

PDC ENERGY

**WELD COUNTY, COLORADO
SW SW SEC. 28 T5N R67W 6th P.M.
KINZER 28H-302**

**ORIGINAL WELLBORE
PROPOSAL #2**

Anticollision Report

25 March, 2016



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Reference	PROPOSAL #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 us	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	25/03/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	11,999.0	PROPOSAL #2 (ORIGINAL WELLBORE)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SW SW SEC. 28 T5N R67W 6th P.M.						
ABDN VERT OSTER POOLING UNIT #1 - Wellbore #1 -	11,439.0	6,924.3	844.7	578.4	3.173	CC, ES
ABDN VERT OSTER POOLING UNIT #1 - Wellbore #1 -	11,500.0	6,923.7	846.9	578.9	3.161	SF
EXIST DD BINDER 20-28 - Wellbore #1 - Wellbore #1	10,761.5	6,949.1	152.7	27.4	1.218	Level 2, CC, ES, SF
EXIST DD KINZER 28KD - Wellbore #1 - Wellbore #1	8,005.5	7,086.3	1,254.5	1,202.1	23.915	CC, ES
EXIST DD KINZER 28KD - Wellbore #1 - Wellbore #1	8,800.0	7,080.0	1,484.9	1,411.9	20.340	SF
EXIST DD KINZER 28LD - Wellbore #1 - Wellbore #1	675.3	674.8	351.9	349.1	125.381	CC
EXIST DD KINZER 28LD - Wellbore #1 - Wellbore #1	700.0	699.8	351.9	349.0	120.626	ES
EXIST DD KINZER 28LD - Wellbore #1 - Wellbore #1	8,900.0	6,927.5	1,651.7	1,573.6	21.171	SF
EXIST VERT BINDER 10-28 - Wellbore #1 - Design #1	10,000.9	6,951.3	691.0	464.2	3.047	CC, ES
EXIST VERT BINDER 10-28 - Wellbore #1 - Design #1	10,100.0	6,950.3	698.1	468.6	3.042	SF
EXIST VERT BINDER 15-28 - Wellbore #1 - Design #1	9,898.0	6,902.4	1,003.0	778.5	4.468	CC
EXIST VERT BINDER 15-28 - Wellbore #1 - Design #1	9,900.0	6,902.4	1,003.0	778.5	4.467	ES
EXIST VERT BINDER 15-28 - Wellbore #1 - Design #1	10,000.0	6,901.3	1,008.2	780.9	4.436	SF
EXIST VERT BINDER 16-28 - Wellbore #1 - Design #1	11,469.7	6,866.0	817.0	549.5	3.054	CC
EXIST VERT BINDER 16-28 - Wellbore #1 - Design #1	11,500.0	6,865.7	817.5	549.2	3.047	ES, SF
EXIST VERT BINDER 9-28 - Wellbore #1 - Design #1	11,583.7	6,924.8	691.3	421.0	2.558	CC
EXIST VERT BINDER 9-28 - Wellbore #1 - Design #1	11,600.0	6,924.7	691.5	420.8	2.554	ES, SF
EXIST VERT HELEN 1 - Wellbore #1 - Design #1	11,424.6	6,951.5	1,824.3	1,558.1	6.855	CC
EXIST VERT HELEN 1 - Wellbore #1 - Design #1	11,500.0	6,950.7	1,825.8	1,557.6	6.808	ES
EXIST VERT HELEN 1 - Wellbore #1 - Design #1	11,800.0	6,947.6	1,862.5	1,586.0	6.736	SF
EXIST VERT KINZER 13-28 - Wellbore #1 - Design #1	7,266.5	6,897.4	774.6	616.1	4.885	CC, ES
EXIST VERT KINZER 13-28 - Wellbore #1 - Design #1	7,350.0	6,907.9	779.1	619.0	4.866	SF
EXIST VERT KINZER 28-2 - Wellbore #1 - Design #1	600.0	592.5	358.5	345.8	28.078	CC
EXIST VERT KINZER 28-2 - Wellbore #1 - Design #1	900.0	892.0	361.8	342.3	18.564	ES
EXIST VERT KINZER 28-2 - Wellbore #1 - Design #1	7,500.0	6,865.5	1,021.4	858.9	6.287	SF
EXIST VERT KINZER 28A - Wellbore #1 - Design #1	7,871.8	6,947.6	2,388.6	2,217.1	13.927	CC
EXIST VERT KINZER 28A - Wellbore #1 - Design #1	7,900.0	6,947.3	2,388.7	2,216.6	13.875	ES
EXIST VERT KINZER 28A - Wellbore #1 - Design #1	8,800.0	6,937.9	2,562.5	2,367.4	13.133	SF
EXIST VERT KINZER 28B - Wellbore #1 - Wellbore #1	7,808.7	6,910.6	230.4	194.3	6.389	CC, ES, SF
EXIST VERT KIZNER 28-1 - Wellbore #1 - Design #1	7,322.8	6,947.5	1,805.6	1,645.6	11.282	CC
EXIST VERT KIZNER 28-1 - Wellbore #1 - Design #1	7,350.0	6,949.9	1,805.8	1,645.3	11.248	ES
EXIST VERT KIZNER 28-1 - Wellbore #1 - Design #1	7,800.0	6,947.3	1,867.6	1,697.8	10.998	SF
EXIST VERT MELLON 28-1 - Wellbore #1 - Design #1	8,900.2	6,927.8	465.1	267.4	2.353	CC, ES, SF
EXIST VERT MELLON 28-2 - Wellbore #1 - Design #1	8,657.8	6,887.4	919.3	728.5	4.817	CC
EXIST VERT MELLON 28-2 - Wellbore #1 - Design #1	8,700.0	6,886.9	920.3	728.4	4.795	ES
EXIST VERT MELLON 28-2 - Wellbore #1 - Design #1	8,800.0	6,885.9	930.3	735.7	4.781	SF
EXIST VERT MELLON 28-4 - Wellbore #1 - Design #1	8,732.9	6,960.6	1,623.5	1,431.0	8.432	CC

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW SW SEC. 28 T5N R67W 6th P.M.						
EXIST VERT MELLON 28-4 - Wellbore #1 - Design #1	8,800.0	6,959.9	1,624.9	1,430.6	8.362	ES
EXIST VERT MELLON 28-4 - Wellbore #1 - Design #1	9,100.0	6,956.7	1,664.5	1,462.2	8.227	SF
EXIST VERT ROGER 1 - Wellbore #1 - Design #1	10,081.5	6,960.5	1,816.8	1,709.8	16.984	CC
EXIST VERT ROGER 1 - Wellbore #1 - Design #1	10,100.0	6,960.3	1,816.9	1,709.4	16.905	ES
EXIST VERT ROGER 1 - Wellbore #1 - Design #1	10,900.0	6,951.9	1,992.6	1,863.0	15.374	SF
KINZER 28G-232 - ORIGINAL WELLBORE - PROPOSAL	300.0	300.0	47.4	46.3	43.323	CC
KINZER 28G-232 - ORIGINAL WELLBORE - PROPOSAL	400.0	399.7	47.6	46.1	30.893	ES
KINZER 28G-232 - ORIGINAL WELLBORE - PROPOSAL	11,999.0	12,140.7	846.3	556.0	2.915	SF
KINZER 28G-332 - ORIGINAL WELLBORE - PROPOSAL	400.0	400.0	30.7	29.1	19.866	CC
KINZER 28G-332 - ORIGINAL WELLBORE - PROPOSAL	500.0	499.8	31.0	29.0	15.567	ES
KINZER 28G-332 - ORIGINAL WELLBORE - PROPOSAL	11,999.0	12,133.9	537.7	247.7	1.854	SF
KINZER 28H-202 - ORIGINAL WELLBORE - PROPOSAL	600.0	600.0	13.9	11.5	5.706	CC, ES
KINZER 28H-202 - ORIGINAL WELLBORE - PROPOSAL	11,999.0	11,880.4	297.5	17.6	1.063	Level 2, SF
KINZER 28H-212 - ORIGINAL WELLBORE - PROPOSAL	500.0	500.0	16.7	14.7	8.391	CC
KINZER 28H-212 - ORIGINAL WELLBORE - PROPOSAL	11,999.0	11,971.2	271.0	-12.0	0.958	Level 1, ES, SF
KINZER 28H-432 - ORIGINAL WELLBORE - PROPOSAL	600.0	600.0	27.9	25.4	11.411	CC, ES
KINZER 28H-432 - ORIGINAL WELLBORE - PROPOSAL	11,999.0	12,054.1	633.1	350.9	2.243	SF
KINZER 28I-202 - ORIGINAL WELLBORE - PROPOSAL	600.0	600.0	58.5	56.1	23.963	CC, ES
KINZER 28I-202 - ORIGINAL WELLBORE - PROPOSAL	11,999.0	11,836.5	1,292.6	1,003.8	4.475	SF
KINZER 28I-312 - ORIGINAL WELLBORE - PROPOSAL	600.0	600.0	44.6	42.1	18.258	CC, ES
KINZER 28I-312 - ORIGINAL WELLBORE - PROPOSAL	11,999.0	11,938.6	955.3	665.7	3.298	SF

Offset Design		SW SW SEC. 28 T5N R67W 6th P.M. - ABDN VERT OSTER POOLING UNIT #1 - Wellbore #1 - Design										Offset Site Error:		0.0 usft
Survey Program: 0-INC												Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.0	0.0	92.5	92.5	0.0	0.0	87.39	202.2	4,444.7	4,449.3					
100.0	100.0	192.5	192.5	0.1	1.2	87.39	202.2	4,444.7	4,449.3	4,448.0	1.25	3,545.751		
200.0	200.0	292.5	292.5	0.3	3.4	87.39	202.2	4,444.7	4,449.3	4,445.6	3.68	1,208.840		
300.0	300.0	392.5	392.5	0.5	5.5	87.39	202.2	4,444.7	4,449.3	4,443.3	6.00	741.826		
400.0	400.0	492.5	492.5	0.8	7.5	87.39	202.2	4,444.7	4,449.3	4,441.0	8.27	538.194		
500.0	500.0	592.5	592.5	1.0	9.5	87.39	202.2	4,444.7	4,449.3	4,438.8	10.52	422.866		
600.0	600.0	692.5	692.5	1.2	11.5	87.39	202.2	4,444.7	4,449.3	4,436.5	12.77	348.425		
700.0	700.0	792.5	792.5	1.4	13.6	104.01	202.2	4,444.7	4,449.7	4,434.7	15.01	296.414		
800.0	799.8	892.3	892.3	1.7	15.6	104.05	202.2	4,444.7	4,451.0	4,433.7	17.25	258.036		
900.0	899.5	992.0	992.0	1.9	17.6	104.12	202.2	4,444.7	4,453.1	4,433.6	19.49	228.494		
1,000.0	998.7	1,091.2	1,091.2	2.2	19.6	104.21	202.2	4,444.7	4,456.1	4,434.4	21.74	204.992		
1,100.0	1,097.5	1,190.0	1,190.0	2.5	21.6	104.33	202.2	4,444.7	4,460.0	4,436.0	24.00	185.803		
1,200.0	1,195.6	1,288.1	1,288.1	2.8	23.6	104.47	202.2	4,444.7	4,464.9	4,438.6	26.29	169.805		
1,228.9	1,223.8	1,316.3	1,316.3	2.9	24.1	104.51	202.2	4,444.7	4,466.4	4,439.5	26.96	165.665		
1,300.0	1,293.3	1,385.8	1,385.8	3.2	25.5	104.70	202.2	4,444.7	4,470.4	4,441.8	28.62	156.207		
1,400.0	1,390.9	1,483.4	1,483.4	3.6	27.5	104.97	202.2	4,444.7	4,476.1	4,445.2	30.97	144.553		
1,500.0	1,488.5	1,581.0	1,581.0	4.0	29.5	105.23	202.2	4,444.7	4,481.9	4,448.6	33.33	134.492		
1,600.0	1,586.1	1,678.6	1,678.6	4.4	31.4	105.49	202.2	4,444.7	4,487.8	4,452.1	35.69	125.732		
1,700.0	1,683.7	1,776.2	1,776.2	4.8	33.4	105.75	202.2	4,444.7	4,493.8	4,455.8	38.07	118.046		
1,800.0	1,781.3	1,873.8	1,873.8	5.3	35.3	106.01	202.2	4,444.7	4,499.9	4,459.5	40.45	111.252		
1,900.0	1,878.9	1,971.4	1,971.4	5.7	37.3	106.27	202.2	4,444.7	4,506.1	4,463.3	42.83	105.208		
2,000.0	1,976.5	2,069.0	2,069.0	6.1	39.3	106.53	202.2	4,444.7	4,512.4	4,467.2	45.22	99.797		

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Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,100.0	2,074.1	2,166.6	2,166.6	6.6	41.2	106.79	202.2	4,444.7	4,518.8	4,471.2	47.60	94.928	
2,200.0	2,171.7	2,264.2	2,264.2	7.0	43.2	107.05	202.2	4,444.7	4,525.3	4,475.3	49.99	90.524	
2,300.0	2,269.3	2,361.8	2,361.8	7.5	45.2	107.31	202.2	4,444.7	4,531.8	4,479.5	52.38	86.522	
2,400.0	2,366.9	2,459.4	2,459.4	7.9	47.1	107.57	202.2	4,444.7	4,538.5	4,483.8	54.77	82.870	
2,500.0	2,464.5	2,557.0	2,557.0	8.4	49.1	107.82	202.2	4,444.7	4,545.3	4,488.1	57.16	79.525	
2,600.0	2,562.1	2,654.6	2,654.6	8.9	51.0	108.08	202.2	4,444.7	4,552.1	4,492.6	59.54	76.450	
2,700.0	2,659.7	2,752.2	2,752.2	9.3	53.0	108.33	202.2	4,444.7	4,559.1	4,497.2	61.93	73.614	
2,800.0	2,757.3	2,849.8	2,849.8	9.8	55.0	108.58	202.2	4,444.7	4,566.1	4,501.8	64.32	70.991	
2,900.0	2,854.9	2,947.4	2,947.4	10.2	56.9	108.84	202.2	4,444.7	4,573.3	4,506.6	66.71	68.557	
3,000.0	2,952.5	3,045.0	3,045.0	10.7	58.9	109.09	202.2	4,444.7	4,580.5	4,511.4	69.09	66.294	
3,100.0	3,050.1	3,142.6	3,142.6	11.1	60.9	109.34	202.2	4,444.7	4,587.8	4,516.4	71.48	64.183	
3,200.0	3,147.7	3,240.2	3,240.2	11.6	62.8	109.59	202.2	4,444.7	4,595.3	4,521.4	73.87	62.211	
3,300.0	3,245.3	3,337.8	3,337.8	12.1	64.8	109.84	202.2	4,444.7	4,602.8	4,526.5	76.25	60.364	
3,400.0	3,342.9	3,435.4	3,435.4	12.5	66.8	110.09	202.2	4,444.7	4,610.4	4,531.7	78.63	58.631	
3,500.0	3,440.5	3,533.0	3,533.0	13.0	68.7	110.34	202.2	4,444.7	4,618.0	4,537.0	81.02	57.002	
3,600.0	3,538.1	3,630.6	3,630.6	13.4	70.7	110.59	202.2	4,444.7	4,625.8	4,542.4	83.40	55.468	
3,700.0	3,635.7	3,728.2	3,728.2	13.9	72.6	110.83	202.2	4,444.7	4,633.7	4,547.9	85.78	54.020	
3,800.0	3,733.3	3,825.8	3,825.8	14.4	74.6	111.08	202.2	4,444.7	4,641.6	4,553.5	88.16	52.652	
3,900.0	3,830.9	3,923.4	3,923.4	14.8	76.6	111.33	202.2	4,444.7	4,649.7	4,559.2	90.53	51.358	
4,000.0	3,928.5	4,021.0	4,021.0	15.3	78.5	111.57	202.2	4,444.7	4,657.8	4,564.9	92.91	50.132	
4,100.0	4,026.1	4,118.6	4,118.6	15.7	80.5	111.81	202.2	4,444.7	4,666.0	4,570.7	95.29	48.968	
4,200.0	4,123.7	4,216.2	4,216.2	16.2	82.5	112.06	202.2	4,444.7	4,674.3	4,576.7	97.66	47.863	
4,300.0	4,221.3	4,313.8	4,313.8	16.7	84.4	112.30	202.2	4,444.7	4,682.7	4,582.7	100.04	46.811	
4,400.0	4,318.9	4,411.4	4,411.4	17.1	86.4	112.54	202.2	4,444.7	4,691.2	4,588.8	102.41	45.809	
4,500.0	4,416.5	4,509.0	4,509.0	17.6	88.3	112.78	202.2	4,444.7	4,699.8	4,595.0	104.78	44.855	
4,600.0	4,514.1	4,606.6	4,606.6	18.1	90.3	113.02	202.2	4,444.7	4,708.4	4,601.3	107.15	43.943	
4,700.0	4,611.7	4,704.2	4,704.2	18.5	92.3	113.26	202.2	4,444.7	4,717.2	4,607.6	109.52	43.073	
4,800.0	4,709.3	4,801.8	4,801.8	19.0	94.2	113.49	202.2	4,444.7	4,726.0	4,614.1	111.88	42.240	
4,900.0	4,806.9	4,899.4	4,899.4	19.4	96.2	113.73	202.2	4,444.7	4,734.9	4,620.6	114.25	41.443	
5,000.0	4,904.5	4,997.0	4,997.0	19.9	98.2	113.97	202.2	4,444.7	4,743.9	4,627.2	116.61	40.680	
5,100.0	5,002.1	5,094.6	5,094.6	20.4	100.1	114.20	202.2	4,444.7	4,752.9	4,634.0	118.98	39.948	
5,200.0	5,099.7	5,192.2	5,192.2	20.8	102.1	114.44	202.2	4,444.7	4,762.1	4,640.7	121.34	39.246	
5,300.0	5,197.3	5,289.8	5,289.8	21.3	104.0	114.67	202.2	4,444.7	4,771.3	4,647.6	123.70	38.572	
5,400.0	5,294.9	5,387.4	5,387.4	21.8	106.0	114.90	202.2	4,444.7	4,780.6	4,654.6	126.06	37.924	
5,500.0	5,392.5	5,485.0	5,485.0	22.2	108.0	115.13	202.2	4,444.7	4,790.0	4,661.6	128.42	37.301	
5,600.0	5,490.1	5,582.6	5,582.6	22.7	109.9	115.36	202.2	4,444.7	4,799.5	4,668.7	130.77	36.701	
5,614.2	5,504.0	5,596.5	5,596.5	22.7	110.2	115.40	202.2	4,444.7	4,800.8	4,669.7	131.11	36.618	
5,700.0	5,587.9	5,680.4	5,680.4	23.1	111.9	115.72	202.2	4,444.7	4,808.5	4,675.3	133.19	36.102	
5,800.0	5,686.4	5,778.9	5,778.9	23.4	113.9	116.04	202.2	4,444.7	4,816.1	4,680.5	135.55	35.531	
5,900.0	5,785.5	5,878.0	5,878.0	23.7	115.9	116.29	202.2	4,444.7	4,822.1	4,684.3	137.86	34.978	
6,000.0	5,885.0	5,977.5	5,977.5	23.9	117.9	116.48	202.2	4,444.7	4,826.7	4,686.6	140.13	34.443	
6,100.0	5,984.7	6,077.2	6,077.2	24.1	119.9	116.61	202.2	4,444.7	4,829.7	4,687.4	142.35	33.927	
6,200.0	6,084.7	6,177.2	6,177.2	24.2	121.9	116.67	202.2	4,444.7	4,831.2	4,686.7	144.52	33.429	
6,243.1	6,127.8	6,220.3	6,220.3	24.3	122.8	100.07	202.2	4,444.7	4,831.3	4,691.0	140.36	34.420	
6,273.1	6,157.8	6,250.3	6,250.3	24.3	123.4	100.07	202.2	4,444.7	4,831.3	4,690.3	141.01	34.262	
6,300.0	6,184.7	6,277.2	6,277.2	24.3	123.9	10.08	202.2	4,444.7	4,830.8	4,684.3	146.52	32.970	
6,350.0	6,234.5	6,327.0	6,327.0	24.4	124.9	10.13	202.2	4,444.7	4,827.3	4,680.4	146.81	32.881	
6,400.0	6,284.0	6,376.5	6,376.5	24.4	125.9	10.25	202.2	4,444.7	4,820.3	4,673.9	146.39	32.927	
6,450.0	6,332.9	6,425.4	6,425.4	24.4	126.9	10.42	202.2	4,444.7	4,809.9	4,664.7	145.26	33.113	
6,500.0	6,380.9	6,473.4	6,473.4	24.4	127.9	10.66	202.2	4,444.7	4,796.2	4,652.8	143.40	33.446	
6,550.0	6,427.8	6,520.3	6,520.3	24.4	128.8	10.97	202.2	4,444.7	4,779.3	4,638.4	140.84	33.935	
6,600.0	6,473.5	6,566.0	6,566.0	24.4	129.7	11.36	202.2	4,444.7	4,759.2	4,621.6	137.58	34.593	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
6,650.0	6,517.5	6,610.0	6,610.0	24.4	130.6	11.84	202.2	4,444.7	4,735.9	4,602.3	133.65	35.435	
6,700.0	6,559.9	6,652.4	6,652.4	24.4	131.5	12.42	202.2	4,444.7	4,709.8	4,580.7	129.10	36.481	
6,750.0	6,600.2	6,692.7	6,692.7	24.4	132.3	13.13	202.2	4,444.7	4,680.8	4,556.8	124.00	37.749	
6,800.0	6,638.4	6,730.9	6,730.9	24.3	133.0	13.99	202.2	4,444.7	4,649.1	4,530.6	118.42	39.258	
6,850.0	6,674.3	6,766.8	6,766.8	24.3	133.8	15.04	202.2	4,444.7	4,614.8	4,502.3	112.52	41.015	
6,900.0	6,707.6	6,800.1	6,800.1	24.3	134.4	16.33	202.2	4,444.7	4,578.2	4,471.7	106.47	42.998	
6,950.0	6,738.3	6,830.8	6,830.8	24.3	135.0	17.92	202.2	4,444.7	4,539.4	4,438.8	100.60	45.124	
7,000.0	6,766.2	6,858.7	6,858.7	24.3	135.6	19.91	202.2	4,444.7	4,498.6	4,403.3	95.35	47.182	
7,050.0	6,791.0	6,883.5	6,883.5	24.3	136.1	22.45	202.2	4,444.7	4,456.1	4,364.7	91.41	48.747	
7,100.0	6,812.8	6,905.3	6,905.3	24.3	136.5	25.75	202.2	4,444.7	4,411.9	4,322.1	89.81	49.123	
7,150.0	6,831.4	6,923.9	6,923.9	24.3	136.9	30.14	202.2	4,444.7	4,366.4	4,274.5	91.90	47.515	
7,200.0	6,846.8	6,939.3	6,939.3	24.4	137.2	36.13	202.2	4,444.7	4,319.7	4,220.5	99.15	43.567	
7,250.0	6,858.7	6,951.2	6,951.2	24.5	137.5	44.49	202.2	4,444.7	4,272.1	4,159.5	112.65	37.923	
7,300.0	6,867.3	6,959.8	6,959.8	24.7	137.6	56.21	202.2	4,444.7	4,223.8	4,092.1	131.71	32.069	
7,350.0	6,872.4	6,964.9	6,964.9	25.0	137.7	72.00	202.2	4,444.7	4,175.1	4,023.9	151.19	27.616	
7,400.0	6,874.0	6,966.5	6,966.5	25.4	137.8	90.72	202.2	4,444.7	4,126.2	3,965.6	160.63	25.687	
7,405.6	6,874.0	6,966.5	6,966.5	25.5	137.8	92.86	202.2	4,444.7	4,120.7	3,960.0	160.67	25.647	
7,500.0	6,873.0	6,965.5	6,965.5	26.7	137.7	92.80	202.2	4,444.7	4,028.4	3,865.9	162.45	24.798	
7,600.0	6,871.9	6,964.4	6,964.4	28.4	137.7	92.72	202.2	4,444.7	3,930.7	3,766.2	164.49	23.896	
7,700.0	6,870.9	6,963.4	6,963.4	30.4	137.7	92.65	202.2	4,444.7	3,833.1	3,666.4	166.66	23.000	
7,800.0	6,869.8	6,962.3	6,962.3	32.5	137.7	92.58	202.2	4,444.7	3,735.6	3,566.7	168.92	22.114	
7,900.0	6,868.8	6,961.3	6,961.3	34.8	137.7	92.51	202.2	4,444.7	3,638.3	3,467.0	171.27	21.243	
8,000.0	6,867.7	6,960.2	6,960.2	37.1	137.6	92.44	202.2	4,444.7	3,541.1	3,367.4	173.68	20.388	
8,100.0	6,866.7	6,959.2	6,959.2	39.5	137.6	92.37	202.2	4,444.7	3,444.1	3,267.9	176.14	19.553	
8,200.0	6,865.6	6,958.1	6,958.1	42.0	137.6	92.30	202.2	4,444.7	3,347.2	3,168.6	178.65	18.737	
8,300.0	6,864.6	6,957.1	6,957.1	44.5	137.6	92.23	202.2	4,444.7	3,250.5	3,069.4	181.18	17.941	
8,400.0	6,863.6	6,956.1	6,956.1	47.0	137.6	92.15	202.2	4,444.7	3,154.1	2,970.3	183.75	17.165	
8,500.0	6,862.5	6,955.0	6,955.0	49.6	137.5	92.08	202.2	4,444.7	3,057.9	2,871.5	186.35	16.410	
8,600.0	6,861.5	6,954.0	6,954.0	52.2	137.5	92.01	202.2	4,444.7	2,961.9	2,772.9	188.96	15.675	
8,700.0	6,860.4	6,952.9	6,952.9	54.8	137.5	91.94	202.2	4,444.7	2,866.2	2,674.6	191.59	14.960	
8,800.0	6,859.4	6,951.9	6,951.9	57.5	137.5	91.87	202.2	4,444.7	2,770.8	2,576.6	194.24	14.265	
8,900.0	6,858.3	6,950.8	6,950.8	60.1	137.5	91.80	202.2	4,444.7	2,675.7	2,478.8	196.90	13.590	
9,000.0	6,857.3	6,949.8	6,949.8	62.8	137.4	91.73	202.2	4,444.7	2,581.0	2,381.5	199.57	12.933	
9,100.0	6,856.2	6,948.7	6,948.7	65.5	137.4	91.66	202.2	4,444.7	2,486.8	2,284.5	202.25	12.296	
9,200.0	6,855.2	6,947.7	6,947.7	68.1	137.4	91.59	202.2	4,444.7	2,393.0	2,188.0	204.94	11.676	
9,300.0	6,854.1	6,946.6	6,946.6	70.8	137.4	91.52	202.2	4,444.7	2,299.7	2,092.0	207.64	11.075	
9,400.0	6,853.1	6,945.6	6,945.6	73.6	137.3	91.44	202.2	4,444.7	2,207.0	1,996.6	210.34	10.492	
9,500.0	6,852.1	6,944.6	6,944.6	76.3	137.3	91.37	202.2	4,444.7	2,114.9	1,901.9	213.05	9.927	
9,600.0	6,851.0	6,943.5	6,943.5	79.0	137.3	91.30	202.2	4,444.7	2,023.7	1,807.9	215.77	9.379	
9,700.0	6,850.0	6,942.5	6,942.5	81.7	137.3	91.23	202.2	4,444.7	1,933.2	1,714.8	218.49	8.848	
9,800.0	6,848.9	6,941.4	6,941.4	84.4	137.3	91.16	202.2	4,444.7	1,843.8	1,622.6	221.22	8.335	
9,900.0	6,847.9	6,940.4	6,940.4	87.2	137.2	91.09	202.2	4,444.7	1,755.5	1,531.6	223.95	7.839	
10,000.0	6,846.8	6,939.3	6,939.3	89.9	137.2	91.02	202.2	4,444.7	1,668.6	1,441.9	226.68	7.361	
10,100.0	6,845.8	6,938.3	6,938.3	92.7	137.2	90.95	202.2	4,444.7	1,583.1	1,353.7	229.41	6.901	
10,200.0	6,844.7	6,937.2	6,937.2	95.4	137.2	90.88	202.2	4,444.7	1,499.5	1,267.4	232.15	6.459	
10,300.0	6,843.7	6,936.2	6,936.2	98.2	137.2	90.81	202.2	4,444.7	1,418.0	1,183.1	234.90	6.037	
10,400.0	6,842.7	6,935.2	6,935.2	100.9	137.1	90.74	202.2	4,444.7	1,339.0	1,101.4	237.64	5.635	
10,500.0	6,841.6	6,934.1	6,934.1	103.7	137.1	90.66	202.2	4,444.7	1,263.0	1,022.6	240.39	5.254	
10,600.0	6,840.6	6,933.1	6,933.1	106.4	137.1	90.59	202.2	4,444.7	1,190.5	947.4	243.13	4.897	
10,700.0	6,839.5	6,932.0	6,932.0	109.2	137.1	90.52	202.2	4,444.7	1,122.3	876.4	245.88	4.564	
10,800.0	6,838.5	6,931.0	6,931.0	112.0	137.1	90.45	202.2	4,444.7	1,059.2	810.5	248.64	4.260	
10,900.0	6,837.4	6,929.9	6,929.9	114.7	137.0	90.38	202.2	4,444.7	1,002.0	750.6	251.39	3.986	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - ABDN VERT OSTER POOLING UNIT #1 - Wellbore #1 - Desig												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
11,000.0	6,836.4	6,928.9	6,928.9	117.5	137.0	90.31	202.2	4,444.7	952.0	697.8	254.14	3.746	
11,100.0	6,835.4	6,927.9	6,927.9	120.3	137.0	90.24	202.2	4,444.7	910.2	653.3	256.90	3.543	
11,200.0	6,834.3	6,926.8	6,926.8	123.0	137.0	90.17	202.2	4,444.7	877.8	618.2	259.65	3.381	
11,300.0	6,833.3	6,925.8	6,925.8	125.8	136.9	90.10	202.2	4,444.7	856.0	593.6	262.41	3.262	
11,400.0	6,832.2	6,924.7	6,924.7	128.6	136.9	90.03	202.2	4,444.7	845.6	580.4	265.17	3.189	
11,439.0	6,831.8	6,924.3	6,924.3	129.7	136.9	90.00	202.2	4,444.7	844.7	578.4	266.25	3.173 CC, ES	
11,500.0	6,831.2	6,923.7	6,923.7	131.4	136.9	89.96	202.2	4,444.7	846.9	578.9	267.93	3.161 SF	
11,600.0	6,830.2	6,922.7	6,922.7	134.1	136.9	89.89	202.2	4,444.7	859.9	589.2	270.69	3.177	
11,700.0	6,829.1	6,921.6	6,921.6	136.9	136.9	89.82	202.2	4,444.7	884.1	610.6	273.45	3.233	
11,800.0	6,828.1	6,920.6	6,920.6	139.7	136.8	89.75	202.2	4,444.7	918.6	642.3	276.21	3.326	
11,900.0	6,827.0	6,919.5	6,919.5	142.5	136.8	89.67	202.2	4,444.7	962.3	683.3	278.97	3.449	
11,999.0	6,826.0	6,918.5	6,918.5	145.2	136.8	89.60	202.2	4,444.7	1,013.4	731.7	281.70	3.597	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST DD BINDER 20-28 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 782-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	91.5	91.5	0.0	0.1	74.62	943.8	3,430.2	3,557.7				
100.0	100.0	192.7	192.7	0.1	0.2	74.61	943.9	3,430.2	3,557.7	3,557.4	0.28	N/A	
200.0	200.0	293.8	293.8	0.3	0.3	74.61	944.0	3,430.1	3,557.6	3,557.0	0.61	5,850.482	
300.0	300.0	394.9	394.9	0.5	0.4	74.61	944.2	3,429.9	3,557.5	3,556.6	0.93	3,819.753	
400.0	400.0	496.1	496.0	0.8	0.5	74.60	944.4	3,429.7	3,557.3	3,556.1	1.25	2,835.459	
500.0	500.0	597.2	597.2	1.0	0.6	74.60	944.7	3,429.4	3,557.2	3,555.6	1.58	2,254.450	
600.0	600.0	698.3	698.3	1.2	0.7	74.59	945.0	3,429.1	3,557.0	3,555.1	1.90	1,871.008	
700.0	700.0	799.2	799.2	1.4	0.8	91.22	945.4	3,428.8	3,556.8	3,554.5	2.24	1,585.994	
800.0	799.8	899.8	899.8	1.7	1.0	91.30	945.7	3,428.4	3,556.6	3,554.0	2.68	1,328.058	
900.0	899.5	1,002.0	1,002.0	1.9	1.2	91.44	946.1	3,428.0	3,556.5	3,553.4	3.12	1,139.475	
964.0	963.0	1,065.8	1,065.8	2.1	1.3	91.56	946.3	3,427.7	3,556.5	3,553.1	3.42	1,039.888	
1,000.0	998.7	1,099.8	1,099.8	2.2	1.4	91.62	946.5	3,427.6	3,556.5	3,552.9	3.59	991.940	
1,100.0	1,097.5	1,198.5	1,198.5	2.5	1.6	91.86	947.1	3,427.2	3,556.8	3,552.7	4.08	871.231	
1,200.0	1,195.6	1,301.4	1,301.4	2.8	1.8	92.16	947.5	3,426.6	3,557.0	3,552.4	4.62	769.662	
1,228.9	1,223.8	1,328.9	1,328.9	2.9	1.9	92.25	947.6	3,426.5	3,557.1	3,552.4	4.78	744.060	
1,300.0	1,293.3	1,402.0	1,402.0	3.2	2.0	92.50	947.7	3,426.1	3,557.5	3,552.3	5.20	684.471	
1,400.0	1,390.9	1,503.8	1,503.7	3.6	2.2	92.85	947.9	3,425.4	3,557.9	3,552.1	5.81	612.852	
1,500.0	1,488.5	1,599.0	1,598.9	4.0	2.4	93.18	948.0	3,424.8	3,558.5	3,552.1	6.41	554.725	
1,600.0	1,586.1	1,697.7	1,697.6	4.4	2.6	93.53	947.8	3,424.3	3,559.2	3,552.2	7.04	505.804	
1,700.0	1,683.7	1,797.6	1,797.6	4.8	2.9	93.88	947.4	3,423.7	3,560.0	3,552.3	7.67	463.971	
1,800.0	1,781.3	1,892.0	1,892.0	5.3	3.1	94.22	947.1	3,423.2	3,560.9	3,552.6	8.31	428.619	
1,900.0	1,878.9	2,019.1	2,019.1	5.7	3.3	94.66	946.9	3,422.1	3,561.8	3,552.8	9.02	395.066	
2,000.0	1,976.5	2,120.1	2,120.0	6.1	3.5	95.02	946.4	3,420.7	3,562.2	3,552.6	9.67	368.488	
2,100.0	2,074.1	2,208.2	2,208.1	6.6	3.7	95.33	945.8	3,419.6	3,562.8	3,552.5	10.29	346.211	
2,200.0	2,171.7	2,318.0	2,317.9	7.0	3.9	95.72	944.8	3,418.4	3,563.7	3,552.7	10.96	325.110	
2,300.0	2,269.3	2,409.0	2,408.9	7.5	4.1	96.05	943.7	3,417.2	3,564.4	3,552.8	11.60	307.357	
2,400.0	2,366.9	2,499.3	2,499.2	7.9	4.3	96.38	942.7	3,416.2	3,565.5	3,553.3	12.23	291.522	
2,500.0	2,464.5	2,581.0	2,580.9	8.4	4.5	96.67	942.1	3,415.5	3,567.0	3,554.2	12.85	277.604	
2,600.0	2,562.1	2,645.9	2,645.8	8.9	4.6	96.90	942.2	3,415.2	3,569.3	3,555.9	13.44	265.666	
2,700.0	2,659.7	2,717.0	2,716.9	9.3	4.8	97.14	942.7	3,415.9	3,573.0	3,558.9	14.03	254.580	
2,800.0	2,757.3	2,755.6	2,755.5	9.8	4.9	97.27	943.0	3,416.7	3,577.7	3,563.2	14.57	245.606	
2,900.0	2,854.9	2,813.0	2,812.9	10.2	5.0	97.46	943.4	3,418.4	3,583.8	3,568.6	15.14	236.741	
3,000.0	2,952.5	2,883.0	2,882.8	10.7	5.1	97.71	943.5	3,421.2	3,590.8	3,575.1	15.73	228.219	
3,100.0	3,050.1	2,943.6	2,943.3	11.1	5.2	97.93	943.4	3,424.2	3,598.9	3,582.6	16.31	220.633	
3,200.0	3,147.7	3,003.0	3,002.6	11.6	5.4	98.15	942.8	3,427.9	3,608.2	3,591.3	16.89	213.665	
3,300.0	3,245.3	3,054.2	3,053.6	12.1	5.5	98.35	942.0	3,431.8	3,618.7	3,601.3	17.45	207.413	
3,400.0	3,342.9	3,098.0	3,097.3	12.5	5.6	98.52	941.3	3,435.5	3,630.6	3,612.6	17.99	201.791	
3,500.0	3,440.5	3,172.2	3,171.1	13.0	5.7	98.81	939.5	3,442.7	3,643.6	3,625.0	18.60	195.900	
3,600.0	3,538.1	3,227.3	3,225.9	13.4	5.9	99.04	937.8	3,448.6	3,657.7	3,638.5	19.17	190.823	
3,700.0	3,635.7	3,287.0	3,285.1	13.9	6.0	99.27	936.6	3,455.8	3,673.1	3,653.4	19.75	186.015	
3,800.0	3,733.3	3,382.0	3,379.5	14.4	6.2	99.63	935.6	3,467.0	3,688.7	3,668.3	20.39	180.876	
3,900.0	3,830.9	3,475.0	3,471.8	14.8	6.4	99.97	934.5	3,478.3	3,704.8	3,683.8	21.04	176.114	
4,000.0	3,928.5	3,523.9	3,520.2	15.3	6.5	100.16	933.8	3,485.0	3,722.0	3,700.4	21.59	172.376	
4,100.0	4,026.1	3,606.8	3,602.3	15.7	6.8	100.47	932.4	3,496.3	3,739.8	3,717.6	22.22	168.319	
4,200.0	4,123.7	3,689.8	3,684.5	16.2	7.0	100.78	930.9	3,508.0	3,758.2	3,735.3	22.84	164.518	
4,300.0	4,221.3	3,804.1	3,797.6	16.7	7.3	101.21	929.1	3,524.1	3,776.6	3,753.1	23.53	160.516	
4,400.0	4,318.9	3,920.5	3,913.0	17.1	7.6	101.62	928.1	3,539.6	3,794.6	3,770.4	24.21	156.711	
4,500.0	4,416.5	4,018.8	4,010.5	17.6	7.8	101.97	927.2	3,552.5	3,812.4	3,787.5	24.86	153.328	
4,600.0	4,514.1	4,125.9	4,116.6	18.1	8.1	102.35	925.4	3,566.4	3,830.3	3,804.7	25.53	150.020	
4,700.0	4,611.7	4,264.5	4,254.1	18.5	8.5	102.85	923.1	3,583.4	3,847.6	3,821.3	26.26	146.515	
4,800.0	4,709.3	4,431.7	4,420.3	19.0	8.9	103.43	920.5	3,601.7	3,863.8	3,836.7	27.05	142.861	
4,900.0	4,806.9	4,562.9	4,550.9	19.4	9.2	103.88	918.4	3,614.0	3,878.5	3,850.8	27.76	139.725	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 782-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	4,904.5	4,645.2	4,632.8	19.9	9.4	104.17	917.1	3,621.3	3,893.0	3,864.7	28.37	137.206		
5,100.0	5,002.1	4,711.0	4,698.3	20.4	9.6	104.39	915.9	3,627.9	3,908.6	3,879.6	28.96	134.984		
5,200.0	5,099.7	4,872.0	4,858.6	20.8	10.0	104.94	913.0	3,643.3	3,924.1	3,894.4	29.72	132.017		
5,300.0	5,197.3	4,962.7	4,949.0	21.3	10.3	105.24	911.5	3,650.8	3,938.4	3,908.0	30.35	129.756		
5,400.0	5,294.9	5,025.9	5,011.9	21.8	10.4	105.45	910.4	3,656.5	3,953.4	3,922.5	30.93	127.836		
5,500.0	5,392.5	5,090.0	5,075.6	22.2	10.6	105.67	909.1	3,662.9	3,969.6	3,938.1	31.50	126.015		
5,600.0	5,490.1	5,221.2	5,206.2	22.7	10.9	106.11	906.0	3,675.9	3,985.8	3,953.6	32.21	123.763		
5,614.2	5,504.0	5,241.2	5,226.0	22.7	11.0	106.18	905.5	3,677.7	3,988.1	3,955.8	32.31	123.438		
5,700.0	5,587.9	5,374.0	5,358.3	23.1	11.3	106.85	902.1	3,689.0	4,000.5	3,967.6	32.88	121.652		
5,800.0	5,686.4	5,439.9	5,424.0	23.4	11.5	107.29	900.4	3,694.4	4,013.9	3,980.6	33.30	120.531		
5,900.0	5,785.5	5,564.0	5,547.6	23.7	11.8	107.81	897.1	3,704.9	4,026.7	3,992.9	33.80	119.138		
6,000.0	5,885.0	5,635.0	5,618.4	23.9	12.0	108.15	895.5	3,710.6	4,038.2	4,004.0	34.15	118.241		
6,100.0	5,984.7	5,788.0	5,770.9	24.1	12.4	108.53	892.2	3,723.0	4,048.5	4,013.8	34.64	116.879		
6,200.0	6,084.7	5,849.0	5,831.6	24.2	12.5	108.75	890.4	3,727.7	4,057.4	4,022.5	34.90	116.274		
6,243.1	6,127.8	5,887.0	5,869.5	24.3	12.6	92.23	889.2	3,730.9	4,061.1	4,032.0	29.17	139.236		
6,273.1	6,157.8	5,908.3	5,890.7	24.3	12.7	92.24	888.7	3,732.7	4,063.8	4,034.5	29.27	138.839		
6,300.0	6,184.7	5,927.5	5,909.8	24.3	12.7	2.24	888.3	3,734.4	4,065.6	4,030.5	35.15	115.666		
6,350.0	6,234.5	5,967.4	5,949.6	24.4	12.8	2.24	887.7	3,738.0	4,066.6	4,031.5	35.14	115.739		
6,400.0	6,284.0	6,010.6	5,992.6	24.4	12.9	2.26	887.5	3,742.0	4,064.2	4,029.2	34.98	116.182		
6,450.0	6,332.9	6,079.2	6,060.8	24.4	13.1	2.27	888.0	3,748.4	4,058.3	4,023.5	34.73	116.841		
6,500.0	6,380.9	6,391.5	6,372.4	24.4	13.8	2.29	892.0	3,767.6	4,048.3	4,013.4	34.86	116.140		
6,550.0	6,427.8	6,551.2	6,532.1	24.4	14.2	2.37	892.4	3,768.9	4,031.3	3,996.8	34.49	116.865		
6,600.0	6,473.5	6,607.2	6,588.2	24.4	14.3	2.46	892.7	3,768.7	4,010.6	3,976.8	33.78	118.721		
6,650.0	6,517.5	6,651.2	6,632.1	24.4	14.3	2.57	893.0	3,768.4	3,986.8	3,953.9	32.91	121.133		
6,700.0	6,559.9	6,693.0	6,673.9	24.4	14.4	2.70	893.2	3,768.2	3,959.9	3,928.0	31.92	124.070		
6,750.0	6,600.2	6,732.6	6,713.6	24.4	14.5	2.86	893.3	3,768.0	3,930.2	3,899.4	30.81	127.581		
6,800.0	6,638.4	6,770.1	6,751.0	24.3	14.6	3.06	893.5	3,767.7	3,897.8	3,868.2	29.59	131.717		
6,850.0	6,674.3	6,799.0	6,779.9	24.3	14.6	3.29	893.6	3,767.6	3,862.8	3,834.5	28.28	136.590		
6,900.0	6,707.6	6,833.5	6,814.5	24.3	14.7	3.60	893.8	3,767.4	3,825.4	3,798.5	26.91	142.140		
6,950.0	6,738.3	6,860.3	6,841.2	24.3	14.7	3.97	893.9	3,767.3	3,785.9	3,760.4	25.49	148.532		
7,000.0	6,766.2	6,884.6	6,865.5	24.3	14.8	4.45	893.9	3,767.3	3,744.3	3,720.3	24.04	155.744		
7,050.0	6,791.0	6,906.0	6,886.9	24.3	14.8	5.07	894.0	3,767.2	3,701.0	3,678.4	22.60	163.737		
7,100.0	6,812.8	6,924.7	6,905.6	24.3	14.8	5.92	894.1	3,767.2	3,656.0	3,634.8	21.21	172.346		
7,150.0	6,831.4	6,940.7	6,921.6	24.3	14.9	7.11	894.1	3,767.2	3,609.6	3,589.7	19.93	181.154		
7,200.0	6,846.8	6,953.9	6,934.9	24.4	14.9	8.91	894.2	3,767.2	3,562.1	3,543.3	18.83	189.221		
7,250.0	6,858.7	6,964.3	6,945.2	24.5	14.9	11.90	894.2	3,767.2	3,513.6	3,495.5	18.09	194.266		
7,300.0	6,867.3	6,971.8	6,952.7	24.7	14.9	17.72	894.3	3,767.2	3,464.4	3,446.1	18.29	189.402		
7,350.0	6,872.4	6,976.3	6,957.2	25.0	14.9	33.04	894.3	3,767.2	3,414.7	3,392.3	22.49	151.831		
7,400.0	6,874.0	6,977.8	6,958.7	25.4	14.9	91.13	894.3	3,767.2	3,364.8	3,327.0	37.82	88.980		
7,405.6	6,874.0	6,977.7	6,958.7	25.5	14.9	100.88	894.3	3,767.2	3,359.2	3,321.3	37.91	88.604		
7,500.0	6,873.0	6,977.0	6,958.0	26.7	14.9	100.62	894.3	3,767.2	3,264.9	3,225.3	39.69	82.268		
7,600.0	6,871.9	6,976.3	6,957.2	28.4	14.9	100.35	894.3	3,767.2	3,165.1	3,123.3	41.72	75.858		
7,700.0	6,870.9	6,975.5	6,956.4	30.4	14.9	100.07	894.3	3,767.2	3,065.2	3,021.3	43.89	69.844		
7,800.0	6,869.8	6,974.8	6,955.7	32.5	14.9	99.79	894.3	3,767.2	2,965.3	2,919.2	46.15	64.256		
7,900.0	6,868.8	6,974.0	6,954.9	34.8	14.9	99.51	894.3	3,767.2	2,865.5	2,817.0	48.49	59.091		
8,000.0	6,867.7	6,973.2	6,954.1	37.1	14.9	99.23	894.3	3,767.2	2,765.6	2,714.7	50.90	54.332		
8,100.0	6,866.7	6,972.4	6,953.4	39.5	14.9	98.94	894.3	3,767.2	2,665.8	2,612.4	53.37	49.952		
8,200.0	6,865.6	6,971.6	6,952.6	42.0	14.9	98.65	894.3	3,767.2	2,565.9	2,510.1	55.88	45.922		
8,300.0	6,864.6	6,970.8	6,951.8	44.5	14.9	98.36	894.3	3,767.2	2,466.1	2,407.7	58.42	42.211		
8,400.0	6,863.6	6,970.0	6,951.0	47.0	14.9	98.06	894.2	3,767.2	2,366.3	2,305.3	61.00	38.790		
8,500.0	6,862.5	6,969.2	6,950.2	49.6	14.9	97.76	894.2	3,767.2	2,266.6	2,202.9	63.61	35.632		
8,600.0	6,861.5	6,968.4	6,949.4	52.2	14.9	97.46	894.2	3,767.2	2,166.8	2,100.6	66.24	32.711		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST DD BINDER 20-28 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 782-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
8,700.0	6,860.4	6,967.6	6,948.5	54.8	14.9	97.16	894.2	3,767.2	2,067.1	1,998.2	68.89	30.005	
8,800.0	6,859.4	6,966.8	6,947.7	57.5	14.9	96.85	894.2	3,767.2	1,967.4	1,895.8	71.56	27.493	
8,900.0	6,858.3	6,965.9	6,946.9	60.1	14.9	96.54	894.2	3,767.2	1,867.7	1,793.4	74.24	25.157	
9,000.0	6,857.3	6,965.1	6,946.0	62.8	14.9	96.23	894.2	3,767.2	1,768.0	1,691.1	76.94	22.980	
9,100.0	6,856.2	6,964.3	6,945.2	65.5	14.9	95.91	894.2	3,767.2	1,668.4	1,588.8	79.65	20.948	
9,200.0	6,855.2	6,963.4	6,944.3	68.1	14.9	95.59	894.2	3,767.2	1,568.9	1,486.5	82.36	19.048	
9,300.0	6,854.1	6,962.5	6,943.5	70.8	14.9	95.27	894.2	3,767.2	1,469.4	1,384.3	85.09	17.269	
9,400.0	6,853.1	6,961.7	6,942.6	73.6	14.9	94.95	894.2	3,767.2	1,370.0	1,282.2	87.82	15.599	
9,500.0	6,852.1	6,960.8	6,941.7	76.3	14.9	94.62	894.2	3,767.2	1,270.7	1,180.1	90.57	14.030	
9,600.0	6,851.0	6,959.9	6,940.8	79.0	14.9	94.29	894.2	3,767.2	1,171.5	1,078.1	93.31	12.554	
9,700.0	6,850.0	6,959.0	6,940.0	81.7	14.9	93.96	894.2	3,767.2	1,072.4	976.3	96.06	11.163	
9,800.0	6,848.9	6,958.1	6,939.1	84.4	14.9	93.62	894.2	3,767.2	973.5	874.7	98.82	9.851	
9,900.0	6,847.9	6,957.2	6,938.1	87.2	14.9	93.28	894.2	3,767.2	874.9	773.3	101.58	8.613	
10,000.0	6,846.8	6,956.3	6,937.2	89.9	14.9	92.94	894.2	3,767.2	776.6	672.3	104.34	7.443	
10,100.0	6,845.8	6,955.4	6,936.3	92.7	14.9	92.59	894.2	3,767.2	678.9	571.8	107.10	6.339	
10,200.0	6,844.7	6,954.5	6,935.4	95.4	14.9	92.25	894.2	3,767.2	581.9	472.0	109.87	5.296	
10,300.0	6,843.7	6,953.5	6,934.4	98.2	14.9	91.89	894.2	3,767.2	486.1	373.5	112.63	4.316	
10,400.0	6,842.7	6,952.6	6,933.5	100.9	14.9	91.54	894.2	3,767.2	392.4	277.0	115.40	3.401	
10,500.0	6,841.6	6,951.6	6,932.5	103.7	14.9	91.18	894.2	3,767.2	302.8	184.7	118.16	2.563	
10,600.0	6,840.6	6,950.6	6,931.6	106.4	14.9	90.82	894.2	3,767.2	222.3	101.4	120.92	1.838	
10,700.0	6,839.5	6,949.7	6,930.6	109.2	14.9	90.45	894.2	3,767.2	164.7	41.0	123.68	1.331 Level 3	
10,761.5	6,838.9	6,949.1	6,930.0	110.9	14.9	90.23	894.2	3,767.2	152.7	27.4	125.38	1.218 Level 2, CC, ES, SF	
10,800.0	6,838.5	6,948.7	6,929.6	112.0	14.9	90.09	894.2	3,767.2	157.5	31.1	126.44	1.246 Level 2	
10,900.0	6,837.4	6,947.7	6,928.6	114.7	14.9	89.71	894.2	3,767.2	206.2	77.0	129.20	1.596	
11,000.0	6,836.4	6,946.7	6,927.6	117.5	14.9	89.34	894.1	3,767.2	283.2	151.3	131.95	2.146	
11,100.0	6,835.4	6,945.7	6,926.6	120.3	14.9	88.96	894.1	3,767.2	371.3	236.7	134.69	2.757	
11,200.0	6,834.3	6,944.7	6,925.6	123.0	14.9	88.58	894.1	3,767.2	464.3	326.9	137.44	3.378	
11,300.0	6,833.3	6,943.7	6,924.6	125.8	14.9	88.20	894.1	3,767.2	559.7	419.5	140.17	3.993	
11,400.0	6,832.2	6,942.6	6,923.5	128.6	14.9	87.81	894.1	3,767.2	656.5	513.6	142.90	4.594	
11,500.0	6,831.2	6,941.6	6,922.5	131.4	14.9	87.42	894.1	3,767.2	754.1	608.5	145.63	5.178	
11,600.0	6,830.2	6,940.5	6,921.4	134.1	14.9	87.02	894.1	3,767.2	852.3	703.9	148.35	5.745	
11,700.0	6,829.1	6,939.5	6,920.4	136.9	14.9	86.63	894.1	3,767.2	950.8	799.7	151.06	6.294	
11,800.0	6,828.1	6,938.4	6,919.3	139.7	14.9	86.22	894.1	3,767.2	1,049.6	895.9	153.76	6.826	
11,900.0	6,827.0	6,937.3	6,918.2	142.5	14.9	85.82	894.1	3,767.2	1,148.6	992.2	156.45	7.342	
11,999.0	6,826.0	6,936.2	6,917.1	145.2	14.9	85.42	894.1	3,767.2	1,246.9	1,087.7	159.10	7.837	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST DD KINZER 28KD - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 40-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	81.2	81.2	0.0	0.0	14.38	3,413.6	874.9	3,523.9				
100.0	100.0	183.4	183.4	0.1	0.2	14.38	3,413.4	875.1	3,523.8	3,523.6	0.27	N/A	
200.0	200.0	285.9	285.9	0.3	0.4	14.38	3,413.2	875.3	3,523.7	3,523.0	0.73	4,857.381	
300.0	300.0	388.1	388.1	0.5	0.6	14.39	3,412.9	875.6	3,523.5	3,522.3	1.18	2,985.641	
400.0	400.0	490.3	490.3	0.8	0.9	14.40	3,412.5	876.1	3,523.2	3,521.6	1.63	2,154.897	
500.0	500.0	592.4	592.4	1.0	1.1	14.41	3,412.0	876.6	3,522.9	3,520.8	2.09	1,685.620	
600.0	600.0	699.8	699.8	1.2	1.3	14.42	3,411.4	877.2	3,522.4	3,519.9	2.54	1,387.637	
700.0	700.0	813.1	813.1	1.4	1.5	31.07	3,410.5	877.1	3,520.2	3,517.2	2.99	1,177.741	
800.0	799.8	928.7	928.7	1.7	1.8	31.18	3,409.1	877.0	3,514.5	3,511.0	3.47	1,012.159	
900.0	899.5	1,009.5	1,009.5	1.9	2.0	31.33	3,408.2	876.9	3,505.9	3,502.0	3.85	909.577	
1,000.0	998.7	1,105.9	1,105.9	2.2	2.1	31.55	3,407.5	876.6	3,494.7	3,490.4	4.28	817.428	
1,100.0	1,097.5	2,164.2	2,146.5	2.5	5.5	34.39	3,245.4	889.9	3,466.6	3,459.5	7.11	487.886	
1,200.0	1,195.6	2,269.4	2,246.7	2.8	6.0	35.39	3,213.5	894.3	3,423.5	3,415.9	7.67	446.376	
1,228.9	1,223.8	2,401.6	2,371.8	2.9	6.8	36.21	3,171.0	899.5	3,410.0	3,401.8	8.18	416.656	
1,300.0	1,293.3	2,482.1	2,447.4	3.2	7.3	36.63	3,143.6	902.9	3,375.7	3,367.0	8.68	388.921	
1,400.0	1,390.9	2,555.0	2,515.8	3.6	7.6	37.02	3,118.8	906.0	3,327.6	3,318.4	9.22	360.918	
1,500.0	1,488.5	2,600.0	2,558.2	4.0	7.8	37.26	3,103.8	907.9	3,280.4	3,270.7	9.68	339.013	
1,600.0	1,586.1	2,640.0	2,596.1	4.4	8.0	37.48	3,091.1	909.4	3,234.5	3,224.3	10.12	319.470	
1,700.0	1,683.7	2,751.2	2,701.6	4.8	8.7	38.08	3,056.0	913.6	3,189.0	3,178.1	10.86	293.515	
1,800.0	1,781.3	2,824.8	2,771.2	5.3	9.1	38.50	3,032.5	916.6	3,143.5	3,132.0	11.47	274.120	
1,900.0	1,878.9	2,880.0	2,823.6	5.7	9.3	38.81	3,015.4	918.8	3,098.8	3,086.8	12.00	258.240	
2,000.0	1,976.5	2,920.0	2,861.8	6.1	9.5	39.04	3,003.5	920.6	3,055.5	3,043.0	12.48	244.778	
2,100.0	2,074.1	2,998.8	2,937.3	6.6	9.9	39.50	2,980.9	923.7	3,013.3	3,000.2	13.12	229.723	
2,200.0	2,171.7	3,084.4	3,019.2	7.0	10.3	39.99	2,956.3	926.5	2,971.1	2,957.3	13.79	215.381	
2,300.0	2,269.3	3,160.0	3,091.6	7.5	10.7	40.43	2,934.8	929.1	2,929.4	2,914.9	14.43	202.949	
2,400.0	2,366.9	3,245.9	3,173.9	7.9	11.2	40.96	2,910.4	932.7	2,888.1	2,873.0	15.15	190.679	
2,500.0	2,464.5	3,376.0	3,298.2	8.4	11.9	41.80	2,872.6	938.3	2,846.6	2,830.5	16.09	176.936	
2,600.0	2,562.1	3,470.1	3,387.7	8.9	12.5	42.46	2,843.8	942.8	2,804.2	2,787.3	16.90	165.945	
2,700.0	2,659.7	3,622.7	3,532.2	9.3	13.4	43.60	2,795.4	951.7	2,761.7	2,743.6	18.05	152.963	
2,800.0	2,757.3	3,776.6	3,676.1	9.8	14.4	44.86	2,741.5	960.8	2,716.5	2,697.2	19.31	140.658	
2,900.0	2,854.9	3,846.6	3,741.4	10.2	14.9	45.45	2,716.6	964.5	2,671.0	2,651.0	20.08	132.998	
3,000.0	2,952.5	3,897.6	3,789.2	10.7	15.2	45.87	2,699.1	966.5	2,626.7	2,606.0	20.73	126.707	
3,100.0	3,050.1	3,935.6	3,825.2	11.1	15.4	46.18	2,686.9	967.8	2,584.1	2,562.8	21.30	121.294	
3,200.0	3,147.7	3,978.0	3,865.6	11.6	15.6	46.51	2,674.1	969.1	2,543.5	2,521.6	21.90	116.158	
3,300.0	3,245.3	4,051.3	3,935.7	12.1	16.0	47.09	2,653.1	971.2	2,504.2	2,481.6	22.66	110.533	
3,400.0	3,342.9	4,125.5	4,006.7	12.5	16.4	47.69	2,631.8	973.7	2,465.6	2,442.1	23.45	105.160	
3,500.0	3,440.5	4,200.0	4,078.1	13.0	16.8	48.32	2,610.5	977.1	2,427.9	2,403.6	24.26	100.095	
3,600.0	3,538.1	4,372.4	4,242.5	13.4	17.8	49.88	2,559.3	985.1	2,390.1	2,364.4	25.70	92.984	
3,700.0	3,635.7	4,454.2	4,320.3	13.9	18.2	50.63	2,533.8	987.4	2,350.5	2,323.9	26.59	88.401	
3,800.0	3,733.3	4,588.5	4,447.3	14.4	19.0	51.89	2,490.6	989.2	2,309.6	2,281.8	27.83	82.979	
3,900.0	3,830.9	4,640.0	4,496.1	14.8	19.3	52.40	2,474.1	990.3	2,269.8	2,241.2	28.56	79.470	
4,000.0	3,928.5	4,718.3	4,570.3	15.3	19.8	53.19	2,449.4	992.6	2,231.3	2,201.8	29.49	75.677	
4,100.0	4,026.1	4,774.8	4,624.1	15.7	20.1	53.77	2,432.0	994.2	2,193.9	2,163.6	30.27	72.486	
4,200.0	4,123.7	4,819.5	4,666.9	16.2	20.3	54.22	2,419.3	995.2	2,158.5	2,127.6	30.95	69.741	
4,300.0	4,221.3	4,871.3	4,717.0	16.7	20.6	54.71	2,406.0	996.0	2,125.3	2,093.6	31.67	67.118	
4,400.0	4,318.9	4,929.2	4,773.2	17.1	20.8	55.26	2,392.2	996.8	2,093.9	2,061.5	32.41	64.616	
4,500.0	4,416.5	4,990.3	4,832.8	17.6	21.1	55.83	2,378.6	997.8	2,064.4	2,031.2	33.17	62.244	
4,600.0	4,514.1	5,054.3	4,895.3	18.1	21.4	56.44	2,365.0	999.5	2,036.5	2,002.5	33.95	59.983	
4,700.0	4,611.7	5,120.0	4,959.6	18.5	21.6	57.08	2,351.6	1,001.7	2,010.2	1,975.4	34.75	57.841	
4,800.0	4,709.3	5,182.1	5,020.5	19.0	21.9	57.68	2,339.9	1,003.9	1,985.7	1,950.1	35.53	55.891	
4,900.0	4,806.9	5,240.0	5,077.6	19.4	22.1	58.22	2,330.2	1,005.8	1,963.1	1,926.8	36.26	54.136	
5,000.0	4,904.5	5,308.2	5,145.1	19.9	22.3	58.83	2,320.3	1,008.0	1,942.4	1,905.3	37.04	52.446	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 40-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	5,376.5	5,212.8	20.4	22.5	59.43	2,311.6	1,010.1	1,923.4	1,885.6	37.79	50.892	
5,200.0	5,099.7	5,452.9	5,288.7	20.8	22.7	60.07	2,303.6	1,012.1	1,906.0	1,867.4	38.57	49.419	
5,300.0	5,197.3	5,535.9	5,371.4	21.3	22.8	60.71	2,296.6	1,013.0	1,889.6	1,850.2	39.33	48.042	
5,400.0	5,294.9	5,615.0	5,450.3	21.8	23.0	61.29	2,291.6	1,013.1	1,874.2	1,834.1	40.05	46.800	
5,500.0	5,392.5	5,688.4	5,523.6	22.2	23.1	61.78	2,288.4	1,012.8	1,860.2	1,819.5	40.72	45.685	
5,600.0	5,490.1	5,769.4	5,604.6	22.7	23.2	62.30	2,286.2	1,012.4	1,847.4	1,806.0	41.39	44.632	
5,614.2	5,504.0	5,780.4	5,615.6	22.7	23.2	62.37	2,286.0	1,012.3	1,845.7	1,804.2	41.49	44.489	
5,700.0	5,587.9	5,840.0	5,675.2	23.1	23.3	62.56	2,285.2	1,012.1	1,836.5	1,794.6	41.94	43.787	
5,800.0	5,686.4	5,911.1	5,746.3	23.4	23.4	62.77	2,285.4	1,012.5	1,829.1	1,786.7	42.39	43.154	
5,900.0	5,785.5	6,006.9	5,842.1	23.7	23.5	63.04	2,286.4	1,013.2	1,824.0	1,781.2	42.83	42.592	
6,000.0	5,885.0	6,112.8	5,948.0	23.9	23.6	63.26	2,287.6	1,013.6	1,820.5	1,777.3	43.22	42.118	
6,100.0	5,984.7	6,216.5	6,051.7	24.1	23.7	63.38	2,288.9	1,013.5	1,818.2	1,774.7	43.55	41.746	
6,200.0	6,084.7	6,317.6	6,152.7	24.2	23.7	63.43	2,290.1	1,013.3	1,817.5	1,773.7	43.82	41.473	
6,203.4	6,088.1	6,321.2	6,156.4	24.2	23.8	63.43	2,290.2	1,013.3	1,817.5	1,773.6	43.83	41.465	
6,243.1	6,127.8	6,362.6	6,197.8	24.3	23.8	46.82	2,290.7	1,013.1	1,817.6	1,781.7	35.89	50.645	
6,273.1	6,157.8	6,389.8	6,225.0	24.3	23.8	46.81	2,291.1	1,013.0	1,817.8	1,781.8	35.97	50.532	
6,300.0	6,184.7	6,413.9	6,249.1	24.3	23.8	-43.22	2,291.4	1,012.9	1,817.6	1,773.6	44.00	41.309	
6,350.0	6,234.5	6,463.2	6,298.3	24.4	23.9	-43.44	2,292.3	1,012.7	1,815.4	1,771.5	43.87	41.379	
6,400.0	6,284.0	6,531.5	6,366.6	24.4	23.9	-43.97	2,293.3	1,012.2	1,810.5	1,766.9	43.54	41.584	
6,450.0	6,332.9	6,583.2	6,418.4	24.4	24.0	-44.68	2,293.8	1,011.4	1,802.7	1,759.7	43.00	41.922	
6,500.0	6,380.9	6,622.4	6,457.6	24.4	24.0	-45.53	2,294.2	1,010.9	1,792.6	1,750.3	42.29	42.390	
6,550.0	6,427.8	6,666.3	6,501.4	24.4	24.1	-46.64	2,294.7	1,010.6	1,780.4	1,739.0	41.42	42.984	
6,600.0	6,473.5	6,717.1	6,552.2	24.4	24.1	-48.05	2,295.1	1,010.4	1,766.0	1,725.6	40.42	43.689	
6,650.0	6,517.5	6,760.0	6,595.1	24.4	24.2	-49.65	2,295.2	1,010.3	1,749.4	1,710.0	39.34	44.469	
6,700.0	6,559.9	6,800.0	6,635.1	24.4	24.2	-51.46	2,295.4	1,010.2	1,730.9	1,692.7	38.21	45.298	
6,750.0	6,600.2	6,831.2	6,666.3	24.4	24.3	-53.39	2,295.7	1,010.2	1,710.9	1,673.8	37.10	46.115	
6,800.0	6,638.4	6,862.0	6,697.2	24.3	24.3	-55.55	2,296.1	1,010.2	1,689.4	1,653.3	36.06	46.856	
6,850.0	6,674.3	6,890.6	6,725.7	24.3	24.3	-57.90	2,296.6	1,010.2	1,666.7	1,631.5	35.14	47.426	
6,900.0	6,707.6	6,920.0	6,755.1	24.3	24.3	-60.51	2,297.2	1,010.4	1,642.9	1,608.5	34.42	47.726	
6,950.0	6,738.3	6,945.4	6,780.5	24.3	24.4	-63.23	2,297.9	1,010.5	1,618.3	1,584.3	33.95	47.667	
7,000.0	6,766.2	6,973.4	6,808.5	24.3	24.4	-66.24	2,298.6	1,010.6	1,593.0	1,559.2	33.76	47.178	
7,050.0	6,791.0	7,000.7	6,835.8	24.3	24.4	-69.41	2,299.3	1,010.8	1,567.1	1,533.2	33.87	46.262	
