.0	4,032.8	4,001.0	16.3	10.6	-172.70	-210.3	301.6	1,037.6	1,019.3	18.26	56.825	
4,133.8	4,033.3	4,065.1	4,033.3	16.5	10.7	-172.77	-210.3	301.6	1,047.7	1,029.3	18.43	56.864	
4,200.0	4,096.3	4,128.1	4,096.3	16.9	10.8	-172.90	-210.3	301.6	1,067.6	1,048.9	18.75	56.939	
4,232.3	4,127.1	4,158.9	4,127.1	17.1	10.8	-172.97	-210.3	301.6	1,077.3	1,058.4	18.91	56.973	
4,300.0	4,191.7	4,223.5	4,191.7	17.6	11.0	-173.10	-210.3	301.6	1,097.6	1,078.4	19.24	57.043	
4,330.7	4,220.9	4,252.7	4,220.9	17.8	11.0	-173.16	-210.3	301.6	1,106.9	1,087.5	19.39	57.073	
4,400.0	4,287.0	4,318.8	4,287.0	18.2	11.1	-173.28	-210.3	301.6	1,127.7	1,107.9	19.74	57.140	
4,429.1	4,314.7	4,346.5	4,314.7	18.4	11.2	-173.34	-210.3	301.6	1,136.4	1,116.6	19.88	57.166	
4,500.0	4,382.3	4,414.1	4,382.3	18.8	11.3	-173.46	-210.3	301.6	1,157.7	1,137.5	20.23	57.229	
4,527.5	4,408.6	4,440.4	4,408.6	19.0	11.3	-173.51	-210.3	301.6	1,166.0	1,145.7	20.37	57.251	
4,600.0	4,477.6	4,509.4	4,477.6	19.5	11.5	-173.63	-210.3	301.6	1,187.8	1,167.1	20.73	57.311	
4,626.0	4,502.4	4,534.2	4,502.4	19.6	11.5	-173.67	-210.3	301.6	1,195.6	1,174.8	20.85	57.331	
4,700.0	4,572.9	4,604.7	4,572.9	20.1	11.6	-173.78	-210.3	301.6	1,217.9	1,196.7	21.22	57.387	
4,724.4	4,596.2	4,628.0	4,596.2	20.3	11.7	-173.82	-210.3	301.6	1,225.2	1,203.9	21.34	57.404	
4,800.0	4,668.3	4,700.1	4,668.3	20.7	11.8	-173.93	-210.3	301.6	1,248.0	1,226.2	21.72	57.457	
4,822.8	4,690.0	4,721.8	4,690.0	20.9	11.9	-173.97	-210.3	301.6	1,254.8	1,233.0	21.83	57.472	
4,900.0	4,763.6	4,795.4	4,763.6	21.4	12.0	-174.08	-210.3	301.6	1,278.0	1,255.8	22.22	57.522	
4,921.2	4,783.8	4,815.6	4,783.8	21.5	12.0	-174.11	-210.3	301.6	1,284.4	1,262.1	22.32	57.535	
5,000.0	4,858.9	4,890.7	4,858.9	22.0	12.2	-174.21	-210.3	301.6	1,308.1	1,285.4	22.72	57.583	
5,019.7	4,877.7	4,909.4	4,877.7	22.1	12.2	-174.24	-210.3	301.6	1,314.1	1,291.2	22.82	57.594	
5,100.0	4,954.2	4,986.0	4,954.2	22.6	12.3	-174.34	-210.3	301.6	1,338.2	1,315.0	23.22	57.639	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	5,003.3	4,971.5	22.8	12.4	-174.37	-210.3	301.6	1,343.7	1,320.4	23.31	57.648	
5,171.8	5,022.7	5,054.4	5,022.7	23.1	12.5	-174.43	-210.3	301.6	1,359.9	1,336.3	23.58	57.676	
5,200.0	5,049.6	5,081.4	5,049.6	23.3	12.5	-174.48	-210.3	301.6	1,368.2	1,344.5	23.75	57.606	
5,216.5	5,065.4	5,097.2	5,065.4	23.3	12.6	-174.51	-210.3	301.6	1,373.0	1,349.1	23.85	57.574	
5,300.0	5,145.7	5,177.5	5,145.7	23.7	12.7	-174.65	-210.3	301.6	1,395.7	1,371.4	24.33	57.373	
5,314.9	5,160.1	5,191.9	5,160.1	23.8	12.7	-174.67	-210.3	301.6	1,399.5	1,375.1	24.41	57.335	
5,400.0	5,242.7	5,274.5	5,242.7	24.1	12.9	-174.78	-210.3	301.6	1,419.9	1,395.0	24.87	57.085	
5,413.4	5,255.7	5,287.5	5,255.7	24.2	12.9	-174.80	-210.3	301.6	1,422.9	1,397.9	24.94	57.045	
5,500.0	5,340.5	7,726.0	6,644.1	24.5	36.4	-128.07	-210.3	-1,054.9	1,392.7	1,337.3	55.41	25.133	
5,511.8	5,352.1	7,728.2	6,644.1	24.5	36.5	-127.50	-210.3	-1,057.1	1,382.0	1,326.3	55.70	24.810	
5,600.0	5,439.0	7,742.7	6,644.1	24.8	36.9	-123.20	-210.3	-1,071.6	1,302.6	1,244.9	57.75	22.557	
5,610.2	5,449.1	7,744.2	6,644.1	24.8	36.9	-122.71	-210.3	-1,073.1	1,293.4	1,235.5	57.96	22.315	
5,700.0	5,538.0	7,756.1	6,644.1	25.1	37.2	-118.44	-210.3	-1,085.0	1,213.1	1,153.4	59.67	20.330	
5,708.6	5,546.6	7,757.1	6,644.1	25.1	37.2	-118.04	-210.3	-1,086.0	1,205.3	1,145.5	59.81	20.153	
5,800.0	5,637.4	7,766.1	6,644.1	25.3	37.5	-113.95	-210.3	-1,095.0	1,124.3	1,063.2	61.12	18.394	
5,807.1	5,644.5	7,766.7	6,644.1	25.3	37.5	-113.64	-210.3	-1,095.6	1,118.1	1,056.9	61.21	18.267	
5,900.0	5,737.2	7,772.8	6,644.1	25.5	37.6	-109.87	-210.3	-1,101.7	1,036.8	974.7	62.12	16.690	
5,905.5	5,742.6	7,773.1	6,644.0	25.5	37.6	-109.66	-210.3	-1,102.0	1,032.1	969.9	62.16	16.603	
6,000.0	5,837.1	7,776.1	6,644.0	25.6	37.7	-106.34	-210.3	-1,105.0	951.1	888.4	62.71	15.167	
6,003.9	5,841.0	7,776.1	6,644.0	25.6	37.7	-106.21	-210.3	-1,105.1	947.8	885.1	62.72	15.111	
6,051.8	5,888.9	7,776.5	6,644.0	25.7	37.7	-179.88	-210.3	-1,105.4	907.6	877.8	29.87	30.388	
6,081.8	5,918.9	7,776.4	6,644.0	25.7	37.7	-179.89	-210.3	-1,105.3	882.8	852.9	29.92	29.510	
6,100.0	5,937.1	7,776.2	6,644.0	25.7	37.7	92.15	-210.3	-1,105.1	868.0	805.0	63.00	13.777	
6,102.3	5,939.4	7,776.1	6,644.0	25.7	37.7	92.41	-210.3	-1,105.0	866.1	803.1	63.01	13.746	
6,150.0	5,987.0	7,773.1	6,644.0	25.7	37.6	97.17	-210.3	-1,102.0	827.8	765.0	62.88	13.166	
6,200.0	6,036.5	7,766.5	6,644.1	25.7	37.5	101.30	-210.3	-1,095.4	789.1	726.7	62.35	12.656	
6,200.8	6,037.3	7,766.4	6,644.1	25.7	37.5	101.36	-210.3	-1,095.3	788.5	726.2	62.34	12.648	
6,250.0	6,085.5	7,756.5	6,644.1	25.7	37.2	104.55	-210.3	-1,085.4	752.0	690.4	61.59	12.210	
6,299.2	6,133.0	7,743.4	6,644.1	25.6	36.9	106.95	-210.3	-1,072.3	717.5	656.8	60.74	11.813	
6,300.0	6,133.7	7,743.1	6,644.1	25.6	36.9	106.98	-210.3	-1,072.1	717.0	656.2	60.73	11.807	
6,350.0	6,180.9	7,726.4	6,644.1	25.5	36.5	108.66	-210.3	-1,055.3	684.2	624.4	59.83	11.436	
6,397.6	6,224.6	7,707.5	6,644.1	25.4	36.0	109.63	-210.3	-1,036.4	655.4	596.5	59.00	11.110	
6,400.0	6,226.7	7,706.5	6,644.1	25.4	35.9	109.66	-210.3	-1,035.4	654.1	595.1	58.96	11.094	
6,450.0	6,271.1	7,683.4	6,644.2	25.2	35.4	110.06	-210.3	-1,012.3	626.7	568.6	58.13	10.782	
6,496.0	6,310.4	7,659.4	6,644.2	25.1	34.8	109.96	-210.3	-988.3	604.1	546.7	57.41	10.523	
6,500.0	6,313.7	7,657.2	6,644.2	25.1	34.7	109.93	-210.3	-986.1	602.3	545.0	57.35	10.503	
6,550.0	6,354.4	7,628.2	6,644.2	25.0	34.0	109.32	-210.3	-957.1	581.0	524.4	56.61	10.262	
6,594.5	6,388.9	7,600.0	6,644.3	24.9	33.3	108.44	-210.3	-928.9	564.6	508.6	55.99	10.085	
6,600.0	6,393.0	7,596.3	6,644.3	24.9	33.2	108.31	-210.3	-925.3	562.8	506.9	55.91	10.066	
6,650.0	6,429.3	7,561.9	6,644.3	24.8	32.3	106.95	-210.3	-890.8	547.5	492.3	55.23	9.914	
6,692.9	6,458.5	7,530.4	6,644.4	24.7	31.5	105.56	-210.3	-859.3	536.8	482.1	54.65	9.822	
6,700.0	6,463.1	7,525.0	6,644.4	24.7	31.4	105.32	-210.3	-853.9	535.2	480.6	54.55	9.811	
6,750.0	6,494.3	7,485.9	6,644.4	24.7	30.5	103.49	-210.3	-814.8	525.5	471.6	53.86	9.756	
6,791.3	6,517.9	7,452.0	6,644.5	24.7	29.6	101.88	-210.3	-780.9	519.2	465.9	53.28	9.745	
6,800.0	6,522.6	7,444.7	6,644.5	24.7	29.5	101.54	-210.3	-773.6	518.1	464.9	53.15	9.747	
6,850.0	6,548.0	7,401.6	6,644.6	24.7	28.4	99.57	-210.3	-730.5	512.7	460.3	52.42	9.782	
6,889.7	6,566.0	7,366.1	6,644.6	24.8	27.6	98.03	-210.3	-695.0	509.7	457.8	51.84	9.831	
6,900.0	6,570.4	7,356.8	6,644.6	24.9	27.4	97.65	-210.3	-685.7	509.0	457.3	51.68	9.848	
6,950.0	6,589.5	7,310.6	6,644.7	25.1	26.3	95.86	-210.3	-639.5	506.6	455.6	50.94	9.945	
6,988.2	6,602.0	7,274.5	6,644.7	25.3	25.5	94.63	-210.3	-603.4	505.4	455.0	50.39	10.029	
7,000.0	6,605.4	7,263.2	6,644.8	25.3	25.3	94.28	-210.3	-592.1	505.1	454.9	50.22	10.057	
7,050.0	6,618.0	7,214.8	6,644.8	25.6	24.2	92.98	-210.3	-543.7	504.3	454.7	49.53	10.181	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,625.0	7,178.9	6,644.9	25.9	23.4	92.23	-210.3	-507.8	504.0	454.9	49.08	10.268	
7,100.0	6,627.1	7,165.7	6,644.9	26.0	23.2	92.00	-210.3	-494.6	503.9	455.0	48.92	10.300	
7,150.0	6,632.8	7,116.0	6,645.0	26.5	22.1	91.38	-210.3	-444.9	503.7	455.3	48.37	10.414	
7,185.0	6,634.7	7,080.9	6,645.0	26.8	21.4	91.17	-210.3	-409.8	503.7	455.6	48.03	10.486	
7,200.0	6,635.0	7,065.8	6,644.7	27.0	21.1	91.10	-210.3	-394.7	503.7	455.8	47.90	10.515	
7,215.9	6,635.0	7,049.7	6,644.1	27.1	20.8	91.04	-210.3	-378.6	503.6	455.9	47.76	10.545	
7,283.4	6,634.1	6,981.7	6,637.5	27.9	19.6	90.38	-210.3	-311.0	503.6	456.2	47.35	10.636	
7,300.0	6,633.9	6,965.3	6,634.9	28.1	19.3	90.11	-210.3	-294.8	503.6	456.3	47.26	10.655	
7,306.4	6,633.8	6,959.0	6,633.8	28.2	19.2	90.00	-210.3	-288.5	503.6	456.3	47.24	10.660	
7,381.9	6,632.9	6,886.0	6,617.4	29.3	18.0	88.23	-210.3	-217.5	503.8	456.7	47.10	10.697	
7,400.0	6,632.6	6,869.0	6,612.5	29.5	17.7	87.70	-210.3	-201.2	504.0	456.9	47.09	10.704	
7,480.3	6,631.6	6,796.8	6,587.6	30.8	16.8	84.97	-210.3	-133.5	505.8	458.6	47.25	10.706	
7,500.0	6,631.4	6,779.9	6,580.7	31.1	16.6	84.23	-210.3	-118.0	506.6	459.3	47.31	10.708	
7,578.7	6,630.4	6,715.8	6,551.6	32.5	15.9	81.05	-210.3	-60.9	511.6	463.9	47.70	10.726	
7,600.0	6,630.1	6,700.0	6,543.7	32.9	15.7	80.19	-210.3	-47.3	513.6	465.8	47.81	10.743	
7,677.1	6,629.1	6,643.8	6,513.0	34.3	15.3	76.90	-210.3	-0.2	523.3	475.0	48.31	10.832	
7,700.0	6,628.8	6,628.3	6,503.9	34.8	15.2	75.94	-210.3	12.3	527.0	478.6	48.46	10.875	
7,775.6	6,627.8	6,580.5	6,474.2	36.3	15.0	72.85	-210.3	49.8	542.5	493.5	49.02	11.068	
7,800.0	6,627.5	6,566.1	6,464.7	36.8	14.9	71.89	-210.3	60.6	548.6	499.4	49.19	11.152	
7,874.0	6,626.6	6,525.3	6,436.8	38.4	14.8	69.11	-210.3	90.4	570.2	520.5	49.77	11.458	
7,900.0	6,626.3	6,511.9	6,427.3	38.9	14.7	68.18	-210.3	99.7	579.0	529.1	49.97	11.589	
7,972.4	6,625.3	6,477.3	6,401.8	40.5	14.7	65.76	-210.3	123.3	606.7	556.2	50.57	11.999	
8,000.0	6,625.0	6,465.0	6,392.5	41.1	14.6	64.89	-210.3	131.3	618.5	567.7	50.79	12.177	
8,070.8	6,624.1	6,435.4	6,369.6	42.7	14.6	62.82	-210.3	150.0	651.6	600.1	51.41	12.673	
8,100.0	6,623.7	6,424.1	6,360.6	43.4	14.6	62.02	-210.3	156.9	666.3	614.6	51.67	12.895	
8,169.3	6,622.8	6,400.0	6,341.2	45.0	14.6	60.34	-210.3	171.1	703.9	651.5	52.35	13.446	
8,200.0	6,622.4	6,388.5	6,331.7	45.7	14.5	59.54	-210.3	177.6	721.6	669.0	52.61	13.717	
8,267.7	6,621.6	6,366.9	6,313.7	47.4	14.5	58.05	-210.3	189.5	762.8	709.5	53.28	14.316	
8,300.0	6,621.1	6,350.0	6,299.3	48.1	14.5	56.90	-210.3	198.4	783.4	730.1	53.35	14.686	
8,366.1	6,620.3	6,350.0	6,299.3	49.7	14.5	56.90	-210.3	198.4	827.4	772.7	54.72	15.122	
8,400.0	6,619.9	6,329.9	6,281.9	50.6	14.5	55.54	-210.3	208.6	850.6	795.9	54.67	15.559	
8,464.5	6,619.0	6,313.9	6,267.9	52.2	14.5	54.48	-210.3	216.3	896.4	841.0	55.39	16.184	
8,500.0	6,618.6	6,300.0	6,255.6	53.0	14.5	53.57	-210.3	222.8	922.3	866.8	55.57	16.599	
8,563.0	6,617.8	6,300.0	6,255.6	54.6	14.5	53.57	-210.3	222.8	969.5	912.7	56.86	17.051	
8,600.0	6,617.3	6,284.1	6,241.4	55.5	14.5	52.54	-210.3	229.9	997.8	940.9	56.96	17.517	
8,661.4	6,616.5	6,272.0	6,230.5	57.1	14.5	51.77	-210.3	235.0	1,045.8	988.1	57.71	18.120	
8,700.0	6,616.0	6,264.8	6,224.0	58.1	14.5	51.32	-210.3	238.0	1,076.5	1,018.3	58.19	18.499	
8,759.8	6,615.2	6,250.0	6,210.4	59.6	14.5	50.40	-210.3	244.0	1,124.8	1,066.1	58.76	19.143	
8,800.0	6,614.7	6,250.0	6,210.4	60.6	14.5	50.40	-210.3	244.0	1,157.8	1,098.2	59.57	19.436	
8,858.2	6,614.0	6,250.0	6,210.4	62.1	14.5	50.40	-210.3	244.0	1,206.3	1,145.6	60.75	19.855	
8,900.0	6,613.4	6,232.0	6,193.8	63.2	14.5	49.30	-210.3	250.9	1,241.3	1,180.5	60.77	20.424	
8,956.7	6,612.7	6,223.9	6,186.2	64.7	14.5	48.81	-210.3	253.8	1,289.4	1,227.9	61.54	20.954	
9,000.0	6,612.2	6,218.0	6,180.7	65.8	14.5	48.46	-210.3	255.9	1,326.6	1,264.5	62.12	21.355	
9,055.1	6,611.5	6,200.0	6,163.8	67.3	14.5	47.40	-210.3	262.0	1,374.5	1,312.1	62.36	22.039	
9,100.0	6,610.9	6,200.0	6,163.8	68.4	14.5	47.40	-210.3	262.0	1,413.6	1,350.3	63.25	22.348	
9,153.5	6,610.2	6,200.0	6,163.8	69.8	14.5	47.40	-210.3	262.0	1,460.7	1,396.3	64.32	22.710	
9,200.0	6,609.6	6,200.0	6,163.8	71.1	14.5	47.40	-210.3	262.0	1,501.9	1,436.6	65.24	23.020	
9,251.9	6,608.9	6,200.0	6,163.8	72.4	14.5	47.40	-210.3	262.0	1,548.3	1,482.0	66.28	23.359	
9,300.0	6,608.3	6,182.8	6,147.5	73.7	14.5	46.42	-210.3	267.5	1,591.3	1,524.9	66.35	23.982	
9,350.4	6,607.7	6,177.8	6,142.7	75.0	14.4	46.13	-210.3	269.0	1,636.7	1,569.6	67.09	24.397	
9,400.0	6,607.0	6,173.1	6,138.2	76.4	14.4	45.87	-210.3	270.4	1,681.7	1,613.9	67.81	24.800	
9,448.8	6,606.4	6,168.6	6,133.9	77.7	14.4	45.62	-210.3	271.7	1,726.1	1,657.6	68.53	25.187	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.7	6,150.0	6,116.0	79.0	14.4	44.60	-210.3	276.8	1,773.2	1,704.6	68.53	25.873	
9,547.2	6,605.1	6,150.0	6,116.0	80.3	14.4	44.60	-210.3	276.8	1,816.5	1,747.0	69.45	26.155	
9,600.0	6,604.5	6,150.0	6,116.0	81.7	14.4	44.60	-210.3	276.8	1,865.1	1,794.6	70.47	26.464	
9,645.6	6,603.9	6,150.0	6,116.0	82.9	14.4	44.60	-210.3	276.8	1,907.3	1,835.9	71.36	26.726	
9,700.0	6,603.2	6,150.0	6,116.0	84.4	14.4	44.60	-210.3	276.8	1,957.8	1,885.3	72.42	27.032	
9,744.1	6,602.6	6,150.0	6,116.0	85.6	14.4	44.60	-210.3	276.8	1,998.8	1,925.6	73.28	27.275	
9,800.0	6,601.9	6,150.0	6,116.0	87.1	14.4	44.60	-210.3	276.8	2,051.1	1,976.8	74.38	27.578	
9,842.5	6,601.3	6,150.0	6,116.0	88.2	14.4	44.60	-210.3	276.8	2,091.0	2,015.8	75.21	27.803	
9,900.0	6,600.6	6,150.0	6,116.0	89.8	14.4	44.60	-210.3	276.8	2,145.1	2,068.8	76.33	28.101	
9,940.9	6,600.1	6,150.0	6,116.0	90.9	14.4	44.60	-210.3	276.8	2,183.7	2,106.6	77.14	28.309	
10,000.0	6,599.3	6,127.9	6,094.6	92.5	14.4	43.43	-210.3	282.2	2,239.2	2,162.2	76.94	29.104	
10,039.3	6,598.8	6,125.5	6,092.3	93.5	14.4	43.30	-210.3	282.8	2,276.4	2,198.8	77.55	29.353	
10,100.0	6,598.0	6,122.0	6,088.9	95.2	14.4	43.12	-210.3	283.5	2,333.9	2,255.4	78.50	29.729	
10,137.8	6,597.5	6,119.9	6,086.8	96.2	14.4	43.01	-210.3	284.0	2,369.7	2,290.6	79.10	29.959	
10,200.0	6,596.7	6,100.0	6,067.3	97.9	14.4	42.00	-210.3	288.1	2,429.2	2,350.1	79.04	30.735	
10,236.2	6,596.3	6,100.0	6,067.3	98.9	14.4	42.00	-210.3	288.1	2,463.6	2,383.9	79.72	30.902	
10,300.0	6,595.4	6,100.0	6,067.3	100.6	14.4	42.00	-210.3	288.1	2,524.4	2,443.5	80.93	31.192	
10,334.6	6,595.0	6,100.0	6,067.3	101.6	14.4	42.00	-210.3	288.1	2,557.5	2,475.9	81.59	31.347	
10,400.0	6,594.2	6,100.0	6,067.3	103.4	14.4	42.00	-210.3	288.1	2,620.1	2,537.2	82.83	31.632	
10,433.0	6,593.7	6,100.0	6,067.3	104.3	14.4	42.00	-210.3	288.1	2,651.7	2,568.3	83.46	31.774	
10,500.0	6,592.9	6,100.0	6,067.3	106.1	14.4	42.00	-210.3	288.1	2,716.0	2,631.3	84.73	32.055	
10,531.5	6,592.5	6,100.0	6,067.3	106.9	14.4	42.00	-210.3	288.1	2,746.3	2,660.9	85.33	32.185	
10,600.0	6,591.6	6,100.0	6,067.3	108.8	14.4	42.00	-210.3	288.1	2,812.2	2,725.6	86.63	32.462	
10,629.9	6,591.2	6,100.0	6,067.3	109.6	14.4	42.00	-210.3	288.1	2,841.0	2,753.8	87.20	32.580	
10,700.0	6,590.3	6,100.0	6,067.3	111.6	14.4	42.00	-210.3	288.1	2,908.7	2,820.2	88.54	32.853	
10,728.3	6,589.9	6,100.0	6,067.3	112.3	14.4	42.00	-210.3	288.1	2,936.1	2,847.0	89.08	32.961	