7,100.0	6,812.8	7,024.6	6,859.7	24.3	24.4	-72.61	2,299.8	1,010.9	1,541.0	1,506.7	34.25	44.994	
7,150.0	6,831.4	7,045.0	6,880.0	24.3	24.4	-75.77	2,300.3	1,011.0	1,514.8	1,480.0	34.84	43.485	
7,200.0	6,846.8	7,061.6	6,896.7	24.4	24.5	-78.83	2,300.6	1,011.0	1,489.0	1,453.4	35.58	41.851	
7,250.0	6,858.7	7,074.7	6,909.7	24.5	24.5	-81.71	2,300.9	1,011.1	1,463.6	1,427.2	36.42	40.192	
7,300.0	6,867.3	7,084.0	6,919.0	24.7	24.5	-84.36	2,301.1	1,011.1	1,439.0	1,401.7	37.30	38.577	
7,350.0	6,872.4	7,089.5	6,924.6	25.0	24.5	-86.75	2,301.2	1,011.1	1,415.4	1,377.2	38.21	37.047	
7,400.0	6,874.0	7,091.4	6,926.5	25.4	24.5	-88.84	2,301.3	1,011.1	1,393.0	1,353.9	39.11	35.618	
7,405.6	6,874.0	7,091.4	6,926.4	25.5	24.5	-89.05	2,301.3	1,011.1	1,390.6	1,351.4	39.21	35.464	
7,500.0	6,873.0	7,090.6	6,925.6	26.7	24.5	-89.02	2,301.2	1,011.1	1,352.6	1,311.5	41.00	32.986	
7,600.0	6,871.9	7,089.7	6,924.8	28.4	24.5	-88.98	2,301.2	1,011.1	1,318.4	1,275.4	43.06	30.617	
7,700.0	6,870.9	7,088.9	6,923.9	30.4	24.5	-88.94	2,301.2	1,011.1	1,291.2	1,246.0	45.25	28.537	
7,800.0	6,869.8	7,088.0	6,923.1	32.5	24.5	-88.90	2,301.2	1,011.1	1,271.3	1,223.7	47.53	26.746	
7,900.0	6,868.8	7,087.2	6,922.3	34.8	24.5	-88.86	2,301.2	1,011.1	1,259.0	1,209.1	49.89	25.233	
8,000.0	6,867.7	7,086.4	6,921.4	37.1	24.5	-88.82	2,301.2	1,011.1	1,254.5	1,202.2	52.32	23.978	
8,005.5	6,867.7	7,086.3	6,921.4	37.3	24.5	-88.82	2,301.2	1,011.1	1,254.5	1,202.1	52.46	23.915 CC, ES	
8,100.0	6,866.7	7,085.5	6,920.6	39.5	24.5	-88.79	2,301.1	1,011.1	1,258.1	1,203.3	54.80	22.958	
8,200.0	6,865.6	7,084.7	6,919.8	42.0	24.5	-88.75	2,301.1	1,011.1	1,269.5	1,212.2	57.32	22.148	
8,300.0	6,864.6	7,083.9	6,919.0	44.5	24.5	-88.71	2,301.1	1,011.1	1,288.6	1,228.7	59.87	21.522	
8,400.0	6,863.6	7,083.1	6,918.2	47.0	24.5	-88.68	2,301.1	1,011.1	1,315.1	1,252.6	62.46	21.056	
8,500.0	6,862.5	7,082.3	6,917.4	49.6	24.5	-88.64	2,301.1	1,011.1	1,348.4	1,283.4	65.07	20.724	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST DD KINZER 28KD - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 40-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
8,600.0	6,861.5	7,081.5	6,916.6	52.2	24.5	-88.60	2,301.1	1,011.1	1,388.2	1,320.5	67.70	20.507	
8,700.0	6,860.4	7,080.8	6,915.8	54.8	24.5	-88.57	2,301.0	1,011.1	1,433.9	1,363.6	70.34	20.385	
8,800.0	6,859.4	7,080.0	6,915.0	57.5	24.5	-88.53	2,301.0	1,011.1	1,484.9	1,411.9	73.00	20.340 SF	
8,900.0	6,858.3	7,079.2	6,914.3	60.1	24.5	-88.50	2,301.0	1,011.1	1,540.7	1,465.0	75.68	20.359	
9,000.0	6,857.3	7,078.4	6,913.5	62.8	24.5	-88.46	2,301.0	1,011.1	1,600.8	1,522.5	78.37	20.428	
9,100.0	6,856.2	7,077.7	6,912.7	65.5	24.5	-88.43	2,301.0	1,011.1	1,664.8	1,583.7	81.06	20.537	
9,200.0	6,855.2	7,076.9	6,912.0	68.1	24.5	-88.39	2,301.0	1,011.1	1,732.2	1,648.4	83.77	20.679	
9,300.0	6,854.1	7,076.1	6,911.2	70.8	24.5	-88.36	2,301.0	1,011.1	1,802.6	1,716.1	86.48	20.844	
9,400.0	6,853.1	7,075.4	6,910.5	73.6	24.5	-88.32	2,300.9	1,011.1	1,875.7	1,786.5	89.20	21.028	
9,500.0	6,852.1	7,074.7	6,909.7	76.3	24.5	-88.29	2,300.9	1,011.1	1,951.2	1,859.3	91.93	21.225	
9,600.0	6,851.0	7,073.9	6,909.0	79.0	24.5	-88.26	2,300.9	1,011.1	2,028.8	1,934.1	94.66	21.433	
9,700.0	6,850.0	7,073.2	6,908.3	81.7	24.5	-88.22	2,300.9	1,011.1	2,108.3	2,010.9	97.39	21.647	
9,800.0	6,848.9	7,072.5	6,907.5	84.4	24.5	-88.19	2,300.9	1,011.1	2,189.5	2,089.3	100.14	21.865	
9,900.0	6,847.9	7,071.7	6,906.8	87.2	24.5	-88.16	2,300.9	1,011.1	2,272.1	2,169.3	102.88	22.085	
10,000.0	6,846.8	7,071.0	6,906.1	89.9	24.5	-88.12	2,300.8	1,011.1	2,356.2	2,250.5	105.63	22.306	
10,100.0	6,845.8	7,070.3	6,905.4	92.7	24.5	-88.09	2,300.8	1,011.1	2,441.4	2,333.0	108.38	22.526	
10,200.0	6,844.7	7,069.6	6,904.7	95.4	24.5	-88.06	2,300.8	1,011.1	2,527.7	2,416.5	111.14	22.744	
10,300.0	6,843.7	7,068.9	6,904.0	98.2	24.5	-88.03	2,300.8	1,011.1	2,615.0	2,501.1	113.89	22.960	
10,400.0	6,842.7	7,068.2	6,903.3	100.9	24.5	-88.00	2,300.8	1,011.1	2,703.1	2,586.5	116.65	23.172	
10,500.0	6,841.6	7,067.5	6,902.6	103.7	24.5	-87.96	2,300.8	1,011.1	2,792.1	2,672.7	119.41	23.381	
10,600.0	6,840.6	7,066.8	6,901.9	106.4	24.5	-87.93	2,300.8	1,011.1	2,881.8	2,759.6	122.18	23.587	
10,700.0	6,839.5	7,066.1	6,901.2	109.2	24.5	-87.90	2,300.7	1,011.1	2,972.1	2,847.2	124.95	23.787	
10,800.0	6,838.5	7,065.4	6,900.5	112.0	24.5	-87.87	2,300.7	1,011.1	3,063.1	2,935.4	127.71	23.984	
10,900.0	6,837.4	7,064.8	6,899.8	114.7	24.5	-87.84	2,300.7	1,011.1	3,154.6	3,024.1	130.48	24.176	
11,000.0	6,836.4	7,064.1	6,899.2	117.5	24.5	-87.81	2,300.7	1,011.1	3,246.5	3,113.3	133.25	24.364	
11,100.0	6,835.4	7,063.4	6,898.5	120.3	24.5	-87.78	2,300.7	1,011.1	3,339.0	3,203.0	136.03	24.547	
11,200.0	6,834.3	7,062.8	6,897.8	123.0	24.5	-87.75	2,300.7	1,011.1	3,431.9	3,293.1	138.80	24.725	
11,300.0	6,833.3	7,062.1	6,897.2	125.8	24.5	-87.72	2,300.7	1,011.1	3,525.1	3,383.6	141.58	24.899	
11,400.0	6,832.2	7,061.5	6,896.5	128.6	24.5	-87.69	2,300.6	1,011.0	3,618.8	3,474.4	144.35	25.069	
11,500.0	6,831.2	7,060.8	6,895.9	131.4	24.5	-87.66	2,300.6	1,011.0	3,712.7	3,565.6	147.13	25.235	
11,600.0	6,830.2	7,060.2	6,895.2	134.1	24.5	-87.63	2,300.6	1,011.0	3,807.0	3,657.1	149.91	25.396	
11,700.0	6,829.1	7,059.5	6,894.6	136.9	24.5	-87.60	2,300.6	1,011.0	3,901.5	3,748.9	152.69	25.553	
11,800.0	6,828.1	7,058.9	6,894.0	139.7	24.5	-87.57	2,300.6	1,011.0	3,996.4	3,840.9	155.47	25.706	
11,900.0	6,827.0	7,058.2	6,893.3	142.5	24.5	-87.54	2,300.6	1,011.0	4,091.4	3,933.2	158.25	25.855	
11,999.0	6,826.0	7,057.6	6,892.7	145.2	24.5	-87.52	2,300.6	1,011.0	4,185.8	4,024.8	161.00	25.999	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 80-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	92.36	-14.6	353.9	354.2				
100.0	100.0	97.0	97.0	0.1	0.1	92.37	-14.6	353.8	354.1	353.9	0.21	1,654.015	
200.0	200.0	197.4	197.4	0.3	0.3	92.39	-14.8	353.7	354.0	353.3	0.66	532.496	
300.0	300.0	297.9	297.9	0.5	0.6	92.43	-15.0	353.3	353.7	352.5	1.12	316.977	
400.0	400.0	397.9	397.9	0.8	0.8	92.49	-15.3	352.9	353.3	351.7	1.57	225.630	
500.0	500.0	498.6	498.6	1.0	1.0	92.56	-15.8	352.4	352.8	350.7	2.02	174.862	
600.0	600.0	598.8	598.8	1.2	1.2	92.65	-16.3	351.7	352.1	349.6	2.47	142.654	
675.3	675.2	674.8	674.8	1.4	1.4	109.50	-16.8	351.1	351.9	349.1	2.81	125.381 CC	
700.0	700.0	699.8	699.8	1.4	1.5	109.64	-16.9	350.9	351.9	349.0	2.92	120.626 ES	
800.0	799.8	800.7	800.7	1.7	1.7	110.55	-17.6	349.7	352.6	349.2	3.36	104.960	
900.0	899.5	899.8	899.7	1.9	1.9	111.90	-18.0	348.5	354.6	350.8	3.78	93.900	
1,000.0	998.7	998.9	998.8	2.2	2.1	113.69	-18.3	347.5	358.4	354.1	4.23	84.799	
1,100.0	1,097.5	1,097.9	1,097.8	2.5	2.3	115.91	-18.7	346.4	363.9	359.2	4.71	77.236	
1,200.0	1,195.6	1,196.2	1,196.2	2.8	2.5	118.49	-19.2	345.2	371.7	366.4	5.22	71.140	
1,228.9	1,223.8	1,224.4	1,224.4	2.9	2.6	119.29	-19.4	344.9	374.4	369.0	5.37	69.652	
1,300.0	1,293.3	1,294.1	1,294.0	3.2	2.7	121.38	-19.8	344.0	381.6	375.8	5.75	66.344	
1,400.0	1,390.9	1,391.8	1,391.8	3.6	2.9	124.14	-20.1	342.7	392.4	386.1	6.28	62.492	
1,500.0	1,488.5	1,489.6	1,489.5	4.0	3.1	126.72	-20.2	341.5	404.1	397.2	6.81	59.376	
1,600.0	1,586.1	1,586.8	1,586.7	4.4	3.3	129.13	-20.2	340.4	416.6	409.3	7.33	56.844	
1,700.0	1,683.7	1,680.0	1,679.9	4.8	3.5	131.28	-20.2	339.8	430.3	422.4	7.84	54.868	
1,800.0	1,781.3	1,766.3	1,766.2	5.3	3.6	133.10	-20.6	341.0	446.5	438.1	8.34	53.510	
1,900.0	1,878.9	1,852.1	1,852.0	5.7	3.8	134.77	-21.7	344.1	465.6	456.7	8.84	52.653	
2,000.0	1,976.5	1,938.9	1,938.5	6.1	4.0	136.33	-23.9	348.9	487.4	478.1	9.34	52.181	
2,100.0	2,074.1	2,026.2	2,025.6	6.6	4.2	137.90	-27.7	354.6	511.3	501.5	9.84	51.987	
2,200.0	2,171.7	2,104.9	2,103.9	7.0	4.3	139.24	-32.6	361.1	538.0	527.7	10.31	52.170	
2,300.0	2,269.3	2,182.5	2,180.8	7.5	4.5	140.43	-38.6	369.7	568.1	557.3	10.79	52.666	
2,400.0	2,366.9	2,258.2	2,255.4	7.9	4.7	141.48	-45.5	380.0	601.3	590.0	11.26	53.421	
2,500.0	2,464.5	2,333.7	2,329.5	8.4	4.9	142.39	-53.5	392.3	637.5	625.7	11.73	54.364	
2,600.0	2,562.1	2,414.4	2,408.2	8.9	5.2	143.17	-62.4	407.7	676.1	663.9	12.20	55.406	
2,700.0	2,659.7	2,515.4	2,506.7	9.3	5.5	143.96	-72.6	427.3	714.6	701.9	12.70	56.260	
2,800.0	2,757.3	2,608.9	2,598.1	9.8	5.8	144.54	-80.8	445.5	752.5	739.3	13.20	57.003	
2,900.0	2,854.9	2,695.9	2,683.0	10.2	6.0	145.02	-88.7	462.8	791.0	777.3	13.70	57.727	
3,000.0	2,952.5	2,794.0	2,778.7	10.7	6.4	145.54	-97.8	481.9	829.3	815.0	14.22	58.330	
3,100.0	3,050.1	2,885.2	2,867.8	11.1	6.7	145.98	-106.1	499.6	867.4	852.6	14.73	58.900	
3,200.0	3,147.7	2,981.6	2,962.1	11.6	7.1	146.38	-114.4	518.3	905.3	890.0	15.25	59.372	
3,300.0	3,245.3	3,070.8	3,049.3	12.1	7.4	146.74	-122.2	535.5	943.3	927.5	15.76	59.842	
3,400.0	3,342.9	3,162.1	3,138.4	12.5	7.7	147.07	-130.5	553.3	981.5	965.3	16.28	60.282	
3,500.0	3,440.5	3,254.7	3,228.8	13.0	8.1	147.38	-138.7	571.4	1,019.8	1,003.0	16.81	60.677	
3,600.0	3,538.1	3,343.0	3,315.1	13.4	8.5	147.65	-146.6	588.7	1,058.2	1,040.9	17.33	61.070	
3,700.0	3,635.7	3,418.5	3,388.7	13.9	8.8	147.88	-153.9	603.9	1,097.5	1,079.7	17.83	61.564	
3,800.0	3,733.3	3,493.3	3,461.3	14.4	9.1	148.07	-161.7	620.1	1,138.2	1,119.9	18.33	62.101	
3,900.0	3,830.9	3,574.7	3,540.1	14.8	9.5	148.24	-170.5	638.7	1,180.1	1,161.2	18.85	62.600	
4,000.0	3,928.5	3,668.7	3,630.9	15.3	9.9	148.41	-180.8	660.5	1,222.3	1,202.9	19.40	62.999	
4,100.0	4,026.1	3,789.5	3,748.0	15.7	10.4	148.62	-192.9	687.4	1,263.3	1,243.3	20.01	63.149	
4,200.0	4,123.7	3,888.3	3,844.3	16.2	10.9	148.80	-202.0	707.9	1,302.7	1,282.1	20.56	63.355	
4,300.0	4,221.3	3,980.1	3,933.8	16.7	11.2	149.01	-211.1	726.1	1,342.0	1,320.9	21.10	63.600	
4,400.0	4,318.9	4,077.9	4,029.2	17.1	11.7	149.20	-220.5	745.6	1,381.1	1,359.5	21.65	63.783	
4,500.0	4,416.5	4,169.5	4,118.5	17.6	12.0	149.37	-229.1	763.6	1,420.0	1,397.8	22.19	63.979	
4,600.0	4,514.1	4,283.1	4,229.5	18.1	12.5	149.56	-239.3	785.9	1,458.5	1,435.7	22.79	64.000	
4,700.0	4,611.7	4,374.0	4,318.5	18.5	12.9	149.73	-247.1	802.6	1,496.0	1,472.7	23.33	64.129	
4,800.0	4,709.3	4,452.3	4,395.1	19.0	13.2	149.88	-254.5	817.1	1,534.1	1,510.2	23.84	64.352	
4,900.0	4,806.9	4,538.8	4,479.5	19.4	13.6	150.01	-262.6	834.1	1,572.9	1,548.5	24.38	64.528	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 80-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	4,904.5	4,635.0	4,573.3	19.9	14.0	150.12	-271.1	853.4	1,611.7	1,586.8	24.94	64.625	
5,100.0	5,002.1	4,764.5	4,699.9	20.4	14.6	150.25	-281.3	879.0	1,649.8	1,624.2	25.59	64.475	
5,200.0	5,099.7	4,883.2	4,816.5	20.8	15.0	150.41	-289.8	899.3	1,685.4	1,659.2	26.19	64.349	
5,300.0	5,197.3	4,973.8	4,905.6	21.3	15.4	150.52	-295.7	914.8	1,720.7	1,694.0	26.74	64.354	
5,400.0	5,294.9	5,066.3	4,996.5	21.8	15.7	150.63	-302.0	930.5	1,756.1	1,728.8	27.29	64.357	
5,500.0	5,392.5	5,185.4	5,113.7	22.2	16.1	150.81	-310.6	949.6	1,791.1	1,763.2	27.89	64.223	
5,600.0	5,490.1	5,452.6	5,378.9	22.7	16.9	151.36	-324.2	979.6	1,823.1	1,794.3	28.77	63.369	
5,614.2	5,504.0	5,481.1	5,407.3	22.7	17.0	151.43	-324.8	981.2	1,826.6	1,797.7	28.87	63.275	
5,700.0	5,587.9	5,608.5	5,534.6	23.1	17.3	151.95	-327.1	985.8	1,845.2	1,815.7	29.42	62.727	
5,800.0	5,686.4	5,735.9	5,661.9	23.4	17.5	152.41	-328.3	988.1	1,862.2	1,832.3	29.95	62.175	
5,900.0	5,785.5	5,853.2	5,779.2	23.7	17.6	152.73	-328.1	989.0	1,874.8	1,844.4	30.43	61.603	
6,000.0	5,885.0	5,943.1	5,869.1	23.9	17.8	152.93	-328.0	989.7	1,884.3	1,853.5	30.83	61.119	
6,100.0	5,984.7	6,033.7	5,959.7	24.1	17.9	153.06	-328.1	990.7	1,891.2	1,860.0	31.19	60.633	
6,200.0	6,084.7	6,130.0	6,056.0	24.2	18.1	153.12	-328.6	991.9	1,895.4	1,863.8	31.53	60.120	
6,243.1	6,127.8	6,173.0	6,099.0	24.3	18.1	136.52	-328.9	992.5	1,896.2	1,855.8	40.45	46.880	
6,273.1	6,157.8	6,203.0	6,129.0	24.3	18.2	136.52	-329.1	992.8	1,896.6	1,856.1	40.53	46.792	
6,300.0	6,184.7	6,229.7	6,155.7	24.3	18.2	46.52	-329.3	993.1	1,896.6	1,864.8	31.83	59.581	
6,350.0	6,234.5	6,282.7	6,208.7	24.4	18.3	46.71	-329.7	993.7	1,894.8	1,862.9	31.90	59.397	
6,400.0	6,284.0	6,335.9	6,261.9	24.4	18.4	47.13	-330.0	994.2	1,890.5	1,858.6	31.89	59.273	
6,450.0	6,332.9	6,389.1	6,315.1	24.4	18.5	47.78	-330.2	994.7	1,883.7	1,851.9	31.82	59.194	
6,500.0	6,380.9	6,440.7	6,366.7	24.4	18.6	48.66	-330.3	995.2	1,874.6	1,842.9	31.70	59.137	
6,550.0	6,427.8	6,490.0	6,416.0	24.4	18.7	49.76	-330.3	995.4	1,863.1	1,831.6	31.54	59.068	
6,600.0	6,473.5	6,535.8	6,461.7	24.4	18.7	51.09	-330.5	995.6	1,849.6	1,818.3	31.38	58.950	
6,650.0	6,517.5	6,580.6	6,506.6	24.4	18.8	52.66	-330.7	995.6	1,834.2	1,802.9	31.24	58.718	
6,700.0	6,559.9	6,624.8	6,550.8	24.4	18.9	54.49	-330.9	995.6	1,816.9	1,785.7	31.16	58.308	
6,750.0	6,600.2	6,667.2	6,593.2	24.4	18.9	56.55	-331.0	995.7	1,797.9	1,766.7	31.18	57.660	
6,800.0	6,638.4	6,702.5	6,628.5	24.3	19.0	58.73	-331.1	995.7	1,777.4	1,746.1	31.31	56.765	
6,850.0	6,674.3	6,733.6	6,659.6	24.3	19.0	61.07	-331.2	995.8	1,755.8	1,724.3	31.58	55.594	
6,900.0	6,707.6	6,763.1	6,689.1	24.3	19.1	63.58	-331.4	995.9	1,733.3	1,701.2	32.02	54.136	
6,950.0	6,738.3	6,793.9	6,719.9	24.3	19.1	66.32	-331.6	996.1	1,709.9	1,677.3	32.63	52.398	
7,000.0	6,766.2	6,824.1	6,750.1	24.3	19.2	69.24	-331.8	996.2	1,685.9	1,652.5	33.41	50.457	
7,050.0	6,791.0	6,852.1	6,778.1	24.3	19.2	72.25	-331.9	996.4	1,661.5	1,627.2	34.32	48.412	
7,100.0	6,812.8	6,877.1	6,803.1	24.3	19.3	75.27	-332.0	996.5	1,636.9	1,601.6	35.31	46.353	
7,150.0	6,831.4	6,895.4	6,821.4	24.3	19.3	78.13	-332.0	996.6	1,612.5	1,576.1	36.33	44.382	
7,200.0	6,846.8	6,910.2	6,836.2	24.4	19.3	80.85	-332.0	996.7	1,588.4	1,551.0	37.37	42.508	
7,250.0	6,858.7	6,921.8	6,847.7	24.5	19.3	83.41	-332.1	996.7	1,564.9	1,526.5	38.40	40.751	
7,300.0	6,867.3	6,930.3	6,856.3	24.7	19.4	85.78	-332.1	996.8	1,542.3	1,502.8	39.43	39.118	
7,350.0	6,872.4	6,935.5	6,861.5	25.0	19.4	87.91	-332.1	996.8	1,520.7	1,480.2	40.43	37.609	
7,400.0	6,874.0	6,937.2	6,863.2	25.4	19.4	89.76	-332.1	996.8	1,500.3	1,458.9	41.42	36.218	
7,405.6	6,874.0	6,937.2	6,863.2	25.5	19.4	89.95	-332.1	996.8	1,498.1	1,456.6	41.54	36.069	
7,500.0	6,873.0	6,936.6	6,862.5	26.7	19.4	89.93	-332.1	996.8	1,463.8	1,420.5	43.33	33.785	
7,600.0	6,871.9	6,935.9	6,861.9	28.4	19.4	89.90	-332.1	996.8	1,433.4	1,388.0	45.39	31.582	
7,700.0	6,870.9	6,935.2	6,861.2	30.4	19.4	89.87	-332.1	996.8	1,409.4	1,361.8	47.57	29.627	
7,800.0	6,869.8	6,934.5	6,860.5	32.5	19.4	89.84	-332.1	996.8	1,392.2	1,342.3	49.85	27.925	
7,900.0	6,868.8	6,933.9	6,859.8	34.8	19.4	89.81	-332.1	996.8	1,382.0	1,329.8	52.22	26.466	
7,991.0	6,867.8	6,933.3	6,859.2	36.9	19.4	89.79	-332.1	996.8	1,379.0	1,324.6	54.43	25.337	
8,000.0	6,867.7	6,933.2	6,859.2	37.1	19.4	89.79	-332.1	996.8	1,379.1	1,324.4	54.65	25.237	
8,100.0	6,866.7	6,932.5	6,858.5	39.5	19.4	89.76	-332.1	996.8	1,383.3	1,326.2	57.12	24.216	
8,200.0	6,865.6	6,931.9	6,857.9	42.0	19.4	89.73	-332.1	996.8	1,394.8	1,335.1	59.64	23.385	
8,300.0	6,864.6	6,931.3	6,857.2	44.5	19.4	89.71	-332.1	996.8	1,413.2	1,351.0	62.20	22.720	
8,400.0	6,863.6	6,930.6	6,856.6	47.0	19.4	89.68	-332.1	996.8	1,438.4	1,373.6	64.79	22.202	
8,500.0	6,862.5	6,930.0	6,856.0	49.6	19.4	89.65	-332.1	996.8	1,470.0	1,402.6	67.40	21.811	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST DD KINZER 28LD - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 80-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
8,600.0	6,861.5	6,929.4	6,855.3	52.2	19.4	89.63	-332.1	996.8	1,507.5	1,437.5	70.03	21.528	
8,700.0	6,860.4	6,928.7	6,854.7	54.8	19.4	89.60	-332.1	996.8	1,550.6	1,477.9	72.67	21.336	
8,800.0	6,859.4	6,928.1	6,854.1	57.5	19.3	89.58	-332.1	996.8	1,598.8	1,523.5	75.34	21.222	
8,900.0	6,858.3	6,927.5	6,853.5	60.1	19.3	89.55	-332.1	996.8	1,651.7	1,573.6	78.01	21.171 SF	
9,000.0	6,857.3	6,926.9	6,852.9	62.8	19.3	89.52	-332.1	996.8	1,708.7	1,628.0	80.70	21.173	
9,100.0	6,856.2	6,926.3	6,852.3	65.5	19.3	89.50	-332.1	996.8	1,769.6	1,686.2	83.40	21.218	
9,200.0	6,855.2	6,925.7	6,851.7	68.1	19.3	89.48	-332.1	996.8	1,833.9	1,747.8	86.11	21.298	
9,300.0	6,854.1	6,925.1	6,851.1	70.8	19.3	89.45	-332.1	996.8	1,901.4	1,812.5	88.82	21.406	
9,400.0	6,853.1	6,924.6	6,850.5	73.6	19.3	89.43	-332.1	996.7	1,971.5	1,880.0	91.54	21.537	
9,500.0	6,852.1	6,924.0	6,850.0	76.3	19.3	89.40	-332.1	996.7	2,044.2	1,949.9	94.27	21.684	
9,600.0	6,851.0	6,923.4	6,849.4	79.0	19.3	89.38	-332.1	996.7	2,119.1	2,022.1	97.00	21.845	
9,700.0	6,850.0	6,922.8	6,848.8	81.7	19.3	89.36	-332.1	996.7	2,196.0	2,096.2	99.74	22.016	
9,800.0	6,848.9	6,920.0	6,846.0	84.4	19.3	89.24	-332.1	996.7	2,274.7	2,172.2	102.48	22.197	
9,900.0	6,847.9	6,920.0	6,846.0	87.2	19.3	89.24	-332.1	996.7	2,355.0	2,249.7	105.23	22.380	
10,000.0	6,846.8	6,920.0	6,846.0	89.9	19.3	89.24	-332.1	996.7	2,436.7	2,328.8	107.98	22.567	
10,100.0	6,845.8	6,920.0	6,846.0	92.7	19.3	89.24	-332.1	996.7	2,519.8	2,409.1	110.74	22.755	
10,200.0	6,844.7	6,920.0	6,846.0	95.4	19.3	89.24	-332.1	996.7	2,604.1	2,490.6	113.49	22.945	
10,300.0	6,843.7	6,920.0	6,846.0	98.2	19.3	89.24	-332.1	996.7	2,689.4	2,573.2	116.26	23.134	
10,400.0	6,842.7	6,920.0	6,846.0	100.9	19.3	89.24	-332.1	996.7	2,775.8	2,656.7	119.02	23.322	
10,500.0	6,841.6	6,920.0	6,846.0	103.7	19.3	89.24	-332.1	996.7	2,863.0	2,741.2	121.79	23.508	
10,600.0	6,840.6	6,920.0	6,846.0	106.4	19.3	89.24	-332.1	996.7	2,951.0	2,826.4	124.56	23.692	
10,700.0	6,839.5	6,917.3	6,843.3	109.2	19.3	89.13	-332.1	996.7	3,039.8	2,912.4	127.32	23.876	
10,800.0	6,838.5	6,916.8	6,842.8	112.0	19.3	89.11	-332.1	996.7	3,129.2	2,999.1	130.09	24.055	
10,900.0	6,837.4	6,916.2	6,842.2	114.7	19.3	89.08	-332.1	996.7	3,219.3	3,086.4	132.86	24.231	
11,000.0	6,836.4	6,915.7	6,841.7	117.5	19.3	89.06	-332.1	996.7	3,309.9	3,174.3	135.63	24.403	
11,100.0	6,835.4	6,915.2	6,841.1	120.3	19.3	89.04	-332.1	996.7	3,401.1	3,262.7	138.41	24.573	
11,200.0	6,834.3	6,914.6	6,840.6	123.0	19.3	89.02	-332.1	996.7	3,492.7	3,351.5	141.19	24.738	
11,300.0	6,833.3	6,914.1	6,840.1	125.8	19.3	89.00	-332.1	996.7	3,584.8	3,440.8	143.96	24.901	
11,400.0	6,832.2	6,913.6	6,839.5	128.6	19.3	88.97	-332.0	996.7	3,677.3	3,530.6	146.74	25.060	
11,500.0	6,831.2	6,913.0	6,839.0	131.4	19.3	88.95	-332.0	996.7	3,770.2	3,620.7	149.52	25.215	
11,600.0	6,830.2	6,912.5	6,838.5	134.1	19.3	88.93	-332.0	996.7	3,863.4	3,711.1	152.30	25.367	
11,700.0	6,829.1	6,912.0	6,838.0	136.9	19.3	88.91	-332.0	996.7	3,957.0	3,801.9	155.09	25.515	
11,800.0	6,828.1	6,911.5	6,837.5	139.7	19.3	88.89	-332.0	996.7	4,050.9	3,893.0	157.87	25.660	
11,900.0	6,827.0	6,911.0	6,836.9	142.5	19.3	88.87	-332.0	996.7	4,145.1	3,984.4	160.65	25.801	
11,999.0	6,826.0	6,910.5	6,836.4	145.2	19.3	88.85	-332.0	996.7	4,238.6	4,075.2	163.41	25.938	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	104.5	104.5	0.0	0.0	59.97	1,737.9	3,006.6	3,472.8				
100.0	100.0	204.5	204.5	0.1	1.2	59.97	1,737.9	3,006.6	3,472.8	3,471.5	1.29	2,685.722	
200.0	200.0	304.5	304.5	0.3	3.5	59.97	1,737.9	3,006.6	3,472.8	3,468.9	3.82	908.830	
300.0	300.0	404.5	404.5	0.5	5.6	59.97	1,737.9	3,006.6	3,472.8	3,466.6	6.12	567.053	
400.0	400.0	504.5	504.5	0.8	7.6	59.97	1,737.9	3,006.6	3,472.8	3,464.4	8.39	413.870	
500.0	500.0	604.5	604.5	1.0	9.6	59.97	1,737.9	3,006.6	3,472.8	3,462.1	10.64	326.246	
600.0	600.0	704.5	704.5	1.2	11.7	59.97	1,737.9	3,006.6	3,472.8	3,459.9	12.89	269.373	
700.0	700.0	804.5	804.5	1.4	13.7	76.61	1,737.9	3,006.6	3,472.4	3,457.2	15.13	229.438	
800.0	799.8	904.3	904.3	1.7	15.7	76.72	1,737.9	3,006.6	3,471.2	3,453.8	17.37	199.804	
900.0	899.5	1,004.0	1,004.0	1.9	17.7	76.90	1,737.9	3,006.6	3,469.2	3,449.5	19.61	176.868	
1,000.0	998.7	1,103.2	1,103.2	2.2	19.7	77.15	1,737.9	3,006.6	3,466.4	3,444.5	21.87	158.522	
1,100.0	1,097.5	1,202.0	1,202.0	2.5	21.7	77.46	1,737.9	3,006.6	3,462.9	3,438.8	24.14	143.458	
1,200.0	1,195.6	1,300.1	1,300.1	2.8	23.7	77.85	1,737.9	3,006.6	3,458.8	3,432.3	26.44	130.825	
1,228.9	1,223.8	1,328.3	1,328.3	2.9	24.2	77.97	1,737.9	3,006.6	3,457.5	3,430.3	27.11	127.543	
1,300.0	1,293.3	1,397.8	1,397.8	3.2	25.6	78.22	1,737.9	3,006.6	3,454.2	3,425.4	28.77	120.047	
1,400.0	1,390.9	1,495.4	1,495.4	3.6	27.6	78.56	1,737.9	3,006.6	3,449.7	3,418.6	31.13	110.809	
1,500.0	1,488.5	1,593.0	1,593.0	4.0	29.6	78.91	1,737.9	3,006.6	3,445.3	3,411.8	33.50	102.831	
1,600.0	1,586.1	1,690.6	1,690.6	4.4	31.5	79.26	1,737.9	3,006.6	3,441.1	3,405.2	35.89	95.884	
1,700.0	1,683.7	1,788.2	1,788.2	4.8	33.5	79.60	1,737.9	3,006.6	3,437.0	3,398.8	38.28	89.786	
1,800.0	1,781.3	1,885.8	1,885.8	5.3	35.5	79.95	1,737.9	3,006.6	3,433.1	3,392.4	40.68	84.396	
1,900.0	1,878.9	1,983.4	1,983.4	5.7	37.4	80.30	1,737.9	3,006.6	3,429.3	3,386.2	43.08	79.600	
2,000.0	1,976.5	2,081.0	2,081.0	6.1	39.4	80.65	1,737.9	3,006.6	3,425.6	3,380.1	45.49	75.307	
2,100.0	2,074.1	2,178.6	2,178.6	6.6	41.4	81.01	1,737.9	3,006.6	3,422.0	3,374.1	47.90	71.444	
2,200.0	2,171.7	2,276.2	2,276.2	7.0	43.3	81.36	1,737.9	3,006.6	3,418.6	3,368.3	50.31	67.950	
2,300.0	2,269.3	2,373.8	2,373.8	7.5	45.3	81.71	1,737.9	3,006.6	3,415.3	3,362.6	52.73	64.775	
2,400.0	2,366.9	2,471.4	2,471.4	7.9	47.2	82.06	1,737.9	3,006.6	3,412.2	3,357.0	55.14	61.879	
2,500.0	2,464.5	2,569.0	2,569.0	8.4	49.2	82.42	1,737.9	3,006.6	3,409.2	3,351.6	57.56	59.227	
2,600.0	2,562.1	2,666.6	2,666.6	8.9	51.2	82.77	1,737.9	3,006.6	3,406.3	3,346.3	59.98	56.789	
2,700.0	2,659.7	2,764.2	2,764.2	9.3	53.1	83.13	1,737.9	3,006.6	3,403.5	3,341.1	62.40	54.542	
2,800.0	2,757.3	2,861.8	2,861.8	9.8	55.1	83.48	1,737.9	3,006.6	3,400.9	3,336.1	64.82	52.464	
2,900.0	2,854.9	2,959.4	2,959.4	10.2	57.1	83.84	1,737.9	3,006.6	3,398.5	3,331.2	67.25	50.537	
3,000.0	2,952.5	3,057.0	3,057.0	10.7	59.0	84.20	1,737.9	3,006.6	3,396.2	3,326.5	69.67	48.745	
3,100.0	3,050.1	3,154.6	3,154.6	11.1	61.0	84.55	1,737.9	3,006.6	3,394.0	3,321.9	72.10	47.076	
3,200.0	3,147.7	3,252.2	3,252.2	11.6	62.9	84.91	1,737.9	3,006.6	3,391.9	3,317.4	74.52	45.516	
3,300.0	3,245.3	3,349.8	3,349.8	12.1	64.9	85.27	1,737.9	3,006.6	3,390.0	3,313.1	76.95	44.057	
3,400.0	3,342.9	3,447.4	3,447.4	12.5	66.9	85.63	1,737.9	3,006.6	3,388.2	3,308.9	79.37	42.688	
3,500.0	3,440.5	3,545.0	3,545.0	13.0	68.8	85.98	1,737.9	3,006.6	3,386.6	3,304.8	81.80	41.402	
3,600.0	3,538.1	3,642.6	3,642.6	13.4	70.8	86.34	1,737.9	3,006.6	3,385.1	3,300.9	84.22	40.192	
3,700.0	3,635.7	3,740.2	3,740.2	13.9	72.8	86.70	1,737.9	3,006.6	3,383.8	3,297.1	86.65	39.051	
3,800.0	3,733.3	3,837.8	3,837.8	14.4	74.7	87.06	1,737.9	3,006.6	3,382.5	3,293.5	89.08	37.973	
3,900.0	3,830.9	3,935.4	3,935.4	14.8	76.7	87.42	1,737.9	3,006.6	3,381.5	3,290.0	91.50	36.955	
4,000.0	3,928.5	4,033.0	4,033.0	15.3	78.7	87.78	1,737.9	3,006.6	3,380.5	3,286.6	93.93	35.990	
4,100.0	4,026.1	4,130.6	4,130.6	15.7	80.6	88.14	1,737.9	3,006.6	3,379.7	3,283.4	96.36	35.076	
4,200.0	4,123.7	4,228.2	4,228.2	16.2	82.6	88.50	1,737.9	3,006.6	3,379.1	3,280.3	98.78	34.208	
4,300.0	4,221.3	4,325.8	4,325.8	16.7	84.5	88.86	1,737.9	3,006.6	3,378.6	3,277.4	101.21	33.383	
4,400.0	4,318.9	4,423.4	4,423.4	17.1	86.5	89.22	1,737.9	3,006.6	3,378.2	3,274.6	103.63	32.598	
4,500.0	4,416.5	4,521.0	4,521.0	17.6	88.5	89.58	1,737.9	3,006.6	3,378.0	3,271.9	106.06	31.851	
4,600.0	4,514.1	4,618.6	4,618.6	18.1	90.4	89.94	1,737.9	3,006.6	3,377.9	3,269.4	108.48	31.138	
4,615.6	4,529.3	4,633.8	4,633.8	18.1	90.7	90.00	1,737.9	3,006.6	3,377.9	3,269.0	108.86	31.030	
4,700.0	4,611.7	4,716.2	4,716.2	18.5	92.4	90.30	1,737.9	3,006.6	3,377.9	3,267.0	110.90	30.458	
4,800.0	4,709.3	4,813.8	4,813.8	19.0	94.4	90.66	1,737.9	3,006.6	3,378.1	3,264.8	113.33	29.808	
4,900.0	4,806.9	4,911.4	4,911.4	19.4	96.3	91.03	1,737.9	3,006.6	3,378.5	3,262.7	115.75	29.187	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,000.0	4,904.5	5,009.0	5,009.0	19.9	98.3	91.39	1,737.9	3,006.6	3,378.9	3,260.7	118.17	28.593	
5,100.0	5,002.1	5,106.6	5,106.6	20.4	100.2	91.75	1,737.9	3,006.6	3,379.5	3,258.9	120.59	28.024	
5,200.0	5,099.7	5,204.2	5,204.2	20.8	102.2	92.11	1,737.9	3,006.6	3,380.3	3,257.3	123.01	27.479	
5,300.0	5,197.3	5,301.8	5,301.8	21.3	104.2	92.47	1,737.9	3,006.6	3,381.2	3,255.7	125.43	26.956	
5,400.0	5,294.9	5,399.4	5,399.4	21.8	106.1	92.83	1,737.9	3,006.6	3,382.2	3,254.3	127.85	26.454	
5,500.0	5,392.5	5,497.0	5,497.0	22.2	108.1	93.19	1,737.9	3,006.6	3,383.4	3,253.1	130.27	25.972	
5,600.0	5,490.1	5,594.6	5,594.6	22.7	110.1	93.54	1,737.9	3,006.6	3,384.7	3,252.0	132.69	25.509	
5,614.2	5,504.0	5,608.5	5,608.5	22.7	110.3	93.60	1,737.9	3,006.6	3,384.9	3,251.8	133.03	25.444	
5,700.0	5,587.9	5,692.4	5,692.4	23.1	112.0	93.91	1,737.9	3,006.6	3,386.0	3,251.0	135.05	25.072	
5,800.0	5,686.4	5,790.9	5,790.9	23.4	114.0	94.22	1,737.9	3,006.6	3,387.3	3,249.9	137.34	24.664	
5,900.0	5,785.5	5,890.0	5,890.0	23.7	116.0	94.47	1,737.9	3,006.6	3,388.3	3,248.7	139.59	24.273	
6,000.0	5,885.0	5,989.5	5,989.5	23.9	118.0	94.65	1,737.9	3,006.6	3,389.1	3,247.3	141.82	23.898	
6,100.0	5,984.7	6,089.2	6,089.2	24.1	120.0	94.78	1,737.9	3,006.6	3,389.7	3,245.7	144.00	23.539	
6,200.0	6,084.7	6,189.2	6,189.2	24.2	122.0	94.84	1,737.9	3,006.6	3,390.0	3,243.8	146.15	23.194	
6,243.1	6,127.8	6,232.3	6,232.3	24.3	122.9	78.24	1,737.9	3,006.6	3,390.0	3,251.6	138.34	24.505	
6,273.1	6,157.8	6,262.3	6,262.3	24.3	123.5	78.24	1,737.9	3,006.6	3,390.0	3,251.0	138.99	24.390	
6,300.0	6,184.7	6,289.2	6,289.2	24.3	124.0	-11.77	1,737.9	3,006.6	3,389.5	3,241.3	148.17	22.875	
6,350.0	6,234.5	6,339.0	6,339.0	24.4	125.0	-11.84	1,737.9	3,006.6	3,386.0	3,237.4	148.51	22.800	
6,400.0	6,284.0	6,388.5	6,388.5	24.4	126.0	-11.98	1,737.9	3,006.6	3,379.0	3,230.9	148.13	22.811	
6,450.0	6,332.9	6,437.4	6,437.4	24.4	127.0	-12.20	1,737.9	3,006.6	3,368.7	3,221.7	147.05	22.909	
6,500.0	6,380.9	6,485.4	6,485.4	24.4	128.0	-12.49	1,737.9	3,006.6	3,355.1	3,209.9	145.25	23.098	
6,550.0	6,427.8	6,532.3	6,532.3	24.4	128.9	-12.87	1,737.9	3,006.6	3,338.3	3,195.5	142.76	23.383	
6,600.0	6,473.5	6,578.0	6,578.0	24.4	129.8	-13.34	1,737.9	3,006.6	3,318.3	3,178.6	139.60	23.769	
6,650.0	6,517.5	6,622.0	6,622.0	24.4	130.7	-13.93	1,737.9	3,006.6	3,295.2	3,159.4	135.81	24.264	
6,700.0	6,559.9	6,664.4	6,664.4	24.4	131.6	-14.65	1,737.9	3,006.6	3,269.2	3,137.7	131.44	24.873	
6,750.0	6,600.2	6,704.7	6,704.7	24.4	132.4	-15.51	1,737.9	3,006.6	3,240.4	3,113.8	126.57	25.601	
6,800.0	6,638.4	6,742.9	6,742.9	24.3	133.2	-16.57	1,737.9	3,006.6	3,208.9	3,087.5	121.34	26.446	
6,850.0	6,674.3	6,778.8	6,778.8	24.3	133.9	-17.84	1,737.9	3,006.6	3,174.9	3,059.0	115.91	27.391	
6,900.0	6,707.6	6,812.1	6,812.1	24.3	134.5	-19.41	1,737.9	3,006.6	3,138.5	3,028.0	110.54	28.392	
6,950.0	6,738.3	6,842.8	6,842.8	24.3	135.2	-21.33	1,737.9	3,006.6	3,100.1	2,994.4	105.62	29.350	
7,000.0	6,766.2	6,870.7	6,870.7	24.3	135.7	-23.72	1,737.9	3,006.6	3,059.6	2,957.9	101.69	30.086	
7,050.0	6,791.0	6,895.5	6,895.5	24.3	136.2	-26.73	1,737.9	3,006.6	3,017.4	2,917.9	99.52	30.318	
7,100.0	6,812.8	6,917.3	6,917.3	24.3	136.7	-30.58	1,737.9	3,006.6	2,973.6	2,873.5	100.08	29.711	
7,150.0	6,831.4	6,935.9	6,935.9	24.3	137.0	-35.57	1,737.9	3,006.6	2,928.5	2,824.1	104.43	28.043	
7,200.0	6,846.8	6,951.3	6,951.3	24.4	137.3	-42.12	1,737.9	3,006.6	2,882.3	2,769.0	113.32	25.435	
7,250.0	6,858.7	6,963.2	6,963.2	24.5	137.6	-50.75	1,737.9	3,006.6	2,835.2	2,708.6	126.63	22.390	
7,300.0	6,867.3	6,971.8	6,971.8	24.7	137.8	-61.91	1,737.9	3,006.6	2,787.4	2,645.1	142.33	19.585	
7,350.0	6,872.4	6,976.9	6,976.9	25.0	137.9	-75.56	1,737.9	3,006.6	2,739.3	2,583.6	155.66	17.598	
7,400.0	6,874.0	6,978.5	6,978.5	25.4	137.9	-90.57	1,737.9	3,006.6	2,691.0	2,530.3	160.68	16.747	
7,405.6	6,874.0	6,978.5	6,978.5	25.5	137.9	-92.25	1,737.9	3,006.6	2,685.5	2,525.0	160.58	16.725	
7,500.0	6,873.0	6,977.5	6,977.5	26.7	137.9	-92.17	1,737.9	3,006.6	2,594.5	2,432.1	162.36	15.979	
7,600.0	6,871.9	6,976.4	6,976.4	28.4	137.8	-92.08	1,737.9	3,006.6	2,498.2	2,333.8	164.42	15.195	
7,700.0	6,870.9	6,975.4	6,975.4	30.4	137.8	-92.00	1,737.9	3,006.6	2,402.3	2,235.7	166.59	14.420	
7,800.0	6,869.8	6,974.3	6,974.3	32.5	137.8	-91.91	1,737.9	3,006.6	2,306.7	2,137.8	168.87	13.659	
7,900.0	6,868.8	6,973.3	6,973.3	34.8	137.8	-91.82	1,737.9	3,006.6	2,211.5	2,040.3	171.23	12.915	
8,000.0	6,867.7	6,972.2	6,972.2	37.1	137.8	-91.74	1,737.9	3,006.6	2,116.7	1,943.1	173.65	12.190	
8,100.0	6,866.7	6,971.2	6,971.2	39.5	137.7	-91.65	1,737.9	3,006.6	2,022.5	1,846.4	176.12	11.483	
8,200.0	6,865.6	6,970.1	6,970.1	42.0	137.7	-91.56	1,737.9	3,006.6	1,928.8	1,750.2	178.64	10.797	
8,300.0	6,864.6	6,969.1	6,969.1	44.5	137.7	-91.47	1,737.9	3,006.6	1,835.8	1,654.6	181.19	10.132	
8,400.0	6,863.6	6,968.1	6,968.1	47.0	137.7	-91.39	1,737.9	3,006.6	1,743.6	1,559.8	183.77	9.488	
8,500.0	6,862.5	6,967.0	6,967.0	49.6	137.7	-91.30	1,737.9	3,006.6	1,652.2	1,465.9	186.37	8.866	
8,600.0	6,861.5	6,966.0	6,966.0	52.2	137.6	-91.21	1,737.9	3,006.6	1,562.0	1,373.0	188.99	8.265	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT BINDER 10-28 - 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
8,700.0	6,860.4	6,964.9	6,964.9	54.8	137.6	-91.13	1,737.9	3,006.6	1,473.0	1,281.3	191.63	7.687	
8,800.0	6,859.4	6,963.9	6,963.9	57.5	137.6	-91.04	1,737.9	3,006.6	1,385.4	1,191.2	194.28	7.131	
8,900.0	6,858.3	6,962.8	6,962.8	60.1	137.6	-90.95	1,737.9	3,006.6	1,299.7	1,102.8	196.95	6.599	
9,000.0	6,857.3	6,961.8	6,961.8	62.8	137.6	-90.87	1,737.9	3,006.6	1,216.2	1,016.6	199.63	6.092	
9,100.0	6,856.2	6,960.7	6,960.7	65.5	137.5	-90.78	1,737.9	3,006.6	1,135.3	933.0	202.31	5.612	
9,200.0	6,855.2	6,959.7	6,959.7	68.1	137.5	-90.69	1,737.9	3,006.6	1,057.8	852.7	205.01	5.160	
9,300.0	6,854.1	6,958.6	6,958.6	70.8	137.5	-90.61	1,737.9	3,006.6	984.2	776.5	207.71	4.738	
9,400.0	6,853.1	6,957.6	6,957.6	73.6	137.5	-90.52	1,737.9	3,006.6	915.7	705.3	210.42	4.352	
9,500.0	6,852.1	6,956.6	6,956.6	76.3	137.4	-90.43	1,737.9	3,006.6	853.5	640.3	213.14	4.004	
9,600.0	6,851.0	6,955.5	6,955.5	79.0	137.4	-90.35	1,737.9	3,006.6	798.9	583.0	215.86	3.701	
9,700.0	6,850.0	6,954.5	6,954.5	81.7	137.4	-90.26	1,737.9	3,006.6	753.7	535.1	218.59	3.448	
9,800.0	6,848.9	6,953.4	6,953.4	84.4	137.4	-90.17	1,737.9	3,006.6	719.6	498.3	221.32	3.252	
9,900.0	6,847.9	6,952.4	6,952.4	87.2	137.4	-90.09	1,737.9	3,006.6	698.4	474.3	224.05	3.117	
10,000.0	6,846.8	6,951.3	6,951.3	89.9	137.3	-90.00	1,737.9	3,006.6	691.0	464.3	226.79	3.047	
10,000.9	6,846.8	6,951.3	6,951.3	89.9	137.3	-90.00	1,737.9	3,006.6	691.0	464.2	226.81	3.047 CC, ES	
10,100.0	6,845.8	6,950.3	6,950.3	92.7	137.3	-89.91	1,737.9	3,006.6	698.1	468.6	229.53	3.042 SF	
10,200.0	6,844.7	6,949.2	6,949.2	95.4	137.3	-89.83	1,737.9	3,006.6	719.2	486.9	232.27	3.096	
10,300.0	6,843.7	6,948.2	6,948.2	98.2	137.3	-89.74	1,737.9	3,006.6	753.0	518.0	235.01	3.204	
10,400.0	6,842.7	6,947.2	6,947.2	100.9	137.3	-89.65	1,737.9	3,006.6	798.0	560.3	237.76	3.356	
10,500.0	6,841.6	6,946.1	6,946.1	103.7	137.2	-89.57	1,737.9	3,006.6	852.4	611.9	240.50	3.544	
10,600.0	6,840.6	6,945.1	6,945.1	106.4	137.2	-89.48	1,737.9	3,006.6	914.6	671.3	243.25	3.760	
10,700.0	6,839.5	6,944.0	6,944.0	109.2	137.2	-89.40	1,737.9	3,006.6	983.0	737.0	246.00	3.996	
10,800.0	6,838.5	6,943.0	6,943.0	112.0	137.2	-89.31	1,737.9	3,006.6	1,056.4	807.7	248.76	4.247	
10,900.0	6,837.4	6,941.9	6,941.9	114.7	137.2	-89.22	1,737.9	3,006.6	1,134.0	882.5	251.51	4.509	
11,000.0	6,836.4	6,940.9	6,940.9	117.5	137.1	-89.14	1,737.9	3,006.6	1,214.8	960.5	254.26	4.778	
11,100.0	6,835.4	6,939.9	6,939.9	120.3	137.1	-89.05	1,737.9	3,006.6	1,298.3	1,041.2	257.02	5.051	
11,200.0	6,834.3	6,938.8	6,938.8	123.0	137.1	-88.96	1,737.9	3,006.6	1,383.9	1,124.2	259.77	5.327	
11,300.0	6,833.3	6,937.8	6,937.8	125.8	137.1	-88.88	1,737.9	3,006.6	1,471.4	1,208.9	262.53	5.605	
11,400.0	6,832.2	6,936.7	6,936.7	128.6	137.0	-88.79	1,737.9	3,006.6	1,560.4	1,295.1	265.29	5.882	
11,500.0	6,831.2	6,935.7	6,935.7	131.4	137.0	-88.71	1,737.9	3,006.6	1,650.7	1,382.6	268.05	6.158	
11,600.0	6,830.2	6,934.7	6,934.7	134.1	137.0	-88.62	1,737.9	3,006.6	1,742.0	1,471.2	270.80	6.433	
11,700.0	6,829.1	6,933.6	6,933.6	136.9	137.0	-88.53	1,737.9	3,006.6	1,834.2	1,560.6	273.56	6.705	
11,800.0	6,828.1	6,932.6	6,932.6	139.7	137.0	-88.45	1,737.9	3,006.6	1,927.2	1,650.9	276.32	6.975	
11,900.0	6,827.0	6,931.5	6,931.5	142.5	136.9	-88.36	1,737.9	3,006.6	2,020.9	1,741.8	279.08	7.241	
11,999.0	6,826.0	6,930.5	6,930.5	145.2	136.9	-88.28	1,737.9	3,006.6	2,114.2	1,832.4	281.81	7.502	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT BINDER 15-28 - 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	
0.0	0.0	54.5	54.5	0.0	0.2	89.13	43.9	2,903.7	2,904.0				
100.0	100.0	154.5	154.5	0.1	1.8	89.13	43.9	2,903.7	2,904.0	2,902.2	1.89	1,539.697	
200.0	200.0	254.5	254.5	0.3	4.1	89.13	43.9	2,903.7	2,904.0	2,899.7	4.38	662.922	
300.0	300.0	354.5	354.5	0.5	6.1	89.13	43.9	2,903.7	2,904.0	2,897.4	6.66	435.936	
400.0	400.0	454.5	454.5	0.8	8.1	89.13	43.9	2,903.7	2,904.0	2,895.1	8.92	325.624	
500.0	500.0	554.5	554.5	1.0	10.2	89.13	43.9	2,903.7	2,904.0	2,892.9	11.17	260.069	
600.0	600.0	654.5	654.5	1.2	12.2	89.13	43.9	2,903.7	2,904.0	2,890.6	13.41	216.553	
700.0	700.0	754.5	754.5	1.4	14.2	105.76	43.9	2,903.7	2,904.5	2,888.9	15.65	185.598	
800.0	799.8	854.3	854.3	1.7	16.2	105.84	43.9	2,903.7	2,905.9	2,888.1	17.88	162.484	
900.0	899.5	954.0	954.0	1.9	18.2	105.95	43.9	2,903.7	2,908.3	2,888.2	20.12	144.542	
1,000.0	998.7	1,053.2	1,053.2	2.2	20.2	106.12	43.9	2,903.7	2,911.7	2,889.4	22.37	130.183	
1,100.0	1,097.5	1,152.0	1,152.0	2.5	22.2	106.32	43.9	2,903.7	2,916.1	2,891.5	24.63	118.411	
1,200.0	1,195.6	1,250.1	1,250.1	2.8	24.2	106.57	43.9	2,903.7	2,921.6	2,894.7	26.91	108.571	
1,228.9	1,223.8	1,278.3	1,278.3	2.9	24.8	106.65	43.9	2,903.7	2,923.4	2,895.9	27.57	106.021	
1,300.0	1,293.3	1,347.8	1,347.8	3.2	26.2	106.93	43.9	2,903.7	2,928.0	2,898.8	29.23	100.178	
1,400.0	1,390.9	1,445.4	1,445.4	3.6	28.1	107.33	43.9	2,903.7	2,934.6	2,903.0	31.57	92.959	
1,500.0	1,488.5	1,543.0	1,543.0	4.0	30.1	107.73	43.9	2,903.7	2,941.3	2,907.4	33.92	86.710	
1,600.0	1,586.1	1,640.6	1,640.6	4.4	32.0	108.12	43.9	2,903.7	2,948.1	2,911.8	36.28	81.257	
1,700.0	1,683.7	1,738.2	1,738.2	4.8	34.0	108.52	43.9	2,903.7	2,955.1	2,916.5	38.65	76.462	
1,800.0	1,781.3	1,835.8	1,835.8	5.3	36.0	108.91	43.9	2,903.7	2,962.3	2,921.2	41.02	72.218	
1,900.0	1,878.9	1,933.4	1,933.4	5.7	37.9	109.30	43.9	2,903.7	2,969.5	2,926.2	43.39	68.437	
2,000.0	1,976.5	2,031.0	2,031.0	6.1	39.9	109.68	43.9	2,903.7	2,977.0	2,931.2	45.76	65.049	
2,100.0	2,074.1	2,128.6	2,128.6	6.6	41.9	110.07	43.9	2,903.7	2,984.5	2,936.4	48.14	61.997	
2,200.0	2,171.7	2,226.2	2,226.2	7.0	43.8	110.45	43.9	2,903.7	2,992.2	2,941.7	50.51	59.235	
2,300.0	2,269.3	2,323.8	2,323.8	7.5	45.8	110.83	43.9	2,903.7	3,000.1	2,947.2	52.89	56.723	
2,400.0	2,366.9	2,421.4	2,421.4	7.9	47.7	111.21	43.9	2,903.7	3,008.1	2,952.8	55.26	54.430	
2,500.0	2,464.5	2,519.0	2,519.0	8.4	49.7	111.59	43.9	2,903.7	3,016.2	2,958.5	57.64	52.330	
2,600.0	2,562.1	2,616.6	2,616.6	8.9	51.7	111.97	43.9	2,903.7	3,024.4	2,964.4	60.01	50.398	
2,700.0	2,659.7	2,714.2	2,714.2	9.3	53.6	112.34	43.9	2,903.7	3,032.8	2,970.4	62.38	48.617	
2,800.0	2,757.3	2,811.8	2,811.8	9.8	55.6	112.71	43.9	2,903.7	3,041.3	2,976.6	64.75	46.968	
2,900.0	2,854.9	2,909.4	2,909.4	10.2	57.6	113.08	43.9	2,903.7	3,050.0	2,982.8	67.12	45.440	
3,000.0	2,952.5	3,007.0	3,007.0	10.7	59.5	113.45	43.9	2,903.7	3,058.7	2,989.3	69.49	44.018	
3,100.0	3,050.1	3,104.6	3,104.6	11.1	61.5	113.81	43.9	2,903.7	3,067.7	2,995.8	71.85	42.693	
3,200.0	3,147.7	3,202.2	3,202.2	11.6	63.5	114.18	43.9	2,903.7	3,076.7	3,002.5	74.22	41.455	
3,300.0	3,245.3	3,299.8	3,299.8	12.1	65.4	114.54	43.9	2,903.7	3,085.9	3,009.3	76.58	40.295	
3,400.0	3,342.9	3,397.4	3,397.4	12.5	67.4	114.90	43.9	2,903.7	3,095.1	3,016.2	78.94	39.208	
3,500.0	3,440.5	3,495.0	3,495.0	13.0	69.3	115.26	43.9	2,903.7	3,104.6	3,023.3	81.30	38.187	
3,600.0	3,538.1	3,592.6	3,592.6	13.4	71.3	115.61	43.9	2,903.7	3,114.1	3,030.4	83.66	37.225	
3,700.0	3,635.7	3,690.2	3,690.2	13.9	73.3	115.96	43.9	2,903.7	3,123.8	3,037.7	86.01	36.318	
3,800.0	3,733.3	3,787.8	3,787.8	14.4	75.2	116.32	43.9	2,903.7	3,133.5	3,045.2	88.36	35.462	
3,900.0	3,830.9	3,885.4	3,885.4	14.8	77.2	116.66	43.9	2,903.7	3,143.4	3,052.7	90.72	34.652	
4,000.0	3,928.5	3,983.0	3,983.0	15.3	79.2	117.01	43.9	2,903.7	3,153.5	3,060.4	93.06	33.885	
4,100.0	4,026.1	4,080.6	4,080.6	15.7	81.1	117.36	43.9	2,903.7	3,163.6	3,068.2	95.41	33.158	
4,200.0	4,123.7	4,178.2	4,178.2	16.2	83.1	117.70	43.9	2,903.7	3,173.9	3,076.1	97.76	32.467	
4,300.0	4,221.3	4,275.8	4,275.8	16.7	85.0	118.04	43.9	2,903.7	3,184.2	3,084.1	100.10	31.811	
4,400.0	4,318.9	4,373.4	4,373.4	17.1	87.0	118.38	43.9	2,903.7	3,194.7	3,092.3	102.44	31.186	
4,500.0	4,416.5	4,471.0	4,471.0	17.6	89.0	118.71	43.9	2,903.7	3,205.3	3,100.5	104.78	30.591	
4,600.0	4,514.1	4,568.6	4,568.6	18.1	90.9	119.05	43.9	2,903.7	3,216.0	3,108.9	107.11	30.024	
4,700.0	4,611.7	4,666.2	4,666.2	18.5	92.9	119.38	43.9	2,903.7	3,226.9	3,117.4	109.45	29.483	
4,800.0	4,709.3	4,763.8	4,763.8	19.0	94.9	119.71	43.9	2,903.7	3,237.8	3,126.0	111.78	28.965	
4,900.0	4,806.9	4,861.4	4,861.4	19.4	96.8	120.04	43.9	2,903.7	3,248.8	3,134.7	114.11	28.471	
5,000.0	4,904.5	4,959.0	4,959.0	19.9	98.8	120.36	43.9	2,903.7	3,260.0	3,143.6	116.44	27.997	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	5,056.6	5,056.6	20.4	100.7	120.69	43.9	2,903.7	3,271.3	3,152.5	118.77	27.544	
5,200.0	5,099.7	5,154.2	5,154.2	20.8	102.7	121.01	43.9	2,903.7	3,282.6	3,161.5	121.09	27.109	
5,300.0	5,197.3	5,251.8	5,251.8	21.3	104.7	121.33	43.9	2,903.7	3,294.1	3,170.7	123.41	26.692	
5,400.0	5,294.9	5,349.4	5,349.4	21.8	106.6	121.64	43.9	2,903.7	3,305.7	3,179.9	125.73	26.291	
5,500.0	5,392.5	5,447.0	5,447.0	22.2	108.6	121.96	43.9	2,903.7	3,317.3	3,189.3	128.05	25.906	
5,600.0	5,490.1	5,544.6	5,544.6	22.7	110.6	122.27	43.9	2,903.7	3,329.1	3,198.8	130.37	25.537	
5,614.2	5,504.0	5,558.5	5,558.5	22.7	110.8	122.31	43.9	2,903.7	3,330.8	3,200.1	130.70	25.485	
5,700.0	5,587.9	5,642.4	5,642.4	23.1	112.5	122.72	43.9	2,903.7	3,340.3	3,207.5	132.81	25.151	
5,800.0	5,686.4	5,740.9	5,740.9	23.4	114.5	123.13	43.9	2,903.7	3,349.7	3,214.5	135.20	24.775	
5,900.0	5,785.5	5,840.0	5,840.0	23.7	116.5	123.45	43.9	2,903.7	3,357.3	3,219.7	137.55	24.407	
6,000.0	5,885.0	5,939.5	5,939.5	23.9	118.5	123.69	43.9	2,903.7	3,362.9	3,223.1	139.85	24.046	
6,100.0	5,984.7	6,039.2	6,039.2	24.1	120.5	123.84	43.9	2,903.7	3,366.7	3,224.6	142.09	23.694	
6,200.0	6,084.7	6,139.2	6,139.2	24.2	122.5	123.92	43.9	2,903.7	3,368.5	3,224.2	144.26	23.350	
6,243.1	6,127.8	6,182.3	6,182.3	24.3	123.4	107.32	43.9	2,903.7	3,368.7	3,226.6	142.07	23.712	
6,273.1	6,157.8	6,212.3	6,212.3	24.3	124.0	107.32	43.9	2,903.7	3,368.7	3,226.0	142.72	23.604	
6,300.0	6,184.7	6,239.2	6,239.2	24.3	124.5	17.34	43.9	2,903.7	3,368.2	3,221.9	146.26	23.029	
6,350.0	6,234.5	6,289.0	6,289.0	24.4	125.5	17.44	43.9	2,903.7	3,364.8	3,218.2	146.58	22.955	
6,400.0	6,284.0	6,338.5	6,338.5	24.4	126.5	17.64	43.9	2,903.7	3,358.0	3,211.8	146.22	22.965	
6,450.0	6,332.9	6,387.4	6,387.4	24.4	127.5	17.94	43.9	2,903.7	3,348.0	3,202.8	145.20	23.058	
6,500.0	6,380.9	6,435.4	6,435.4	24.4	128.5	18.36	43.9	2,903.7	3,334.7	3,191.2	143.51	23.237	
6,550.0	6,427.8	6,482.3	6,482.3	24.4	129.4	18.90	43.9	2,903.7	3,318.3	3,177.1	141.18	23.503	
6,600.0	6,473.5	6,528.0	6,528.0	24.4	130.3	19.57	43.9	2,903.7	3,298.8	3,160.5	138.26	23.859	
6,650.0	6,517.5	6,572.0	6,572.0	24.4	131.2	20.40	43.9	2,903.7	3,276.3	3,141.5	134.80	24.305	
6,700.0	6,559.9	6,614.4	6,614.4	24.4	132.1	21.40	43.9	2,903.7	3,251.0	3,120.1	130.89	24.837	
6,750.0	6,600.2	6,654.7	6,654.7	24.4	132.9	22.61	43.9	2,903.7	3,223.0	3,096.3	126.67	25.444	
6,800.0	6,638.4	6,692.9	6,692.9	24.3	133.7	24.06	43.9	2,903.7	3,192.3	3,070.0	122.31	26.101	
6,850.0	6,674.3	6,728.8	6,728.8	24.3	134.4	25.79	43.9	2,903.7	3,159.3	3,041.3	118.06	26.760	
6,900.0	6,707.6	6,762.1	6,762.1	24.3	135.0	27.88	43.9	2,903.7	3,124.0	3,009.8	114.27	27.340	
6,950.0	6,738.3	6,792.8	6,792.8	24.3	135.7	30.40	43.9	2,903.7	3,086.7	2,975.3	111.37	27.714	
7,000.0	6,766.2	6,820.7	6,820.7	24.3	136.2	33.45	43.9	2,903.7	3,047.4	2,937.5	109.94	27.719	
7,050.0	6,791.0	6,845.5	6,845.5	24.3	136.7	37.15	43.9	2,903.7	3,006.5	2,895.9	110.59	27.186	
7,100.0	6,812.8	6,867.3	6,867.3	24.3	137.2	41.65	43.9	2,903.7	2,964.2	2,850.3	113.87	26.031	
7,150.0	6,831.4	6,885.9	6,885.9	24.3	137.5	47.12	43.9	2,903.7	2,920.5	2,800.5	120.07	24.323	
7,200.0	6,846.8	6,901.3	6,901.3	24.4	137.8	53.72	43.9	2,903.7	2,875.9	2,747.0	128.93	22.306	
7,250.0	6,858.7	6,913.2	6,913.2	24.5	138.1	61.55	43.9	2,903.7	2,830.4	2,691.0	139.43	20.300	
7,300.0	6,867.3	6,921.8	6,921.8	24.7	138.3	70.52	43.9	2,903.7	2,784.4	2,634.7	149.74	18.595	
7,350.0	6,872.4	6,926.9	6,926.9	25.0	138.4	80.32	43.9	2,903.7	2,738.1	2,580.5	157.60	17.374	
7,400.0	6,874.0	6,928.5	6,928.5	25.4	138.4	90.38	43.9	2,903.7	2,691.7	2,530.4	161.25	16.693	
7,405.6	6,874.0	6,928.5	6,928.5	25.5	138.4	91.49	43.9	2,903.7	2,686.5	2,525.1	161.36	16.649	
7,500.0	6,873.0	6,927.5	6,927.5	26.7	138.4	91.43	43.9	2,903.7	2,599.2	2,436.0	163.13	15.933	
7,600.0	6,871.9	6,926.4	6,926.4	28.4	138.4	91.37	43.9	2,903.7	2,507.2	2,342.0	165.17	15.179	
7,700.0	6,870.9	6,925.4	6,925.4	30.4	138.3	91.31	43.9	2,903.7	2,415.9	2,248.6	167.34	14.437	
7,800.0	6,869.8	6,924.3	6,924.3	32.5	138.3	91.25	43.9	2,903.7	2,325.3	2,155.7	169.60	13.710	
7,900.0	6,868.8	6,923.3	6,923.3	34.8	138.3	91.19	43.9	2,903.7	2,235.5	2,063.6	171.95	13.001	
8,000.0	6,867.7	6,922.2	6,922.2	37.1	138.3	91.13	43.9	2,903.7	2,146.6	1,972.2	174.35	12.312	
8,100.0	6,866.7	6,921.2	6,921.2	39.5	138.2	91.07	43.9	2,903.7	2,058.7	1,881.9	176.81	11.643	
8,200.0	6,865.6	6,920.1	6,920.1	42.0	138.2	91.01	43.9	2,903.7	1,972.0	1,792.7	179.32	10.997	
8,300.0	6,864.6	6,919.1	6,919.1	44.5	138.2	90.95	43.9	2,903.7	1,886.6	1,704.7	181.85	10.374	
8,400.0	6,863.6	6,918.1	6,918.1	47.0	138.2	90.89	43.9	2,903.7	1,802.7	1,618.3	184.42	9.775	
8,500.0	6,862.5	6,917.0	6,917.0	49.6	138.2	90.83	43.9	2,903.7	1,720.5	1,533.5	187.01	9.200	
8,600.0	6,861.5	6,916.0	6,916.0	52.2	138.1	90.78	43.9	2,903.7	1,640.3	1,450.7	189.62	8.651	
8,700.0	6,860.4	6,914.9	6,914.9	54.8	138.1	90.72	43.9	2,903.7	1,562.4	1,370.1	192.25	8.127	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT BINDER 15-28 - 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
8,800.0	6,859.4	6,913.9	6,913.9	57.5	138.1	90.66	43.9	2,903.7	1,487.1	1,292.2	194.89	7.630	
8,900.0	6,858.3	6,912.8	6,912.8	60.1	138.1	90.60	43.9	2,903.7	1,414.9	1,217.3	197.55	7.162	
9,000.0	6,857.3	6,911.8	6,911.8	62.8	138.1	90.54	43.9	2,903.7	1,346.2	1,146.0	200.21	6.724	
9,100.0	6,856.2	6,910.7	6,910.7	65.5	138.0	90.48	43.9	2,903.7	1,281.7	1,078.8	202.89	6.317	
9,200.0	6,855.2	6,909.7	6,909.7	68.1	138.0	90.42	43.9	2,903.7	1,221.9	1,016.4	205.58	5.944	
9,300.0	6,854.1	6,908.6	6,908.6	70.8	138.0	90.36	43.9	2,903.7	1,167.7	959.4	208.27	5.607	
9,400.0	6,853.1	6,907.6	6,907.6	73.6	138.0	90.30	43.9	2,903.7	1,119.8	908.8	210.97	5.308	
9,500.0	6,852.1	6,906.6	6,906.6	76.3	138.0	90.24	43.9	2,903.7	1,079.1	865.4	213.68	5.050	
9,600.0	6,851.0	6,905.5	6,905.5	79.0	137.9	90.18	43.9	2,903.7	1,046.3	829.9	216.39	4.835	
9,700.0	6,850.0	6,904.5	6,904.5	81.7	137.9	90.12	43.9	2,903.7	1,022.4	803.2	219.11	4.666	
9,800.0	6,848.9	6,903.4	6,903.4	84.4	137.9	90.06	43.9	2,903.7	1,007.8	786.0	221.83	4.543	
9,898.0	6,847.9	6,902.4	6,902.4	87.1	137.9	90.00	43.9	2,903.7	1,003.0	778.5	224.50	4.468	CC
9,900.0	6,847.9	6,902.4	6,902.4	87.2	137.9	90.00	43.9	2,903.7	1,003.0	778.5	224.56	4.467	ES
10,000.0	6,846.8	6,901.3	6,901.3	89.9	137.8	89.94	43.9	2,903.7	1,008.2	780.9	227.29	4.436	SF
10,100.0	6,845.8	6,900.3	6,900.3	92.7	137.8	89.88	43.9	2,903.7	1,023.2	793.1	230.02	4.448	
10,200.0	6,844.7	6,899.2	6,899.2	95.4	137.8	89.82	43.9	2,903.7	1,047.5	814.7	232.75	4.500	
10,300.0	6,843.7	6,898.2	6,898.2	98.2	137.8	89.76	43.9	2,903.7	1,080.6	845.1	235.49	4.589	
10,400.0	6,842.7	6,897.2	6,897.2	100.9	137.8	89.70	43.9	2,903.7	1,121.6	883.4	238.23	4.708	
10,500.0	6,841.6	6,896.1	6,896.1	103.7	137.7	89.64	43.9	2,903.7	1,169.8	928.8	240.97	4.854	
10,600.0	6,840.6	6,895.1	6,895.1	106.4	137.7	89.58	43.9	2,903.7	1,224.3	980.6	243.72	5.023	
10,700.0	6,839.5	6,894.0	6,894.0	109.2	137.7	89.52	43.9	2,903.7	1,284.2	1,037.8	246.46	5.211	
10,800.0	6,838.5	6,893.0	6,893.0	112.0	137.7	89.46	43.9	2,903.7	1,348.9	1,099.7	249.21	5.413	
10,900.0	6,837.4	6,891.9	6,891.9	114.7	137.7	89.40	43.9	2,903.7	1,417.7	1,165.8	251.96	5.627	
11,000.0	6,836.4	6,890.9	6,890.9	117.5	137.6	89.34	43.9	2,903.7	1,490.1	1,235.4	254.71	5.850	
11,100.0	6,835.4	6,889.9	6,889.9	120.3	137.6	89.28	43.9	2,903.7	1,565.5	1,308.0	257.46	6.081	
11,200.0	6,834.3	6,888.8	6,888.8	123.0	137.6	89.23	43.9	2,903.7	1,643.5	1,383.3	260.21	6.316	
11,300.0	6,833.3	6,887.8	6,887.8	125.8	137.6	89.17	43.9	2,903.7	1,723.8	1,460.8	262.97	6.555	
11,400.0	6,832.2	6,886.7	6,886.7	128.6	137.6	89.11	43.9	2,903.7	1,806.1	1,540.4	265.72	6.797	
11,500.0	6,831.2	6,885.7	6,885.7	131.4	137.5	89.05	43.9	2,903.7	1,890.0	1,621.6	268.48	7.040	
11,600.0	6,830.2	6,884.7	6,884.7	134.1	137.5	88.99	43.9	2,903.7	1,975.5	1,704.3	271.23	7.284	
11,700.0	6,829.1	6,883.6	6,883.6	136.9	137.5	88.93	43.9	2,903.7	2,062.3	1,788.3	273.99	7.527	
11,800.0	6,828.1	6,882.6	6,882.6	139.7	137.5	88.87	43.9	2,903.7	2,150.2	1,873.5	276.74	7.770	
11,900.0	6,827.0	6,881.5	6,881.5	142.5	137.4	88.81	43.9	2,903.7	2,239.1	1,959.6	279.50	8.011	
11,999.0	6,826.0	6,880.5	6,880.5	145.2	137.4	88.75	43.9	2,903.7	2,328.1	2,045.9	282.23	8.249	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	34.5	34.5	0.0	0.2	87.06	229.9	4,475.4	4,481.3				
100.0	100.0	134.5	134.5	0.1	1.5	87.06	229.9	4,475.4	4,481.3	4,479.6	1.62	2,760.032	
200.0	200.0	234.5	234.5	0.3	3.8	87.06	229.9	4,475.4	4,481.3	4,477.1	4.15	1,079.786	
300.0	300.0	334.5	334.5	0.5	5.9	87.06	229.9	4,475.4	4,481.3	4,474.8	6.44	695.551	
400.0	400.0	434.5	434.5	0.8	7.9	87.06	229.9	4,475.4	4,481.3	4,472.6	8.70	514.815	
500.0	500.0	534.5	534.5	1.0	10.0	87.06	229.9	4,475.4	4,481.3	4,470.3	10.96	409.042	
600.0	600.0	634.5	634.5	1.2	12.0	87.06	229.9	4,475.4	4,481.3	4,468.1	13.20	339.460	
700.0	700.0	734.5	734.5	1.4	14.0	103.68	229.9	4,475.4	4,481.7	4,466.2	15.44	290.231	
800.0	799.8	834.3	834.3	1.7	16.0	103.72	229.9	4,475.4	4,482.9	4,465.2	17.68	253.582	
900.0	899.5	934.0	934.0	1.9	18.0	103.79	229.9	4,475.4	4,485.0	4,465.1	19.92	225.182	
1,000.0	998.7	1,033.2	1,033.2	2.2	20.0	103.88	229.9	4,475.4	4,487.9	4,465.8	22.17	202.470	
1,100.0	1,097.5	1,132.0	1,132.0	2.5	22.0	104.00	229.9	4,475.4	4,491.7	4,467.3	24.43	183.848	
1,200.0	1,195.6	1,230.1	1,230.1	2.8	24.0	104.14	229.9	4,475.4	4,496.5	4,469.7	26.72	168.268	
1,228.9	1,223.8	1,258.3	1,258.3	2.9	24.6	104.18	229.9	4,475.4	4,498.0	4,470.6	27.39	164.228	
1,300.0	1,293.3	1,327.8	1,327.8	3.2	25.9	104.37	229.9	4,475.4	4,501.9	4,472.9	29.05	154.988	
1,400.0	1,390.9	1,425.4	1,425.4	3.6	27.9	104.63	229.9	4,475.4	4,507.5	4,476.1	31.39	143.578	
1,500.0	1,488.5	1,523.0	1,523.0	4.0	29.9	104.89	229.9	4,475.4	4,513.2	4,479.4	33.75	133.708	
1,600.0	1,586.1	1,620.6	1,620.6	4.4	31.8	105.15	229.9	4,475.4	4,518.9	4,482.8	36.12	125.098	
1,700.0	1,683.7	1,718.2	1,718.2	4.8	33.8	105.41	229.9	4,475.4	4,524.8	4,486.3	38.50	117.532	
1,800.0	1,781.3	1,815.8	1,815.8	5.3	35.8	105.67	229.9	4,475.4	4,530.8	4,489.9	40.88	110.835	
1,900.0	1,878.9	1,913.4	1,913.4	5.7	37.7	105.93	229.9	4,475.4	4,536.8	4,493.6	43.26	104.869	
2,000.0	1,976.5	2,011.0	2,011.0	6.1	39.7	106.19	229.9	4,475.4	4,543.0	4,497.3	45.65	99.524	
2,100.0	2,074.1	2,108.6	2,108.6	6.6	41.7	106.45	229.9	4,475.4	4,549.2	4,501.2	48.03	94.708	
2,200.0	2,171.7	2,206.2	2,206.2	7.0	43.6	106.70	229.9	4,475.4	4,555.6	4,505.2	50.42	90.348	
2,300.0	2,269.3	2,303.8	2,303.8	7.5	45.6	106.96	229.9	4,475.4	4,562.0	4,509.2	52.81	86.383	
2,400.0	2,366.9	2,401.4	2,401.4	7.9	47.5	107.22	229.9	4,475.4	4,568.6	4,513.4	55.20	82.762	
2,500.0	2,464.5	2,499.0	2,499.0	8.4	49.5	107.47	229.9	4,475.4	4,575.2	4,517.6	57.59	79.444	
2,600.0	2,562.1	2,596.6	2,596.6	8.9	51.5	107.72	229.9	4,475.4	4,582.0	4,522.0	59.98	76.391	
2,700.0	2,659.7	2,694.2	2,694.2	9.3	53.4	107.98	229.9	4,475.4	4,588.8	4,526.4	62.37	73.574	
2,800.0	2,757.3	2,791.8	2,791.8	9.8	55.4	108.23	229.9	4,475.4	4,595.7	4,530.9	64.76	70.967	
2,900.0	2,854.9	2,889.4	2,889.4	10.2	57.4	108.48	229.9	4,475.4	4,602.7	4,535.6	67.15	68.547	
3,000.0	2,952.5	2,987.0	2,987.0	10.7	59.3	108.73	229.9	4,475.4	4,609.8	4,540.3	69.53	66.296	
3,100.0	3,050.1	3,084.6	3,084.6	11.1	61.3	108.98	229.9	4,475.4	4,617.0	4,545.1	71.92	64.195	
3,200.0	3,147.7	3,182.2	3,182.2	11.6	63.3	109.23	229.9	4,475.4	4,624.3	4,550.0	74.31	62.232	
3,300.0	3,245.3	3,279.8	3,279.8	12.1	65.2	109.48	229.9	4,475.4	4,631.7	4,555.0	76.69	60.393	
3,400.0	3,342.9	3,377.4	3,377.4	12.5	67.2	109.73	229.9	4,475.4	4,639.1	4,560.0	79.08	58.666	
3,500.0	3,440.5	3,475.0	3,475.0	13.0	69.1	109.98	229.9	4,475.4	4,646.7	4,565.2	81.46	57.042	
3,600.0	3,538.1	3,572.6	3,572.6	13.4	71.1	110.22	229.9	4,475.4	4,654.3	4,570.5	83.84	55.513	
3,700.0	3,635.7	3,670.2	3,670.2	13.9	73.1	110.47	229.9	4,475.4	4,662.1	4,575.8	86.22	54.069	
3,800.0	3,733.3	3,767.8	3,767.8	14.4	75.0	110.72	229.9	4,475.4	4,669.9	4,581.3	88.60	52.705	
3,900.0	3,830.9	3,865.4	3,865.4	14.8	77.0	110.96	229.9	4,475.4	4,677.8	4,586.8	90.98	51.414	
4,000.0	3,928.5	3,963.0	3,963.0	15.3	79.0	111.20	229.9	4,475.4	4,685.8	4,592.4	93.36	50.190	
4,100.0	4,026.1	4,060.6	4,060.6	15.7	80.9	111.45	229.9	4,475.4	4,693.9	4,598.1	95.74	49.028	
4,200.0	4,123.7	4,158.2	4,158.2	16.2	82.9	111.69	229.9	4,475.4	4,702.1	4,603.9	98.11	47.924	
4,300.0	4,221.3	4,255.8	4,255.8	16.7	84.8	111.93	229.9	4,475.4	4,710.3	4,609.8	100.49	46.874	
4,400.0	4,318.9	4,353.4	4,353.4	17.1	86.8	112.17	229.9	4,475.4	4,718.7	4,615.8	102.86	45.873	
4,500.0	4,416.5	4,451.0	4,451.0	17.6	88.8	112.41	229.9	4,475.4	4,727.1	4,621.9	105.24	44.919	
4,600.0	4,514.1	4,548.6	4,548.6	18.1	90.7	112.65	229.9	4,475.4	4,735.6	4,628.0	107.61	44.009	
4,700.0	4,611.7	4,646.2	4,646.2	18.5	92.7	112.89	229.9	4,475.4	4,744.2	4,634.2	109.98	43.139	
4,800.0	4,709.3	4,743.8	4,743.8	19.0	94.7	113.12	229.9	4,475.4	4,752.9	4,640.6	112.34	42.307	
4,900.0	4,806.9	4,841.4	4,841.4	19.4	96.6	113.36	229.9	4,475.4	4,761.7	4,647.0	114.71	41.510	
5,000.0	4,904.5	4,939.0	4,939.0	19.9	98.6	113.59	229.9	4,475.4	4,770.5	4,653.4	117.08	40.747	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT BINDER 16-28 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	5,036.6	5,036.6	20.4	100.5	113.83	229.9	4,475.4	4,779.5	4,660.0	119.44	40.015	
5,200.0	5,099.7	5,134.2	5,134.2	20.8	102.5	114.06	229.9	4,475.4	4,788.5	4,666.7	121.80	39.313	
5,300.0	5,197.3	5,231.8	5,231.8	21.3	104.5	114.29	229.9	4,475.4	4,797.6	4,673.4	124.17	38.638	
5,400.0	5,294.9	5,329.4	5,329.4	21.8	106.4	114.53	229.9	4,475.4	4,806.8	4,680.2	126.53	37.990	
5,500.0	5,392.5	5,427.0	5,427.0	22.2	108.4	114.76	229.9	4,475.4	4,816.0	4,687.1	128.89	37.366	
5,600.0	5,490.1	5,524.6	5,524.6	22.7	110.4	114.99	229.9	4,475.4	4,825.4	4,694.1	131.24	36.766	
5,614.2	5,504.0	5,538.5	5,538.5	22.7	110.6	115.02	229.9	4,475.4	4,826.7	4,695.1	131.58	36.683	
5,700.0	5,587.9	5,622.4	5,622.4	23.1	112.3	115.34	229.9	4,475.4	4,834.2	4,700.6	133.66	36.168	
5,800.0	5,686.4	5,720.9	5,720.9	23.4	114.3	115.66	229.9	4,475.4	4,841.7	4,705.7	136.01	35.597	
5,900.0	5,785.5	5,820.0	5,820.0	23.7	116.3	115.91	229.9	4,475.4	4,847.7	4,709.4	138.33	35.045	
6,000.0	5,885.0	5,919.5	5,919.5	23.9	118.3	116.10	229.9	4,475.4	4,852.2	4,711.6	140.60	34.511	
6,100.0	5,984.7	6,019.2	6,019.2	24.1	120.3	116.22	229.9	4,475.4	4,855.2	4,712.4	142.82	33.995	
6,200.0	6,084.7	6,119.2	6,119.2	24.2	122.3	116.28	229.9	4,475.4	4,856.6	4,711.6	144.98	33.497	
6,243.1	6,127.8	6,162.3	6,162.3	24.3	123.2	99.68	229.9	4,475.4	4,856.8	4,716.0	140.73	34.511	
6,273.1	6,157.8	6,192.3	6,192.3	24.3	123.8	99.68	229.9	4,475.4	4,856.8	4,715.4	141.38	34.352	
6,300.0	6,184.7	6,219.2	6,219.2	24.3	124.3	9.69	229.9	4,475.4	4,856.3	4,709.3	146.98	33.039	
6,350.0	6,234.5	6,269.0	6,269.0	24.4	125.3	9.75	229.9	4,475.4	4,852.7	4,705.4	147.27	32.950	
6,400.0	6,284.0	6,318.5	6,318.5	24.4	126.3	9.86	229.9	4,475.4	4,845.7	4,698.9	146.85	32.998	
6,450.0	6,332.9	6,367.4	6,367.4	24.4	127.3	10.03	229.9	4,475.4	4,835.3	4,689.6	145.70	33.187	
6,500.0	6,380.9	6,415.4	6,415.4	24.4	128.3	10.26	229.9	4,475.4	4,821.6	4,677.8	143.83	33.523	
6,550.0	6,427.8	6,462.3	6,462.3	24.4	129.2	10.55	229.9	4,475.4	4,804.7	4,663.4	141.25	34.016	
6,600.0	6,473.5	6,508.0	6,508.0	24.4	130.1	10.93	229.9	4,475.4	4,784.5	4,646.5	137.96	34.680	
6,650.0	6,517.5	6,552.0	6,552.0	24.4	131.0	11.39	229.9	4,475.4	4,761.3	4,627.3	134.00	35.531	
6,700.0	6,559.9	6,594.4	6,594.4	24.4	131.9	11.95	229.9	4,475.4	4,735.1	4,605.7	129.41	36.589	
6,750.0	6,600.2	6,634.7	6,634.7	24.4	132.7	12.63	229.9	4,475.4	4,706.0	4,581.8	124.25	37.874	
6,800.0	6,638.4	6,672.9	6,672.9	24.3	133.5	13.47	229.9	4,475.4	4,674.3	4,555.7	118.61	39.408	
6,850.0	6,674.3	6,708.8	6,708.8	24.3	134.2	14.48	229.9	4,475.4	4,640.0	4,527.4	112.62	41.202	
6,900.0	6,707.6	6,742.1	6,742.1	24.3	134.8	15.72	229.9	4,475.4	4,603.4	4,496.9	106.46	43.242	
6,950.0	6,738.3	6,772.8	6,772.8	24.3	135.5	17.26	229.9	4,475.4	4,564.5	4,464.1	100.42	45.454	
7,000.0	6,766.2	6,800.7	6,800.7	24.3	136.0	19.19	229.9	4,475.4	4,523.7	4,428.7	94.95	47.642	
7,050.0	6,791.0	6,825.5	6,825.5	24.3	136.5	21.65	229.9	4,475.4	4,481.0	4,390.3	90.73	49.389	
7,100.0	6,812.8	6,847.3	6,847.3	24.3	137.0	24.86	229.9	4,475.4	4,436.8	4,348.0	88.77	49.980	
7,150.0	6,831.4	6,865.9	6,865.9	24.3	137.3	29.15	229.9	4,475.4	4,391.2	4,300.8	90.46	48.544	
7,200.0	6,846.8	6,881.3	6,881.3	24.4	137.6	35.03	229.9	4,475.4	4,344.5	4,247.1	97.39	44.608	
7,250.0	6,858.7	6,893.2	6,893.2	24.5	137.9	43.32	229.9	4,475.4	4,296.8	4,186.0	110.85	38.764	
7,300.0	6,867.3	6,901.8	6,901.8	24.7	138.1	55.13	229.9	4,475.4	4,248.5	4,118.0	130.41	32.577	
7,350.0	6,872.4	6,906.9	6,906.9	25.0	138.2	71.30	229.9	4,475.4	4,199.7	4,048.7	150.96	27.820	
7,400.0	6,874.0	6,908.5	6,908.5	25.4	138.2	90.75	229.9	4,475.4	4,150.7	3,989.6	161.05	25.772	
7,405.6	6,874.0	6,908.5	6,908.5	25.5	138.2	92.98	229.9	4,475.4	4,145.2	3,984.1	161.08	25.733	
7,500.0	6,873.0	6,907.5	6,907.5	26.7	138.2	92.91	229.9	4,475.4	4,052.7	3,889.8	162.86	24.884	
7,600.0	6,871.9	6,906.4	6,906.4	28.4	138.1	92.84	229.9	4,475.4	3,954.8	3,789.9	164.90	23.982	
7,700.0	6,870.9	6,905.4	6,905.4	30.4	138.1	92.77	229.9	4,475.4	3,857.0	3,689.9	167.07	23.086	
7,800.0	6,869.8	6,904.3	6,904.3	32.5	138.1	92.69	229.9	4,475.4	3,759.3	3,590.0	169.34	22.200	
7,900.0	6,868.8	6,903.3	6,903.3	34.8	138.1	92.62	229.9	4,475.4	3,661.8	3,490.1	171.68	21.329	
8,000.0	6,867.7	6,902.2	6,902.2	37.1	138.1	92.54	229.9	4,475.4	3,564.4	3,390.3	174.09	20.474	
8,100.0	6,866.7	6,901.2	6,901.2	39.5	138.0	92.47	229.9	4,475.4	3,467.1	3,290.6	176.56	19.638	
8,200.0	6,865.6	6,900.1	6,900.1	42.0	138.0	92.40	229.9	4,475.4	3,370.0	3,191.0	179.06	18.821	
8,300.0	6,864.6	6,899.1	6,899.1	44.5	138.0	92.32	229.9	4,475.4	3,273.1	3,091.5	181.60	18.024	
8,400.0	6,863.6	6,898.1	6,898.1	47.0	138.0	92.25	229.9	4,475.4	3,176.4	2,992.2	184.17	17.247	
8,500.0	6,862.5	6,897.0	6,897.0	49.6	138.0	92.18	229.9	4,475.4	3,079.9	2,893.1	186.76	16.491	
8,600.0	6,861.5	6,896.0	6,896.0	52.2	137.9	92.10	229.9	4,475.4	2,983.6	2,794.2	189.38	15.755	
8,700.0	6,860.4	6,894.9	6,894.9	54.8	137.9	92.03	229.9	4,475.4	2,887.5	2,695.5	192.01	15.039	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT BINDER 16-28 - 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	
8,800.0	6,859.4	6,893.9	6,893.9	57.5	137.9	91.96	229.9	4,475.4	2,791.8	2,597.1	194.65	14.342	
8,900.0	6,858.3	6,892.8	6,892.8	60.1	137.9	91.88	229.9	4,475.4	2,696.3	2,499.0	197.31	13.665	
9,000.0	6,857.3	6,891.8	6,891.8	62.8	137.9	91.81	229.9	4,475.4	2,601.2	2,401.2	199.99	13.007	
9,100.0	6,856.2	6,890.7	6,890.7	65.5	137.8	91.74	229.9	4,475.4	2,506.5	2,303.8	202.67	12.367	
9,200.0	6,855.2	6,889.7	6,889.7	68.1	137.8	91.66	229.9	4,475.4	2,412.1	2,206.8	205.36	11.746	
9,300.0	6,854.1	6,888.6	6,888.6	70.8	137.8	91.59	229.9	4,475.4	2,318.3	2,110.2	208.06	11.143	
9,400.0	6,853.1	6,887.6	6,887.6	73.6	137.8	91.52	229.9	4,475.4	2,225.0	2,014.2	210.76	10.557	
9,500.0	6,852.1	6,886.6	6,886.6	76.3	137.7	91.44	229.9	4,475.4	2,132.3	1,918.8	213.47	9.989	
9,600.0	6,851.0	6,885.5	6,885.5	79.0	137.7	91.37	229.9	4,475.4	2,040.3	1,824.1	216.19	9.438	
9,700.0	6,850.0	6,884.5	6,884.5	81.7	137.7	91.30	229.9	4,475.4	1,949.1	1,730.2	218.91	8.904	
9,800.0	6,848.9	6,883.4	6,883.4	84.4	137.7	91.22	229.9	4,475.4	1,858.8	1,637.1	221.64	8.387	
9,900.0	6,847.9	6,882.4	6,882.4	87.2	137.7	91.15	229.9	4,475.4	1,769.5	1,545.1	224.37	7.887	
10,000.0	6,846.8	6,881.3	6,881.3	89.9	137.6	91.08	229.9	4,475.4	1,681.4	1,454.3	227.10	7.404	
10,100.0	6,845.8	6,880.3	6,880.3	92.7	137.6	91.00	229.9	4,475.4	1,594.8	1,364.9	229.84	6.939	
10,200.0	6,844.7	6,879.2	6,879.2	95.4	137.6	90.93	229.9	4,475.4	1,509.8	1,277.2	232.58	6.492	
10,300.0	6,843.7	6,878.2	6,878.2	98.2	137.6	90.86	229.9	4,475.4	1,426.7	1,191.4	235.32	6.063	
10,400.0	6,842.7	6,877.2	6,877.2	100.9	137.6	90.78	229.9	4,475.4	1,345.9	1,107.9	238.06	5.654	
10,500.0	6,841.6	6,876.1	6,876.1	103.7	137.5	90.71	229.9	4,475.4	1,267.9	1,027.1	240.81	5.265	
10,600.0	6,840.6	6,875.1	6,875.1	106.4	137.5	90.64	229.9	4,475.4	1,193.2	949.7	243.56	4.899	
10,700.0	6,839.5	6,874.0	6,874.0	109.2	137.5	90.56	229.9	4,475.4	1,122.4	876.1	246.31	4.557	
10,800.0	6,838.5	6,873.0	6,873.0	112.0	137.5	90.49	229.9	4,475.4	1,056.4	807.3	249.06	4.241	
10,900.0	6,837.4	6,871.9	6,871.9	114.7	137.5	90.42	229.9	4,475.4	996.0	744.2	251.81	3.955	
11,000.0	6,836.4	6,870.9	6,870.9	117.5	137.4	90.34	229.9	4,475.4	942.4	687.8	254.57	3.702	
11,100.0	6,835.4	6,869.9	6,869.9	120.3	137.4	90.27	229.9	4,475.4	896.7	639.4	257.32	3.485	
11,200.0	6,834.3	6,868.8	6,868.8	123.0	137.4	90.20	229.9	4,475.4	860.3	600.3	260.08	3.308	
11,300.0	6,833.3	6,867.8	6,867.8	125.8	137.4	90.12	229.9	4,475.4	834.4	571.6	262.84	3.175	
11,400.0	6,832.2	6,866.7	6,866.7	128.6	137.4	90.05	229.9	4,475.4	819.9	554.4	265.59	3.087	
11,469.7	6,831.5	6,866.0	6,866.0	130.5	137.3	90.00	229.9	4,475.4	817.0	549.5	267.52	3.054 CC	
11,500.0	6,831.2	6,865.7	6,865.7	131.4	137.3	89.98	229.9	4,475.4	817.5	549.2	268.35	3.047 ES, SF	
11,600.0	6,830.2	6,864.7	6,864.7	134.1	137.3	89.90	229.9	4,475.4	827.3	556.2	271.11	3.052	
11,700.0	6,829.1	6,863.6	6,863.6	136.9	137.3	89.83	229.9	4,475.4	848.8	574.9	273.87	3.099	
11,800.0	6,828.1	6,862.6	6,862.6	139.7	137.3	89.76	229.9	4,475.4	881.2	604.6	276.63	3.186	
11,900.0	6,827.0	6,861.5	6,861.5	142.5	137.2	89.69	229.9	4,475.4	923.4	644.0	279.39	3.305	
11,999.0	6,826.0	6,860.5	6,860.5	145.2	137.2	89.61	229.9	4,475.4	973.5	691.3	282.13	3.450	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	94.5	94.5	0.0	0.0	69.26	1,738.2	4,589.3	4,907.5				
100.0	100.0	194.5	194.5	0.1	1.2	69.26	1,738.2	4,589.3	4,907.5	4,906.2	1.25	3,911.283	
200.0	200.0	294.5	294.5	0.3	3.4	69.26	1,738.2	4,589.3	4,907.5	4,903.8	3.71	1,324.543	
300.0	300.0	394.5	394.5	0.5	5.5	69.26	1,738.2	4,589.3	4,907.5	4,901.4	6.02	815.336	
400.0	400.0	494.5	494.5	0.8	7.5	69.26	1,738.2	4,589.3	4,907.5	4,899.2	8.29	592.135	
500.0	500.0	594.5	594.5	1.0	9.5	69.26	1,738.2	4,589.3	4,907.5	4,896.9	10.54	465.505	
600.0	600.0	694.5	694.5	1.2	11.6	69.26	1,738.2	4,589.3	4,907.5	4,894.7	12.79	383.692	
700.0	700.0	794.5	794.5	1.4	13.6	85.88	1,738.2	4,589.3	4,907.3	4,892.3	15.03	326.443	
800.0	799.8	894.3	894.3	1.7	15.6	85.95	1,738.2	4,589.3	4,907.0	4,889.7	17.27	284.087	
900.0	899.5	994.0	994.0	1.9	17.6	86.07	1,738.2	4,589.3	4,906.4	4,886.8	19.52	251.386	
1,000.0	998.7	1,093.2	1,093.2	2.2	19.6	86.22	1,738.2	4,589.3	4,905.5	4,883.8	21.77	225.285	
1,100.0	1,097.5	1,192.0	1,192.0	2.5	21.6	86.42	1,738.2	4,589.3	4,904.5	4,880.5	24.05	203.895	
1,200.0	1,195.6	1,290.1	1,290.1	2.8	23.6	86.67	1,738.2	4,589.3	4,903.3	4,877.0	26.36	185.993	
1,228.9	1,223.8	1,318.3	1,318.3	2.9	24.1	86.74	1,738.2	4,589.3	4,903.0	4,875.9	27.04	181.348	
1,300.0	1,293.3	1,387.8	1,387.8	3.2	25.5	86.92	1,738.2	4,589.3	4,902.1	4,873.4	28.70	170.777	
1,400.0	1,390.9	1,485.4	1,485.4	3.6	27.5	87.17	1,738.2	4,589.3	4,901.0	4,869.9	31.07	157.754	
1,500.0	1,488.5	1,583.0	1,583.0	4.0	29.5	87.42	1,738.2	4,589.3	4,899.9	4,866.5	33.44	146.511	
1,600.0	1,586.1	1,680.6	1,680.6	4.4	31.4	87.66	1,738.2	4,589.3	4,898.9	4,863.1	35.83	136.725	
1,700.0	1,683.7	1,778.2	1,778.2	4.8	33.4	87.91	1,738.2	4,589.3	4,898.1	4,859.9	38.23	128.138	
1,800.0	1,781.3	1,875.8	1,875.8	5.3	35.4	88.16	1,738.2	4,589.3	4,897.3	4,856.7	40.63	120.549	
1,900.0	1,878.9	1,973.4	1,973.4	5.7	37.3	88.41	1,738.2	4,589.3	4,896.6	4,853.6	43.03	113.798	
2,000.0	1,976.5	2,071.0	2,071.0	6.1	39.3	88.66	1,738.2	4,589.3	4,896.1	4,850.6	45.44	107.755	
2,100.0	2,074.1	2,168.6	2,168.6	6.6	41.3	88.91	1,738.2	4,589.3	4,895.6	4,847.8	47.85	102.317	
2,200.0	2,171.7	2,266.2	2,266.2	7.0	43.2	89.16	1,738.2	4,589.3	4,895.2	4,845.0	50.26	97.398	
2,300.0	2,269.3	2,363.8	2,363.8	7.5	45.2	89.40	1,738.2	4,589.3	4,894.9	4,842.3	52.67	92.929	
2,400.0	2,366.9	2,461.4	2,461.4	7.9	47.1	89.65	1,738.2	4,589.3	4,894.8	4,839.7	55.09	88.851	
2,500.0	2,464.5	2,559.0	2,559.0	8.4	49.1	89.90	1,738.2	4,589.3	4,894.7	4,837.2	57.51	85.115	
2,539.6	2,503.1	2,597.6	2,597.6	8.6	49.9	90.00	1,738.2	4,589.3	4,894.7	4,836.2	58.46	83.722	
2,600.0	2,562.1	2,656.6	2,656.6	8.9	51.1	90.15	1,738.2	4,589.3	4,894.7	4,834.8	59.92	81.681	
2,700.0	2,659.7	2,754.2	2,754.2	9.3	53.0	90.40	1,738.2	4,589.3	4,894.8	4,832.4	62.34	78.515	
2,800.0	2,757.3	2,851.8	2,851.8	9.8	55.0	90.65	1,738.2	4,589.3	4,895.0	4,830.2	64.76	75.585	
2,900.0	2,854.9	2,949.4	2,949.4	10.2	57.0	90.90	1,738.2	4,589.3	4,895.3	4,828.1	67.18	72.868	
3,000.0	2,952.5	3,047.0	3,047.0	10.7	58.9	91.15	1,738.2	4,589.3	4,895.7	4,826.1	69.60	70.340	
3,100.0	3,050.1	3,144.6	3,144.6	11.1	60.9	91.39	1,738.2	4,589.3	4,896.2	4,824.2	72.02	67.983	
3,200.0	3,147.7	3,242.2	3,242.2	11.6	62.8	91.64	1,738.2	4,589.3	4,896.8	4,822.3	74.44	65.781	
3,300.0	3,245.3	3,339.8	3,339.8	12.1	64.8	91.89	1,738.2	4,589.3	4,897.5	4,820.6	76.86	63.719	
3,400.0	3,342.9	3,437.4	3,437.4	12.5	66.8	92.14	1,738.2	4,589.3	4,898.3	4,819.0	79.28	61.784	
3,500.0	3,440.5	3,535.0	3,535.0	13.0	68.7	92.39	1,738.2	4,589.3	4,899.1	4,817.4	81.70	59.964	
3,600.0	3,538.1	3,632.6	3,632.6	13.4	70.7	92.64	1,738.2	4,589.3	4,900.1	4,816.0	84.12	58.251	
3,700.0	3,635.7	3,730.2	3,730.2	13.9	72.7	92.88	1,738.2	4,589.3	4,901.2	4,814.6	86.54	56.634	
3,800.0	3,733.3	3,827.8	3,827.8	14.4	74.6	93.13	1,738.2	4,589.3	4,902.4	4,813.4	88.96	55.107	
3,900.0	3,830.9	3,925.4	3,925.4	14.8	76.6	93.38	1,738.2	4,589.3	4,903.6	4,812.2	91.38	53.662	
4,000.0	3,928.5	4,023.0	4,023.0	15.3	78.6	93.63	1,738.2	4,589.3	4,905.0	4,811.2	93.80	52.292	
4,100.0	4,026.1	4,120.6	4,120.6	15.7	80.5	93.88	1,738.2	4,589.3	4,906.4	4,810.2	96.22	50.993	
4,200.0	4,123.7	4,218.2	4,218.2	16.2	82.5	94.12	1,738.2	4,589.3	4,908.0	4,809.4	98.64	49.758	
4,300.0	4,221.3	4,315.8	4,315.8	16.7	84.4	94.37	1,738.2	4,589.3	4,909.7	4,808.6	101.06	48.584	
4,400.0	4,318.9	4,413.4	4,413.4	17.1	86.4	94.62	1,738.2	4,589.3	4,911.4	4,807.9	103.47	47.466	
4,500.0	4,416.5	4,511.0	4,511.0	17.6	88.4	94.87	1,738.2	4,589.3	4,913.2	4,807.4	105.89	46.399	
4,600.0	4,514.1	4,608.6	4,608.6	18.1	90.3	95.11	1,738.2	4,589.3	4,915.2	4,806.9	108.31	45.382	
4,700.0	4,611.7	4,706.2	4,706.2	18.5	92.3	95.36	1,738.2	4,589.3	4,917.2	4,806.5	110.72	44.410	
4,800.0	4,709.3	4,803.8	4,803.8	19.0	94.3	95.61	1,738.2	4,589.3	4,919.4	4,806.2	113.14	43.480	
4,900.0	4,806.9	4,901.4	4,901.4	19.4	96.2	95.85	1,738.2	4,589.3	4,921.6	4,806.0	115.55	42.591	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,000.0	4,904.5	4,999.0	4,999.0	19.9	98.2	96.10	1,738.2	4,589.3	4,923.9	4,805.9	117.97	41.739	
5,100.0	5,002.1	5,096.6	5,096.6	20.4	100.1	96.34	1,738.2	4,589.3	4,926.3	4,805.9	120.38	40.922	
5,200.0	5,099.7	5,194.2	5,194.2	20.8	102.1	96.59	1,738.2	4,589.3	4,928.8	4,806.0	122.80	40.138	
5,300.0	5,197.3	5,291.8	5,291.8	21.3	104.1	96.84	1,738.2	4,589.3	4,931.4	4,806.2	125.21	39.385	
5,400.0	5,294.9	5,389.4	5,389.4	21.8	106.0	97.08	1,738.2	4,589.3	4,934.1	4,806.5	127.62	38.662	
5,500.0	5,392.5	5,487.0	5,487.0	22.2	108.0	97.33	1,738.2	4,589.3	4,936.9	4,806.9	130.03	37.967	
5,600.0	5,490.1	5,584.6	5,584.6	22.7	110.0	97.57	1,738.2	4,589.3	4,939.8	4,807.4	132.44	37.297	
5,614.2	5,504.0	5,598.5	5,598.5	22.7	110.2	97.60	1,738.2	4,589.3	4,940.2	4,807.5	132.79	37.204	
5,700.0	5,587.9	5,682.4	5,682.4	23.1	111.9	97.85	1,738.2	4,589.3	4,942.6	4,807.8	134.81	36.663	
5,800.0	5,686.4	5,780.9	5,780.9	23.4	113.9	98.09	1,738.2	4,589.3	4,945.0	4,807.9	137.10	36.068	
5,900.0	5,785.5	5,880.0	5,880.0	23.7	115.9	98.28	1,738.2	4,589.3	4,947.0	4,807.7	139.36	35.497	
6,000.0	5,885.0	5,979.5	5,979.5	23.9	117.9	98.43	1,738.2	4,589.3	4,948.5	4,806.9	141.59	34.950	
6,100.0	5,984.7	6,079.2	6,079.2	24.1	119.9	98.53	1,738.2	4,589.3	4,949.5	4,805.7	143.78	34.424	
6,200.0	6,084.7	6,179.2	6,179.2	24.2	121.9	98.57	1,738.2	4,589.3	4,950.0	4,804.1	145.93	33.920	
6,243.1	6,127.8	6,222.3	6,222.3	24.3	122.8	81.97	1,738.2	4,589.3	4,950.0	4,811.6	138.43	35.760	
6,273.1	6,157.8	6,252.3	6,252.3	24.3	123.4	81.97	1,738.2	4,589.3	4,950.0	4,811.0	139.08	35.592	
6,300.0	6,184.7	6,279.2	6,279.2	24.3	123.9	-8.03	1,738.2	4,589.3	4,949.5	4,801.6	147.95	33.455	
6,350.0	6,234.5	6,329.0	6,329.0	24.4	124.9	-8.08	1,738.2	4,589.3	4,946.0	4,797.7	148.26	33.360	
6,400.0	6,284.0	6,378.5	6,378.5	24.4	125.9	-8.17	1,738.2	4,589.3	4,938.9	4,791.1	147.85	33.405	
6,450.0	6,332.9	6,427.4	6,427.4	24.4	126.9	-8.31	1,738.2	4,589.3	4,928.5	4,781.8	146.72	33.592	
6,500.0	6,380.9	6,475.4	6,475.4	24.4	127.9	-8.50	1,738.2	4,589.3	4,914.7	4,769.9	144.85	33.930	
6,550.0	6,427.8	6,522.3	6,522.3	24.4	128.8	-8.75	1,738.2	4,589.3	4,897.7	4,755.4	142.26	34.428	
6,600.0	6,473.5	6,568.0	6,568.0	24.4	129.7	-9.06	1,738.2	4,589.3	4,877.5	4,738.5	138.95	35.101	
6,650.0	6,517.5	6,612.0	6,612.0	24.4	130.6	-9.45	1,738.2	4,589.3	4,854.1	4,719.1	134.96	35.967	
6,700.0	6,559.9	6,654.4	6,654.4	24.4	131.5	-9.92	1,738.2	4,589.3	4,827.8	4,697.5	130.32	37.046	
6,750.0	6,600.2	6,694.7	6,694.7	24.4	132.3	-10.49	1,738.2	4,589.3	4,798.6	4,673.5	125.07	38.367	
6,800.0	6,638.4	6,732.9	6,732.9	24.3	133.1	-11.18	1,738.2	4,589.3	4,766.7	4,647.4	119.30	39.956	
6,850.0	6,674.3	6,768.8	6,768.8	24.3	133.8	-12.03	1,738.2	4,589.3	4,732.2	4,619.1	113.11	41.837	
6,900.0	6,707.6	6,802.1	6,802.1	24.3	134.4	-13.08	1,738.2	4,589.3	4,695.4	4,588.8	106.66	44.022	
6,950.0	6,738.3	6,832.8	6,832.8	24.3	135.1	-14.38	1,738.2	4,589.3	4,656.4	4,556.2	100.19	46.474	
7,000.0	6,766.2	6,860.7	6,860.7	24.3	135.6	-16.02	1,738.2	4,589.3	4,615.3	4,521.2	94.09	49.054	
7,050.0	6,791.0	6,885.5	6,885.5	24.3	136.1	-18.13	1,738.2	4,589.3	4,572.5	4,483.5	88.94	51.411	
7,100.0	6,812.8	6,907.3	6,907.3	24.3	136.6	-20.91	1,738.2	4,589.3	4,528.0	4,442.3	85.71	52.830	
7,150.0	6,831.4	6,925.9	6,925.9	24.3	136.9	-24.69	1,738.2	4,589.3	4,482.1	4,396.3	85.83	52.219	
7,200.0	6,846.8	6,941.3	6,941.3	24.4	137.2	-30.02	1,738.2	4,589.3	4,435.1	4,343.9	91.23	48.617	
7,250.0	6,858.7	6,953.2	6,953.2	24.5	137.5	-37.85	1,738.2	4,589.3	4,387.2	4,283.3	103.91	42.219	
7,300.0	6,867.3	6,961.8	6,961.8	24.7	137.7	-49.76	1,738.2	4,589.3	4,338.6	4,213.8	124.78	34.769	
7,350.0	6,872.4	6,966.9	6,966.9	25.0	137.8	-67.65	1,738.2	4,589.3	4,289.5	4,140.3	149.20	28.749	
7,400.0	6,874.0	6,968.5	6,968.5	25.4	137.8	-90.91	1,738.2	4,589.3	4,240.2	4,079.6	160.55	26.410	
7,405.6	6,874.0	6,968.5	6,968.5	25.5	137.8	-93.62	1,738.2	4,589.3	4,234.6	4,074.4	160.20	26.433	
7,500.0	6,873.0	6,967.5	6,967.5	26.7	137.8	-93.54	1,738.2	4,589.3	4,141.6	3,979.6	162.00	25.566	
7,600.0	6,871.9	6,966.4	6,966.4	28.4	137.7	-93.45	1,738.2	4,589.3	4,043.0	3,878.9	164.05	24.644	
7,700.0	6,870.9	6,965.4	6,965.4	30.4	137.7	-93.37	1,738.2	4,589.3	3,944.5	3,778.3	166.24	23.728	
7,800.0	6,869.8	6,964.3	6,964.3	32.5	137.7	-93.28	1,738.2	4,589.3	3,846.1	3,677.6	168.52	22.823	
7,900.0	6,868.8	6,963.3	6,963.3	34.8	137.7	-93.19	1,738.2	4,589.3	3,747.8	3,576.9	170.88	21.932	
8,000.0	6,867.7	6,962.2	6,962.2	37.1	137.7	-93.10	1,738.2	4,589.3	3,649.5	3,476.2	173.31	21.058	
8,100.0	6,866.7	6,961.2	6,961.2	39.5	137.6	-93.02	1,738.2	4,589.3	3,551.4	3,375.6	175.78	20.203	
8,200.0	6,865.6	6,960.1	6,960.1	42.0	137.6	-92.93	1,738.2	4,589.3	3,453.4	3,275.1	178.30	19.368	
8,300.0	6,864.6	6,959.1	6,959.1	44.5	137.6	-92.84	1,738.2	4,589.3	3,355.5	3,174.6	180.86	18.553	
8,400.0	6,863.6	6,958.1	6,958.1	47.0	137.6	-92.76	1,738.2	4,589.3	3,257.7	3,074.3	183.44	17.759	
8,500.0	6,862.5	6,957.0	6,957.0	49.6	137.6	-92.67	1,738.2	4,589.3	3,160.0	2,974.0	186.05	16.985	
8,600.0	6,861.5	6,956.0	6,956.0	52.2	137.5	-92.58	1,738.2	4,589.3	3,062.5	2,873.9	188.67	16.232	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT BINDER 9-28 - 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	
8,700.0	6,860.4	6,954.9	6,954.9	54.8	137.5	-92.50	1,738.2	4,589.3	2,965.2	2,773.9	191.32	15.499	
8,800.0	6,859.4	6,953.9	6,953.9	57.5	137.5	-92.41	1,738.2	4,589.3	2,868.1	2,674.1	193.98	14.786	
8,900.0	6,858.3	6,952.8	6,952.8	60.1	137.5	-92.32	1,738.2	4,589.3	2,771.1	2,574.5	196.65	14.092	
9,000.0	6,857.3	6,951.8	6,951.8	62.8	137.5	-92.24	1,738.2	4,589.3	2,674.4	2,475.1	199.33	13.417	
9,100.0	6,856.2	6,950.7	6,950.7	65.5	137.4	-92.15	1,738.2	4,589.3	2,578.0	2,375.9	202.03	12.760	
9,200.0	6,855.2	6,949.7	6,949.7	68.1	137.4	-92.06	1,738.2	4,589.3	2,481.8	2,277.0	204.73	12.122	
9,300.0	6,854.1	6,948.6	6,948.6	70.8	137.4	-91.98	1,738.2	4,589.3	2,385.9	2,178.5	207.44	11.502	
9,400.0	6,853.1	6,947.6	6,947.6	73.6	137.4	-91.89	1,738.2	4,589.3	2,290.4	2,080.2	210.16	10.898	
9,500.0	6,852.1	6,946.6	6,946.6	76.3	137.3	-91.80	1,738.2	4,589.3	2,195.2	1,982.4	212.88	10.312	
9,600.0	6,851.0	6,945.5	6,945.5	79.0	137.3	-91.72	1,738.2	4,589.3	2,100.6	1,885.0	215.61	9.743	
9,700.0	6,850.0	6,944.5	6,944.5	81.7	137.3	-91.63	1,738.2	4,589.3	2,006.4	1,788.1	218.34	9.189	
9,800.0	6,848.9	6,943.4	6,943.4	84.4	137.3	-91.54	1,738.2	4,589.3	1,912.9	1,691.8	221.07	8.653	
9,900.0	6,847.9	6,942.4	6,942.4	87.2	137.3	-91.46	1,738.2	4,589.3	1,820.0	1,596.2	223.82	8.132	
10,000.0	6,846.8	6,941.3	6,941.3	89.9	137.2	-91.37	1,738.2	4,589.3	1,727.9	1,501.3	226.56	7.627	
10,100.0	6,845.8	6,940.3	6,940.3	92.7	137.2	-91.28	1,738.2	4,589.3	1,636.7	1,407.4	229.31	7.138	
10,200.0	6,844.7	6,939.2	6,939.2	95.4	137.2	-91.20	1,738.2	4,589.3	1,546.7	1,314.6	232.05	6.665	
10,300.0	6,843.7	6,938.2	6,938.2	98.2	137.2	-91.11	1,738.2	4,589.3	1,457.9	1,223.1	234.81	6.209	
10,400.0	6,842.7	6,937.2	6,937.2	100.9	137.2	-91.02	1,738.2	4,589.3	1,370.7	1,133.1	237.56	5.770	
10,500.0	6,841.6	6,936.1	6,936.1	103.7	137.1	-90.94	1,738.2	4,589.3	1,285.3	1,045.0	240.32	5.349	
10,600.0	6,840.6	6,935.1	6,935.1	106.4	137.1	-90.85	1,738.2	4,589.3	1,202.2	959.2	243.07	4.946	
10,700.0	6,839.5	6,934.0	6,934.0	109.2	137.1	-90.76	1,738.2	4,589.3	1,121.9	876.1	245.83	4.564	
10,800.0	6,838.5	6,933.0	6,933.0	112.0	137.1	-90.68	1,738.2	4,589.3	1,045.0	796.4	248.59	4.203	
10,900.0	6,837.4	6,931.9	6,931.9	114.7	137.1	-90.59	1,738.2	4,589.3	972.2	720.9	251.36	3.868	
11,000.0	6,836.4	6,930.9	6,930.9	117.5	137.0	-90.50	1,738.2	4,589.3	904.7	650.6	254.12	3.560	
11,100.0	6,835.4	6,929.9	6,929.9	120.3	137.0	-90.42	1,738.2	4,589.3	843.7	586.8	256.88	3.284	
11,200.0	6,834.3	6,928.8	6,928.8	123.0	137.0	-90.33	1,738.2	4,589.3	790.6	531.0	259.65	3.045	
11,300.0	6,833.3	6,927.8	6,927.8	125.8	137.0	-90.24	1,738.2	4,589.3	747.2	484.8	262.41	2.847	
11,400.0	6,832.2	6,926.7	6,926.7	128.6	136.9	-90.16	1,738.2	4,589.3	715.3	450.1	265.18	2.697	
11,500.0	6,831.2	6,925.7	6,925.7	131.4	136.9	-90.07	1,738.2	4,589.3	696.3	428.4	267.95	2.599	
11,583.7	6,830.3	6,924.8	6,924.8	133.7	136.9	-90.00	1,738.2	4,589.3	691.3	421.0	270.26	2.558 CC	
11,600.0	6,830.2	6,924.7	6,924.7	134.1	136.9	-89.99	1,738.2	4,589.3	691.5	420.8	270.71	2.554 ES, SF	
11,700.0	6,829.1	6,923.6	6,923.6	136.9	136.9	-89.90	1,738.2	4,589.3	701.0	427.5	273.48	2.563	
11,800.0	6,828.1	6,922.6	6,922.6	139.7	136.9	-89.81	1,738.2	4,589.3	724.3	448.1	276.25	2.622	
11,900.0	6,827.0	6,921.5	6,921.5	142.5	136.8	-89.73	1,738.2	4,589.3	760.2	481.2	279.02	2.725	
11,999.0	6,826.0	6,920.5	6,920.5	145.2	136.8	-89.64	1,738.2	4,589.3	806.5	524.7	281.76	2.862	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	119.5	119.5	0.0	0.2	57.05	2,871.2	4,430.3	5,279.3				
100.0	100.0	219.5	219.5	0.1	1.4	57.05	2,871.2	4,430.3	5,279.3	5,277.9	1.45	3,640.880	
200.0	200.0	319.5	319.5	0.3	3.7	57.05	2,871.2	4,430.3	5,279.3	5,275.3	3.98	1,325.474	
300.0	300.0	419.5	419.5	0.5	5.7	57.05	2,871.2	4,430.3	5,279.3	5,273.0	6.28	840.394	
400.0	400.0	519.5	519.5	0.8	7.8	57.05	2,871.2	4,430.3	5,279.3	5,270.8	8.55	617.703	
500.0	500.0	619.5	619.5	1.0	9.8	57.05	2,871.2	4,430.3	5,279.3	5,268.5	10.80	488.861	
600.0	600.0	719.5	719.5	1.2	11.8	57.05	2,871.2	4,430.3	5,279.3	5,266.3	13.05	404.672	
700.0	700.0	819.5	819.5	1.4	13.8	73.69	2,871.2	4,430.3	5,278.8	5,263.5	15.29	345.305	
800.0	799.8	919.3	919.3	1.7	15.9	73.77	2,871.2	4,430.3	5,277.3	5,259.8	17.52	301.133	
900.0	899.5	1,019.0	1,019.0	1.9	17.9	73.91	2,871.2	4,430.3	5,274.9	5,255.1	19.76	266.887	
1,000.0	998.7	1,118.2	1,118.2	2.2	19.9	74.10	2,871.2	4,430.3	5,271.5	5,249.5	22.01	239.464	
1,100.0	1,097.5	1,217.0	1,217.0	2.5	21.9	74.34	2,871.2	4,430.3	5,267.2	5,242.9	24.28	216.931	
1,200.0	1,195.6	1,315.1	1,315.1	2.8	23.8	74.64	2,871.2	4,430.3	5,262.0	5,235.5	26.57	198.024	
1,228.9	1,223.8	1,343.3	1,343.3	2.9	24.4	74.73	2,871.2	4,430.3	5,260.4	5,233.1	27.24	193.111	
1,300.0	1,293.3	1,412.8	1,412.8	3.2	25.8	74.89	2,871.2	4,430.3	5,256.2	5,227.3	28.90	181.862	
1,400.0	1,390.9	1,510.4	1,510.4	3.6	27.8	75.12	2,871.2	4,430.3	5,250.5	5,219.2	31.26	167.983	
1,500.0	1,488.5	1,608.0	1,608.0	4.0	29.7	75.34	2,871.2	4,430.3	5,244.8	5,211.2	33.62	155.985	
1,600.0	1,586.1	1,705.6	1,705.6	4.4	31.7	75.57	2,871.2	4,430.3	5,239.2	5,203.2	36.00	145.525	
1,700.0	1,683.7	1,803.2	1,803.2	4.8	33.7	75.79	2,871.2	4,430.3	5,233.7	5,195.3	38.39	136.336	
1,800.0	1,781.3	1,900.8	1,900.8	5.3	35.6	76.02	2,871.2	4,430.3	5,228.3	5,187.5	40.78	128.205	
1,900.0	1,878.9	1,998.4	1,998.4	5.7	37.6	76.25	2,871.2	4,430.3	5,222.9	5,179.7	43.18	120.963	
2,000.0	1,976.5	2,096.0	2,096.0	6.1	39.5	76.47	2,871.2	4,430.3	5,217.7	5,172.1	45.58	114.476	
2,100.0	2,074.1	2,193.6	2,193.6	6.6	41.5	76.70	2,871.2	4,430.3	5,212.5	5,164.5	47.98	108.631	
2,200.0	2,171.7	2,291.2	2,291.2	7.0	43.5	76.93	2,871.2	4,430.3	5,207.4	5,157.0	50.39	103.341	
2,300.0	2,269.3	2,388.8	2,388.8	7.5	45.4	77.16	2,871.2	4,430.3	5,202.4	5,149.6	52.80	98.530	
2,400.0	2,366.9	2,486.4	2,486.4	7.9	47.4	77.39	2,871.2	4,430.3	5,197.5	5,142.3	55.21	94.138	
2,500.0	2,464.5	2,584.0	2,584.0	8.4	49.4	77.62	2,871.2	4,430.3	5,192.7	5,135.1	57.63	90.111	
2,600.0	2,562.1	2,681.6	2,681.6	8.9	51.3	77.84	2,871.2	4,430.3	5,187.9	5,127.9	60.04	86.408	
2,700.0	2,659.7	2,779.2	2,779.2	9.3	53.3	78.07	2,871.2	4,430.3	5,183.3	5,120.8	62.46	82.990	
2,800.0	2,757.3	2,876.8	2,876.8	9.8	55.2	78.30	2,871.2	4,430.3	5,178.7	5,113.9	64.87	79.827	
2,900.0	2,854.9	2,974.4	2,974.4	10.2	57.2	78.54	2,871.2	4,430.3	5,174.3	5,107.0	67.29	76.891	
3,000.0	2,952.5	3,072.0	3,072.0	10.7	59.2	78.77	2,871.2	4,430.3	5,169.9	5,100.2	69.71	74.159	
3,100.0	3,050.1	3,169.6	3,169.6	11.1	61.1	79.00	2,871.2	4,430.3	5,165.6	5,093.4	72.13	71.610	
3,200.0	3,147.7	3,267.2	3,267.2	11.6	63.1	79.23	2,871.2	4,430.3	5,161.4	5,086.8	74.56	69.228	
3,300.0	3,245.3	3,364.8	3,364.8	12.1	65.1	79.46	2,871.2	4,430.3	5,157.2	5,080.3	76.98	66.996	
3,400.0	3,342.9	3,462.4	3,462.4	12.5	67.0	79.69	2,871.2	4,430.3	5,153.2	5,073.8	79.40	64.900	
3,500.0	3,440.5	3,560.0	3,560.0	13.0	69.0	79.93	2,871.2	4,430.3	5,149.3	5,067.4	81.83	62.929	
3,600.0	3,538.1	3,657.6	3,657.6	13.4	71.0	80.16	2,871.2	4,430.3	5,145.4	5,061.2	84.25	61.072	
3,700.0	3,635.7	3,755.2	3,755.2	13.9	72.9	80.39	2,871.2	4,430.3	5,141.6	5,055.0	86.68	59.320	
3,800.0	3,733.3	3,852.8	3,852.8	14.4	74.9	80.63	2,871.2	4,430.3	5,138.0	5,048.9	89.10	57.664	
3,900.0	3,830.9	3,950.4	3,950.4	14.8	76.8	80.86	2,871.2	4,430.3	5,134.4	5,042.9	91.53	56.096	
4,000.0	3,928.5	4,048.0	4,048.0	15.3	78.8	81.10	2,871.2	4,430.3	5,130.9	5,036.9	93.96	54.610	
4,100.0	4,026.1	4,145.6	4,145.6	15.7	80.8	81.33	2,871.2	4,430.3	5,127.5	5,031.1	96.38	53.199	
4,200.0	4,123.7	4,243.2	4,243.2	16.2	82.7	81.57	2,871.2	4,430.3	5,124.2	5,025.4	98.81	51.858	
4,300.0	4,221.3	4,340.8	4,340.8	16.7	84.7	81.80	2,871.2	4,430.3	5,120.9	5,019.7	101.24	50.583	
4,400.0	4,318.9	4,438.4	4,438.4	17.1	86.7	82.04	2,871.2	4,430.3	5,117.8	5,014.1	103.67	49.367	
4,500.0	4,416.5	4,536.0	4,536.0	17.6	88.6	82.27	2,871.2	4,430.3	5,114.8	5,008.7	106.10	48.209	
4,600.0	4,514.1	4,633.6	4,633.6	18.1	90.6	82.51	2,871.2	4,430.3	5,111.8	5,003.3	108.53	47.102	
4,700.0	4,611.7	4,731.2	4,731.2	18.5	92.5	82.75	2,871.2	4,430.3	5,108.9	4,998.0	110.96	46.045	
4,800.0	4,709.3	4,828.8	4,828.8	19.0	94.5	82.98	2,871.2	4,430.3	5,106.2	4,992.8	113.38	45.034	
4,900.0	4,806.9	4,926.4	4,926.4	19.4	96.5	83.22	2,871.2	4,430.3	5,103.5	4,987.7	115.81	44.066	
5,000.0	4,904.5	5,024.0	5,024.0	19.9	98.4	83.46	2,871.2	4,430.3	5,100.9	4,982.7	118.24	43.139	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	5,121.6	5,121.6	20.4	100.4	83.69	2,871.2	4,430.3	5,098.4	4,977.7	120.67	42.249	
5,200.0	5,099.7	5,219.2	5,219.2	20.8	102.4	83.93	2,871.2	4,430.3	5,096.0	4,972.9	123.11	41.396	
5,300.0	5,197.3	5,316.8	5,316.8	21.3	104.3	84.17	2,871.2	4,430.3	5,093.7	4,968.2	125.54	40.576	
5,400.0	5,294.9	5,414.4	5,414.4	21.8	106.3	84.41	2,871.2	4,430.3	5,091.5	4,963.5	127.97	39.788	
5,500.0	5,392.5	5,512.0	5,512.0	22.2	108.2	84.65	2,871.2	4,430.3	5,089.4	4,959.0	130.40	39.030	
5,600.0	5,490.1	5,609.6	5,609.6	22.7	110.2	84.88	2,871.2	4,430.3	5,087.3	4,954.5	132.83	38.300	
5,614.2	5,504.0	5,623.5	5,623.5	22.7	110.5	84.92	2,871.2	4,430.3	5,087.0	4,953.9	133.17	38.199	
5,700.0	5,587.9	5,707.4	5,707.4	23.1	112.2	85.08	2,871.2	4,430.3	5,085.5	4,950.3	135.21	37.612	
5,800.0	5,686.4	5,805.9	5,805.9	23.4	114.2	85.24	2,871.2	4,430.3	5,084.0	4,946.5	137.50	36.974	
5,900.0	5,785.5	5,905.0	5,905.0	23.7	116.1	85.37	2,871.2	4,430.3	5,082.9	4,943.1	139.77	36.367	
6,000.0	5,885.0	6,004.5	6,004.5	23.9	118.2	85.47	2,871.2	4,430.3	5,082.1	4,940.1	142.00	35.790	
6,100.0	5,984.7	6,104.2	6,104.2	24.1	120.2	85.53	2,871.2	4,430.3	5,081.5	4,937.3	144.19	35.243	
6,200.0	6,084.7	6,204.2	6,204.2	24.2	122.2	85.56	2,871.2	4,430.3	5,081.3	4,934.9	146.34	34.723	
6,243.1	6,127.8	6,247.3	6,247.3	24.3	123.0	68.96	2,871.2	4,430.3	5,081.3	4,942.8	138.44	36.704	
6,273.1	6,157.8	6,277.3	6,277.3	24.3	123.6	68.96	2,871.2	4,430.3	5,081.3	4,942.2	139.09	36.532	
6,300.0	6,184.7	6,304.2	6,304.2	24.3	124.2	-21.06	2,871.2	4,430.3	5,080.8	4,932.4	148.37	34.243	
6,350.0	6,234.5	6,354.0	6,354.0	24.4	125.2	-21.17	2,871.2	4,430.3	5,077.4	4,928.6	148.78	34.128	
6,400.0	6,284.0	6,403.5	6,403.5	24.4	126.2	-21.39	2,871.2	4,430.3	5,070.8	4,922.3	148.53	34.140	
6,450.0	6,332.9	6,452.4	6,452.4	24.4	127.2	-21.73	2,871.2	4,430.3	5,061.0	4,913.3	147.64	34.280	
6,500.0	6,380.9	6,500.4	6,500.4	24.4	128.1	-22.19	2,871.2	4,430.3	5,048.0	4,901.9	146.12	34.548	
6,550.0	6,427.8	6,547.3	6,547.3	24.4	129.1	-22.78	2,871.2	4,430.3	5,032.0	4,888.0	144.00	34.945	
6,600.0	6,473.5	6,593.0	6,593.0	24.4	130.0	-23.52	2,871.2	4,430.3	5,012.9	4,871.6	141.33	35.468	
6,650.0	6,517.5	6,637.0	6,637.0	24.4	130.9	-24.42	2,871.2	4,430.3	4,990.9	4,852.7	138.20	36.113	
6,700.0	6,559.9	6,679.4	6,679.4	24.4	131.7	-25.51	2,871.2	4,430.3	4,966.2	4,831.5	134.71	36.867	
6,750.0	6,600.2	6,719.7	6,719.7	24.4	132.5	-26.81	2,871.2	4,430.3	4,938.8	4,807.8	130.99	37.702	
6,800.0	6,638.4	6,757.9	6,757.9	24.3	133.3	-28.37	2,871.2	4,430.3	4,908.8	4,781.6	127.26	38.572	
6,850.0	6,674.3	6,793.8	6,793.8	24.3	134.0	-30.21	2,871.2	4,430.3	4,876.5	4,752.7	123.78	39.398	
6,900.0	6,707.6	6,827.1	6,827.1	24.3	134.7	-32.41	2,871.2	4,430.3	4,842.0	4,721.1	120.86	40.061	
6,950.0	6,738.3	6,857.8	6,857.8	24.3	135.3	-35.02	2,871.2	4,430.3	4,805.5	4,686.5	118.94	40.403	
7,000.0	6,766.2	6,885.7	6,885.7	24.3	135.9	-38.13	2,871.2	4,430.3	4,767.1	4,648.6	118.46	40.243	
7,050.0	6,791.0	6,910.5	6,910.5	24.3	136.4	-41.84	2,871.2	4,430.3	4,727.1	4,607.2	119.86	39.439	
7,100.0	6,812.8	6,932.3	6,932.3	24.3	136.8	-46.27	2,871.2	4,430.3	4,685.6	4,562.1	123.45	37.957	
7,150.0	6,831.4	6,950.9	6,950.9	24.3	137.2	-51.53	2,871.2	4,430.3	4,642.9	4,513.6	129.25	35.922	
7,200.0	6,846.8	6,966.3	6,966.3	24.4	137.5	-57.70	2,871.2	4,430.3	4,599.2	4,462.3	136.84	33.609	
7,250.0	6,858.7	6,978.2	6,978.2	24.5	137.7	-64.84	2,871.2	4,430.3	4,554.7	4,409.4	145.27	31.352	
7,300.0	6,867.3	6,986.8	6,986.8	24.7	137.9	-72.84	2,871.2	4,430.3	4,509.6	4,356.5	153.09	29.456	
7,350.0	6,872.4	6,991.9	6,991.9	25.0	138.0	-81.47	2,871.2	4,430.3	4,464.1	4,305.4	158.69	28.131	
7,400.0	6,874.0	6,993.5	6,993.5	25.4	138.0	-90.33	2,871.2	4,430.3	4,418.6	4,257.7	160.85	27.470	
7,405.6	6,874.0	6,993.5	6,993.5	25.5	138.0	-91.32	2,871.2	4,430.3	4,413.5	4,252.6	160.86	27.437	
7,500.0	6,873.0	6,992.5	6,992.5	26.7	138.0	-91.29	2,871.2	4,430.3	4,327.7	4,165.1	162.64	26.610	
7,600.0	6,871.9	6,991.4	6,991.4	28.4	138.0	-91.26	2,871.2	4,430.3	4,237.2	4,072.6	164.68	25.730	
7,700.0	6,870.9	6,990.4	6,990.4	30.4	138.0	-91.22	2,871.2	4,430.3	4,147.2	3,980.4	166.85	24.856	
7,800.0	6,869.8	6,989.3	6,989.3	32.5	138.0	-91.19	2,871.2	4,430.3	4,057.6	3,888.5	169.12	23.993	
7,900.0	6,868.8	6,988.3	6,988.3	34.8	137.9	-91.16	2,871.2	4,430.3	3,968.6	3,797.1	171.47	23.145	
8,000.0	6,867.7	6,987.2	6,987.2	37.1	137.9	-91.13	2,871.2	4,430.3	3,880.0	3,706.2	173.88	22.314	
8,100.0	6,866.7	6,986.2	6,986.2	39.5	137.9	-91.09	2,871.2	4,430.3	3,792.1	3,615.7	176.35	21.504	
8,200.0	6,865.6	6,985.1	6,985.1	42.0	137.9	-91.06	2,871.2	4,430.3	3,704.7	3,525.9	178.85	20.714	
8,300.0	6,864.6	6,984.1	6,984.1	44.5	137.9	-91.03	2,871.2	4,430.3	3,618.0	3,436.6	181.39	19.946	
8,400.0	6,863.6	6,983.1	6,983.1	47.0	137.8	-90.99	2,871.2	4,430.3	3,532.0	3,348.1	183.96	19.200	