10,800.0	6,589.0	6,100.0	6,067.3	114.3	14.4	42.00	-210.3	288.1	3,005.4	2,915.0	90.44	33.230	
10,826.7	6,588.7	6,100.0	6,067.3	115.0	14.4	42.00	-210.3	288.1	3,031.3	2,940.4	90.95	33.328	
10,900.0	6,587.7	6,100.0	6,067.3	117.1	14.4	42.00	-210.3	288.1	3,102.3	3,010.0	92.35	33.592	
10,925.2	6,587.4	6,100.0	6,067.3	117.7	14.4	42.00	-210.3	288.1	3,126.7	3,033.9	92.83	33.681	
11,000.0	6,586.4	6,100.0	6,067.3	119.8	14.4	42.00	-210.3	288.1	3,199.4	3,105.2	94.26	33.941	
11,023.6	6,586.1	6,100.0	6,067.3	120.4	14.4	42.00	-210.3	288.1	3,222.4	3,127.7	94.72	34.021	
11,100.0	6,585.1	6,079.5	6,047.2	122.6	14.4	40.99	-210.3	291.8	3,296.3	3,201.7	94.62	34.839	
11,122.0	6,584.8	6,078.8	6,046.5	123.2	14.4	40.96	-210.3	291.9	3,317.8	3,222.8	94.98	34.932	
11,200.0	6,583.8	6,076.4	6,044.1	125.3	14.4	40.84	-210.3	292.3	3,393.7	3,297.4	96.26	35.255	
11,220.4	6,583.6	6,075.7	6,043.5	125.9	14.4	40.81	-210.3	292.4	3,413.6	3,317.0	96.60	35.339	
11,300.0	6,582.5	6,073.4	6,041.1	128.1	14.4	40.70	-210.3	292.8	3,491.1	3,393.2	97.91	35.658	
11,318.9	6,582.3	6,072.8	6,040.6	128.6	14.4	40.67	-210.3	292.9	3,509.5	3,411.3	98.22	35.732	
11,400.0	6,581.2	6,050.0	6,018.0	130.8	14.4	39.60	-210.3	296.1	3,589.1	3,491.1	97.95	36.641	
11,417.3	6,581.0	6,050.0	6,018.0	131.3	14.4	39.60	-210.3	296.1	3,605.9	3,507.7	98.27	36.694	
11,500.0	6,580.0	6,050.0	6,018.0	133.6	14.4	39.60	-210.3	296.1	3,686.7	3,586.9	99.79	36.943	
11,515.7	6,579.7	6,050.0	6,018.0	134.0	14.4	39.60	-210.3	296.1	3,702.0	3,602.0	100.08	36.990	
11,600.0	6,578.7	6,050.0	6,018.0	136.3	14.4	39.60	-210.3	296.1	3,784.4	3,682.8	101.64	37.235	
11,614.1	6,578.5	6,050.0	6,018.0	136.7	14.4	39.60	-210.3	296.1	3,798.3	3,696.4	101.90	37.275	
11,700.0	6,577.4	6,050.0	6,018.0	139.1	14.4	39.60	-210.3	296.1	3,882.3	3,778.8	103.48	37.517	
11,712.6	6,577.2	6,050.0	6,018.0	139.5	14.4	39.60	-210.3	296.1	3,894.6	3,790.9	103.71	37.552	
11,800.0	6,576.1	6,050.0	6,018.0	141.9	14.4	39.60	-210.3	296.1	3,980.2	3,874.9	105.32	37.790	
11,811.0	6,575.9	6,050.0	6,018.0	142.2	14.4	39.60	-210.3	296.1	3,991.0	3,885.5	105.53	37.820	
11,882.7	6,575.0	6,050.0	6,018.0	144.2	14.4	39.60	-210.3	296.1	4,061.3	3,954.5	106.85	38.009	
11,883.5	6,575.0	6,050.0	6,018.0	144.2	14.4	39.60	-210.3	296.1	4,062.1	3,955.2	106.86	38.013	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-179.29	-90.0	-1.1	90.0				
98.4	98.4	98.4	98.4	0.1	0.1	-179.29	-90.0	-1.1	90.0	89.8	0.19	468.047	
100.0	100.0	100.0	100.0	0.1	0.1	-179.29	-90.0	-1.1	90.0	89.8	0.20	460.124	
196.8	196.8	196.8	196.8	0.3	0.3	-179.29	-90.0	-1.1	90.0	89.3	0.63	142.611	
200.0	200.0	200.0	200.0	0.3	0.3	-179.29	-90.0	-1.1	90.0	89.3	0.65	139.480	
295.3	295.3	295.3	295.3	0.5	0.5	-179.29	-90.0	-1.1	90.0	88.9	1.07	83.825	
300.0	300.0	300.0	300.0	0.5	0.5	-179.29	-90.0	-1.1	90.0	88.9	1.09	82.199	
393.7	393.7	393.7	393.7	0.8	0.8	-179.29	-90.0	-1.1	90.0	88.5	1.52	59.358	
400.0	400.0	400.0	400.0	0.8	0.8	-179.29	-90.0	-1.1	90.0	88.4	1.54	58.269	
492.1	492.1	492.1	492.1	1.0	1.0	-179.29	-90.0	-1.1	90.0	88.0	1.96	45.946	
500.0	500.0	500.0	500.0	1.0	1.0	-179.29	-90.0	-1.1	90.0	88.0	1.99	45.131	
590.5	590.5	590.5	590.5	1.2	1.2	-179.29	-90.0	-1.1	90.0	87.6	2.40	37.479	
600.0	600.0	600.0	600.0	1.2	1.2	-179.29	-90.0	-1.1	90.0	87.5	2.44	36.827	
689.0	689.0	689.0	689.0	1.4	1.4	-179.29	-90.0	-1.1	90.0	87.1	2.84	31.646	
700.0	700.0	700.0	700.0	1.4	1.4	-179.29	-90.0	-1.1	90.0	87.1	2.89	31.104	
787.4	787.4	787.4	787.4	1.6	1.6	-179.29	-90.0	-1.1	90.0	86.7	3.29	27.385	
800.0	800.0	800.0	800.0	1.7	1.7	-179.29	-90.0	-1.1	90.0	86.6	3.34	26.921	
885.8	885.8	885.8	885.8	1.9	1.9	-179.29	-90.0	-1.1	90.0	86.2	3.73	24.135	
900.0	900.0	900.0	900.0	1.9	1.9	-179.29	-90.0	-1.1	90.0	86.2	3.79	23.729	
984.2	984.2	984.2	984.2	2.1	2.1	-179.29	-90.0	-1.1	90.0	85.8	4.17	21.574	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-179.29	-90.0	-1.1	90.0	85.7	4.24	21.214 CC, ES	
1,082.7	1,082.7	1,081.8	1,081.8	2.3	2.3	-178.59	-90.3	-2.2	90.4	85.8	4.60	19.665	
1,100.0	1,100.0	1,098.9	1,098.9	2.3	2.3	-178.27	-90.5	-2.7	90.6	85.9	4.67	19.393	
1,181.1	1,181.1	1,179.0	1,178.8	2.5	2.5	-176.01	-91.8	-6.4	92.0	87.0	5.01	18.375	
1,200.0	1,200.0	1,197.6	1,197.4	2.6	2.5	-175.32	-92.2	-7.6	92.5	87.4	5.09	18.187	
1,279.5	1,279.5	1,275.7	1,275.3	2.7	2.7	-171.76	-94.3	-13.6	95.4	89.9	5.43	17.579	
1,300.0	1,300.0	1,295.8	1,295.3	2.8	2.7	-170.71	-94.9	-15.5	96.3	90.8	5.51	17.476	
1,377.9	1,377.9	1,371.9	1,370.8	3.0	2.9	-166.27	-97.8	-23.9	101.0	95.1	5.85	17.264	
1,400.0	1,400.0	1,393.3	1,392.1	3.0	3.0	-164.93	-98.8	-26.6	102.6	96.6	5.94	17.260	
1,476.4	1,476.4	1,467.3	1,465.2	3.2	3.2	-85.35	-102.4	-37.1	109.4	103.0	6.32	17.316	
1,500.0	1,500.0	1,490.1	1,487.8	3.2	3.2	-84.13	-103.6	-40.7	111.8	105.4	6.42	17.410	
1,574.8	1,574.7	1,562.2	1,558.6	3.4	3.4	-80.73	-107.9	-53.1	120.4	113.6	6.77	17.796	
1,600.0	1,599.8	1,586.4	1,582.3	3.4	3.5	-79.75	-109.5	-57.7	123.6	116.7	6.88	17.964	
1,673.2	1,672.8	1,656.5	1,650.8	3.6	3.8	-77.29	-114.4	-71.9	133.7	126.4	7.24	18.472	
1,700.0	1,699.5	1,682.1	1,675.6	3.7	3.9	-76.53	-116.3	-77.5	137.6	130.2	7.37	18.683	
1,771.6	1,770.6	1,750.2	1,741.6	3.8	4.1	-74.83	-121.8	-93.4	148.8	141.1	7.73	19.239	
1,800.0	1,798.7	1,777.1	1,767.6	3.9	4.2	-74.27	-124.1	-100.2	153.5	145.6	7.88	19.473	
1,870.1	1,868.0	1,846.2	1,834.2	4.1	4.6	-73.32	-130.1	-117.6	165.0	156.7	8.28	19.915	
1,900.0	1,897.5	1,875.8	1,862.7	4.2	4.7	-73.12	-132.7	-125.1	169.7	161.3	8.46	20.071	
1,968.5	1,964.8	1,943.5	1,927.9	4.4	5.0	-73.04	-138.6	-142.2	180.3	171.4	8.88	20.295	
2,000.0	1,995.6	1,974.6	1,957.9	4.5	5.2	-73.17	-141.3	-150.0	185.0	175.9	9.08	20.362	
2,066.9	2,060.9	2,040.8	2,021.7	4.7	5.5	-73.75	-147.1	-166.7	194.6	185.1	9.55	20.376	
2,100.0	2,093.1	2,073.5	2,053.2	4.8	5.7	-74.16	-149.9	-175.0	199.3	189.5	9.79	20.353	
2,165.3	2,156.3	2,138.1	2,115.5	5.1	6.0	-75.23	-155.6	-191.3	208.2	197.9	10.31	20.195	
2,200.0	2,189.6	2,172.3	2,148.4	5.2	6.2	-75.91	-158.5	-200.0	212.8	202.2	10.59	20.091	
2,263.8	2,250.7	2,235.2	2,209.1	5.5	6.5	-77.36	-164.0	-215.9	221.1	210.0	11.16	19.812	
2,280.0	2,266.2	2,251.2	2,224.5	5.6	6.6	-77.76	-165.4	-219.9	223.2	211.9	11.31	19.737	
2,300.0	2,285.3	2,270.9	2,243.5	5.7	6.7	-78.32	-167.1	-224.9	225.8	214.3	11.50	19.634	
2,362.2	2,344.6	2,332.2	2,302.6	6.0	7.0	-79.96	-172.5	-240.4	234.0	221.9	12.11	19.319	
2,400.0	2,380.6	2,369.5	2,338.5	6.2	7.2	-80.91	-175.7	-249.8	239.1	226.6	12.49	19.142	
2,460.6	2,438.4	2,429.2	2,396.0	6.5	7.5	-82.34	-180.9	-264.9	247.4	234.3	13.12	18.862	
2,500.0	2,475.9	2,468.1	2,433.4	6.7	7.7	-83.22	-184.3	-274.7	252.9	239.3	13.53	18.694	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,526.3	2,489.5	7.0	8.1	-84.47	-189.4	-289.4	261.1	247.0	14.15	18.450	
2,600.0	2,571.2	2,566.6	2,528.4	7.2	8.3	-85.29	-192.9	-299.6	266.9	252.4	14.59	18.294	
2,657.5	2,626.0	2,623.3	2,583.0	7.5	8.6	-86.39	-197.8	-313.9	275.2	260.0	15.22	18.083	
2,700.0	2,666.6	2,665.2	2,623.4	7.8	8.8	-87.16	-201.5	-324.5	281.3	265.7	15.68	17.940	
2,755.9	2,719.8	2,720.3	2,676.5	8.1	9.1	-88.12	-206.3	-338.4	289.5	273.2	16.30	17.759	
2,800.0	2,761.9	2,763.7	2,718.4	8.3	9.4	-88.84	-210.1	-349.4	296.0	279.2	16.79	17.628	
2,854.3	2,813.7	2,817.3	2,770.0	8.7	9.7	-89.69	-214.7	-362.9	304.1	286.7	17.40	17.474	
2,900.0	2,857.2	2,862.3	2,813.3	8.9	9.9	-90.37	-218.6	-374.3	310.9	293.0	17.92	17.354	
2,952.7	2,907.5	2,914.3	2,863.4	9.2	10.2	-91.11	-223.2	-387.4	318.9	300.3	18.51	17.222	
3,000.0	2,952.5	2,960.9	2,908.3	9.5	10.5	-91.75	-227.2	-399.2	326.0	307.0	19.05	17.113	
3,051.2	3,001.3	3,011.3	2,956.9	9.8	10.7	-92.41	-231.6	-411.9	333.8	314.2	19.64	17.000	
3,100.0	3,047.8	3,059.4	3,003.3	10.1	11.0	-93.01	-235.8	-424.1	341.3	321.1	20.19	16.900	
3,149.6	3,095.1	3,108.3	3,050.4	10.4	11.3	-93.60	-240.1	-436.4	348.9	328.1	20.76	16.804	
3,200.0	3,143.2	3,158.0	3,098.3	10.7	11.6	-94.17	-244.4	-448.9	356.7	335.3	21.34	16.713	
3,248.0	3,188.9	3,205.3	3,143.9	11.0	11.8	-94.69	-248.5	-460.9	364.1	342.2	21.90	16.631	
3,300.0	3,238.5	3,256.5	3,193.2	11.3	12.1	-95.23	-253.0	-473.8	372.2	349.7	22.49	16.548	
3,346.4	3,282.8	3,302.3	3,237.4	11.6	12.4	-95.69	-257.0	-485.4	379.5	356.5	23.03	16.477	
3,400.0	3,333.8	3,355.1	3,288.2	11.9	12.7	-96.20	-261.6	-498.7	387.9	364.2	23.65	16.401	
3,444.9	3,376.6	3,399.3	3,330.8	12.2	12.9	-96.61	-265.4	-509.9	395.0	370.8	24.17	16.340	
3,500.0	3,429.1	3,453.6	3,383.2	12.6	13.2	-97.10	-270.2	-523.6	403.7	378.8	24.81	16.270	
3,543.3	3,470.4	3,496.3	3,424.3	12.8	13.5	-97.47	-273.9	-534.4	410.5	385.2	25.31	16.217	
3,600.0	3,524.4	3,552.2	3,478.2	13.2	13.8	-97.93	-278.7	-548.5	419.5	393.5	25.97	16.153	
3,641.7	3,564.2	3,593.3	3,517.8	13.4	14.0	-98.26	-282.3	-558.9	426.1	399.7	26.46	16.107	
3,700.0	3,619.8	3,650.8	3,573.1	13.8	14.4	-98.70	-287.3	-573.4	435.4	408.3	27.13	16.048	
3,740.1	3,658.0	3,690.3	3,611.3	14.0	14.6	-99.00	-290.8	-583.4	441.8	414.2	27.60	16.009	
3,800.0	3,715.1	3,749.3	3,668.1	14.4	14.9	-99.42	-295.9	-598.3	451.4	423.1	28.30	15.953	
3,838.6	3,751.8	3,787.3	3,704.8	14.7	15.1	-99.68	-299.2	-607.9	457.6	428.9	28.75	15.919	
3,900.0	3,810.4	3,847.9	3,763.1	15.0	15.5	-100.09	-304.5	-623.2	467.5	438.0	29.46	15.868	
3,937.0	3,845.7	3,884.4	3,798.2	15.3	15.7	-100.32	-307.7	-632.4	473.5	443.6	29.89	15.839	
4,000.0	3,905.7	3,946.4	3,858.1	15.7	16.0	-100.71	-313.1	-648.1	483.6	453.0	30.63	15.791	
4,035.4	3,939.5	3,981.4	3,891.7	15.9	16.2	-100.92	-316.1	-656.9	489.3	458.3	31.04	15.766	
4,100.0	4,001.0	4,045.0	3,953.1	16.3	16.6	-101.29	-321.7	-673.0	499.8	468.0	31.79	15.722	
4,133.8	4,033.3	4,078.4	3,985.2	16.5	16.8	-101.48	-324.6	-681.4	505.3	473.1	32.18	15.699	
4,200.0	4,096.3	4,143.6	4,048.0	16.9	17.2	-101.84	-330.3	-697.9	516.0	483.1	32.96	15.658	
4,232.3	4,127.1	4,175.4	4,078.7	17.1	17.3	-102.01	-333.0	-705.9	521.3	487.9	33.33	15.639	
4,300.0	4,191.7	4,242.1	4,143.0	17.6	17.7	-102.35	-338.8	-722.8	532.3	498.2	34.12	15.600	
4,330.7	4,220.9	4,272.4	4,172.2	17.8	17.9	-102.50	-341.5	-730.4	537.3	502.8	34.48	15.583	
4,400.0	4,287.0	4,340.7	4,238.0	18.2	18.3	-102.83	-347.4	-747.7	548.6	513.3	35.29	15.547	
4,429.1	4,314.7	4,369.4	4,265.6	18.4	18.5	-102.97	-349.9	-754.9	553.3	517.7	35.63	15.533	
4,500.0	4,382.3	4,439.2	4,333.0	18.8	18.9	-103.29	-356.0	-772.6	564.9	528.5	36.45	15.499	
4,527.5	4,408.6	4,466.4	4,359.1	19.0	19.0	-103.41	-358.4	-779.4	569.4	532.7	36.77	15.486	
4,600.0	4,477.6	4,537.8	4,427.9	19.5	19.4	-103.72	-364.6	-797.5	581.3	543.7	37.62	15.454	
4,626.0	4,502.4	4,563.4	4,452.6	19.6	19.6	-103.83	-366.8	-804.0	585.6	547.6	37.92	15.443	
4,700.0	4,572.9	4,636.4	4,522.9	20.1	20.0	-104.12	-373.2	-822.4	597.7	558.9	38.78	15.413	
4,724.4	4,596.2	4,660.4	4,546.1	20.3	20.1	-104.22	-375.3	-828.5	601.7	562.7	39.06	15.403	
4,800.0	4,668.3	4,734.9	4,617.9	20.7	20.6	-104.51	-381.8	-847.3	614.1	574.2	39.94	15.375	
4,822.8	4,690.0	4,757.4	4,639.6	20.9	20.7	-104.59	-383.7	-853.0	617.9	577.7	40.21	15.367	
4,900.0	4,763.6	4,833.5	4,712.9	21.4	21.1	-104.87	-390.4	-872.2	630.6	589.5	41.11	15.340	
4,921.2	4,783.8	4,854.4	4,733.0	21.5	21.2	-104.95	-392.2	-877.5	634.1	592.7	41.36	15.333	
5,000.0	4,858.9	4,932.0	4,807.8	22.0	21.7	-105.22	-398.9	-897.1	647.1	604.8	42.27	15.307	
5,019.7	4,877.7	4,951.4	4,826.5	22.1	21.8	-105.28	-400.6	-902.0	650.3	607.8	42.50	15.301	
5,100.0	4,954.2	5,030.6	4,902.8	22.6	22.3	-105.55	-407.5	-922.0	663.6	620.1	43.44	15.277	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	5,048.4	4,920.0	22.8	22.4	-105.60	-409.1	-926.5	666.6	622.9	43.65	15.272	
5,171.8	5,022.7	5,101.4	4,971.0	23.1	22.7	-105.77	-413.7	-939.8	675.4	631.2	44.27	15.257	
5,200.0	5,049.6	5,129.2	4,997.8	23.3	22.8	-105.94	-416.1	-946.9	680.1	635.5	44.59	15.252	
5,216.5	5,065.4	5,145.5	5,013.5	23.3	22.9	-106.02	-417.5	-951.0	682.7	638.0	44.76	15.255	
5,300.0	5,145.7	5,227.9	5,092.9	23.7	23.4	-106.33	-424.7	-971.8	695.9	650.3	45.61	15.258	
5,314.9	5,160.1	5,242.7	5,107.2	23.8	23.5	-106.36	-426.0	-975.5	698.1	652.4	45.75	15.259	
5,400.0	5,242.7	5,326.8	5,188.2	24.1	24.0	-106.42	-433.3	-996.8	710.7	664.1	46.58	15.259	
5,413.4	5,255.7	5,340.0	5,201.0	24.2	24.0	-106.41	-434.5	-1,000.1	712.6	665.9	46.70	15.259	
5,500.0	5,340.5	5,431.5	5,289.4	24.5	24.5	-106.28	-442.1	-1,022.2	724.3	676.8	47.44	15.268	
5,511.8	5,352.1	5,444.1	5,301.6	24.5	24.5	-106.26	-443.1	-1,025.1	725.7	678.2	47.52	15.271	
5,600.0	5,439.0	5,538.8	5,394.0	24.8	24.9	-106.11	-449.9	-1,044.8	735.9	687.7	48.15	15.283	
5,610.2	5,449.1	5,549.8	5,404.8	24.8	24.9	-106.09	-450.6	-1,046.9	736.9	688.7	48.21	15.284	
5,700.0	5,538.0	5,646.6	5,500.0	25.1	25.2	-105.93	-456.4	-1,063.7	745.4	696.6	48.77	15.285	
5,708.6	5,546.6	5,656.0	5,509.2	25.1	25.2	-105.92	-456.9	-1,065.2	746.1	697.3	48.81	15.286	
5,800.0	5,637.4	5,755.0	5,607.1	25.3	25.5	-105.74	-461.7	-1,079.0	752.9	703.6	49.29	15.276	
5,807.1	5,644.5	5,762.7	5,614.7	25.3	25.5	-105.73	-462.0	-1,079.9	753.3	704.0	49.32	15.275	
5,900.0	5,737.2	5,863.7	5,715.2	25.5	25.7	-105.53	-465.6	-1,090.4	758.2	708.5	49.71	15.254	
5,905.5	5,742.6	5,869.7	5,721.2	25.5	25.8	-105.52	-465.8	-1,090.9	758.5	708.8	49.73	15.253	
6,000.0	5,837.1	5,972.8	5,823.9	25.6	25.9	-105.30	-468.2	-1,097.9	761.5	711.5	50.03	15.220	
6,003.9	5,841.0	5,977.1	5,828.2	25.6	25.9	-105.30	-468.3	-1,098.1	761.6	711.5	50.05	15.218	
6,051.8	5,888.9	6,029.4	5,880.5	25.7	26.0	179.69	-469.0	-1,100.3	762.4	730.3	32.07	23.775	
6,081.8	5,918.9	6,062.2	5,913.3	25.7	26.1	179.76	-469.3	-1,101.1	762.6	730.5	32.17	23.710	
6,100.0	5,937.1	6,082.1	5,933.1	25.7	26.1	89.80	-469.4	-1,101.5	762.8	712.5	50.28	15.171	
6,102.3	5,939.4	6,084.6	5,935.7	25.7	26.1	89.80	-469.5	-1,101.5	762.8	712.5	50.28	15.170	
6,150.0	5,987.0	6,135.9	5,987.0	25.7	26.1	90.06	-469.6	-1,101.9	762.9	712.5	50.34	15.154	
6,200.0	6,036.5	6,185.7	6,036.8	25.7	26.2	90.50	-469.6	-1,101.3	762.9	712.5	50.35	15.152	
6,200.8	6,037.3	6,186.5	6,037.6	25.7	26.2	90.51	-469.6	-1,101.3	762.9	712.5	50.35	15.153	
6,250.0	6,085.5	6,236.0	6,087.0	25.7	26.2	90.97	-469.6	-1,097.6	763.0	712.7	50.28	15.174	
6,299.2	6,133.0	6,286.0	6,136.4	25.6	26.2	91.43	-469.6	-1,090.4	763.1	712.9	50.15	15.215	