8,500.0	6,862.5	6,982.0	6,982.0	49.6	137.8	-90.96	2,871.2	4,430.3	3,446.8	3,260.2	186.56	18.476	
8,600.0	6,861.5	6,981.0	6,981.0	52.2	137.8	-90.93	2,871.2	4,430.3	3,362.4	3,173.2	189.17	17.774	
8,700.0	6,860.4	6,979.9	6,979.9	54.8	137.8	-90.89	2,871.2	4,430.3	3,278.8	3,087.0	191.80	17.095	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT HELEN 1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,800.0	6,859.4	6,978.9	6,978.9	57.5	137.7	-90.86	2,871.2	4,430.3	3,196.2	3,001.8	194.45	16.437	
8,900.0	6,858.3	6,977.8	6,977.8	60.1	137.7	-90.83	2,871.2	4,430.3	3,114.6	2,917.5	197.11	15.801	
9,000.0	6,857.3	6,976.8	6,976.8	62.8	137.7	-90.80	2,871.2	4,430.3	3,034.2	2,834.4	199.79	15.187	
9,100.0	6,856.2	6,975.7	6,975.7	65.5	137.7	-90.76	2,871.2	4,430.3	2,954.9	2,752.4	202.47	14.594	
9,200.0	6,855.2	6,974.7	6,974.7	68.1	137.7	-90.73	2,871.2	4,430.3	2,876.9	2,671.7	205.16	14.023	
9,300.0	6,854.1	6,973.6	6,973.6	70.8	137.6	-90.70	2,871.2	4,430.3	2,800.3	2,592.4	207.86	13.472	
9,400.0	6,853.1	6,972.6	6,972.6	73.6	137.6	-90.66	2,871.2	4,430.3	2,725.2	2,514.6	210.56	12.942	
9,500.0	6,852.1	6,971.6	6,971.6	76.3	137.6	-90.63	2,871.2	4,430.3	2,651.7	2,438.5	213.28	12.433	
9,600.0	6,851.0	6,970.5	6,970.5	79.0	137.6	-90.60	2,871.2	4,430.3	2,580.1	2,364.1	215.99	11.945	
9,700.0	6,850.0	6,969.5	6,969.5	81.7	137.6	-90.57	2,871.2	4,430.3	2,510.4	2,291.7	218.72	11.478	
9,800.0	6,848.9	6,968.4	6,968.4	84.4	137.5	-90.53	2,871.2	4,430.3	2,442.8	2,221.3	221.44	11.031	
9,900.0	6,847.9	6,967.4	6,967.4	87.2	137.5	-90.50	2,871.2	4,430.3	2,377.4	2,153.3	224.17	10.605	
10,000.0	6,846.8	6,966.3	6,966.3	89.9	137.5	-90.47	2,871.2	4,430.3	2,314.6	2,087.7	226.91	10.201	
10,100.0	6,845.8	6,965.3	6,965.3	92.7	137.5	-90.43	2,871.2	4,430.3	2,254.4	2,024.8	229.65	9.817	
10,200.0	6,844.7	6,964.2	6,964.2	95.4	137.5	-90.40	2,871.2	4,430.3	2,197.2	1,964.8	232.39	9.455	
10,300.0	6,843.7	6,963.2	6,963.2	98.2	137.4	-90.37	2,871.2	4,430.3	2,143.0	1,907.9	235.13	9.114	
10,400.0	6,842.7	6,962.2	6,962.2	100.9	137.4	-90.34	2,871.2	4,430.3	2,092.3	1,854.4	237.88	8.796	
10,500.0	6,841.6	6,961.1	6,961.1	103.7	137.4	-90.30	2,871.2	4,430.3	2,045.2	1,804.6	240.62	8.499	
10,600.0	6,840.6	6,960.1	6,960.1	106.4	137.4	-90.27	2,871.2	4,430.3	2,002.0	1,758.6	243.38	8.226	
10,700.0	6,839.5	6,959.0	6,959.0	109.2	137.3	-90.24	2,871.2	4,430.3	1,962.9	1,716.8	246.13	7.975	
10,800.0	6,838.5	6,958.0	6,958.0	112.0	137.3	-90.20	2,871.2	4,430.3	1,928.2	1,679.3	248.88	7.748	
10,900.0	6,837.4	6,956.9	6,956.9	114.7	137.3	-90.17	2,871.2	4,430.3	1,898.2	1,646.5	251.64	7.543	
11,000.0	6,836.4	6,955.9	6,955.9	117.5	137.3	-90.14	2,871.2	4,430.3	1,873.0	1,618.6	254.40	7.363	
11,100.0	6,835.4	6,954.9	6,954.9	120.3	137.3	-90.11	2,871.2	4,430.3	1,852.9	1,595.8	257.16	7.205	
11,200.0	6,834.3	6,953.8	6,953.8	123.0	137.2	-90.07	2,871.2	4,430.3	1,838.0	1,578.1	259.92	7.072	
11,300.0	6,833.3	6,952.8	6,952.8	125.8	137.2	-90.04	2,871.2	4,430.3	1,828.5	1,565.8	262.68	6.961	
11,400.0	6,832.2	6,951.7	6,951.7	128.6	137.2	-90.01	2,871.2	4,430.3	1,824.4	1,559.0	265.44	6.873	
11,424.6	6,832.0	6,951.5	6,951.5	129.3	137.2	-90.00	2,871.2	4,430.3	1,824.3	1,558.1	266.12	6.855 CC	
11,500.0	6,831.2	6,950.7	6,950.7	131.4	137.2	-89.98	2,871.2	4,430.3	1,825.8	1,557.6	268.20	6.808 ES	
11,600.0	6,830.2	6,949.7	6,949.7	134.1	137.2	-89.94	2,871.2	4,430.3	1,832.7	1,561.7	270.97	6.763	
11,700.0	6,829.1	6,948.6	6,948.6	136.9	137.1	-89.91	2,871.2	4,430.3	1,844.9	1,571.2	273.73	6.740	
11,800.0	6,828.1	6,947.6	6,947.6	139.7	137.1	-89.88	2,871.2	4,430.3	1,862.5	1,586.0	276.50	6.736 SF	
11,900.0	6,827.0	6,946.5	6,946.5	142.5	137.1	-89.84	2,871.2	4,430.3	1,885.2	1,605.9	279.27	6.750	
11,999.0	6,826.0	6,945.5	6,945.5	145.2	137.1	-89.81	2,871.2	4,430.3	1,912.5	1,630.5	282.01	6.782	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	35.5	35.5	0.0	0.2	8.53	1,821.5	273.1	1,841.9				
100.0	100.0	135.5	135.5	0.1	1.5	8.53	1,821.5	273.1	1,841.9	1,840.3	1.64	1,125.954	
200.0	200.0	235.5	235.5	0.3	3.8	8.53	1,821.5	273.1	1,841.9	1,837.7	4.16	442.610	
300.0	300.0	335.5	335.5	0.5	5.9	8.53	1,821.5	273.1	1,841.9	1,835.4	6.45	285.409	
400.0	400.0	435.5	435.5	0.8	7.9	8.53	1,821.5	273.1	1,841.9	1,833.2	8.72	211.344	
500.0	500.0	535.5	535.5	1.0	10.0	8.53	1,821.5	273.1	1,841.9	1,830.9	10.97	167.966	
600.0	600.0	635.5	635.5	1.2	12.0	8.53	1,821.5	273.1	1,841.9	1,828.7	13.21	139.416	
700.0	700.0	735.5	735.5	1.4	14.0	25.17	1,821.5	273.1	1,840.3	1,824.9	15.45	119.138	
800.0	799.8	835.3	835.3	1.7	16.0	25.28	1,821.5	273.1	1,835.6	1,817.9	17.66	103.937	
900.0	899.5	935.0	935.0	1.9	18.0	25.46	1,821.5	273.1	1,827.7	1,807.9	19.85	92.091	
1,000.0	998.7	1,034.2	1,034.2	2.2	20.0	25.72	1,821.5	273.1	1,816.7	1,794.7	22.00	82.573	
1,100.0	1,097.5	1,133.0	1,133.0	2.5	22.0	26.06	1,821.5	273.1	1,802.6	1,778.5	24.12	74.733	
1,200.0	1,195.6	1,231.1	1,231.1	2.8	24.0	26.49	1,821.5	273.1	1,785.4	1,759.2	26.20	68.140	
1,228.9	1,223.8	1,259.3	1,259.3	2.9	24.6	26.62	1,821.5	273.1	1,779.9	1,753.1	26.80	66.424	
1,300.0	1,293.3	1,328.8	1,328.8	3.2	26.0	26.85	1,821.5	273.1	1,766.0	1,737.6	28.37	62.253	
1,400.0	1,390.9	1,426.4	1,426.4	3.6	27.9	27.17	1,821.5	273.1	1,746.5	1,715.9	30.59	57.100	
1,500.0	1,488.5	1,524.0	1,524.0	4.0	29.9	27.50	1,821.5	273.1	1,727.1	1,694.2	32.81	52.631	
1,600.0	1,586.1	1,621.6	1,621.6	4.4	31.8	27.83	1,821.5	273.1	1,707.7	1,672.6	35.05	48.723	
1,700.0	1,683.7	1,719.2	1,719.2	4.8	33.8	28.18	1,821.5	273.1	1,688.4	1,651.1	37.29	45.277	
1,800.0	1,781.3	1,816.8	1,816.8	5.3	35.8	28.53	1,821.5	273.1	1,669.1	1,629.5	39.54	42.216	
1,900.0	1,878.9	1,914.4	1,914.4	5.7	37.7	28.89	1,821.5	273.1	1,649.9	1,608.1	41.79	39.482	
2,000.0	1,976.5	2,012.0	2,012.0	6.1	39.7	29.25	1,821.5	273.1	1,630.7	1,586.7	44.05	37.024	
2,100.0	2,074.1	2,109.6	2,109.6	6.6	41.7	29.63	1,821.5	273.1	1,611.7	1,565.4	46.31	34.804	
2,200.0	2,171.7	2,207.2	2,207.2	7.0	43.6	30.02	1,821.5	273.1	1,592.7	1,544.1	48.57	32.788	
2,300.0	2,269.3	2,304.8	2,304.8	7.5	45.6	30.41	1,821.5	273.1	1,573.7	1,522.9	50.85	30.951	
2,400.0	2,366.9	2,402.4	2,402.4	7.9	47.6	30.81	1,821.5	273.1	1,554.9	1,501.7	53.12	29.270	
2,500.0	2,464.5	2,500.0	2,500.0	8.4	49.5	31.23	1,821.5	273.1	1,536.1	1,480.7	55.40	27.726	
2,600.0	2,562.1	2,597.6	2,597.6	8.9	51.5	31.65	1,821.5	273.1	1,517.4	1,459.7	57.69	26.303	
2,700.0	2,659.7	2,695.2	2,695.2	9.3	53.4	32.08	1,821.5	273.1	1,498.8	1,438.8	59.98	24.989	
2,800.0	2,757.3	2,792.8	2,792.8	9.8	55.4	32.53	1,821.5	273.1	1,480.2	1,418.0	62.27	23.770	
2,900.0	2,854.9	2,890.4	2,890.4	10.2	57.4	32.98	1,821.5	273.1	1,461.8	1,397.2	64.57	22.638	
3,000.0	2,952.5	2,988.0	2,988.0	10.7	59.3	33.45	1,821.5	273.1	1,443.4	1,376.6	66.88	21.583	
3,100.0	3,050.1	3,085.6	3,085.6	11.1	61.3	33.93	1,821.5	273.1	1,425.2	1,356.0	69.19	20.598	
3,200.0	3,147.7	3,183.2	3,183.2	11.6	63.3	34.42	1,821.5	273.1	1,407.0	1,335.5	71.51	19.677	
3,300.0	3,245.3	3,280.8	3,280.8	12.1	65.2	34.93	1,821.5	273.1	1,389.0	1,315.2	73.83	18.814	
3,400.0	3,342.9	3,378.4	3,378.4	12.5	67.2	35.44	1,821.5	273.1	1,371.1	1,294.9	76.16	18.003	
3,500.0	3,440.5	3,476.0	3,476.0	13.0	69.2	35.97	1,821.5	273.1	1,353.2	1,274.7	78.49	17.241	
3,600.0	3,538.1	3,573.6	3,573.6	13.4	71.1	36.52	1,821.5	273.1	1,335.5	1,254.7	80.83	16.523	
3,700.0	3,635.7	3,671.2	3,671.2	13.9	73.1	37.08	1,821.5	273.1	1,317.9	1,234.8	83.18	15.845	
3,800.0	3,733.3	3,768.8	3,768.8	14.4	75.0	37.65	1,821.5	273.1	1,300.5	1,214.9	85.53	15.205	
3,900.0	3,830.9	3,866.4	3,866.4	14.8	77.0	38.24	1,821.5	273.1	1,283.1	1,195.3	87.89	14.599	
4,000.0	3,928.5	3,964.0	3,964.0	15.3	79.0	38.84	1,821.5	273.1	1,265.9	1,175.7	90.26	14.026	
4,100.0	4,026.1	4,061.6	4,061.6	15.7	80.9	39.46	1,821.5	273.1	1,248.9	1,156.3	92.63	13.483	
4,200.0	4,123.7	4,159.2	4,159.2	16.2	82.9	40.10	1,821.5	273.1	1,232.0	1,137.0	95.01	12.967	
4,300.0	4,221.3	4,256.8	4,256.8	16.7	84.9	40.75	1,821.5	273.1	1,215.3	1,117.9	97.40	12.477	
4,400.0	4,318.9	4,354.4	4,354.4	17.1	86.8	41.43	1,821.5	273.1	1,198.7	1,098.9	99.80	12.011	
4,500.0	4,416.5	4,452.0	4,452.0	17.6	88.8	42.12	1,821.5	273.1	1,182.3	1,080.1	102.21	11.567	
4,600.0	4,514.1	4,549.6	4,549.6	18.1	90.7	42.83	1,821.5	273.1	1,166.0	1,061.4	104.62	11.145	
4,700.0	4,611.7	4,647.2	4,647.2	18.5	92.7	43.56	1,821.5	273.1	1,150.0	1,042.9	107.04	10.743	
4,800.0	4,709.3	4,744.8	4,744.8	19.0	94.7	44.31	1,821.5	273.1	1,134.1	1,024.6	109.47	10.360	
4,900.0	4,806.9	4,842.4	4,842.4	19.4	96.6	45.08	1,821.5	273.1	1,118.4	1,006.5	111.91	9.994	
5,000.0	4,904.5	4,940.0	4,940.0	19.9	98.6	45.87	1,821.5	273.1	1,103.0	988.6	114.36	9.644	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	5,037.6	5,037.6	20.4	100.6	46.68	1,821.5	273.1	1,087.7	970.9	116.82	9.311	
5,200.0	5,099.7	5,135.2	5,135.2	20.8	102.5	47.51	1,821.5	273.1	1,072.7	953.4	119.29	8.993	
5,300.0	5,197.3	5,232.8	5,232.8	21.3	104.5	48.37	1,821.5	273.1	1,057.9	936.2	121.77	8.688	
5,400.0	5,294.9	5,330.4	5,330.4	21.8	106.4	49.25	1,821.5	273.1	1,043.4	919.1	124.25	8.397	
5,500.0	5,392.5	5,428.0	5,428.0	22.2	108.4	50.16	1,821.5	273.1	1,029.1	902.4	126.75	8.119	
5,600.0	5,490.1	5,525.6	5,525.6	22.7	110.4	51.09	1,821.5	273.1	1,015.1	885.8	129.26	7.853	
5,614.2	5,504.0	5,539.5	5,539.5	22.7	110.6	51.22	1,821.5	273.1	1,013.1	883.5	129.61	7.816	
5,700.0	5,587.9	5,623.4	5,623.4	23.1	112.3	51.82	1,821.5	273.1	1,002.1	870.2	131.94	7.595	
5,800.0	5,686.4	5,721.9	5,721.9	23.4	114.3	52.42	1,821.5	273.1	991.5	857.0	134.53	7.370	
5,900.0	5,785.5	5,821.0	5,821.0	23.7	116.3	52.91	1,821.5	273.1	983.2	846.2	137.02	7.175	
6,000.0	5,885.0	5,920.5	5,920.5	23.9	118.3	53.29	1,821.5	273.1	977.0	837.6	139.42	7.008	
6,100.0	5,984.7	6,020.2	6,020.2	24.1	120.3	53.54	1,821.5	273.1	973.0	831.3	141.72	6.866	
6,200.0	6,084.7	6,120.2	6,120.2	24.2	122.3	53.67	1,821.5	273.1	971.1	827.2	143.92	6.748	
6,243.1	6,127.8	6,163.3	6,163.3	24.3	123.2	37.07	1,821.5	273.1	970.9	828.8	142.06	6.835	
6,273.1	6,157.8	6,193.3	6,193.3	24.3	123.8	37.07	1,821.5	273.1	970.9	828.2	142.70	6.804	
6,300.0	6,184.7	6,220.2	6,220.2	24.3	124.3	-52.97	1,821.5	273.1	970.6	824.6	146.02	6.647	
6,350.0	6,234.5	6,270.0	6,270.0	24.4	125.3	-53.28	1,821.5	273.1	968.4	821.6	146.78	6.598	
6,400.0	6,284.0	6,319.5	6,319.5	24.4	126.3	-53.89	1,821.5	273.1	964.2	817.0	147.22	6.549	
6,450.0	6,332.9	6,368.4	6,368.4	24.4	127.3	-54.80	1,821.5	273.1	957.9	810.6	147.38	6.500	
6,500.0	6,380.9	6,416.4	6,416.4	24.4	128.3	-56.01	1,821.5	273.1	949.8	802.5	147.33	6.447	
6,550.0	6,427.8	6,463.3	6,463.3	24.4	129.2	-57.52	1,821.5	273.1	940.0	792.8	147.15	6.388	
6,600.0	6,473.5	6,509.0	6,509.0	24.4	130.1	-59.32	1,821.5	273.1	928.5	781.6	146.95	6.319	
6,650.0	6,517.5	6,553.0	6,553.0	24.4	131.0	-61.40	1,821.5	273.1	915.7	768.9	146.84	6.237	
6,700.0	6,559.9	6,595.4	6,595.4	24.4	131.9	-63.74	1,821.5	273.1	901.8	754.9	146.91	6.139	
6,750.0	6,600.2	6,635.7	6,635.7	24.4	132.7	-66.31	1,821.5	273.1	887.1	739.8	147.26	6.024	
6,800.0	6,638.4	6,673.9	6,673.9	24.3	133.5	-69.05	1,821.5	273.1	871.8	723.9	147.90	5.895	
6,850.0	6,674.3	6,709.8	6,709.8	24.3	134.2	-71.91	1,821.5	273.1	856.4	707.6	148.84	5.754	
6,900.0	6,707.6	6,743.1	6,743.1	24.3	134.9	-74.82	1,821.5	273.1	841.2	691.2	150.02	5.607	
6,950.0	6,738.3	6,773.8	6,773.8	24.3	135.5	-77.69	1,821.5	273.1	826.6	675.3	151.34	5.462	
7,000.0	6,766.2	6,801.7	6,801.7	24.3	136.0	-80.45	1,821.5	273.1	813.1	660.4	152.71	5.324	
7,050.0	6,791.0	6,826.5	6,826.5	24.3	136.5	-83.00	1,821.5	273.1	801.0	646.9	154.03	5.200	
7,100.0	6,812.8	6,848.3	6,848.3	24.3	137.0	-85.27	1,821.5	273.1	790.7	635.5	155.24	5.094	
7,150.0	6,831.4	6,866.9	6,866.9	24.3	137.3	-87.18	1,821.5	273.1	782.7	626.4	156.34	5.007	
7,200.0	6,846.8	6,882.3	6,882.3	24.4	137.7	-88.69	1,821.5	273.1	777.3	620.0	157.33	4.941	
7,250.0	6,858.7	6,894.2	6,894.2	24.5	137.9	-89.75	1,821.5	273.1	774.8	616.6	158.26	4.896	
7,266.5	6,861.9	6,897.4	6,897.4	24.5	138.0	-90.00	1,821.5	273.1	774.6	616.1	158.57	4.885 CC, ES	
7,300.0	6,867.3	6,902.8	6,902.8	24.7	138.1	-90.33	1,821.5	273.1	775.4	616.2	159.17	4.871	
7,350.0	6,872.4	6,907.9	6,907.9	25.0	138.2	-90.41	1,821.5	273.1	779.1	619.0	160.10	4.866 SF	
7,400.0	6,874.0	6,909.5	6,909.5	25.4	138.2	-89.97	1,821.5	273.1	785.9	624.9	161.04	4.881	
7,405.6	6,874.0	6,909.5	6,909.5	25.5	138.2	-89.89	1,821.5	273.1	786.9	625.8	161.14	4.883	
7,500.0	6,873.0	6,908.5	6,908.5	26.7	138.2	-89.82	1,821.5	273.1	808.9	646.0	162.92	4.965	
7,600.0	6,871.9	6,907.4	6,907.4	28.4	138.2	-89.74	1,821.5	273.1	843.1	678.1	164.96	5.111	
7,700.0	6,870.9	6,906.4	6,906.4	30.4	138.1	-89.66	1,821.5	273.1	887.3	720.2	167.13	5.309	
7,800.0	6,869.8	6,905.3	6,905.3	32.5	138.1	-89.59	1,821.5	273.1	940.2	770.8	169.40	5.550	
7,900.0	6,868.8	6,904.3	6,904.3	34.8	138.1	-89.51	1,821.5	273.1	1,000.2	828.5	171.75	5.824	
8,000.0	6,867.7	6,903.2	6,903.2	37.1	138.1	-89.43	1,821.5	273.1	1,066.3	892.2	174.16	6.123	
8,100.0	6,866.7	6,902.2	6,902.2	39.5	138.1	-89.36	1,821.5	273.1	1,137.4	960.7	176.62	6.440	
8,200.0	6,865.6	6,901.1	6,901.1	42.0	138.0	-89.28	1,821.5	273.1	1,212.5	1,033.4	179.12	6.769	
8,300.0	6,864.6	6,900.1	6,900.1	44.5	138.0	-89.20	1,821.5	273.1	1,291.0	1,109.3	181.66	7.107	
8,400.0	6,863.6	6,899.1	6,899.1	47.0	138.0	-89.12	1,821.5	273.1	1,372.3	1,188.1	184.23	7.449	
8,500.0	6,862.5	6,898.0	6,898.0	49.6	138.0	-89.05	1,821.5	273.1	1,455.9	1,269.1	186.82	7.793	
8,600.0	6,861.5	6,897.0	6,897.0	52.2	137.9	-88.97	1,821.5	273.1	1,541.5	1,352.1	189.43	8.138	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT KINZER 13-28 - 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
8,700.0	6,860.4	6,895.9	6,895.9	54.8	137.9	-88.89	1,821.5	273.1	1,628.7	1,436.7	192.05	8.481	
8,800.0	6,859.4	6,894.9	6,894.9	57.5	137.9	-88.82	1,821.5	273.1	1,717.4	1,522.7	194.70	8.821	
8,900.0	6,858.3	6,893.8	6,893.8	60.1	137.9	-88.74	1,821.5	273.1	1,807.2	1,609.8	197.35	9.157	
9,000.0	6,857.3	6,892.8	6,892.8	62.8	137.9	-88.66	1,821.5	273.1	1,898.0	1,698.0	200.02	9.489	
9,100.0	6,856.2	6,891.7	6,891.7	65.5	137.8	-88.58	1,821.5	273.1	1,989.7	1,787.0	202.69	9.816	
9,200.0	6,855.2	6,890.7	6,890.7	68.1	137.8	-88.51	1,821.5	273.1	2,082.2	1,876.8	205.38	10.138	
9,300.0	6,854.1	6,889.6	6,889.6	70.8	137.8	-88.43	1,821.5	273.1	2,175.3	1,967.2	208.07	10.455	
9,400.0	6,853.1	6,888.6	6,888.6	73.6	137.8	-88.35	1,821.5	273.1	2,269.0	2,058.3	210.77	10.766	
9,500.0	6,852.1	6,887.6	6,887.6	76.3	137.8	-88.28	1,821.5	273.1	2,363.3	2,149.8	213.47	11.071	
9,600.0	6,851.0	6,886.5	6,886.5	79.0	137.7	-88.20	1,821.5	273.1	2,457.9	2,241.8	216.18	11.370	
9,700.0	6,850.0	6,885.5	6,885.5	81.7	137.7	-88.12	1,821.5	273.1	2,553.0	2,334.2	218.89	11.664	
9,800.0	6,848.9	6,884.4	6,884.4	84.4	137.7	-88.05	1,821.5	273.1	2,648.5	2,426.9	221.61	11.951	
9,900.0	6,847.9	6,883.4	6,883.4	87.2	137.7	-87.97	1,821.5	273.1	2,744.3	2,519.9	224.33	12.233	
10,000.0	6,846.8	6,882.3	6,882.3	89.9	137.7	-87.89	1,821.5	273.1	2,840.3	2,613.3	227.05	12.510	
10,100.0	6,845.8	6,881.3	6,881.3	92.7	137.6	-87.81	1,821.5	273.1	2,936.7	2,706.9	229.77	12.781	
10,200.0	6,844.7	6,880.2	6,880.2	95.4	137.6	-87.74	1,821.5	273.1	3,033.2	2,800.7	232.50	13.046	
10,300.0	6,843.7	6,879.2	6,879.2	98.2	137.6	-87.66	1,821.5	273.1	3,130.0	2,894.8	235.23	13.306	
10,400.0	6,842.7	6,878.2	6,878.2	100.9	137.6	-87.58	1,821.5	273.1	3,227.0	2,989.0	237.97	13.561	
10,500.0	6,841.6	6,877.1	6,877.1	103.7	137.5	-87.51	1,821.5	273.1	3,324.2	3,083.5	240.70	13.810	
10,600.0	6,840.6	6,876.1	6,876.1	106.4	137.5	-87.43	1,821.5	273.1	3,421.5	3,178.0	243.44	14.055	
10,700.0	6,839.5	6,875.0	6,875.0	109.2	137.5	-87.35	1,821.5	273.1	3,518.9	3,272.8	246.17	14.295	
10,800.0	6,838.5	6,874.0	6,874.0	112.0	137.5	-87.28	1,821.5	273.1	3,616.6	3,367.6	248.91	14.530	
10,900.0	6,837.4	6,872.9	6,872.9	114.7	137.5	-87.20	1,821.5	273.1	3,714.3	3,462.6	251.65	14.760	
11,000.0	6,836.4	6,871.9	6,871.9	117.5	137.4	-87.12	1,821.5	273.1	3,812.1	3,557.8	254.39	14.985	
11,100.0	6,835.4	6,870.9	6,870.9	120.3	137.4	-87.05	1,821.5	273.1	3,910.1	3,653.0	257.13	15.207	
11,200.0	6,834.3	6,869.8	6,869.8	123.0	137.4	-86.97	1,821.5	273.1	4,008.2	3,748.3	259.87	15.424	
11,300.0	6,833.3	6,868.8	6,868.8	125.8	137.4	-86.90	1,821.5	273.1	4,106.3	3,843.7	262.61	15.636	
11,400.0	6,832.2	6,867.7	6,867.7	128.6	137.4	-86.82	1,821.5	273.1	4,204.6	3,939.2	265.35	15.845	
11,500.0	6,831.2	6,866.7	6,866.7	131.4	137.3	-86.74	1,821.5	273.1	4,302.9	4,034.8	268.10	16.050	
11,600.0	6,830.2	6,865.7	6,865.7	134.1	137.3	-86.67	1,821.5	273.1	4,401.3	4,130.4	270.84	16.250	
11,700.0	6,829.1	6,864.6	6,864.6	136.9	137.3	-86.59	1,821.5	273.1	4,499.8	4,226.2	273.58	16.447	
11,800.0	6,828.1	6,863.6	6,863.6	139.7	137.3	-86.51	1,821.5	273.1	4,598.3	4,322.0	276.33	16.641	
11,900.0	6,827.0	6,862.5	6,862.5	142.5	137.3	-86.44	1,821.5	273.1	4,696.9	4,417.8	279.07	16.831	
11,999.0	6,826.0	6,861.5	6,861.5	145.2	137.2	-86.36	1,821.5	273.1	4,794.6	4,512.8	281.79	17.015	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	84.17	36.4	356.7	358.6				
100.0	100.0	92.5	92.5	0.1	1.2	84.17	36.4	356.7	358.5	357.3	1.25	285.736	
200.0	200.0	192.5	192.5	0.3	3.4	84.17	36.4	356.7	358.5	354.9	3.68	97.415	
300.0	300.0	292.5	292.5	0.5	5.5	84.17	36.4	356.7	358.5	352.6	6.00	59.780	
400.0	400.0	392.5	392.5	0.8	7.5	84.17	36.4	356.7	358.5	350.3	8.27	43.371	
500.0	500.0	492.5	492.5	1.0	9.5	84.17	36.4	356.7	358.5	348.0	10.52	34.077	
600.0	600.0	592.5	592.5	1.2	11.5	84.17	36.4	356.7	358.5	345.8	12.77	28.078 CC	
700.0	700.0	692.5	692.5	1.4	13.6	101.04	36.4	356.7	358.9	343.9	15.01	23.906	
800.0	799.8	792.3	792.3	1.7	15.6	101.84	36.4	356.7	359.9	342.7	17.25	20.865	
900.0	899.5	892.0	892.0	1.9	17.6	103.15	36.4	356.7	361.8	342.3	19.49	18.564 ES	
1,000.0	998.7	991.2	991.2	2.2	19.6	104.94	36.4	356.7	364.8	343.1	21.74	16.782	
1,100.0	1,097.5	1,090.0	1,090.0	2.5	21.6	107.17	36.4	356.7	369.2	345.2	23.99	15.387	
1,200.0	1,195.6	1,188.1	1,188.1	2.8	23.6	109.80	36.4	356.7	375.3	349.1	26.25	14.295	
1,228.9	1,223.8	1,216.3	1,216.3	2.9	24.1	110.62	36.4	356.7	377.5	350.6	26.91	14.029	
1,300.0	1,293.3	1,285.8	1,285.8	3.2	25.5	112.74	36.4	356.7	383.3	354.8	28.54	13.433	
1,400.0	1,390.9	1,383.4	1,383.4	3.6	27.5	115.62	36.4	356.7	392.4	361.6	30.83	12.731	
1,500.0	1,488.5	1,481.0	1,481.0	4.0	29.5	118.36	36.4	356.7	402.5	369.4	33.11	12.156	
1,600.0	1,586.1	1,578.6	1,578.6	4.4	31.4	120.97	36.4	356.7	413.5	378.1	35.39	11.683	
1,700.0	1,683.7	1,676.2	1,676.2	4.8	33.4	123.44	36.4	356.7	425.3	387.6	37.66	11.292	
1,800.0	1,781.3	1,773.8	1,773.8	5.3	35.3	125.78	36.4	356.7	437.9	398.0	39.92	10.968	
1,900.0	1,878.9	1,871.4	1,871.4	5.7	37.3	128.00	36.4	356.7	451.2	409.0	42.18	10.697	
2,000.0	1,976.5	1,969.0	1,969.0	6.1	39.3	130.08	36.4	356.7	465.1	420.7	44.42	10.471	
2,100.0	2,074.1	2,066.6	2,066.6	6.6	41.2	132.05	36.4	356.7	479.6	432.9	46.65	10.281	
2,200.0	2,171.7	2,164.2	2,164.2	7.0	43.2	133.90	36.4	356.7	494.6	445.7	48.87	10.121	
2,300.0	2,269.3	2,261.8	2,261.8	7.5	45.2	135.64	36.4	356.7	510.1	459.1	51.09	9.986	
2,400.0	2,366.9	2,359.4	2,359.4	7.9	47.1	137.28	36.4	356.7	526.1	472.8	53.29	9.872	
2,500.0	2,464.5	2,457.0	2,457.0	8.4	49.1	138.82	36.4	356.7	542.5	487.0	55.50	9.775	
2,600.0	2,562.1	2,554.6	2,554.6	8.9	51.0	140.28	36.4	356.7	559.2	501.5	57.69	9.693	
2,700.0	2,659.7	2,652.2	2,652.2	9.3	53.0	141.65	36.4	356.7	576.3	516.4	59.88	9.623	
2,800.0	2,757.3	2,749.8	2,749.8	9.8	55.0	142.94	36.4	356.7	593.7	531.6	62.07	9.564	
2,900.0	2,854.9	2,847.4	2,847.4	10.2	56.9	144.16	36.4	356.7	611.3	547.1	64.26	9.514	
3,000.0	2,952.5	2,945.0	2,945.0	10.7	58.9	145.31	36.4	356.7	629.3	562.8	66.44	9.472	
3,100.0	3,050.1	3,042.6	3,042.6	11.1	60.9	146.40	36.4	356.7	647.4	578.8	68.62	9.436	
3,200.0	3,147.7	3,140.2	3,140.2	11.6	62.8	147.43	36.4	356.7	665.8	595.0	70.79	9.405	
3,300.0	3,245.3	3,237.8	3,237.8	12.1	64.8	148.41	36.4	356.7	684.4	611.4	72.97	9.379	
3,400.0	3,342.9	3,335.4	3,335.4	12.5	66.8	149.33	36.4	356.7	703.1	628.0	75.14	9.358	
3,500.0	3,440.5	3,433.0	3,433.0	13.0	68.7	150.21	36.4	356.7	722.1	644.8	77.31	9.340	
3,600.0	3,538.1	3,530.6	3,530.6	13.4	70.7	151.04	36.4	356.7	741.2	661.7	79.48	9.325	
3,700.0	3,635.7	3,628.2	3,628.2	13.9	72.6	151.83	36.4	356.7	760.4	678.7	81.65	9.313	
3,800.0	3,733.3	3,725.8	3,725.8	14.4	74.6	152.58	36.4	356.7	779.7	695.9	83.82	9.303	
3,900.0	3,830.9	3,823.4	3,823.4	14.8	76.6	153.30	36.4	356.7	799.2	713.2	85.99	9.295	
4,000.0	3,928.5	3,921.0	3,921.0	15.3	78.5	153.98	36.4	356.7	818.8	730.7	88.16	9.288	
4,100.0	4,026.1	4,018.6	4,018.6	15.7	80.5	154.63	36.4	356.7	838.6	748.2	90.33	9.283	
4,200.0	4,123.7	4,116.2	4,116.2	16.2	82.5	155.25	36.4	356.7	858.4	765.9	92.50	9.280	
4,300.0	4,221.3	4,213.8	4,213.8	16.7	84.4	155.84	36.4	356.7	878.3	783.6	94.66	9.278	
4,400.0	4,318.9	4,311.4	4,311.4	17.1	86.4	156.41	36.4	356.7	898.3	801.4	96.83	9.276	
4,500.0	4,416.5	4,409.0	4,409.0	17.6	88.3	156.95	36.4	356.7	918.3	819.3	99.00	9.276	
4,600.0	4,514.1	4,506.6	4,506.6	18.1	90.3	157.47	36.4	356.7	938.5	837.3	101.17	9.276	
4,700.0	4,611.7	4,604.2	4,604.2	18.5	92.3	157.96	36.4	356.7	958.7	855.4	103.34	9.277	
4,800.0	4,709.3	4,701.8	4,701.8	19.0	94.2	158.44	36.4	356.7	979.0	873.5	105.51	9.279	
4,900.0	4,806.9	4,799.4	4,799.4	19.4	96.2	158.90	36.4	356.7	999.3	891.7	107.67	9.281	
5,000.0	4,904.5	4,897.0	4,897.0	19.9	98.2	159.34	36.4	356.7	1,019.7	909.9	109.84	9.284	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	4,994.6	4,994.6	20.4	100.1	159.76	36.4	356.7	1,040.2	928.2	112.01	9.286	
5,200.0	5,099.7	5,092.2	5,092.2	20.8	102.1	160.17	36.4	356.7	1,060.7	946.5	114.18	9.290	
5,300.0	5,197.3	5,189.8	5,189.8	21.3	104.0	160.56	36.4	356.7	1,081.3	964.9	116.35	9.293	
5,400.0	5,294.9	5,287.4	5,287.4	21.8	106.0	160.93	36.4	356.7	1,101.9	983.4	118.52	9.297	
5,500.0	5,392.5	5,385.0	5,385.0	22.2	108.0	161.29	36.4	356.7	1,122.5	1,001.9	120.69	9.301	
5,600.0	5,490.1	5,482.6	5,482.6	22.7	109.9	161.64	36.4	356.7	1,143.2	1,020.4	122.87	9.305	
5,614.2	5,504.0	5,496.5	5,496.5	22.7	110.2	161.69	36.4	356.7	1,146.2	1,023.0	123.17	9.305	
5,700.0	5,587.9	5,580.4	5,580.4	23.1	111.9	162.07	36.4	356.7	1,162.8	1,037.2	125.62	9.256	
5,800.0	5,686.4	5,678.9	5,678.9	23.4	113.9	162.42	36.4	356.7	1,179.1	1,050.8	128.36	9.186	
5,900.0	5,785.5	5,778.0	5,778.0	23.7	115.9	162.70	36.4	356.7	1,192.2	1,061.2	130.98	9.102	
6,000.0	5,885.0	5,877.5	5,877.5	23.9	117.9	162.90	36.4	356.7	1,201.9	1,068.5	133.49	9.004	
6,100.0	5,984.7	5,977.2	5,977.2	24.1	119.9	163.03	36.4	356.7	1,208.4	1,072.5	135.86	8.895	
6,200.0	6,084.7	6,077.2	6,077.2	24.2	121.9	163.10	36.4	356.7	1,211.5	1,073.4	138.08	8.774	
6,243.1	6,127.8	6,120.3	6,120.3	24.3	122.8	146.50	36.4	356.7	1,211.8	1,065.4	146.44	8.275	
6,273.1	6,157.8	6,150.3	6,150.3	24.3	123.4	146.50	36.4	356.7	1,211.8	1,064.7	147.07	8.239	
6,300.0	6,184.7	6,177.2	6,177.2	24.3	123.9	56.54	36.4	356.7	1,211.5	1,071.4	140.15	8.645	
6,350.0	6,234.5	6,227.0	6,227.0	24.4	124.9	56.81	36.4	356.7	1,209.5	1,068.6	140.91	8.584	
6,400.0	6,284.0	6,276.5	6,276.5	24.4	125.9	57.35	36.4	356.7	1,205.6	1,064.2	141.45	8.524	
6,450.0	6,332.9	6,325.4	6,325.4	24.4	126.9	58.16	36.4	356.7	1,199.9	1,058.1	141.81	8.462	
6,500.0	6,380.9	6,373.4	6,373.4	24.4	127.9	59.23	36.4	356.7	1,192.5	1,050.4	142.05	8.395	
6,550.0	6,427.8	6,420.3	6,420.3	24.4	128.8	60.55	36.4	356.7	1,183.4	1,041.2	142.25	8.320	
6,600.0	6,473.5	6,466.0	6,466.0	24.4	129.7	62.12	36.4	356.7	1,172.9	1,030.4	142.48	8.232	
6,650.0	6,517.5	6,510.0	6,510.0	24.4	130.6	63.92	36.4	356.7	1,161.1	1,018.3	142.83	8.129	
6,700.0	6,559.9	6,552.4	6,552.4	24.4	131.5	65.93	36.4	356.7	1,148.3	1,004.9	143.38	8.008	
6,750.0	6,600.2	6,592.7	6,592.7	24.4	132.3	68.12	36.4	356.7	1,134.5	990.4	144.18	7.869	
6,800.0	6,638.4	6,630.9	6,630.9	24.3	133.0	70.46	36.4	356.7	1,120.3	975.0	145.24	7.713	
6,850.0	6,674.3	6,666.8	6,666.8	24.3	133.8	72.90	36.4	356.7	1,105.7	959.1	146.53	7.546	
6,900.0	6,707.6	6,700.1	6,700.1	24.3	134.4	75.37	36.4	356.7	1,091.1	943.1	148.01	7.372	
6,950.0	6,738.3	6,730.8	6,730.8	24.3	135.0	77.83	36.4	356.7	1,076.8	927.2	149.59	7.198	
7,000.0	6,766.2	6,758.7	6,758.7	24.3	135.6	80.20	36.4	356.7	1,063.2	912.0	151.19	7.032	
7,050.0	6,791.0	6,783.5	6,783.5	24.3	136.1	82.44	36.4	356.7	1,050.5	897.8	152.73	6.878	
7,100.0	6,812.8	6,805.3	6,805.3	24.3	136.5	84.46	36.4	356.7	1,039.1	884.9	154.17	6.740	
7,150.0	6,831.4	6,823.9	6,823.9	24.3	136.9	86.23	36.4	356.7	1,029.3	873.8	155.47	6.620	
7,200.0	6,846.8	6,839.3	6,839.3	24.4	137.2	87.70	36.4	356.7	1,021.3	864.6	156.65	6.519	
7,250.0	6,858.7	6,851.2	6,851.2	24.5	137.5	88.84	36.4	356.7	1,015.4	857.6	157.73	6.437	
7,300.0	6,867.3	6,859.8	6,859.8	24.7	137.6	89.61	36.4	356.7	1,011.7	853.0	158.74	6.374	
7,350.0	6,872.4	6,864.9	6,864.9	25.0	137.7	90.00	36.4	356.7	1,010.5	850.8	159.69	6.328	
7,350.8	6,872.4	6,864.9	6,864.9	25.0	137.7	90.00	36.4	356.7	1,010.5	850.8	159.71	6.327	
7,400.0	6,874.0	6,866.5	6,866.5	25.4	137.8	89.99	36.4	356.7	1,011.7	851.1	160.60	6.299	
7,405.6	6,874.0	6,866.5	6,866.5	25.5	137.8	89.97	36.4	356.7	1,012.0	851.2	160.70	6.297	
7,500.0	6,873.0	6,865.5	6,865.5	26.7	137.7	89.91	36.4	356.7	1,021.4	858.9	162.47	6.287 SF	
7,600.0	6,871.9	6,864.4	6,864.4	28.4	137.7	89.85	36.4	356.7	1,040.7	876.2	164.51	6.326	
7,700.0	6,870.9	6,863.4	6,863.4	30.4	137.7	89.79	36.4	356.7	1,069.1	902.4	166.67	6.414	
7,800.0	6,869.8	6,862.3	6,862.3	32.5	137.7	89.73	36.4	356.7	1,105.8	936.9	168.93	6.546	
7,900.0	6,868.8	6,861.3	6,861.3	34.8	137.7	89.67	36.4	356.7	1,150.1	978.8	171.27	6.715	
8,000.0	6,867.7	6,860.2	6,860.2	37.1	137.6	89.61	36.4	356.7	1,201.0	1,027.3	173.68	6.915	
8,100.0	6,866.7	6,859.2	6,859.2	39.5	137.6	89.56	36.4	356.7	1,257.9	1,081.7	176.13	7.142	
8,200.0	6,865.6	6,858.1	6,858.1	42.0	137.6	89.50	36.4	356.7	1,319.9	1,141.2	178.63	7.389	
8,300.0	6,864.6	6,857.1	6,857.1	44.5	137.6	89.44	36.4	356.7	1,386.3	1,205.2	181.16	7.652	
8,400.0	6,863.6	6,856.1	6,856.1	47.0	137.6	89.38	36.4	356.7	1,456.6	1,272.9	183.73	7.928	
8,500.0	6,862.5	6,855.0	6,855.0	49.6	137.5	89.32	36.4	356.7	1,530.2	1,343.9	186.31	8.213	
8,600.0	6,861.5	6,854.0	6,854.0	52.2	137.5	89.26	36.4	356.7	1,606.7	1,417.7	188.92	8.505	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,700.0	6,860.4	6,852.9	6,852.9	54.8	137.5	89.20	36.4	356.7	1,685.6	1,494.0	191.54	8.800	
8,800.0	6,859.4	6,851.9	6,851.9	57.5	137.5	89.14	36.4	356.7	1,766.6	1,572.4	194.18	9.098	
8,900.0	6,858.3	6,850.8	6,850.8	60.1	137.5	89.08	36.4	356.7	1,849.5	1,652.7	196.83	9.396	
9,000.0	6,857.3	6,849.8	6,849.8	62.8	137.4	89.02	36.4	356.7	1,934.1	1,734.6	199.50	9.695	
9,100.0	6,856.2	6,848.7	6,848.7	65.5	137.4	88.96	36.4	356.7	2,020.0	1,817.8	202.17	9.992	
9,200.0	6,855.2	6,847.7	6,847.7	68.1	137.4	88.90	36.4	356.7	2,107.2	1,902.3	204.85	10.286	
9,300.0	6,854.1	6,846.6	6,846.6	70.8	137.4	88.85	36.4	356.7	2,195.4	1,987.9	207.54	10.579	
9,400.0	6,853.1	6,845.6	6,845.6	73.6	137.3	88.79	36.4	356.7	2,284.7	2,074.4	210.23	10.867	
9,500.0	6,852.1	6,844.6	6,844.6	76.3	137.3	88.73	36.4	356.7	2,374.8	2,161.8	212.93	11.153	
9,600.0	6,851.0	6,843.5	6,843.5	79.0	137.3	88.67	36.4	356.7	2,465.6	2,250.0	215.64	11.434	
9,700.0	6,850.0	6,842.5	6,842.5	81.7	137.3	88.61	36.4	356.7	2,557.2	2,338.8	218.35	11.711	
9,800.0	6,848.9	6,841.4	6,841.4	84.4	137.3	88.55	36.4	356.7	2,649.3	2,428.3	221.07	11.984	
9,900.0	6,847.9	6,840.4	6,840.4	87.2	137.2	88.49	36.4	356.7	2,742.0	2,518.2	223.79	12.253	
10,000.0	6,846.8	6,839.3	6,839.3	89.9	137.2	88.43	36.4	356.7	2,835.2	2,608.7	226.51	12.517	
10,100.0	6,845.8	6,838.3	6,838.3	92.7	137.2	88.37	36.4	356.7	2,928.9	2,699.6	229.24	12.777	
10,200.0	6,844.7	6,837.2	6,837.2	95.4	137.2	88.31	36.4	356.7	3,022.9	2,791.0	231.96	13.032	
10,300.0	6,843.7	6,836.2	6,836.2	98.2	137.2	88.26	36.4	356.7	3,117.3	2,882.6	234.69	13.283	
10,400.0	6,842.7	6,835.2	6,835.2	100.9	137.1	88.20	36.4	356.7	3,212.1	2,974.7	237.43	13.529	
10,500.0	6,841.6	6,834.1	6,834.1	103.7	137.1	88.14	36.4	356.7	3,307.2	3,067.0	240.16	13.771	
10,600.0	6,840.6	6,833.1	6,833.1	106.4	137.1	88.08	36.4	356.7	3,402.5	3,159.6	242.90	14.008	
10,700.0	6,839.5	6,832.0	6,832.0	109.2	137.1	88.02	36.4	356.7	3,498.1	3,252.5	245.64	14.241	
10,800.0	6,838.5	6,831.0	6,831.0	112.0	137.1	87.96	36.4	356.7	3,594.0	3,345.6	248.38	14.470	
10,900.0	6,837.4	6,829.9	6,829.9	114.7	137.0	87.90	36.4	356.7	3,690.0	3,438.9	251.12	14.695	
11,000.0	6,836.4	6,828.9	6,828.9	117.5	137.0	87.84	36.4	356.7	3,786.3	3,532.5	253.86	14.915	
11,100.0	6,835.4	6,827.9	6,827.9	120.3	137.0	87.79	36.4	356.7	3,882.8	3,626.2	256.60	15.132	
11,200.0	6,834.3	6,826.8	6,826.8	123.0	137.0	87.73	36.4	356.7	3,979.4	3,720.1	259.35	15.344	
11,300.0	6,833.3	6,825.8	6,825.8	125.8	136.9	87.67	36.4	356.7	4,076.2	3,814.1	262.09	15.553	
11,400.0	6,832.2	6,824.7	6,824.7	128.6	136.9	87.61	36.4	356.7	4,173.2	3,908.3	264.84	15.757	
11,500.0	6,831.2	6,823.7	6,823.7	131.4	136.9	87.55	36.4	356.7	4,270.2	4,002.7	267.58	15.959	
11,600.0	6,830.2	6,822.7	6,822.7	134.1	136.9	87.49	36.4	356.7	4,367.5	4,097.1	270.33	16.156	
11,700.0	6,829.1	6,821.6	6,821.6	136.9	136.9	87.43	36.4	356.7	4,464.8	4,191.7	273.08	16.350	
11,800.0	6,828.1	6,820.6	6,820.6	139.7	136.8	87.38	36.4	356.7	4,562.3	4,286.4	275.82	16.540	
11,900.0	6,827.0	6,819.5	6,819.5	142.5	136.8	87.32	36.4	356.7	4,659.8	4,381.2	278.57	16.728	
11,999.0	6,826.0	6,818.5	6,818.5	145.2	136.8	87.26	36.4	356.7	4,756.5	4,475.2	281.29	16.909	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	78.5	78.5	0.0	0.1	14.33	3,435.5	877.7	3,545.8				
100.0	100.0	178.5	178.5	0.1	2.2	14.33	3,435.5	877.7	3,545.8	3,543.5	2.26	1,569.539	
200.0	200.0	278.5	278.5	0.3	4.3	14.33	3,435.5	877.7	3,545.8	3,541.1	4.67	759.840	
300.0	300.0	378.5	378.5	0.5	6.4	14.33	3,435.5	877.7	3,545.8	3,538.9	6.93	511.655	
400.0	400.0	478.5	478.5	0.8	8.4	14.33	3,435.5	877.7	3,545.8	3,536.6	9.18	386.281	
500.0	500.0	578.5	578.5	1.0	10.4	14.33	3,435.5	877.7	3,545.8	3,534.4	11.42	310.404	
600.0	600.0	678.5	678.5	1.2	12.4	14.33	3,435.5	877.7	3,545.8	3,532.1	13.66	259.494	
700.0	700.0	778.5	778.5	1.4	14.5	30.97	3,435.5	877.7	3,544.3	3,528.4	15.90	222.953	
800.0	799.8	878.3	878.3	1.7	16.5	31.06	3,435.5	877.7	3,539.8	3,521.7	18.11	195.455	
900.0	899.5	978.0	978.0	1.9	18.5	31.21	3,435.5	877.7	3,532.3	3,512.0	20.30	174.004	
1,000.0	998.7	1,077.2	1,077.2	2.2	20.5	31.42	3,435.5	877.7	3,521.9	3,499.4	22.46	156.787	
1,100.0	1,097.5	1,176.0	1,176.0	2.5	22.5	31.69	3,435.5	877.7	3,508.5	3,483.9	24.60	142.643	
1,200.0	1,195.6	1,274.1	1,274.1	2.8	24.4	32.03	3,435.5	877.7	3,492.2	3,465.5	26.70	130.796	
1,228.9	1,223.8	1,302.3	1,302.3	2.9	25.0	32.14	3,435.5	877.7	3,487.0	3,459.7	27.30	127.722	
1,300.0	1,293.3	1,371.8	1,371.8	3.2	26.4	32.28	3,435.5	877.7	3,473.8	3,444.9	28.88	120.271	
1,400.0	1,390.9	1,469.4	1,469.4	3.6	28.4	32.47	3,435.5	877.7	3,455.3	3,424.2	31.12	111.045	
1,500.0	1,488.5	1,567.0	1,567.0	4.0	30.3	32.66	3,435.5	877.7	3,436.8	3,403.5	33.36	103.028	
1,600.0	1,586.1	1,664.6	1,664.6	4.4	32.3	32.86	3,435.5	877.7	3,418.4	3,382.8	35.61	96.003	
1,700.0	1,683.7	1,762.2	1,762.2	4.8	34.3	33.05	3,435.5	877.7	3,400.0	3,362.1	37.86	89.800	
1,800.0	1,781.3	1,859.8	1,859.8	5.3	36.2	33.25	3,435.5	877.7	3,381.6	3,341.5	40.12	84.284	
1,900.0	1,878.9	1,957.4	1,957.4	5.7	38.2	33.46	3,435.5	877.7	3,363.3	3,320.9	42.39	79.350	
2,000.0	1,976.5	2,055.0	2,055.0	6.1	40.1	33.66	3,435.5	877.7	3,345.0	3,300.4	44.65	74.910	
2,100.0	2,074.1	2,152.6	2,152.6	6.6	42.1	33.87	3,435.5	877.7	3,326.8	3,279.8	46.93	70.895	
2,200.0	2,171.7	2,250.2	2,250.2	7.0	44.1	34.07	3,435.5	877.7	3,308.6	3,259.4	49.20	67.247	
2,300.0	2,269.3	2,347.8	2,347.8	7.5	46.0	34.29	3,435.5	877.7	3,290.4	3,238.9	51.48	63.918	
2,400.0	2,366.9	2,445.4	2,445.4	7.9	48.0	34.50	3,435.5	877.7	3,272.3	3,218.6	53.76	60.869	
2,500.0	2,464.5	2,543.0	2,543.0	8.4	50.0	34.71	3,435.5	877.7	3,254.3	3,198.2	56.04	58.066	
2,600.0	2,562.1	2,640.6	2,640.6	8.9	51.9	34.93	3,435.5	877.7	3,236.2	3,177.9	58.33	55.481	
2,700.0	2,659.7	2,738.2	2,738.2	9.3	53.9	35.15	3,435.5	877.7	3,218.3	3,157.7	60.62	53.090	
2,800.0	2,757.3	2,835.8	2,835.8	9.8	55.8	35.38	3,435.5	877.7	3,200.3	3,137.4	62.91	50.871	
2,900.0	2,854.9	2,933.4	2,933.4	10.2	57.8	35.60	3,435.5	877.7	3,182.5	3,117.3	65.21	48.806	
3,000.0	2,952.5	3,031.0	3,031.0	10.7	59.8	35.83	3,435.5	877.7	3,164.6	3,097.1	67.50	46.882	
3,100.0	3,050.1	3,128.6	3,128.6	11.1	61.7	36.06	3,435.5	877.7	3,146.9	3,077.1	69.80	45.082	
3,200.0	3,147.7	3,226.2	3,226.2	11.6	63.7	36.29	3,435.5	877.7	3,129.1	3,057.0	72.10	43.397	
3,300.0	3,245.3	3,323.8	3,323.8	12.1	65.7	36.53	3,435.5	877.7	3,111.5	3,037.1	74.41	41.816	
3,400.0	3,342.9	3,421.4	3,421.4	12.5	67.6	36.76	3,435.5	877.7	3,093.9	3,017.1	76.72	40.329	
3,500.0	3,440.5	3,519.0	3,519.0	13.0	69.6	37.00	3,435.5	877.7	3,076.3	2,997.3	79.03	38.928	
3,600.0	3,538.1	3,616.6	3,616.6	13.4	71.5	37.25	3,435.5	877.7	3,058.8	2,977.4	81.34	37.606	
3,700.0	3,635.7	3,714.2	3,714.2	13.9	73.5	37.49	3,435.5	877.7	3,041.3	2,957.7	83.65	36.356	
3,800.0	3,733.3	3,811.8	3,811.8	14.4	75.5	37.74	3,435.5	877.7	3,023.9	2,937.9	85.97	35.174	
3,900.0	3,830.9	3,909.4	3,909.4	14.8	77.4	37.99	3,435.5	877.7	3,006.6	2,918.3	88.29	34.053	
4,000.0	3,928.5	4,007.0	4,007.0	15.3	79.4	38.25	3,435.5	877.7	2,989.3	2,898.7	90.61	32.990	
4,100.0	4,026.1	4,104.6	4,104.6	15.7	81.4	38.51	3,435.5	877.7	2,972.0	2,879.1	92.94	31.979	
4,200.0	4,123.7	4,202.2	4,202.2	16.2	83.3	38.77	3,435.5	877.7	2,954.9	2,859.6	95.27	31.017	
4,300.0	4,221.3	4,299.8	4,299.8	16.7	85.3	39.03	3,435.5	877.7	2,937.8	2,840.2	97.60	30.101	
4,400.0	4,318.9	4,397.4	4,397.4	17.1	87.3	39.30	3,435.5	877.7	2,920.7	2,820.8	99.93	29.228	
4,500.0	4,416.5	4,495.0	4,495.0	17.6	89.2	39.57	3,435.5	877.7	2,903.7	2,801.5	102.26	28.394	
4,600.0	4,514.1	4,592.6	4,592.6	18.1	91.2	39.84	3,435.5	877.7	2,886.8	2,782.2	104.60	27.598	
4,700.0	4,611.7	4,690.2	4,690.2	18.5	93.1	40.12	3,435.5	877.7	2,870.0	2,763.0	106.95	26.836	
4,800.0	4,709.3	4,787.8	4,787.8	19.0	95.1	40.39	3,435.5	877.7	2,853.2	2,743.9	109.29	26.107	
4,900.0	4,806.9	4,885.4	4,885.4	19.4	97.1	40.68	3,435.5	877.7	2,836.5	2,724.8	111.64	25.408	
5,000.0	4,904.5	4,983.0	4,983.0	19.9	99.0	40.96	3,435.5	877.7	2,819.8	2,705.8	113.99	24.738	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	5,080.6	5,080.6	20.4	101.0	41.25	3,435.5	877.7	2,803.2	2,686.9	116.34	24.095	
5,200.0	5,099.7	5,178.2	5,178.2	20.8	103.0	41.54	3,435.5	877.7	2,786.7	2,668.0	118.70	23.478	
5,300.0	5,197.3	5,275.8	5,275.8	21.3	104.9	41.84	3,435.5	877.7	2,770.3	2,649.2	121.06	22.884	
5,400.0	5,294.9	5,373.4	5,373.4	21.8	106.9	42.14	3,435.5	877.7	2,753.9	2,630.5	123.42	22.314	
5,500.0	5,392.5	5,471.0	5,471.0	22.2	108.8	42.44	3,435.5	877.7	2,737.6	2,611.9	125.78	21.765	
5,600.0	5,490.1	5,568.6	5,568.6	22.7	110.8	42.75	3,435.5	877.7	2,721.4	2,593.3	128.15	21.236	
5,614.2	5,504.0	5,582.5	5,582.5	22.7	111.1	42.79	3,435.5	877.7	2,719.1	2,590.6	128.49	21.162	
5,700.0	5,587.9	5,666.4	5,666.4	23.1	112.8	42.86	3,435.5	877.7	2,706.2	2,575.4	130.81	20.688	
5,800.0	5,686.4	5,764.9	5,764.9	23.4	114.8	42.93	3,435.5	877.7	2,693.6	2,560.2	133.40	20.192	
5,900.0	5,785.5	5,864.0	5,864.0	23.7	116.7	42.99	3,435.5	877.7	2,683.5	2,547.6	135.90	19.746	
6,000.0	5,885.0	5,963.5	5,963.5	23.9	118.7	43.04	3,435.5	877.7	2,676.1	2,537.7	138.31	19.348	
6,100.0	5,984.7	6,063.2	6,063.2	24.1	120.8	43.07	3,435.5	877.7	2,671.1	2,530.5	140.62	18.996	
6,200.0	6,084.7	6,163.2	6,163.2	24.2	122.8	43.08	3,435.5	877.7	2,668.8	2,525.9	142.82	18.687	
6,243.1	6,127.8	6,206.3	6,206.3	24.3	123.6	26.48	3,435.5	877.7	2,668.5	2,524.4	144.12	18.516	
6,273.1	6,157.8	6,236.3	6,236.3	24.3	124.2	26.48	3,435.5	877.7	2,668.5	2,523.8	144.76	18.434	
6,300.0	6,184.7	6,263.2	6,263.2	24.3	124.8	-63.55	3,435.5	877.7	2,668.3	2,523.4	144.94	18.409	
6,350.0	6,234.5	6,313.0	6,313.0	24.4	125.8	-63.73	3,435.5	877.7	2,666.7	2,520.8	145.84	18.285	
6,400.0	6,284.0	6,362.5	6,362.5	24.4	126.8	-64.09	3,435.5	877.7	2,663.5	2,517.0	146.53	18.177	
6,450.0	6,332.9	6,411.4	6,411.4	24.4	127.8	-64.63	3,435.5	877.7	2,658.9	2,511.9	147.04	18.082	
6,500.0	6,380.9	6,459.4	6,459.4	24.4	128.7	-65.34	3,435.5	877.7	2,652.8	2,505.4	147.41	17.996	
6,550.0	6,427.8	6,506.3	6,506.3	24.4	129.7	-66.21	3,435.5	877.7	2,645.4	2,497.7	147.67	17.914	
6,600.0	6,473.5	6,552.0	6,552.0	24.4	130.6	-67.24	3,435.5	877.7	2,636.6	2,488.8	147.89	17.829	
6,650.0	6,517.5	6,596.0	6,596.0	24.4	131.5	-68.41	3,435.5	877.7	2,626.7	2,478.6	148.10	17.736	
6,700.0	6,559.9	6,638.4	6,638.4	24.4	132.3	-69.72	3,435.5	877.7	2,615.8	2,467.4	148.38	17.629	
6,750.0	6,600.2	6,678.7	6,678.7	24.4	133.1	-71.15	3,435.5	877.7	2,603.9	2,455.1	148.76	17.504	
6,800.0	6,638.4	6,716.9	6,716.9	24.3	133.9	-72.68	3,435.5	877.7	2,591.2	2,442.0	149.28	17.358	
6,850.0	6,674.3	6,752.8	6,752.8	24.3	134.6	-74.29	3,435.5	877.7	2,577.9	2,428.0	149.95	17.192	
6,900.0	6,707.6	6,786.1	6,786.1	24.3	135.3	-75.95	3,435.5	877.7	2,564.2	2,413.4	150.79	17.005	
6,950.0	6,738.3	6,816.8	6,816.8	24.3	135.9	-77.65	3,435.5	877.7	2,550.1	2,398.3	151.76	16.803	
7,000.0	6,766.2	6,844.7	6,844.7	24.3	136.5	-79.34	3,435.5	877.7	2,535.8	2,383.0	152.84	16.591	
7,050.0	6,791.0	6,869.5	6,869.5	24.3	137.0	-81.02	3,435.5	877.7	2,521.6	2,367.6	154.00	16.374	
7,100.0	6,812.8	6,891.3	6,891.3	24.3	137.4	-82.64	3,435.5	877.7	2,507.5	2,352.3	155.19	16.157	
7,150.0	6,831.4	6,909.9	6,909.9	24.3	137.8	-84.18	3,435.5	877.7	2,493.8	2,337.4	156.38	15.947	
7,200.0	6,846.8	6,925.3	6,925.3	24.4	138.1	-85.62	3,435.5	877.7	2,480.6	2,323.0	157.53	15.747	
7,250.0	6,858.7	6,937.2	6,937.2	24.5	138.3	-86.95	3,435.5	877.7	2,467.9	2,309.3	158.62	15.559	
7,300.0	6,867.3	6,945.8	6,945.8	24.7	138.5	-88.13	3,435.5	877.7	2,456.0	2,296.3	159.64	15.385	
7,350.0	6,872.4	6,950.9	6,950.9	25.0	138.6	-89.16	3,435.5	877.7	2,444.9	2,284.3	160.59	15.225	
7,400.0	6,874.0	6,952.5	6,952.5	25.4	138.6	-90.03	3,435.5	877.7	2,434.7	2,273.2	161.47	15.079	
7,405.6	6,874.0	6,952.5	6,952.5	25.5	138.6	-90.12	3,435.5	877.7	2,433.6	2,272.1	161.56	15.063	
7,500.0	6,873.0	6,951.5	6,951.5	26.7	138.6	-90.09	3,435.5	877.7	2,417.3	2,254.0	163.34	14.799	
7,600.0	6,871.9	6,950.4	6,950.4	28.4	138.6	-90.07	3,435.5	877.7	2,404.0	2,238.6	165.38	14.536	
7,700.0	6,870.9	6,949.4	6,949.4	30.4	138.6	-90.04	3,435.5	877.7	2,394.7	2,227.2	167.55	14.293	
7,800.0	6,869.8	6,948.3	6,948.3	32.5	138.6	-90.02	3,435.5	877.7	2,389.6	2,219.8	169.82	14.072	
7,871.8	6,869.1	6,947.6	6,947.6	34.1	138.5	-90.00	3,435.5	877.7	2,388.6	2,217.1	171.50	13.927 CC	
7,900.0	6,868.8	6,947.3	6,947.3	34.8	138.5	-89.99	3,435.5	877.7	2,388.7	2,216.6	172.16	13.875 ES	
8,000.0	6,867.7	6,946.2	6,946.2	37.1	138.5	-89.97	3,435.5	877.7	2,392.0	2,217.4	174.57	13.702	
8,100.0	6,866.7	6,945.2	6,945.2	39.5	138.5	-89.94	3,435.5	877.7	2,399.4	2,222.4	177.03	13.554	
8,200.0	6,865.6	6,944.1	6,944.1	42.0	138.5	-89.92	3,435.5	877.7	2,411.0	2,231.5	179.54	13.429	
8,300.0	6,864.6	6,943.1	6,943.1	44.5	138.4	-89.89	3,435.5	877.7	2,426.6	2,244.5	182.07	13.328	
8,400.0	6,863.6	6,942.1	6,942.1	47.0	138.4	-89.87	3,435.5	877.7	2,446.2	2,261.6	184.64	13.249	
8,500.0	6,862.5	6,941.0	6,941.0	49.6	138.4	-89.84	3,435.5	877.7	2,469.8	2,282.5	187.23	13.191	
8,600.0	6,861.5	6,940.0	6,940.0	52.2	138.4	-89.82	3,435.5	877.7	2,497.1	2,307.2	189.85	13.153	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT KINZER 28A - 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	
8,700.0	6,860.4	6,938.9	6,938.9	54.8	138.4	-89.79	3,435.5	877.7	2,528.0	2,335.6	192.48	13.134	
8,800.0	6,859.4	6,937.9	6,937.9	57.5	138.3	-89.77	3,435.5	877.7	2,562.5	2,367.4	195.12	13.133 SF	
8,900.0	6,858.3	6,936.8	6,936.8	60.1	138.3	-89.74	3,435.5	877.7	2,600.4	2,402.6	197.78	13.148	
9,000.0	6,857.3	6,935.8	6,935.8	62.8	138.3	-89.72	3,435.5	877.7	2,641.6	2,441.1	200.45	13.178	
9,100.0	6,856.2	6,934.7	6,934.7	65.5	138.3	-89.69	3,435.5	877.7	2,685.8	2,482.7	203.13	13.222	
9,200.0	6,855.2	6,933.7	6,933.7	68.1	138.3	-89.67	3,435.5	877.7	2,733.0	2,527.1	205.82	13.278	
9,300.0	6,854.1	6,932.6	6,932.6	70.8	138.2	-89.64	3,435.5	877.7	2,782.9	2,574.4	208.51	13.346	
9,400.0	6,853.1	6,931.6	6,931.6	73.6	138.2	-89.62	3,435.5	877.7	2,835.5	2,624.3	211.22	13.425	
9,500.0	6,852.1	6,930.6	6,930.6	76.3	138.2	-89.59	3,435.5	877.7	2,890.6	2,676.7	213.93	13.512	
9,600.0	6,851.0	6,929.5	6,929.5	79.0	138.2	-89.57	3,435.5	877.7	2,948.1	2,731.5	216.64	13.608	
9,700.0	6,850.0	6,928.5	6,928.5	81.7	138.2	-89.54	3,435.5	877.7	3,007.8	2,788.5	219.36	13.712	
9,800.0	6,848.9	6,927.4	6,927.4	84.4	138.1	-89.52	3,435.5	877.7	3,069.6	2,847.5	222.09	13.822	
9,900.0	6,847.9	6,926.4	6,926.4	87.2	138.1	-89.49	3,435.5	877.7	3,133.4	2,908.6	224.82	13.938	
10,000.0	6,846.8	6,925.3	6,925.3	89.9	138.1	-89.47	3,435.5	877.7	3,199.0	2,971.5	227.55	14.059	
10,100.0	6,845.8	6,924.3	6,924.3	92.7	138.1	-89.44	3,435.5	877.7	3,266.4	3,036.1	230.28	14.184	
10,200.0	6,844.7	6,923.2	6,923.2	95.4	138.0	-89.42	3,435.5	877.7	3,335.4	3,102.4	233.02	14.314	
10,300.0	6,843.7	6,922.2	6,922.2	98.2	138.0	-89.39	3,435.5	877.7	3,406.0	3,170.2	235.76	14.447	
10,400.0	6,842.7	6,921.2	6,921.2	100.9	138.0	-89.37	3,435.5	877.7	3,478.0	3,239.4	238.51	14.582	