6,300.0	6,133.7	6,286.8	6,137.2	25.6	26.2	91.43	-469.6	-1,090.3	763.1	712.9	50.15	15.216	
6,350.0	6,180.9	6,338.0	6,187.2	25.5	26.1	91.89	-469.6	-1,079.3	763.3	713.3	49.96	15.276	
6,397.6	6,224.6	6,387.2	6,234.4	25.4	26.0	92.32	-469.6	-1,065.4	763.5	713.8	49.74	15.349	
6,400.0	6,226.7	6,389.7	6,236.7	25.4	26.0	92.35	-469.6	-1,064.7	763.5	713.8	49.73	15.353	
6,450.0	6,271.1	6,441.8	6,285.5	25.2	25.9	92.79	-469.6	-1,046.3	763.8	714.3	49.46	15.442	
6,496.0	6,310.4	6,490.3	6,329.5	25.1	25.8	93.19	-469.6	-1,026.1	764.1	714.9	49.19	15.533	
6,500.0	6,313.7	6,494.5	6,333.3	25.1	25.7	93.22	-469.6	-1,024.2	764.1	714.9	49.17	15.541	
6,550.0	6,354.4	6,547.6	6,379.7	25.0	25.6	93.64	-469.6	-998.4	764.4	715.6	48.87	15.643	
6,594.5	6,388.9	6,595.2	6,419.6	24.9	25.5	93.99	-469.6	-972.4	764.7	716.1	48.61	15.733	
6,600.0	6,393.0	6,601.1	6,424.4	24.9	25.4	94.04	-469.6	-969.0	764.8	716.2	48.58	15.744	
6,650.0	6,429.3	6,655.1	6,467.2	24.8	25.3	94.42	-469.6	-936.0	765.2	716.8	48.31	15.837	
6,692.9	6,458.5	6,701.8	6,502.1	24.7	25.2	94.72	-469.6	-905.0	765.5	717.4	48.13	15.904	
6,700.0	6,463.1	6,709.6	6,507.7	24.7	25.1	94.77	-469.6	-899.6	765.5	717.4	48.10	15.914	
6,750.0	6,494.3	6,764.5	6,545.6	24.7	25.0	95.11	-469.6	-859.9	765.9	718.0	47.97	15.968	
6,791.3	6,517.9	6,810.1	6,574.7	24.7	25.0	95.37	-469.6	-824.8	766.2	718.3	47.93	15.988	
6,800.0	6,522.6	6,819.7	6,580.5	24.7	24.9	95.42	-469.6	-817.1	766.3	718.4	47.92	15.990	
6,850.0	6,548.0	6,875.4	6,612.3	24.7	24.9	95.70	-469.6	-771.5	766.7	718.7	47.99	15.974	
6,889.7	6,566.0	6,919.9	6,635.1	24.8	24.9	95.90	-469.6	-733.3	766.9	718.8	48.15	15.929	
6,900.0	6,570.4	6,931.4	6,640.6	24.9	24.9	95.95	-469.6	-723.2	767.0	718.8	48.20	15.914	
6,950.0	6,589.5	6,987.7	6,665.1	25.1	25.0	96.17	-469.6	-672.5	767.3	718.8	48.54	15.807	
6,988.2	6,602.0	7,030.8	6,681.2	25.3	25.1	96.31	-469.6	-632.5	767.5	718.6	48.92	15.689	
7,000.0	6,605.4	7,044.2	6,685.7	25.3	25.1	96.35	-469.6	-619.9	767.6	718.5	49.04	15.651	
7,050.0	6,618.0	7,101.0	6,702.1	25.6	25.4	96.50	-469.6	-565.5	767.8	718.1	49.70	15.448	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,625.0	7,142.7	6,711.4	25.9	25.6	96.59	-469.6	-524.9	767.9	717.6	50.29	15.269	
7,100.0	6,627.1	7,157.9	6,714.2	26.0	25.7	96.61	-469.6	-509.9	768.0	717.5	50.52	15.201	
7,150.0	6,632.8	7,215.0	6,721.9	26.5	26.1	96.69	-469.6	-453.3	768.1	716.6	51.48	14.920	
7,185.0	6,634.7	7,255.1	6,724.6	26.8	26.4	96.72	-469.6	-413.4	768.1	715.9	52.23	14.707	
7,200.0	6,635.0	7,272.2	6,725.0	27.0	26.6	96.73	-469.6	-396.3	768.2	715.6	52.57	14.613	
7,215.9	6,635.0	7,290.4	6,725.1	27.1	26.7	96.73	-469.6	-378.1	768.2	715.2	52.93	14.512	
7,283.4	6,634.1	7,358.5	6,723.9	27.9	27.5	96.71	-469.6	-310.0	768.1	713.6	54.56	14.078	
7,300.0	6,633.9	7,375.1	6,723.6	28.1	27.6	96.71	-469.6	-293.4	768.1	713.2	54.97	13.975	
7,381.9	6,632.9	7,456.9	6,722.2	29.3	28.7	96.68	-469.6	-211.6	768.1	710.8	57.24	13.418	
7,400.0	6,632.6	7,475.1	6,721.9	29.5	28.9	96.68	-469.6	-193.4	768.1	710.3	57.76	13.298	
7,480.3	6,631.6	7,555.4	6,720.6	30.8	30.1	96.65	-469.6	-113.2	768.0	707.7	60.30	12.737	
7,500.0	6,631.4	7,575.1	6,720.2	31.1	30.4	96.64	-469.6	-93.5	768.0	707.1	60.94	12.604	
7,578.7	6,630.4	7,653.8	6,718.9	32.5	31.7	96.62	-469.6	-14.7	768.0	704.3	63.69	12.058	
7,600.0	6,630.1	7,675.1	6,718.5	32.9	32.1	96.61	-469.6	6.5	768.0	703.5	64.44	11.917	
7,677.1	6,629.1	7,752.2	6,717.2	34.3	33.5	96.59	-469.6	83.7	767.9	700.6	67.36	11.401	
7,700.0	6,628.8	7,775.1	6,716.8	34.8	33.9	96.58	-469.6	106.5	767.9	699.7	68.23	11.255	
7,775.6	6,627.8	7,850.6	6,715.5	36.3	35.4	96.56	-469.6	182.1	767.9	696.6	71.26	10.776	
7,800.0	6,627.5	7,875.1	6,715.1	36.8	35.9	96.55	-469.6	206.5	767.9	695.6	72.25	10.628	
7,874.0	6,626.6	7,949.1	6,713.8	38.4	37.5	96.53	-469.6	280.5	767.9	692.5	75.37	10.188	
7,900.0	6,626.3	7,975.1	6,713.4	38.9	38.0	96.52	-469.6	306.5	767.8	691.4	76.47	10.041	
7,972.4	6,625.3	8,047.5	6,712.2	40.5	39.6	96.49	-469.6	378.9	767.8	688.2	79.64	9.640	
8,000.0	6,625.0	8,075.1	6,711.7	41.1	40.2	96.49	-469.6	406.5	767.8	686.9	80.86	9.495	
8,070.8	6,624.1	8,145.9	6,710.5	42.7	41.8	96.46	-469.6	477.3	767.8	683.7	84.06	9.133	
8,100.0	6,623.7	8,175.1	6,710.0	43.4	42.5	96.45	-469.6	506.5	767.7	682.4	85.39	8.991	
8,169.3	6,622.8	8,244.3	6,708.8	45.0	44.1	96.43	-469.6	575.7	767.7	679.1	88.60	8.665	
8,200.0	6,622.4	8,275.1	6,708.3	45.7	44.8	96.42	-469.6	606.4	767.7	677.7	90.04	8.527	
8,267.7	6,621.6	8,342.8	6,707.1	47.4	46.4	96.40	-469.6	674.1	767.7	674.4	93.25	8.232	
8,300.0	6,621.1	8,375.1	6,706.6	48.1	47.2	96.39	-469.6	706.4	767.7	672.9	94.79	8.099	
8,366.1	6,620.3	8,441.2	6,705.4	49.7	48.8	96.37	-469.6	772.5	767.6	669.6	97.98	7.834	
8,400.0	6,619.9	8,475.1	6,704.9	50.6	49.6	96.36	-469.6	806.4	767.6	668.0	99.63	7.705	
8,464.5	6,619.0	8,539.6	6,703.8	52.2	51.2	96.34	-469.6	871.0	767.6	664.8	102.80	7.467	
8,500.0	6,618.6	8,575.1	6,703.2	53.0	52.0	96.33	-469.6	906.4	767.6	663.0	104.54	7.342	
8,563.0	6,617.8	8,638.0	6,702.1	54.6	53.6	96.31	-469.6	969.4	767.5	659.9	107.68	7.128	
8,600.0	6,617.3	8,675.1	6,701.4	55.5	54.5	96.30	-469.6	1,006.4	767.5	658.0	109.52	7.008	
8,661.4	6,616.5	8,736.5	6,700.4	57.1	56.1	96.28	-469.6	1,067.8	767.5	654.9	112.62	6.815	
8,700.0	6,616.0	8,775.1	6,699.7	58.1	57.1	96.26	-469.6	1,106.4	767.5	652.9	114.56	6.699	
8,759.8	6,615.2	8,834.9	6,698.7	59.6	58.6	96.24	-469.6	1,166.2	767.4	649.8	117.61	6.526	
8,800.0	6,614.7	8,875.1	6,698.0	60.6	59.6	96.23	-469.6	1,206.4	767.4	647.8	119.65	6.414	
8,858.2	6,614.0	8,933.3	6,697.0	62.1	61.1	96.21	-469.6	1,264.6	767.4	644.8	122.64	6.257	
8,900.0	6,613.4	8,975.1	6,696.3	63.2	62.2	96.20	-469.6	1,306.3	767.4	642.6	124.78	6.150	
8,956.7	6,612.7	9,031.7	6,695.3	64.7	63.7	96.18	-469.6	1,363.0	767.3	639.6	127.71	6.008	
9,000.0	6,612.2	9,075.1	6,694.6	65.8	64.8	96.17	-469.6	1,406.3	767.3	637.4	129.96	5.905	
9,055.1	6,611.5	9,130.2	6,693.6	67.3	66.2	96.15	-469.6	1,461.4	767.3	634.5	132.82	5.777	
9,100.0	6,610.9	9,175.1	6,692.9	68.4	67.4	96.14	-469.6	1,506.3	767.3	632.1	135.16	5.677	
9,153.5	6,610.2	9,228.6	6,692.0	69.8	68.8	96.12	-469.6	1,559.8	767.3	629.3	137.96	5.561	
9,200.0	6,609.6	9,275.1	6,691.2	71.1	70.0	96.10	-469.6	1,606.3	767.2	626.8	140.40	5.465	
9,251.9	6,608.9	9,327.0	6,690.3	72.4	71.4	96.09	-469.6	1,658.2	767.2	624.1	143.13	5.360	
9,300.0	6,608.3	9,375.1	6,689.5	73.7	72.7	96.07	-469.6	1,706.3	767.2	621.5	145.66	5.267	
9,350.4	6,607.7	9,425.4	6,688.6	75.0	74.0	96.06	-469.6	1,756.7	767.2	618.8	148.33	5.172	
9,400.0	6,607.0	9,475.1	6,687.7	76.4	75.3	96.04	-469.6	1,806.3	767.1	616.2	150.95	5.082	
9,448.8	6,606.4	9,523.9	6,686.9	77.7	76.6	96.02	-469.6	1,855.1	767.1	613.6	153.54	4.996	
9,500.0	6,605.7	9,575.1	6,686.0	79.0	78.0	96.01	-469.6	1,906.3	767.1	610.8	156.26	4.909	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.1	9,622.3	6,685.2	80.3	79.3	95.99	-469.6	1,953.5	767.1	608.3	158.78	4.831	
9,600.0	6,604.5	9,675.1	6,684.3	81.7	80.7	95.98	-469.6	2,006.2	767.1	605.5	161.60	4.747	
9,645.6	6,603.9	9,720.7	6,683.5	82.9	81.9	95.96	-469.6	2,051.9	767.0	603.0	164.04	4.676	
9,700.0	6,603.2	9,775.1	6,682.6	84.4	83.4	95.94	-469.6	2,106.2	767.0	600.1	166.94	4.594	
9,744.1	6,602.6	9,819.1	6,681.8	85.6	84.5	95.93	-469.6	2,150.3	767.0	597.7	169.31	4.530	
9,800.0	6,601.9	9,875.1	6,680.9	87.1	86.1	95.91	-469.6	2,206.2	767.0	594.7	172.31	4.451	
9,842.5	6,601.3	9,917.6	6,680.1	88.2	87.2	95.90	-469.6	2,248.7	766.9	592.4	174.60	4.393	
9,900.0	6,600.6	9,975.1	6,679.1	89.8	88.8	95.88	-469.6	2,306.2	766.9	589.2	177.69	4.316	
9,940.9	6,600.1	10,016.0	6,678.4	90.9	89.9	95.87	-469.6	2,347.1	766.9	587.0	179.90	4.263	
10,000.0	6,599.3	10,075.1	6,677.4	92.5	91.5	95.85	-469.6	2,406.2	766.9	583.8	183.09	4.189	
10,039.3	6,598.8	10,114.4	6,676.8	93.5	92.5	95.83	-469.6	2,445.5	766.9	581.6	185.21	4.140	
10,100.0	6,598.0	10,175.1	6,675.7	95.2	94.2	95.82	-469.6	2,506.2	766.8	578.3	188.49	4.068	
10,137.8	6,597.5	10,212.8	6,675.1	96.2	95.2	95.80	-469.6	2,543.9	766.8	576.3	190.54	4.024	
10,200.0	6,596.7	10,275.1	6,674.0	97.9	96.9	95.78	-469.6	2,606.2	766.8	572.9	193.91	3.954	
10,236.2	6,596.3	10,311.3	6,673.4	98.9	97.9	95.77	-469.6	2,642.3	766.8	570.9	195.88	3.915	
10,300.0	6,595.4	10,375.1	6,672.3	100.6	99.6	95.75	-469.6	2,706.1	766.7	567.4	199.34	3.846	
10,334.6	6,595.0	10,409.7	6,671.7	101.6	100.6	95.74	-469.6	2,740.8	766.7	565.5	201.23	3.810	
10,400.0	6,594.2	10,475.1	6,670.5	103.4	102.3	95.72	-469.6	2,806.1	766.7	561.9	204.78	3.744	
10,433.0	6,593.7	10,508.1	6,670.0	104.3	103.2	95.71	-469.6	2,839.2	766.7	560.1	206.58	3.711	
10,500.0	6,592.9	10,575.1	6,668.8	106.1	105.1	95.69	-469.6	2,906.1	766.7	556.4	210.23	3.647	
10,531.5	6,592.5	10,606.5	6,668.3	106.9	105.9	95.68	-469.6	2,937.6	766.6	554.7	211.95	3.617	
10,600.0	6,591.6	10,675.1	6,667.1	108.8	107.8	95.65	-469.6	3,006.1	766.6	550.9	215.69	3.554	
10,629.9	6,591.2	10,705.0	6,666.6	109.6	108.6	95.65	-469.6	3,036.0	766.6	549.3	217.32	3.527	
10,700.0	6,590.3	10,775.1	6,665.4	111.6	110.5	95.62	-469.6	3,106.1	766.6	545.4	221.16	3.466	
10,728.3	6,589.9	10,803.4	6,664.9	112.3	111.3	95.61	-469.6	3,134.4	766.6	543.8	222.71	3.442	
10,800.0	6,589.0	10,875.1	6,663.7	114.3	113.3	95.59	-469.6	3,206.1	766.5	539.9	226.63	3.382	
10,826.7	6,588.7	10,901.8	6,663.2	115.0	114.0	95.58	-469.6	3,232.8	766.5	538.4	228.10	3.360	
10,900.0	6,587.7	10,975.1	6,661.9	117.1	116.0	95.56	-469.6	3,306.1	766.5	534.4	232.11	3.302	
10,925.2	6,587.4	11,000.2	6,661.5	117.7	116.7	95.55	-469.6	3,331.2	766.5	533.0	233.49	3.283	
11,000.0	6,586.4	11,075.1	6,660.2	119.8	118.8	95.53	-469.6	3,406.0	766.4	528.8	237.60	3.226	
11,023.6	6,586.1	11,098.7	6,659.8	120.4	119.4	95.52	-469.6	3,429.6	766.4	527.5	238.89	3.208	
11,100.0	6,585.1	11,175.1	6,658.5	122.6	121.5	95.49	-469.6	3,506.0	766.4	523.3	243.09	3.153	
11,122.0	6,584.8	11,197.1	6,658.1	123.2	122.1	95.49	-469.6	3,528.0	766.4	522.1	244.30	3.137	
11,200.0	6,583.8	11,275.1	6,656.8	125.3	124.3	95.46	-469.6	3,606.0	766.4	517.8	248.59	3.083	
11,220.4	6,583.6	11,295.5	6,656.4	125.9	124.9	95.45	-469.6	3,626.5	766.3	516.6	249.71	3.069	
11,300.0	6,582.5	11,375.1	6,655.0	128.1	127.0	95.43	-469.6	3,706.0	766.3	512.2	254.09	3.016	
11,318.9	6,582.3	11,393.9	6,654.7	128.6	127.6	95.42	-469.6	3,724.9	766.3	511.2	255.13	3.004	
11,400.0	6,581.2	11,475.1	6,653.3	130.8	129.8	95.40	-469.6	3,806.0	766.3	506.7	259.60	2.952	
11,417.3	6,581.0	11,492.4	6,653.0	131.3	130.3	95.39	-469.6	3,823.3	766.3	505.7	260.55	2.941	
11,500.0	6,580.0	11,575.1	6,651.6	133.6	132.6	95.36	-469.6	3,906.0	766.2	501.1	265.11	2.890	
11,515.7	6,579.7	11,590.8	6,651.3	134.0	133.0	95.36	-469.6	3,921.7	766.2	500.2	265.98	2.881	
11,600.0	6,578.7	11,675.1	6,649.8	136.3	135.3	95.33	-469.6	4,005.9	766.2	495.5	270.63	2.831	
11,614.1	6,578.5	11,689.2	6,649.6	136.7	135.7	95.33	-469.6	4,020.1	766.2	494.8	271.41	2.823	
11,700.0	6,577.4	11,775.1	6,648.1	139.1	138.1	95.30	-469.6	4,105.9	766.1	490.0	276.15	2.774	
11,712.6	6,577.2	11,787.6	6,647.9	139.5	138.4	95.30	-469.6	4,118.5	766.1	489.3	276.85	2.767	
11,800.0	6,576.1	11,875.1	6,646.4	141.9	140.9	95.27	-469.6	4,205.9	766.1	484.4	281.68	2.720	
11,811.0	6,575.9	11,886.1	6,646.2	142.2	141.2	95.26	-469.6	4,216.9	766.1	483.8	282.29	2.714	
11,861.9	6,575.3	11,937.0	6,645.3	143.6	142.6	95.25	-469.6	4,267.8	766.1	481.0	285.10	2.687	
11,882.7	6,575.0	11,955.0	6,645.0	144.2	143.1	95.24	-469.6	4,285.8	766.1	479.9	286.17	2.677	
11,883.5	6,575.0	11,955.0	6,645.0	144.2	143.1	95.24	-469.6	4,285.8	766.1	479.9	286.19	2.677 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-179.36	-75.0	-0.8	75.0				
98.4	98.4	98.4	98.4	0.1	0.1	-179.36	-75.0	-0.8	75.0	74.8	0.19	390.335	
100.0	100.0	100.0	100.0	0.1	0.1	-179.36	-75.0	-0.8	75.0	74.8	0.20	383.728	
196.8	196.8	196.8	196.8	0.3	0.3	-179.36	-75.0	-0.8	75.0	74.4	0.63	118.932	
200.0	200.0	200.0	200.0	0.3	0.3	-179.36	-75.0	-0.8	75.0	74.4	0.65	116.322	
295.3	295.3	295.3	295.3	0.5	0.5	-179.36	-75.0	-0.8	75.0	74.0	1.07	69.908	
300.0	300.0	300.0	300.0	0.5	0.5	-179.36	-75.0	-0.8	75.0	73.9	1.09	68.551	
393.7	393.7	393.7	393.7	0.8	0.8	-179.36	-75.0	-0.8	75.0	73.5	1.52	49.502	
400.0	400.0	400.0	400.0	0.8	0.8	-179.36	-75.0	-0.8	75.0	73.5	1.54	48.594	
492.1	492.1	492.1	492.1	1.0	1.0	-179.36	-75.0	-0.8	75.0	73.1	1.96	38.318	
500.0	500.0	500.0	500.0	1.0	1.0	-179.36	-75.0	-0.8	75.0	73.0	1.99	37.637	
590.5	590.5	590.5	590.5	1.2	1.2	-179.36	-75.0	-0.8	75.0	72.6	2.40	31.256	
600.0	600.0	600.0	600.0	1.2	1.2	-179.36	-75.0	-0.8	75.0	72.6	2.44	30.712	
689.0	689.0	689.0	689.0	1.4	1.4	-179.36	-75.0	-0.8	75.0	72.2	2.84	26.392	
700.0	700.0	700.0	700.0	1.4	1.4	-179.36	-75.0	-0.8	75.0	72.1	2.89	25.940	
787.4	787.4	787.4	787.4	1.6	1.6	-179.36	-75.0	-0.8	75.0	71.8	3.29	22.838	
800.0	800.0	800.0	800.0	1.7	1.7	-179.36	-75.0	-0.8	75.0	71.7	3.34	22.451	
885.8	885.8	885.8	885.8	1.9	1.9	-179.36	-75.0	-0.8	75.0	71.3	3.73	20.127	
900.0	900.0	900.0	900.0	1.9	1.9	-179.36	-75.0	-0.8	75.0	71.2	3.79	19.789	
984.2	984.2	984.2	984.2	2.1	2.1	-179.36	-75.0	-0.8	75.0	70.9	4.17	17.992	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-179.36	-75.0	-0.8	75.0	70.8	4.24	17.692	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-179.36	-75.0	-0.8	75.0	70.4	4.61	16.266	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-179.36	-75.0	-0.8	75.0	70.3	4.69	15.996 CC, ES	
1,181.1	1,181.1	1,179.5	1,179.5	2.5	2.5	-179.92	-75.9	-0.1	75.9	70.8	5.03	15.080	
1,200.0	1,200.0	1,198.0	1,198.0	2.6	2.5	179.80	-76.3	0.3	76.3	71.2	5.11	14.932	
1,279.5	1,279.5	1,275.9	1,275.7	2.7	2.7	178.04	-79.1	2.7	79.2	73.8	5.43	14.587	
1,300.0	1,300.0	1,295.9	1,295.7	2.8	2.7	177.46	-80.1	3.6	80.3	74.8	5.51	14.556	
1,377.9	1,377.9	1,371.8	1,371.4	3.0	2.9	174.86	-84.8	7.6	85.3	79.5	5.84	14.618	
1,400.0	1,400.0	1,393.2	1,392.7	3.0	2.9	174.05	-86.3	9.0	87.1	81.2	5.93	14.689	
1,476.4	1,476.4	1,467.0	1,466.0	3.2	3.1	-114.20	-92.8	14.6	94.9	88.6	6.25	15.175	
1,500.0	1,500.0	1,489.7	1,488.5	3.2	3.1	-115.45	-95.0	16.5	97.9	91.5	6.35	15.412	
1,574.8	1,574.7	1,560.9	1,558.9	3.4	3.3	-119.71	-102.9	23.4	109.3	102.7	6.66	16.414	
1,600.0	1,599.8	1,584.6	1,582.3	3.4	3.4	-121.19	-105.9	26.0	113.9	107.1	6.76	16.844	
1,673.2	1,672.8	1,652.8	1,649.4	3.6	3.6	-125.41	-115.2	34.0	129.5	122.4	7.07	18.314	
1,700.0	1,699.5	1,677.4	1,673.5	3.7	3.6	-126.88	-118.8	37.2	136.0	128.8	7.18	18.946	
1,771.6	1,770.6	1,744.5	1,739.2	3.8	3.9	-130.66	-129.3	46.3	155.5	148.0	7.48	20.780	
1,800.0	1,798.7	1,771.3	1,765.4	3.9	3.9	-132.03	-133.5	50.0	163.7	156.1	7.60	21.543	
1,870.1	1,868.0	1,837.3	1,829.9	4.1	4.2	-135.12	-143.8	59.0	185.3	177.4	7.89	23.469	
1,900.0	1,897.5	1,865.3	1,857.3	4.2	4.3	-136.31	-148.2	62.8	195.0	187.0	8.02	24.325	
1,968.5	1,964.8	1,928.9	1,919.5	4.4	4.5	-138.80	-158.2	71.5	218.4	210.1	8.30	26.304	
2,000.0	1,995.6	1,958.0	1,948.0	4.5	4.6	-139.84	-162.8	75.4	229.6	221.2	8.43	27.240	
2,066.9	2,060.9	2,019.3	2,008.0	4.7	4.9	-141.87	-172.4	83.8	254.7	246.0	8.71	29.230	
2,100.0	2,093.1	2,049.4	2,037.4	4.8	5.0	-142.78	-177.1	87.9	267.6	258.8	8.85	30.238	
2,165.3	2,156.3	2,108.4	2,095.1	5.1	5.2	-144.43	-186.4	96.0	294.3	285.1	9.13	32.239	
2,200.0	2,189.6	2,139.4	2,125.5	5.2	5.3	-145.23	-191.3	100.2	308.9	299.7	9.27	33.319	
2,263.8	2,250.7	2,196.1	2,180.8	5.5	5.6	-146.59	-200.1	107.9	336.9	327.4	9.54	35.300	
2,280.0	2,266.2	2,210.4	2,194.8	5.6	5.6	-146.92	-202.4	109.9	344.3	334.7	9.61	35.815	
2,300.0	2,285.3	2,228.0	2,212.0	5.7	5.7	-147.41	-205.1	112.3	353.4	343.7	9.71	36.400	
2,362.2	2,344.6	2,282.7	2,265.6	6.0	5.9	-148.79	-213.7	119.7	381.8	371.8	10.00	38.164	
2,400.0	2,380.6	2,316.0	2,298.2	6.2	6.1	-149.53	-219.0	124.3	399.1	388.9	10.19	39.172	
2,460.6	2,438.4	2,369.4	2,350.4	6.5	6.3	-150.60	-227.3	131.6	427.0	416.6	10.49	40.717	
2,500.0	2,475.9	2,404.0	2,384.3	6.7	6.4	-151.23	-232.8	136.3	445.2	434.6	10.68	41.682	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,456.0	2,435.1	7.0	6.6	-152.08	-240.9	143.4	472.6	461.6	10.98	43.044	
2,600.0	2,571.2	2,492.1	2,470.4	7.2	6.8	-152.61	-246.6	148.3	491.6	480.4	11.18	43.954	
2,657.5	2,626.0	2,542.7	2,519.9	7.5	7.0	-153.29	-254.5	155.2	518.3	506.9	11.48	45.158	
2,700.0	2,666.6	2,580.1	2,556.5	7.8	7.2	-153.75	-260.4	160.3	538.2	526.5	11.70	46.015	
2,755.9	2,719.8	2,629.3	2,604.6	8.1	7.4	-154.31	-268.1	167.0	564.2	552.3	11.98	47.081	
2,800.0	2,761.9	2,668.1	2,642.6	8.3	7.6	-154.72	-274.2	172.3	584.9	572.6	12.21	47.889	
2,854.3	2,813.7	2,715.9	2,689.4	8.7	7.8	-155.18	-281.7	178.8	610.3	597.8	12.50	48.834	
2,900.0	2,857.2	2,756.1	2,728.7	8.9	8.0	-155.54	-288.0	184.3	631.7	618.9	12.74	49.596	
2,952.7	2,907.5	2,802.6	2,774.1	9.2	8.2	-155.92	-295.3	190.7	656.4	643.4	13.01	50.435	
3,000.0	2,952.5	2,844.2	2,814.8	9.5	8.3	-156.25	-301.9	196.3	678.6	665.3	13.26	51.155	
3,051.2	3,001.3	2,889.2	2,858.8	9.8	8.5	-156.57	-308.9	202.5	702.6	689.0	13.54	51.900	
3,100.0	3,047.8	2,932.2	2,900.9	10.1	8.7	-156.86	-315.7	208.3	725.5	711.7	13.80	52.583	
3,149.6	3,095.1	2,975.9	2,943.6	10.4	8.9	-157.14	-322.5	214.3	748.8	734.8	14.06	53.245	
3,200.0	3,143.2	3,020.2	2,987.0	10.7	9.1	-157.41	-329.5	220.3	772.6	758.2	14.33	53.893	
3,248.0	3,188.9	3,062.5	3,028.3	11.0	9.3	-157.65	-336.1	226.1	795.2	780.6	14.59	54.482	
3,300.0	3,238.5	3,108.3	3,073.1	11.3	9.5	-157.89	-343.3	232.4	819.6	804.7	14.88	55.098	
3,346.4	3,282.8	3,149.2	3,113.1	11.6	9.7	-158.09	-349.7	237.9	841.5	826.4	15.13	55.623	
3,400.0	3,333.8	3,196.3	3,159.2	11.9	9.9	-158.32	-357.1	244.4	866.7	851.3	15.42	56.210	
3,444.9	3,376.6	3,235.8	3,197.8	12.2	10.1	-158.49	-363.3	249.8	887.9	872.2	15.67	56.678	
3,500.0	3,429.1	3,284.3	3,245.3	12.6	10.3	-158.70	-370.9	256.4	913.9	897.9	15.97	57.236	
3,543.3	3,470.4	3,322.4	3,282.6	12.8	10.5	-158.86	-376.9	261.6	934.3	918.1	16.20	57.657	
3,600.0	3,524.4	3,393.1	3,351.9	13.2	10.8	-159.14	-387.5	270.8	960.6	944.0	16.55	58.044	
3,641.7	3,564.2	3,448.5	3,406.4	13.4	10.9	-159.37	-394.9	277.2	979.1	962.3	16.80	58.284	
3,700.0	3,619.8	3,527.6	3,484.5	13.8	11.2	-159.70	-404.0	285.1	1,003.9	986.7	17.15	58.547	
3,740.1	3,658.0	3,583.1	3,539.6	14.0	11.3	-159.94	-409.5	289.9	1,020.1	1,002.7	17.38	58.677	
3,800.0	3,715.1	3,667.5	3,623.5	14.4	11.5	-160.32	-416.2	295.7	1,043.0	1,025.3	17.74	58.801	
3,838.6	3,751.8	3,722.9	3,678.7	14.7	11.6	-160.58	-419.6	298.7	1,056.9	1,039.0	17.96	58.836	
3,900.0	3,810.4	3,812.6	3,768.3	15.0	11.8	-161.01	-423.4	302.0	1,077.7	1,059.4	18.32	58.828	
3,937.0	3,845.7	3,867.5	3,823.2	15.3	11.9	-161.28	-424.7	303.1	1,089.4	1,070.9	18.53	58.788	
4,000.0	3,905.7	3,950.1	3,905.7	15.7	12.0	-161.70	-425.2	303.6	1,108.0	1,089.1	18.87	58.711	
4,035.4	3,939.5	3,983.8	3,939.5	15.9	12.1	-161.87	-425.2	303.6	1,118.2	1,099.2	19.05	58.710	
4,100.0	4,001.0	4,045.4	4,001.0	16.3	12.1	-162.18	-425.2	303.6	1,136.9	1,117.5	19.36	58.710	
4,133.8	4,033.3	4,077.7	4,033.3	16.5	12.2	-162.34	-425.2	303.6	1,146.6	1,127.1	19.53	58.711	
4,200.0	4,096.3	4,140.7	4,096.3	16.9	12.3	-162.63	-425.2	303.6	1,165.8	1,145.9	19.86	58.714	
4,232.3	4,127.1	4,171.5	4,127.1	17.1	12.3	-162.77	-425.2	303.6	1,175.2	1,155.1	20.01	58.716	
4,300.0	4,191.7	4,236.0	4,191.7	17.6	12.4	-163.06	-425.2	303.6	1,194.8	1,174.5	20.35	58.721	
4,330.7	4,220.9	4,265.3	4,220.9	17.8	12.5	-163.19	-425.2	303.6	1,203.7	1,183.2	20.50	58.723	
4,400.0	4,287.0	4,331.4	4,287.0	18.2	12.6	-163.47	-425.2	303.6	1,223.9	1,203.0	20.84	58.730	
4,429.1	4,314.7	4,359.1	4,314.7	18.4	12.6	-163.59	-425.2	303.6	1,232.4	1,211.4	20.98	58.733	
4,500.0	4,382.3	4,426.7	4,382.3	18.8	12.7	-163.87	-425.2	303.6	1,253.0	1,231.7	21.33	58.741	
4,527.5	4,408.6	4,452.9	4,408.6	19.0	12.7	-163.97	-425.2	303.6	1,261.0	1,239.6	21.47	58.744	
4,600.0	4,477.6	4,522.0	4,477.6	19.5	12.8	-164.24	-425.2	303.6	1,282.2	1,260.4	21.82	58.753	
4,626.0	4,502.4	4,546.8	4,502.4	19.6	12.9	-164.33	-425.2	303.6	1,289.8	1,267.8	21.95	58.756	
4,700.0	4,572.9	4,617.3	4,572.9	20.1	13.0	-164.60	-425.2	303.6	1,311.4	1,289.1	22.32	58.766	
4,724.4	4,596.2	4,640.6	4,596.2	20.3	13.0	-164.68	-425.2	303.6	1,318.5	1,296.1	22.44	58.769	
4,800.0	4,668.3	4,712.6	4,668.3	20.7	13.1	-164.94	-425.2	303.6	1,340.7	1,317.9	22.81	58.780	
4,822.8	4,690.0	4,734.4	4,690.0	20.9	13.2	-165.02	-425.2	303.6	1,347.4	1,324.4	22.92	58.783	
4,900.0	4,763.6	4,807.9	4,763.6	21.4	13.3	-165.27	-425.2	303.6	1,370.0	1,346.7	23.30	58.794	
4,921.2	4,783.8	4,828.2	4,783.8	21.5	13.3	-165.34	-425.2	303.6	1,376.2	1,352.8	23.41	58.797	
5,000.0	4,858.9	4,903.3	4,858.9	22.0	13.4	-165.58	-425.2	303.6	1,399.3	1,375.5	23.79	58.809	
5,019.7	4,877.7	4,922.0	4,877.7	22.1	13.5	-165.64	-425.2	303.6	1,405.1	1,381.2	23.89	58.812	
5,100.0	4,954.2	4,998.6	4,954.2	22.6	13.6	-165.88	-425.2	303.6	1,428.7	1,404.4	24.29	58.824	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	5,015.8	4,971.5	22.8	13.6	-165.94	-425.2	303.6	1,434.0	1,409.7	24.38	58.826	
5,171.8	5,022.7	5,067.0	5,022.7	23.1	13.7	-166.09	-425.2	303.6	1,449.8	1,425.2	24.64	58.834	
5,200.0	5,049.6	5,093.9	5,049.6	23.3	13.8	-166.21	-425.2	303.6	1,458.0	1,433.2	24.81	58.762	
5,216.5	5,065.4	5,109.8	5,065.4	23.3	13.8	-166.28	-425.2	303.6	1,462.7	1,437.8	24.90	58.731	
5,300.0	5,145.7	5,190.1	5,145.7	23.7	13.9	-166.60	-425.2	303.6	1,484.9	1,459.5	25.37	58.537	
5,314.9	5,160.1	5,204.5	5,160.1	23.8	13.9	-166.65	-425.2	303.6	1,488.7	1,463.2	25.45	58.501	
5,400.0	5,242.7	5,287.1	5,242.7	24.1	14.1	-166.92	-425.2	303.6	1,508.6	1,482.7	25.89	58.259	
5,413.4	5,255.7	5,300.1	5,255.7	24.2	14.1	-166.96	-425.2	303.6	1,511.5	1,485.5	25.96	58.220	
5,500.0	5,340.5	5,384.9	5,340.5	24.5	14.2	-167.19	-425.2	303.6	1,528.9	1,502.5	26.39	57.934	
5,511.8	5,352.1	5,396.4	5,352.1	24.5	14.3	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
5,600.0	5,439.0	5,483.4	5,439.0	24.8	14.3	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
5,610.2	5,449.1	5,493.5	5,449.1	24.8	14.3	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
5,700.0	5,538.0	5,582.4	5,538.0	25.1	14.3	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
5,708.6	5,546.6	5,591.0	5,546.6	25.1	14.3	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
5,800.0	5,637.4	5,681.8	5,637.4	25.3	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
5,807.1	5,644.5	5,688.9	5,644.5	25.3	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
5,900.0	5,737.2	5,781.6	5,737.2	25.5	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
5,905.5	5,742.6	5,787.0	5,742.6	25.5	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,000.0	5,837.1	5,881.5	5,837.1	25.6	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,003.9	5,841.0	5,885.4	5,841.0	25.6	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,051.8	5,888.9	5,933.3	5,888.9	25.7	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,081.8	5,918.9	5,963.3	5,918.9	25.7	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,100.0	5,937.1	5,981.5	5,937.1	25.7	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,102.3	5,939.4	5,983.8	5,939.4	25.7	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,150.0	5,987.0	6,031.4	5,987.0	25.7	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,200.0	6,036.5	6,080.9	6,036.5	25.7	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,200.8	6,037.3	6,081.7	6,037.3	25.7	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,250.0	6,085.5	6,129.9	6,085.5	25.7	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,299.2	6,133.0	6,177.4	6,133.0	25.6	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,300.0	6,133.7	6,178.1	6,133.7	25.6	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,350.0	6,180.9	6,225.3	6,180.9	25.5	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,397.6	6,224.6	6,269.0	6,224.6	25.4	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,400.0	6,226.7	6,271.1	6,226.7	25.4	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,450.0	6,271.1	6,315.5	6,271.1	25.2	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,496.0	6,310.4	6,354.8	6,310.4	25.1	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,500.0	6,313.7	6,358.1	6,313.7	25.1	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,550.0	6,354.4	6,398.8	6,354.4	25.0	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,594.5	6,388.9	6,433.3	6,388.9	24.9	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,600.0	6,393.0	6,437.4	6,393.0	24.9	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,650.0	6,429.3	6,473.7	6,429.3	24.8	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,692.9	6,458.5	6,502.9	6,458.5	24.7	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,700.0	6,463.1	6,507.5	6,463.1	24.7	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,750.0	6,494.3	6,538.7	6,494.3	24.7	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,791.3	6,517.9	6,562.3	6,517.9	24.7	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,800.0	6,522.6	6,567.2	6,522.6	24.7	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,850.0	6,548.0	6,592.0	6,548.0	24.7	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,889.7	6,566.0	6,610.7	6,566.0	24.8	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,900.0	6,570.4	6,614.8	6,570.4	24.9	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,950.0	6,589.5	6,633.5	6,589.5	25.1	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
6,988.2	6,602.0	6,646.2	6,602.0	25.3	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
7,000.0	6,605.4	6,649.6	6,605.4	25.3	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	
7,050.0	6,618.0	6,662.0	6,618.0	25.6	14.4	-167.22	-425.2	303.6	1,531.1	1,504.6	26.45	57.894	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,625.0	7,263.5	6,714.8	25.9	23.4	97.03	-425.2	-507.9	724.1	675.4	48.74	14.857	
7,100.0	6,627.1	7,250.3	6,714.8	26.0	23.1	96.89	-425.2	-494.7	723.9	675.3	48.58	14.899	
7,150.0	6,632.8	7,200.6	6,714.9	26.5	22.1	96.50	-425.2	-445.0	723.2	675.2	48.05	15.052	
7,185.0	6,634.7	7,165.1	6,715.0	26.8	21.4	96.37	-425.2	-409.6	723.0	675.3	47.72	15.150	
7,200.0	6,635.0	7,148.3	6,714.7	27.0	21.1	96.33	-425.2	-392.7	722.9	675.4	47.56	15.201	
7,215.9	6,635.0	7,130.4	6,714.0	27.1	20.7	96.28	-425.2	-374.9	722.9	675.5	47.40	15.250	
7,283.4	6,634.1	7,055.1	6,706.1	27.9	19.3	95.73	-425.2	-300.0	722.2	675.3	46.91	15.395	
7,300.0	6,633.9	7,036.9	6,703.0	28.1	19.0	95.50	-425.2	-282.1	722.0	675.1	46.83	15.418	
7,381.9	6,632.9	6,949.8	6,682.0	29.3	17.6	93.92	-425.2	-197.6	720.4	673.7	46.72	15.420	
7,400.0	6,632.6	6,931.2	6,676.2	29.5	17.4	93.48	-425.2	-180.0	720.0	673.3	46.75	15.403	
7,480.3	6,631.6	6,853.0	6,646.8	30.8	16.4	91.21	-425.2	-107.5	718.7	671.6	47.12	15.252	
7,500.0	6,631.4	6,834.9	6,638.8	31.1	16.3	90.60	-425.2	-91.2	718.6	671.3	47.26	15.205	
7,518.6	6,631.1	6,818.1	6,631.1	31.4	16.1	90.00	-425.2	-76.3	718.5	671.1	47.42	15.151	
7,578.7	6,630.4	6,766.8	6,605.4	32.5	15.8	88.00	-425.2	-31.9	719.1	671.1	48.00	14.982	
7,600.0	6,630.1	6,750.0	6,596.3	32.9	15.8	87.29	-425.2	-17.8	719.7	671.5	48.22	14.926	
7,677.1	6,629.1	6,691.5	6,562.1	34.3	15.6	84.62	-425.2	29.6	723.6	674.4	49.17	14.716	
7,700.0	6,628.8	6,675.6	6,552.2	34.8	15.6	83.85	-425.2	42.0	725.3	675.9	49.46	14.665	
7,775.6	6,627.8	6,626.7	6,519.8	36.3	15.6	81.35	-425.2	78.7	733.7	683.2	50.51	14.525	
7,800.0	6,627.5	6,612.0	6,509.7	36.8	15.6	80.57	-425.2	89.3	737.3	686.4	50.85	14.499	
7,874.0	6,626.6	6,571.0	6,480.2	38.4	15.6	78.32	-425.2	117.7	750.8	698.9	51.95	14.453	
7,900.0	6,626.3	6,557.7	6,470.2	38.9	15.6	77.57	-425.2	126.5	756.6	704.3	52.33	14.459	
7,972.4	6,625.3	6,523.4	6,443.8	40.5	15.6	75.60	-425.2	148.5	775.6	722.2	53.44	14.513	
8,000.0	6,625.0	6,511.3	6,434.3	41.1	15.6	74.90	-425.2	156.0	784.0	730.2	53.86	14.556	
8,070.8	6,624.1	6,482.4	6,411.0	42.7	15.6	73.20	-425.2	173.1	808.3	753.3	54.98	14.702	
8,100.0	6,623.7	6,471.4	6,401.9	43.4	15.6	72.55	-425.2	179.3	819.5	764.0	55.44	14.782	
8,169.3	6,622.8	6,450.0	6,384.1	45.0	15.6	71.27	-425.2	191.1	848.6	792.0	56.61	14.990	
8,200.0	6,622.4	6,436.9	6,373.0	45.7	15.6	70.49	-425.2	198.0	862.6	805.6	57.05	15.121	
8,267.7	6,621.6	6,416.3	6,355.2	47.4	15.6	69.25	-425.2	208.6	895.9	837.7	58.17	15.402	
8,300.0	6,621.1	6,400.0	6,341.0	48.1	15.6	68.27	-425.2	216.5	912.9	854.3	58.54	15.593	