10,500.0	6,841.6	6,920.1	6,920.1	103.7	138.0	-89.34	3,435.5	877.7	3,551.3	3,310.0	241.25	14.720	
10,600.0	6,840.6	6,919.1	6,919.1	106.4	138.0	-89.32	3,435.5	877.7	3,625.9	3,381.9	244.00	14.860	
10,700.0	6,839.5	6,918.0	6,918.0	109.2	137.9	-89.29	3,435.5	877.7	3,701.7	3,455.0	246.75	15.002	
10,800.0	6,838.5	6,917.0	6,917.0	112.0	137.9	-89.27	3,435.5	877.7	3,778.7	3,529.2	249.50	15.145	
10,900.0	6,837.4	6,915.9	6,915.9	114.7	137.9	-89.24	3,435.5	877.7	3,856.7	3,604.4	252.26	15.289	
11,000.0	6,836.4	6,914.9	6,914.9	117.5	137.9	-89.22	3,435.5	877.7	3,935.7	3,680.7	255.01	15.433	
11,100.0	6,835.4	6,913.9	6,913.9	120.3	137.9	-89.19	3,435.5	877.7	4,015.6	3,757.8	257.77	15.578	
11,200.0	6,834.3	6,912.8	6,912.8	123.0	137.8	-89.17	3,435.5	877.7	4,096.4	3,835.9	260.53	15.724	
11,300.0	6,833.3	6,911.8	6,911.8	125.8	137.8	-89.14	3,435.5	877.7	4,178.1	3,914.8	263.29	15.869	
11,400.0	6,832.2	6,910.7	6,910.7	128.6	137.8	-89.12	3,435.5	877.7	4,260.5	3,994.5	266.05	16.014	
11,500.0	6,831.2	6,909.7	6,909.7	131.4	137.8	-89.09	3,435.5	877.7	4,343.7	4,074.9	268.81	16.159	
11,600.0	6,830.2	6,908.7	6,908.7	134.1	137.8	-89.07	3,435.5	877.7	4,427.5	4,156.0	271.57	16.303	
11,700.0	6,829.1	6,907.6	6,907.6	136.9	137.7	-89.04	3,435.5	877.7	4,512.0	4,237.7	274.33	16.447	
11,800.0	6,828.1	6,906.6	6,906.6	139.7	137.7	-89.02	3,435.5	877.7	4,597.2	4,320.1	277.10	16.591	
11,900.0	6,827.0	6,905.5	6,905.5	142.5	137.7	-88.99	3,435.5	877.7	4,682.9	4,403.0	279.86	16.733	
11,999.0	6,826.0	6,904.5	6,904.5	145.2	137.7	-88.97	3,435.5	877.7	4,768.3	4,485.7	282.60	16.873	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 650-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	41.4	41.4	0.0	0.0	34.66	1,289.7	891.7	1,567.9				
100.0	100.0	141.0	141.0	0.1	0.1	34.67	1,289.5	892.0	1,567.9	1,567.7	0.23	6,723.779	
200.0	200.0	240.7	240.7	0.3	0.2	34.70	1,289.1	892.6	1,568.0	1,567.4	0.55	2,829.998	
300.0	300.0	340.4	340.4	0.5	0.3	34.74	1,288.6	893.5	1,568.0	1,567.2	0.87	1,792.220	
400.0	400.0	440.0	440.0	0.8	0.4	34.79	1,287.9	894.7	1,568.1	1,566.9	1.20	1,311.396	
500.0	500.0	539.7	539.6	1.0	0.5	34.85	1,286.9	896.2	1,568.2	1,566.7	1.52	1,034.036	
600.0	600.0	639.3	639.3	1.2	0.6	34.93	1,285.8	898.0	1,568.4	1,566.5	1.84	853.556	
700.0	700.0	741.1	741.0	1.4	0.7	51.68	1,284.6	899.9	1,567.4	1,565.2	2.16	725.611	
800.0	799.8	842.9	842.8	1.7	0.8	51.96	1,283.4	901.6	1,564.1	1,561.6	2.49	628.807	
900.0	899.5	944.5	944.4	1.9	0.9	52.38	1,282.2	903.0	1,558.6	1,555.8	2.82	552.122	
1,000.0	998.7	1,044.8	1,044.6	2.2	1.0	52.92	1,281.0	904.1	1,550.9	1,547.7	3.17	489.232	
1,100.0	1,097.5	1,143.5	1,143.3	2.5	1.1	53.59	1,280.0	905.1	1,541.2	1,537.6	3.54	435.838	
1,200.0	1,195.6	1,241.6	1,241.4	2.8	1.2	54.39	1,279.0	905.9	1,529.5	1,525.6	3.93	388.873	
1,228.9	1,223.8	1,269.8	1,269.6	2.9	1.2	54.65	1,278.8	906.1	1,525.8	1,521.8	4.05	376.293	
1,300.0	1,293.3	1,339.2	1,339.0	3.2	1.3	55.14	1,278.2	906.5	1,516.6	1,512.2	4.36	347.786	
1,400.0	1,390.9	1,436.9	1,436.7	3.6	1.4	55.84	1,277.5	906.9	1,503.7	1,498.9	4.81	312.836	
1,500.0	1,488.5	1,535.3	1,535.1	4.0	1.5	56.55	1,276.9	907.2	1,491.1	1,485.8	5.27	282.978	
1,600.0	1,586.1	1,634.9	1,634.8	4.4	1.6	57.28	1,276.2	907.4	1,478.6	1,472.9	5.75	257.319	
1,700.0	1,683.7	1,734.6	1,734.4	4.8	1.7	58.02	1,275.5	907.4	1,466.2	1,459.9	6.23	235.223	
1,800.0	1,781.3	1,834.2	1,834.0	5.3	1.8	58.77	1,274.6	907.3	1,453.9	1,447.1	6.73	216.065	
1,900.0	1,878.9	1,933.8	1,933.6	5.7	1.9	59.53	1,273.7	907.1	1,441.6	1,434.4	7.23	199.341	
2,000.0	1,976.5	2,033.4	2,033.2	6.1	1.9	60.30	1,272.6	906.8	1,429.5	1,421.8	7.74	184.644	
2,100.0	2,074.1	2,132.9	2,132.8	6.6	2.0	61.08	1,271.5	906.3	1,417.5	1,409.2	8.26	171.646	
2,200.0	2,171.7	2,232.5	2,232.3	7.0	2.1	61.88	1,270.3	905.7	1,405.6	1,396.8	8.78	160.087	
2,300.0	2,269.3	2,332.0	2,331.8	7.5	2.2	62.68	1,269.1	905.0	1,393.8	1,384.5	9.31	149.753	
2,400.0	2,366.9	2,431.5	2,431.2	7.9	2.3	63.50	1,267.7	904.1	1,382.2	1,372.3	9.84	140.469	
2,500.0	2,464.5	2,530.0	2,529.7	8.4	2.4	64.33	1,266.3	903.1	1,370.7	1,360.3	10.37	132.127	
2,600.0	2,562.1	2,626.5	2,626.2	8.9	2.5	65.14	1,264.9	902.1	1,359.5	1,348.6	10.91	124.650	
2,700.0	2,659.7	2,723.0	2,722.7	9.3	2.6	65.97	1,263.6	901.2	1,348.6	1,337.2	11.44	117.864	
2,800.0	2,757.3	2,819.5	2,819.2	9.8	2.6	66.81	1,262.4	900.3	1,338.1	1,326.1	11.98	111.686	
2,900.0	2,854.9	2,916.0	2,915.8	10.2	2.7	67.66	1,261.2	899.3	1,328.0	1,315.5	12.52	106.043	
3,000.0	2,952.5	3,012.6	3,012.3	10.7	2.8	68.52	1,260.1	898.4	1,318.3	1,305.2	13.07	100.876	
3,100.0	3,050.1	3,109.3	3,108.9	11.1	2.9	69.39	1,259.1	897.6	1,308.9	1,295.3	13.62	96.132	
3,200.0	3,147.7	3,205.9	3,205.6	11.6	3.0	70.27	1,258.2	896.7	1,299.9	1,285.7	14.17	91.766	
3,300.0	3,245.3	3,302.6	3,302.3	12.1	3.0	71.16	1,257.4	895.8	1,291.3	1,276.6	14.72	87.741	
3,400.0	3,342.9	3,399.3	3,399.0	12.5	3.1	72.06	1,256.6	895.0	1,283.1	1,267.8	15.27	84.022	
3,500.0	3,440.5	3,496.1	3,495.7	13.0	3.2	72.97	1,255.9	894.2	1,275.3	1,259.4	15.83	80.580	
3,600.0	3,538.1	3,597.8	3,597.4	13.4	3.3	73.93	1,255.2	893.2	1,267.7	1,251.3	16.37	77.435	
3,700.0	3,635.7	3,699.8	3,699.4	13.9	3.3	74.89	1,254.5	891.7	1,260.1	1,243.1	16.91	74.495	
3,800.0	3,733.3	3,801.8	3,801.5	14.4	3.4	75.86	1,253.8	889.8	1,252.4	1,235.0	17.46	71.737	
3,900.0	3,830.9	3,903.9	3,903.5	14.8	3.4	76.82	1,253.1	887.4	1,244.8	1,226.8	18.00	69.141	
4,000.0	3,928.5	4,006.0	4,005.6	15.3	3.5	77.79	1,252.4	884.6	1,237.2	1,218.6	18.55	66.692	
4,100.0	4,026.1	4,108.2	4,107.7	15.7	3.6	78.76	1,251.8	881.4	1,229.5	1,210.4	19.10	64.379	
4,200.0	4,123.7	4,210.4	4,209.8	16.2	3.6	79.73	1,251.1	877.7	1,221.8	1,202.2	19.65	62.193	
4,300.0	4,221.3	4,312.6	4,311.9	16.7	3.7	80.71	1,250.5	873.6	1,214.1	1,193.9	20.19	60.125	
4,400.0	4,318.9	4,414.8	4,414.1	17.1	3.8	81.69	1,249.9	869.1	1,206.3	1,185.6	20.74	58.165	
4,500.0	4,416.5	4,500.0	4,499.1	17.6	3.8	82.51	1,249.4	865.0	1,198.6	1,177.4	21.27	56.351	
4,600.0	4,514.1	4,607.5	4,606.5	18.1	3.9	83.55	1,248.9	859.9	1,191.3	1,169.5	21.79	54.682	
4,700.0	4,611.7	4,699.6	4,698.6	18.5	3.9	84.45	1,248.6	855.9	1,184.8	1,162.5	22.29	53.152	
4,800.0	4,709.3	4,791.8	4,790.7	19.0	3.9	85.36	1,248.5	852.4	1,179.1	1,156.3	22.79	51.729	
4,900.0	4,806.9	4,884.1	4,882.9	19.4	3.9	86.28	1,248.6	849.2	1,174.2	1,150.9	23.30	50.407	
5,000.0	4,904.5	4,976.4	4,975.2	19.9	4.0	87.21	1,248.8	846.4	1,170.2	1,146.4	23.79	49.179	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 650-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	5,068.7	5,067.5	20.4	4.0	88.14	1,249.2	844.1	1,166.9	1,142.7	24.29	48.040	
5,200.0	5,099.7	5,161.1	5,159.8	20.8	4.0	89.07	1,249.8	842.1	1,164.5	1,139.7	24.78	46.986	
5,300.0	5,197.3	5,253.5	5,252.2	21.3	4.0	90.01	1,250.5	840.5	1,162.9	1,137.7	25.28	46.011	
5,400.0	5,294.9	5,346.0	5,344.6	21.8	4.1	90.94	1,251.4	839.4	1,162.2	1,136.4	25.76	45.110	
5,444.4	5,338.2	5,387.0	5,385.7	22.0	4.1	91.36	1,251.9	839.0	1,162.1	1,136.1	25.98	44.733	
5,500.0	5,392.5	5,438.4	5,437.1	22.2	4.1	91.87	1,252.5	838.6	1,162.2	1,136.0	26.25	44.281	
5,600.0	5,490.1	5,533.5	5,532.2	22.7	4.1	92.83	1,253.8	838.2	1,163.0	1,136.3	26.73	43.508	
5,614.2	5,504.0	5,547.8	5,546.5	22.7	4.1	92.97	1,254.0	838.2	1,163.2	1,136.4	26.80	43.400	
5,700.0	5,587.9	5,634.2	5,632.9	23.1	4.2	93.79	1,255.2	837.7	1,164.1	1,136.9	27.17	42.852	
5,800.0	5,686.4	5,735.5	5,734.2	23.4	4.2	94.58	1,256.7	836.9	1,164.9	1,137.4	27.50	42.356	
5,900.0	5,785.5	5,837.4	5,836.0	23.7	4.3	95.18	1,258.4	835.9	1,165.4	1,137.6	27.80	41.919	
6,000.0	5,885.0	5,939.6	5,938.2	23.9	4.3	95.60	1,260.1	834.6	1,165.5	1,137.4	28.06	41.530	
6,100.0	5,984.7	6,042.1	6,040.7	24.1	4.4	95.83	1,261.9	833.1	1,165.0	1,136.8	28.29	41.183	
6,200.0	6,084.7	6,144.7	6,143.3	24.2	4.4	95.87	1,263.7	831.4	1,164.0	1,135.5	28.48	40.874	
6,243.1	6,127.8	6,188.9	6,187.5	24.3	4.4	79.22	1,264.5	830.5	1,163.4	1,143.5	19.87	58.560	
6,273.1	6,157.8	6,219.7	6,218.2	24.3	4.4	79.18	1,265.1	829.9	1,162.9	1,143.0	19.93	58.354	
6,300.0	6,184.7	6,247.3	6,245.8	24.3	4.4	-10.87	1,265.7	829.3	1,162.0	1,133.4	28.63	40.589	
6,350.0	6,234.5	6,298.3	6,296.8	24.4	4.5	-11.03	1,266.7	828.2	1,157.6	1,128.9	28.62	40.447	
6,400.0	6,284.0	6,348.9	6,347.4	24.4	4.5	-11.28	1,267.7	827.1	1,149.7	1,121.2	28.53	40.301	
6,450.0	6,332.9	6,398.7	6,397.2	24.4	4.5	-11.64	1,268.7	825.9	1,138.4	1,110.1	28.36	40.147	
6,500.0	6,380.9	6,447.6	6,446.0	24.4	4.5	-12.10	1,269.7	824.7	1,123.8	1,095.7	28.11	39.984	
6,550.0	6,427.8	6,495.2	6,493.6	24.4	4.6	-12.69	1,270.7	823.4	1,105.9	1,078.2	27.78	39.808	
6,600.0	6,473.5	6,539.4	6,537.8	24.4	4.6	-13.41	1,271.6	822.3	1,084.9	1,057.6	27.37	39.633	
6,650.0	6,517.5	6,582.0	6,580.3	24.4	4.6	-14.29	1,272.4	821.2	1,061.0	1,034.1	26.90	39.438	
6,700.0	6,559.9	6,622.7	6,621.1	24.4	4.6	-15.36	1,273.2	820.2	1,034.2	1,007.8	26.37	39.218	
6,750.0	6,600.2	6,661.6	6,659.9	24.4	4.6	-16.66	1,273.9	819.3	1,004.7	978.9	25.79	38.959	
6,800.0	6,638.4	6,698.4	6,696.7	24.3	4.6	-18.26	1,274.5	818.5	972.6	947.5	25.17	38.644	
6,850.0	6,674.3	6,732.8	6,731.1	24.3	4.6	-20.22	1,275.0	817.8	938.2	913.7	24.53	38.241	
6,900.0	6,707.6	6,764.9	6,763.1	24.3	4.6	-22.64	1,275.5	817.1	901.6	877.7	23.92	37.697	
6,950.0	6,738.3	6,794.3	6,792.5	24.3	4.6	-25.64	1,275.9	816.6	863.0	839.7	23.37	36.935	
7,000.0	6,766.2	6,820.9	6,819.2	24.3	4.6	-29.39	1,276.2	816.1	822.7	799.7	22.95	35.842	
7,050.0	6,791.0	6,844.7	6,842.9	24.3	4.6	-34.08	1,276.5	815.7	780.8	758.1	22.77	34.292	
7,100.0	6,812.8	6,865.4	6,863.6	24.3	4.6	-39.90	1,276.8	815.3	737.7	714.8	22.91	32.199	
7,150.0	6,831.4	6,883.0	6,881.2	24.3	4.6	-47.03	1,277.0	815.0	693.5	670.1	23.42	29.611	
7,200.0	6,846.8	6,897.4	6,895.6	24.4	4.6	-55.45	1,277.1	814.8	648.6	624.4	24.24	26.755	
7,250.0	6,858.7	6,908.5	6,906.7	24.5	4.6	-64.84	1,277.2	814.6	603.4	578.2	25.20	23.945	
7,300.0	6,867.3	6,916.2	6,914.4	24.7	4.6	-74.51	1,277.3	814.5	558.1	532.0	26.08	21.399	
7,350.0	6,872.4	6,920.5	6,918.7	25.0	4.6	-83.57	1,277.4	814.4	513.2	486.4	26.78	19.162	
7,400.0	6,874.0	6,921.3	6,919.5	25.4	4.6	-91.27	1,277.4	814.4	469.0	441.7	27.32	17.170	
7,405.6	6,874.0	6,921.2	6,919.4	25.5	4.6	-92.03	1,277.4	814.4	464.2	436.8	27.37	16.957	
7,500.0	6,873.0	6,918.7	6,917.0	26.7	4.6	-91.42	1,277.3	814.4	385.1	355.9	29.20	13.187	
7,600.0	6,871.9	6,916.1	6,914.3	28.4	4.6	-90.77	1,277.3	814.5	310.8	279.5	31.30	9.929	
7,700.0	6,870.9	6,913.5	6,911.7	30.4	4.6	-90.12	1,277.3	814.5	254.7	221.2	33.53	7.597	
7,800.0	6,869.8	6,910.9	6,909.1	32.5	4.6	-89.46	1,277.3	814.5	230.5	194.7	35.85	6.431	
7,808.7	6,869.7	6,910.6	6,908.9	32.7	4.6	-89.41	1,277.3	814.6	230.4	194.3	36.06	6.389 CC, ES, SF	
7,900.0	6,868.8	6,908.2	6,906.4	34.8	4.6	-88.81	1,277.2	814.6	247.8	209.5	38.25	6.479	
8,000.0	6,867.7	6,905.5	6,903.8	37.1	4.6	-88.14	1,277.2	814.6	299.4	258.7	40.70	7.356	
8,100.0	6,866.7	6,902.9	6,901.1	39.5	4.6	-87.48	1,277.2	814.7	371.3	328.1	43.20	8.594	
8,200.0	6,865.6	6,900.2	6,898.4	42.0	4.6	-86.81	1,277.1	814.7	453.9	408.2	45.74	9.924	
8,300.0	6,864.6	6,897.5	6,895.7	44.5	4.6	-86.14	1,277.1	814.8	542.5	494.1	48.30	11.230	
8,400.0	6,863.6	6,894.7	6,893.0	47.0	4.6	-85.46	1,277.1	814.8	634.4	583.5	50.89	12.466	
8,500.0	6,862.5	6,892.0	6,890.2	49.6	4.6	-84.79	1,277.1	814.9	728.4	674.9	53.49	13.618	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT KINZER 28B - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 650-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
8,600.0	6,861.5	6,889.2	6,887.5	52.2	4.6	-84.11	1,277.0	814.9	823.9	767.8	56.10	14.686	
8,700.0	6,860.4	6,886.5	6,884.7	54.8	4.6	-83.43	1,277.0	814.9	920.3	861.6	58.71	15.674	
8,800.0	6,859.4	6,883.7	6,881.9	57.5	4.6	-82.74	1,277.0	815.0	1,017.4	956.0	61.33	16.588	
8,900.0	6,858.3	6,880.9	6,879.1	60.1	4.6	-82.06	1,276.9	815.0	1,114.9	1,051.0	63.94	17.436	
9,000.0	6,857.3	6,878.1	6,876.3	62.8	4.6	-81.37	1,276.9	815.1	1,212.9	1,146.4	66.56	18.224	
9,100.0	6,856.2	6,875.2	6,873.5	65.5	4.6	-80.68	1,276.9	815.1	1,311.2	1,242.0	69.16	18.959	
9,200.0	6,855.2	6,872.4	6,870.6	68.1	4.6	-79.99	1,276.8	815.2	1,409.7	1,338.0	71.76	19.646	
9,300.0	6,854.1	6,869.5	6,867.8	70.8	4.6	-79.30	1,276.8	815.2	1,508.4	1,434.1	74.34	20.290	
9,400.0	6,853.1	6,866.7	6,864.9	73.6	4.6	-78.61	1,276.8	815.3	1,607.3	1,530.4	76.92	20.897	
9,500.0	6,852.1	6,863.8	6,862.0	76.3	4.6	-77.92	1,276.7	815.3	1,706.3	1,626.8	79.47	21.470	
9,600.0	6,851.0	6,860.9	6,859.1	79.0	4.6	-77.22	1,276.7	815.4	1,805.4	1,723.4	82.01	22.013	
9,700.0	6,850.0	6,857.9	6,856.2	81.7	4.6	-76.53	1,276.7	815.4	1,904.6	1,820.0	84.54	22.530	
9,800.0	6,848.9	6,855.0	6,853.2	84.4	4.6	-75.84	1,276.6	815.5	2,003.8	1,916.8	87.04	23.022	
9,900.0	6,847.9	6,852.0	6,850.3	87.2	4.6	-75.15	1,276.6	815.5	2,103.2	2,013.6	89.52	23.494	
10,000.0	6,846.8	6,849.0	6,847.3	89.9	4.6	-74.45	1,276.6	815.6	2,202.6	2,110.6	91.98	23.946	
10,100.0	6,845.8	6,846.1	6,844.3	92.7	4.6	-73.76	1,276.5	815.6	2,302.0	2,207.6	94.41	24.382	
10,200.0	6,844.7	6,843.0	6,841.3	95.4	4.6	-73.07	1,276.5	815.7	2,401.5	2,304.6	96.82	24.803	
10,300.0	6,843.7	6,840.0	6,838.3	98.2	4.6	-72.38	1,276.5	815.7	2,501.0	2,401.8	99.21	25.210	
10,400.0	6,842.7	6,837.0	6,835.2	100.9	4.6	-71.69	1,276.4	815.8	2,600.5	2,499.0	101.56	25.606	
10,500.0	6,841.6	6,833.9	6,832.2	103.7	4.6	-71.00	1,276.4	815.8	2,700.1	2,596.2	103.89	25.991	
10,600.0	6,840.6	6,830.8	6,829.1	106.4	4.6	-70.31	1,276.3	815.9	2,799.7	2,693.5	106.18	26.367	
10,700.0	6,839.5	6,827.7	6,826.0	109.2	4.6	-69.63	1,276.3	816.0	2,899.4	2,790.9	108.45	26.734	
10,800.0	6,838.5	6,824.6	6,822.9	112.0	4.6	-68.95	1,276.3	816.0	2,999.0	2,888.3	110.69	27.095	
10,900.0	6,837.4	6,821.5	6,819.7	114.7	4.6	-68.26	1,276.2	816.1	3,098.7	2,985.8	112.89	27.449	
11,000.0	6,836.4	6,818.3	6,816.6	117.5	4.6	-67.59	1,276.2	816.1	3,198.4	3,083.3	115.06	27.798	
11,100.0	6,835.4	6,815.2	6,813.4	120.3	4.6	-66.91	1,276.1	816.2	3,298.1	3,180.9	117.20	28.142	
11,200.0	6,834.3	6,812.0	6,810.2	123.0	4.6	-66.24	1,276.1	816.2	3,397.8	3,278.5	119.30	28.482	
11,300.0	6,833.3	6,808.8	6,807.0	125.8	4.6	-65.56	1,276.1	816.3	3,497.5	3,376.2	121.36	28.818	
11,400.0	6,832.2	6,805.5	6,803.8	128.6	4.6	-64.90	1,276.0	816.4	3,597.3	3,473.9	123.40	29.152	
11,500.0	6,831.2	6,802.3	6,800.5	131.4	4.6	-64.23	1,276.0	816.4	3,697.0	3,571.6	125.39	29.484	
11,600.0	6,830.2	6,799.0	6,797.3	134.1	4.6	-63.57	1,275.9	816.5	3,796.8	3,669.5	127.35	29.814	
11,700.0	6,829.1	6,795.7	6,794.0	136.9	4.6	-62.91	1,275.9	816.5	3,896.6	3,767.3	129.27	30.142	
11,800.0	6,828.1	6,792.4	6,790.7	139.7	4.6	-62.26	1,275.8	816.6	3,996.4	3,865.2	131.16	30.469	
11,900.0	6,827.0	6,789.1	6,787.4	142.5	4.6	-61.60	1,275.8	816.7	4,096.2	3,963.2	133.01	30.796	
11,999.0	6,826.0	6,785.8	6,784.0	145.2	4.6	-60.96	1,275.8	816.7	4,195.0	4,060.2	134.80	31.120	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	77.5	77.5	0.0	0.1	6.57	2,852.5	328.8	2,871.4				
100.0	100.0	177.5	177.5	0.1	2.1	6.57	2,852.5	328.8	2,871.4	2,869.2	2.24	1,280.680	
200.0	200.0	277.5	277.5	0.3	4.3	6.57	2,852.5	328.8	2,871.4	2,866.8	4.65	616.922	
300.0	300.0	377.5	377.5	0.5	6.4	6.57	2,852.5	328.8	2,871.4	2,864.5	6.92	415.021	
400.0	400.0	477.5	477.5	0.8	8.4	6.57	2,852.5	328.8	2,871.4	2,862.3	9.17	313.189	
500.0	500.0	577.5	577.5	1.0	10.4	6.57	2,852.5	328.8	2,871.4	2,860.0	11.41	251.607	
600.0	600.0	677.5	677.5	1.2	12.4	6.57	2,852.5	328.8	2,871.4	2,857.8	13.65	210.305	
700.0	700.0	777.5	777.5	1.4	14.4	23.21	2,852.5	328.8	2,869.8	2,853.9	15.89	180.656	
800.0	799.8	877.3	877.3	1.7	16.5	23.29	2,852.5	328.8	2,865.0	2,846.9	18.10	158.328	
900.0	899.5	977.0	977.0	1.9	18.5	23.42	2,852.5	328.8	2,857.0	2,836.7	20.28	140.900	
1,000.0	998.7	1,076.2	1,076.2	2.2	20.5	23.61	2,852.5	328.8	2,845.8	2,823.4	22.42	126.907	
1,100.0	1,097.5	1,175.0	1,175.0	2.5	22.4	23.85	2,852.5	328.8	2,831.5	2,806.9	24.53	115.410	
1,200.0	1,195.6	1,273.1	1,273.1	2.8	24.4	24.15	2,852.5	328.8	2,814.0	2,787.4	26.60	105.780	
1,228.9	1,223.8	1,301.3	1,301.3	2.9	25.0	24.25	2,852.5	328.8	2,808.4	2,781.2	27.19	103.282	
1,300.0	1,293.3	1,370.8	1,370.8	3.2	26.4	24.38	2,852.5	328.8	2,794.2	2,765.4	28.76	97.166	
1,400.0	1,390.9	1,468.4	1,468.4	3.6	28.4	24.56	2,852.5	328.8	2,774.3	2,743.3	30.97	89.593	
1,500.0	1,488.5	1,566.0	1,566.0	4.0	30.3	24.75	2,852.5	328.8	2,754.4	2,721.2	33.18	83.011	
1,600.0	1,586.1	1,663.6	1,663.6	4.4	32.3	24.94	2,852.5	328.8	2,734.6	2,699.2	35.40	77.242	
1,700.0	1,683.7	1,761.2	1,761.2	4.8	34.2	25.13	2,852.5	328.8	2,714.8	2,677.1	37.63	72.145	
1,800.0	1,781.3	1,858.8	1,858.8	5.3	36.2	25.33	2,852.5	328.8	2,695.0	2,655.1	39.86	67.611	
1,900.0	1,878.9	1,956.4	1,956.4	5.7	38.2	25.53	2,852.5	328.8	2,675.2	2,633.1	42.09	63.553	
2,000.0	1,976.5	2,054.0	2,054.0	6.1	40.1	25.73	2,852.5	328.8	2,655.5	2,611.2	44.33	59.900	
2,100.0	2,074.1	2,151.6	2,151.6	6.6	42.1	25.94	2,852.5	328.8	2,635.8	2,589.2	46.57	56.595	
2,200.0	2,171.7	2,249.2	2,249.2	7.0	44.1	26.14	2,852.5	328.8	2,616.2	2,567.3	48.82	53.591	
2,300.0	2,269.3	2,346.8	2,346.8	7.5	46.0	26.35	2,852.5	328.8	2,596.5	2,545.5	51.06	50.849	
2,400.0	2,366.9	2,444.4	2,444.4	7.9	48.0	26.57	2,852.5	328.8	2,576.9	2,523.6	53.31	48.336	
2,500.0	2,464.5	2,542.0	2,542.0	8.4	49.9	26.78	2,852.5	328.8	2,557.4	2,501.8	55.57	46.025	
2,600.0	2,562.1	2,639.6	2,639.6	8.9	51.9	27.01	2,852.5	328.8	2,537.9	2,480.1	57.82	43.893	
2,700.0	2,659.7	2,737.2	2,737.2	9.3	53.9	27.23	2,852.5	328.8	2,518.4	2,458.3	60.08	41.919	
2,800.0	2,757.3	2,834.8	2,834.8	9.8	55.8	27.46	2,852.5	328.8	2,499.0	2,436.6	62.34	40.088	
2,900.0	2,854.9	2,932.4	2,932.4	10.2	57.8	27.69	2,852.5	328.8	2,479.6	2,415.0	64.60	38.384	
3,000.0	2,952.5	3,030.0	3,030.0	10.7	59.8	27.92	2,852.5	328.8	2,460.2	2,393.3	66.86	36.794	
3,100.0	3,050.1	3,127.6	3,127.6	11.1	61.7	28.16	2,852.5	328.8	2,440.9	2,371.7	69.13	35.308	
3,200.0	3,147.7	3,225.2	3,225.2	11.6	63.7	28.40	2,852.5	328.8	2,421.6	2,350.2	71.40	33.916	
3,300.0	3,245.3	3,322.8	3,322.8	12.1	65.7	28.65	2,852.5	328.8	2,402.4	2,328.7	73.67	32.608	
3,400.0	3,342.9	3,420.4	3,420.4	12.5	67.6	28.90	2,852.5	328.8	2,383.2	2,307.2	75.95	31.379	
3,500.0	3,440.5	3,518.0	3,518.0	13.0	69.6	29.15	2,852.5	328.8	2,364.0	2,285.8	78.23	30.221	
3,600.0	3,538.1	3,615.6	3,615.6	13.4	71.5	29.41	2,852.5	328.8	2,344.9	2,264.4	80.51	29.127	
3,700.0	3,635.7	3,713.2	3,713.2	13.9	73.5	29.67	2,852.5	328.8	2,325.9	2,243.1	82.79	28.094	
3,800.0	3,733.3	3,810.8	3,810.8	14.4	75.5	29.94	2,852.5	328.8	2,306.9	2,221.8	85.07	27.116	
3,900.0	3,830.9	3,908.4	3,908.4	14.8	77.4	30.21	2,852.5	328.8	2,287.9	2,200.5	87.36	26.188	
4,000.0	3,928.5	4,006.0	4,006.0	15.3	79.4	30.48	2,852.5	328.8	2,269.0	2,179.3	89.65	25.308	
4,100.0	4,026.1	4,103.6	4,103.6	15.7	81.4	30.76	2,852.5	328.8	2,250.1	2,158.2	91.95	24.471	
4,200.0	4,123.7	4,201.2	4,201.2	16.2	83.3	31.05	2,852.5	328.8	2,231.3	2,137.1	94.25	23.675	
4,300.0	4,221.3	4,298.8	4,298.8	16.7	85.3	31.33	2,852.5	328.8	2,212.6	2,116.0	96.55	22.917	
4,400.0	4,318.9	4,396.4	4,396.4	17.1	87.2	31.63	2,852.5	328.8	2,193.9	2,095.0	98.85	22.194	
4,500.0	4,416.5	4,494.0	4,494.0	17.6	89.2	31.93	2,852.5	328.8	2,175.3	2,074.1	101.16	21.503	
4,600.0	4,514.1	4,591.6	4,591.6	18.1	91.2	32.23	2,852.5	328.8	2,156.7	2,053.2	103.47	20.844	
4,700.0	4,611.7	4,689.2	4,689.2	18.5	93.1	32.54	2,852.5	328.8	2,138.2	2,032.4	105.78	20.213	
4,800.0	4,709.3	4,786.8	4,786.8	19.0	95.1	32.85	2,852.5	328.8	2,119.7	2,011.6	108.10	19.609	
4,900.0	4,806.9	4,884.4	4,884.4	19.4	97.1	33.17	2,852.5	328.8	2,101.3	1,990.9	110.42	19.030	
5,000.0	4,904.5	4,982.0	4,982.0	19.9	99.0	33.50	2,852.5	328.8	2,083.0	1,970.2	112.75	18.475	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT KIZNER 28-1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	5,079.6	5,079.6	20.4	101.0	33.83	2,852.5	328.8	2,064.7	1,949.7	115.08	17.942	
5,200.0	5,099.7	5,177.2	5,177.2	20.8	102.9	34.17	2,852.5	328.8	2,046.5	1,929.1	117.41	17.431	
5,300.0	5,197.3	5,274.8	5,274.8	21.3	104.9	34.51	2,852.5	328.8	2,028.4	1,908.7	119.74	16.940	
5,400.0	5,294.9	5,372.4	5,372.4	21.8	106.9	34.86	2,852.5	328.8	2,010.4	1,888.3	122.09	16.467	
5,500.0	5,392.5	5,470.0	5,470.0	22.2	108.8	35.21	2,852.5	328.8	1,992.2	1,868.0	124.43	16.012	
5,600.0	5,490.1	5,567.6	5,567.6	22.7	110.8	35.58	2,852.5	328.8	1,974.5	1,847.7	126.78	15.574	
5,614.2	5,504.0	5,581.5	5,581.5	22.7	111.1	35.63	2,852.5	328.8	1,972.0	1,844.9	127.11	15.513	
5,700.0	5,587.9	5,665.4	5,665.4	23.1	112.8	35.75	2,852.5	328.8	1,957.7	1,828.2	129.51	15.117	
5,800.0	5,686.4	5,763.9	5,763.9	23.4	114.7	35.88	2,852.5	328.8	1,943.8	1,811.6	132.17	14.706	
5,900.0	5,785.5	5,863.0	5,863.0	23.7	116.7	35.99	2,852.5	328.8	1,932.7	1,797.9	134.74	14.344	
6,000.0	5,885.0	5,962.5	5,962.5	23.9	118.7	36.07	2,852.5	328.8	1,924.4	1,787.2	137.19	14.027	
6,100.0	5,984.7	6,062.2	6,062.2	24.1	120.7	36.12	2,852.5	328.8	1,918.9	1,779.4	139.52	13.753	
6,200.0	6,084.7	6,162.2	6,162.2	24.2	122.8	36.15	2,852.5	328.8	1,916.3	1,774.6	141.73	13.520	
6,243.1	6,127.8	6,205.3	6,205.3	24.3	123.6	19.54	2,852.5	328.8	1,916.0	1,770.9	145.11	13.204	
6,273.1	6,157.8	6,235.3	6,235.3	24.3	124.2	19.54	2,852.5	328.8	1,916.0	1,770.3	145.75	13.146	
6,300.0	6,184.7	6,262.2	6,262.2	24.3	124.8	-70.48	2,852.5	328.8	1,915.9	1,772.0	143.87	13.317	
6,350.0	6,234.5	6,312.0	6,312.0	24.4	125.8	-70.68	2,852.5	328.8	1,914.7	1,769.8	144.83	13.220	
6,400.0	6,284.0	6,361.5	6,361.5	24.4	126.8	-71.05	2,852.5	328.8	1,912.3	1,766.7	145.65	13.130	
6,450.0	6,332.9	6,410.4	6,410.4	24.4	127.7	-71.61	2,852.5	328.8	1,908.9	1,762.5	146.34	13.044	
6,500.0	6,380.9	6,458.4	6,458.4	24.4	128.7	-72.33	2,852.5	328.8	1,904.4	1,757.5	146.94	12.960	
6,550.0	6,427.8	6,505.3	6,505.3	24.4	129.7	-73.21	2,852.5	328.8	1,899.0	1,751.5	147.48	12.876	
6,600.0	6,473.5	6,551.0	6,551.0	24.4	130.6	-74.24	2,852.5	328.8	1,892.8	1,744.8	148.00	12.789	
6,650.0	6,517.5	6,595.0	6,595.0	24.4	131.5	-75.40	2,852.5	328.8	1,885.8	1,737.3	148.53	12.697	
6,700.0	6,559.9	6,637.4	6,637.4	24.4	132.3	-76.66	2,852.5	328.8	1,878.3	1,729.2	149.10	12.598	
6,750.0	6,600.2	6,677.7	6,677.7	24.4	133.1	-78.00	2,852.5	328.8	1,870.4	1,720.7	149.73	12.492	
6,800.0	6,638.4	6,715.9	6,715.9	24.3	133.9	-79.40	2,852.5	328.8	1,862.3	1,711.8	150.44	12.379	
6,850.0	6,674.3	6,751.8	6,751.8	24.3	134.6	-80.83	2,852.5	328.8	1,854.1	1,702.8	151.23	12.260	
6,900.0	6,707.6	6,785.1	6,785.1	24.3	135.3	-82.25	2,852.5	328.8	1,846.0	1,693.9	152.09	12.138	
6,950.0	6,738.3	6,815.8	6,815.8	24.3	135.9	-83.63	2,852.5	328.8	1,838.2	1,685.2	153.00	12.014	
7,000.0	6,766.2	6,843.7	6,843.7	24.3	136.5	-84.94	2,852.5	328.8	1,830.8	1,676.9	153.94	11.893	
7,050.0	6,791.0	6,868.5	6,868.5	24.3	137.0	-86.16	2,852.5	328.8	1,824.2	1,669.3	154.90	11.777	
7,100.0	6,812.8	6,890.3	6,890.3	24.3	137.4	-87.25	2,852.5	328.8	1,818.3	1,662.5	155.85	11.667	
7,150.0	6,831.4	6,908.9	6,908.9	24.3	137.8	-88.19	2,852.5	328.8	1,813.4	1,656.6	156.81	11.565	
7,200.0	6,846.8	6,924.3	6,924.3	24.4	138.1	-88.96	2,852.5	328.8	1,809.7	1,651.9	157.75	11.471	
7,250.0	6,858.7	6,936.2	6,936.2	24.5	138.3	-89.53	2,852.5	328.8	1,807.1	1,648.4	158.69	11.387	
7,300.0	6,867.3	6,944.8	6,944.8	24.7	138.5	-89.90	2,852.5	328.8	1,805.8	1,646.2	159.62	11.313	
7,322.8	6,870.0	6,947.5	6,947.5	24.8	138.5	-90.00	2,852.5	328.8	1,805.6	1,645.6	160.05	11.282 CC	
7,350.0	6,872.4	6,949.9	6,949.9	25.0	138.6	-90.06	2,852.5	328.8	1,805.8	1,645.3	160.55	11.248 ES	
7,400.0	6,874.0	6,951.5	6,951.5	25.4	138.6	-89.99	2,852.5	328.8	1,807.3	1,645.8	161.46	11.193	
7,405.6	6,874.0	6,951.5	6,951.5	25.5	138.6	-89.97	2,852.5	328.8	1,807.5	1,646.0	161.56	11.188	
7,500.0	6,873.0	6,950.5	6,950.5	26.7	138.6	-89.94	2,852.5	328.8	1,814.3	1,651.0	163.34	11.108	
7,600.0	6,871.9	6,949.4	6,949.4	28.4	138.6	-89.91	2,852.5	328.8	1,826.8	1,661.4	165.38	11.046	
7,700.0	6,870.9	6,948.4	6,948.4	30.4	138.6	-89.87	2,852.5	328.8	1,844.6	1,677.0	167.55	11.009	
7,800.0	6,869.8	6,947.3	6,947.3	32.5	138.5	-89.84	2,852.5	328.8	1,867.6	1,697.8	169.81	10.998 SF	
7,900.0	6,868.8	6,946.3	6,946.3	34.8	138.5	-89.81	2,852.5	328.8	1,895.6	1,723.5	172.16	11.011	
8,000.0	6,867.7	6,945.2	6,945.2	37.1	138.5	-89.78	2,852.5	328.8	1,928.4	1,753.8	174.57	11.047	
8,100.0	6,866.7	6,944.2	6,944.2	39.5	138.5	-89.74	2,852.5	328.8	1,965.7	1,788.7	177.03	11.104	
8,200.0	6,865.6	6,943.1	6,943.1	42.0	138.5	-89.71	2,852.5	328.8	2,007.4	1,827.8	179.53	11.181	
8,300.0	6,864.6	6,942.1	6,942.1	44.5	138.4	-89.68	2,852.5	328.8	2,053.0	1,871.0	182.07	11.276	
8,400.0	6,863.6	6,941.1	6,941.1	47.0	138.4	-89.64	2,852.5	328.8	2,102.5	1,917.8	184.64	11.387	
8,500.0	6,862.5	6,940.0	6,940.0	49.6	138.4	-89.61	2,852.5	328.8	2,155.4	1,968.2	187.23	11.512	
8,600.0	6,861.5	6,939.0	6,939.0	52.2	138.4	-89.58	2,852.5	328.8	2,211.6	2,021.8	189.84	11.650	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,700.0	6,860.4	6,937.9	6,937.9	54.8	138.4	-89.54	2,852.5	328.8	2,270.8	2,078.3	192.47	11.798	
8,800.0	6,859.4	6,936.9	6,936.9	57.5	138.3	-89.51	2,852.5	328.8	2,332.8	2,137.7	195.12	11.956	
8,900.0	6,858.3	6,935.8	6,935.8	60.1	138.3	-89.48	2,852.5	328.8	2,397.4	2,199.6	197.78	12.122	
9,000.0	6,857.3	6,934.8	6,934.8	62.8	138.3	-89.44	2,852.5	328.8	2,464.3	2,263.8	200.45	12.294	
9,100.0	6,856.2	6,933.7	6,933.7	65.5	138.3	-89.41	2,852.5	328.8	2,533.4	2,330.3	203.13	12.472	
9,200.0	6,855.2	6,932.7	6,932.7	68.1	138.2	-89.38	2,852.5	328.8	2,604.5	2,398.7	205.81	12.655	
9,300.0	6,854.1	6,931.6	6,931.6	70.8	138.2	-89.34	2,852.5	328.8	2,677.5	2,469.0	208.51	12.841	
9,400.0	6,853.1	6,930.6	6,930.6	73.6	138.2	-89.31	2,852.5	328.8	2,752.1	2,540.9	211.21	13.030	
9,500.0	6,852.1	6,929.6	6,929.6	76.3	138.2	-89.28	2,852.5	328.8	2,828.4	2,614.4	213.92	13.221	
9,600.0	6,851.0	6,928.5	6,928.5	79.0	138.2	-89.25	2,852.5	328.8	2,906.0	2,689.4	216.64	13.414	
9,700.0	6,850.0	6,927.5	6,927.5	81.7	138.1	-89.21	2,852.5	328.8	2,985.0	2,765.7	219.36	13.608	
9,800.0	6,848.9	6,926.4	6,926.4	84.4	138.1	-89.18	2,852.5	328.8	3,065.2	2,843.2	222.08	13.802	
9,900.0	6,847.9	6,925.4	6,925.4	87.2	138.1	-89.15	2,852.5	328.8	3,146.6	2,921.8	224.81	13.997	
10,000.0	6,846.8	6,924.3	6,924.3	89.9	138.1	-89.11	2,852.5	328.8	3,229.0	3,001.5	227.54	14.191	
10,100.0	6,845.8	6,923.3	6,923.3	92.7	138.1	-89.08	2,852.5	328.8	3,312.4	3,082.1	230.27	14.385	
10,200.0	6,844.7	6,922.2	6,922.2	95.4	138.0	-89.05	2,852.5	328.8	3,396.6	3,163.6	233.01	14.577	
10,300.0	6,843.7	6,921.2	6,921.2	98.2	138.0	-89.01	2,852.5	328.8	3,481.7	3,246.0	235.75	14.769	
10,400.0	6,842.7	6,920.2	6,920.2	100.9	138.0	-88.98	2,852.5	328.8	3,567.6	3,329.1	238.49	14.959	
10,500.0	6,841.6	6,919.1	6,919.1	103.7	138.0	-88.95	2,852.5	328.8	3,654.2	3,413.0	241.24	15.148	
10,600.0	6,840.6	6,918.1	6,918.1	106.4	138.0	-88.92	2,852.5	328.8	3,741.5	3,497.5	243.98	15.335	
10,700.0	6,839.5	6,917.0	6,917.0	109.2	137.9	-88.88	2,852.5	328.8	3,829.3	3,582.6	246.73	15.520	
10,800.0	6,838.5	6,916.0	6,916.0	112.0	137.9	-88.85	2,852.5	328.8	3,917.8	3,668.3	249.48	15.704	
10,900.0	6,837.4	6,914.9	6,914.9	114.7	137.9	-88.82	2,852.5	328.8	4,006.8	3,754.6	252.24	15.885	
11,000.0	6,836.4	6,913.9	6,913.9	117.5	137.9	-88.78	2,852.5	328.8	4,096.3	3,841.3	254.99	16.065	
11,100.0	6,835.4	6,912.9	6,912.9	120.3	137.8	-88.75	2,852.5	328.8	4,186.3	3,928.6	257.74	16.242	
11,200.0	6,834.3	6,911.8	6,911.8	123.0	137.8	-88.72	2,852.5	328.8	4,276.7	4,016.2	260.50	16.417	
11,300.0	6,833.3	6,910.8	6,910.8	125.8	137.8	-88.69	2,852.5	328.8	4,367.6	4,104.3	263.26	16.591	
11,400.0	6,832.2	6,909.7	6,909.7	128.6	137.8	-88.65	2,852.5	328.8	4,458.8	4,192.8	266.02	16.762	
11,500.0	6,831.2	6,908.7	6,908.7	131.4	137.8	-88.62	2,852.5	328.8	4,550.4	4,281.7	268.78	16.930	
11,600.0	6,830.2	6,907.7	6,907.7	134.1	137.7	-88.59	2,852.5	328.8	4,642.4	4,370.9	271.54	17.097	
11,700.0	6,829.1	6,906.6	6,906.6	136.9	137.7	-88.55	2,852.5	328.8	4,734.7	4,460.4	274.30	17.261	
11,800.0	6,828.1	6,905.6	6,905.6	139.7	137.7	-88.52	2,852.5	328.8	4,827.3	4,550.2	277.06	17.423	
11,900.0	6,827.0	6,904.5	6,904.5	142.5	137.7	-88.49	2,852.5	328.8	4,920.1	4,640.3	279.82	17.583	
11,999.0	6,826.0	6,903.5	6,903.5	145.2	137.7	-88.46	2,852.5	328.8	5,012.4	4,729.8	282.56	17.739	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	69.5	69.5	0.0	0.2	51.58	1,512.0	1,906.0	2,432.8				
100.0	100.0	169.5	169.5	0.1	2.0	51.58	1,512.0	1,906.0	2,432.8	2,430.7	2.11	1,152.546	
200.0	200.0	269.5	269.5	0.3	4.2	51.58	1,512.0	1,906.0	2,432.8	2,428.3	4.56	533.708	
300.0	300.0	369.5	369.5	0.5	6.3	51.58	1,512.0	1,906.0	2,432.8	2,426.0	6.83	356.266	
400.0	400.0	469.5	469.5	0.8	8.3	51.58	1,512.0	1,906.0	2,432.8	2,423.8	9.08	267.906	
500.0	500.0	569.5	569.5	1.0	10.3	51.58	1,512.0	1,906.0	2,432.8	2,421.5	11.33	214.793	
600.0	600.0	669.5	669.5	1.2	12.3	51.58	1,512.0	1,906.0	2,432.8	2,419.3	13.57	179.298	
700.0	700.0	769.5	769.5	1.4	14.4	68.23	1,512.0	1,906.0	2,432.2	2,416.4	15.81	153.871	
800.0	799.8	869.3	869.3	1.7	16.4	68.38	1,512.0	1,906.0	2,430.3	2,412.2	18.04	134.714	
900.0	899.5	969.0	969.0	1.9	18.4	68.63	1,512.0	1,906.0	2,427.1	2,406.8	20.27	119.711	
1,000.0	998.7	1,068.2	1,068.2	2.2	20.4	68.98	1,512.0	1,906.0	2,422.6	2,400.1	22.52	107.598	
1,100.0	1,097.5	1,167.0	1,167.0	2.5	22.4	69.43	1,512.0	1,906.0	2,417.0	2,392.2	24.77	97.570	
1,200.0	1,195.6	1,265.1	1,265.1	2.8	24.3	69.97	1,512.0	1,906.0	2,410.3	2,383.2	27.05	89.100	
1,228.9	1,223.8	1,293.3	1,293.3	2.9	24.9	70.15	1,512.0	1,906.0	2,408.1	2,380.4	27.71	86.890	
1,300.0	1,293.3	1,362.8	1,362.8	3.2	26.3	70.49	1,512.0	1,906.0	2,402.8	2,373.4	29.37	81.803	
1,400.0	1,390.9	1,460.4	1,460.4	3.6	28.3	70.97	1,512.0	1,906.0	2,395.5	2,363.7	31.72	75.514	
1,500.0	1,488.5	1,558.0	1,558.0	4.0	30.2	71.45	1,512.0	1,906.0	2,388.3	2,354.2	34.09	70.066	
1,600.0	1,586.1	1,655.6	1,655.6	4.4	32.2	71.94	1,512.0	1,906.0	2,381.3	2,344.8	36.46	65.309	
1,700.0	1,683.7	1,753.2	1,753.2	4.8	34.2	72.43	1,512.0	1,906.0	2,374.5	2,335.6	38.85	61.125	
1,800.0	1,781.3	1,850.8	1,850.8	5.3	36.1	72.92	1,512.0	1,906.0	2,367.9	2,326.6	41.24	57.419	
1,900.0	1,878.9	1,948.4	1,948.4	5.7	38.1	73.41	1,512.0	1,906.0	2,361.4	2,317.8	43.64	54.117	
2,000.0	1,976.5	2,046.0	2,046.0	6.1	40.1	73.91	1,512.0	1,906.0	2,355.2	2,309.1	46.04	51.157	
2,100.0	2,074.1	2,143.6	2,143.6	6.6	42.0	74.41	1,512.0	1,906.0	2,349.1	2,300.6	48.44	48.490	
2,200.0	2,171.7	2,241.2	2,241.2	7.0	44.0	74.91	1,512.0	1,906.0	2,343.2	2,292.3	50.86	46.076	
2,300.0	2,269.3	2,338.8	2,338.8	7.5	45.9	75.41	1,512.0	1,906.0	2,337.5	2,284.2	53.27	43.881	
2,400.0	2,366.9	2,436.4	2,436.4	7.9	47.9	75.92	1,512.0	1,906.0	2,332.0	2,276.3	55.68	41.878	
2,500.0	2,464.5	2,534.0	2,534.0	8.4	49.9	76.43	1,512.0	1,906.0	2,326.6	2,268.5	58.10	40.043	
2,600.0	2,562.1	2,631.6	2,631.6	8.9	51.8	76.94	1,512.0	1,906.0	2,321.5	2,261.0	60.52	38.356	
2,700.0	2,659.7	2,729.2	2,729.2	9.3	53.8	77.45	1,512.0	1,906.0	2,316.6	2,253.6	62.95	36.802	
2,800.0	2,757.3	2,826.8	2,826.8	9.8	55.8	77.97	1,512.0	1,906.0	2,311.8	2,246.4	65.37	35.364	
2,900.0	2,854.9	2,924.4	2,924.4	10.2	57.7	78.48	1,512.0	1,906.0	2,307.3	2,239.5	67.80	34.031	
3,000.0	2,952.5	3,022.0	3,022.0	10.7	59.7	79.00	1,512.0	1,906.0	2,302.9	2,232.7	70.23	32.793	
3,100.0	3,050.1	3,119.6	3,119.6	11.1	61.6	79.52	1,512.0	1,906.0	2,298.8	2,226.1	72.65	31.640	
3,200.0	3,147.7	3,217.2	3,217.2	11.6	63.6	80.04	1,512.0	1,906.0	2,294.8	2,219.7	75.08	30.563	
3,300.0	3,245.3	3,314.8	3,314.8	12.1	65.6	80.57	1,512.0	1,906.0	2,291.1	2,213.5	77.51	29.556	
3,400.0	3,342.9	3,412.4	3,412.4	12.5	67.5	81.09	1,512.0	1,906.0	2,287.5	2,207.6	79.95	28.613	
3,500.0	3,440.5	3,510.0	3,510.0	13.0	69.5	81.62	1,512.0	1,906.0	2,284.1	2,201.8	82.38	27.728	
3,600.0	3,538.1	3,607.6	3,607.6	13.4	71.5	82.15	1,512.0	1,906.0	2,281.0	2,196.2	84.81	26.895	
3,700.0	3,635.7	3,705.2	3,705.2	13.9	73.4	82.68	1,512.0	1,906.0	2,278.1	2,190.8	87.24	26.112	
3,800.0	3,733.3	3,802.8	3,802.8	14.4	75.4	83.21	1,512.0	1,906.0	2,275.3	2,185.6	89.68	25.373	
3,900.0	3,830.9	3,900.4	3,900.4	14.8	77.3	83.74	1,512.0	1,906.0	2,272.8	2,180.7	92.11	24.675	
4,000.0	3,928.5	3,998.0	3,998.0	15.3	79.3	84.27	1,512.0	1,906.0	2,270.5	2,175.9	94.54	24.015	
4,100.0	4,026.1	4,095.6	4,095.6	15.7	81.3	84.81	1,512.0	1,906.0	2,268.3	2,171.4	96.97	23.391	
4,200.0	4,123.7	4,193.2	4,193.2	16.2	83.2	85.34	1,512.0	1,906.0	2,266.4	2,167.0	99.41	22.799	
4,300.0	4,221.3	4,290.8	4,290.8	16.7	85.2	85.88	1,512.0	1,906.0	2,264.7	2,162.9	101.84	22.238	
4,400.0	4,318.9	4,388.4	4,388.4	17.1	87.2	86.42	1,512.0	1,906.0	2,263.2	2,158.9	104.27	21.705	
4,500.0	4,416.5	4,486.0	4,486.0	17.6	89.1	86.95	1,512.0	1,906.0	2,261.9	2,155.2	106.70	21.199	
4,600.0	4,514.1	4,583.6	4,583.6	18.1	91.1	87.49	1,512.0	1,906.0	2,260.8	2,151.7	109.13	20.717	
4,700.0	4,611.7	4,681.2	4,681.2	18.5	93.0	88.03	1,512.0	1,906.0	2,260.0	2,148.4	111.56	20.258	
4,800.0	4,709.3	4,778.8	4,778.8	19.0	95.0	88.57	1,512.0	1,906.0	2,259.3	2,145.3	113.99	19.821	
4,900.0	4,806.9	4,876.4	4,876.4	19.4	97.0	89.11	1,512.0	1,906.0	2,258.9	2,142.4	116.41	19.404	
5,000.0	4,904.5	4,974.0	4,974.0	19.9	98.9	89.65	1,512.0	1,906.0	2,258.6	2,139.8	118.84	19.006	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT MELLON 28-1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,065.5	4,968.4	5,037.9	5,037.9	20.2	100.2	90.00	1,512.0	1,906.0	2,258.6	2,138.1	120.43	18.755	
5,100.0	5,002.1	5,071.6	5,071.6	20.4	100.9	90.19	1,512.0	1,906.0	2,258.6	2,137.3	121.26	18.626	
5,200.0	5,099.7	5,169.2	5,169.2	20.8	102.9	90.73	1,512.0	1,906.0	2,258.8	2,135.1	123.68	18.262	
5,300.0	5,197.3	5,266.8	5,266.8	21.3	104.8	91.26	1,512.0	1,906.0	2,259.1	2,133.0	126.10	17.915	
5,400.0	5,294.9	5,364.4	5,364.4	21.8	106.8	91.80	1,512.0	1,906.0	2,259.7	2,131.2	128.52	17.582	
5,500.0	5,392.5	5,462.0	5,462.0	22.2	108.8	92.34	1,512.0	1,906.0	2,260.5	2,129.6	130.94	17.264	
5,600.0	5,490.1	5,559.6	5,559.6	22.7	110.7	92.88	1,512.0	1,906.0	2,261.6	2,128.2	133.36	16.959	
5,614.2	5,504.0	5,573.5	5,573.5	22.7	111.0	92.96	1,512.0	1,906.0	2,261.7	2,128.0	133.70	16.916	
5,700.0	5,587.9	5,657.4	5,657.4	23.1	112.7	93.41	1,512.0	1,906.0	2,262.7	2,127.0	135.72	16.672	
5,800.0	5,686.4	5,755.9	5,755.9	23.4	114.7	93.86	1,512.0	1,906.0	2,263.8	2,125.8	138.00	16.404	
5,900.0	5,785.5	5,855.0	5,855.0	23.7	116.7	94.22	1,512.0	1,906.0	2,264.8	2,124.5	140.25	16.148	
6,000.0	5,885.0	5,954.5	5,954.5	23.9	118.7	94.49	1,512.0	1,906.0	2,265.6	2,123.1	142.47	15.901	
6,100.0	5,984.7	6,054.2	6,054.2	24.1	120.7	94.67	1,512.0	1,906.0	2,266.1	2,121.4	144.66	15.665	
6,200.0	6,084.7	6,154.2	6,154.2	24.2	122.7	94.76	1,512.0	1,906.0	2,266.4	2,119.6	146.81	15.437	
6,243.1	6,127.8	6,197.3	6,197.3	24.3	123.5	78.16	1,512.0	1,906.0	2,266.4	2,127.4	138.99	16.306	
6,273.1	6,157.8	6,227.3	6,227.3	24.3	124.1	78.16	1,512.0	1,906.0	2,266.4	2,126.7	139.65	16.230	
6,300.0	6,184.7	6,254.2	6,254.2	24.3	124.7	-11.85	1,512.0	1,906.0	2,265.9	2,117.1	148.83	15.225	
6,350.0	6,234.5	6,304.0	6,304.0	24.4	125.7	-11.93	1,512.0	1,906.0	2,262.4	2,113.2	149.16	15.167	
6,400.0	6,284.0	6,353.5	6,353.5	24.4	126.7	-12.08	1,512.0	1,906.0	2,255.4	2,106.6	148.78	15.159	
6,450.0	6,332.9	6,402.4	6,402.4	24.4	127.7	-12.32	1,512.0	1,906.0	2,245.1	2,097.4	147.69	15.202	
6,500.0	6,380.9	6,450.4	6,450.4	24.4	128.6	-12.64	1,512.0	1,906.0	2,231.5	2,085.6	145.89	15.296	
6,550.0	6,427.8	6,497.3	6,497.3	24.4	129.6	-13.06	1,512.0	1,906.0	2,214.7	2,071.3	143.39	15.445	
6,600.0	6,473.5	6,543.0	6,543.0	24.4	130.5	-13.58	1,512.0	1,906.0	2,194.7	2,054.5	140.23	15.651	
6,650.0	6,517.5	6,587.0	6,587.0	24.4	131.4	-14.23	1,512.0	1,906.0	2,171.7	2,035.2	136.43	15.917	
6,700.0	6,559.9	6,629.4	6,629.4	24.4	132.2	-15.02	1,512.0	1,906.0	2,145.7	2,013.6	132.08	16.246	
6,750.0	6,600.2	6,669.7	6,669.7	24.4	133.0	-15.98	1,512.0	1,906.0	2,116.9	1,989.6	127.25	16.636	
6,800.0	6,638.4	6,707.9	6,707.9	24.3	133.8	-17.15	1,512.0	1,906.0	2,085.5	1,963.4	122.08	17.083	
6,850.0	6,674.3	6,743.8	6,743.8	24.3	134.5	-18.57	1,512.0	1,906.0	2,051.5	1,934.8	116.77	17.568	
6,900.0	6,707.6	6,777.1	6,777.1	24.3	135.2	-20.31	1,512.0	1,906.0	2,015.3	1,903.7	111.62	18.055	
6,950.0	6,738.3	6,807.8	6,807.8	24.3	135.8	-22.45	1,512.0	1,906.0	1,976.9	1,869.9	107.04	18.469	
7,000.0	6,766.2	6,835.7	6,835.7	24.3	136.4	-25.12	1,512.0	1,906.0	1,936.6	1,832.9	103.63	18.687	
7,050.0	6,791.0	6,860.5	6,860.5	24.3	136.9	-28.46	1,512.0	1,906.0	1,894.5	1,792.3	102.21	18.535	
7,100.0	6,812.8	6,882.3	6,882.3	24.3	137.3	-32.70	1,512.0	1,906.0	1,850.9	1,747.2	103.75	17.841	
7,150.0	6,831.4	6,900.9	6,900.9	24.3	137.7	-38.13	1,512.0	1,906.0	1,806.1	1,696.9	109.13	16.549	
7,200.0	6,846.8	6,916.3	6,916.3	24.4	138.0	-45.09	1,512.0	1,906.0	1,760.1	1,641.3	118.78	14.818	
7,250.0	6,858.7	6,928.2	6,928.2	24.5	138.2	-53.94	1,512.0	1,906.0	1,713.4	1,581.4	131.99	12.981	
7,300.0	6,867.3	6,936.8	6,936.8	24.7	138.4	-64.84	1,512.0	1,906.0	1,666.0	1,519.7	146.26	11.391	
7,350.0	6,872.4	6,941.9	6,941.9	25.0	138.5	-77.39	1,512.0	1,906.0	1,618.3	1,461.0	157.36	10.284	
7,400.0	6,874.0	6,943.5	6,943.5	25.4	138.5	-90.49	1,512.0	1,906.0	1,570.5	1,409.2	161.35	9.734	
7,405.6	6,874.0	6,943.5	6,943.5	25.5	138.5	-91.93	1,512.0	1,906.0	1,565.2	1,403.9	161.28	9.705	
7,500.0	6,873.0	6,942.5	6,942.5	26.7	138.5	-91.81	1,512.0	1,906.0	1,475.3	1,312.2	163.07	9.047	
7,600.0	6,871.9	6,941.4	6,941.4	28.4	138.5	-91.68	1,512.0	1,906.0	1,380.8	1,215.6	165.13	8.362	
7,700.0	6,870.9	6,940.4	6,940.4	30.4	138.5	-91.55	1,512.0	1,906.0	1,287.1	1,119.7	167.31	7.692	
7,800.0	6,869.8	6,939.3	6,939.3	32.5	138.5	-91.42	1,512.0	1,906.0	1,194.4	1,024.8	169.60	7.042	
7,900.0	6,868.8	6,938.3	6,938.3	34.8	138.4	-91.29	1,512.0	1,906.0	1,103.0	931.0	171.96	6.414	
8,000.0	6,867.7	6,937.2	6,937.2	37.1	138.4	-91.16	1,512.0	1,906.0	1,013.2	838.8	174.38	5.810	
8,100.0	6,866.7	6,936.2	6,936.2	39.5	138.4	-91.03	1,512.0	1,906.0	925.5	748.6	176.86	5.233	
8,200.0	6,865.6	6,935.1	6,935.1	42.0	138.4	-90.90	1,512.0	1,906.0	840.5	661.1	179.37	4.686	
8,300.0	6,864.6	6,934.1	6,934.1	44.5	138.4	-90.77	1,512.0	1,906.0	759.2	577.3	181.92	4.173	
8,400.0	6,863.6	6,933.1	6,933.1	47.0	138.3	-90.64	1,512.0	1,906.0	682.9	498.4	184.50	3.702	
8,500.0	6,862.5	6,932.0	6,932.0	49.6	138.3	-90.52	1,512.0	1,906.0	613.5	426.4	187.10	3.279	
8,600.0	6,861.5	6,931.0	6,931.0	52.2	138.3	-90.39	1,512.0	1,906.0	553.5	363.8	189.72	2.917	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT MELLON 28-1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,700.0	6,860.4	6,929.9	6,929.9	54.8	138.3	-90.26	1,512.0	1,906.0	506.3	313.9	192.36	2.632	
8,800.0	6,859.4	6,928.9	6,928.9	57.5	138.2	-90.13	1,512.0	1,906.0	475.7	280.7	195.01	2.439	
8,900.0	6,858.3	6,927.8	6,927.8	60.1	138.2	-90.00	1,512.0	1,906.0	465.1	267.4	197.68	2.353	
8,900.2	6,858.3	6,927.8	6,927.8	60.1	138.2	-90.00	1,512.0	1,906.0	465.1	267.4	197.68	2.353	CC, ES, SF
9,000.0	6,857.3	6,926.8	6,926.8	62.8	138.2	-89.87	1,512.0	1,906.0	475.7	275.3	200.35	2.374	
9,100.0	6,856.2	6,925.7	6,925.7	65.5	138.2	-89.74	1,512.0	1,906.0	506.2	303.1	203.04	2.493	
9,200.0	6,855.2	6,924.7	6,924.7	68.1	138.2	-89.61	1,512.0	1,906.0	553.3	347.6	205.73	2.690	
9,300.0	6,854.1	6,923.6	6,923.6	70.8	138.1	-89.49	1,512.0	1,906.0	613.3	404.9	208.43	2.942	
9,400.0	6,853.1	6,922.6	6,922.6	73.6	138.1	-89.36	1,512.0	1,906.0	682.7	471.6	211.13	3.234	
9,500.0	6,852.1	6,921.6	6,921.6	76.3	138.1	-89.23	1,512.0	1,906.0	759.0	545.1	213.84	3.549	
9,600.0	6,851.0	6,920.5	6,920.5	79.0	138.1	-89.10	1,512.0	1,906.0	840.2	623.7	216.55	3.880	
9,700.0	6,850.0	6,919.5	6,919.5	81.7	138.1	-88.97	1,512.0	1,906.0	925.2	705.9	219.27	4.219	
9,800.0	6,848.9	6,918.4	6,918.4	84.4	138.0	-88.84	1,512.0	1,906.0	1,012.9	790.9	221.99	4.563	
9,900.0	6,847.9	6,917.4	6,917.4	87.2	138.0	-88.71	1,512.0	1,906.0	1,102.6	877.9	224.72	4.907	
10,000.0	6,846.8	6,916.3	6,916.3	89.9	138.0	-88.59	1,512.0	1,906.0	1,194.1	966.6	227.44	5.250	
10,100.0	6,845.8	6,915.3	6,915.3	92.7	138.0	-88.46	1,512.0	1,906.0	1,286.7	1,056.6	230.17	5.590	
10,200.0	6,844.7	6,914.2	6,914.2	95.4	138.0	-88.33	1,512.0	1,906.0	1,380.5	1,147.6	232.90	5.927	
10,300.0	6,843.7	6,913.2	6,913.2	98.2	137.9	-88.20	1,512.0	1,906.0	1,475.0	1,239.4	235.63	6.260	
10,400.0	6,842.7	6,912.2	6,912.2	100.9	137.9	-88.07	1,512.0	1,906.0	1,570.2	1,331.8	238.36	6.588	
10,500.0	6,841.6	6,911.1	6,911.1	103.7	137.9	-87.95	1,512.0	1,906.0	1,666.0	1,424.9	241.09	6.910	
10,600.0	6,840.6	6,910.1	6,910.1	106.4	137.9	-87.82	1,512.0	1,906.0	1,762.2	1,518.4	243.83	7.227	
10,700.0	6,839.5	6,909.0	6,909.0	109.2	137.9	-87.69	1,512.0	1,906.0	1,858.8	1,612.3	246.56	7.539	
10,800.0	6,838.5	6,908.0	6,908.0	112.0	137.8	-87.56	1,512.0	1,906.0	1,955.8	1,706.5	249.29	7.845	
10,900.0	6,837.4	6,906.9	6,906.9	114.7	137.8	-87.43	1,512.0	1,906.0	2,053.1	1,801.1	252.03	8.146	
11,000.0	6,836.4	6,905.9	6,905.9	117.5	137.8	-87.31	1,512.0	1,906.0	2,150.6	1,895.8	254.76	8.442	
11,100.0	6,835.4	6,904.9	6,904.9	120.3	137.8	-87.18	1,512.0	1,906.0	2,248.3	1,990.8	257.49	8.732	
11,200.0	6,834.3	6,903.8	6,903.8	123.0	137.7	-87.05	1,512.0	1,906.0	2,346.3	2,086.0	260.23	9.016	
11,300.0	6,833.3	6,902.8	6,902.8	125.8	137.7	-86.92	1,512.0	1,906.0	2,444.3	2,181.4	262.96	9.295	