8,366.1	6,620.3	6,400.0	6,341.0	49.7	15.6	68.27	-425.2	216.5	949.7	889.6	60.05	15.815	
8,400.0	6,619.9	6,381.0	6,324.2	50.6	15.6	67.13	-425.2	225.4	969.3	909.0	60.38	16.053	
8,464.5	6,619.0	6,365.9	6,310.7	52.2	15.6	66.23	-425.2	232.1	1,008.8	947.3	61.49	16.405	
8,500.0	6,618.6	6,350.0	6,296.3	53.0	15.6	65.28	-425.2	238.8	1,031.4	969.5	61.89	16.664	
8,563.0	6,617.8	6,350.0	6,296.3	54.6	15.6	65.28	-425.2	238.8	1,072.9	1,009.6	63.34	16.940	
8,600.0	6,617.3	6,350.0	6,296.3	55.5	15.6	65.28	-425.2	238.8	1,098.3	1,034.1	64.19	17.111	
8,661.4	6,616.5	6,326.5	6,274.8	57.1	15.6	63.89	-425.2	248.2	1,141.2	1,076.2	64.95	17.570	
8,700.0	6,616.0	6,319.8	6,268.6	58.1	15.6	63.50	-425.2	250.8	1,169.0	1,103.3	65.64	17.809	
8,759.8	6,615.2	6,300.0	6,250.2	59.6	15.6	62.33	-425.2	258.0	1,213.2	1,146.8	66.42	18.266	
8,800.0	6,614.7	6,300.0	6,250.2	60.6	15.6	62.33	-425.2	258.0	1,243.3	1,176.0	67.34	18.465	
8,858.2	6,614.0	6,300.0	6,250.2	62.1	15.6	62.33	-425.2	258.0	1,288.0	1,219.4	68.68	18.754	
8,900.0	6,613.4	6,300.0	6,250.2	63.2	15.6	62.33	-425.2	258.0	1,320.7	1,251.1	69.64	18.965	
8,956.7	6,612.7	6,281.8	6,233.0	64.7	15.6	61.28	-425.2	264.2	1,365.6	1,295.2	70.35	19.412	
9,000.0	6,612.2	6,276.3	6,227.8	65.8	15.6	60.96	-425.2	266.0	1,400.4	1,329.3	71.15	19.682	
9,055.1	6,611.5	6,269.6	6,221.5	67.3	15.6	60.58	-425.2	268.1	1,445.4	1,373.2	72.19	20.021	
9,100.0	6,610.9	6,250.0	6,202.8	68.4	15.6	59.46	-425.2	273.9	1,482.6	1,410.1	72.51	20.447	
9,153.5	6,610.2	6,250.0	6,202.8	69.8	15.6	59.46	-425.2	273.9	1,527.2	1,453.4	73.74	20.711	
9,200.0	6,609.6	6,250.0	6,202.8	71.1	15.6	59.46	-425.2	273.9	1,566.3	1,491.5	74.80	20.939	
9,251.9	6,608.9	6,250.0	6,202.8	72.4	15.6	59.46	-425.2	273.9	1,610.5	1,534.5	76.00	21.191	
9,300.0	6,608.3	6,250.0	6,202.8	73.7	15.6	59.46	-425.2	273.9	1,651.8	1,574.7	77.11	21.423	
9,350.4	6,607.7	6,250.0	6,202.8	75.0	15.6	59.46	-425.2	273.9	1,695.5	1,617.2	78.27	21.662	
9,400.0	6,607.0	6,250.0	6,202.8	76.4	15.6	59.46	-425.2	273.9	1,738.9	1,659.4	79.42	21.895	
9,448.8	6,606.4	6,230.8	6,184.3	77.7	15.6	58.38	-425.2	279.1	1,781.5	1,701.7	79.76	22.337	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.7	6,226.6	6,180.2	79.0	15.6	58.15	-425.2	280.2	1,826.7	1,746.0	80.76	22.620	
9,547.2	6,605.1	6,222.9	6,176.7	80.3	15.6	57.95	-425.2	281.1	1,868.7	1,787.0	81.68	22.877	
9,600.0	6,604.5	6,219.0	6,172.9	81.7	15.6	57.73	-425.2	282.1	1,915.9	1,833.1	82.72	23.160	
9,645.6	6,603.9	6,200.0	6,154.4	82.9	15.5	56.69	-425.2	286.5	1,957.1	1,874.2	82.92	23.601	
9,700.0	6,603.2	6,200.0	6,154.4	84.4	15.5	56.69	-425.2	286.5	2,006.1	1,921.9	84.16	23.836	
9,744.1	6,602.6	6,200.0	6,154.4	85.6	15.5	56.69	-425.2	286.5	2,046.0	1,960.8	85.17	24.024	
9,800.0	6,601.9	6,200.0	6,154.4	87.1	15.5	56.69	-425.2	286.5	2,096.8	2,010.4	86.44	24.258	
9,842.5	6,601.3	6,200.0	6,154.4	88.2	15.5	56.69	-425.2	286.5	2,135.7	2,048.3	87.41	24.432	
9,900.0	6,600.6	6,200.0	6,154.4	89.8	15.5	56.69	-425.2	286.5	2,188.4	2,099.7	88.73	24.665	
9,940.9	6,600.1	6,200.0	6,154.4	90.9	15.5	56.69	-425.2	286.5	2,226.1	2,136.5	89.67	24.827	
10,000.0	6,599.3	6,200.0	6,154.4	92.5	15.5	56.69	-425.2	286.5	2,280.7	2,189.7	91.02	25.057	
10,039.3	6,598.8	6,200.0	6,154.4	93.5	15.5	56.69	-425.2	286.5	2,317.2	2,225.3	91.93	25.208	
10,100.0	6,598.0	6,200.0	6,154.4	95.2	15.5	56.69	-425.2	286.5	2,373.7	2,280.3	93.32	25.436	
10,137.8	6,597.5	6,200.0	6,154.4	96.2	15.5	56.69	-425.2	286.5	2,408.9	2,314.7	94.19	25.575	
10,200.0	6,596.7	6,200.0	6,154.4	97.9	15.5	56.69	-425.2	286.5	2,467.1	2,371.5	95.62	25.801	
10,236.2	6,596.3	6,200.0	6,154.4	98.9	15.5	56.69	-425.2	286.5	2,501.1	2,404.6	96.46	25.930	
10,300.0	6,595.4	6,178.6	6,133.4	100.6	15.5	55.54	-425.2	290.8	2,560.7	2,463.9	96.78	26.460	
10,334.6	6,595.0	6,177.1	6,131.9	101.6	15.5	55.46	-425.2	291.1	2,593.3	2,495.8	97.48	26.603	
10,400.0	6,594.2	6,174.2	6,129.1	103.4	15.5	55.31	-425.2	291.6	2,654.9	2,556.1	98.82	26.868	
10,433.0	6,593.7	6,172.8	6,127.7	104.3	15.5	55.23	-425.2	291.9	2,686.2	2,586.7	99.49	26.999	
10,500.0	6,592.9	6,170.1	6,125.0	106.1	15.5	55.09	-425.2	292.4	2,749.5	2,648.7	100.86	27.261	
10,531.5	6,592.5	6,150.0	6,105.2	106.9	15.5	54.04	-425.2	295.6	2,779.7	2,679.3	100.43	27.678	
10,600.0	6,591.6	6,150.0	6,105.2	108.8	15.5	54.04	-425.2	295.6	2,844.7	2,742.7	101.97	27.897	
10,629.9	6,591.2	6,150.0	6,105.2	109.6	15.5	54.04	-425.2	295.6	2,873.1	2,770.5	102.65	27.991	
10,700.0	6,590.3	6,150.0	6,105.2	111.6	15.5	54.04	-425.2	295.6	2,939.9	2,835.7	104.23	28.207	
10,728.3	6,589.9	6,150.0	6,105.2	112.3	15.5	54.04	-425.2	295.6	2,966.9	2,862.0	104.87	28.293	
10,800.0	6,589.0	6,150.0	6,105.2	114.3	15.5	54.04	-425.2	295.6	3,035.4	2,928.9	106.48	28.506	
10,826.7	6,588.7	6,150.0	6,105.2	115.0	15.5	54.04	-425.2	295.6	3,061.0	2,953.9	107.09	28.584	
10,900.0	6,587.7	6,150.0	6,105.2	117.1	15.5	54.04	-425.2	295.6	3,131.1	3,022.4	108.74	28.794	
10,925.2	6,587.4	6,150.0	6,105.2	117.7	15.5	54.04	-425.2	295.6	3,155.3	3,046.0	109.31	28.865	
11,000.0	6,586.4	6,150.0	6,105.2	119.8	15.5	54.04	-425.2	295.6	3,227.2	3,116.2	111.00	29.072	
11,023.6	6,586.1	6,150.0	6,105.2	120.4	15.5	54.04	-425.2	295.6	3,249.9	3,138.3	111.54	29.137	
11,100.0	6,585.1	6,150.0	6,105.2	122.6	15.5	54.04	-425.2	295.6	3,323.4	3,210.1	113.27	29.341	
11,122.0	6,584.8	6,150.0	6,105.2	123.2	15.5	54.04	-425.2	295.6	3,344.6	3,230.9	113.77	29.399	
11,200.0	6,583.8	6,150.0	6,105.2	125.3	15.5	54.04	-425.2	295.6	3,419.9	3,304.4	115.53	29.601	
11,220.4	6,583.6	6,150.0	6,105.2	125.9	15.5	54.04	-425.2	295.6	3,439.6	3,323.6	116.00	29.653	
11,300.0	6,582.5	6,150.0	6,105.2	128.1	15.5	54.04	-425.2	295.6	3,516.6	3,398.8	117.80	29.851	
11,318.9	6,582.3	6,150.0	6,105.2	128.6	15.5	54.04	-425.2	295.6	3,534.8	3,416.6	118.23	29.898	
11,400.0	6,581.2	6,150.0	6,105.2	130.8	15.5	54.04	-425.2	295.6	3,613.4	3,493.3	120.07	30.094	
11,417.3	6,581.0	6,150.0	6,105.2	131.3	15.5	54.04	-425.2	295.6	3,630.2	3,509.7	120.46	30.135	
11,500.0	6,580.0	6,150.0	6,105.2	133.6	15.5	54.04	-425.2	295.6	3,710.4	3,588.1	122.34	30.328	
11,515.7	6,579.7	6,150.0	6,105.2	134.0	15.5	54.04	-425.2	295.6	3,725.7	3,603.0	122.70	30.364	
11,600.0	6,578.7	6,150.0	6,105.2	136.3	15.5	54.04	-425.2	295.6	3,807.6	3,683.0	124.62	30.555	
11,614.1	6,578.5	6,150.0	6,105.2	136.7	15.5	54.04	-425.2	295.6	3,821.4	3,696.4	124.94	30.586	
11,700.0	6,577.4	6,150.0	6,105.2	139.1	15.5	54.03	-425.2	295.6	3,904.9	3,778.0	126.89	30.774	
11,712.6	6,577.2	6,150.0	6,105.2	139.5	15.5	54.03	-425.2	295.6	3,917.2	3,790.0	127.18	30.801	
11,800.0	6,576.1	6,150.0	6,105.2	141.9	15.5	54.03	-425.2	295.6	4,002.4	3,873.2	129.17	30.986	
11,811.0	6,575.9	6,150.0	6,105.2	142.2	15.5	54.03	-425.2	295.6	4,013.1	3,883.7	129.42	31.009	
11,882.7	6,575.0	6,150.0	6,105.2	144.2	15.5	54.03	-425.2	295.6	4,083.0	3,952.0	131.05	31.156	
11,883.5	6,575.0	6,150.0	6,105.2	144.2	15.5	54.03	-425.2	295.6	4,083.8	3,952.7	131.06	31.160	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-179.47	-30.2	-0.3	30.2				
98.4	98.4	98.4	98.4	0.1	0.1	-179.47	-30.2	-0.3	30.2	30.0	0.19	157.217	
100.0	100.0	100.0	100.0	0.1	0.1	-179.47	-30.2	-0.3	30.2	30.0	0.20	154.556	
196.8	196.8	196.8	196.8	0.3	0.3	-179.47	-30.2	-0.3	30.2	29.6	0.63	47.903	
200.0	200.0	200.0	200.0	0.3	0.3	-179.47	-30.2	-0.3	30.2	29.6	0.65	46.851	
295.3	295.3	295.3	295.3	0.5	0.5	-179.47	-30.2	-0.3	30.2	29.1	1.07	28.157	
300.0	300.0	300.0	300.0	0.5	0.5	-179.47	-30.2	-0.3	30.2	29.1	1.09	27.611	
393.7	393.7	393.7	393.7	0.8	0.8	-179.47	-30.2	-0.3	30.2	28.7	1.52	19.938	
400.0	400.0	400.0	400.0	0.8	0.8	-179.47	-30.2	-0.3	30.2	28.7	1.54	19.573	
492.1	492.1	492.1	492.1	1.0	1.0	-179.47	-30.2	-0.3	30.2	28.3	1.96	15.433	
500.0	500.0	500.0	500.0	1.0	1.0	-179.47	-30.2	-0.3	30.2	28.2	1.99	15.159	
590.5	590.5	590.5	590.5	1.2	1.2	-179.47	-30.2	-0.3	30.2	27.8	2.40	12.589	
600.0	600.0	600.0	600.0	1.2	1.2	-179.47	-30.2	-0.3	30.2	27.8	2.44	12.370	
689.0	689.0	689.0	689.0	1.4	1.4	-179.47	-30.2	-0.3	30.2	27.4	2.84	10.630	
700.0	700.0	700.0	700.0	1.4	1.4	-179.47	-30.2	-0.3	30.2	27.3	2.89	10.448	
787.4	787.4	787.4	787.4	1.6	1.6	-179.47	-30.2	-0.3	30.2	26.9	3.29	9.199	
800.0	800.0	800.0	800.0	1.7	1.7	-179.47	-30.2	-0.3	30.2	26.9	3.34	9.043	
885.8	885.8	885.8	885.8	1.9	1.9	-179.47	-30.2	-0.3	30.2	26.5	3.73	8.107	
900.0	900.0	900.0	900.0	1.9	1.9	-179.47	-30.2	-0.3	30.2	26.4	3.79	7.971	
984.2	984.2	984.2	984.2	2.1	2.1	-179.47	-30.2	-0.3	30.2	26.1	4.17	7.247	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-179.47	-30.2	-0.3	30.2	26.0	4.24	7.126	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-179.47	-30.2	-0.3	30.2	25.6	4.61	6.552	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-179.47	-30.2	-0.3	30.2	25.5	4.69	6.443	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	-179.47	-30.2	-0.3	30.2	25.2	5.06	5.978	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-179.47	-30.2	-0.3	30.2	25.1	5.14	5.879	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	-179.47	-30.2	-0.3	30.2	24.7	5.50	5.497	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-179.47	-30.2	-0.3	30.2	24.6	5.59	5.407	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	-179.47	-30.2	-0.3	30.2	24.3	5.94	5.088	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-179.47	-30.2	-0.3	30.2	24.2	6.04	5.004 CC	
1,476.4	1,476.4	1,476.4	1,476.4	3.2	3.2	-106.19	-30.2	-0.3	30.5	24.1	6.38	4.783	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	-107.49	-30.2	-0.3	30.7	24.2	6.48	4.738	
1,574.8	1,574.7	1,574.7	1,574.7	3.4	3.4	-113.61	-30.2	-0.3	32.0	25.2	6.80	4.698	
1,600.0	1,599.8	1,599.8	1,599.8	3.4	3.5	-116.24	-30.2	-0.3	32.7	25.7	6.91	4.725	
1,673.2	1,672.8	1,673.2	1,673.2	3.6	3.6	-123.58	-30.1	-1.2	35.3	28.1	7.22	4.893	
1,700.0	1,699.5	1,700.1	1,700.0	3.7	3.7	-125.92	-30.0	-2.0	36.5	29.2	7.34	4.978	
1,771.6	1,770.6	1,772.0	1,771.9	3.8	3.8	-131.30	-29.7	-5.4	40.1	32.4	7.64	5.247	
1,800.0	1,798.7	1,800.5	1,800.4	3.9	3.9	-133.10	-29.5	-7.3	41.6	33.9	7.75	5.368	
1,870.1	1,868.0	1,871.1	1,870.6	4.1	4.0	-136.85	-28.8	-13.0	45.7	37.7	8.05	5.678	
1,900.0	1,897.5	1,901.2	1,900.7	4.2	4.1	-138.18	-28.5	-16.0	47.6	39.4	8.18	5.819	
1,968.5	1,964.8	1,970.3	1,969.3	4.4	4.3	-140.71	-27.6	-24.0	52.0	43.6	8.48	6.136	
2,000.0	1,995.6	2,002.1	2,000.8	4.5	4.3	-141.67	-27.2	-28.3	54.2	45.5	8.62	6.286	
2,066.9	2,060.9	2,069.8	2,067.7	4.7	4.5	-143.32	-26.1	-38.5	58.8	49.9	8.93	6.590	
2,100.0	2,093.1	2,103.3	2,100.7	4.8	4.6	-143.98	-25.4	-44.1	61.2	52.1	9.08	6.743	
2,165.3	2,156.3	2,169.5	2,165.8	5.1	4.8	-145.01	-24.1	-56.4	66.0	56.6	9.40	7.022	
2,200.0	2,189.6	2,204.7	2,200.2	5.2	4.9	-145.43	-23.3	-63.5	68.6	59.1	9.58	7.169	
2,263.8	2,250.7	2,269.4	2,263.3	5.5	5.1	-146.02	-21.8	-77.7	73.5	63.6	9.92	7.415	
2,280.0	2,266.2	2,285.9	2,279.4	5.6	5.2	-146.13	-21.4	-81.5	74.8	64.8	10.01	7.477	
2,300.0	2,285.3	2,306.2	2,299.1	5.7	5.2	-146.24	-20.8	-86.4	76.3	66.2	10.13	7.537	
2,362.2	2,344.6	2,369.6	2,360.4	6.0	5.5	-146.11	-19.1	-102.4	80.4	69.8	10.53	7.628	
2,400.0	2,380.6	2,408.2	2,397.5	6.2	5.6	-145.72	-17.9	-112.8	82.3	71.5	10.80	7.622	
2,460.6	2,438.4	2,470.0	2,456.7	6.5	5.9	-144.63	-16.0	-130.6	84.7	73.4	11.26	7.519	
2,500.0	2,475.9	2,509.7	2,494.5	6.7	6.1	-143.69	-14.7	-142.5	85.8	74.2	11.58	7.410	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,559.0	2,532.2	2,568.7	2,550.7	7.0	6.4	-142.31	-12.8	-160.3	87.5	75.4	12.09	7.241	
2,600.0	2,571.2	2,609.6	2,589.7	7.2	6.6	-141.39	-11.4	-172.7	88.7	76.3	12.45	7.129	
2,657.5	2,626.0	2,667.0	2,644.4	7.5	6.9	-140.13	-9.5	-190.0	90.5	77.5	12.98	6.972	
2,700.0	2,666.6	2,709.5	2,684.8	7.8	7.1	-139.24	-8.1	-202.9	91.8	78.4	13.38	6.862	
2,755.9	2,719.8	2,765.3	2,738.0	8.1	7.4	-138.10	-6.3	-219.7	93.6	79.6	13.93	6.719	
2,800.0	2,761.9	2,809.4	2,780.0	8.3	7.6	-137.23	-4.8	-233.0	95.0	80.6	14.37	6.612	
2,854.3	2,813.7	2,863.6	2,831.7	8.7	7.9	-136.19	-3.0	-249.4	96.8	81.8	14.93	6.483	
2,900.0	2,857.2	2,909.2	2,875.2	8.9	8.2	-135.35	-1.5	-263.2	98.3	82.9	15.40	6.381	
2,952.7	2,907.5	2,961.9	2,925.4	9.2	8.5	-134.41	0.2	-279.1	100.1	84.1	15.97	6.266	
3,000.0	2,952.5	3,009.1	2,970.4	9.5	8.7	-133.60	1.8	-293.3	101.7	85.2	16.48	6.169	
3,051.2	3,001.3	3,060.3	3,019.1	9.8	9.0	-132.74	3.4	-308.8	103.5	86.4	17.05	6.067	
3,100.0	3,047.8	3,109.0	3,065.6	10.1	9.3	-131.96	5.0	-323.5	105.2	87.6	17.60	5.976	
3,149.6	3,095.1	3,158.6	3,112.8	10.4	9.6	-131.18	6.7	-338.5	106.9	88.8	18.16	5.886	
3,200.0	3,143.2	3,208.9	3,160.7	10.7	9.9	-130.42	8.3	-353.7	108.7	90.0	18.74	5.801	
3,248.0	3,188.9	3,256.9	3,206.4	11.0	10.2	-129.72	9.9	-368.1	110.5	91.2	19.31	5.722	
3,300.0	3,238.5	3,308.8	3,255.9	11.3	10.5	-128.99	11.6	-383.8	112.4	92.4	19.92	5.642	
3,346.4	3,282.8	3,355.2	3,300.1	11.6	10.8	-128.35	13.2	-397.8	114.1	93.6	20.47	5.573	
3,400.0	3,333.8	3,408.7	3,351.1	11.9	11.1	-127.64	14.9	-414.0	116.1	95.0	21.11	5.498	
3,444.9	3,376.6	3,453.6	3,393.8	12.2	11.4	-127.07	16.4	-427.5	117.7	96.1	21.65	5.438	
3,500.0	3,429.1	3,508.6	3,446.3	12.6	11.7	-126.38	18.2	-444.1	119.8	97.5	22.32	5.368	
3,543.3	3,470.4	3,551.9	3,487.5	12.8	12.0	-125.86	19.6	-457.2	121.5	98.6	22.85	5.315	
3,600.0	3,524.4	3,608.5	3,541.4	13.2	12.3	-125.20	21.5	-474.3	123.6	100.1	23.55	5.250	
3,641.7	3,564.2	3,650.2	3,581.2	13.4	12.6	-124.73	22.9	-486.9	125.3	101.2	24.07	5.204	
3,700.0	3,619.8	3,708.4	3,636.6	13.8	12.9	-124.09	24.8	-504.4	127.5	102.7	24.79	5.143	
3,740.1	3,658.0	3,748.5	3,674.8	14.0	13.2	-123.66	26.1	-516.6	129.1	103.8	25.29	5.103	
3,800.0	3,715.1	3,808.3	3,731.8	14.4	13.5	-123.04	28.1	-534.6	131.4	105.4	26.04	5.046	
3,838.6	3,751.8	3,846.8	3,768.5	14.7	13.8	-122.65	29.4	-546.2	132.9	106.4	26.53	5.011	
3,900.0	3,810.4	3,908.2	3,827.0	15.0	14.2	-122.05	31.4	-564.8	135.4	108.1	27.31	4.958	
3,937.0	3,845.7	3,945.2	3,862.2	15.3	14.4	-121.70	32.6	-575.9	136.8	109.1	27.78	4.927	
4,000.0	3,905.7	4,008.1	3,922.1	15.7	14.8	-121.12	34.7	-594.9	139.4	110.8	28.58	4.877	
4,035.4	3,939.5	4,043.5	3,955.9	15.9	15.0	-120.81	35.8	-605.6	140.8	111.8	29.03	4.850	
4,100.0	4,001.0	4,108.0	4,017.3	16.3	15.4	-120.25	38.0	-625.1	143.4	113.5	29.85	4.803	