11,400.0	6,832.2	6,901.7	6,901.7	128.6	137.7	-86.80	1,512.0	1,906.0	2,542.6	2,276.9	265.69	9.570	
11,500.0	6,831.2	6,900.7	6,900.7	131.4	137.7	-86.67	1,512.0	1,906.0	2,641.0	2,372.5	268.42	9.839	
11,600.0	6,830.2	6,899.7	6,899.7	134.1	137.7	-86.54	1,512.0	1,906.0	2,739.4	2,468.3	271.15	10.103	
11,700.0	6,829.1	6,898.6	6,898.6	136.9	137.6	-86.41	1,512.0	1,906.0	2,838.0	2,564.2	273.88	10.362	
11,800.0	6,828.1	6,897.6	6,897.6	139.7	137.6	-86.29	1,512.0	1,906.0	2,936.7	2,660.1	276.61	10.617	
11,900.0	6,827.0	6,896.5	6,896.5	142.5	137.6	-86.16	1,512.0	1,906.0	3,035.5	2,756.2	279.34	10.867	
11,999.0	6,826.0	6,895.5	6,895.5	145.2	137.6	-86.03	1,512.0	1,906.0	3,133.4	2,851.4	282.04	11.110	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	26.5	26.5	0.0	0.2	85.62	127.6	1,663.6	1,668.5				
100.0	100.0	126.5	126.5	0.1	1.4	85.62	127.6	1,663.6	1,668.5	1,667.0	1.53	1,091.397	
200.0	200.0	226.5	226.5	0.3	3.7	85.62	127.6	1,663.6	1,668.5	1,664.5	4.06	410.932	
300.0	300.0	326.5	326.5	0.5	5.8	85.62	127.6	1,663.6	1,668.5	1,662.2	6.36	262.486	
400.0	400.0	426.5	426.5	0.8	7.8	85.62	127.6	1,663.6	1,668.5	1,659.9	8.62	193.561	
500.0	500.0	526.5	526.5	1.0	9.9	85.62	127.6	1,663.6	1,668.5	1,657.6	10.87	153.471	
600.0	600.0	626.5	626.5	1.2	11.9	85.62	127.6	1,663.6	1,668.5	1,655.4	13.12	127.192	
700.0	700.0	726.5	726.5	1.4	13.9	102.27	127.6	1,663.6	1,668.9	1,653.5	15.36	108.657	
800.0	799.8	826.3	826.3	1.7	15.9	102.43	127.6	1,663.6	1,670.0	1,652.4	17.60	94.906	
900.0	899.5	926.0	926.0	1.9	17.9	102.68	127.6	1,663.6	1,671.9	1,652.1	19.84	84.286	
1,000.0	998.7	1,025.2	1,025.2	2.2	19.9	103.03	127.6	1,663.6	1,674.6	1,652.6	22.09	75.825	
1,100.0	1,097.5	1,124.0	1,124.0	2.5	21.9	103.47	127.6	1,663.6	1,678.3	1,653.9	24.35	68.917	
1,200.0	1,195.6	1,222.1	1,222.1	2.8	23.9	104.00	127.6	1,663.6	1,682.9	1,656.2	26.64	63.168	
1,228.9	1,223.8	1,250.3	1,250.3	2.9	24.5	104.17	127.6	1,663.6	1,684.4	1,657.1	27.31	61.684	
1,300.0	1,293.3	1,319.8	1,319.8	3.2	25.9	104.67	127.6	1,663.6	1,688.4	1,659.4	28.96	58.294	
1,400.0	1,390.9	1,417.4	1,417.4	3.6	27.8	105.37	127.6	1,663.6	1,694.1	1,662.8	31.30	54.117	
1,500.0	1,488.5	1,515.0	1,515.0	4.0	29.8	106.06	127.6	1,663.6	1,700.2	1,666.5	33.66	50.513	
1,600.0	1,586.1	1,612.6	1,612.6	4.4	31.8	106.75	127.6	1,663.6	1,706.4	1,670.4	36.02	47.377	
1,700.0	1,683.7	1,710.2	1,710.2	4.8	33.7	107.43	127.6	1,663.6	1,713.0	1,674.6	38.38	44.629	
1,800.0	1,781.3	1,807.8	1,807.8	5.3	35.7	108.11	127.6	1,663.6	1,719.8	1,679.0	40.75	42.203	
1,900.0	1,878.9	1,905.4	1,905.4	5.7	37.6	108.78	127.6	1,663.6	1,726.8	1,683.7	43.12	40.048	
2,000.0	1,976.5	2,003.0	2,003.0	6.1	39.6	109.44	127.6	1,663.6	1,734.1	1,688.6	45.49	38.123	
2,100.0	2,074.1	2,100.6	2,100.6	6.6	41.6	110.11	127.6	1,663.6	1,741.6	1,693.8	47.85	36.394	
2,200.0	2,171.7	2,198.2	2,198.2	7.0	43.5	110.76	127.6	1,663.6	1,749.4	1,699.2	50.22	34.834	
2,300.0	2,269.3	2,295.8	2,295.8	7.5	45.5	111.41	127.6	1,663.6	1,757.4	1,704.8	52.59	33.420	
2,400.0	2,366.9	2,393.4	2,393.4	7.9	47.5	112.06	127.6	1,663.6	1,765.6	1,710.7	54.95	32.133	
2,500.0	2,464.5	2,491.0	2,491.0	8.4	49.4	112.69	127.6	1,663.6	1,774.1	1,716.8	57.31	30.957	
2,600.0	2,562.1	2,588.6	2,588.6	8.9	51.4	113.33	127.6	1,663.6	1,782.8	1,723.1	59.67	29.879	
2,700.0	2,659.7	2,686.2	2,686.2	9.3	53.4	113.95	127.6	1,663.6	1,791.7	1,729.7	62.02	28.889	
2,800.0	2,757.3	2,783.8	2,783.8	9.8	55.3	114.57	127.6	1,663.6	1,800.8	1,736.5	64.37	27.975	
2,900.0	2,854.9	2,881.4	2,881.4	10.2	57.3	115.19	127.6	1,663.6	1,810.2	1,743.5	66.72	27.131	
3,000.0	2,952.5	2,979.0	2,979.0	10.7	59.2	115.80	127.6	1,663.6	1,819.7	1,750.7	69.07	26.348	
3,100.0	3,050.1	3,076.6	3,076.6	11.1	61.2	116.40	127.6	1,663.6	1,829.5	1,758.1	71.41	25.620	
3,200.0	3,147.7	3,174.2	3,174.2	11.6	63.2	117.00	127.6	1,663.6	1,839.5	1,765.7	73.75	24.943	
3,300.0	3,245.3	3,271.8	3,271.8	12.1	65.1	117.59	127.6	1,663.6	1,849.7	1,773.6	76.08	24.311	
3,400.0	3,342.9	3,369.4	3,369.4	12.5	67.1	118.17	127.6	1,663.6	1,860.0	1,781.6	78.41	23.721	
3,500.0	3,440.5	3,467.0	3,467.0	13.0	69.1	118.75	127.6	1,663.6	1,870.6	1,789.9	80.74	23.167	
3,600.0	3,538.1	3,564.6	3,564.6	13.4	71.0	119.32	127.6	1,663.6	1,881.4	1,798.3	83.07	22.649	
3,700.0	3,635.7	3,662.2	3,662.2	13.9	73.0	119.88	127.6	1,663.6	1,892.3	1,806.9	85.39	22.161	
3,800.0	3,733.3	3,759.8	3,759.8	14.4	74.9	120.44	127.6	1,663.6	1,903.5	1,815.8	87.71	21.703	
3,900.0	3,830.9	3,857.4	3,857.4	14.8	76.9	120.99	127.6	1,663.6	1,914.8	1,824.8	90.02	21.270	
4,000.0	3,928.5	3,955.0	3,955.0	15.3	78.9	121.54	127.6	1,663.6	1,926.3	1,834.0	92.33	20.863	
4,100.0	4,026.1	4,052.6	4,052.6	15.7	80.8	122.08	127.6	1,663.6	1,938.0	1,843.3	94.64	20.477	
4,200.0	4,123.7	4,150.2	4,150.2	16.2	82.8	122.61	127.6	1,663.6	1,949.8	1,852.9	96.94	20.113	
4,300.0	4,221.3	4,247.8	4,247.8	16.7	84.8	123.14	127.6	1,663.6	1,961.8	1,862.6	99.24	19.768	
4,400.0	4,318.9	4,345.4	4,345.4	17.1	86.7	123.66	127.6	1,663.6	1,974.0	1,872.5	101.54	19.441	
4,500.0	4,416.5	4,443.0	4,443.0	17.6	88.7	124.17	127.6	1,663.6	1,986.4	1,882.6	103.84	19.130	
4,600.0	4,514.1	4,540.6	4,540.6	18.1	90.7	124.68	127.6	1,663.6	1,998.9	1,892.8	106.13	18.835	
4,700.0	4,611.7	4,638.2	4,638.2	18.5	92.6	125.18	127.6	1,663.6	2,011.6	1,903.2	108.41	18.555	
4,800.0	4,709.3	4,735.8	4,735.8	19.0	94.6	125.68	127.6	1,663.6	2,024.4	1,913.7	110.70	18.288	
4,900.0	4,806.9	4,833.4	4,833.4	19.4	96.5	126.17	127.6	1,663.6	2,037.4	1,924.4	112.98	18.033	
5,000.0	4,904.5	4,931.0	4,931.0	19.9	98.5	126.65	127.6	1,663.6	2,050.5	1,935.3	115.26	17.791	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT MELLON 28-2 - 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	
5,100.0	5,002.1	5,028.6	5,028.6	20.4	100.5	127.13	127.6	1,663.6	2,063.8	1,946.3	117.53	17.560	
5,200.0	5,099.7	5,126.2	5,126.2	20.8	102.4	127.60	127.6	1,663.6	2,077.2	1,957.4	119.80	17.339	
5,300.0	5,197.3	5,223.8	5,223.8	21.3	104.4	128.07	127.6	1,663.6	2,090.8	1,968.7	122.07	17.127	
5,400.0	5,294.9	5,321.4	5,321.4	21.8	106.4	128.53	127.6	1,663.6	2,104.5	1,980.1	124.34	16.926	
5,500.0	5,392.5	5,419.0	5,419.0	22.2	108.3	128.98	127.6	1,663.6	2,118.3	1,991.7	126.60	16.732	
5,600.0	5,490.1	5,516.6	5,516.6	22.7	110.3	129.43	127.6	1,663.6	2,132.3	2,003.4	128.86	16.547	
5,614.2	5,504.0	5,530.5	5,530.5	22.7	110.6	129.49	127.6	1,663.6	2,134.3	2,005.1	129.18	16.521	
5,700.0	5,587.9	5,614.4	5,614.4	23.1	112.2	130.02	127.6	1,663.6	2,145.5	2,014.2	131.33	16.337	
5,800.0	5,686.4	5,712.9	5,712.9	23.4	114.2	130.54	127.6	1,663.6	2,156.7	2,022.9	133.76	16.123	
5,900.0	5,785.5	5,812.0	5,812.0	23.7	116.2	130.95	127.6	1,663.6	2,165.7	2,029.5	136.15	15.907	
6,000.0	5,885.0	5,911.5	5,911.5	23.9	118.2	131.25	127.6	1,663.6	2,172.4	2,033.9	138.47	15.688	
6,100.0	5,984.7	6,011.2	6,011.2	24.1	120.2	131.45	127.6	1,663.6	2,176.9	2,036.1	140.73	15.468	
6,200.0	6,084.7	6,111.2	6,111.2	24.2	122.2	131.55	127.6	1,663.6	2,179.0	2,036.1	142.91	15.248	
6,243.1	6,127.8	6,154.3	6,154.3	24.3	123.1	114.95	127.6	1,663.6	2,179.2	2,036.3	142.97	15.243	
6,273.1	6,157.8	6,184.3	6,184.3	24.3	123.7	114.95	127.6	1,663.6	2,179.2	2,035.6	143.61	15.175	
6,300.0	6,184.7	6,211.2	6,211.2	24.3	124.2	24.97	127.6	1,663.6	2,178.8	2,033.9	144.91	15.035	
6,350.0	6,234.5	6,261.0	6,261.0	24.4	125.3	25.12	127.6	1,663.6	2,175.5	2,030.2	145.28	14.974	
6,400.0	6,284.0	6,310.5	6,310.5	24.4	126.2	25.43	127.6	1,663.6	2,169.1	2,024.0	145.04	14.955	
6,450.0	6,332.9	6,359.4	6,359.4	24.4	127.2	25.88	127.6	1,663.6	2,159.6	2,015.3	144.21	14.975	
6,500.0	6,380.9	6,407.4	6,407.4	24.4	128.2	26.50	127.6	1,663.6	2,147.0	2,004.2	142.81	15.034	
6,550.0	6,427.8	6,454.3	6,454.3	24.4	129.1	27.30	127.6	1,663.6	2,131.4	1,990.6	140.88	15.129	
6,600.0	6,473.5	6,500.0	6,500.0	24.4	130.1	28.29	127.6	1,663.6	2,113.0	1,974.5	138.51	15.256	
6,650.0	6,517.5	6,544.0	6,544.0	24.4	130.9	29.50	127.6	1,663.6	2,091.8	1,956.0	135.79	15.405	
6,700.0	6,559.9	6,586.4	6,586.4	24.4	131.8	30.95	127.6	1,663.6	2,067.9	1,935.1	132.86	15.565	
6,750.0	6,600.2	6,626.7	6,626.7	24.4	132.6	32.67	127.6	1,663.6	2,041.6	1,911.6	129.92	15.714	
6,800.0	6,638.4	6,664.9	6,664.9	24.3	133.4	34.70	127.6	1,663.6	2,012.8	1,885.6	127.22	15.822	
6,850.0	6,674.3	6,700.8	6,700.8	24.3	134.1	37.08	127.6	1,663.6	1,981.9	1,856.9	125.04	15.851	
6,900.0	6,707.6	6,734.1	6,734.1	24.3	134.8	39.86	127.6	1,663.6	1,949.0	1,825.3	123.73	15.752	
6,950.0	6,738.3	6,764.8	6,764.8	24.3	135.4	43.07	127.6	1,663.6	1,914.3	1,790.6	123.64	15.483	
7,000.0	6,766.2	6,792.7	6,792.7	24.3	135.9	46.77	127.6	1,663.6	1,878.0	1,752.9	125.06	15.017	
7,050.0	6,791.0	6,817.5	6,817.5	24.3	136.4	50.99	127.6	1,663.6	1,840.3	1,712.2	128.11	14.365	
7,100.0	6,812.8	6,839.3	6,839.3	24.3	136.9	55.73	127.6	1,663.6	1,801.5	1,668.8	132.70	13.575	
7,150.0	6,831.4	6,857.9	6,857.9	24.3	137.3	60.97	127.6	1,663.6	1,761.7	1,623.3	138.43	12.727	
7,200.0	6,846.8	6,873.3	6,873.3	24.4	137.6	66.62	127.6	1,663.6	1,721.3	1,576.7	144.65	11.900	
7,250.0	6,858.7	6,885.2	6,885.2	24.5	137.8	72.56	127.6	1,663.6	1,680.5	1,529.9	150.59	11.159	
7,300.0	6,867.3	6,893.8	6,893.8	24.7	138.0	78.60	127.6	1,663.6	1,639.5	1,483.9	155.54	10.540	
7,350.0	6,872.4	6,898.9	6,898.9	25.0	138.1	84.55	127.6	1,663.6	1,598.5	1,439.5	159.05	10.051	
7,400.0	6,874.0	6,900.5	6,900.5	25.4	138.1	90.21	127.6	1,663.6	1,557.9	1,397.0	160.96	9.679	
7,405.6	6,874.0	6,900.5	6,900.5	25.5	138.1	90.82	127.6	1,663.6	1,553.4	1,392.3	161.08	9.644	
7,500.0	6,873.0	6,899.5	6,899.5	26.7	138.1	90.76	127.6	1,663.6	1,478.4	1,315.5	162.85	9.078	
7,600.0	6,871.9	6,898.4	6,898.4	28.4	138.1	90.69	127.6	1,663.6	1,401.4	1,236.6	164.89	8.499	
7,700.0	6,870.9	6,897.4	6,897.4	30.4	138.0	90.62	127.6	1,663.6	1,327.6	1,160.5	167.05	7.947	
7,800.0	6,869.8	6,896.3	6,896.3	32.5	138.0	90.56	127.6	1,663.6	1,257.4	1,088.0	169.31	7.426	
7,900.0	6,868.8	6,895.3	6,895.3	34.8	138.0	90.49	127.6	1,663.6	1,191.4	1,019.7	171.66	6.941	
8,000.0	6,867.7	6,894.2	6,894.2	37.1	138.0	90.43	127.6	1,663.6	1,130.4	956.4	174.06	6.494	
8,100.0	6,866.7	6,893.2	6,893.2	39.5	138.0	90.36	127.6	1,663.6	1,075.3	898.8	176.52	6.092	
8,200.0	6,865.6	6,892.1	6,892.1	42.0	137.9	90.30	127.6	1,663.6	1,027.0	848.0	179.02	5.737	
8,300.0	6,864.6	6,891.1	6,891.1	44.5	137.9	90.23	127.6	1,663.6	986.5	805.0	181.55	5.434	
8,400.0	6,863.6	6,890.1	6,890.1	47.0	137.9	90.17	127.6	1,663.6	954.8	770.7	184.12	5.186	
8,500.0	6,862.5	6,889.0	6,889.0	49.6	137.9	90.10	127.6	1,663.6	932.8	746.1	186.71	4.996	
8,600.0	6,861.5	6,888.0	6,888.0	52.2	137.9	90.04	127.6	1,663.6	921.2	731.8	189.31	4.866	
8,657.8	6,860.9	6,887.4	6,887.4	53.7	137.8	90.00	127.6	1,663.6	919.3	728.5	190.83	4.817 CC	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT MELLON 28-2 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,700.0	6,860.4	6,886.9	6,886.9	54.8	137.8	89.97	127.6	1,663.6	920.3	728.4	191.94	4.795	ES
8,800.0	6,859.4	6,885.9	6,885.9	57.5	137.8	89.91	127.6	1,663.6	930.3	735.7	194.58	4.781	SF
8,900.0	6,858.3	6,884.8	6,884.8	60.1	137.8	89.84	127.6	1,663.6	950.7	753.5	197.24	4.820	
9,000.0	6,857.3	6,883.8	6,883.8	62.8	137.8	89.78	127.6	1,663.6	980.9	781.0	199.90	4.907	
9,100.0	6,856.2	6,882.7	6,882.7	65.5	137.8	89.71	127.6	1,663.6	1,020.1	817.6	202.58	5.036	
9,200.0	6,855.2	6,881.7	6,881.7	68.1	137.7	89.65	127.6	1,663.6	1,067.3	862.0	205.26	5.200	
9,300.0	6,854.1	6,880.6	6,880.6	70.8	137.7	89.58	127.6	1,663.6	1,121.4	913.4	207.95	5.393	
9,400.0	6,853.1	6,879.6	6,879.6	73.6	137.7	89.52	127.6	1,663.6	1,181.5	970.9	210.65	5.609	
9,500.0	6,852.1	6,878.6	6,878.6	76.3	137.7	89.45	127.6	1,663.6	1,246.7	1,033.4	213.35	5.844	
9,600.0	6,851.0	6,877.5	6,877.5	79.0	137.6	89.39	127.6	1,663.6	1,316.4	1,100.3	216.06	6.092	
9,700.0	6,850.0	6,876.5	6,876.5	81.7	137.6	89.32	127.6	1,663.6	1,389.7	1,170.9	218.78	6.352	
9,800.0	6,848.9	6,875.4	6,875.4	84.4	137.6	89.26	127.6	1,663.6	1,466.2	1,244.7	221.49	6.619	
9,900.0	6,847.9	6,874.4	6,874.4	87.2	137.6	89.19	127.6	1,663.6	1,545.3	1,321.1	224.22	6.892	
10,000.0	6,846.8	6,873.3	6,873.3	89.9	137.6	89.13	127.6	1,663.6	1,626.8	1,399.8	226.94	7.168	
10,100.0	6,845.8	6,872.3	6,872.3	92.7	137.5	89.06	127.6	1,663.6	1,710.2	1,480.5	229.67	7.446	
10,200.0	6,844.7	6,871.2	6,871.2	95.4	137.5	89.00	127.6	1,663.6	1,795.3	1,562.9	232.40	7.725	
10,300.0	6,843.7	6,870.2	6,870.2	98.2	137.5	88.93	127.6	1,663.6	1,881.9	1,646.8	235.13	8.004	
10,400.0	6,842.7	6,869.2	6,869.2	100.9	137.5	88.87	127.6	1,663.6	1,969.8	1,731.9	237.87	8.281	
10,500.0	6,841.6	6,868.1	6,868.1	103.7	137.5	88.80	127.6	1,663.6	2,058.7	1,818.1	240.61	8.556	
10,600.0	6,840.6	6,867.1	6,867.1	106.4	137.4	88.74	127.6	1,663.6	2,148.7	1,905.3	243.35	8.830	
10,700.0	6,839.5	6,866.0	6,866.0	109.2	137.4	88.67	127.6	1,663.6	2,239.5	1,993.4	246.09	9.100	
10,800.0	6,838.5	6,865.0	6,865.0	112.0	137.4	88.61	127.6	1,663.6	2,331.0	2,082.2	248.83	9.368	
10,900.0	6,837.4	6,863.9	6,863.9	114.7	137.4	88.54	127.6	1,663.6	2,423.2	2,171.6	251.57	9.632	
11,000.0	6,836.4	6,862.9	6,862.9	117.5	137.4	88.48	127.6	1,663.6	2,516.0	2,261.7	254.32	9.893	
11,100.0	6,835.4	6,861.9	6,861.9	120.3	137.3	88.41	127.6	1,663.6	2,609.4	2,352.3	257.06	10.151	
11,200.0	6,834.3	6,860.8	6,860.8	123.0	137.3	88.35	127.6	1,663.6	2,703.2	2,443.4	259.81	10.404	
11,300.0	6,833.3	6,859.8	6,859.8	125.8	137.3	88.28	127.6	1,663.6	2,797.4	2,534.9	262.56	10.654	
11,400.0	6,832.2	6,858.7	6,858.7	128.6	137.3	88.22	127.6	1,663.6	2,892.0	2,626.7	265.31	10.901	
11,500.0	6,831.2	6,857.7	6,857.7	131.4	137.2	88.16	127.6	1,663.6	2,987.0	2,719.0	268.05	11.143	
11,600.0	6,830.2	6,856.7	6,856.7	134.1	137.2	88.09	127.6	1,663.6	3,082.3	2,811.5	270.80	11.382	
11,700.0	6,829.1	6,855.6	6,855.6	136.9	137.2	88.03	127.6	1,663.6	3,177.9	2,904.3	273.55	11.617	
11,800.0	6,828.1	6,854.6	6,854.6	139.7	137.2	87.96	127.6	1,663.6	3,273.7	2,997.4	276.30	11.848	
11,900.0	6,827.0	6,853.5	6,853.5	142.5	137.2	87.90	127.6	1,663.6	3,369.8	3,090.8	279.05	12.076	
11,999.0	6,826.0	6,852.5	6,852.5	145.2	137.1	87.83	127.6	1,663.6	3,465.2	3,183.4	281.78	12.298	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	100.5	100.5	0.0	0.0	33.07	2,670.4	1,738.7	3,186.6				
100.0	100.0	200.5	200.5	0.1	1.2	33.07	2,670.4	1,738.7	3,186.6	3,185.3	1.25	2,541.775	
200.0	200.0	300.5	300.5	0.3	3.5	33.07	2,670.4	1,738.7	3,186.6	3,182.8	3.78	843.253	
300.0	300.0	400.5	400.5	0.5	5.5	33.07	2,670.4	1,738.7	3,186.6	3,180.5	6.08	523.875	
400.0	400.0	500.5	500.5	0.8	7.6	33.07	2,670.4	1,738.7	3,186.6	3,178.2	8.35	381.635	
500.0	500.0	600.5	600.5	1.0	9.6	33.07	2,670.4	1,738.7	3,186.6	3,176.0	10.60	300.517	
600.0	600.0	700.5	700.5	1.2	11.6	33.07	2,670.4	1,738.7	3,186.6	3,173.7	12.85	247.960	
700.0	700.0	800.5	800.5	1.4	13.6	49.71	2,670.4	1,738.7	3,185.5	3,170.4	15.09	211.082	
800.0	799.8	900.3	900.3	1.7	15.7	49.84	2,670.4	1,738.7	3,182.1	3,164.8	17.32	183.732	
900.0	899.5	1,000.0	1,000.0	1.9	17.7	50.04	2,670.4	1,738.7	3,176.5	3,156.9	19.54	162.594	
1,000.0	998.7	1,099.2	1,099.2	2.2	19.7	50.33	2,670.4	1,738.7	3,168.6	3,146.9	21.74	145.719	
1,100.0	1,097.5	1,198.0	1,198.0	2.5	21.7	50.71	2,670.4	1,738.7	3,158.6	3,134.7	23.95	131.890	
1,200.0	1,195.6	1,296.1	1,296.1	2.8	23.6	51.16	2,670.4	1,738.7	3,146.4	3,120.3	26.15	120.310	
1,228.9	1,223.8	1,324.3	1,324.3	2.9	24.2	51.31	2,670.4	1,738.7	3,142.5	3,115.7	26.79	117.303	
1,300.0	1,293.3	1,393.8	1,393.8	3.2	25.6	51.53	2,670.4	1,738.7	3,132.7	3,104.3	28.42	110.246	
1,400.0	1,390.9	1,491.4	1,491.4	3.6	27.6	51.84	2,670.4	1,738.7	3,119.0	3,088.3	30.72	101.545	
1,500.0	1,488.5	1,589.0	1,589.0	4.0	29.5	52.15	2,670.4	1,738.7	3,105.4	3,072.4	33.03	94.021	
1,600.0	1,586.1	1,686.6	1,686.6	4.4	31.5	52.46	2,670.4	1,738.7	3,091.9	3,056.6	35.35	87.460	
1,700.0	1,683.7	1,784.2	1,784.2	4.8	33.5	52.78	2,670.4	1,738.7	3,078.5	3,040.8	37.68	81.693	
1,800.0	1,781.3	1,881.8	1,881.8	5.3	35.4	53.10	2,670.4	1,738.7	3,065.2	3,025.1	40.02	76.586	
1,900.0	1,878.9	1,979.4	1,979.4	5.7	37.4	53.42	2,670.4	1,738.7	3,051.9	3,009.6	42.37	72.036	
2,000.0	1,976.5	2,077.0	2,077.0	6.1	39.3	53.74	2,670.4	1,738.7	3,038.8	2,994.1	44.72	67.957	
2,100.0	2,074.1	2,174.6	2,174.6	6.6	41.3	54.07	2,670.4	1,738.7	3,025.8	2,978.7	47.07	64.281	
2,200.0	2,171.7	2,272.2	2,272.2	7.0	43.3	54.40	2,670.4	1,738.7	3,012.8	2,963.4	49.43	60.952	
2,300.0	2,269.3	2,369.8	2,369.8	7.5	45.2	54.73	2,670.4	1,738.7	3,000.0	2,948.2	51.79	57.924	
2,400.0	2,366.9	2,467.4	2,467.4	7.9	47.2	55.07	2,670.4	1,738.7	2,987.3	2,933.1	54.16	55.158	
2,500.0	2,464.5	2,565.0	2,565.0	8.4	49.2	55.41	2,670.4	1,738.7	2,974.7	2,918.1	56.53	52.622	
2,600.0	2,562.1	2,662.6	2,662.6	8.9	51.1	55.75	2,670.4	1,738.7	2,962.1	2,903.2	58.90	50.289	
2,700.0	2,659.7	2,760.2	2,760.2	9.3	53.1	56.09	2,670.4	1,738.7	2,949.7	2,888.5	61.28	48.136	
2,800.0	2,757.3	2,857.8	2,857.8	9.8	55.1	56.44	2,670.4	1,738.7	2,937.4	2,873.8	63.66	46.144	
2,900.0	2,854.9	2,955.4	2,955.4	10.2	57.0	56.79	2,670.4	1,738.7	2,925.3	2,859.2	66.04	44.294	
3,000.0	2,952.5	3,053.0	3,053.0	10.7	59.0	57.14	2,670.4	1,738.7	2,913.2	2,844.8	68.43	42.573	
3,100.0	3,050.1	3,150.6	3,150.6	11.1	60.9	57.50	2,670.4	1,738.7	2,901.2	2,830.4	70.82	40.968	
3,200.0	3,147.7	3,248.2	3,248.2	11.6	62.9	57.85	2,670.4	1,738.7	2,889.4	2,816.2	73.21	39.468	
3,300.0	3,245.3	3,345.8	3,345.8	12.1	64.9	58.21	2,670.4	1,738.7	2,877.6	2,802.0	75.60	38.063	
3,400.0	3,342.9	3,443.4	3,443.4	12.5	66.8	58.58	2,670.4	1,738.7	2,866.0	2,788.0	78.00	36.744	
3,500.0	3,440.5	3,541.0	3,541.0	13.0	68.8	58.94	2,670.4	1,738.7	2,854.5	2,774.1	80.40	35.505	
3,600.0	3,538.1	3,638.6	3,638.6	13.4	70.8	59.31	2,670.4	1,738.7	2,843.2	2,760.4	82.80	34.337	
3,700.0	3,635.7	3,736.2	3,736.2	13.9	72.7	59.69	2,670.4	1,738.7	2,831.9	2,746.7	85.21	33.236	
3,800.0	3,733.3	3,833.8	3,833.8	14.4	74.7	60.06	2,670.4	1,738.7	2,820.8	2,733.2	87.61	32.196	
3,900.0	3,830.9	3,931.4	3,931.4	14.8	76.6	60.44	2,670.4	1,738.7	2,809.8	2,719.7	90.02	31.212	
4,000.0	3,928.5	4,029.0	4,029.0	15.3	78.6	60.82	2,670.4	1,738.7	2,798.9	2,706.5	92.44	30.279	
4,100.0	4,026.1	4,126.6	4,126.6	15.7	80.6	61.20	2,670.4	1,738.7	2,788.1	2,693.3	94.85	29.395	
4,200.0	4,123.7	4,224.2	4,224.2	16.2	82.5	61.59	2,670.4	1,738.7	2,777.5	2,680.3	97.27	28.555	
4,300.0	4,221.3	4,321.8	4,321.8	16.7	84.5	61.98	2,670.4	1,738.7	2,767.0	2,667.3	99.69	27.757	
4,400.0	4,318.9	4,419.4	4,419.4	17.1	86.5	62.37	2,670.4	1,738.7	2,756.7	2,654.6	102.11	26.997	
4,500.0	4,416.5	4,517.0	4,517.0	17.6	88.4	62.77	2,670.4	1,738.7	2,746.4	2,641.9	104.53	26.273	
4,600.0	4,514.1	4,614.6	4,614.6	18.1	90.4	63.16	2,670.4	1,738.7	2,736.4	2,629.4	106.96	25.583	
4,700.0	4,611.7	4,712.2	4,712.2	18.5	92.4	63.56	2,670.4	1,738.7	2,726.4	2,617.0	109.39	24.924	
4,800.0	4,709.3	4,809.8	4,809.8	19.0	94.3	63.97	2,670.4	1,738.7	2,716.6	2,604.8	111.82	24.294	
4,900.0	4,806.9	4,907.4	4,907.4	19.4	96.3	64.37	2,670.4	1,738.7	2,706.9	2,592.7	114.25	23.692	
5,000.0	4,904.5	5,005.0	5,005.0	19.9	98.2	64.78	2,670.4	1,738.7	2,697.4	2,580.7	116.69	23.116	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT MELLON 28-4 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	5,102.6	5,102.6	20.4	100.2	65.19	2,670.4	1,738.7	2,688.0	2,568.9	119.13	22.564	
5,200.0	5,099.7	5,200.2	5,200.2	20.8	102.2	65.61	2,670.4	1,738.7	2,678.7	2,557.2	121.57	22.035	
5,300.0	5,197.3	5,297.8	5,297.8	21.3	104.1	66.02	2,670.4	1,738.7	2,669.6	2,545.6	124.01	21.528	
5,400.0	5,294.9	5,395.4	5,395.4	21.8	106.1	66.44	2,670.4	1,738.7	2,660.7	2,534.2	126.45	21.042	
5,500.0	5,392.5	5,493.0	5,493.0	22.2	108.1	66.87	2,670.4	1,738.7	2,651.9	2,523.0	128.89	20.574	
5,600.0	5,490.1	5,590.6	5,590.6	22.7	110.0	67.29	2,670.4	1,738.7	2,643.2	2,511.9	131.34	20.125	
5,614.2	5,504.0	5,604.5	5,604.5	22.7	110.3	67.35	2,670.4	1,738.7	2,642.0	2,510.3	131.69	20.062	
5,700.0	5,587.9	5,688.4	5,688.4	23.1	112.0	67.57	2,670.4	1,738.7	2,635.2	2,501.4	133.82	19.693	
5,800.0	5,686.4	5,786.9	5,786.9	23.4	114.0	67.79	2,670.4	1,738.7	2,628.6	2,492.4	136.20	19.299	
5,900.0	5,785.5	5,886.0	5,886.0	23.7	116.0	67.97	2,670.4	1,738.7	2,623.4	2,484.9	138.54	18.936	
6,000.0	5,885.0	5,985.5	5,985.5	23.9	118.0	68.10	2,670.4	1,738.7	2,619.6	2,478.8	140.82	18.602	
6,100.0	5,984.7	6,085.2	6,085.2	24.1	120.0	68.19	2,670.4	1,738.7	2,617.1	2,474.0	143.05	18.295	
6,200.0	6,084.7	6,185.2	6,185.2	24.2	122.0	68.23	2,670.4	1,738.7	2,615.9	2,470.6	145.22	18.014	
6,243.1	6,127.8	6,228.3	6,228.3	24.3	122.8	51.63	2,670.4	1,738.7	2,615.7	2,476.1	139.62	18.734	
6,273.1	6,157.8	6,258.3	6,258.3	24.3	123.4	51.63	2,670.4	1,738.7	2,615.7	2,475.5	140.27	18.648	
6,300.0	6,184.7	6,285.2	6,285.2	24.3	124.0	-38.39	2,670.4	1,738.7	2,615.3	2,468.1	147.29	17.757	
6,350.0	6,234.5	6,335.0	6,335.0	24.4	125.0	-38.58	2,670.4	1,738.7	2,612.5	2,464.6	147.88	17.666	
6,400.0	6,284.0	6,384.5	6,384.5	24.4	126.0	-38.96	2,670.4	1,738.7	2,607.0	2,459.0	147.99	17.616	
6,450.0	6,332.9	6,433.4	6,433.4	24.4	127.0	-39.53	2,670.4	1,738.7	2,598.7	2,451.1	147.64	17.601	
6,500.0	6,380.9	6,481.4	6,481.4	24.4	127.9	-40.29	2,670.4	1,738.7	2,587.9	2,441.0	146.89	17.618	
6,550.0	6,427.8	6,528.3	6,528.3	24.4	128.9	-41.26	2,670.4	1,738.7	2,574.5	2,428.7	145.78	17.660	
6,600.0	6,473.5	6,574.0	6,574.0	24.4	129.8	-42.45	2,670.4	1,738.7	2,558.7	2,414.2	144.43	17.715	
6,650.0	6,517.5	6,618.0	6,618.0	24.4	130.7	-43.86	2,670.4	1,738.7	2,540.5	2,397.5	142.95	17.772	
6,700.0	6,559.9	6,660.4	6,660.4	24.4	131.5	-45.51	2,670.4	1,738.7	2,520.1	2,378.6	141.48	17.812	
6,750.0	6,600.2	6,700.7	6,700.7	24.4	132.3	-47.41	2,670.4	1,738.7	2,497.6	2,357.4	140.19	17.816	
6,800.0	6,638.4	6,738.9	6,738.9	24.3	133.1	-49.57	2,670.4	1,738.7	2,473.2	2,333.9	139.25	17.761	
6,850.0	6,674.3	6,774.8	6,774.8	24.3	133.8	-52.00	2,670.4	1,738.7	2,447.0	2,308.2	138.83	17.626	
6,900.0	6,707.6	6,808.1	6,808.1	24.3	134.5	-54.71	2,670.4	1,738.7	2,419.3	2,280.2	139.07	17.396	
6,950.0	6,738.3	6,838.8	6,838.8	24.3	135.1	-57.68	2,670.4	1,738.7	2,390.2	2,250.1	140.06	17.066	
7,000.0	6,766.2	6,866.7	6,866.7	24.3	135.7	-60.90	2,670.4	1,738.7	2,359.9	2,218.1	141.80	16.643	
7,050.0	6,791.0	6,891.5	6,891.5	24.3	136.2	-64.34	2,670.4	1,738.7	2,328.6	2,184.4	144.19	16.150	
7,100.0	6,812.8	6,913.3	6,913.3	24.3	136.6	-67.98	2,670.4	1,738.7	2,296.6	2,149.5	147.05	15.617	
7,150.0	6,831.4	6,931.9	6,931.9	24.3	137.0	-71.74	2,670.4	1,738.7	2,264.0	2,113.8	150.14	15.080	
7,200.0	6,846.8	6,947.3	6,947.3	24.4	137.3	-75.56	2,670.4	1,738.7	2,231.1	2,077.9	153.16	14.567	
7,250.0	6,858.7	6,959.2	6,959.2	24.5	137.5	-79.39	2,670.4	1,738.7	2,198.1	2,042.2	155.88	14.101	
7,300.0	6,867.3	6,967.8	6,967.8	24.7	137.7	-83.13	2,670.4	1,738.7	2,165.2	2,007.1	158.09	13.696	
7,350.0	6,872.4	6,972.9	6,972.9	25.0	137.8	-86.73	2,670.4	1,738.7	2,132.6	1,972.9	159.69	13.355	
7,400.0	6,874.0	6,974.5	6,974.5	25.4	137.8	-90.12	2,670.4	1,738.7	2,100.5	1,939.9	160.68	13.073	
7,405.6	6,874.0	6,974.5	6,974.5	25.5	137.8	-90.49	2,670.4	1,738.7	2,097.0	1,936.2	160.75	13.045	
7,500.0	6,873.0	6,973.5	6,973.5	26.7	137.8	-90.46	2,670.4	1,738.7	2,038.6	1,876.0	162.53	12.543	
7,600.0	6,871.9	6,972.4	6,972.4	28.4	137.8	-90.42	2,670.4	1,738.7	1,979.7	1,815.1	164.57	12.029	
7,700.0	6,870.9	6,971.4	6,971.4	30.4	137.8	-90.38	2,670.4	1,738.7	1,924.2	1,757.5	166.74	11.540	
7,800.0	6,869.8	6,970.3	6,970.3	32.5	137.8	-90.34	2,670.4	1,738.7	1,872.5	1,703.4	169.01	11.079	
7,900.0	6,868.8	6,969.3	6,969.3	34.8	137.7	-90.31	2,670.4	1,738.7	1,824.7	1,653.3	171.36	10.649	
8,000.0	6,867.7	6,968.2	6,968.2	37.1	137.7	-90.27	2,670.4	1,738.7	1,781.3	1,607.5	173.77	10.251	
8,100.0	6,866.7	6,967.2	6,967.2	39.5	137.7	-90.23	2,670.4	1,738.7	1,742.5	1,566.3	176.23	9.888	
8,200.0	6,865.6	6,966.1	6,966.1	42.0	137.7	-90.20	2,670.4	1,738.7	1,708.8	1,530.0	178.73	9.560	
8,300.0	6,864.6	6,965.1	6,965.1	44.5	137.7	-90.16	2,670.4	1,738.7	1,680.3	1,499.0	181.27	9.269	
8,400.0	6,863.6	6,964.1	6,964.1	47.0	137.6	-90.12	2,670.4	1,738.7	1,657.3	1,473.5	183.84	9.015	
8,500.0	6,862.5	6,963.0	6,963.0	49.6	137.6	-90.09	2,670.4	1,738.7	1,640.2	1,453.7	186.43	8.798	
8,600.0	6,861.5	6,962.0	6,962.0	52.2	137.6	-90.05	2,670.4	1,738.7	1,629.0	1,439.9	189.05	8.617	
8,700.0	6,860.4	6,960.9	6,960.9	54.8	137.6	-90.01	2,670.4	1,738.7	1,623.9	1,432.2	191.68	8.472	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT MELLON 28-4 - 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	
8,732.9	6,860.1	6,960.6	6,960.6	55.7	137.6	-90.00	2,670.4	1,738.7	1,623.5	1,431.0	192.55	8.432 CC	
8,800.0	6,859.4	6,959.9	6,959.9	57.5	137.6	-89.98	2,670.4	1,738.7	1,624.9	1,430.6	194.33	8.362 ES	
8,900.0	6,858.3	6,958.8	6,958.8	60.1	137.5	-89.94	2,670.4	1,738.7	1,632.1	1,435.1	196.99	8.286	
9,000.0	6,857.3	6,957.8	6,957.8	62.8	137.5	-89.90	2,670.4	1,738.7	1,645.4	1,445.7	199.66	8.241	
9,100.0	6,856.2	6,956.7	6,956.7	65.5	137.5	-89.86	2,670.4	1,738.7	1,664.5	1,462.2	202.34	8.227 SF	
9,200.0	6,855.2	6,955.7	6,955.7	68.1	137.5	-89.83	2,670.4	1,738.7	1,689.4	1,484.4	205.03	8.240	
9,300.0	6,854.1	6,954.6	6,954.6	70.8	137.4	-89.79	2,670.4	1,738.7	1,719.7	1,512.0	207.72	8.279	
9,400.0	6,853.1	6,953.6	6,953.6	73.6	137.4	-89.75	2,670.4	1,738.7	1,755.2	1,544.8	210.43	8.341	
9,500.0	6,852.1	6,952.6	6,952.6	76.3	137.4	-89.72	2,670.4	1,738.7	1,795.6	1,582.5	213.14	8.425	
9,600.0	6,851.0	6,951.5	6,951.5	79.0	137.4	-89.68	2,670.4	1,738.7	1,840.6	1,624.7	215.85	8.527	
9,700.0	6,850.0	6,950.5	6,950.5	81.7	137.4	-89.64	2,670.4	1,738.7	1,889.7	1,671.2	218.57	8.646	
9,800.0	6,848.9	6,949.4	6,949.4	84.4	137.3	-89.61	2,670.4	1,738.7	1,942.8	1,721.5	221.30	8.779	
9,900.0	6,847.9	6,948.4	6,948.4	87.2	137.3	-89.57	2,670.4	1,738.7	1,999.5	1,775.5	224.03	8.925	
10,000.0	6,846.8	6,947.3	6,947.3	89.9	137.3	-89.53	2,670.4	1,738.7	2,059.4	1,832.7	226.76	9.082	
10,100.0	6,845.8	6,946.3	6,946.3	92.7	137.3	-89.50	2,670.4	1,738.7	2,122.4	1,892.9	229.50	9.248	
10,200.0	6,844.7	6,945.2	6,945.2	95.4	137.3	-89.46	2,670.4	1,738.7	2,188.2	1,955.9	232.23	9.422	
10,300.0	6,843.7	6,944.2	6,944.2	98.2	137.2	-89.42	2,670.4	1,738.7	2,256.4	2,021.5	234.98	9.603	
10,400.0	6,842.7	6,943.2	6,943.2	100.9	137.2	-89.39	2,670.4	1,738.7	2,327.0	2,089.3	237.72	9.789	
10,500.0	6,841.6	6,942.1	6,942.1	103.7	137.2	-89.35	2,670.4	1,738.7	2,399.6	2,159.2	240.47	9.979	
10,600.0	6,840.6	6,941.1	6,941.1	106.4	137.2	-89.31	2,670.4	1,738.7	2,474.2	2,231.0	243.21	10.173	
10,700.0	6,839.5	6,940.0	6,940.0	109.2	137.2	-89.28	2,670.4	1,738.7	2,550.5	2,304.5	245.96	10.369	
10,800.0	6,838.5	6,939.0	6,939.0	112.0	137.1	-89.24	2,670.4	1,738.7	2,628.4	2,379.7	248.72	10.568	
10,900.0	6,837.4	6,937.9	6,937.9	114.7	137.1	-89.20	2,670.4	1,738.7	2,707.7	2,456.3	251.47	10.768	
11,000.0	6,836.4	6,936.9	6,936.9	117.5	137.1	-89.17	2,670.4	1,738.7	2,788.4	2,534.2	254.22	10.968	
11,100.0	6,835.4	6,935.9	6,935.9	120.3	137.1	-89.13	2,670.4	1,738.7	2,870.3	2,613.3	256.98	11.169	
11,200.0	6,834.3	6,934.8	6,934.8	123.0	137.1	-89.09	2,670.4	1,738.7	2,953.3	2,693.5	259.74	11.370	
11,300.0	6,833.3	6,933.8	6,933.8	125.8	137.0	-89.06	2,670.4	1,738.7	3,037.3	2,774.8	262.50	11.571	
11,400.0	6,832.2	6,932.7	6,932.7	128.6	137.0	-89.02	2,670.4	1,738.7	3,122.3	2,857.0	265.26	11.771	
11,500.0	6,831.2	6,931.7	6,931.7	131.4	137.0	-88.98	2,670.4	1,738.7	3,208.1	2,940.1	268.02	11.970	
11,600.0	6,830.2	6,930.7	6,930.7	134.1	137.0	-88.95	2,670.4	1,738.7	3,294.7	3,024.0	270.78	12.168	
11,700.0	6,829.1	6,929.6	6,929.6	136.9	136.9	-88.91	2,670.4	1,738.7	3,382.1	3,108.6	273.54	12.364	
11,800.0	6,828.1	6,928.6	6,928.6	139.7	136.9	-88.87	2,670.4	1,738.7	3,470.2	3,193.9	276.30	12.559	
11,900.0	6,827.0	6,927.5	6,927.5	142.5	136.9	-88.84	2,670.4	1,738.7	3,558.9	3,279.8	279.07	12.753	
11,999.0	6,826.0	6,926.5	6,926.5	145.2	136.9	-88.80	2,670.4	1,738.7	3,647.2	3,365.4	281.81	12.942	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MW/D												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	114.5	114.5	0.0	0.0	47.15	2,863.7	3,087.3	4,210.9				
100.0	100.0	214.5	214.5	0.1	0.1	47.15	2,863.7	3,087.3	4,210.9	4,210.7	0.21	N/A	
200.0	200.0	314.5	314.5	0.3	0.3	47.15	2,863.7	3,087.3	4,210.9	4,210.3	0.66	6,377.761	
300.0	300.0	414.5	414.5	0.5	0.6	47.15	2,863.7	3,087.3	4,210.9	4,209.8	1.11	3,794.365	
400.0	400.0	514.5	514.5	0.8	0.8	47.15	2,863.7	3,087.3	4,210.9	4,209.4	1.56	2,700.494	
500.0	500.0	614.5	614.5	1.0	1.0	47.15	2,863.7	3,087.3	4,210.9	4,208.9	2.01	2,096.188	
600.0	600.0	714.5	714.5	1.2	1.2	47.15	2,863.7	3,087.3	4,210.9	4,208.5	2.46	1,712.885	
700.0	700.0	814.5	814.5	1.4	1.5	63.79	2,863.7	3,087.3	4,210.1	4,207.2	2.91	1,448.055	
800.0	799.8	914.3	914.3	1.7	1.7	63.90	2,863.7	3,087.3	4,207.8	4,204.5	3.36	1,252.921	
900.0	899.5	1,014.0	1,014.0	1.9	1.9	64.07	2,863.7	3,087.3	4,204.0	4,200.2	3.82	1,101.118	
1,000.0	998.7	1,113.2	1,113.2	2.2	2.1	64.32	2,863.7	3,087.3	4,198.7	4,194.4	4.29	977.715	
1,100.0	1,097.5	1,212.0	1,212.0	2.5	2.4	64.63	2,863.7	3,087.3	4,191.9	4,187.1	4.80	873.888	
1,200.0	1,195.6	1,310.1	1,310.1	2.8	2.6	65.01	2,863.7	3,087.3	4,183.6	4,178.3	5.33	784.319	
1,228.9	1,223.8	1,338.3	1,338.3	2.9	2.6	65.14	2,863.7	3,087.3	4,181.0	4,175.5	5.50	760.610	
1,300.0	1,293.3	1,407.8	1,407.8	3.2	2.8	65.33	2,863.7	3,087.3	4,174.4	4,168.4	5.91	706.367	
1,400.0	1,390.9	1,505.4	1,505.4	3.6	3.0	65.59	2,863.7	3,087.3	4,165.1	4,158.6	6.51	640.208	
1,500.0	1,488.5	1,603.0	1,603.0	4.0	3.2	65.86	2,863.7	3,087.3	4,156.0	4,148.9	7.12	584.015	
1,600.0	1,586.1	1,700.6	1,700.6	4.4	3.5	66.13	2,863.7	3,087.3	4,147.0	4,139.2	7.74	535.980	
1,700.0	1,683.7	1,798.2	1,798.2	4.8	3.7	66.40	2,863.7	3,087.3	4,138.0	4,129.6	8.37	494.610	
1,800.0	1,781.3	1,895.8	1,895.8	5.3	3.9	66.67	2,863.7	3,087.3	4,129.2	4,120.2	9.00	458.707	
1,900.0	1,878.9	1,993.4	1,993.4	5.7	4.1	66.94	2,863.7	3,087.3	4,120.4	4,110.8	9.64	427.316	
2,000.0	1,976.5	2,091.0	2,091.0	6.1	4.3	67.22	2,863.7	3,087.3	4,111.8	4,101.5	10.29	399.675	
2,100.0	2,074.1	2,188.6	2,188.6	6.6	4.6	67.49	2,863.7	3,087.3	4,103.2	4,092.3	10.94	375.178	
2,200.0	2,171.7	2,286.2	2,286.2	7.0	4.8	67.77	2,863.7	3,087.3	4,094.7	4,083.1	11.59	353.336	
2,300.0	2,269.3	2,383.8	2,383.8	7.5	5.0	68.04	2,863.7	3,087.3	4,086.4	4,074.1	12.24	333.752	
2,400.0	2,366.9	2,481.4	2,481.4	7.9	5.2	68.32	2,863.7	3,087.3	4,078.1	4,065.2	12.90	316.102	
2,500.0	2,464.5	2,579.0	2,579.0	8.4	5.4	68.60	2,863.7	3,087.3	4,069.9	4,056.4	13.56	300.122	
2,600.0	2,562.1	2,676.6	2,676.6	8.9	5.6	68.88	2,863.7	3,087.3	4,061.9	4,047.7	14.22	285.590	
2,700.0	2,659.7	2,774.2	2,774.2	9.3	5.9	69.16	2,863.7	3,087.3	4,053.9	4,039.0	14.89	272.322	
2,800.0	2,757.3	2,871.8	2,871.8	9.8	6.1	69.44	2,863.7	3,087.3	4,046.1	4,030.5	15.55	260.164	
2,900.0	2,854.9	2,969.4	2,969.4	10.2	6.3	69.73	2,863.7	3,087.3	4,038.3	4,022.1	16.22	248.985	
3,000.0	2,952.5	3,067.0	3,067.0	10.7	6.5	70.01	2,863.7	3,087.3	4,030.6	4,013.8	16.89	238.673	
3,100.0	3,050.1	3,164.6	3,164.6	11.1	6.7	70.30	2,863.7	3,087.3	4,023.1	4,005.5	17.56	229.135	
3,200.0	3,147.7	3,262.2	3,262.2	11.6	7.0	70.58	2,863.7	3,087.3	4,015.6	3,997.4	18.23	220.286	
3,300.0	3,245.3	3,359.8	3,359.8	12.1	7.2	70.87	2,863.7	3,087.3	4,008.3	3,989.4	18.90	212.058	
3,400.0	3,342.9	3,457.4	3,457.4	12.5	7.4	71.16	2,863.7	3,087.3	4,001.1	3,981.5	19.58	204.387	
3,500.0	3,440.5	3,555.0	3,555.0	13.0	7.6	71.45	2,863.7	3,087.3	3,993.9	3,973.7	20.25	197.221	
3,600.0	3,538.1	3,652.6	3,652.6	13.4	7.8	71.74	2,863.7	3,087.3	3,986.9	3,966.0	20.93	190.512	
3,700.0	3,635.7	3,750.2	3,750.2	13.9	8.1	72.03	2,863.7	3,087.3	3,980.0	3,958.4	21.60	184.219	
3,800.0	3,733.3	3,847.8	3,847.8	14.4	8.3	72.32	2,863.7	3,087.3	3,973.2	3,950.9	22.28	178.305	
3,900.0	3,830.9	3,945.4	3,945.4	14.8	8.5	72.62	2,863.7	3,087.3	3,966.5	3,943.5	22.96	172.738	
4,000.0	3,928.5	4,043.0	4,043.0	15.3	8.7	72.91	2,863.7	3,087.3	3,959.9	3,936.2	23.64	167.489	
4,100.0	4,026.1	4,140.6	4,140.6	15.7	8.9	73.20	2,863.7	3,087.3	3,953.4	3,929.0	24.32	162.531	
4,200.0	4,123.7	4,238.2	4,238.2	16.2	9.2	73.50	2,863.7	3,087.3	3,947.0	3,922.0	25.01	157.843	
4,300.0	4,221.3	4,335.8	4,335.8	16.7	9.4	73.80	2,863.7	3,087.3	3,940.7	3,915.0	25.69	153.403	
4,400.0	4,318.9	4,433.4	4,433.4	17.1	9.6	74.10	2,863.7	3,087.3	3,934.6	3,908.2	26.37	149.193	
4,500.0	4,416.5	4,531.0	4,531.0	17.6	9.8	74.39	2,863.7	3,087.3	3,928.5	3,901.5	27.06	145.195	
4,600.0	4,514.1	4,628.6	4,628.6	18.1	10.0	74.69	2,863.7	3,087.3	3,922.6	3,894.8	27.74	141.396	
4,700.0	4,611.7	4,726.2	4,726.2	18.5	10.3	74.99	2,863.7	3,087.3	3,916.8	3,888.3	28.43	137.779	
4,800.0	4,709.3	4,823.8	4,823.8	19.0	10.5	75.30	2,863.7	3,087.3	3,911.0	3,881.9	29.11	134.334	
4,900.0	4,806.9	4,921.4	4,921.4	19.4	10.7	75.60	2,863.7	3,087.3	3,905.5	3,875.6	29.80	131.049	
5,000.0	4,904.5	5,019.0	5,019.0	19.9	10.9	75.90	2,863.7	3,087.3	3,900.0	3,869.5	30.49	127.913	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWMD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	5,116.6	5,116.6	20.4	11.1	76.20	2,863.7	3,087.3	3,894.6	3,863.4	31.18	124.917	
5,200.0	5,099.7	5,214.2	5,214.2	20.8	11.4	76.51	2,863.7	3,087.3	3,889.3	3,857.5	31.87	122.052	
5,300.0	5,197.3	5,311.8	5,311.8	21.3	11.6	76.81	2,863.7	3,087.3	3,884.2	3,851.6	32.56	119.310	
5,400.0	5,294.9	5,409.4	5,409.4	21.8	11.8	77.12	2,863.7	3,087.3	3,879.2	3,845.9	33.25	116.683	
5,500.0	5,392.5	5,507.0	5,507.0	22.2	12.0	77.43	2,863.7	3,087.3	3,874.3	3,840.3	33.94	114.165	
5,600.0	5,490.1	5,604.6	5,604.6	22.7	12.2	77.73	2,863.7	3,087.3	3,869.5	3,834.8	34.63	111.750	
5,614.2	5,504.0	5,618.5	5,618.5	22.7	12.3	77.78	2,863.7	3,087.3	3,868.8	3,834.1	34.72	111.414	
5,700.0	5,587.9	5,702.4	5,702.4	23.1	12.4	77.95	2,863.7	3,087.3	3,865.1	3,829.8	35.26	109.623	
5,800.0	5,686.4	5,800.9	5,800.9	23.4	12.7	78.13	2,863.7	3,087.3	3,861.5	3,825.7	35.79	107.886	
5,900.0	5,785.5	5,900.0	5,900.0	23.7	12.9	78.27	2,863.7	3,087.3	3,858.6	3,822.4	36.29	106.342	
6,000.0	5,885.0	5,999.5	5,999.5	23.9	13.1	78.37	2,863.7	3,087.3	3,856.6	3,819.8	36.74	104.980	
6,100.0	5,984.7	6,099.2	6,099.2	24.1	13.3	78.45	2,863.7	3,087.3	3,855.2	3,818.1	37.14	103.789	
6,200.0	6,084.7	6,199.2	6,199.2	24.2	13.6	78.48	2,863.7	3,087.3	3,854.6	3,817.0	37.51	102.762	
6,243.1	6,127.8	6,242.3	6,242.3	24.3	13.7	61.88	2,863.7	3,087.3	3,854.5	3,825.1	29.42	131.017	
6,273.1	6,157.8	6,272.3	6,272.3	24.3	13.7	61.88	2,863.7	3,087.3	3,854.5	3,824.9	29.54	130.496	
6,300.0	6,184.7	6,299.2	6,299.2	24.3	13.8	-28.14	2,863.7	3,087.3	3,854.0	3,816.2	37.83	101.865	
6,350.0	6,234.5	6,349.0	6,349.0	24.4	13.9	-28.29	2,863.7	3,087.3	3,850.9	3,813.0	37.86	101.701	
6,400.0	6,284.0	6,398.5	6,398.5	24.4	14.0	-28.58	2,863.7	3,087.3	3,844.6	3,806.9	37.74	101.867	
6,450.0	6,332.9	6,447.4	6,447.4	24.4	14.1	-29.02	2,863.7	3,087.3	3,835.3	3,797.9	37.47	102.353	
6,500.0	6,380.9	6,495.4	6,495.4	24.4	14.2	-29.61	2,863.7	3,087.3	3,823.1	3,786.0	37.06	103.149	
6,550.0	6,427.8	6,542.3	6,542.3	24.4	14.3	-30.38	2,863.7	3,087.3	3,807.9	3,771.4	36.53	104.242	
6,600.0	6,473.5	6,588.0	6,588.0	24.4	14.4	-31.32	2,863.7	3,087.3	3,790.0	3,754.1	35.89	105.613	
6,650.0	6,517.5	6,632.0	6,632.0	24.4	14.5	-32.46	2,863.7	3,087.3	3,769.3	3,734.2	35.15	107.227	
6,700.0	6,559.9	6,674.4	6,674.4	24.4	14.6	-33.83	2,863.7	3,087.3	3,746.0	3,711.7	34.36	109.025	
6,750.0	6,600.2	6,714.7	6,714.7	24.4	14.7	-35.44	2,863.7	3,087.3	3,720.3	3,686.7	33.54	110.918	
6,800.0	6,638.4	6,752.9	6,752.9	24.3	14.8	-37.32	2,863.7	3,087.3	3,692.2	3,659.4	32.74	112.766	
6,850.0	6,674.3	6,788.8	6,788.8	24.3	14.9	-39.52	2,863.7	3,087.3	3,661.9	3,629.9	32.02	114.369	
6,900.0	6,707.6	6,822.1	6,822.1	24.3	15.0	-42.06	2,863.7	3,087.3	3,629.6	3,598.2	31.44	115.464	
6,950.0	6,738.3	6,852.8	6,852.8	24.3	15.0	-44.99	2,863.7	3,087.3	3,595.5	3,564.4	31.06	115.745	
7,000.0	6,766.2	6,880.7	6,880.7	24.3	15.1	-48.36	2,863.7	3,087.3	3,559.7	3,528.7	30.97	114.923	
7,050.0	6,791.0	6,905.5	6,905.5	24.3	15.2	-52.19	2,863.7	3,087.3	3,522.5	3,491.3	31.22	112.818	
7,100.0	6,812.8	6,927.3	6,927.3	24.3	15.2	-56.51	2,863.7	3,087.3	3,484.0	3,452.2	31.83	109.463	
7,150.0	6,831.4	6,945.9	6,945.9	24.3	15.2	-61.32	2,863.7	3,087.3	3,444.5	3,411.8	32.76	105.140	
7,200.0	6,846.8	6,961.3	6,961.3	24.4	15.3	-66.60	2,863.7	3,087.3	3,404.2	3,370.3	33.93	100.320	
7,250.0	6,858.7	6,973.2	6,973.2	24.5	15.3	-72.26	2,863.7	3,087.3	3,363.3	3,328.0	35.21	95.525	
7,300.0	6,867.3	6,981.8	6,981.8	24.7	15.3	-78.19	2,863.7	3,087.3	3,321.9	3,285.5	36.43	91.195	
7,350.0	6,872.4	6,986.9	6,986.9	25.0	15.3	-84.24	2,863.7	3,087.3	3,280.4	3,242.9	37.44	87.609	
7,400.0	6,874.0	6,988.5	6,988.5	25.4	15.3	-90.22	2,863.7	3,087.3	3,238.9	3,200.7	38.16	84.873	
7,405.6	6,874.0	6,988.5	6,988.5	25.5	15.3	-90.88	2,863.7	3,087.3	3,234.3	3,196.0	38.22	84.618	
7,500.0	6,873.0	6,987.5	6,987.5	26.7	15.3	-90.85	2,863.7	3,087.3	3,156.6	3,116.6	40.02	78.884	
7,600.0	6,871.9	6,986.4	6,986.4	28.4	15.3	-90.82	2,863.7	3,087.3	3,075.4	3,033.3	42.08	73.090	
7,700.0	6,870.9	6,985.4	6,985.4	30.4	15.3	-90.79	2,863.7	3,087.3	2,995.3	2,951.0	44.26	67.669	
7,800.0	6,869.8	6,984.3	6,984.3	32.5	15.3	-90.75	2,863.7	3,087.3	2,916.4	2,869.9	46.55	62.651	
7,900.0	6,868.8	6,983.3	6,983.3	34.8	15.3	-90.72	2,863.7	3,087.3	2,838.9	2,790.0	48.92	58.035	
8,000.0	6,867.7	6,982.2	6,982.2	37.1	15.3	-90.69	2,863.7	3,087.3	2,762.8	2,711.4	51.35	53.807	
8,100.0	6,866.7	6,981.2	6,981.2	39.5	15.3	-90.65	2,863.7	3,087.3	2,688.3	2,634.4	53.83	49.943	
8,200.0	6,865.6	6,980.1	6,980.1	42.0	15.3	-90.62	2,863.7	3,087.3	2,615.4	2,559.1	56.35	46.414	
8,300.0	6,864.6	6,979.1	6,979.1	44.5	15.3	-90.59	2,863.7	3,087.3	2,544.4	2,485.5	58.91	43.193	
8,400.0	6,863.6	6,978.1	6,978.1	47.0	15.3	-90.55	2,863.7	3,087.3	2,475.5	2,414.0	61.50	40.255	
8,500.0	6,862.5	6,977.0	6,977.0	49.6	15.3	-90.52	2,863.7	3,087.3	2,408.7	2,344.6	64.11	37.573	
8,600.0	6,861.5	6,976.0	6,976.0	52.2	15.3	-90.49	2,863.7	3,087.3	2,344.2	2,277.5	66.74	35.125	
8,700.0	6,860.4	6,974.9	6,974.9	54.8	15.3	-90.46	2,863.7	3,087.3	2,282.3	2,213.0	69.39	32.892	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT ROGER 1 - Wellbore #1 - Design #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	
8,800.0	6,859.4	6,973.9	6,973.9	57.5	15.3	-90.42	2,863.7	3,087.3	2,223.2	2,151.2	72.05	30.855	
8,900.0	6,858.3	6,972.8	6,972.8	60.1	15.3	-90.39	2,863.7	3,087.3	2,167.1	2,092.4	74.73	28.999	
9,000.0	6,857.3	6,971.8	6,971.8	62.8	15.3	-90.36	2,863.7	3,087.3	2,114.3	2,036.9	77.42	27.309	
9,100.0	6,856.2	6,970.7	6,970.7	65.5	15.3	-90.32	2,863.7	3,087.3	2,064.9	1,984.8	80.12	25.772	
9,200.0	6,855.2	6,969.7	6,969.7	68.1	15.3	-90.29	2,863.7	3,087.3	2,019.3	1,936.5	82.83	24.379	
9,300.0	6,854.1	6,968.6	6,968.6	70.8	15.3	-90.26	2,863.7	3,087.3	1,977.7	1,892.2	85.55	23.118	
9,400.0	6,853.1	6,967.6	6,967.6	73.6	15.3	-90.22	2,863.7	3,087.3	1,940.4	1,852.1	88.27	21.982	
9,500.0	6,852.1	6,966.6	6,966.6	76.3	15.3	-90.19	2,863.7	3,087.3	1,907.6	1,816.6	91.00	20.962	
9,600.0	6,851.0	6,965.5	6,965.5	79.0	15.3	-90.16	2,863.7	3,087.3	1,879.5	1,785.8	93.74	20.051	
9,700.0	6,850.0	6,964.5	6,964.5	81.7	15.3	-90.13	2,863.7	3,087.3	1,856.4	1,759.9	96.48	19.242	
9,800.0	6,848.9	6,963.4	6,963.4	84.4	15.3	-90.09	2,863.7	3,087.3	1,838.4	1,739.2	99.22	18.529	
9,900.0	6,847.9	6,962.4	6,962.4	87.2	15.3	-90.06	2,863.7	3,087.3	1,825.8	1,723.8	101.97	17.906	
10,000.0	6,846.8	6,961.3	6,961.3	89.9	15.3	-90.03	2,863.7	3,087.3	1,818.6	1,713.9	104.72	17.366	
10,081.5	6,846.0	6,960.5	6,960.5	92.1	15.3	-90.00	2,863.7	3,087.3	1,816.8	1,709.8	106.97	16.984 CC	
10,100.0	6,845.8	6,960.3	6,960.3	92.7	15.3	-89.99	2,863.7	3,087.3	1,816.9	1,709.4	107.48	16.905 ES	
10,200.0	6,844.7	6,959.2	6,959.2	95.4	15.3	-89.96	2,863.7	3,087.3	1,820.6	1,710.4	110.23	16.516	
10,300.0	6,843.7	6,958.2	6,958.2	98.2	15.3	-89.93	2,863.7	3,087.3	1,829.9	1,716.9	113.00	16.194	
10,400.0	6,842.7	6,957.2	6,957.2	100.9	15.3	-89.90	2,863.7	3,087.3	1,844.5	1,728.7	115.76	15.933	
10,500.0	6,841.6	6,956.1	6,956.1	103.7	15.3	-89.86	2,863.7	3,087.3	1,864.3	1,745.8	118.53	15.729	
10,600.0	6,840.6	6,955.1	6,955.1	106.4	15.3	-89.83	2,863.7	3,087.3	1,889.3	1,768.0	121.29	15.576	
10,700.0	6,839.5	6,954.0	6,954.0	109.2	15.3	-89.80	2,863.7	3,087.3	1,919.1	1,795.1	124.07	15.469	
10,800.0	6,838.5	6,953.0	6,953.0	112.0	15.3	-89.76	2,863.7	3,087.3	1,953.7	1,826.8	126.84	15.403	
10,900.0	6,837.4	6,951.9	6,951.9	114.7	15.3	-89.73	2,863.7	3,087.3	1,992.6	1,863.0	129.61	15.374 SF	
11,000.0	6,836.4	6,950.9	6,950.9	117.5	15.3	-89.70	2,863.7	3,087.3	2,035.7	1,903.3	132.39	15.377	
11,100.0	6,835.4	6,949.9	6,949.9	120.3	15.3	-89.67	2,863.7	3,087.3	2,082.7	1,947.6	135.16	15.409	
11,200.0	6,834.3	6,948.8	6,948.8	123.0	15.2	-89.63	2,863.7	3,087.3	2,133.4	1,995.5	137.94	15.466	
11,300.0	6,833.3	6,947.8	6,947.8	125.8	15.2	-89.60	2,863.7	3,087.3	2,187.5	2,046.8	140.72	15.545	
11,400.0	6,832.2	6,946.7	6,946.7	128.6	15.2	-89.57	2,863.7	3,087.3	2,244.7	2,101.2	143.50	15.642	
11,500.0	6,831.2	6,945.7	6,945.7	131.4	15.2	-89.53	2,863.7	3,087.3	2,304.9	2,158.6	146.28	15.756	
11,600.0	6,830.2	6,944.7	6,944.7	134.1	15.2	-89.50	2,863.7	3,087.3	2,367.7	2,218.7	149.07	15.884	
11,700.0	6,829.1	6,943.6	6,943.6	136.9	15.2	-89.47	2,863.7	3,087.3	2,433.1	2,281.2	151.85	16.023	
11,800.0	6,828.1	6,942.6	6,942.6	139.7	15.2	-89.44	2,863.7	3,087.3	2,500.7	2,346.0	154.63	16.172	