4,133.8	4,033.3	4,141.8	4,049.5	16.5	15.6	-119.96	39.1	-635.3	144.8	114.5	30.29	4.780	
4,200.0	4,096.3	4,207.9	4,112.5	16.9	16.0	-119.42	41.2	-655.2	147.4	116.3	31.13	4.736	
4,232.3	4,127.1	4,240.1	4,143.2	17.1	16.2	-119.16	42.3	-665.0	148.8	117.2	31.55	4.715	
4,300.0	4,191.7	4,307.8	4,207.7	17.6	16.7	-118.63	44.5	-685.4	151.5	119.1	32.42	4.674	
4,330.7	4,220.9	4,338.5	4,236.9	17.8	16.9	-118.40	45.6	-694.7	152.8	120.0	32.82	4.656	
4,400.0	4,287.0	4,407.7	4,302.9	18.2	17.3	-117.89	47.8	-715.6	155.6	121.9	33.71	4.617	
4,429.1	4,314.7	4,436.8	4,330.6	18.4	17.5	-117.68	48.8	-724.3	156.8	122.8	34.09	4.601	
4,500.0	4,382.3	4,507.6	4,398.0	18.8	17.9	-117.18	51.1	-745.7	159.8	124.8	35.00	4.565	
4,527.5	4,408.6	4,535.1	4,424.3	19.0	18.1	-116.99	52.0	-754.0	160.9	125.6	35.36	4.551	
4,600.0	4,477.6	4,607.5	4,493.2	19.5	18.6	-116.51	54.4	-775.9	163.9	127.6	36.30	4.516	
4,626.0	4,502.4	4,633.4	4,517.9	19.6	18.7	-116.34	55.3	-783.7	165.0	128.4	36.64	4.504	
4,700.0	4,572.9	4,707.4	4,588.4	20.1	19.2	-115.88	57.7	-806.0	168.1	130.5	37.60	4.471	
4,724.4	4,596.2	4,731.7	4,611.6	20.3	19.4	-115.73	58.5	-813.4	169.1	131.2	37.92	4.461	
4,800.0	4,668.3	4,807.3	4,683.6	20.7	19.8	-115.27	61.0	-836.2	172.3	133.4	38.90	4.430	
4,822.8	4,690.0	4,830.1	4,705.3	20.9	20.0	-115.14	61.7	-843.1	173.3	134.1	39.20	4.421	
4,900.0	4,763.6	4,907.2	4,778.7	21.4	20.5	-114.69	64.3	-866.4	176.5	136.3	40.20	4.391	
4,921.2	4,783.8	4,928.4	4,799.0	21.5	20.6	-114.57	65.0	-872.8	177.4	137.0	40.48	4.383	
5,000.0	4,858.9	5,007.1	4,873.9	22.0	21.1	-114.14	67.6	-896.5	180.8	139.3	41.51	4.355	
5,019.7	4,877.7	5,026.7	4,892.6	22.1	21.2	-114.04	68.2	-902.5	181.6	139.9	41.76	4.349	
5,100.0	4,954.2	5,106.9	4,969.1	22.6	21.8	-113.62	70.9	-926.7	185.0	142.2	42.81	4.322	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	5,125.0	4,986.3	22.8	21.9	-113.53	71.5	-932.1	185.8	142.8	43.05	4.316	
5,171.8	5,022.7	5,178.7	5,037.4	23.1	22.2	-113.26	73.2	-948.3	188.1	144.3	43.75	4.299	
5,200.0	5,049.6	5,206.8	5,064.3	23.3	22.4	-113.10	74.2	-956.8	189.2	145.1	44.10	4.291	
5,216.5	5,065.4	5,223.4	5,080.0	23.3	22.5	-112.97	74.7	-961.8	189.9	145.6	44.30	4.286	
5,300.0	5,145.7	5,305.9	5,158.8	23.7	23.0	-112.09	77.4	-986.3	192.6	147.3	45.28	4.254	
5,314.9	5,160.1	5,320.6	5,172.9	23.8	23.1	-111.92	77.8	-990.4	193.1	147.6	45.43	4.250	
5,400.0	5,242.7	5,404.2	5,253.5	24.1	23.4	-111.02	80.3	-1,012.7	195.5	149.2	46.27	4.225	
5,413.4	5,255.7	5,417.4	5,266.2	24.2	23.5	-110.89	80.6	-1,015.9	195.8	149.4	46.39	4.221	
5,500.0	5,340.5	5,502.7	5,349.2	24.5	23.8	-110.01	82.8	-1,035.8	197.9	150.7	47.15	4.196	
5,511.8	5,352.1	5,514.4	5,360.5	24.5	23.9	-109.89	83.1	-1,038.3	198.1	150.9	47.25	4.193	
5,600.0	5,439.0	5,601.3	5,445.7	24.8	24.2	-109.04	84.9	-1,055.7	199.8	151.9	47.94	4.169	
5,610.2	5,449.1	5,611.4	5,455.6	24.8	24.2	-108.94	85.2	-1,057.6	200.0	152.0	48.01	4.166	
5,700.0	5,538.0	5,700.0	5,543.0	25.1	24.5	-108.09	86.8	-1,072.3	201.4	152.7	48.63	4.141	
5,708.6	5,546.6	5,708.6	5,551.5	25.1	24.5	-108.01	86.9	-1,073.6	201.5	152.8	48.68	4.139	
5,800.0	5,637.4	5,798.9	5,641.0	25.3	24.7	-107.18	88.2	-1,085.6	202.4	153.2	49.21	4.113	
5,807.1	5,644.5	5,805.9	5,647.9	25.3	24.8	-107.11	88.3	-1,086.4	202.5	153.3	49.25	4.112	
5,900.0	5,737.2	5,897.9	5,739.4	25.5	25.0	-106.28	89.3	-1,095.5	203.0	153.3	49.70	4.085	
5,905.5	5,742.6	5,903.3	5,744.8	25.5	25.0	-106.23	89.3	-1,096.0	203.1	153.3	49.73	4.084	
6,000.0	5,837.1	5,996.9	5,838.3	25.6	25.1	-105.40	90.0	-1,102.0	203.2	153.1	50.10	4.056	
6,003.9	5,841.0	6,000.8	5,842.1	25.6	25.1	-105.36	90.0	-1,102.2	203.2	153.1	50.11	4.054	
6,051.8	5,888.9	6,048.3	5,889.6	25.7	25.2	-105.93	90.2	-1,104.1	203.1	172.8	30.32	6.698	
6,081.8	5,918.9	6,078.1	5,919.3	25.7	25.2	-107.85	90.3	-1,104.9	203.0	172.6	30.38	6.681	
6,100.0	5,937.1	6,096.1	5,937.4	25.7	25.3	90.31	90.3	-1,105.2	203.0	152.5	50.41	4.026	
6,102.3	5,939.4	6,098.5	5,939.7	25.7	25.3	90.33	90.3	-1,105.2	203.0	152.5	50.42	4.025	
6,122.9	5,960.0	6,118.8	5,960.1	25.7	25.3	90.64	90.4	-1,105.4	202.9	152.5	50.47	4.021	
6,150.0	5,987.0	6,145.7	5,987.0	25.7	25.3	91.23	90.4	-1,105.5	203.0	152.4	50.56	4.014	
6,200.0	6,036.5	6,195.7	6,036.9	25.7	25.4	92.89	90.4	-1,104.9	203.2	152.5	50.72	4.006	
6,200.8	6,037.3	6,196.5	6,037.7	25.7	25.4	92.92	90.4	-1,104.9	203.2	152.5	50.72	4.006	
6,250.0	6,085.5	6,246.3	6,087.4	25.7	25.4	94.64	90.4	-1,101.2	203.6	152.8	50.77	4.010	
6,299.2	6,133.0	6,296.5	6,137.0	25.6	25.3	96.33	90.4	-1,093.9	204.2	153.5	50.73	4.025	
6,300.0	6,133.7	6,297.3	6,137.8	25.6	25.3	96.36	90.4	-1,093.8	204.2	153.5	50.73	4.026	
6,350.0	6,180.9	6,348.8	6,188.1	25.5	25.3	98.05	90.4	-1,082.7	205.0	154.4	50.58	4.053	
6,397.6	6,224.6	6,398.2	6,235.5	25.4	25.2	99.62	90.4	-1,068.7	205.9	155.5	50.35	4.088	
6,400.0	6,226.7	6,400.7	6,237.9	25.4	25.2	99.69	90.4	-1,067.9	205.9	155.6	50.34	4.090	
6,450.0	6,271.1	6,453.1	6,286.9	25.2	25.1	101.28	90.4	-1,049.3	207.0	157.0	50.02	4.138	
6,496.0	6,310.4	6,501.8	6,331.1	25.1	25.0	102.69	90.4	-1,028.9	208.1	158.4	49.67	4.189	
6,500.0	6,313.7	6,506.0	6,334.8	25.1	24.9	102.81	90.4	-1,027.0	208.2	158.5	49.64	4.194	
6,550.0	6,354.4	6,559.4	6,381.4	25.0	24.8	104.26	90.4	-1,001.0	209.4	160.2	49.20	4.257	
6,594.5	6,388.9	6,607.3	6,421.4	24.9	24.7	105.48	90.4	-974.7	210.6	161.8	48.80	4.316	
6,600.0	6,393.0	6,613.2	6,426.3	24.9	24.7	105.63	90.4	-971.3	210.8	162.0	48.75	4.324	
6,650.0	6,429.3	6,667.5	6,469.2	24.8	24.6	106.91	90.4	-938.0	212.2	163.9	48.29	4.394	
6,692.9	6,458.5	6,714.4	6,504.1	24.7	24.5	107.94	90.4	-906.7	213.4	165.4	47.92	4.453	
6,700.0	6,463.1	6,722.2	6,509.7	24.7	24.5	108.10	90.4	-901.3	213.6	165.7	47.86	4.462	
6,750.0	6,494.3	6,777.3	6,547.6	24.7	24.4	109.19	90.4	-861.3	214.9	167.5	47.48	4.526	
6,791.3	6,517.9	6,823.1	6,576.6	24.7	24.4	110.01	90.4	-825.9	216.0	168.8	47.24	4.573	
6,800.0	6,522.6	6,832.8	6,582.5	24.7	24.4	110.17	90.4	-818.2	216.2	169.1	47.19	4.583	
6,850.0	6,548.0	6,888.6	6,614.1	24.7	24.4	111.04	90.4	-772.2	217.5	170.5	47.00	4.627	
6,889.7	6,566.0	6,933.3	6,636.8	24.8	24.5	111.66	90.4	-733.8	218.4	171.4	46.96	4.651	
6,900.0	6,570.4	6,944.8	6,642.3	24.9	24.5	111.81	90.4	-723.6	218.6	171.7	46.95	4.656	
6,950.0	6,589.5	7,001.3	6,666.6	25.1	24.7	112.46	90.4	-672.7	219.6	172.6	47.06	4.667	
6,988.2	6,602.0	7,044.5	6,682.5	25.3	24.9	112.87	90.4	-632.5	220.3	173.0	47.26	4.661	
7,000.0	6,605.4	7,057.9	6,687.0	25.3	25.0	112.99	90.4	-619.8	220.5	173.1	47.34	4.657	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,050.0	6,618.0	7,114.8	6,703.1	25.6	25.4	113.40	90.4	-565.3	221.1	173.3	47.80	4.626	
7,086.6	6,625.0	7,156.6	6,712.2	25.9	25.7	113.63	90.4	-524.5	221.5	173.2	48.26	4.590	
7,100.0	6,627.1	7,171.9	6,714.9	26.0	25.8	113.70	90.4	-509.5	221.6	173.2	48.44	4.575	
7,150.0	6,632.8	7,229.0	6,722.3	26.5	26.3	113.88	90.4	-452.8	221.9	172.7	49.26	4.505	
7,185.0	6,634.7	7,269.0	6,724.7	26.8	26.7	113.93	90.4	-412.9	222.0	172.1	49.94	4.446	
7,200.0	6,635.0	7,286.2	6,725.1	27.0	26.9	113.93	90.4	-395.8	222.0	171.8	50.24	4.419	
7,215.9	6,635.0	7,304.4	6,725.0	27.1	27.1	113.92	90.4	-377.6	222.0	171.4	50.58	4.389	
7,283.4	6,634.1	7,372.0	6,723.9	27.9	28.0	113.85	90.4	-310.0	221.9	169.7	52.17	4.253	
7,300.0	6,633.9	7,388.5	6,723.6	28.1	28.2	113.84	90.4	-293.4	221.8	169.3	52.56	4.221	
7,381.9	6,632.9	7,470.4	6,722.2	29.3	29.3	113.76	90.4	-211.6	221.7	166.9	54.77	4.048	
7,400.0	6,632.6	7,488.5	6,721.9	29.5	29.6	113.74	90.4	-193.4	221.7	166.4	55.27	4.011	
7,480.3	6,631.6	7,568.8	6,720.5	30.8	30.9	113.66	90.4	-113.1	221.5	163.8	57.71	3.839	
7,500.0	6,631.4	7,588.5	6,720.2	31.1	31.2	113.64	90.4	-93.4	221.5	163.2	58.31	3.799	
7,578.7	6,630.4	7,667.2	6,718.8	32.5	32.6	113.56	90.4	-14.7	221.4	160.4	60.94	3.633	
7,600.0	6,630.1	7,688.5	6,718.5	32.9	33.0	113.54	90.4	6.5	221.3	159.7	61.65	3.590	
7,677.1	6,629.1	7,765.7	6,717.1	34.3	34.5	113.46	90.4	83.7	221.2	156.8	64.42	3.434	
7,700.0	6,628.8	7,788.5	6,716.8	34.8	34.9	113.43	90.4	106.5	221.2	155.9	65.25	3.390	
7,775.6	6,627.8	7,864.1	6,715.5	36.3	36.4	113.36	90.4	182.1	221.0	152.9	68.12	3.245	
7,800.0	6,627.5	7,888.5	6,715.1	36.8	36.9	113.33	90.4	206.5	221.0	151.9	69.05	3.200	
7,874.0	6,626.6	7,962.5	6,713.8	38.4	38.5	113.26	90.4	280.5	220.9	148.9	72.00	3.068	
7,900.0	6,626.3	7,988.5	6,713.3	38.9	39.1	113.23	90.4	306.5	220.8	147.8	73.04	3.023	
7,972.4	6,625.3	8,060.9	6,712.1	40.5	40.7	113.16	90.4	378.9	220.7	144.7	76.04	2.903	
8,000.0	6,625.0	8,088.5	6,711.6	41.1	41.3	113.13	90.4	406.5	220.7	143.5	77.18	2.859	
8,070.8	6,624.1	8,159.4	6,710.4	42.7	42.9	113.06	90.4	477.3	220.5	140.3	80.21	2.750	
8,100.0	6,623.7	8,188.5	6,709.9	43.4	43.6	113.03	90.4	506.5	220.5	139.0	81.45	2.707	
8,169.3	6,622.8	8,257.8	6,708.7	45.0	45.2	112.96	90.4	575.7	220.4	135.9	84.49	2.608	
8,200.0	6,622.4	8,288.5	6,708.2	45.7	45.9	112.92	90.4	606.4	220.3	134.5	85.84	2.567	
8,267.7	6,621.6	8,356.2	6,707.1	47.4	47.5	112.85	90.4	674.1	220.2	131.3	88.88	2.478	
8,300.0	6,621.1	8,388.5	6,706.5	48.1	48.3	112.82	90.4	706.4	220.2	129.8	90.33	2.437	
8,366.1	6,620.3	8,454.6	6,705.4	49.7	49.9	112.75	90.4	772.5	220.0	126.7	93.35	2.357	
8,400.0	6,619.9	8,488.5	6,704.8	50.6	50.7	112.72	90.4	806.4	220.0	125.1	94.90	2.318	
8,464.5	6,619.0	8,553.1	6,703.7	52.2	52.3	112.65	90.4	871.0	219.9	122.0	97.90	2.246	
8,500.0	6,618.6	8,588.5	6,703.1	53.0	53.2	112.62	90.4	906.4	219.8	120.3	99.55	2.208	
8,563.0	6,617.8	8,651.5	6,702.0	54.6	54.8	112.55	90.4	969.4	219.7	117.2	102.52	2.143	
8,600.0	6,617.3	8,688.5	6,701.4	55.5	55.7	112.51	90.4	1,006.4	219.7	115.4	104.26	2.107	
8,661.4	6,616.5	8,749.9	6,700.3	57.1	57.2	112.45	90.4	1,067.8	219.6	112.4	107.19	2.048	
8,700.0	6,616.0	8,788.5	6,699.7	58.1	58.2	112.41	90.4	1,106.4	219.5	110.5	109.04	2.013	
8,759.8	6,615.2	8,848.3	6,698.7	59.6	59.8	112.35	90.4	1,166.2	219.4	107.5	111.92	1.960	
8,800.0	6,614.7	8,888.5	6,698.0	60.6	60.8	112.31	90.4	1,206.4	219.3	105.5	113.86	1.926	
8,858.2	6,614.0	8,946.8	6,697.0	62.1	62.3	112.25	90.4	1,264.6	219.2	102.5	116.69	1.879	
8,900.0	6,613.4	8,988.5	6,696.3	63.2	63.4	112.20	90.4	1,306.3	219.2	100.4	118.73	1.846	
8,956.7	6,612.7	9,045.2	6,695.3	64.7	64.8	112.14	90.4	1,363.0	219.1	97.6	121.51	1.803	
9,000.0	6,612.2	9,088.5	6,694.5	65.8	66.0	112.10	90.4	1,406.3	219.0	95.4	123.64	1.771	
9,055.1	6,611.5	9,143.6	6,693.6	67.3	67.4	112.04	90.4	1,461.4	218.9	92.6	126.37	1.732	
9,100.0	6,610.9	9,188.5	6,692.8	68.4	68.6	111.99	90.4	1,506.3	218.8	90.3	128.59	1.702	
9,153.5	6,610.2	9,242.0	6,691.9	69.8	70.0	111.94	90.4	1,559.8	218.8	87.5	131.26	1.667	
9,200.0	6,609.6	9,288.5	6,691.1	71.1	71.2	111.89	90.4	1,606.3	218.7	85.1	133.58	1.637	
9,251.9	6,608.9	9,340.5	6,690.2	72.4	72.6	111.84	90.4	1,658.2	218.6	82.4	136.18	1.605	
9,300.0	6,608.3	9,388.5	6,689.4	73.7	73.8	111.79	90.4	1,706.3	218.5	79.9	138.60	1.577	
9,350.4	6,607.7	9,438.9	6,688.5	75.0	75.2	111.73	90.4	1,756.7	218.4	77.3	141.14	1.548	
9,400.0	6,607.0	9,488.5	6,687.7	76.4	76.5	111.68	90.4	1,806.3	218.4	74.7	143.64	1.520	
9,448.8	6,606.4	9,537.3	6,686.9	77.7	77.8	111.63	90.4	1,855.1	218.3	72.2	146.11	1.494 Level 3	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.7	9,588.5	6,686.0	79.0	79.2	111.58	90.4	1,906.3	218.2	69.5	148.71	1.467	Level 3
9,547.2	6,605.1	9,635.7	6,685.2	80.3	80.4	111.53	90.4	1,953.5	218.1	67.0	151.12	1.443	Level 3
9,600.0	6,604.5	9,688.5	6,684.3	81.7	81.8	111.47	90.4	2,006.2	218.1	64.2	153.81	1.418	Level 3
9,645.6	6,603.9	9,734.2	6,683.5	82.9	83.0	111.42	90.4	2,051.9	218.0	61.8	156.15	1.396	Level 3
9,700.0	6,603.2	9,788.5	6,682.5	84.4	84.5	111.37	90.4	2,106.2	217.9	59.0	158.93	1.371	Level 3
9,744.1	6,602.6	9,832.6	6,681.8	85.6	85.7	111.32	90.4	2,150.3	217.8	56.6	161.20	1.351	Level 3
9,800.0	6,601.9	9,888.5	6,680.8	87.1	87.2	111.26	90.4	2,206.2	217.7	53.7	164.07	1.327	Level 3
9,842.5	6,601.3	9,931.0	6,680.1	88.2	88.3	111.22	90.4	2,248.7	217.7	51.4	166.27	1.309	Level 3
9,900.0	6,600.6	9,988.5	6,679.1	89.8	89.9	111.16	90.4	2,306.2	217.6	48.4	169.23	1.286	Level 3
9,940.9	6,600.1	10,029.4	6,678.4	90.9	91.0	111.11	90.4	2,347.1	217.5	46.2	171.35	1.269	Level 3
10,000.0	6,599.3	10,088.5	6,677.4	92.5	92.6	111.05	90.4	2,406.2	217.4	43.0	174.42	1.247	Level 2
10,039.3	6,598.8	10,127.9	6,676.7	93.5	93.7	111.01	90.4	2,445.5	217.4	40.9	176.46	1.232	Level 2
10,100.0	6,598.0	10,188.5	6,675.7	95.2	95.3	110.94	90.4	2,506.2	217.3	37.7	179.61	1.210	Level 2
10,137.8	6,597.5	10,226.3	6,675.0	96.2	96.3	110.90	90.4	2,543.9	217.2	35.6	181.58	1.196	Level 2
10,200.0	6,596.7	10,288.5	6,674.0	97.9	98.0	110.84	90.4	2,606.1	217.1	32.3	184.83	1.175	Level 2
10,236.2	6,596.3	10,324.7	6,673.3	98.9	99.0	110.80	90.4	2,642.3	217.1	30.3	186.72	1.163	Level 2
10,300.0	6,595.4	10,388.5	6,672.2	100.6	100.7	110.73	90.4	2,706.1	217.0	26.9	190.06	1.142	Level 2
10,334.6	6,595.0	10,423.1	6,671.6	101.6	101.7	110.70	90.4	2,740.8	216.9	25.0	191.88	1.130	Level 2
10,400.0	6,594.2	10,488.5	6,670.5	103.4	103.5	110.63	90.4	2,806.1	216.8	21.5	195.31	1.110	Level 2
10,433.0	6,593.7	10,521.6	6,670.0	104.3	104.4	110.59	90.4	2,839.2	216.8	19.7	197.05	1.100	Level 2
10,500.0	6,592.9	10,588.5	6,668.8	106.1	106.2	110.52	90.4	2,906.1	216.7	16.1	200.57	1.080	Level 2
10,531.5	6,592.5	10,620.0	6,668.3	106.9	107.1	110.49	90.4	2,937.6	216.6	14.4	202.23	1.071	Level 2
10,600.0	6,591.6	10,688.5	6,667.1	108.8	108.9	110.41	90.4	3,006.1	216.5	10.7	205.85	1.052	Level 2
10,629.9	6,591.2	10,718.4	6,666.6	109.6	109.8	110.38	90.4	3,036.0	216.5	9.0	207.43	1.044	Level 2
10,700.0	6,590.3	10,788.5	6,665.4	111.6	111.7	110.31	90.4	3,106.1	216.4	5.2	211.13	1.025	Level 2
10,728.3	6,589.9	10,816.8	6,664.9	112.3	112.5	110.28	90.4	3,134.4	216.3	3.7	212.63	1.017	Level 2
10,800.0	6,589.0	10,888.5	6,663.6	114.3	114.4	110.20	90.4	3,206.1	216.2	-0.2	216.44	0.999	Level 1
10,826.7	6,588.7	10,915.3	6,663.2	115.0	115.2	110.17	90.4	3,232.8	216.2	-1.7	217.86	0.992	Level 1
10,900.0	6,587.7	10,988.5	6,661.9	117.1	117.2	110.09	90.4	3,306.0	216.1	-5.7	221.75	0.974	Level 1
10,925.2	6,587.4	11,013.7	6,661.5	117.7	117.9	110.06	90.4	3,331.2	216.0	-7.1	223.09	0.968	Level 1