11,900.0	6,827.0	6,941.5	6,941.5	142.5	15.2	-89.40	2,863.7	3,087.3	2,570.4	2,413.0	157.42	16.328	
11,999.0	6,826.0	6,940.5	6,940.5	145.2	15.2	-89.37	2,863.7	3,087.3	2,641.4	2,481.2	160.18	16.490	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - KINZER 28G-232 - ORIGINAL WELLBORE - PROPOSAL #2												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	-90.00	0.0	-47.4	47.4				
100.0	100.0	100.0	100.0	0.1	0.1	-90.00	0.0	-47.4	47.4	47.2	0.19	243.662	
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-47.4	47.4	46.7	0.64	73.566	
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-47.4	47.4	46.3	1.09	43.323 CC	
400.0	400.0	399.7	399.7	0.8	0.8	-87.93	1.7	-47.6	47.6	46.1	1.54	30.893 ES	
500.0	500.0	499.2	499.1	1.0	1.0	-81.92	6.9	-48.3	48.8	46.8	2.00	24.454	
600.0	600.0	598.2	597.7	1.2	1.2	-72.75	15.4	-49.5	51.9	49.4	2.46	21.078	
700.0	700.0	696.8	695.5	1.4	1.5	-46.55	27.2	-51.1	56.8	53.9	2.94	19.346	
800.0	799.8	794.9	792.5	1.7	1.8	-38.37	42.3	-53.2	62.8	59.3	3.43	18.316	
900.0	899.5	892.8	888.5	1.9	2.2	-31.40	60.5	-55.7	69.4	65.4	3.92	17.686	
1,000.0	998.7	990.2	983.6	2.2	2.6	-25.42	82.0	-58.6	76.5	72.1	4.42	17.300	
1,100.0	1,097.5	1,087.3	1,077.5	2.5	3.0	-20.23	106.5	-62.0	84.0	79.1	4.92	17.070	
1,200.0	1,195.6	1,184.1	1,170.1	2.8	3.5	-15.65	134.1	-65.8	91.8	86.4	5.42	16.942	
1,228.9	1,223.8	1,212.0	1,196.7	2.9	3.7	-14.43	142.6	-66.9	94.1	88.6	5.56	16.920	
1,300.0	1,293.3	1,280.5	1,261.4	3.2	4.1	-11.51	164.6	-69.9	100.8	94.8	5.94	16.977	
1,400.0	1,390.9	1,376.0	1,350.9	3.6	4.7	-7.62	197.9	-74.5	113.2	106.8	6.46	17.531	
1,500.0	1,488.5	1,472.4	1,440.1	4.0	5.4	-4.17	234.1	-79.5	129.0	122.0	6.99	18.458	
1,600.0	1,586.1	1,570.8	1,531.0	4.4	6.1	-1.39	271.4	-84.6	145.6	138.1	7.53	19.325	
1,700.0	1,683.7	1,669.2	1,621.9	4.8	6.8	0.82	308.8	-89.7	162.5	154.4	8.09	20.079	
1,800.0	1,781.3	1,767.6	1,712.7	5.3	7.5	2.61	346.2	-94.8	179.5	170.9	8.66	20.730	
1,900.0	1,878.9	1,866.0	1,803.6	5.7	8.2	4.09	383.6	-100.0	196.7	187.5	9.24	21.292	
2,000.0	1,976.5	1,964.4	1,894.5	6.1	9.0	5.33	421.0	-105.1	214.1	204.2	9.83	21.777	
2,100.0	2,074.1	2,062.8	1,985.4	6.6	9.7	6.39	458.3	-110.2	231.4	221.0	10.43	22.199	
2,200.0	2,171.7	2,161.2	2,076.2	7.0	10.4	7.30	495.7	-115.3	248.9	237.9	11.03	22.566	
2,300.0	2,269.3	2,259.6	2,167.1	7.5	11.2	8.09	533.1	-120.5	266.4	254.8	11.64	22.887	
2,400.0	2,366.9	2,358.0	2,258.0	7.9	11.9	8.78	570.5	-125.6	284.0	271.7	12.26	23.170	
2,500.0	2,464.5	2,456.4	2,348.8	8.4	12.6	9.39	607.8	-130.7	301.6	288.7	12.88	23.419	
2,600.0	2,562.1	2,554.8	2,439.7	8.9	13.4	9.94	645.2	-135.8	319.2	305.7	13.50	23.641	
2,700.0	2,659.7	2,653.1	2,530.6	9.3	14.1	10.42	682.6	-141.0	336.9	322.7	14.13	23.840	
2,800.0	2,757.3	2,751.5	2,621.5	9.8	14.8	10.86	720.0	-146.1	354.5	339.8	14.76	24.017	
2,900.0	2,854.9	2,849.9	2,712.3	10.2	15.6	11.26	757.3	-151.2	372.2	356.8	15.40	24.177	
3,000.0	2,952.5	2,948.3	2,803.2	10.7	16.3	11.62	794.7	-156.3	389.9	373.9	16.03	24.321	
3,100.0	3,050.1	3,046.7	2,894.1	11.1	17.1	11.95	832.1	-161.5	407.6	391.0	16.67	24.452	
3,200.0	3,147.7	3,145.1	2,984.9	11.6	17.8	12.25	869.5	-166.6	425.4	408.1	17.31	24.572	
3,300.0	3,245.3	3,243.5	3,075.8	12.1	18.5	12.53	906.9	-171.7	443.1	425.1	17.95	24.681	
3,400.0	3,342.9	3,341.9	3,166.7	12.5	19.3	12.79	944.2	-176.8	460.9	442.3	18.60	24.780	
3,500.0	3,440.5	3,440.3	3,257.6	13.0	20.0	13.02	981.6	-182.0	478.6	459.4	19.24	24.872	
3,600.0	3,538.1	3,538.7	3,348.4	13.4	20.8	13.24	1,019.0	-187.1	496.4	476.5	19.89	24.957	
3,700.0	3,635.7	3,637.1	3,439.3	13.9	21.5	13.45	1,056.4	-192.2	514.1	493.6	20.54	25.035	
3,800.0	3,733.3	3,735.5	3,530.2	14.4	22.2	13.64	1,093.7	-197.3	531.9	510.7	21.19	25.107	
3,900.0	3,830.9	3,833.9	3,621.0	14.8	23.0	13.82	1,131.1	-202.5	549.7	527.9	21.84	25.174	
4,000.0	3,928.5	3,932.2	3,711.9	15.3	23.7	13.99	1,168.5	-207.6	567.5	545.0	22.49	25.236	
4,100.0	4,026.1	4,030.6	3,802.8	15.7	24.5	14.15	1,205.9	-212.7	585.3	562.2	23.14	25.295	
4,200.0	4,123.7	4,129.0	3,893.7	16.2	25.2	14.30	1,243.2	-217.8	603.1	579.3	23.79	25.349	
4,300.0	4,221.3	4,227.4	3,984.5	16.7	25.9	14.44	1,280.6	-223.0	620.9	596.4	24.44	25.400	
4,400.0	4,318.9	4,325.8	4,075.4	17.1	26.7	14.57	1,318.0	-228.1	638.7	613.6	25.10	25.448	
4,500.0	4,416.5	4,424.2	4,166.3	17.6	27.4	14.69	1,355.4	-233.2	656.5	630.7	25.75	25.492	
4,600.0	4,514.1	4,522.6	4,257.2	18.1	28.2	14.81	1,392.8	-238.3	674.3	647.9	26.41	25.535	
4,700.0	4,611.7	4,621.0	4,348.0	18.5	28.9	14.92	1,430.1	-243.5	692.1	665.1	27.06	25.574	
4,800.0	4,709.3	4,719.4	4,438.9	19.0	29.7	15.03	1,467.5	-248.6	709.9	682.2	27.72	25.612	
4,900.0	4,806.9	4,817.8	4,529.8	19.4	30.4	15.13	1,504.9	-253.7	727.8	699.4	28.38	25.647	
5,000.0	4,904.5	4,916.2	4,620.6	19.9	31.1	15.23	1,542.3	-258.8	745.6	716.5	29.03	25.681	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-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	5,002.1	5,014.6	4,711.5	20.4	31.9	15.32	1,579.6	-264.0	763.4	733.7	29.69	25.713	
5,200.0	5,099.7	5,112.9	4,802.4	20.8	32.6	15.41	1,617.0	-269.1	781.2	750.9	30.35	25.743	
5,300.0	5,197.3	5,211.3	4,893.3	21.3	33.4	15.49	1,654.4	-274.2	799.0	768.0	31.01	25.771	
5,400.0	5,294.9	5,328.0	5,001.3	21.8	34.2	15.59	1,698.0	-280.2	816.3	784.6	31.71	25.745	
5,500.0	5,392.5	5,466.6	5,131.6	22.2	34.9	15.76	1,744.7	-286.6	829.6	797.2	32.44	25.571	
5,600.0	5,490.1	5,606.7	5,265.5	22.7	35.5	15.98	1,785.5	-292.2	838.1	804.9	33.17	25.268	
5,614.2	5,504.0	5,626.7	5,284.8	22.7	35.6	16.01	1,790.8	-292.9	838.9	805.6	33.27	25.216	
5,700.0	5,587.9	5,747.5	5,401.9	23.1	36.1	16.24	1,819.8	-296.9	842.9	809.2	33.77	24.964	
5,800.0	5,686.4	5,888.6	5,540.3	23.4	36.6	16.47	1,847.6	-300.7	846.2	812.0	34.24	24.715	
5,900.0	5,785.5	6,030.0	5,680.0	23.7	37.0	16.66	1,868.6	-303.6	848.0	813.4	34.62	24.494	
6,000.0	5,885.0	6,171.5	5,820.8	23.9	37.3	16.81	1,882.8	-305.5	848.2	813.3	34.91	24.294	
6,100.0	5,984.7	6,312.9	5,962.0	24.1	37.5	16.92	1,890.1	-306.5	846.9	811.8	35.12	24.116	
6,200.0	6,084.7	6,435.5	6,084.6	24.2	37.6	16.99	1,891.1	-306.5	844.5	809.3	35.22	23.979	
6,241.0	6,125.7	6,476.1	6,125.1	24.3	37.6	17.13	1,891.1	-304.5	844.2	809.0	35.26	23.946	
6,243.1	6,127.8	6,478.2	6,127.2	24.3	37.6	0.53	1,891.1	-304.4	844.2	783.4	60.86	13.873	
6,273.1	6,157.8	6,507.6	6,156.5	24.3	37.6	0.73	1,891.1	-301.4	844.3	783.4	60.88	13.868	
6,300.0	6,184.7	6,533.9	6,182.5	24.3	37.6	-89.05	1,891.1	-297.8	844.3	808.8	35.51	23.777	
6,350.0	6,234.5	6,582.3	6,230.0	24.4	37.6	-88.65	1,891.1	-288.5	844.4	808.7	35.72	23.643	
6,400.0	6,284.0	6,630.5	6,276.5	24.4	37.7	-88.25	1,891.1	-276.2	844.6	808.7	35.90	23.529	
6,450.0	6,332.9	6,678.2	6,321.8	24.4	37.7	-87.87	1,891.1	-260.9	844.8	808.7	36.05	23.434	
6,500.0	6,380.9	6,725.6	6,365.6	24.4	37.7	-87.50	1,891.1	-242.7	845.0	808.8	36.18	23.355	
6,550.0	6,427.8	6,772.7	6,407.8	24.4	37.7	-87.14	1,891.1	-221.9	845.3	809.0	36.30	23.289	
6,600.0	6,473.5	6,819.5	6,448.3	24.4	37.7	-86.79	1,891.1	-198.5	845.5	809.1	36.40	23.229	
6,650.0	6,517.5	6,866.0	6,487.0	24.4	37.7	-86.46	1,891.1	-172.6	845.8	809.3	36.51	23.169	
6,700.0	6,559.9	6,912.3	6,523.7	24.4	37.7	-86.14	1,891.1	-144.5	846.1	809.5	36.63	23.101	
6,750.0	6,600.2	6,958.3	6,558.3	24.4	37.7	-85.85	1,891.1	-114.2	846.4	809.7	36.78	23.014	
6,800.0	6,638.4	7,004.0	6,590.7	24.3	37.7	-85.57	1,891.1	-82.0	846.7	809.8	36.98	22.897	
6,850.0	6,674.3	7,050.0	6,621.2	24.3	37.7	-85.31	1,891.1	-47.6	847.0	809.8	37.25	22.738	
6,900.0	6,707.6	7,095.0	6,648.8	24.3	37.7	-85.08	1,891.1	-12.1	847.3	809.7	37.61	22.528	
6,950.0	6,738.3	7,140.2	6,674.2	24.3	37.7	-84.87	1,891.1	25.3	847.6	809.5	38.08	22.259	
7,000.0	6,766.2	7,185.2	6,697.2	24.3	37.7	-84.68	1,891.1	64.1	847.9	809.2	38.69	21.912	
7,050.0	6,791.0	7,230.2	6,717.6	24.3	37.7	-84.51	1,891.1	104.1	848.1	808.7	39.42	21.514	
7,100.0	6,812.8	7,275.0	6,735.4	24.3	37.8	-84.37	1,891.1	145.2	848.3	808.0	40.30	21.048	
7,150.0	6,831.4	7,319.7	6,750.6	24.3	37.8	-84.25	1,891.1	187.2	848.5	807.1	41.34	20.526	
7,200.0	6,846.8	7,364.3	6,763.1	24.4	37.9	-84.16	1,891.1	230.0	848.6	806.1	42.52	19.958	
7,250.0	6,858.7	7,408.9	6,773.0	24.5	37.9	-84.09	1,891.1	273.5	848.7	804.9	43.85	19.357	
7,300.0	6,867.3	7,453.4	6,780.1	24.7	38.0	-84.05	1,891.1	317.5	848.8	803.5	45.30	18.735	
7,350.0	6,872.4	7,500.0	6,784.5	25.0	38.1	-84.04	1,891.1	363.8	848.8	801.9	46.91	18.093	
7,371.1	6,873.5	7,516.7	6,785.4	25.1	38.2	-84.04	1,891.1	380.5	848.8	801.2	47.58	17.838	
7,400.0	6,874.0	7,542.5	6,786.0	25.4	38.2	-84.05	1,891.1	406.3	848.8	800.2	48.56	17.480	
7,405.6	6,874.0	7,548.9	6,786.0	25.5	38.3	-84.05	1,891.1	412.7	848.8	800.0	48.77	17.403	
7,500.0	6,873.0	7,641.7	6,785.6	26.7	38.6	-84.09	1,891.1	505.5	848.7	796.5	52.23	16.250	
7,600.0	6,871.9	7,741.7	6,785.1	28.4	39.1	-84.13	1,891.1	605.5	848.6	792.4	56.20	15.099	
7,700.0	6,870.9	7,841.7	6,784.7	30.4	39.9	-84.17	1,891.1	705.5	848.6	788.1	60.44	14.040	
7,800.0	6,869.8	7,941.7	6,784.3	32.5	40.8	-84.21	1,891.1	805.5	848.5	783.6	64.88	13.079	
7,900.0	6,868.8	8,041.7	6,783.8	34.8	42.1	-84.25	1,891.1	905.5	848.5	779.0	69.49	12.211	
8,000.0	6,867.7	8,141.7	6,783.4	37.1	43.5	-84.30	1,891.1	1,005.5	848.4	774.2	74.23	11.430	
8,100.0	6,866.7	8,241.7	6,783.0	39.5	45.2	-84.34	1,891.1	1,105.5	848.3	769.3	79.08	10.727	
8,200.0	6,865.6	8,341.7	6,782.5	42.0	47.1	-84.38	1,891.1	1,205.5	848.3	764.2	84.03	10.095	
8,300.0	6,864.6	8,441.7	6,782.1	44.5	49.2	-84.42	1,891.1	1,305.5	848.2	759.2	89.05	9.525	
8,400.0	6,863.6	8,541.7	6,781.7	47.0	51.3	-84.46	1,891.1	1,405.5	848.2	754.0	94.14	9.009	
8,500.0	6,862.5	8,641.7	6,781.2	49.6	53.6	-84.50	1,891.1	1,505.5	848.1	748.8	99.29	8.542	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - KINZER 28G-232 - ORIGINAL WELLBORE - PROPOSAL #2												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
8,600.0	6,861.5	8,741.7	6,780.8	52.2	55.9	-84.54	1,891.1	1,605.5	848.0	743.6	104.48	8.117	
8,700.0	6,860.4	8,841.7	6,780.3	54.8	58.3	-84.58	1,891.1	1,705.5	848.0	738.3	109.71	7.729	
8,800.0	6,859.4	8,941.7	6,779.9	57.5	60.8	-84.62	1,891.1	1,805.5	847.9	733.0	114.98	7.375	
8,900.0	6,858.3	9,041.7	6,779.5	60.1	63.2	-84.66	1,891.1	1,905.5	847.9	727.6	120.27	7.050	
9,000.0	6,857.3	9,141.7	6,779.0	62.8	65.8	-84.71	1,891.1	2,005.5	847.8	722.2	125.60	6.750	
9,100.0	6,856.2	9,241.7	6,778.6	65.5	68.3	-84.75	1,891.1	2,105.5	847.8	716.8	130.94	6.474	
9,200.0	6,855.2	9,341.7	6,778.2	68.1	70.9	-84.79	1,891.1	2,205.4	847.7	711.4	136.31	6.219	
9,300.0	6,854.1	9,441.7	6,777.7	70.8	73.5	-84.83	1,891.1	2,305.4	847.6	705.9	141.70	5.982	
9,400.0	6,853.1	9,541.7	6,777.3	73.6	76.1	-84.87	1,891.1	2,405.4	847.6	700.5	147.10	5.762	
9,500.0	6,852.1	9,641.7	6,776.9	76.3	78.7	-84.91	1,891.1	2,505.4	847.5	695.0	152.52	5.557	
9,600.0	6,851.0	9,741.7	6,776.4	79.0	81.3	-84.95	1,891.1	2,605.4	847.5	689.5	157.95	5.366	
9,700.0	6,850.0	9,841.7	6,776.0	81.7	84.0	-84.99	1,891.1	2,705.4	847.4	684.0	163.39	5.186	
9,800.0	6,848.9	9,941.7	6,775.5	84.4	86.6	-85.03	1,891.1	2,805.4	847.4	678.5	168.85	5.019	
9,900.0	6,847.9	10,041.7	6,775.1	87.2	89.3	-85.07	1,891.1	2,905.4	847.3	673.0	174.31	4.861	
10,000.0	6,846.8	10,141.7	6,774.7	89.9	92.0	-85.11	1,891.1	3,005.4	847.3	667.5	179.79	4.713	
10,100.0	6,845.8	10,241.7	6,774.2	92.7	94.7	-85.16	1,891.1	3,105.4	847.2	662.0	185.27	4.573	
10,200.0	6,844.7	10,341.7	6,773.8	95.4	97.4	-85.20	1,891.1	3,205.4	847.2	656.4	190.76	4.441	
10,300.0	6,843.7	10,441.7	6,773.4	98.2	100.1	-85.24	1,891.1	3,305.4	847.1	650.9	196.26	4.316	
10,400.0	6,842.7	10,541.6	6,772.9	100.9	102.8	-85.28	1,891.1	3,405.4	847.1	645.3	201.76	4.198	
10,500.0	6,841.6	10,641.6	6,772.5	103.7	105.5	-85.32	1,891.1	3,505.4	847.0	639.8	207.27	4.087	
10,600.0	6,840.6	10,741.6	6,772.1	106.4	108.2	-85.36	1,891.1	3,605.4	847.0	634.2	212.78	3.980	
10,700.0	6,839.5	10,841.6	6,771.6	109.2	111.0	-85.40	1,891.1	3,705.4	846.9	628.6	218.30	3.880	
10,800.0	6,838.5	10,941.6	6,771.2	112.0	113.7	-85.44	1,891.1	3,805.4	846.9	623.0	223.83	3.784	
10,900.0	6,837.4	11,041.6	6,770.8	114.7	116.4	-85.48	1,891.1	3,905.4	846.8	617.5	229.36	3.692	
11,000.0	6,836.4	11,141.6	6,770.3	117.5	119.2	-85.52	1,891.1	4,005.4	846.8	611.9	234.89	3.605	
11,100.0	6,835.4	11,241.6	6,769.9	120.3	121.9	-85.56	1,891.1	4,105.4	846.7	606.3	240.43	3.522	
11,200.0	6,834.3	11,341.6	6,769.4	123.0	124.6	-85.61	1,891.1	4,205.4	846.7	600.7	245.97	3.442	
11,300.0	6,833.3	11,441.6	6,769.0	125.8	127.4	-85.65	1,891.1	4,305.4	846.6	595.1	251.52	3.366	
11,400.0	6,832.2	11,541.6	6,768.6	128.6	130.1	-85.69	1,891.1	4,405.4	846.6	589.5	257.07	3.293	
11,500.0	6,831.2	11,641.6	6,768.1	131.4	132.9	-85.73	1,891.1	4,505.4	846.5	583.9	262.62	3.223	
11,600.0	6,830.2	11,741.6	6,767.7	134.1	135.6	-85.77	1,891.1	4,605.4	846.5	578.3	268.17	3.157	
11,700.0	6,829.1	11,841.6	6,767.3	136.9	138.4	-85.81	1,891.1	4,705.4	846.5	572.7	273.73	3.092	
11,800.0	6,828.1	11,941.6	6,766.8	139.7	141.1	-85.85	1,891.1	4,805.4	846.4	567.1	279.29	3.031	
11,900.0	6,827.0	12,041.6	6,766.4	142.5	143.9	-85.89	1,891.1	4,905.4	846.4	561.5	284.85	2.971	
11,999.0	6,826.0	12,140.7	6,766.0	145.2	146.6	-85.93	1,891.1	5,004.5	846.3	556.0	290.36	2.915 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-30.7	30.7					
100.0	100.0	100.0	100.0	0.1	0.1	-90.00	0.0	-30.7	30.7	30.5	0.19	157.664		
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-30.7	30.7	30.0	0.64	47.602		
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-30.7	30.7	29.6	1.09	28.033		
400.0	400.0	400.0	400.0	0.8	0.8	-90.00	0.0	-30.7	30.7	29.1	1.54	19.866 CC		
500.0	500.0	499.8	499.8	1.0	1.0	-86.84	1.7	-31.0	31.0	29.0	1.99	15.567 ES		
600.0	600.0	599.3	599.1	1.2	1.2	-77.91	6.8	-31.9	32.6	30.1	2.44	13.333		
700.0	700.0	698.5	698.0	1.4	1.5	-50.79	15.3	-33.3	35.6	32.7	2.90	12.277		
800.0	799.8	797.5	796.2	1.7	1.7	-41.79	27.1	-35.4	39.3	36.0	3.37	11.675		
900.0	899.5	896.2	893.7	1.9	2.0	-34.12	42.2	-38.1	43.6	39.7	3.85	11.328		
1,000.0	998.7	994.7	990.5	2.2	2.4	-27.54	60.6	-41.3	48.2	43.9	4.33	11.133		
1,100.0	1,097.5	1,093.0	1,086.2	2.5	2.8	-21.83	82.1	-45.1	53.2	48.4	4.82	11.036		
1,200.0	1,195.6	1,191.0	1,181.0	2.8	3.2	-16.81	106.9	-49.5	58.4	53.1	5.31	11.002		
1,228.9	1,223.8	1,219.3	1,208.1	2.9	3.4	-15.46	114.6	-50.8	59.9	54.5	5.45	10.998		
1,300.0	1,293.3	1,288.7	1,274.5	3.2	3.7	-12.18	134.7	-54.4	64.6	58.8	5.81	11.126		
1,400.0	1,390.9	1,387.3	1,368.1	3.6	4.3	-7.83	165.3	-59.7	73.8	67.5	6.32	11.667		
1,500.0	1,488.5	1,486.7	1,462.4	4.0	4.9	-4.39	196.4	-65.2	83.5	76.7	6.84	12.206		
1,600.0	1,586.1	1,586.2	1,556.6	4.4	5.5	-1.68	227.5	-70.7	93.5	86.1	7.38	12.674		
1,700.0	1,683.7	1,685.6	1,650.9	4.8	6.1	0.51	258.6	-76.2	103.6	95.7	7.92	13.084		
1,800.0	1,781.3	1,785.0	1,745.2	5.3	6.7	2.31	289.8	-81.6	113.9	105.4	8.47	13.439		
1,900.0	1,878.9	1,884.4	1,839.4	5.7	7.3	3.81	320.9	-87.1	124.2	115.2	9.04	13.747		
2,000.0	1,976.5	1,983.8	1,933.7	6.1	7.9	5.08	352.0	-92.6	134.6	125.0	9.61	14.013		
2,100.0	2,074.1	2,083.2	2,027.9	6.6	8.5	6.17	383.1	-98.1	145.1	134.9	10.19	14.245		
2,200.0	2,171.7	2,182.7	2,122.2	7.0	9.1	7.11	414.2	-103.5	155.6	144.8	10.77	14.447		
2,300.0	2,269.3	2,282.1	2,216.5	7.5	9.8	7.93	445.3	-109.0	166.2	154.8	11.36	14.624		
2,400.0	2,366.9	2,381.5	2,310.7	7.9	10.4	8.65	476.4	-114.5	176.8	164.8	11.96	14.779		
2,500.0	2,464.5	2,480.9	2,405.0	8.4	11.0	9.29	507.5	-120.0	187.4	174.8	12.56	14.917		
2,600.0	2,562.1	2,580.3	2,499.3	8.9	11.6	9.87	538.7	-125.4	198.0	184.8	13.17	15.040		
2,700.0	2,659.7	2,679.7	2,593.5	9.3	12.3	10.38	569.8	-130.9	208.6	194.9	13.77	15.149		
2,800.0	2,757.3	2,779.1	2,687.8	9.8	12.9	10.84	600.9	-136.4	219.3	204.9	14.38	15.247		
2,900.0	2,854.9	2,878.6	2,782.0	10.2	13.5	11.26	632.0	-141.9	230.0	215.0	15.00	15.335		
3,000.0	2,952.5	2,978.0	2,876.3	10.7	14.1	11.65	663.1	-147.3	240.7	225.1	15.61	15.414		
3,100.0	3,050.1	3,077.4	2,970.6	11.1	14.8	12.00	694.2	-152.8	251.4	235.1	16.23	15.486		
3,200.0	3,147.7	3,176.8	3,064.8	11.6	15.4	12.32	725.3	-158.3	262.1	245.2	16.85	15.552		
3,300.0	3,245.3	3,276.2	3,159.1	12.1	16.0	12.62	756.5	-163.8	272.8	255.3	17.47	15.612		
3,400.0	3,342.9	3,375.6	3,253.4	12.5	16.7	12.89	787.6	-169.2	283.5	265.4	18.10	15.666		
3,500.0	3,440.5	3,475.0	3,347.6	13.0	17.3	13.15	818.7	-174.7	294.2	275.5	18.72	15.717		
3,600.0	3,538.1	3,574.5	3,441.9	13.4	17.9	13.38	849.8	-180.2	305.0	285.6	19.35	15.763		
3,700.0	3,635.7	3,673.9	3,536.1	13.9	18.5	13.60	880.9	-185.7	315.7	295.7	19.97	15.806		
3,800.0	3,733.3	3,773.3	3,630.4	14.4	19.2	13.81	912.0	-191.1	326.4	305.8	20.60	15.845		
3,900.0	3,830.9	3,872.7	3,724.7	14.8	19.8	14.00	943.1	-196.6	337.2	315.9	21.23	15.882		
4,000.0	3,928.5	3,972.1	3,818.9	15.3	20.4	14.18	974.2	-202.1	347.9	326.1	21.86	15.916		
4,100.0	4,026.1	4,071.5	3,913.2	15.7	21.1	14.35	1,005.4	-207.6	358.7	336.2	22.49	15.948		
4,200.0	4,123.7	4,171.0	4,007.5	16.2	21.7	14.51	1,036.5	-213.0	369.4	346.3	23.12	15.977		
4,300.0	4,221.3	4,270.4	4,101.7	16.7	22.3	14.67	1,067.6	-218.5	380.2	356.4	23.75	16.005		
4,400.0	4,318.9	4,369.8	4,196.0	17.1	23.0	14.81	1,098.7	-224.0	390.9	366.6	24.39	16.031		
4,500.0	4,416.5	4,469.2	4,290.2	17.6	23.6	14.94	1,129.8	-229.5	401.7	376.7	25.02	16.056		
4,600.0	4,514.1	4,568.6	4,384.5	18.1	24.2	15.07	1,160.9	-234.9	412.5	386.8	25.65	16.079		
4,700.0	4,611.7	4,668.0	4,478.8	18.5	24.9	15.19	1,192.0	-240.4	423.2	396.9	26.29	16.100		
4,800.0	4,709.3	4,767.4	4,573.0	19.0	25.5	15.31	1,223.1	-245.9	434.0	407.1	26.92	16.120		
4,900.0	4,806.9	4,866.9	4,667.3	19.4	26.1	15.42	1,254.3	-251.4	444.8	417.2	27.56	16.140		
5,000.0	4,904.5	4,966.3	4,761.6	19.9	26.8	15.52	1,285.4	-256.8	455.5	427.3	28.19	16.158		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWMD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	5,065.7	4,855.8	20.4	27.4	15.62	1,316.5	-262.3	466.3	437.5	28.83	16.175	
5,200.0	5,099.7	5,165.1	4,950.1	20.8	28.0	15.72	1,347.6	-267.8	477.1	447.6	29.46	16.191	
5,300.0	5,197.3	5,264.5	5,044.3	21.3	28.7	15.81	1,378.7	-273.3	487.9	457.8	30.10	16.207	
5,400.0	5,294.9	5,363.9	5,138.6	21.8	29.3	15.90	1,409.8	-278.7	498.6	467.9	30.74	16.222	
5,500.0	5,392.5	5,465.2	5,234.7	22.2	29.9	15.98	1,441.5	-284.3	509.4	478.0	31.38	16.233	
5,600.0	5,490.1	5,586.3	5,350.3	22.7	30.5	16.14	1,476.6	-290.5	517.7	485.7	32.04	16.159	
5,614.2	5,504.0	5,603.6	5,367.0	22.7	30.6	16.17	1,481.2	-291.3	518.6	486.4	32.13	16.138	
5,700.0	5,587.9	5,707.9	5,468.0	23.1	31.0	16.36	1,506.9	-295.8	523.1	490.5	32.62	16.037	
5,800.0	5,686.4	5,829.8	5,587.1	23.4	31.4	16.55	1,532.4	-300.3	527.7	494.6	33.09	15.947	
5,900.0	5,785.5	5,952.0	5,707.5	23.7	31.8	16.69	1,552.8	-303.9	531.4	497.9	33.48	15.871	
6,000.0	5,885.0	6,074.3	5,828.8	23.9	32.1	16.80	1,568.3	-306.6	534.2	500.4	33.80	15.806	
6,100.0	5,984.7	6,196.8	5,950.9	24.1	32.4	16.87	1,578.6	-308.4	536.2	502.1	34.04	15.753	
6,200.0	6,084.7	6,319.4	6,073.3	24.2	32.5	16.90	1,583.8	-309.3	537.3	503.1	34.19	15.713	
6,243.1	6,127.8	6,372.3	6,126.2	24.3	32.6	0.29	1,584.4	-309.4	537.5	481.7	55.76	9.640	
6,273.1	6,157.8	6,403.9	6,157.8	24.3	32.6	0.29	1,584.4	-309.5	537.5	481.7	55.82	9.630	
6,300.0	6,184.7	6,430.7	6,184.6	24.3	32.6	-89.73	1,584.4	-309.2	537.5	503.1	34.41	15.621	
6,350.0	6,234.5	6,480.5	6,234.3	24.4	32.7	-89.78	1,584.4	-306.1	537.5	503.0	34.52	15.572	
6,400.0	6,284.0	6,530.4	6,283.8	24.4	32.7	-89.84	1,584.4	-299.5	537.5	502.9	34.59	15.537	
6,450.0	6,332.9	6,580.3	6,332.7	24.4	32.7	-89.89	1,584.4	-289.5	537.5	502.9	34.65	15.514	
6,500.0	6,380.9	6,630.3	6,380.8	24.4	32.7	-89.95	1,584.4	-276.1	537.5	502.8	34.68	15.500	
6,547.0	6,425.1	6,677.3	6,425.1	24.4	32.7	-90.00	1,584.4	-260.5	537.5	502.8	34.70	15.492	
6,550.0	6,427.8	6,680.2	6,427.9	24.4	32.7	-90.01	1,584.4	-259.4	537.5	502.8	34.70	15.491	
6,600.0	6,473.5	6,730.3	6,473.7	24.4	32.7	-90.06	1,584.4	-239.4	537.5	502.8	34.72	15.483	
6,650.0	6,517.5	6,780.3	6,518.1	24.4	32.7	-90.12	1,584.4	-216.3	537.5	502.8	34.75	15.470	
6,700.0	6,559.9	6,830.4	6,560.7	24.4	32.7	-90.17	1,584.4	-190.0	537.5	502.7	34.80	15.445	
6,750.0	6,600.2	6,880.5	6,601.5	24.4	32.7	-90.23	1,584.4	-160.9	537.5	502.6	34.90	15.401	
6,800.0	6,638.4	6,930.7	6,640.2	24.3	32.7	-90.28	1,584.4	-128.9	537.5	502.4	35.06	15.330	
6,850.0	6,674.3	6,980.9	6,676.5	24.3	32.7	-90.33	1,584.4	-94.3	537.5	502.2	35.31	15.224	
6,900.0	6,707.6	7,031.1	6,710.4	24.3	32.7	-90.38	1,584.4	-57.2	537.5	501.9	35.65	15.077	
6,950.0	6,738.3	7,081.4	6,741.6	24.3	32.7	-90.43	1,584.4	-17.8	537.5	501.4	36.12	14.882	
7,000.0	6,766.2	7,131.7	6,769.9	24.3	32.7	-90.48	1,584.4	23.7	537.5	500.8	36.72	14.637	
7,050.0	6,791.0	7,182.0	6,795.3	24.3	32.7	-90.52	1,584.4	67.1	537.5	500.0	37.48	14.343	
7,100.0	6,812.8	7,232.4	6,817.6	24.3	32.7	-90.56	1,584.4	112.2	537.5	499.1	38.39	14.002	
7,150.0	6,831.4	7,282.8	6,836.7	24.3	32.8	-90.60	1,584.4	158.9	537.5	498.1	39.46	13.622	
7,200.0	6,846.8	7,333.2	6,852.5	24.4	32.8	-90.64	1,584.4	206.7	537.5	496.8	40.69	13.211	
7,250.0	6,858.7	7,383.6	6,864.9	24.5	32.9	-90.67	1,584.4	255.6	537.5	495.5	42.06	12.779	
7,300.0	6,867.3	7,434.1	6,873.8	24.7	33.0	-90.70	1,584.4	305.3	537.5	494.0	43.57	12.337	
7,350.0	6,872.4	7,484.5	6,879.2	25.0	33.1	-90.72	1,584.4	355.4	537.5	492.3	45.19	11.894	
7,400.0	6,874.0	7,535.0	6,881.0	25.4	33.3	-90.75	1,584.4	405.9	537.5	490.6	46.91	11.459	
7,405.6	6,874.0	7,540.7	6,881.0	25.5	33.3	-90.75	1,584.4	411.5	537.5	490.4	47.11	11.411	
7,500.0	6,873.0	7,635.1	6,880.2	26.7	33.8	-90.77	1,584.4	505.9	537.5	486.9	50.65	10.614	
7,600.0	6,871.9	7,735.1	6,879.3	28.4	34.6	-90.78	1,584.4	605.9	537.5	482.9	54.69	9.828	
7,700.0	6,870.9	7,835.1	6,878.4	30.4	35.6	-90.80	1,584.4	705.9	537.6	478.6	59.00	9.111	
7,800.0	6,869.8	7,935.1	6,877.5	32.5	37.0	-90.82	1,584.4	805.9	537.6	474.1	63.50	8.465	
7,900.0	6,868.8	8,035.1	6,876.7	34.8	38.7	-90.84	1,584.4	905.9	537.6	469.4	68.17	7.885	
8,000.0	6,867.7	8,135.1	6,875.8	37.1	40.5	-90.86	1,584.4	1,005.9	537.6	464.6	72.98	7.366	
8,100.0	6,866.7	8,235.1	6,874.9	39.5	42.6	-90.88	1,584.4	1,105.9	537.6	459.7	77.89	6.901	
8,200.0	6,865.6	8,335.1	6,874.1	42.0	44.8	-90.90	1,584.4	1,205.9	537.6	454.7	82.89	6.485	
8,300.0	6,864.6	8,435.1	6,873.2	44.5	47.1	-90.91	1,584.4	1,305.9	537.6	449.6	87.97	6.111	
8,400.0	6,863.6	8,535.1	6,872.3	47.0	49.4	-90.93	1,584.4	1,405.9	537.6	444.5	93.11	5.774	
8,500.0	6,862.5	8,635.1	6,871.4	49.6	51.8	-90.95	1,584.4	1,505.9	537.6	439.3	98.30	5.469	
8,600.0	6,861.5	8,735.1	6,870.6	52.2	54.3	-90.97	1,584.4	1,605.9	537.6	434.0	103.53	5.192	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - KINZER 28G-332 - ORIGINAL WELLBORE - PROPOSAL #2												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	
8,700.0	6,860.4	8,835.1	6,869.7	54.8	56.8	-90.99	1,584.4	1,705.9	537.6	428.8	108.80	4.941	
8,800.0	6,859.4	8,935.1	6,868.8	57.5	59.4	-91.01	1,584.4	1,805.9	537.6	423.5	114.11	4.711	
8,900.0	6,858.3	9,035.1	6,868.0	60.1	61.9	-91.03	1,584.4	1,905.9	537.6	418.1	119.44	4.501	
9,000.0	6,857.3	9,135.1	6,867.1	62.8	64.5	-91.04	1,584.4	2,005.9	537.6	412.8	124.80	4.308	
9,100.0	6,856.2	9,235.1	6,866.2	65.5	67.1	-91.06	1,584.4	2,105.9	537.6	407.4	130.18	4.130	
9,200.0	6,855.2	9,335.1	6,865.3	68.1	69.7	-91.08	1,584.4	2,205.9	537.6	402.0	135.58	3.965	
9,300.0	6,854.1	9,435.1	6,864.5	70.8	72.4	-91.10	1,584.4	2,305.9	537.6	396.6	140.99	3.813	
9,400.0	6,853.1	9,535.1	6,863.6	73.6	75.0	-91.12	1,584.4	2,405.9	537.6	391.2	146.42	3.672	
9,500.0	6,852.1	9,635.1	6,862.7	76.3	77.7	-91.14	1,584.4	2,505.9	537.6	385.7	151.86	3.540	
9,600.0	6,851.0	9,735.1	6,861.9	79.0	80.4	-91.16	1,584.4	2,605.9	537.6	380.3	157.32	3.417	
9,700.0	6,850.0	9,835.1	6,861.0	81.7	83.1	-91.17	1,584.4	2,705.9	537.6	374.8	162.78	3.303	
9,800.0	6,848.9	9,935.1	6,860.1	84.4	85.7	-91.19	1,584.4	2,805.8	537.6	369.4	168.26	3.195	
9,900.0	6,847.9	10,035.1	6,859.2	87.2	88.4	-91.21	1,584.4	2,905.8	537.6	363.9	173.74	3.094	
10,000.0	6,846.8	10,135.1	6,858.4	89.9	91.2	-91.23	1,584.4	3,005.8	537.6	358.4	179.24	3.000	
10,100.0	6,845.8	10,235.1	6,857.5	92.7	93.9	-91.25	1,584.4	3,105.8	537.6	352.9	184.74	2.910	
10,200.0	6,844.7	10,335.1	6,856.6	95.4	96.6	-91.27	1,584.4	3,205.8	537.6	347.4	190.24	2.826	
10,300.0	6,843.7	10,435.1	6,855.8	98.2	99.3	-91.29	1,584.4	3,305.8	537.6	341.9	195.75	2.746	
10,400.0	6,842.7	10,535.1	6,854.9	100.9	102.0	-91.30	1,584.4	3,405.8	537.6	336.4	201.27	2.671	
10,500.0	6,841.6	10,635.1	6,854.0	103.7	104.8	-91.32	1,584.4	3,505.8	537.6	330.8	206.79	2.600	
10,600.0	6,840.6	10,735.1	6,853.2	106.4	107.5	-91.34	1,584.4	3,605.8	537.6	325.3	212.32	2.532	
10,700.0	6,839.5	10,835.1	6,852.3	109.2	110.2	-91.36	1,584.4	3,705.8	537.6	319.8	217.85	2.468	
10,800.0	6,838.5	10,935.1	6,851.4	112.0	113.0	-91.38	1,584.4	3,805.8	537.7	314.3	223.39	2.407	
10,900.0	6,837.4	11,035.1	6,850.5	114.7	115.7	-91.40	1,584.4	3,905.8	537.7	308.7	228.93	2.349	
11,000.0	6,836.4	11,135.1	6,849.7	117.5	118.5	-91.41	1,584.4	4,005.8	537.7	303.2	234.47	2.293	
11,100.0	6,835.4	11,235.1	6,848.8	120.3	121.2	-91.43	1,584.4	4,105.8	537.7	297.6	240.01	2.240	
11,200.0	6,834.3	11,335.1	6,847.9	123.0	124.0	-91.45	1,584.4	4,205.8	537.7	292.1	245.56	2.190	
11,300.0	6,833.3	11,435.1	6,847.1	125.8	126.8	-91.47	1,584.4	4,305.8	537.7	286.6	251.11	2.141	
11,400.0	6,832.2	11,535.1	6,846.2	128.6	129.5	-91.49	1,584.4	4,405.8	537.7	281.0	256.67	2.095	
11,500.0	6,831.2	11,635.1	6,845.3	131.4	132.3	-91.51	1,584.4	4,505.8	537.7	275.5	262.22	2.050	
11,600.0	6,830.2	11,735.1	6,844.5	134.1	135.0	-91.52	1,584.4	4,605.8	537.7	269.9	267.78	2.008	
11,700.0	6,829.1	11,835.1	6,843.6	136.9	137.8	-91.54	1,584.4	4,705.8	537.7	264.3	273.34	1.967	
11,800.0	6,828.1	11,935.1	6,842.7	139.7	140.6	-91.56	1,584.4	4,805.8	537.7	258.8	278.90	1.928	
11,900.0	6,827.0	12,035.1	6,841.9	142.5	143.3	-91.58	1,584.4	4,905.8	537.7	253.2	284.47	1.890	
11,955.0	6,826.5	12,090.1	6,841.4	144.0	144.9	-91.59	1,584.4	4,960.8	537.7	250.2	287.53	1.870	
11,999.0	6,826.0	12,133.9	6,841.0	145.2	146.1	-91.60	1,584.4	5,004.5	537.7	247.7	289.97	1.854 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	13.9	13.9				
100.0	100.0	100.0	100.0	0.1	0.1	90.00	0.0	13.9	13.9	13.7	0.19	71.665	
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	13.9	13.9	13.3	0.64	21.637	
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	13.9	13.9	12.8	1.09	12.742	
400.0	400.0	400.0	400.0	0.8	0.8	90.00	0.0	13.9	13.9	12.4	1.54	9.030	
500.0	500.0	500.0	500.0	1.0	1.0	90.00	0.0	13.9	13.9	11.9	1.99	6.993	
600.0	600.0	600.0	600.0	1.2	1.2	90.00	0.0	13.9	13.9	11.5	2.44	5.706 CC, ES	
700.0	700.0	700.0	700.0	1.4	1.4	113.20	0.0	13.9	14.5	11.6	2.89	5.026	
800.0	799.8	800.2	800.2	1.7	1.7	125.06	1.6	13.2	16.1	12.7	3.34	4.811	
900.0	899.5	900.6	900.4	1.9	1.9	135.51	6.4	11.1	17.9	14.1	3.79	4.716	
1,000.0	998.7	1,001.1	1,000.5	2.2	2.1	144.82	14.5	7.6	19.9	15.7	4.24	4.695	
1,100.0	1,097.5	1,101.7	1,100.4	2.5	2.4	153.20	25.8	2.7	22.2	17.5	4.69	4.728	
1,200.0	1,195.6	1,202.4	1,199.8	2.8	2.7	160.83	40.3	-3.6	24.7	19.6	5.14	4.804	
1,228.9	1,223.8	1,231.5	1,228.5	2.9	2.8	162.90	45.1	-5.6	25.5	20.2	5.27	4.831	
1,300.0	1,293.3	1,303.2	1,298.8	3.2	3.0	167.40	58.0	-11.2	26.6	21.0	5.61	4.745	
1,400.0	1,390.9	1,403.2	1,396.5	3.6	3.4	173.01	77.1	-19.5	27.4	21.3	6.10	4.484	
1,500.0	1,488.5	1,503.1	1,494.3	4.0	3.8	178.28	96.2	-27.8	28.3	21.7	6.60	4.288	
1,600.0	1,586.1	1,603.1	1,592.1	4.4	4.1	-176.84	115.2	-36.1	29.5	22.4	7.14	4.133	
1,700.0	1,683.7	1,703.1	1,689.9	4.8	4.6	-172.36	134.3	-44.3	30.9	23.2	7.71	4.007	
1,800.0	1,781.3	1,803.0	1,787.7	5.3	5.0	-168.30	153.4	-52.6	32.5	24.1	8.32	3.899	
1,900.0	1,878.9	1,903.0	1,885.4	5.7	5.4	-164.62	172.4	-60.9	34.2	25.2	8.97	3.806	
2,000.0	1,976.5	2,002.9	1,983.2	6.1	5.8	-161.30	191.5	-69.1	36.0	26.3	9.66	3.725	
2,100.0	2,074.1	2,102.9	2,081.0	6.6	6.2	-158.31	210.5	-77.4	37.9	27.6	10.39	3.653	
2,200.0	2,171.7	2,202.9	2,178.8	7.0	6.7	-155.63	229.6	-85.7	40.0	28.8	11.13	3.590	
2,300.0	2,269.3	2,302.8	2,276.6	7.5	7.1	-153.20	248.7	-94.0	42.1	30.2	11.91	3.535	
2,400.0	2,366.9	2,402.8	2,374.3	7.9	7.5	-151.01	267.7	-102.2	44.3	31.6	12.70	3.486	
2,500.0	2,464.5	2,502.8	2,472.1	8.4	8.0	-149.03	286.8	-110.5	46.5	33.0	13.51	3.444	
2,600.0	2,562.1	2,602.7	2,569.9	8.9	8.4	-147.24	305.8	-118.8	48.8	34.5	14.33	3.407	
2,700.0	2,659.7	2,702.7	2,667.7	9.3	8.8	-145.60	324.9	-127.0	51.1	36.0	15.16	3.374	
2,800.0	2,757.3	2,802.6	2,765.4	9.8	9.3	-144.11	344.0	-135.3	53.5	37.5	16.00	3.346	
2,900.0	2,854.9	2,902.6	2,863.2	10.2	9.7	-142.75	363.0	-143.6	55.9	39.1	16.84	3.320	
3,000.0	2,952.5	3,002.6	2,961.0	10.7	10.2	-141.50	382.1	-151.8	58.4	40.7	17.69	3.298	
3,100.0	3,050.1	3,102.5	3,058.8	11.1	10.6	-140.35	401.2	-160.1	60.8	42.3	18.55	3.279	
3,200.0	3,147.7	3,202.5	3,156.6	11.6	11.0	-139.29	420.2	-168.4	63.3	43.9	19.41	3.262	
3,300.0	3,245.3	3,302.5	3,254.3	12.1	11.5	-138.32	439.3	-176.7	65.8	45.5	20.27	3.246	
3,400.0	3,342.9	3,402.4	3,352.1	12.5	11.9	-137.41	458.3	-184.9	68.3	47.2	21.14	3.233	
3,500.0	3,440.5	3,502.4	3,449.9	13.0	12.4	-136.57	477.4	-193.2	70.9	48.9	22.00	3.221	
3,600.0	3,538.1	3,602.3	3,547.7	13.4	12.8	-135.78	496.5	-201.5	73.4	50.5	22.87	3.210	
3,700.0	3,635.7	3,702.3	3,645.5	13.9	13.3	-135.05	515.5	-209.7	76.0	52.2	23.74	3.200	
3,800.0	3,733.3	3,802.3	3,743.2	14.4	13.7	-134.37	534.6	-218.0	78.6	53.9	24.61	3.192	
3,900.0	3,830.9	3,902.2	3,841.0	14.8	14.2	-133.73	553.7	-226.3	81.1	55.7	25.49	3.184	
4,000.0	3,928.5	4,002.2	3,938.8	15.3	14.6	-133.13	572.7	-234.5	83.7	57.4	26.36	3.177	
4,100.0	4,026.1	4,102.2	4,036.6	15.7	15.0	-132.57	591.8	-242.8	86.4	59.1	27.23	3.171	
4,200.0	4,123.7	4,202.1	4,134.4	16.2	15.5	-132.03	610.8	-251.1	89.0	60.9	28.11	3.165	
4,300.0	4,221.3	4,302.1	4,232.1	16.7	15.9	-131.53	629.9	-259.4	91.6	62.6	28.98	3.160	
4,400.0	4,318.9	4,402.0	4,329.9	17.1	16.4	-131.06	649.0	-267.6	94.2	64.4	29.86	3.155	
4,500.0	4,416.5	4,502.0	4,427.7	17.6	16.8	-130.61	668.0	-275.9	96.8	66.1	30.73	3.151	
4,600.0	4,514.1	4,602.0	4,525.5	18.1	17.3	-130.19	687.1	-284.2	99.5	67.9	31.61	3.147	
4,700.0	4,611.7	4,701.4	4,622.8	18.5	17.7	-129.85	705.9	-292.3	102.2	69.7	32.45	3.149	
4,800.0	4,709.3	4,800.0	4,719.7	19.0	18.0	-130.67	722.4	-299.5	106.3	73.3	32.97	3.224	
4,900.0	4,806.9	4,896.9	4,815.6	19.4	18.3	-132.80	735.5	-305.2	112.4	79.2	33.18	3.388	
5,000.0	4,904.5	4,994.0	4,911.9	19.9	18.5	-135.94	745.7	-309.6	120.8	87.7	33.09	3.649	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	5,090.2	5,007.9	20.4	18.7	-139.72	752.9	-312.7	131.7	99.0	32.79	4.018	
5,200.0	5,099.7	5,185.4	5,103.0	20.8	18.9	-143.76	757.0	-314.5	145.6	113.3	32.34	4.503	
5,300.0	5,197.3	5,279.7	5,197.3	21.3	19.0	-147.78	758.3	-315.1	162.7	130.8	31.85	5.108	
5,400.0	5,294.9	5,377.3	5,294.9	21.8	19.1	-151.43	758.3	-315.1	181.6	150.1	31.46	5.772	
5,500.0	5,392.5	5,474.9	5,392.5	22.2	19.3	-154.38	758.3	-315.1	201.1	169.8	31.25	6.434	
5,600.0	5,490.1	5,572.5	5,490.1	22.7	19.4	-156.82	758.3	-315.1	221.0	189.8	31.18	7.088	
5,614.2	5,504.0	5,586.4	5,504.0	22.7	19.4	-157.13	758.3	-315.1	223.9	192.7	31.18	7.180	
5,700.0	5,587.9	5,670.4	5,587.9	23.1	19.5	-158.86	758.3	-315.1	240.1	208.9	31.19	7.696	
5,800.0	5,686.4	5,768.9	5,686.4	23.4	19.7	-160.35	758.3	-315.1	256.1	224.9	31.27	8.191	
5,900.0	5,785.5	5,868.0	5,785.5	23.7	19.8	-161.41	758.3	-315.1	269.1	237.7	31.41	8.567	
6,000.0	5,885.0	5,967.4	5,885.0	23.9	19.9	-162.14	758.3	-315.1	278.8	247.2	31.58	8.827	
6,100.0	5,984.7	6,067.2	5,984.7	24.1	20.1	-162.59	758.3	-315.1	285.2	253.4	31.77	8.976	
6,200.0	6,084.7	6,167.2	6,084.7	24.2	20.2	-162.84	758.3	-314.9	288.3	256.3	31.96	9.021	
6,243.1	6,127.8	6,210.4	6,127.8	24.3	20.3	-179.90	758.3	-312.7	288.6	245.6	42.98	6.714	
6,249.1	6,133.8	6,216.4	6,133.8	24.3	20.3	-180.00	758.3	-312.2	288.6	245.6	43.01	6.710	
6,273.1	6,157.8	6,240.2	6,157.5	24.3	20.3	179.50	758.3	-309.7	288.6	245.5	43.14	6.690	
6,300.0	6,184.7	6,266.7	6,183.7	24.3	20.3	88.85	758.3	-305.9	288.7	256.8	31.86	9.061	
6,350.0	6,234.5	6,315.7	6,231.8	24.4	20.3	87.66	758.3	-296.5	288.8	257.1	31.74	9.102	
6,400.0	6,284.0	6,364.3	6,278.8	24.4	20.3	86.48	758.3	-283.9	289.2	257.6	31.60	9.150	
6,450.0	6,332.9	6,412.6	6,324.4	24.4	20.3	85.33	758.3	-268.3	289.6	258.1	31.47	9.202	
6,500.0	6,380.9	6,460.5	6,368.6	24.4	20.3	84.20	758.3	-249.8	290.1	258.8	31.35	9.254	
6,550.0	6,427.8	6,508.0	6,411.1	24.4	20.3	83.11	758.3	-228.5	290.7	259.5	31.25	9.305	
6,600.0	6,473.5	6,555.2	6,451.9	24.4	20.3	82.06	758.3	-204.7	291.4	260.3	31.17	9.349	
6,650.0	6,517.5	6,602.2	6,490.7	24.4	20.3	81.05	758.3	-178.3	292.2	261.1	31.14	9.383	
6,700.0	6,559.9	6,650.0	6,528.4	24.4	20.2	80.07	758.3	-149.0	293.0	261.9	31.16	9.404	
6,750.0	6,600.2	6,695.1	6,562.1	24.4	20.2	79.18	758.3	-119.0	293.9	262.6	31.24	9.407	
6,800.0	6,638.4	6,741.2	6,594.6	24.3	20.2	78.33	758.3	-86.3	294.7	263.3	31.39	9.389	
6,850.0	6,674.3	6,787.1	6,624.7	24.3	20.1	77.53	758.3	-51.7	295.6	264.0	31.63	9.346	
6,900.0	6,707.6	6,832.7	6,652.4	24.3	20.1	76.79	758.3	-15.4	296.5	264.5	31.97	9.275	
6,950.0	6,738.3	6,878.2	6,677.6	24.3	20.1	76.12	758.3	22.4	297.3	264.9	32.41	9.175	
7,000.0	6,766.2	6,923.4	6,700.4	24.3	20.1	75.51	758.3	61.5	298.1	265.2	32.96	9.045	
7,050.0	6,791.0	6,968.5	6,720.5	24.3	20.0	74.96	758.3	101.9	298.9	265.2	33.64	8.884	
7,100.0	6,812.8	7,013.5	6,738.0	24.3	20.1	74.48	758.3	143.3	299.5	265.1	34.42	8.702	
7,150.0	6,831.4	7,058.4	6,752.8	24.3	20.1	74.07	758.3	185.6	300.2	264.8	35.36	8.489	
7,200.0	6,846.8	7,103.1	6,764.9	24.4	20.3	73.72	758.3	228.7	300.7	264.3	36.41	8.257	
7,250.0	6,858.7	7,150.0	6,774.7	24.5	20.7	73.44	758.3	274.5	301.1	263.5	37.62	8.004	
7,300.0	6,867.3	7,192.4	6,781.0	24.7	21.2	73.24	758.3	316.5	301.4	262.5	38.88	7.753	
7,350.0	6,872.4	7,237.0	6,784.9	25.0	21.9	73.11	758.3	360.8	301.6	261.4	40.27	7.490	
7,400.0	6,874.0	7,282.3	6,786.0	25.4	22.7	73.04	758.3	406.1	301.7	260.0	41.76	7.226	
7,405.6	6,874.0	7,287.0	6,785.9	25.5	22.8	73.04	758.3	410.9	301.7	259.8	41.92	7.197	
7,406.5	6,873.9	7,287.9	6,785.9	25.5	22.8	73.04	758.3	411.8	301.7	259.8	41.96	7.191	
7,500.0	6,873.0	7,381.4	6,785.3	26.7	24.6	73.10	758.3	505.3	301.6	256.2	45.44	6.638	
7,600.0	6,871.9	7,481.4	6,784.6	28.4	26.7	73.16	758.3	605.3	301.5	252.1	49.47	6.095	
7,700.0	6,870.9	7,581.4	6,783.9	30.4	28.9	73.23	758.3	705.3	301.4	247.7	53.74	5.609	
7,800.0	6,869.8	7,681.4	6,783.2	32.5	31.2	73.29	758.3	805.3	301.3	243.1	58.20	5.177	
7,900.0	6,868.8	7,781.4	6,782.5	34.8	33.6	73.35	758.3	905.3	301.2	238.4	62.82	4.795	
8,000.0	6,867.7	7,881.4	6,781.8	37.1	36.1	73.42	758.3	1,005.2	301.1	233.6	67.56	4.457	
8,100.0	6,866.7	7,981.4	6,781.1	39.5	38.6	73.48	758.3	1,105.2	301.0	228.6	72.39	4.158	
8,200.0	6,865.6	8,081.4	6,780.4	42.0	41.1	73.55	758.3	1,205.2	300.9	223.6	77.31	3.893	
8,300.0	6,864.6	8,181.4	6,779.7	44.5	43.7	73.61	758.3	1,305.2	300.8	218.5	82.29	3.656	
8,400.0	6,863.6	8,281.4	6,779.0	47.0	46.2	73.67	758.3	1,405.2	300.7	213.4	87.33	3.444	
8,500.0	6,862.5	8,381.4	6,778.3	49.6	48.9	73.74	758.3	1,505.2	300.6	208.2	92.42	3.253	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - KINZER 28H-202 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,600.0	6,861.5	8,481.4	6,777.6	52.2	51.5	73.80	758.3	1,605.2	300.5	203.0	97.55	3.081	
8,700.0	6,860.4	8,581.4	6,776.9	54.8	54.1	73.86	758.3	1,705.2	300.4	197.7	102.71	2.925	
8,800.0	6,859.4	8,681.4	6,776.2	57.5	56.8	73.93	758.3	1,805.2	300.3	192.4	107.90	2.784	
8,900.0	6,858.3	8,781.4	6,775.5	60.1	59.5	73.99	758.3	1,905.2	300.2	187.1	113.12	2.654	
9,000.0	6,857.3	8,881.4	6,774.8	62.8	62.2	74.06	758.3	2,005.2	300.1	181.8	118.36	2.536	
9,100.0	6,856.2	8,981.4	6,774.1	65.5	64.9	74.12	758.3	2,105.2	300.1	176.4	123.63	2.427	
9,200.0	6,855.2	9,081.4	6,773.4	68.1	67.6	74.18	758.3	2,205.2	300.0	171.1	128.91	2.327	
9,300.0	6,854.1	9,181.4	6,772.7	70.8	70.3	74.25	758.3	2,305.2	299.9	165.7	134.21	2.234	
9,400.0	6,853.1	9,281.4	6,772.0	73.6	73.0	74.31	758.3	2,405.2	299.8	160.2	139.52	2.149	
9,500.0	6,852.1	9,381.4	6,771.4	76.3	75.8	74.38	758.3	2,505.2	299.7	154.8	144.85	2.069	
9,600.0	6,851.0	9,481.4	6,770.7	79.0	78.5	74.44	758.3	2,605.2	299.6	149.4	150.19	1.995	
9,700.0	6,850.0	9,581.4	6,770.0	81.7	81.2	74.51	758.3	2,705.2	299.5	143.9	155.54	1.925	
9,800.0	6,848.9	9,681.4	6,769.3	84.4	84.0	74.57	758.3	2,805.2	299.4	138.5	160.91	1.861	
9,900.0	6,847.9	9,781.4	6,768.6	87.2	86.7	74.63	758.3	2,905.2	299.3	133.0	166.28	1.800	
10,000.0	6,846.8	9,881.4	6,767.9	89.9	89.5	74.70	758.3	3,005.2	299.2	127.5	171.67	1.743	
10,100.0	6,845.8	9,981.4	6,767.2	92.7	92.2	74.76	758.3	3,105.2	299.1	122.1	177.06	1.689	
10,200.0	6,844.7	10,081.4	6,766.5	95.4	95.0	74.83	758.3	3,205.2	299.0	116.6	182.46	1.639	
10,300.0	6,843.7	10,181.4	6,765.8	98.2	97.8	74.89	758.3	3,305.2	298.9	111.1	187.87	1.591	
10,400.0	6,842.7	10,281.4	6,765.1	100.9	100.5	74.96	758.3	3,405.2	298.9	105.6	193.28	1.546	
10,500.0	6,841.6	10,381.4	6,764.4	103.7	103.3	75.02	758.3	3,505.2	298.8	100.1	198.71	1.504	
10,600.0	6,840.6	10,481.4	6,763.7	106.4	106.1	75.09	758.3	3,605.2	298.7	94.5	204.14	1.463 Level 3	
10,700.0	6,839.5	10,581.4	6,763.0	109.2	108.8	75.15	758.3	3,705.2	298.6	89.0	209.57	1.425 Level 3	
10,800.0	6,838.5	10,681.4	6,762.3	112.0	111.6	75.21	758.3	3,805.2	298.5	83.5	215.01	1.388 Level 3	
10,900.0	6,837.4	10,781.4	6,761.6	114.7	114.4	75.28	758.3	3,905.2	298.4	77.9	220.46	1.354 Level 3	
11,000.0	6,836.4	10,881.4	6,760.9	117.5	117.2	75.34	758.3	4,005.2	298.3	72.4	225.92	1.320 Level 3	
11,100.0	6,835.4	10,981.4	6,760.2	120.3	119.9	75.41	758.3	4,105.2	298.2	66.9	231.37	1.289 Level 3	
11,200.0	6,834.3	11,081.4	6,759.5	123.0	122.7	75.47	758.3	4,205.2	298.1	61.3	236.84	1.259 Level 3	
11,300.0	6,833.3	11,181.4	6,758.8	125.8	125.5	75.54	758.3	4,305.1	298.1	55.8	242.31	1.230 Level 2	
11,400.0	6,832.2	11,281.4	6,758.2	128.6	128.3	75.60	758.3	4,405.1	298.0	50.2	247.78	1.203 Level 2	
11,500.0	6,831.2	11,381.4	6,757.5	131.4	131.1	75.67	758.3	4,505.1	297.9	44.6	253.26	1.176 Level 2	
11,600.0	6,830.2	11,481.4	6,756.8	134.1	133.8	75.73	758.3	4,605.1	297.8	39.1	258.74	1.151 Level 2	
11,700.0	6,829.1	11,581.4	6,756.1	136.9	136.6	75.80	758.3	4,705.1	297.7	33.5	264.23	1.127 Level 2	
11,800.0	6,828.1	11,681.4	6,755.4	139.7	139.4	75.86	758.3	4,805.1	297.6	27.9	269.72	1.103 Level 2	
11,900.0	6,827.0	11,781.4	6,754.7	142.5	142.2	75.93	758.3	4,905.1	297.5	22.3	275.22	1.081 Level 2	
11,999.0	6,826.0	11,880.4	6,754.0	145.2	144.2	75.99	758.3	5,004.2	297.5	17.6	279.89	1.063 Level 2, SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-16.7	16.7				
100.0	100.0	100.0	100.0	0.1	0.1	-90.00	0.0	-16.7	16.7	16.5	0.19	85.998	
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-16.7	16.7	16.1	0.64	25.965	
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-16.7	16.7	15.6	1.09	15.291	
400.0	400.0	400.0	400.0	0.8	0.8	-90.00	0.0	-16.7	16.7	15.2	1.54	10.836	
500.0	500.0	500.0	500.0	1.0	1.0	-90.00	0.0	-16.7	16.7	14.7	1.99	8.391 CC	
600.0	600.0	599.8	599.8	1.2	1.2	-84.33	1.7	-17.1	17.2	14.7	2.44	7.041	
700.0	700.0	699.5	699.4	1.4	1.5	-57.32	6.8	-18.2	18.5	15.6	2.89	6.396	
800.0	799.8	799.1	798.5	1.7	1.7	-48.12	15.2	-20.2	20.1	16.8	3.34	6.011	
900.0	899.5	898.5	897.3	1.9	1.9	-40.04	27.0	-22.8	22.0	18.2	3.81	5.773	
1,000.0	998.7	997.9	995.4	2.2	2.2	-32.93	42.1	-26.2	24.1	19.8	4.29	5.624	
1,100.0	1,097.5	1,097.1	1,092.8	2.5	2.6	-26.63	60.5	-30.4	26.4	21.6	4.77	5.536	
1,200.0	1,195.6	1,196.2	1,189.3	2.8	3.0	-20.99	82.1	-35.3	28.8	23.6	5.25	5.492	
1,228.9	1,223.8	1,224.8	1,217.0	2.9	3.1	-19.47	89.0	-36.8	29.5	24.2	5.39	5.484	
1,300.0	1,293.3	1,295.1	1,285.0	3.2	3.4	-15.49	106.9	-40.9	32.2	26.5	5.74	5.613	
1,400.0	1,390.9	1,395.0	1,381.0	3.6	3.9	-10.46	133.5	-46.8	37.2	31.0	6.24	5.966	
1,500.0	1,488.5	1,494.8	1,477.1	4.0	4.4	-6.65	160.0	-52.8	42.4	35.7	6.74	6.292	
1,600.0	1,586.1	1,594.6	1,573.2	4.4	4.9	-3.69	186.5	-58.8	47.8	40.5	7.26	6.583	
1,700.0	1,683.7	1,694.5	1,669.2	4.8	5.4	-1.32	213.0	-64.8	53.3	45.5	7.79	6.839	
1,800.0	1,781.3	1,794.3	1,765.3	5.3	6.0	0.60	239.5	-70.8	58.8	50.5	8.33	7.062	
1,900.0	1,878.9	1,894.1	1,861.3	5.7	6.5	2.19	266.0	-76.8	64.4	55.5	8.87	7.258	
2,000.0	1,976.5	1,993.9	1,957.4	6.1	7.0	3.52	292.5	-82.7	70.0	60.6	9.43	7.429	
2,100.0	2,074.1	2,093.8	2,053.5	6.6	7.6	4.66	319.0	-88.7	75.7	65.7	9.99	7.579	
2,200.0	2,171.7	2,193.6	2,149.5	7.0	8.1	5.64	345.5	-94.7	81.4	70.8	10.56	7.711	
2,300.0	2,269.3	2,293.4	2,245.6	7.5	8.7	6.49	372.0	-100.7	87.1	76.0	11.13	7.828	
2,400.0	2,366.9	2,393.3	2,341.6	7.9	9.2	7.23	398.5	-106.7	92.8	81.1	11.70	7.931	
2,500.0	2,464.5	2,493.1	2,437.7	8.4	9.7	7.89	425.0	-112.6	98.6	86.3	12.29	8.024	
2,600.0	2,562.1	2,592.9	2,533.8	8.9	10.3	8.47	451.5	-118.6	104.3	91.5	12.87	8.107	
2,700.0	2,659.7	2,692.7	2,629.8	9.3	10.8	9.00	478.0	-124.6	110.1	96.6	13.46	8.182	
2,800.0	2,757.3	2,792.6	2,725.9	9.8	11.4	9.47	504.5	-130.6	115.9	101.8	14.05	8.249	
2,900.0	2,854.9	2,892.4	2,821.9	10.2	11.9	9.90	531.0	-136.6	121.6	107.0	14.64	8.310	
3,000.0	2,952.5	2,992.2	2,918.0	10.7	12.5	10.28	557.5	-142.6	127.4	112.2	15.23	8.366	
3,100.0	3,050.1	3,092.1	3,014.1	11.1	13.0	10.64	584.0	-148.5	133.2	117.4	15.83	8.417	
3,200.0	3,147.7	3,191.9	3,110.1	11.6	13.6	10.96	610.5	-154.5	139.0	122.6	16.43	8.463	