11,000.0	6,586.4	11,088.5	6,660.2	119.8	119.9	109.98	90.4	3,406.0	215.9	-11.2	227.07	0.951	Level 1
11,023.6	6,586.1	11,112.1	6,659.8	120.4	120.6	109.96	90.4	3,429.6	215.9	-12.4	228.33	0.945	Level 1
11,100.0	6,585.1	11,188.5	6,658.5	122.6	122.7	109.88	90.4	3,506.0	215.8	-16.6	232.41	0.928	Level 1
11,122.0	6,584.8	11,210.5	6,658.1	123.2	123.3	109.85	90.4	3,528.0	215.7	-17.8	233.59	0.924	Level 1
11,200.0	6,583.8	11,288.5	6,656.7	125.3	125.4	109.77	90.4	3,606.0	215.6	-22.1	237.76	0.907	Level 1
11,220.4	6,583.6	11,309.0	6,656.4	125.9	126.0	109.75	90.4	3,626.4	215.6	-23.3	238.85	0.903	Level 1
11,300.0	6,582.5	11,388.5	6,655.0	128.1	128.2	109.66	90.4	3,706.0	215.5	-27.6	243.12	0.886	Level 1
11,318.9	6,582.3	11,407.4	6,654.7	128.6	128.7	109.64	90.4	3,724.8	215.5	-28.7	244.13	0.883	Level 1
11,400.0	6,581.2	11,488.5	6,653.3	130.8	130.9	109.55	90.4	3,806.0	215.3	-33.2	248.49	0.867	Level 1
11,417.3	6,581.0	11,505.8	6,653.0	131.3	131.4	109.53	90.4	3,823.3	215.3	-34.1	249.42	0.863	Level 1
11,500.0	6,580.0	11,588.5	6,651.6	133.6	133.7	109.44	90.4	3,905.9	215.2	-38.7	253.87	0.848	Level 1
11,515.7	6,579.7	11,604.2	6,651.3	134.0	134.1	109.43	90.4	3,921.7	215.2	-39.5	254.71	0.845	Level 1
11,600.0	6,578.7	11,688.5	6,649.9	136.3	136.5	109.34	90.4	4,005.9	215.0	-44.2	259.25	0.829	Level 1
11,614.1	6,578.5	11,702.7	6,649.6	136.7	136.8	109.32	90.4	4,020.1	215.0	-45.0	260.02	0.827	Level 1
11,700.0	6,577.4	11,788.5	6,648.1	139.1	139.2	109.23	90.4	4,105.9	214.9	-49.7	264.65	0.812	Level 1
11,712.6	6,577.2	11,801.1	6,647.9	139.5	139.6	109.21	90.4	4,118.5	214.9	-50.4	265.33	0.810	Level 1
11,800.0	6,576.1	11,888.5	6,646.4	141.9	142.0	109.12	90.4	4,205.9	214.8	-55.3	270.06	0.795	Level 1
11,811.0	6,575.9	11,899.5	6,646.2	142.2	142.3	109.11	90.4	4,216.9	214.7	-55.9	270.65	0.793	Level 1
11,864.0	6,575.2	11,952.5	6,645.3	143.7	143.8	109.05	90.4	4,269.9	214.7	-58.9	273.53	0.785	Level 1
11,882.7	6,575.0	11,969.5	6,645.0	144.2	144.2	109.03	90.4	4,286.9	214.7	-59.8	274.49	0.782	Level 1
11,883.5	6,575.0	11,969.5	6,645.0	144.2	144.2	109.03	90.4	4,286.9	214.7	-59.8	274.50	0.782	Level 1, ES, SF

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	-178.96	-15.3	-0.3	15.3				
98.4	98.4	98.4	98.4	0.1	0.1	-178.96	-15.3	-0.3	15.3	15.1	0.19	79.523	
100.0	100.0	100.0	100.0	0.1	0.1	-178.96	-15.3	-0.3	15.3	15.1	0.20	78.177	
196.8	196.8	196.8	196.8	0.3	0.3	-178.96	-15.3	-0.3	15.3	14.7	0.63	24.230	
200.0	200.0	200.0	200.0	0.3	0.3	-178.96	-15.3	-0.3	15.3	14.6	0.65	23.698	
295.3	295.3	295.3	295.3	0.5	0.5	-178.96	-15.3	-0.3	15.3	14.2	1.07	14.242	
300.0	300.0	300.0	300.0	0.5	0.5	-178.96	-15.3	-0.3	15.3	14.2	1.09	13.966	
393.7	393.7	393.7	393.7	0.8	0.8	-178.96	-15.3	-0.3	15.3	13.8	1.52	10.085	
400.0	400.0	400.0	400.0	0.8	0.8	-178.96	-15.3	-0.3	15.3	13.7	1.54	9.900	
492.1	492.1	492.1	492.1	1.0	1.0	-178.96	-15.3	-0.3	15.3	13.3	1.96	7.807	
500.0	500.0	500.0	500.0	1.0	1.0	-178.96	-15.3	-0.3	15.3	13.3	1.99	7.668	
590.5	590.5	590.5	590.5	1.2	1.2	-178.96	-15.3	-0.3	15.3	12.9	2.40	6.368	
600.0	600.0	600.0	600.0	1.2	1.2	-178.96	-15.3	-0.3	15.3	12.8	2.44	6.257	
689.0	689.0	689.0	689.0	1.4	1.4	-178.96	-15.3	-0.3	15.3	12.4	2.84	5.377	
700.0	700.0	700.0	700.0	1.4	1.4	-178.96	-15.3	-0.3	15.3	12.4	2.89	5.285	
787.4	787.4	787.4	787.4	1.6	1.6	-178.96	-15.3	-0.3	15.3	12.0	3.29	4.653	
800.0	800.0	800.0	800.0	1.7	1.7	-178.96	-15.3	-0.3	15.3	11.9	3.34	4.574	
885.8	885.8	885.8	885.8	1.9	1.9	-178.96	-15.3	-0.3	15.3	11.6	3.73	4.101	
900.0	900.0	900.0	900.0	1.9	1.9	-178.96	-15.3	-0.3	15.3	11.5	3.79	4.032	
984.2	984.2	984.2	984.2	2.1	2.1	-178.96	-15.3	-0.3	15.3	11.1	4.17	3.666	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-178.96	-15.3	-0.3	15.3	11.0	4.24	3.604	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-178.96	-15.3	-0.3	15.3	10.7	4.61	3.314	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-178.96	-15.3	-0.3	15.3	10.6	4.69	3.259	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	-178.96	-15.3	-0.3	15.3	10.2	5.06	3.024	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-178.96	-15.3	-0.3	15.3	10.1	5.14	2.974	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	-178.96	-15.3	-0.3	15.3	9.8	5.50	2.781	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-178.96	-15.3	-0.3	15.3	9.7	5.59	2.735	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	-178.96	-15.3	-0.3	15.3	9.3	5.94	2.573	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-178.96	-15.3	-0.3	15.3	9.2	6.04	2.531 CC	
1,476.4	1,476.4	1,476.4	1,476.4	3.2	3.2	-107.47	-15.3	-0.3	15.6	9.2	6.38	2.441 ES	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	-109.98	-15.3	-0.3	15.8	9.3	6.48	2.438 SF	
1,574.8	1,574.7	1,574.6	1,574.6	3.4	3.4	-124.27	-15.1	0.7	17.5	10.7	6.79	2.579	
1,600.0	1,599.8	1,599.7	1,599.6	3.4	3.5	-130.69	-15.0	1.4	18.7	11.8	6.90	2.714	
1,673.2	1,672.8	1,672.0	1,671.9	3.6	3.6	-148.86	-14.6	4.8	25.0	17.8	7.19	3.476	
1,700.0	1,699.5	1,698.3	1,698.1	3.7	3.7	-154.38	-14.3	6.5	28.4	21.1	7.30	3.899	
1,771.6	1,770.6	1,768.0	1,767.6	3.8	3.8	-165.49	-13.5	12.1	40.6	33.1	7.58	5.361	
1,800.0	1,798.7	1,795.2	1,794.7	3.9	3.9	-168.65	-13.2	14.8	46.6	38.9	7.69	6.059	
1,870.1	1,868.0	1,861.8	1,860.9	4.1	4.0	-174.42	-12.1	22.3	63.8	55.9	7.96	8.020	
1,900.0	1,897.5	1,889.9	1,888.7	4.2	4.1	-176.22	-11.6	26.0	72.3	64.2	8.07	8.950	
1,968.5	1,964.8	1,953.1	1,951.2	4.4	4.3	-179.38	-10.3	35.1	93.8	85.5	8.34	11.254	
2,000.0	1,995.6	1,981.6	1,979.4	4.5	4.3	179.50	-9.7	39.7	104.7	96.3	8.45	12.391	
2,066.9	2,060.9	2,041.2	2,038.0	4.7	4.5	177.62	-8.2	50.2	130.0	121.3	8.70	14.938	
2,100.0	2,093.1	2,070.1	2,066.3	4.8	4.6	176.87	-7.4	55.7	143.5	134.7	8.83	16.265	
2,165.3	2,156.3	2,127.3	2,122.4	5.1	4.8	175.64	-5.8	67.3	172.0	162.9	9.07	18.972	
2,200.0	2,189.6	2,158.2	2,152.5	5.2	4.9	175.12	-4.9	73.7	187.7	178.5	9.19	20.426	
2,263.8	2,250.7	2,214.5	2,207.6	5.5	5.0	174.38	-3.3	85.3	217.6	208.2	9.42	23.105	
2,280.0	2,266.2	2,228.7	2,221.5	5.6	5.1	174.22	-2.9	88.2	225.5	216.0	9.48	23.797	
2,300.0	2,285.3	2,246.2	2,238.6	5.7	5.1	174.06	-2.4	91.8	235.2	225.6	9.56	24.598	
2,362.2	2,344.6	2,300.6	2,291.8	6.0	5.3	173.65	-0.8	103.0	265.3	255.5	9.82	27.005	
2,400.0	2,380.6	2,333.6	2,324.1	6.2	5.4	173.44	0.2	109.8	283.6	273.6	10.00	28.363	
2,460.6	2,438.4	2,386.6	2,376.0	6.5	5.6	173.16	1.7	120.7	313.0	302.7	10.26	30.492	
2,500.0	2,475.9	2,421.0	2,409.7	6.7	5.8	173.00	2.7	127.8	332.1	321.6	10.44	31.814	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	2,532.2	2,472.7	2,460.2	7.0	6.0	172.79	4.2	138.4	360.7	350.0	10.70	33.697	
2,600.0	2,571.2	2,508.5	2,495.2	7.2	6.1	172.67	5.2	145.8	380.6	369.7	10.89	34.947	
2,657.5	2,626.0	2,558.7	2,544.4	7.5	6.3	172.52	6.7	156.2	408.4	397.3	11.15	36.618	
2,700.0	2,666.6	2,595.9	2,580.7	7.8	6.4	172.42	7.7	163.8	429.0	417.7	11.35	37.805	
2,755.9	2,719.8	2,644.8	2,628.5	8.1	6.6	172.30	9.1	173.9	456.2	444.5	11.61	39.290	
2,800.0	2,761.9	2,683.4	2,666.3	8.3	6.8	172.21	10.3	181.8	477.5	465.7	11.82	40.416	
2,854.3	2,813.7	2,730.9	2,712.7	8.7	7.0	172.12	11.6	191.6	503.9	491.8	12.07	41.739	
2,900.0	2,857.2	2,770.8	2,751.8	8.9	7.1	172.05	12.8	199.8	526.0	513.7	12.29	42.807	
2,952.7	2,907.5	2,816.9	2,796.9	9.2	7.3	171.97	14.1	209.3	551.6	539.1	12.54	43.988	
3,000.0	2,952.5	2,858.3	2,837.3	9.5	7.5	171.91	15.3	217.8	574.5	561.8	12.77	45.003	
3,051.2	3,001.3	2,903.0	2,881.1	9.8	7.7	171.85	16.6	227.0	599.4	586.3	13.01	46.058	
3,100.0	3,047.8	2,945.7	2,922.9	10.1	7.8	171.79	17.8	235.8	623.0	609.8	13.25	47.024	
3,149.6	3,095.1	2,997.5	2,973.6	10.4	8.0	171.74	19.3	246.2	646.9	633.4	13.50	47.910	
3,200.0	3,143.2	3,054.8	3,029.9	10.7	8.2	171.71	20.8	256.7	670.3	656.6	13.76	48.722	
3,248.0	3,188.9	3,110.6	3,084.9	11.0	8.4	171.71	22.1	265.9	691.9	677.9	14.00	49.403	
3,300.0	3,238.5	3,172.0	3,145.7	11.3	8.5	171.74	23.3	274.7	714.2	700.0	14.27	50.048	
3,346.4	3,282.8	3,228.0	3,201.2	11.6	8.7	171.80	24.3	281.6	733.4	718.9	14.51	50.540	
3,400.0	3,333.8	3,293.7	3,266.5	11.9	8.8	171.88	25.2	288.4	754.5	739.7	14.79	51.015	
3,444.9	3,376.6	3,349.6	3,322.3	12.2	9.0	171.98	25.9	293.0	771.3	756.3	15.02	51.341	
3,500.0	3,429.1	3,419.5	3,392.1	12.6	9.1	172.12	26.4	297.2	790.9	775.6	15.31	51.655	
3,543.3	3,470.4	3,475.3	3,447.8	12.8	9.2	172.25	26.7	299.3	805.4	789.9	15.54	51.836	
3,600.0	3,524.4	3,549.3	3,521.8	13.2	9.3	172.45	26.9	300.5	823.3	807.4	15.83	52.002	
3,641.7	3,564.2	3,591.7	3,564.2	13.4	9.4	172.57	26.9	300.5	835.8	819.8	16.03	52.137	
3,700.0	3,619.8	3,647.3	3,619.8	13.8	9.5	172.72	26.9	300.5	853.3	837.0	16.31	52.308	
3,740.1	3,658.0	3,685.5	3,658.0	14.0	9.6	172.82	26.9	300.5	865.3	848.8	16.51	52.417	
3,800.0	3,715.1	3,742.6	3,715.1	14.4	9.7	172.97	26.9	300.5	883.3	866.5	16.80	52.576	
3,838.6	3,751.8	3,779.4	3,751.8	14.7	9.8	173.06	26.9	300.5	894.9	877.9	16.99	52.674	
3,900.0	3,810.4	3,837.9	3,810.4	15.0	9.9	173.20	26.9	300.5	913.3	896.0	17.29	52.825	
3,937.0	3,845.7	3,873.2	3,845.7	15.3	9.9	173.28	26.9	300.5	924.5	907.0	17.47	52.912	
4,000.0	3,905.7	3,933.2	3,905.7	15.7	10.0	173.42	26.9	300.5	943.4	925.6	17.78	53.057	
4,035.4	3,939.5	3,967.0	3,939.5	15.9	10.1	173.49	26.9	300.5	954.0	936.1	17.95	53.135	
4,100.0	4,001.0	4,028.5	4,001.0	16.3	10.2	173.62	26.9	300.5	973.5	955.2	18.27	53.273	
4,133.8	4,033.3	4,060.8	4,033.3	16.5	10.3	173.69	26.9	300.5	983.6	965.2	18.44	53.343	
4,200.0	4,096.3	4,123.9	4,096.3	16.9	10.4	173.81	26.9	300.5	1,003.5	984.8	18.77	53.476	
4,232.3	4,127.1	4,154.6	4,127.1	17.1	10.4	173.87	26.9	300.5	1,013.2	994.3	18.93	53.538	
4,300.0	4,191.7	4,219.2	4,191.7	17.6	10.6	173.99	26.9	300.5	1,033.6	1,014.3	19.26	53.665	
4,330.7	4,220.9	4,248.4	4,220.9	17.8	10.6	174.05	26.9	300.5	1,042.8	1,023.4	19.41	53.720	
4,400.0	4,287.0	4,314.5	4,287.0	18.2	10.7	174.16	26.9	300.5	1,063.7	1,043.9	19.76	53.842	
4,429.1	4,314.7	4,342.3	4,314.7	18.4	10.8	174.21	26.9	300.5	1,072.5	1,052.6	19.90	53.891	
4,500.0	4,382.3	4,409.8	4,382.3	18.8	10.9	174.32	26.9	300.5	1,093.8	1,073.5	20.25	54.008	
4,527.5	4,408.6	4,436.1	4,408.6	19.0	11.0	174.37	26.9	300.5	1,102.1	1,081.7	20.39	54.051	
4,600.0	4,477.6	4,505.1	4,477.6	19.5	11.1	174.48	26.9	300.5	1,123.9	1,103.2	20.75	54.163	
4,626.0	4,502.4	4,529.9	4,502.4	19.6	11.2	174.52	26.9	300.5	1,131.7	1,110.8	20.88	54.202	
4,700.0	4,572.9	4,600.5	4,572.9	20.1	11.3	174.62	26.9	300.5	1,154.0	1,132.8	21.25	54.310	
4,724.4	4,596.2	4,623.7	4,596.2	20.3	11.3	174.66	26.9	300.5	1,161.4	1,140.0	21.37	54.344	
4,800.0	4,668.3	4,695.8	4,668.3	20.7	11.5	174.76	26.9	300.5	1,184.1	1,162.4	21.75	54.448	
4,822.8	4,690.0	4,717.5	4,690.0	20.9	11.5	174.79	26.9	300.5	1,191.0	1,169.2	21.86	54.478	
4,900.0	4,763.6	4,791.1	4,763.6	21.4	11.7	174.89	26.9	300.5	1,214.3	1,192.0	22.25	54.578	
4,921.2	4,783.8	4,811.4	4,783.8	21.5	11.7	174.92	26.9	300.5	1,220.7	1,198.3	22.35	54.604	
5,000.0	4,858.9	4,886.4	4,858.9	22.0	11.8	175.01	26.9	300.5	1,244.4	1,221.6	22.75	54.700	
5,019.7	4,877.7	4,905.2	4,877.7	22.1	11.9	175.04	26.9	300.5	1,250.3	1,227.5	22.85	54.723	
5,100.0	4,954.2	4,981.7	4,954.2	22.6	12.0	175.13	26.9	300.5	1,274.5	1,251.3	23.25	54.816	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	4,971.5	4,999.0	4,971.5	22.8	12.1	175.15	26.9	300.5	1,280.0	1,256.6	23.34	54.836	
5,171.8	5,022.7	5,050.2	5,022.7	23.1	12.2	175.21	26.9	300.5	1,296.2	1,272.6	23.61	54.895	
5,200.0	5,049.6	5,077.1	5,049.6	23.3	12.2	175.26	26.9	300.5	1,304.5	1,280.8	23.79	54.841	
5,216.5	5,065.4	5,092.9	5,065.4	23.3	12.3	175.28	26.9	300.5	1,309.3	1,285.4	23.89	54.816	
5,300.0	5,145.7	5,173.2	5,145.7	23.7	12.4	175.40	26.9	300.5	1,332.1	1,307.7	24.37	54.652	
5,314.9	5,160.1	5,187.6	5,160.1	23.8	12.4	175.42	26.9	300.5	1,335.9	1,311.4	24.46	54.621	
5,400.0	5,242.7	5,270.2	5,242.7	24.1	12.6	175.52	26.9	300.5	1,356.3	1,331.3	24.93	54.407	
5,413.4	5,255.7	5,283.2	5,255.7	24.2	12.6	175.54	26.9	300.5	1,359.2	1,334.2	25.00	54.372	
5,500.0	5,340.5	5,368.0	5,340.5	24.5	12.8	175.62	26.9	300.5	1,377.1	1,351.6	25.45	54.111	
5,511.8	5,352.1	5,379.6	5,352.1	24.5	12.8	175.63	26.9	300.5	1,379.3	1,353.8	25.51	54.075	
5,600.0	5,439.0	5,467.5	5,439.0	24.8	12.9	175.65	26.9	300.5	1,401.5	1,376.0	26.00	53.800	
5,610.2	5,449.1	5,477.6	5,449.1	24.8	12.9	175.66	26.9	300.5	1,404.7	1,379.2	26.06	53.762	
5,700.0	5,538.0	5,566.0	5,538.0	25.1	13.0	175.68	26.9	300.5	1,426.9	1,401.4	26.56	53.486	
5,708.6	5,546.6	5,574.6	5,546.6	25.1	13.0	175.69	26.9	300.5	1,429.1	1,403.6	26.62	53.448	
5,800.0	5,637.4	5,665.4	5,637.4	25.3	13.1	175.70	26.9	300.5	1,451.3	1,425.8	27.06	53.170	
5,807.1	5,644.5	5,672.5	5,644.5	25.3	13.1	175.71	26.9	300.5	1,454.5	1,428.0	27.12	53.132	
5,900.0	5,737.2	5,765.2	5,737.2	25.5	13.2	175.72	26.9	300.5	1,476.7	1,450.2	27.56	52.852	
5,905.5	5,742.6	5,770.6	5,742.6	25.5	13.2	175.73	26.9	300.5	1,479.9	1,453.4	27.62	52.814	
6,000.0	5,837.1	5,865.1	5,837.1	25.6	13.3	175.74	26.9	300.5	1,502.1	1,475.6	28.06	52.532	
6,003.9	5,841.0	5,869.0	5,841.0	25.6	13.3	175.75	26.9	300.5	1,505.3	1,478.8	28.12	52.494	
6,051.8	5,888.9	5,916.9	5,888.9	25.7	13.4	175.76	26.9	300.5	1,527.5	1,501.0	28.56	52.210	
6,081.8	5,918.9	5,946.9	5,918.9	25.7	13.4	175.77	26.9	300.5	1,530.7	1,503.2	28.62	52.172	
6,100.0	5,937.1	5,965.1	5,937.1	25.7	13.4	175.78	26.9	300.5	1,533.9	1,506.4	28.68	52.134	
6,102.3	5,939.4	5,967.4	5,939.4	25.7	13.4	175.79	26.9	300.5	1,537.1	1,508.6	28.74	52.096	
6,150.0	5,987.0	6,015.0	5,987.0	25.7	13.5	175.80	26.9	300.5	1,559.3	1,531.8	29.18	51.812	
6,200.0	6,036.5	6,064.5	6,036.5	25.7	13.5	175.81	26.9	300.5	1,562.5	1,535.0	29.24	51.774	
6,200.8	6,037.3	6,065.3	6,037.3	25.7	13.5	175.82	26.9	300.5	1,565.7	1,538.2	29.30	51.736	
6,250.0	6,085.5	6,113.5	6,085.5	25.7	13.6	175.83	26.9	300.5	1,587.9	1,560.4	29.74	51.452	
6,299.2	6,133.0	6,161.0	6,133.0	25.6	13.6	175.84	26.9	300.5	1,591.1	1,563.6	29.80	51.414	
6,300.0	6,133.7	6,161.7	6,133.7	25.6	13.6	175.85	26.9	300.5	1,594.3	1,566.8	29.86	51.376	
6,350.0	6,180.9	6,208.9	6,180.9	25.5	13.7	175.86	26.9	300.5	1,616.5	1,589.0	30.30	51.092	
6,397.6	6,224.6	6,252.6	6,224.6	25.4	13.7	175.87	26.9	300.5	1,619.7	1,592.2	30.36	51.054	
6,400.0	6,226.7	6,254.7	6,226.7	25.4	13.7	175.88	26.9	300.5	1,622.9	1,595.4	30.42	51.016	
6,450.0	6,271.1	6,299.1	6,271.1	25.2	13.8	175.89	26.9	300.5	1,645.1	1,617.6	30.86	50.732	
6,496.0	6,310.4	6,338.4	6,310.4	25.1	13.8	175.90	26.9	300.5	1,648.3	1,620.8	30.92	50.694	
6,500.0	6,313.7	6,342.7	6,313.7	25.1	13.8	175.91	26.9	300.5	1,651.5	1,624.0	30.98	50.656	
6,550.0	6,354.4	6,382.4	6,354.4	25.0	13.9	175.92	26.9	300.5	1,673.7	1,646.2	31.42	50.372	
6,594.5	6,388.9	6,416.9	6,388.9	24.9	13.9	175.93	26.9	300.5	1,676.9	1,649.4	31.48	50.334	
6,600.0	6,393.0	6,421.0	6,393.0	24.9	13.9	175.94	26.9	300.5	1,680.1	1,652.6	31.54	50.296	
6,650.0	6,429.3	6,457.3	6,429.3	24.8	14.0	175.95	26.9	300.5	1,702.3	1,674.8	31.98	50.012	
6,692.9	6,458.5	6,486.5	6,458.5	24.7	14.0	175.96	26.9	300.5	1,705.5	1,678.0	32.04	50.000	
6,700.0	6,463.1	6,491.1	6,463.1	24.7	14.0	175.97	26.9	300.5	1,708.7	1,681.2	32.10	50.000	
6,750.0	6,494.3	6,522.3	6,494.3	24.7	14.1	175.98	26.9	300.5	1,730.9	1,703.4	32.54	49.716	
6,791.3	6,517.9	6,545.9	6,517.9	24.7	14.1	175.99	26.9	300.5	1,734.1	1,706.6	32.60	49.678	
6,800.0	6,522.6	6,550.6	6,522.6	24.7	14.1	176.00	26.9	300.5	1,737.3	1,709.8	32.66	49.640	
6,850.0	6,548.0	6,576.0	6,548.0	24.7	14.2	176.01	26.9	300.5	1,759.5	1,732.0	33.10	49.356	
6,889.7	6,566.0	6,594.0	6,566.0	24.8	14.2	176.02	26.9	300.5	1,762.7	1,735.2	33.16	49.318	
6,900.0	6,570.4	6,598.4	6,570.4	24.9	14.2	176.03	26.9	300.5	1,765.9	1,738.4	33.22	49.280	
6,950.0	6,589.5	6,617.5	6,589.5	25.1	14.3	176.04	26.9	300.5	1,788.1	1,760.6	33.66	48.996	
6,988.2	6,602.0	6,630.2	6,602.0	25.3	14.3	176.05	26.9	300.5	1,791.3	1,763.8	33.72	48.958	
7,000.0	6,605.4	6,633.4	6,605.4	25.3	14.3	176.06	26.9	300.5	1,794.5	1,767.0	33.78	48.920	
7,050.0	6,618.0	6,646.0	6,618.0	25.6	14.4	176.07	26.9	300.5	1,816.7	1,789.2	34.22	48.636	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,625.0	7,243.6	6,714.8	25.9	23.6	108.40	26.9	-507.9	281.1	233.6	47.54	5.913	
7,100.0	6,627.1	7,230.4	6,714.8	26.0	23.3	108.05	26.9	-494.7	280.5	233.0	47.44	5.912	
7,150.0	6,632.8	7,180.7	6,714.9	26.5	22.3	107.09	26.9	-445.0	278.8	231.7	47.05	5.924	
7,185.0	6,634.7	7,144.8	6,715.0	26.8	21.6	106.75	26.9	-409.2	278.2	231.4	46.76	5.950	
7,200.0	6,635.0	7,128.0	6,714.6	27.0	21.2	106.63	26.9	-392.3	278.0	231.4	46.61	5.964	
7,215.9	6,635.0	7,110.1	6,713.8	27.1	20.9	106.49	26.9	-374.5	277.8	231.4	46.47	5.979	
7,283.4	6,634.1	7,034.9	6,705.6	27.9	19.5	105.04	26.9	-299.8	276.0	229.8	46.22	5.972	
7,300.0	6,633.9	7,016.8	6,702.4	28.1	19.2	104.45	26.9	-281.9	275.4	229.1	46.22	5.958	
7,381.9	6,632.9	6,929.8	6,681.0	29.3	17.9	100.28	26.9	-197.7	271.1	224.6	46.58	5.821	
7,400.0	6,632.6	6,911.3	6,675.2	29.5	17.6	99.11	26.9	-180.1	270.2	223.5	46.69	5.786	
7,480.3	6,631.6	6,833.3	6,645.6	30.8	16.6	93.01	26.9	-108.0	266.8	219.5	47.34	5.637	
7,500.0	6,631.4	6,815.3	6,637.6	31.1	16.4	91.35	26.9	-91.8	266.5	219.0	47.47	5.614	
7,515.5	6,631.2	6,801.3	6,631.2	31.4	16.3	90.00	26.9	-79.5	266.4	218.8	47.58	5.599	
7,578.7	6,630.4	6,747.4	6,604.1	32.5	15.8	84.32	26.9	-32.9	268.2	220.3	47.89	5.600	
7,600.0	6,630.1	6,730.3	6,594.8	32.9	15.6	82.39	26.9	-18.5	269.7	221.8	47.94	5.627	
7,677.1	6,629.1	6,672.5	6,560.8	34.3	15.2	75.49	26.9	28.2	280.2	232.3	47.91	5.849	
7,700.0	6,628.8	6,656.7	6,550.9	34.8	15.2	73.53	26.9	40.6	284.9	237.1	47.82	5.959	
7,775.6	6,627.8	6,608.0	6,518.6	36.3	14.9	67.46	26.9	77.0	306.0	258.5	47.44	6.450	
7,800.0	6,627.5	6,593.4	6,508.5	36.8	14.9	65.65	26.9	87.5	314.6	267.3	47.27	6.655	
7,874.0	6,626.6	6,550.0	6,477.1	38.4	14.7	60.36	26.9	117.4	345.6	299.0	46.63	7.411	
7,900.0	6,626.3	6,539.4	6,469.1	38.9	14.7	59.09	26.9	124.5	358.1	311.5	46.58	7.688	
7,972.4	6,625.3	6,500.0	6,438.7	40.5	14.6	54.57	26.9	149.5	397.2	351.3	45.85	8.663	
8,000.0	6,625.0	6,500.0	6,438.7	41.1	14.6	54.57	26.9	149.5	413.4	367.1	46.35	8.919	
8,070.8	6,624.1	6,464.4	6,410.0	42.7	14.5	50.72	26.9	170.7	458.1	412.5	45.66	10.033	
8,100.0	6,623.7	6,450.0	6,398.2	43.4	14.5	49.23	26.9	178.8	477.7	432.3	45.36	10.530	
8,169.3	6,622.8	6,429.1	6,380.7	45.0	14.5	47.16	26.9	190.2	526.4	481.0	45.41	11.592	
8,200.0	6,622.4	6,419.1	6,372.2	45.7	14.5	46.20	26.9	195.5	548.9	503.5	45.37	12.098	
8,267.7	6,621.6	6,400.0	6,355.8	47.4	14.5	44.43	26.9	205.2	600.1	554.7	45.45	13.205	
8,300.0	6,621.1	6,400.0	6,355.8	48.1	14.5	44.43	26.9	205.2	625.4	579.4	46.01	13.594	
8,366.1	6,620.3	6,371.8	6,331.1	49.7	14.5	41.96	26.9	218.8	678.0	632.5	45.50	14.901	
8,400.0	6,619.9	6,363.4	6,323.6	50.6	14.4	41.25	26.9	222.6	705.6	660.0	45.58	15.479	
8,464.5	6,619.0	6,350.0	6,311.6	52.2	14.4	40.16	26.9	228.6	759.1	713.2	45.89	16.541	
8,500.0	6,618.6	6,350.0	6,311.6	53.0	14.4	40.16	26.9	228.6	789.1	742.6	46.48	16.975	
8,563.0	6,617.8	6,327.6	6,291.3	54.6	14.4	38.42	26.9	238.1	842.8	796.5	46.22	18.232	
8,600.0	6,617.3	6,320.4	6,284.7	55.5	14.4	37.89	26.9	241.0	874.8	828.4	46.41	18.848	
8,661.4	6,616.5	6,300.0	6,265.9	57.1	14.4	36.42	26.9	248.9	928.5	882.3	46.24	20.081	
8,700.0	6,616.0	6,300.0	6,265.9	58.1	14.4	36.42	26.9	248.9	962.5	915.7	46.86	20.542	
8,759.8	6,615.2	6,300.0	6,265.9	59.6	14.4	36.42	26.9	248.9	1,015.8	968.0	47.82	21.243	
8,800.0	6,614.7	6,300.0	6,265.9	60.6	14.4	36.42	26.9	248.9	1,052.0	1,003.5	48.47	21.706	
8,858.2	6,614.0	6,277.9	6,245.2	62.1	14.4	34.91	26.9	256.8	1,104.4	1,056.3	48.10	22.962	
8,900.0	6,613.4	6,272.0	6,239.7	63.2	14.4	34.53	26.9	258.8	1,142.4	1,094.0	48.42	23.595	
8,956.7	6,612.7	6,250.0	6,218.9	64.7	14.4	33.15	26.9	265.9	1,194.4	1,146.4	48.04	24.863	
9,000.0	6,612.2	6,250.0	6,218.9	65.8	14.4	33.15	26.9	265.9	1,234.1	1,185.4	48.70	25.339	
9,055.1	6,611.5	6,250.0	6,218.9	67.3	14.4	33.15	26.9	265.9	1,284.9	1,235.4	49.55	25.931	
9,100.0	6,610.9	6,250.0	6,218.9	68.4	14.4	33.15	26.9	265.9	1,326.6	1,276.3	50.24	26.403	
9,153.5	6,610.2	6,250.0	6,218.9	69.8	14.4	33.15	26.9	265.9	1,376.5	1,325.4	51.07	26.952	
9,200.0	6,609.6	6,250.0	6,218.9	71.1	14.4	33.15	26.9	265.9	1,420.1	1,368.3	51.79	27.419	
9,251.9	6,608.9	6,231.4	6,201.1	72.4	14.4	32.04	26.9	271.4	1,468.6	1,417.2	51.47	28.532	
9,300.0	6,608.3	6,226.8	6,196.6	73.7	14.4	31.78	26.9	272.7	1,513.8	1,461.9	51.93	29.153	
9,350.4	6,607.7	6,222.2	6,192.2	75.0	14.4	31.51	26.9	273.9	1,561.4	1,509.0	52.41	29.789	
9,400.0	6,607.0	6,217.8	6,188.0	76.4	14.4	31.27	26.9	275.1	1,608.4	1,555.5	52.90	30.404	
9,448.8	6,606.4	6,200.0	6,170.8	77.7	14.4	30.30	26.9	279.6	1,654.9	1,602.3	52.58	31.473	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	6,605.7	6,200.0	6,170.8	79.0	14.4	30.30	26.9	279.6	1,703.5	1,650.1	53.33	31.940	
9,547.2	6,605.1	6,200.0	6,170.8	80.3	14.4	30.30	26.9	279.6	1,748.4	1,694.4	54.03	32.359	
9,600.0	6,604.5	6,200.0	6,170.8	81.7	14.4	30.30	26.9	279.6	1,798.8	1,744.0	54.81	32.819	
9,645.6	6,603.9	6,200.0	6,170.8	82.9	14.4	30.30	26.9	279.6	1,842.5	1,787.0	55.49	33.206	
9,700.0	6,603.2	6,200.0	6,170.8	84.4	14.4	30.30	26.9	279.6	1,894.6	1,838.3	56.29	33.658	
9,744.1	6,602.6	6,200.0	6,170.8	85.6	14.4	30.30	26.9	279.6	1,937.0	1,880.1	56.95	34.015	
9,800.0	6,601.9	6,200.0	6,170.8	87.1	14.4	30.30	26.9	279.6	1,990.9	1,933.1	57.78	34.458	
9,842.5	6,601.3	6,200.0	6,170.8	88.2	14.4	30.30	26.9	279.6	2,031.9	1,973.5	58.41	34.787	
9,900.0	6,600.6	6,200.0	6,170.8	89.8	14.4	30.30	26.9	279.6	2,087.5	2,028.2	59.26	35.222	
9,940.9	6,600.1	6,179.9	6,151.2	90.9	14.3	29.26	26.9	284.1	2,126.7	2,068.1	58.56	36.314	
10,000.0	6,599.3	6,176.6	6,147.9	92.5	14.3	29.10	26.9	284.8	2,183.8	2,124.6	59.21	36.881	
10,039.3	6,598.8	6,174.4	6,145.9	93.5	14.3	28.99	26.9	285.3	2,221.9	2,162.3	59.65	37.251	
10,100.0	6,598.0	6,171.3	6,142.7	95.2	14.3	28.84	26.9	285.9	2,280.8	2,220.4	60.32	37.810	
10,137.8	6,597.5	6,169.3	6,140.9	96.2	14.3	28.74	26.9	286.3	2,317.4	2,256.7	60.74	38.150	
10,200.0	6,596.7	6,150.0	6,121.9	97.9	14.3	27.83	26.9	289.9	2,378.1	2,317.7	60.40	39.371	
10,236.2	6,596.3	6,150.0	6,121.9	98.9	14.3	27.83	26.9	289.9	2,413.3	2,352.4	60.91	39.617	
10,300.0	6,595.4	6,150.0	6,121.9	100.6	14.3	27.83	26.9	289.9	2,475.3	2,413.5	61.82	40.043	
10,334.6	6,595.0	6,150.0	6,121.9	101.6	14.3	27.83	26.9	289.9	2,509.0	2,446.7	62.31	40.268	
10,400.0	6,594.2	6,150.0	6,121.9	103.4	14.3	27.83	26.9	289.9	2,572.7	2,509.5	63.23	40.686	
10,433.0	6,593.7	6,150.0	6,121.9	104.3	14.3	27.83	26.9	289.9	2,605.0	2,541.3	63.70	40.893	
10,500.0	6,592.9	6,150.0	6,121.9	106.1	14.3	27.83	26.9	289.9	2,670.3	2,605.7	64.65	41.303	
10,531.5	6,592.5	6,150.0	6,121.9	106.9	14.3	27.83	26.9	289.9	2,701.1	2,636.0	65.10	41.492	
10,600.0	6,591.6	6,150.0	6,121.9	108.8	14.3	27.83	26.9	289.9	2,768.1	2,702.0	66.07	41.895	
10,629.9	6,591.2	6,150.0	6,121.9	109.6	14.3	27.83	26.9	289.9	2,797.4	2,730.9	66.50	42.067	
10,700.0	6,590.3	6,150.0	6,121.9	111.6	14.3	27.83	26.9	289.9	2,866.0	2,798.5	67.49	42.463	
10,728.3	6,589.9	6,150.0	6,121.9	112.3	14.3	27.83	26.9	289.9	2,893.8	2,825.9	67.90	42.619	
10,800.0	6,589.0	6,150.0	6,121.9	114.3	14.3	27.83	26.9	289.9	2,964.1	2,895.2	68.92	43.008	
10,826.7	6,588.7	6,150.0	6,121.9	115.0	14.3	27.83	26.9	289.9	2,990.3	2,921.0	69.30	43.151	
10,900.0	6,587.7	6,150.0	6,121.9	117.1	14.3	27.82	26.9	289.9	3,062.3	2,991.9	70.34	43.533	
10,925.2	6,587.4	6,150.0	6,121.9	117.7	14.3	27.82	26.9	289.9	3,087.0	3,016.3	70.70	43.661	
11,000.0	6,586.4	6,150.0	6,121.9	119.8	14.3	27.82	26.9	289.9	3,160.6	3,088.8	71.77	44.037	
11,023.6	6,586.1	6,150.0	6,121.9	120.4	14.3	27.82	26.9	289.9	3,183.8	3,111.7	72.11	44.153	
11,100.0	6,585.1	6,150.0	6,121.9	122.6	14.3	27.82	26.9	289.9	3,259.0	3,185.8	73.20	44.522	
11,122.0	6,584.8	6,150.0	6,121.9	123.2	14.3	27.82	26.9	289.9	3,280.7	3,207.2	73.51	44.626	
11,200.0	6,583.8	6,150.0	6,121.9	125.3	14.3	27.82	26.9	289.9	3,357.5	3,282.9	74.63	44.989	
11,220.4	6,583.6	6,129.2	6,101.4	125.9	14.3	26.89	26.9	293.1	3,377.3	3,303.9	73.33	46.058	
11,300.0	6,582.5	6,127.1	6,099.3	128.1	14.3	26.80	26.9	293.4	3,455.6	3,381.4	74.28	46.524	
11,318.9	6,582.3	6,126.6	6,098.8	128.6	14.3	26.78	26.9	293.5	3,474.2	3,399.7	74.50	46.632	
11,400.0	6,581.2	6,124.5	6,096.7	130.8	14.3	26.69	26.9	293.8	3,554.2	3,478.7	75.48	47.091	
11,417.3	6,581.0	6,124.1	6,096.3	131.3	14.3	26.67	26.9	293.9	3,571.3	3,495.6	75.68	47.187	
11,500.0	6,580.0	6,122.1	6,094.3	133.6	14.3	26.58	26.9	294.1	3,652.8	3,576.1	76.68	47.639	
11,515.7	6,579.7	6,121.7	6,093.9	134.0	14.3	26.57	26.9	294.2	3,668.3	3,591.5	76.87	47.723	
11,600.0	6,578.5	6,100.0	6,072.4	136.3	14.3	25.67	26.9	296.7	3,751.8	3,675.5	76.38	49.121	
11,614.1	6,578.5	6,100.0	6,072.4	136.7	14.3	25.67	26.9	296.7	3,765.8	3,689.2	76.57	49.180	
11,700.0	6,577.4	6,100.0	6,072.4	139.1	14.3	25.67	26.9	296.7	3,850.5	3,772.8	77.74	49.532	
11,712.6	6,577.2	6,100.0	6,072.4	139.5	14.3	25.67	26.9	296.7	3,862.9	3,785.0	77.91	49.583	
11,800.0	6,576.1	6,100.0	6,072.4	141.9	14.3	25.67	26.9	296.7	3,949.3	3,870.2	79.10	49.930	
11,811.0	6,575.9	6,100.0	6,072.4	142.2	14.3	25.67	26.9	296.7	3,960.1	3,880.9	79.25	49.973	
11,882.7	6,575.0	6,100.0	6,072.4	144.2	14.3	25.67	26.9	296.7	4,031.0	3,950.7	80.22	50.249	
11,883.5	6,575.0	6,100.0	6,072.4	144.2	14.3	25.67	26.9	296.7	4,031.8	3,951.5	80.23	50.254	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB-EST @ 4624.0usft (Original Well ECoordinates are relative to: WACKER 10F-232

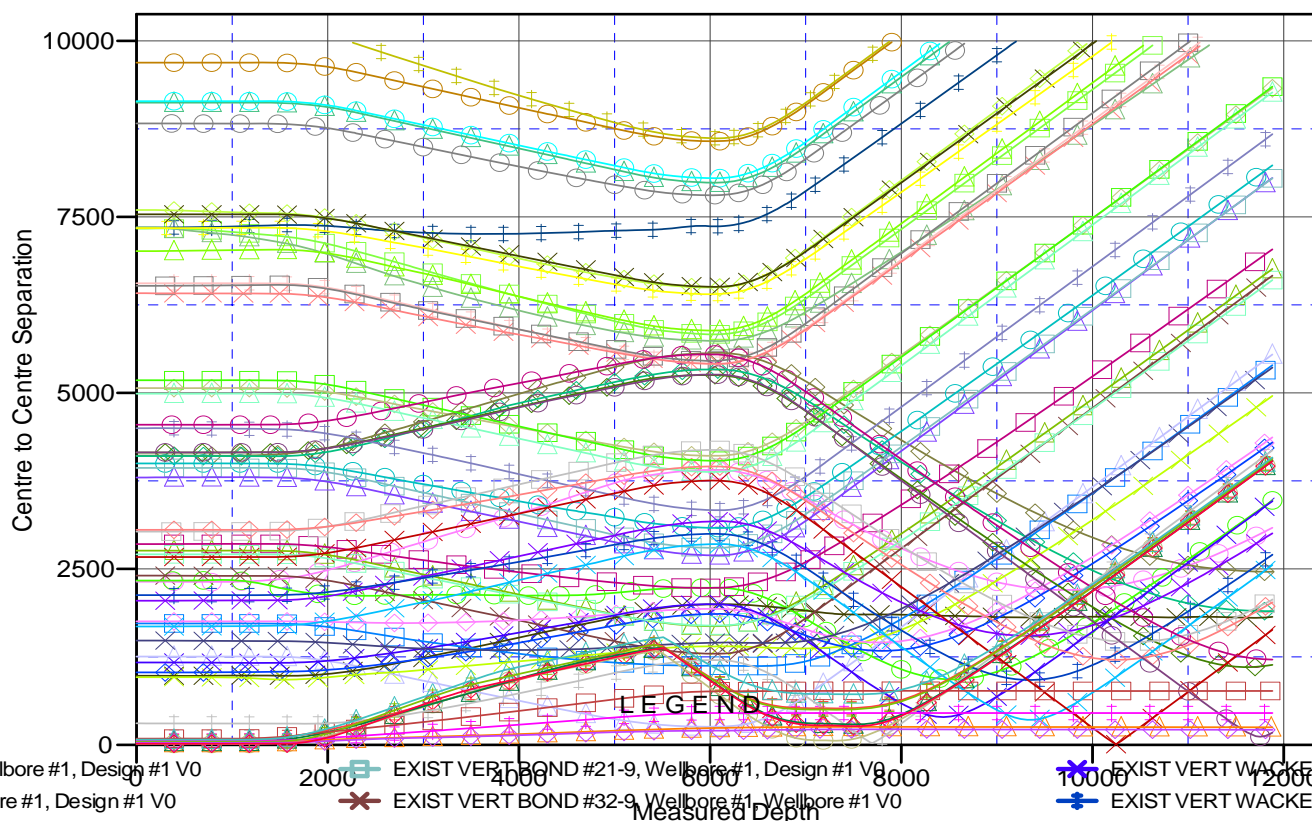
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.500000

Grid Convergence at Surface is: 0.62°

## Ladder Plot



Wellbore #1, Design #1 V0	EXIST VERT BOND #21-9, Wellbore #1, Design #1 V0	EXIST VERT WACKER #10D, V
Wellbore #1, Design #1 V0	EXIST VERT BOND #32-9, Wellbore #1, Wellbore #1 V0	EXIST VERT WACKER #2, Well
Wellbore #1, Design #1 V0	EXIST VERT DR B #10-12, Wellbore #1, Wellbore #1 V0	EXIST VERT WACKER #22-10,
Wellbore #1, Design #1 V0	EXIST VERT HECKENDORF #1, Wellbore #1, Design #1 V0	EXIST VERT WACKER #31-10,
Wellbore #1, Design #1 V0	EXIST VERT HEINRICH #41-9, Wellbore #1, Design #1 V0	EXIST VERT WACKER #32-10,
Wellbore #1, Design #1 V0	EXIST VERT JURGENS #8-1, Wellbore #1, Wellbore #1 V0	EXIST VERT WACKER #41-10,
Wellbore #1, Design #1 V0	EXIST VERT JURGENS #8-13, Wellbore #1, Wellbore #1 V0	EXIST VERT WACKER #42-10,
Wellbore #1, Design #1 V0	EXIST VERT JURGENS #8-14, Wellbore #1, Wellbore #1 V0	EXIST VERT WILLIAMS #1, Wel
Wellbore #1, Design #1 V0	EXIST VERT JURGENS PC #B8-23, Wellbore #1, Wellbore #1 V0	WACKER 10F-204, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT JURGENS PMB #B8-10, Wellbore #1, Design #1 V0	WACKER 10F-234, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT LOWER LATHAM #8-15, Wellbore #1, Wellbore #1 V0	WACKER 10F-302, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT MILLAGE #11-10, Wellbore #1, Design #1 V0	WACKER 10F-304, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT OGRADY #31-9, Wellbore #1, Design #1 V0	WACKER 10G-212, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT PAULINE #5, Wellbore #1, Design #1 V0	WACKER 10G-214, ORIGINAL V
Wellbore #1, Design #1 V0		WACKER 10G-222, ORIGINAL V

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well WACKER 10F-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 10 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4624.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	WACKER 10F-232	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB-EST @ 4624.0usft (Original Well ECoordinates are relative to: WACKER 10F-232

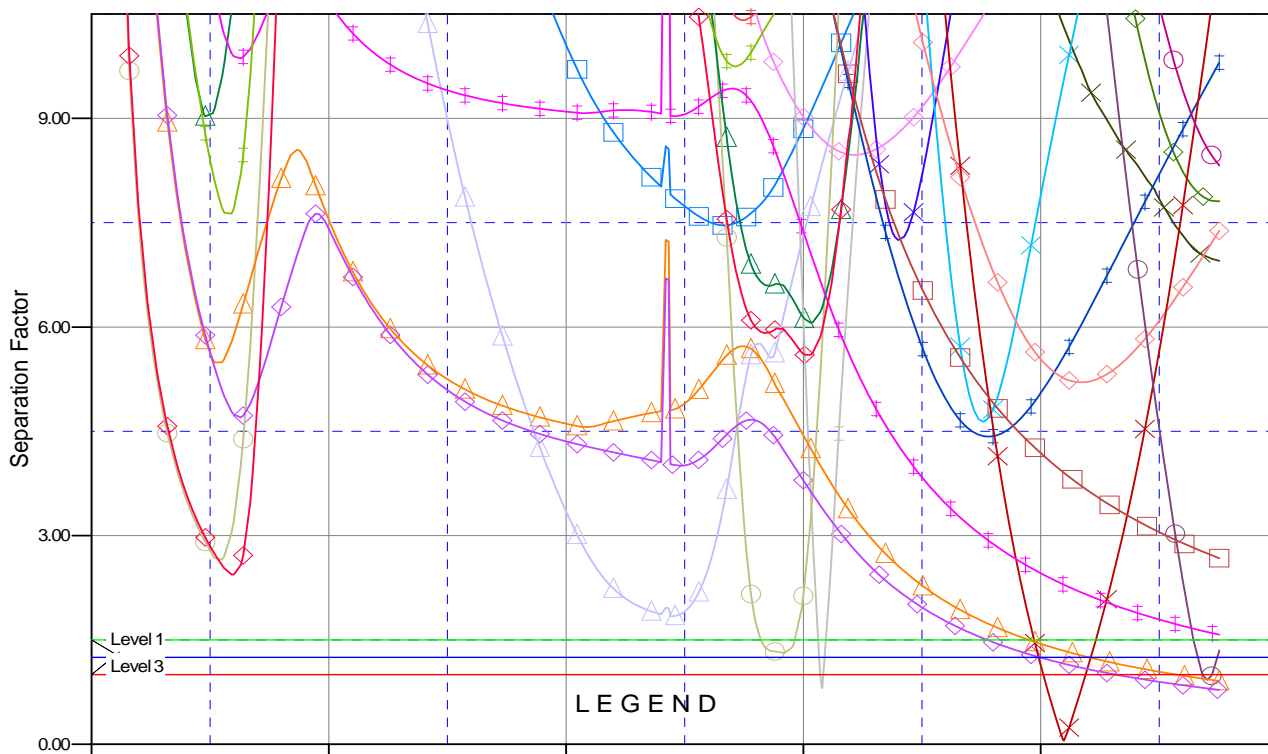
Offset Depths are relative to Offset Datum

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



### LEGEND

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-234, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT LOWER LATHAM #8-15, Wellbore #1, Design #1 V0	WACKER 10F-302, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT MILLAGE #11-10, Wellbore #1, Design #1 V0	WACKER 10F-304, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT OGRADY #31-9, Wellbore #1, Design #1 V0	WACKER 10G-212, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT PAULINE #5, Wellbore #1, Design #1 V0	WACKER 10G-214, ORIGINAL V