3,300.0	3,245.3	3,291.7	3,206.2	12.1	14.1	11.26	637.0	-160.5	144.8	127.8	17.03	8.506	
3,400.0	3,342.9	3,391.5	3,302.2	12.5	14.7	11.54	663.5	-166.5	150.6	133.0	17.63	8.545	
3,500.0	3,440.5	3,491.4	3,398.3	13.0	15.2	11.79	690.0	-172.5	156.4	138.2	18.23	8.582	
3,600.0	3,538.1	3,591.2	3,494.4	13.4	15.8	12.03	716.5	-178.4	162.2	143.4	18.83	8.615	
3,700.0	3,635.7	3,691.0	3,590.4	13.9	16.3	12.25	743.0	-184.4	168.1	148.6	19.44	8.647	
3,800.0	3,733.3	3,790.9	3,686.5	14.4	16.9	12.46	769.5	-190.4	173.9	153.8	20.04	8.676	
3,900.0	3,830.9	3,890.7	3,782.5	14.8	17.5	12.65	796.0	-196.4	179.7	159.0	20.65	8.703	
4,000.0	3,928.5	3,990.5	3,878.6	15.3	18.0	12.83	822.5	-202.4	185.5	164.3	21.25	8.729	
4,100.0	4,026.1	4,090.4	3,974.7	15.7	18.6	13.00	849.0	-208.4	191.3	169.5	21.86	8.752	
4,200.0	4,123.7	4,190.2	4,070.7	16.2	19.1	13.16	875.6	-214.3	197.2	174.7	22.47	8.775	
4,300.0	4,221.3	4,290.0	4,166.8	16.7	19.7	13.31	902.1	-220.3	203.0	179.9	23.08	8.796	
4,400.0	4,318.9	4,389.8	4,262.8	17.1	20.2	13.45	928.6	-226.3	208.8	185.1	23.69	8.815	
4,500.0	4,416.5	4,489.7	4,358.9	17.6	20.8	13.59	955.1	-232.3	214.6	190.3	24.30	8.834	
4,600.0	4,514.1	4,589.5	4,455.0	18.1	21.3	13.71	981.6	-238.3	220.5	195.5	24.91	8.852	
4,700.0	4,611.7	4,689.3	4,551.0	18.5	21.9	13.84	1,008.1	-244.3	226.3	200.8	25.52	8.868	
4,800.0	4,709.3	4,789.2	4,647.1	19.0	22.4	13.95	1,034.6	-250.2	232.1	206.0	26.13	8.884	
4,900.0	4,806.9	4,889.0	4,743.1	19.4	23.0	14.06	1,061.1	-256.2	237.9	211.2	26.74	8.899	
5,000.0	4,904.5	4,988.8	4,839.2	19.9	23.5	14.16	1,087.6	-262.2	243.8	216.4	27.35	8.913	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MW/D												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	5,088.6	4,935.3	20.4	24.1	14.26	1,114.1	-268.2	249.6	221.6	27.96	8.927	
5,200.0	5,099.7	5,188.5	5,031.3	20.8	24.7	14.36	1,140.6	-274.2	255.4	226.9	28.57	8.940	
5,300.0	5,197.3	5,288.3	5,127.4	21.3	25.2	14.45	1,167.1	-280.1	261.3	232.1	29.19	8.952	
5,400.0	5,294.9	5,388.1	5,223.4	21.8	25.8	14.53	1,193.6	-286.1	267.1	237.3	29.80	8.963	
5,500.0	5,392.5	5,494.3	5,325.8	22.2	26.3	14.65	1,221.0	-292.3	272.2	241.8	30.42	8.949	
5,600.0	5,490.1	5,604.6	5,433.2	22.7	26.7	14.93	1,245.8	-297.9	273.8	242.8	31.03	8.826	
5,614.2	5,504.0	5,620.3	5,448.5	22.7	26.8	14.98	1,249.0	-298.6	273.8	242.6	31.11	8.799	
5,700.0	5,587.9	5,714.9	5,541.4	23.1	27.1	15.29	1,266.6	-302.6	272.9	241.3	31.59	8.639	
5,800.0	5,686.4	5,825.2	5,650.3	23.4	27.4	15.63	1,283.3	-306.4	271.6	239.5	32.06	8.472	
5,900.0	5,785.5	5,935.3	5,759.7	23.7	27.7	15.92	1,295.8	-309.2	269.8	237.4	32.46	8.314	
6,000.0	5,885.0	6,045.4	5,869.4	23.9	27.9	16.19	1,304.3	-311.1	267.7	234.9	32.79	8.165	
6,100.0	5,984.7	6,155.4	5,979.3	24.1	28.0	16.41	1,308.6	-312.1	265.2	232.1	33.05	8.023	
6,200.0	6,084.7	6,260.8	6,084.7	24.2	28.1	16.62	1,309.2	-312.1	262.6	229.4	33.25	7.899	
6,241.2	6,125.9	6,301.8	6,125.7	24.3	28.2	17.08	1,309.2	-310.0	262.3	228.9	33.39	7.855	
6,243.1	6,127.8	6,303.8	6,127.6	24.3	28.2	0.51	1,309.2	-309.9	262.3	211.1	51.21	5.122	
6,273.1	6,157.8	6,333.4	6,157.1	24.3	28.2	1.16	1,309.2	-306.9	262.4	211.2	51.17	5.127	
6,300.0	6,184.7	6,359.9	6,183.3	24.3	28.2	-88.13	1,309.2	-303.2	262.4	228.6	33.88	7.746	
6,350.0	6,234.5	6,408.7	6,231.2	24.4	28.2	-86.82	1,309.2	-293.8	262.7	228.4	34.31	7.657	
6,400.0	6,284.0	6,457.2	6,278.0	24.4	28.2	-85.54	1,309.2	-281.3	263.1	228.4	34.72	7.579	
6,450.0	6,332.9	6,505.2	6,323.5	24.4	28.2	-84.29	1,309.2	-265.8	263.6	228.5	35.08	7.515	
6,500.0	6,380.9	6,553.0	6,367.6	24.4	28.2	-83.07	1,309.2	-247.4	264.3	228.9	35.40	7.465	
6,550.0	6,427.8	6,600.0	6,409.7	24.4	28.2	-81.90	1,309.2	-226.4	265.0	229.3	35.67	7.429	
6,600.0	6,473.5	6,647.4	6,450.6	24.4	28.2	-80.76	1,309.2	-202.6	265.8	229.9	35.89	7.406	
6,650.0	6,517.5	6,694.2	6,489.4	24.4	28.2	-79.68	1,309.2	-176.4	266.7	230.6	36.06	7.395	
6,700.0	6,559.9	6,740.7	6,526.2	24.4	28.2	-78.66	1,309.2	-148.0	267.6	231.4	36.20	7.392	
6,750.0	6,600.2	6,786.9	6,560.8	24.4	28.2	-77.69	1,309.2	-117.4	268.5	232.2	36.32	7.394	
6,800.0	6,638.4	6,832.9	6,593.3	24.3	28.2	-76.79	1,309.2	-84.8	269.5	233.0	36.44	7.396	
6,850.0	6,674.3	6,878.7	6,623.4	24.3	28.2	-75.95	1,309.2	-50.4	270.4	233.9	36.58	7.393	
6,900.0	6,707.6	6,924.2	6,651.2	24.3	28.2	-75.18	1,309.2	-14.3	271.4	234.6	36.78	7.378	
6,950.0	6,738.3	6,969.6	6,676.5	24.3	28.2	-74.48	1,309.2	23.4	272.3	235.2	37.06	7.348	
7,000.0	6,766.2	7,014.8	6,699.3	24.3	28.2	-73.85	1,309.2	62.4	273.1	235.7	37.43	7.297	
7,050.0	6,791.0	7,059.8	6,719.5	24.3	28.2	-73.29	1,309.2	102.6	273.9	235.9	37.98	7.212	
7,100.0	6,812.8	7,104.7	6,737.1	24.3	28.2	-72.80	1,309.2	143.9	274.6	235.9	38.66	7.103	
7,150.0	6,831.4	7,150.0	6,752.2	24.3	28.3	-72.38	1,309.2	186.6	275.2	235.7	39.52	6.964	
7,200.0	6,846.8	7,194.3	6,764.3	24.4	28.3	-72.05	1,309.2	229.1	275.7	235.2	40.57	6.797	
7,250.0	6,858.7	7,238.9	6,773.9	24.5	28.4	-71.79	1,309.2	272.8	276.1	234.3	41.80	6.607	
7,300.0	6,867.3	7,283.5	6,780.7	24.7	28.5	-71.60	1,309.2	316.8	276.4	233.2	43.20	6.398	
7,350.0	6,872.4	7,328.0	6,784.7	25.0	28.7	-71.49	1,309.2	361.2	276.6	231.8	44.78	6.178	
7,400.0	6,874.0	7,372.6	6,786.0	25.4	28.9	-71.45	1,309.2	405.7	276.7	230.2	46.49	5.952	
7,405.6	6,874.0	7,377.9	6,786.0	25.5	29.0	-71.46	1,309.2	411.0	276.7	230.0	46.69	5.925	
7,500.0	6,873.0	7,472.2	6,785.4	26.7	29.7	-71.54	1,309.2	505.3	276.5	226.4	50.11	5.519	
7,600.0	6,871.9	7,572.2	6,784.8	28.4	30.8	-71.62	1,309.2	605.3	276.4	222.4	54.00	5.119	
7,700.0	6,870.9	7,672.2	6,784.2	30.4	32.4	-71.71	1,309.2	705.3	276.3	218.1	58.13	4.753	
7,800.0	6,869.8	7,772.2	6,783.6	32.5	34.2	-71.79	1,309.2	805.3	276.1	213.7	62.45	4.422	
7,900.0	6,868.8	7,872.2	6,782.9	34.8	36.2	-71.88	1,309.2	905.3	276.0	209.1	66.92	4.124	
8,000.0	6,867.7	7,972.2	6,782.3	37.1	38.4	-71.97	1,309.2	1,005.3	275.9	204.3	71.53	3.857	
8,100.0	6,866.7	8,072.2	6,781.7	39.5	40.7	-72.05	1,309.2	1,105.3	275.7	199.5	76.24	3.616	
8,200.0	6,865.6	8,172.2	6,781.1	42.0	43.1	-72.14	1,309.2	1,205.3	275.6	194.5	81.04	3.401	
8,300.0	6,864.6	8,272.2	6,780.5	44.5	45.5	-72.22	1,309.2	1,305.3	275.4	189.5	85.91	3.206	
8,400.0	6,863.6	8,372.2	6,779.9	47.0	48.0	-72.31	1,309.2	1,405.3	275.3	184.5	90.85	3.030	
8,500.0	6,862.5	8,472.2	6,779.3	49.6	50.5	-72.40	1,309.2	1,505.3	275.2	179.3	95.84	2.871	
8,600.0	6,861.5	8,572.2	6,778.7	52.2	53.1	-72.48	1,309.2	1,605.3	275.1	174.2	100.88	2.727	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,700.0	6,860.4	8,672.2	6,778.1	54.8	55.6	-72.57	1,309.2	1,705.3	274.9	169.0	105.96	2.595	
8,800.0	6,859.4	8,772.2	6,777.5	57.5	58.2	-72.66	1,309.2	1,805.3	274.8	163.7	111.07	2.474	
8,900.0	6,858.3	8,872.2	6,776.8	60.1	60.9	-72.74	1,309.2	1,905.3	274.7	158.4	116.22	2.363	
9,000.0	6,857.3	8,972.2	6,776.2	62.8	63.5	-72.83	1,309.2	2,005.3	274.5	153.1	121.39	2.262	
9,100.0	6,856.2	9,072.2	6,775.6	65.5	66.2	-72.92	1,309.2	2,105.3	274.4	147.8	126.59	2.168	
9,200.0	6,855.2	9,172.2	6,775.0	68.1	68.8	-73.00	1,309.2	2,205.3	274.3	142.5	131.82	2.081	
9,300.0	6,854.1	9,272.2	6,774.4	70.8	71.5	-73.09	1,309.2	2,305.3	274.1	137.1	137.06	2.000	
9,400.0	6,853.1	9,372.2	6,773.8	73.6	74.2	-73.18	1,309.2	2,405.3	274.0	131.7	142.32	1.925	
9,500.0	6,852.1	9,472.2	6,773.2	76.3	76.9	-73.27	1,309.2	2,505.3	273.9	126.3	147.61	1.856	
9,600.0	6,851.0	9,572.2	6,772.6	79.0	79.6	-73.35	1,309.2	2,605.3	273.8	120.9	152.90	1.791	
9,700.0	6,850.0	9,672.2	6,772.0	81.7	82.3	-73.44	1,309.2	2,705.3	273.6	115.4	158.21	1.730	
9,800.0	6,848.9	9,772.2	6,771.4	84.4	85.0	-73.53	1,309.2	2,805.3	273.5	110.0	163.54	1.673	
9,900.0	6,847.9	9,872.2	6,770.8	87.2	87.7	-73.62	1,309.2	2,905.3	273.4	104.5	168.88	1.619	
10,000.0	6,846.8	9,972.2	6,770.1	89.9	90.4	-73.70	1,309.2	3,005.3	273.3	99.1	174.23	1.569	
10,100.0	6,845.8	10,072.2	6,769.5	92.7	93.2	-73.79	1,309.2	3,105.3	273.2	93.6	179.59	1.521	
10,200.0	6,844.7	10,172.2	6,768.9	95.4	95.9	-73.88	1,309.2	3,205.3	273.0	88.1	184.96	1.476 Level 3	
10,300.0	6,843.7	10,272.2	6,768.3	98.2	98.6	-73.97	1,309.2	3,305.3	272.9	82.6	190.34	1.434 Level 3	
10,400.0	6,842.7	10,372.2	6,767.7	100.9	101.4	-74.05	1,309.2	3,405.3	272.8	77.1	195.73	1.394 Level 3	
10,500.0	6,841.6	10,472.2	6,767.1	103.7	104.1	-74.14	1,309.2	3,505.3	272.7	71.5	201.13	1.356 Level 3	
10,600.0	6,840.6	10,572.2	6,766.5	106.4	106.9	-74.23	1,309.2	3,605.3	272.6	66.0	206.54	1.320 Level 3	
10,700.0	6,839.5	10,672.2	6,765.9	109.2	109.6	-74.32	1,309.2	3,705.3	272.4	60.5	211.96	1.285 Level 3	
10,800.0	6,838.5	10,772.2	6,765.3	112.0	112.4	-74.41	1,309.2	3,805.2	272.3	54.9	217.38	1.253 Level 3	
10,900.0	6,837.4	10,872.2	6,764.7	114.7	115.2	-74.49	1,309.2	3,905.2	272.2	49.4	222.82	1.222 Level 2	
11,000.0	6,836.4	10,972.2	6,764.1	117.5	117.9	-74.58	1,309.2	4,005.2	272.1	43.8	228.26	1.192 Level 2	
11,100.0	6,835.4	11,072.2	6,763.5	120.3	120.7	-74.67	1,309.2	4,105.2	272.0	38.3	233.70	1.164 Level 2	
11,200.0	6,834.3	11,172.2	6,762.9	123.0	123.4	-74.76	1,309.2	4,205.2	271.9	32.7	239.16	1.137 Level 2	
11,300.0	6,833.3	11,272.2	6,762.2	125.8	126.2	-74.85	1,309.2	4,305.2	271.7	27.1	244.62	1.111 Level 2	
11,400.0	6,832.2	11,372.2	6,761.6	128.6	129.0	-74.94	1,309.2	4,405.2	271.6	21.5	250.09	1.086 Level 2	
11,500.0	6,831.2	11,472.2	6,761.0	131.4	131.8	-75.02	1,309.2	4,505.2	271.5	16.0	255.56	1.062 Level 2	
11,600.0	6,830.2	11,572.2	6,760.4	134.1	134.5	-75.11	1,309.2	4,605.2	271.4	10.4	261.04	1.040 Level 2	
11,700.0	6,829.1	11,672.2	6,759.8	136.9	137.3	-75.20	1,309.2	4,705.2	271.3	4.8	266.52	1.018 Level 2	
11,800.0	6,828.1	11,772.2	6,759.2	139.7	140.1	-75.29	1,309.2	4,805.2	271.2	-0.8	272.01	0.997 Level 1	
11,900.0	6,827.0	11,872.2	6,758.6	142.5	142.9	-75.38	1,309.2	4,905.2	271.1	-6.4	277.51	0.977 Level 1	
11,999.0	6,826.0	11,971.2	6,758.0	145.2	145.6	-75.47	1,309.2	5,004.2	271.0	-12.0	282.96	0.958 Level 1, ES, SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	27.9	27.9					
100.0	100.0	100.0	100.0	0.1	0.1	90.00	0.0	27.9	27.9	27.7	0.19	143.330		
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	27.9	27.9	27.2	0.64	43.274		
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	27.9	27.9	26.8	1.09	25.484		
400.0	400.0	400.0	400.0	0.8	0.8	90.00	0.0	27.9	27.9	26.3	1.54	18.060		
500.0	500.0	500.0	500.0	1.0	1.0	90.00	0.0	27.9	27.9	25.9	1.99	13.985		
600.0	600.0	600.0	600.0	1.2	1.2	90.00	0.0	27.9	27.9	25.4	2.44	11.411	CC, ES	
700.0	700.0	700.0	700.0	1.4	1.4	109.97	0.0	27.9	28.4	25.5	2.89	9.831		
800.0	799.8	799.8	799.8	1.7	1.7	119.17	0.0	27.9	30.6	27.3	3.34	9.162		
900.0	899.5	900.5	900.5	1.9	1.9	130.20	1.4	26.8	34.1	30.3	3.79	9.002		
1,000.0	998.7	1,001.4	1,001.2	2.2	2.1	140.65	5.5	23.5	38.0	33.7	4.24	8.958		
1,100.0	1,097.5	1,102.5	1,101.9	2.5	2.4	150.65	12.5	17.9	42.4	37.7	4.69	9.042		
1,200.0	1,195.6	1,203.6	1,202.3	2.8	2.6	160.17	22.2	10.2	47.5	42.4	5.13	9.269		
1,228.9	1,223.8	1,232.9	1,231.2	2.9	2.7	162.82	25.5	7.5	49.2	43.9	5.26	9.358		
1,300.0	1,293.3	1,305.0	1,302.4	3.2	2.9	168.94	34.7	0.2	52.8	47.2	5.59	9.443		
1,400.0	1,390.9	1,406.4	1,401.9	3.6	3.2	177.10	50.0	-12.0	55.8	49.7	6.09	9.164		
1,500.0	1,488.5	1,506.0	1,499.4	4.0	3.6	-175.17	66.2	-24.9	58.5	51.8	6.65	8.792		
1,600.0	1,586.1	1,605.7	1,596.8	4.4	4.0	-168.21	82.4	-37.8	62.0	54.8	7.28	8.527		
1,700.0	1,683.7	1,705.4	1,694.3	4.8	4.4	-162.09	98.6	-50.7	66.4	58.5	7.97	8.335		
1,800.0	1,781.3	1,805.0	1,791.8	5.3	4.8	-156.78	114.9	-63.6	71.5	62.8	8.73	8.191		
1,900.0	1,878.9	1,904.7	1,889.3	5.7	5.2	-152.20	131.1	-76.5	77.1	67.5	9.53	8.087		
2,000.0	1,976.5	2,004.4	1,986.8	6.1	5.6	-148.26	147.3	-89.5	83.1	72.7	10.37	8.014		
2,100.0	2,074.1	2,104.1	2,084.3	6.6	6.0	-144.86	163.5	-102.4	89.4	78.2	11.23	7.965		
2,200.0	2,171.7	2,203.7	2,181.8	7.0	6.4	-141.92	179.7	-115.3	96.1	84.0	12.11	7.935		
2,300.0	2,269.3	2,303.4	2,279.3	7.5	6.9	-139.36	195.9	-128.2	102.9	89.9	13.00	7.919		
2,400.0	2,366.9	2,403.1	2,376.7	7.9	7.3	-137.13	212.1	-141.1	109.9	96.0	13.89	7.914		
2,500.0	2,464.5	2,502.7	2,474.2	8.4	7.7	-135.17	228.4	-154.0	117.1	102.3	14.79	7.917		
2,600.0	2,562.1	2,602.4	2,571.7	8.9	8.2	-133.43	244.6	-167.0	124.4	108.7	15.70	7.925		
2,700.0	2,659.7	2,702.1	2,669.2	9.3	8.6	-131.89	260.8	-179.9	131.8	115.2	16.60	7.938		
2,800.0	2,757.3	2,801.7	2,766.7	9.8	9.1	-130.51	277.0	-192.8	139.3	121.8	17.51	7.954		
2,900.0	2,854.9	2,901.4	2,864.2	10.2	9.5	-129.28	293.2	-205.7	146.8	128.4	18.42	7.972		
3,000.0	2,952.5	3,001.1	2,961.7	10.7	9.9	-128.16	309.4	-218.6	154.4	135.1	19.32	7.991		
3,100.0	3,050.1	3,100.7	3,059.2	11.1	10.4	-127.15	325.7	-231.5	162.1	141.9	20.23	8.011		
3,200.0	3,147.7	3,200.4	3,156.6	11.6	10.8	-126.23	341.9	-244.4	169.8	148.7	21.14	8.032		
3,300.0	3,245.3	3,300.1	3,254.1	12.1	11.3	-125.39	358.1	-257.4	177.5	155.5	22.05	8.052		
3,400.0	3,342.9	3,399.7	3,351.6	12.5	11.7	-124.63	374.3	-270.3	185.3	162.4	22.96	8.073		
3,500.0	3,440.5	3,498.9	3,448.7	13.0	12.1	-123.98	390.3	-283.0	193.2	169.3	23.84	8.104		
3,600.0	3,538.1	3,597.1	3,545.2	13.4	12.4	-124.12	404.1	-294.0	201.6	177.1	24.54	8.216		
3,700.0	3,635.7	3,695.0	3,642.1	13.9	12.7	-125.15	415.3	-302.9	210.9	185.7	25.13	8.391		
3,800.0	3,733.3	3,792.4	3,738.9	14.4	13.0	-126.92	423.8	-309.7	221.0	195.4	25.59	8.637		
3,900.0	3,830.9	3,889.1	3,835.3	14.8	13.2	-129.30	429.7	-314.4	232.4	206.5	25.93	8.964		
4,000.0	3,928.5	3,984.8	3,930.9	15.3	13.3	-132.15	433.1	-317.1	245.3	219.2	26.14	9.386		
4,100.0	4,026.1	4,080.0	4,026.1	15.7	13.4	-135.35	434.0	-317.8	260.1	233.9	26.23	9.915		
4,200.0	4,123.7	4,177.6	4,123.7	16.2	13.6	-138.49	434.0	-317.8	276.2	249.9	26.31	10.500		
4,300.0	4,221.3	4,275.2	4,221.3	16.7	13.7	-141.29	434.0	-317.8	293.0	266.6	26.40	11.099		
4,400.0	4,318.9	4,372.8	4,318.9	17.1	13.9	-143.78	434.0	-317.8	310.5	283.9	26.52	11.708		
4,500.0	4,416.5	4,470.4	4,416.5	17.6	14.0	-146.01	434.0	-317.8	328.4	301.8	26.66	12.318		
4,600.0	4,514.1	4,568.0	4,514.1	18.1	14.2	-148.01	434.0	-317.8	346.8	320.0	26.83	12.926		
4,700.0	4,611.7	4,665.6	4,611.7	18.5	14.3	-149.80	434.0	-317.8	365.6	338.6	27.03	13.527		
4,800.0	4,709.3	4,763.2	4,709.3	19.0	14.5	-151.43	434.0	-317.8	384.7	357.4	27.24	14.119		
4,900.0	4,806.9	4,860.8	4,806.9	19.4	14.6	-152.90	434.0	-317.8	404.0	376.5	27.48	14.700		
5,000.0	4,904.5	4,958.4	4,904.5	19.9	14.8	-154.23	434.0	-317.8	423.6	395.9	27.74	15.269		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	5,056.0	5,002.1	20.4	14.9	-155.45	434.0	-317.8	443.4	415.4	28.02	15.823	
5,200.0	5,099.7	5,153.6	5,099.7	20.8	15.1	-156.57	434.0	-317.8	463.4	435.1	28.32	16.364	
5,300.0	5,197.3	5,251.2	5,197.3	21.3	15.2	-157.59	434.0	-317.8	483.5	454.9	28.63	16.890	
5,400.0	5,294.9	5,348.8	5,294.9	21.8	15.4	-158.53	434.0	-317.8	503.8	474.8	28.95	17.402	
5,500.0	5,392.5	5,446.4	5,392.5	22.2	15.6	-159.40	434.0	-317.8	524.2	494.9	29.29	17.898	
5,600.0	5,490.1	5,544.0	5,490.1	22.7	15.7	-160.20	434.0	-317.8	544.7	515.0	29.63	18.381	
5,614.2	5,504.0	5,557.9	5,504.0	22.7	15.7	-160.31	434.0	-317.8	547.6	517.9	29.68	18.448	
5,700.0	5,587.9	5,641.9	5,587.9	23.1	15.9	-161.02	434.0	-317.8	564.1	534.1	29.99	18.811	
5,800.0	5,686.4	5,740.4	5,686.4	23.4	16.0	-161.67	434.0	-317.8	580.3	550.0	30.30	19.150	
5,900.0	5,785.5	5,839.4	5,785.5	23.7	16.2	-162.16	434.0	-317.8	593.3	562.7	30.61	19.383	
6,000.0	5,885.0	5,938.9	5,885.0	23.9	16.4	-162.52	434.0	-317.8	603.1	572.2	30.90	19.514	
6,100.0	5,984.7	6,038.7	5,984.7	24.1	16.6	-162.75	434.0	-317.8	609.5	578.3	31.18	19.549	
6,200.0	6,084.7	6,138.6	6,084.7	24.2	16.7	-162.86	434.0	-317.8	612.6	581.2	31.43	19.491	
6,243.1	6,127.8	6,181.7	6,127.8	24.3	16.8	-179.47	434.0	-317.8	612.9	573.8	39.14	15.659	
6,273.1	6,157.8	6,211.7	6,157.8	24.3	16.9	-179.47	434.0	-317.8	612.9	573.7	39.23	15.623	
6,300.0	6,184.7	6,238.6	6,184.7	24.3	16.9	90.57	434.0	-317.8	612.9	581.2	31.74	19.308	
6,350.0	6,234.5	6,288.5	6,234.5	24.4	17.0	90.91	434.0	-317.8	613.0	581.0	31.96	19.180	
6,400.0	6,284.0	6,338.3	6,284.4	24.4	17.1	91.54	434.0	-317.7	613.1	580.9	32.21	19.038	
6,450.0	6,332.9	6,389.2	6,335.1	24.4	17.1	92.25	434.0	-314.8	613.4	581.0	32.42	18.918	
6,500.0	6,380.9	6,440.6	6,386.2	24.4	17.2	92.96	434.0	-308.2	613.7	581.1	32.60	18.824	
6,550.0	6,427.8	6,492.6	6,437.1	24.4	17.2	93.65	434.0	-297.8	614.2	581.4	32.75	18.755	
6,600.0	6,473.5	6,545.3	6,487.8	24.4	17.2	94.33	434.0	-283.5	614.7	581.8	32.86	18.707	
6,650.0	6,517.5	6,598.5	6,537.8	24.4	17.2	94.99	434.0	-265.4	615.3	582.3	32.95	18.676	
6,700.0	6,559.9	6,652.4	6,586.9	24.4	17.2	95.63	434.0	-243.3	615.9	582.9	33.02	18.653	
6,750.0	6,600.2	6,706.8	6,634.7	24.4	17.2	96.24	434.0	-217.3	616.6	583.5	33.10	18.628	
6,800.0	6,638.4	6,761.9	6,680.9	24.3	17.2	96.82	434.0	-187.4	617.3	584.1	33.21	18.590	
6,850.0	6,674.3	6,817.5	6,725.1	24.3	17.2	97.37	434.0	-153.6	618.1	584.7	33.37	18.523	
6,900.0	6,707.6	6,873.6	6,767.0	24.3	17.1	97.88	434.0	-116.2	618.8	585.2	33.61	18.411	
6,950.0	6,738.3	6,930.3	6,806.1	24.3	17.1	98.35	434.0	-75.2	619.5	585.6	33.96	18.241	
7,000.0	6,766.2	6,987.5	6,842.2	24.3	17.1	98.77	434.0	-30.8	620.2	585.7	34.46	17.998	
7,050.0	6,791.0	7,045.2	6,874.8	24.3	17.2	99.15	434.0	16.7	620.8	585.7	35.13	17.675	
7,100.0	6,812.8	7,103.2	6,903.7	24.3	17.3	99.48	434.0	67.0	621.4	585.4	35.99	17.267	
7,150.0	6,831.4	7,161.6	6,928.6	24.3	17.8	99.75	434.0	119.8	621.9	584.8	37.06	16.780	
7,200.0	6,846.8	7,220.3	6,949.2	24.4	18.4	99.97	434.0	174.7	622.3	584.0	38.34	16.230	
7,250.0	6,858.7	7,279.2	6,965.3	24.5	19.3	100.13	434.0	231.4	622.6	582.8	39.83	15.631	
7,300.0	6,867.3	7,338.3	6,976.7	24.7	20.2	100.23	434.0	289.3	622.8	581.3	41.50	15.007	
7,350.0	6,872.4	7,397.4	6,983.2	25.0	21.2	100.28	434.0	348.1	622.9	579.6	43.34	14.374	
7,398.1	6,874.0	7,453.3	6,985.0	25.4	22.3	100.27	434.0	404.0	622.9	577.7	45.21	13.777	
7,400.0	6,874.0	7,455.2	6,985.0	25.4	22.3	100.27	434.0	405.9	622.9	577.6	45.28	13.755	
7,405.6	6,874.0	7,460.9	6,985.0	25.5	22.4	100.27	434.0	411.5	622.9	577.4	45.49	13.692	
7,500.0	6,873.0	7,555.2	6,985.0	26.7	24.3	100.36	434.0	505.9	623.1	574.0	49.09	12.692	
7,600.0	6,871.9	7,655.2	6,985.0	28.4	26.4	100.45	434.0	605.9	623.2	570.1	53.18	11.719	
7,700.0	6,870.9	7,755.2	6,985.0	30.4	28.6	100.55	434.0	705.9	623.4	565.9	57.51	10.841	
7,800.0	6,869.8	7,855.2	6,985.0	32.5	31.0	100.64	434.0	805.9	623.6	561.6	62.03	10.054	
7,900.0	6,868.8	7,955.2	6,985.0	34.8	33.4	100.74	434.0	905.9	623.8	557.1	66.69	9.354	
8,000.0	6,867.7	8,055.2	6,985.0	37.1	35.8	100.83	434.0	1,005.8	624.0	552.5	71.48	8.730	
8,100.0	6,866.7	8,155.2	6,985.0	39.5	38.3	100.92	434.0	1,105.8	624.2	547.9	76.36	8.175	
8,200.0	6,865.6	8,255.2	6,985.0	42.0	40.9	101.02	434.0	1,205.8	624.4	543.1	81.32	7.679	
8,300.0	6,864.6	8,355.2	6,985.0	44.5	43.5	101.11	434.0	1,305.8	624.6	538.3	86.34	7.234	
8,400.0	6,863.6	8,455.2	6,985.0	47.0	46.1	101.21	434.0	1,405.8	624.8	533.4	91.41	6.835	
8,500.0	6,862.5	8,555.2	6,985.0	49.6	48.7	101.30	434.0	1,505.8	625.0	528.5	96.53	6.475	
8,600.0	6,861.5	8,655.2	6,985.0	52.2	51.3	101.40	434.0	1,605.8	625.2	523.5	101.69	6.149	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,700.0	6,860.4	8,755.2	6,985.0	54.8	54.0	101.49	434.0	1,705.8	625.4	518.6	106.87	5.852	
8,800.0	6,859.4	8,855.2	6,985.0	57.5	56.7	101.58	434.0	1,805.8	625.6	513.6	112.08	5.582	
8,900.0	6,858.3	8,955.2	6,985.0	60.1	59.4	101.68	434.0	1,905.8	625.9	508.5	117.31	5.335	
9,000.0	6,857.3	9,055.2	6,985.0	62.8	62.1	101.77	434.0	2,005.8	626.1	503.5	122.56	5.108	
9,100.0	6,856.2	9,155.2	6,985.0	65.5	64.8	101.86	434.0	2,105.8	626.3	498.4	127.83	4.899	
9,200.0	6,855.2	9,255.1	6,985.0	68.1	67.5	101.96	434.0	2,205.8	626.5	493.4	133.11	4.707	
9,300.0	6,854.1	9,355.1	6,985.0	70.8	70.2	102.05	434.0	2,305.8	626.7	488.3	138.40	4.528	
9,400.0	6,853.1	9,455.1	6,985.0	73.6	72.9	102.14	434.0	2,405.8	626.9	483.2	143.70	4.363	
9,500.0	6,852.1	9,555.1	6,985.0	76.3	75.7	102.24	434.0	2,505.8	627.1	478.1	149.01	4.209	
9,600.0	6,851.0	9,655.1	6,985.0	79.0	78.4	102.33	434.0	2,605.8	627.4	473.0	154.33	4.065	
9,700.0	6,850.0	9,755.1	6,985.0	81.7	81.2	102.42	434.0	2,705.8	627.6	467.9	159.65	3.931	
9,800.0	6,848.9	9,855.1	6,985.0	84.4	83.9	102.52	434.0	2,805.7	627.8	462.8	164.98	3.806	
9,900.0	6,847.9	9,955.1	6,985.0	87.2	86.7	102.61	434.0	2,905.7	628.0	457.7	170.31	3.688	
10,000.0	6,846.8	10,055.1	6,985.0	89.9	89.4	102.70	434.0	3,005.7	628.3	452.6	175.64	3.577	
10,100.0	6,845.8	10,155.1	6,985.0	92.7	92.2	102.80	434.0	3,105.7	628.5	447.5	180.98	3.473	
10,200.0	6,844.7	10,255.1	6,985.0	95.4	94.9	102.89	434.0	3,205.7	628.7	442.4	186.31	3.375	
10,300.0	6,843.7	10,355.1	6,985.0	98.2	97.7	102.98	434.0	3,305.7	629.0	437.3	191.65	3.282	
10,400.0	6,842.7	10,455.1	6,985.0	100.9	100.5	103.07	434.0	3,405.7	629.2	432.2	196.99	3.194	
10,500.0	6,841.6	10,555.1	6,985.0	103.7	103.2	103.17	434.0	3,505.7	629.4	427.1	202.33	3.111	
10,600.0	6,840.6	10,655.1	6,985.0	106.4	106.0	103.26	434.0	3,605.7	629.7	422.0	207.67	3.032	
10,700.0	6,839.5	10,755.1	6,985.0	109.2	108.8	103.35	434.0	3,705.7	629.9	416.9	213.01	2.957	
10,800.0	6,838.5	10,855.1	6,985.0	112.0	111.6	103.44	434.0	3,805.7	630.2	411.8	218.35	2.886	
10,900.0	6,837.4	10,955.1	6,985.0	114.7	114.3	103.54	434.0	3,905.7	630.4	406.7	223.69	2.818	
11,000.0	6,836.4	11,055.1	6,985.0	117.5	117.1	103.63	434.0	4,005.7	630.7	401.6	229.03	2.754	
11,100.0	6,835.4	11,155.0	6,985.0	120.3	119.9	103.72	434.0	4,105.7	630.9	396.5	234.36	2.692	
11,200.0	6,834.3	11,255.0	6,985.0	123.0	122.7	103.81	434.0	4,205.7	631.1	391.4	239.70	2.633	
11,300.0	6,833.3	11,355.0	6,985.0	125.8	125.5	103.90	434.0	4,305.7	631.4	386.4	245.03	2.577	
11,400.0	6,832.2	11,455.0	6,985.0	128.6	128.3	103.99	434.0	4,405.7	631.6	381.3	250.36	2.523	
11,500.0	6,831.2	11,555.0	6,985.0	131.4	131.0	104.09	434.0	4,505.7	631.9	376.2	255.69	2.471	
11,600.0	6,830.2	11,655.0	6,985.0	134.1	133.8	104.18	434.0	4,605.7	632.2	371.1	261.01	2.422	
11,700.0	6,829.1	11,755.0	6,985.0	136.9	136.6	104.27	434.0	4,705.6	632.4	366.1	266.34	2.374	
11,800.0	6,828.1	11,855.0	6,985.0	139.7	139.4	104.36	434.0	4,805.6	632.7	361.0	271.66	2.329	
11,900.0	6,827.0	11,955.0	6,985.0	142.5	142.2	104.45	434.0	4,905.6	632.9	356.0	276.97	2.285	
11,999.0	6,826.0	12,054.1	6,985.0	145.2	145.0	104.54	434.0	5,004.8	633.1	350.9	282.24	2.243 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	89.99	0.0	58.5	58.5				
100.0	100.0	100.0	100.0	0.1	0.1	89.99	0.0	58.5	58.5	58.3	0.19	300.994	
200.0	200.0	200.0	200.0	0.3	0.3	89.99	0.0	58.5	58.5	57.9	0.64	90.876	
300.0	300.0	300.0	300.0	0.5	0.5	89.99	0.0	58.5	58.5	57.4	1.09	53.517	
400.0	400.0	400.0	400.0	0.8	0.8	89.99	0.0	58.5	58.5	57.0	1.54	37.926	
500.0	500.0	500.0	500.0	1.0	1.0	89.99	0.0	58.5	58.5	56.5	1.99	29.369	
600.0	600.0	600.0	600.0	1.2	1.2	89.99	0.0	58.5	58.5	56.1	2.44	23.963 CC, ES	
700.0	700.0	700.0	700.0	1.4	1.4	108.21	0.0	58.5	59.0	56.2	2.89	20.427	
800.0	799.8	799.8	799.8	1.7	1.7	112.85	0.0	58.5	60.9	57.5	3.34	18.229	
900.0	899.5	899.5	899.5	1.9	1.9	119.89	0.0	58.5	64.8	61.0	3.80	17.064	
1,000.0	998.7	998.7	998.7	2.2	2.1	128.22	0.0	58.5	71.7	67.4	4.26	16.820	
1,100.0	1,097.5	1,098.7	1,098.7	2.5	2.3	137.78	-0.9	57.1	81.6	76.9	4.70	17.336	
1,200.0	1,195.6	1,197.5	1,197.4	2.8	2.5	148.16	-3.7	52.8	95.1	90.0	5.12	18.573	
1,228.9	1,223.8	1,225.8	1,225.5	2.9	2.6	151.12	-4.8	51.0	100.0	94.7	5.24	19.066	
1,300.0	1,293.3	1,294.9	1,294.4	3.2	2.7	158.02	-8.2	45.8	113.1	107.5	5.55	20.375	
1,400.0	1,390.9	1,391.1	1,389.9	3.6	2.9	166.49	-14.4	36.1	133.7	127.7	6.00	22.284	
1,500.0	1,488.5	1,486.1	1,483.8	4.0	3.2	173.75	-22.2	23.9	156.9	150.4	6.48	24.212	
1,600.0	1,586.1	1,581.0	1,577.2	4.4	3.5	179.77	-31.2	10.0	182.5	175.5	7.00	26.085	
1,700.0	1,683.7	1,676.0	1,670.8	4.8	3.8	-175.66	-40.1	-3.9	209.6	202.1	7.54	27.804	
1,800.0	1,781.3	1,771.1	1,764.4	5.3	4.1	-172.14	-49.1	-17.9	237.7	229.6	8.10	29.348	
1,900.0	1,878.9	1,866.1	1,858.0	5.7	4.4	-169.35	-58.1	-31.8	266.5	257.8	8.67	30.722	
2,000.0	1,976.5	1,961.2	1,951.6	6.1	4.7	-167.11	-67.0	-45.8	295.7	286.4	9.26	31.935	
2,100.0	2,074.1	2,056.2	2,045.1	6.6	5.1	-165.27	-76.0	-59.8	325.3	315.4	9.85	33.018	
2,200.0	2,171.7	2,151.3	2,138.7	7.0	5.4	-163.73	-85.0	-73.7	355.1	344.6	10.45	33.979	
2,300.0	2,269.3	2,246.3	2,232.3	7.5	5.8	-162.43	-93.9	-87.7	385.1	374.1	11.05	34.838	
2,400.0	2,366.9	2,341.4	2,325.9	7.9	6.1	-161.32	-102.9	-101.6	415.3	403.6	11.66	35.607	
2,500.0	2,464.5	2,436.4	2,419.5	8.4	6.5	-160.36	-111.9	-115.6	445.6	433.3	12.28	36.299	
2,600.0	2,562.1	2,531.5	2,513.1	8.9	6.9	-159.52	-120.8	-129.5	476.0	463.1	12.89	36.925	
2,700.0	2,659.7	2,626.5	2,606.7	9.3	7.2	-158.78	-129.8	-143.5	506.5	493.0	13.51	37.492	
2,800.0	2,757.3	2,721.5	2,700.3	9.8	7.6	-158.12	-138.8	-157.4	537.0	522.9	14.13	38.008	
2,900.0	2,854.9	2,816.6	2,793.9	10.2	8.0	-157.54	-147.7	-171.4	567.7	552.9	14.75	38.479	
3,000.0	2,952.5	2,911.6	2,887.4	10.7	8.3	-157.01	-156.7	-185.3	598.3	582.9	15.38	38.911	
3,100.0	3,050.1	3,006.7	2,981.0	11.1	8.7	-156.54	-165.7	-199.3	629.0	613.0	16.00	39.309	
3,200.0	3,147.7	3,101.7	3,074.6	11.6	9.1	-156.11	-174.6	-213.3	659.7	643.1	16.63	39.675	
3,300.0	3,245.3	3,196.8	3,168.2	12.1	9.5	-155.71	-183.6	-227.2	690.5	673.3	17.26	40.013	
3,400.0	3,342.9	3,291.8	3,261.8	12.5	9.8	-155.36	-192.6	-241.2	721.3	703.4	17.89	40.327	
3,500.0	3,440.5	3,386.9	3,355.4	13.0	10.2	-155.03	-201.5	-255.1	752.1	733.6	18.52	40.619	
3,600.0	3,538.1	3,481.9	3,449.0	13.4	10.6	-154.72	-210.5	-269.1	783.0	763.8	19.15	40.890	
3,700.0	3,635.7	3,577.0	3,542.6	13.9	11.0	-154.44	-219.5	-283.0	813.8	794.0	19.78	41.144	
3,800.0	3,733.3	3,693.9	3,658.1	14.4	11.3	-154.24	-229.3	-298.4	843.5	823.1	20.40	41.354	
3,900.0	3,830.9	3,813.8	3,777.1	14.8	11.6	-154.31	-236.7	-309.9	870.6	849.6	20.98	41.505	
4,000.0	3,928.5	3,935.2	3,898.2	15.3	11.9	-154.63	-241.5	-317.4	895.0	873.5	21.52	41.595	
4,100.0	4,026.1	4,057.8	4,020.8	15.7	12.1	-155.18	-243.5	-320.5	916.7	894.7	22.02	41.630	
4,200.0	4,123.7	4,160.7	4,123.7	16.2	12.2	-155.76	-243.6	-320.6	936.7	914.2	22.48	41.670	
4,300.0	4,221.3	4,258.3	4,221.3	16.7	12.4	-156.30	-243.6	-320.6	956.7	933.7	22.93	41.721	
4,400.0	4,318.9	4,355.9	4,318.9	17.1	12.5	-156.81	-243.6	-320.6	976.7	953.4	23.38	41.774	
4,500.0	4,416.5	4,453.5	4,416.5	17.6	12.7	-157.30	-243.6	-320.6	996.9	973.0	23.83	41.829	
4,600.0	4,514.1	4,551.1	4,514.1	18.1	12.8	-157.77	-243.6	-320.6	1,017.1	992.8	24.28	41.885	
4,700.0	4,611.7	4,648.7	4,611.7	18.5	13.0	-158.22	-243.6	-320.6	1,037.3	1,012.6	24.73	41.942	
4,800.0	4,709.3	4,746.3	4,709.3	19.0	13.1	-158.66	-243.6	-320.6	1,057.6	1,032.4	25.18	41.999	
4,900.0	4,806.9	4,843.9	4,806.9	19.4	13.3	-159.08	-243.6	-320.6	1,078.0	1,052.4	25.63	42.056	
5,000.0	4,904.5	4,941.5	4,904.5	19.9	13.4	-159.48	-243.6	-320.6	1,098.4	1,072.3	26.08	42.113	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	5,039.1	5,002.1	20.4	13.6	-159.87	-243.6	-320.6	1,118.9	1,092.4	26.53	42.170	
5,200.0	5,099.7	5,136.7	5,099.7	20.8	13.8	-160.25	-243.6	-320.6	1,139.4	1,112.5	26.98	42.226	
5,300.0	5,197.3	5,234.3	5,197.3	21.3	13.9	-160.61	-243.6	-320.6	1,160.0	1,132.6	27.44	42.281	
5,400.0	5,294.9	5,331.9	5,294.9	21.8	14.1	-160.96	-243.6	-320.6	1,180.6	1,152.7	27.89	42.336	
5,500.0	5,392.5	5,429.5	5,392.5	22.2	14.2	-161.30	-243.6	-320.6	1,201.3	1,172.9	28.34	42.390	
5,600.0	5,490.1	5,527.1	5,490.1	22.7	14.4	-161.63	-243.6	-320.6	1,222.0	1,193.2	28.79	42.443	
5,614.2	5,504.0	5,541.0	5,504.0	22.7	14.4	-161.67	-243.6	-320.6	1,224.9	1,196.1	28.86	42.450	
5,700.0	5,587.9	5,625.0	5,587.9	23.1	14.6	-162.03	-243.6	-320.6	1,241.5	1,212.2	29.29	42.388	
5,800.0	5,686.4	5,723.5	5,686.4	23.4	14.8	-162.37	-243.6	-320.6	1,257.8	1,228.1	29.73	42.303	
5,900.0	5,785.5	5,822.5	5,785.5	23.7	14.9	-162.64	-243.6	-320.6	1,270.9	1,240.8	30.14	42.160	
6,000.0	5,885.0	5,922.0	5,885.0	23.9	15.1	-162.83	-243.6	-320.6	1,280.7	1,250.1	30.52	41.961	
6,100.0	5,984.7	6,021.8	5,984.7	24.1	15.3	-162.96	-243.6	-320.6	1,287.1	1,256.2	30.86	41.709	
6,200.0	6,084.7	6,121.9	6,084.9	24.2	15.5	-163.03	-243.6	-320.3	1,290.2	1,259.1	31.15	41.414	
6,243.1	6,127.8	6,165.4	6,128.3	24.3	15.5	-179.75	-243.6	-317.8	1,290.5	1,253.0	37.52	34.399	
6,273.1	6,157.8	6,195.4	6,158.1	24.3	15.5	-179.89	-243.6	-314.6	1,290.5	1,252.9	37.61	34.316	
6,292.0	6,176.7	6,214.1	6,176.7	24.3	15.6	90.00	-243.6	-311.9	1,290.5	1,259.1	31.35	41.167	
6,300.0	6,184.7	6,222.1	6,184.5	24.3	15.6	89.95	-243.6	-310.7	1,290.5	1,259.1	31.36	41.149	
6,350.0	6,234.5	6,271.4	6,232.8	24.4	15.6	89.67	-243.6	-300.8	1,290.5	1,259.1	31.43	41.066	
6,400.0	6,284.0	6,320.3	6,279.9	24.4	15.6	89.39	-243.6	-287.8	1,290.6	1,259.1	31.46	41.025	
6,450.0	6,332.9	6,368.7	6,325.6	24.4	15.6	89.12	-243.6	-271.8	1,290.6	1,259.2	31.47	41.015	
6,500.0	6,380.9	6,416.8	6,369.8	24.4	15.6	88.85	-243.6	-252.9	1,290.8	1,259.3	31.46	41.024	
6,550.0	6,427.8	6,464.5	6,412.3	24.4	15.6	88.58	-243.6	-231.2	1,290.9	1,259.4	31.46	41.039	
6,600.0	6,473.5	6,511.8	6,452.9	24.4	15.5	88.33	-243.6	-206.9	1,291.1	1,259.6	31.46	41.042	
6,650.0	6,517.5	6,558.8	6,491.6	24.4	15.5	88.08	-243.6	-180.3	1,291.2	1,259.7	31.48	41.015	
6,700.0	6,559.9	6,605.5	6,528.2	24.4	15.5	87.84	-243.6	-151.3	1,291.4	1,259.9	31.55	40.938	
6,750.0	6,600.2	6,651.9	6,562.7	24.4	15.6	87.61	-243.6	-120.2	1,291.6	1,260.0	31.67	40.787	
6,800.0	6,638.4	6,698.0	6,594.8	24.3	15.6	87.39	-243.6	-87.2	1,291.8	1,260.0	31.87	40.540	
6,850.0	6,674.3	6,743.9	6,624.6	24.3	15.7	87.19	-243.6	-52.3	1,292.1	1,259.9	32.16	40.174	
6,900.0	6,707.6	6,789.5	6,652.0	24.3	15.9	86.99	-243.6	-15.9	1,292.3	1,259.7	32.57	39.678	
6,950.0	6,738.3	6,834.9	6,676.9	24.3	16.1	86.82	-243.6	22.1	1,292.5	1,259.4	33.10	39.046	
7,000.0	6,766.2	6,880.1	6,699.2	24.3	16.4	86.65	-243.6	61.4	1,292.7	1,258.9	33.77	38.277	
7,050.0	6,791.0	6,925.1	6,719.0	24.3	16.8	86.50	-243.6	101.8	1,292.9	1,258.3	34.59	37.381	
7,100.0	6,812.8	6,970.0	6,736.1	24.3	17.3	86.37	-243.6	143.3	1,293.1	1,257.5	35.55	36.374	
7,150.0	6,831.4	7,014.7	6,750.5	24.3	17.8	86.25	-243.6	185.6	1,293.3	1,256.6	36.66	35.280	
7,200.0	6,846.8	7,059.3	6,762.3	24.4	18.5	86.15	-243.6	228.7	1,293.4	1,255.5	37.90	34.123	
7,250.0	6,858.7	7,103.8	6,771.3	24.5	19.1	86.07	-243.6	272.2	1,293.5	1,254.3	39.28	32.931	
7,300.0	6,867.3	7,150.0	6,777.8	24.7	19.9	86.00	-243.6	317.9	1,293.6	1,252.8	40.80	31.705	
7,350.0	6,872.4	7,192.6	6,781.1	25.0	20.7	85.95	-243.6	360.4	1,293.7	1,251.4	42.37	30.534	
7,400.0	6,874.0	7,237.5	6,781.9	25.4	21.5	85.92	-243.6	405.3	1,293.8	1,249.7	44.06	29.366	
7,405.6	6,874.0	7,243.1	6,781.9	25.5	21.6	85.92	-243.6	410.9	1,293.8	1,249.5	44.26	29.228	
7,500.0	6,873.0	7,337.5	6,781.3	26.7	23.5	85.94	-243.6	505.3	1,293.7	1,245.8	47.94	26.988	
7,600.0	6,871.9	7,437.5	6,780.6	28.4	25.6	85.95	-243.6	605.3	1,293.7	1,241.6	52.12	24.820	
7,700.0	6,870.9	7,537.5	6,780.0	30.4	27.9	85.97	-243.6	705.3	1,293.7	1,237.1	56.56	22.874	
7,800.0	6,869.8	7,637.5	6,779.3	32.5	30.3	85.99	-243.6	805.3	1,293.7	1,232.5	61.18	21.144	
7,900.0	6,868.8	7,737.5	6,778.6	34.8	32.7	86.00	-243.6	905.3	1,293.6	1,227.7	65.96	19.612	
8,000.0	6,867.7	7,837.5	6,778.0	37.1	35.2	86.02	-243.6	1,005.3	1,293.6	1,222.7	70.86	18.256	
8,100.0	6,866.7	7,937.5	6,777.3	39.5	37.7	86.04	-243.6	1,105.3	1,293.6	1,217.7	75.86	17.052	
8,200.0	6,865.6	8,037.5	6,776.6	42.0	40.2	86.05	-243.6	1,205.2	1,293.6	1,212.6	80.94	15.982	
8,300.0	6,864.6	8,137.5	6,776.0	44.5	42.8	86.07	-243.6	1,305.2	1,293.5	1,207.4	86.08	15.027	
8,400.0	6,863.6	8,237.5	6,775.3	47.0	45.5	86.09	-243.6	1,405.2	1,293.5	1,202.2	91.28	14.171	
8,500.0	6,862.5	8,337.5	6,774.6	49.6	48.1	86.10	-243.6	1,505.2	1,293.5	1,197.0	96.52	13.401	
8,600.0	6,861.5	8,437.5	6,774.0	52.2	50.8	86.12	-243.6	1,605.2	1,293.5	1,191.6	101.81	12.705	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - KINZER 28H-202 - 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	
8,700.0	6,860.4	8,537.5	6,773.3	54.8	53.4	86.14	-243.6	1,705.2	1,293.4	1,186.3	107.12	12.074	
8,800.0	6,859.4	8,637.5	6,772.6	57.5	56.1	86.15	-243.6	1,805.2	1,293.4	1,180.9	112.47	11.500	
8,900.0	6,858.3	8,737.5	6,772.0	60.1	58.8	86.17	-243.6	1,905.2	1,293.4	1,175.5	117.84	10.976	
9,000.0	6,857.3	8,837.5	6,771.3	62.8	61.5	86.19	-243.6	2,005.2	1,293.3	1,170.1	123.23	10.495	
9,100.0	6,856.2	8,937.5	6,770.6	65.5	64.2	86.20	-243.6	2,105.2	1,293.3	1,164.7	128.64	10.054	
9,200.0	6,855.2	9,037.5	6,769.9	68.1	67.0	86.22	-243.6	2,205.2	1,293.3	1,159.2	134.07	9.647	
9,300.0	6,854.1	9,137.5	6,769.3	70.8	69.7	86.24	-243.6	2,305.2	1,293.3	1,153.8	139.51	9.270	
9,400.0	6,853.1	9,237.5	6,768.6	73.6	72.4	86.25	-243.6	2,405.2	1,293.2	1,148.3	144.96	8.921	
9,500.0	6,852.1	9,337.5	6,767.9	76.3	75.2	86.27	-243.6	2,505.2	1,293.2	1,142.8	150.43	8.597	
9,600.0	6,851.0	9,437.5	6,767.3	79.0	77.9	86.29	-243.6	2,605.2	1,293.2	1,137.3	155.90	8.295	
9,700.0	6,850.0	9,537.5	6,766.6	81.7	80.7	86.30	-243.6	2,705.2	1,293.2	1,131.8	161.39	8.013	
9,800.0	6,848.9	9,637.5	6,765.9	84.4	83.4	86.32	-243.6	2,805.2	1,293.2	1,126.3	166.88	7.749	
9,900.0	6,847.9	9,737.5	6,765.2	87.2	86.2	86.34	-243.6	2,905.2	1,293.1	1,120.7	172.38	7.502	
10,000.0	6,846.8	9,837.5	6,764.6	89.9	88.9	86.35	-243.6	3,005.2	1,293.1	1,115.2	177.89	7.269	
10,100.0	6,845.8	9,937.5	6,763.9	92.7	91.7	86.37	-243.6	3,105.2	1,293.1	1,109.7	183.40	7.050	
10,200.0	6,844.7	10,037.5	6,763.2	95.4	94.5	86.38	-243.6	3,205.2	1,293.1	1,104.1	188.92	6.844	
10,300.0	6,843.7	10,137.5	6,762.5	98.2	97.2	86.40	-243.6	3,305.2	1,293.0	1,098.6	194.45	6.650	
10,400.0	6,842.7	10,237.5	6,761.9	100.9	100.0	86.42	-243.6	3,405.2	1,293.0	1,093.0	199.98	6.466	
10,500.0	6,841.6	10,337.5	6,761.2	103.7	102.8	86.43	-243.6	3,505.2	1,293.0	1,087.5	205.52	6.291	
10,600.0	6,840.6	10,437.5	6,760.5	106.4	105.6	86.45	-243.6	3,605.2	1,293.0	1,081.9	211.05	6.126	
10,700.0	6,839.5	10,537.5	6,759.8	109.2	108.3	86.47	-243.6	3,705.2	1,292.9	1,076.3	216.60	5.969	
10,800.0	6,838.5	10,637.5	6,759.2	112.0	111.1	86.48	-243.6	3,805.2	1,292.9	1,070.8	222.14	5.820	
10,900.0	6,837.4	10,737.5	6,758.5	114.7	113.9	86.50	-243.6	3,905.2	1,292.9	1,065.2	227.69	5.678	
11,000.0	6,836.4	10,837.5	6,757.8	117.5	116.7	86.51	-243.6	4,005.2	1,292.9	1,059.6	233.25	5.543	
11,100.0	6,835.4	10,937.5	6,757.1	120.3	119.5	86.53	-243.6	4,105.2	1,292.8	1,054.0	238.80	5.414	
11,200.0	6,834.3	11,037.5	6,756.4	123.0	122.3	86.55	-243.6	4,205.2	1,292.8	1,048.5	244.36	5.291	
11,300.0	6,833.3	11,137.5	6,755.8	125.8	125.0	86.56	-243.6	4,305.1	1,292.8	1,042.9	249.92	5.173	
11,400.0	6,832.2	11,237.5	6,755.1	128.6	127.8	86.58	-243.6	4,405.1	1,292.8	1,037.3	255.49	5.060	
11,500.0	6,831.2	11,337.5	6,754.4	131.4	130.6	86.59	-243.6	4,505.1	1,292.8	1,031.7	261.05	4.952	
11,600.0	6,830.2	11,437.5	6,753.7	134.1	133.4	86.61	-243.6	4,605.1	1,292.7	1,026.1	266.62	4.849	
11,700.0	6,829.1	11,537.5	6,753.0	136.9	136.2	86.63	-243.6	4,705.1	1,292.7	1,020.5	272.19	4.749	
11,800.0	6,828.1	11,637.5	6,752.4	139.7	139.0	86.64	-243.6	4,805.1	1,292.7	1,014.9	277.76	4.654	
11,900.0	6,827.0	11,737.5	6,751.7	142.5	141.8	86.66	-243.6	4,905.1	1,292.7	1,009.3	283.34	4.562	
11,999.0	6,826.0	11,836.5	6,751.0	145.2	144.5	86.67	-243.6	5,004.2	1,292.6	1,003.8	288.86	4.475 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	44.6	44.6				
100.0	100.0	100.0	100.0	0.1	0.1	90.00	0.0	44.6	44.6	44.4	0.19	229.329	
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	44.6	44.6	43.9	0.64	69.239	
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	44.6	44.6	43.5	1.09	40.775	
400.0	400.0	400.0	400.0	0.8	0.8	90.00	0.0	44.6	44.6	43.0	1.54	28.896	
500.0	500.0	500.0	500.0	1.0	1.0	90.00	0.0	44.6	44.6	42.6	1.99	22.377	
600.0	600.0	600.0	600.0	1.2	1.2	90.00	0.0	44.6	44.6	42.1	2.44	18.258 CC, ES	
700.0	700.0	700.0	700.0	1.4	1.4	108.72	0.0	44.6	45.1	42.2	2.89	15.609	
800.0	799.8	799.8	799.8	1.7	1.7	114.72	0.0	44.6	47.1	43.7	3.34	14.090	
900.0	899.5	899.5	899.5	1.9	1.9	123.50	0.0	44.6	51.3	47.5	3.80	13.524	
1,000.0	998.7	1,000.7	1,000.7	2.2	2.1	133.86	0.4	42.9	57.3	53.0	4.25	13.486	
1,100.0	1,097.5	1,101.8	1,101.6	2.5	2.3	145.12	1.7	37.7	64.3	59.6	4.68	13.717	
1,200.0	1,195.6	1,202.5	1,201.9	2.8	2.6	156.58	3.9	29.1	73.4	68.3	5.12	14.351	
1,228.9	1,223.8	1,231.5	1,230.7	2.9	2.6	159.82	4.7	26.0	76.7	71.4	5.25	14.614	
1,300.0	1,293.3	1,302.8	1,301.5	3.2	2.8	167.37	6.9	17.2	84.9	79.4	5.57	15.237	
1,400.0	1,390.9	1,402.9	1,400.3	3.6	3.1	177.08	10.8	1.9	96.8	90.7	6.08	15.916	
1,500.0	1,488.5	1,502.6	1,498.1	4.0	3.4	-173.90	15.5	-16.6	109.3	102.6	6.67	16.384	
1,600.0	1,586.1	1,600.3	1,593.8	4.4	3.8	-166.25	20.5	-36.3	123.3	116.0	7.33	16.813	
1,700.0	1,683.7	1,698.1	1,689.4	4.8	4.1	-160.21	25.4	-56.0	139.1	131.0	8.05	17.272	
1,800.0	1,781.3	1,795.9	1,785.1	5.3	4.5	-155.42	30.4	-75.8	156.1	147.2	8.80	17.724	
1,900.0	1,878.9	1,893.7	1,880.7	5.7	4.9	-151.59	35.4	-95.5	173.9	164.3	9.58	18.153	
2,000.0	1,976.5	1,991.5	1,976.4	6.1	5.3	-148.47	40.4	-115.2	192.4	182.0	10.37	18.552	
2,100.0	2,074.1	2,089.3	2,072.0	6.6	5.7	-145.90	45.4	-134.9	211.3	200.1	11.17	18.919	
2,200.0	2,171.7	2,187.1	2,167.7	7.0	6.2	-143.75	50.3	-154.6	230.6	218.6	11.98	19.255	
2,300.0	2,269.3	2,284.8	2,263.3	7.5	6.6	-141.93	55.3	-174.3	250.1	237.4	12.79	19.563	
2,400.0	2,366.9	2,382.6	2,359.0	7.9	7.0	-140.38	60.3	-194.0	269.9	256.3	13.60	19.845	
2,500.0	2,464.5	2,480.4	2,454.6	8.4	7.4	-139.04	65.3	-213.7	289.8	275.4	14.42	20.103	
2,600.0	2,562.1	2,578.2	2,550.3	8.9	7.9	-137.87	70.3	-233.4	309.9	294.6	15.24	20.339	
2,700.0	2,659.7	2,676.0	2,645.9	9.3	8.3	-136.84	75.3	-253.1	330.0	314.0	16.06	20.556	
2,800.0	2,757.3	2,775.9	2,743.8	9.8	8.6	-136.10	80.1	-272.2	350.0	333.3	16.79	20.848	
2,900.0	2,854.9	2,876.7	2,843.3	10.2	8.9	-135.96	84.1	-288.2	369.4	351.9	17.46	21.153	
3,000.0	2,952.5	2,977.7	2,943.5	10.7	9.2	-136.36	87.3	-300.7	388.0	369.9	18.08	21.458	
3,100.0	3,050.1	3,078.8	3,044.1	11.1	9.4	-137.22	89.6	-309.9	405.9	387.2	18.64	21.774	
3,200.0	3,147.7	3,179.5	3,144.7	11.6	9.6	-138.49	91.0	-315.5	423.3	404.1	19.14	22.116	
3,300.0	3,245.3	3,279.8	3,244.9	12.1	9.8	-140.10	91.6	-317.8	440.3	420.7	19.57	22.498	
3,400.0	3,342.9	3,377.7	3,342.9	12.5	9.9	-141.84	91.6	-317.8	457.4	437.4	19.98	22.897	
3,500.0	3,440.5	3,475.3	3,440.5	13.0	10.1	-143.45	91.6	-317.8	474.9	454.5	20.38	23.302	
3,600.0	3,538.1	3,572.9	3,538.1	13.4	10.3	-144.94	91.6	-317.8	492.7	471.9	20.78	23.712	
3,700.0	3,635.7	3,670.5	3,635.7	13.9	10.4	-146.34	91.6	-317.8	510.8	489.6	21.17	24.122	
3,800.0	3,733.3	3,768.1	3,733.3	14.4	10.6	-147.63	91.6	-317.8	529.2	507.6	21.57	24.532	
3,900.0	3,830.9	3,865.7	3,830.9	14.8	10.7	-148.85	91.6	-317.8	547.8	525.8	21.97	24.937	
4,000.0	3,928.5	3,963.3	3,928.5	15.3	10.9	-149.98	91.6	-317.8	566.7	544.3	22.37	25.338	
4,100.0	4,026.1	4,060.9	4,026.1	15.7	11.1	-151.04	91.6	-317.8	585.7	563.0	22.76	25.732	
4,200.0	4,123.7	4,158.5	4,123.7	16.2	11.2	-152.03	91.6	-317.8	605.0	581.8	23.16	26.118	
4,300.0	4,221.3	4,256.1	4,221.3	16.7	11.4	-152.96	91.6	-317.8	624.4	600.8	23.57	26.497	
4,400.0	4,318.9	4,353.7	4,318.9	17.1	11.6	-153.84	91.6	-317.8	644.0	620.0	23.97	26.867	
4,500.0	4,416.5	4,451.3	4,416.5	17.6	11.8	-154.67	91.6	-317.8	663.7	639.3	24.37	27.228	
4,600.0	4,514.1	4,548.9	4,514.1	18.1	11.9	-155.44	91.6	-317.8	683.5	658.7	24.78	27.580	
4,700.0	4,611.7	4,646.5	4,611.7	18.5	12.1	-156.18	91.6	-317.8	703.4	678.3	25.19	27.922	
4,800.0	4,709.3	4,744.1	4,709.3	19.0	12.3	-156.87	91.6	-317.8	723.5	697.9	25.61	28.255	
4,900.0	4,806.9	4,841.7	4,806.9	19.4	12.5	-157.53	91.6	-317.8	743.6	717.6	26.02	28.579	
5,000.0	4,904.5	4,939.3	4,904.5	19.9	12.6	-158.15	91.6	-317.8	763.9	737.4	26.44	28.893	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,002.1	5,036.9	5,002.1	20.4	12.8	-158.74	91.6	-317.8	784.2	757.3	26.86	29.198	
5,200.0	5,099.7	5,134.5	5,099.7	20.8	13.0	-159.30	91.6	-317.8	804.6	777.3	27.28	29.495	
5,300.0	5,197.3	5,232.1	5,197.3	21.3	13.2	-159.83	91.6	-317.8	825.1	797.4	27.70	29.782	
5,400.0	5,294.9	5,329.7	5,294.9	21.8	13.4	-160.34	91.6	-317.8	845.6	817.5	28.13	30.061	
5,500.0	5,392.5	5,427.3	5,392.5	22.2	13.6	-160.83	91.6	-317.8	866.2	837.6	28.56	30.332	
5,600.0	5,490.1	5,524.9	5,490.1	22.7	13.7	-161.29	91.6	-317.8	886.8	857.8	28.99	30.594	
5,614.2	5,504.0	5,538.8	5,504.0	22.7	13.8	-161.35	91.6	-317.8	889.8	860.7	29.05	30.631	
5,700.0	5,587.9	5,622.8	5,587.9	23.1	13.9	-161.81	91.6	-317.8	906.3	876.9	29.44	30.787	
5,800.0	5,686.4	5,721.3	5,686.4	23.4	14.1	-162.24	91.6	-317.8	922.7	892.8	29.84	30.918	
5,900.0	5,785.5	5,820.4	5,785.5	23.7	14.3	-162.57	91.6	-317.8	935.7	905.5	30.22	30.965	
6,000.0	5,885.0	5,919.9	5,885.0	23.9	14.5	-162.82	91.6	-317.8	945.5	914.9	30.57	30.932	
6,100.0	5,984.7	6,019.6	5,984.7	24.1	14.7	-162.98	91.6	-317.8	951.9	921.0	30.88	30.822	
6,200.0	6,084.7	6,119.6	6,084.7	24.2	14.9	-163.05	91.6	-317.8	955.0	923.8	31.17	30.638	
6,243.1	6,127.8	6,162.7	6,127.8	24.3	15.0	-179.66	91.6	-317.8	955.3	918.3	37.04	25.793	
6,273.1	6,157.8	6,192.7	6,157.8	24.3	15.1	-179.66	91.6	-317.8	955.3	918.2	37.14	25.725	
6,300.0	6,184.7	6,219.8	6,184.9	24.3	15.1	90.34	91.6	-317.3	955.3	923.8	31.48	30.349	
6,350.0	6,234.5	6,270.2	6,235.1	24.4	15.2	90.33	91.6	-313.6	955.3	923.7	31.60	30.227	
6,400.0	6,284.0	6,320.6	6,285.0	24.4	15.2	90.33	91.6	-306.4	955.3	923.6	31.70	30.140	
6,450.0	6,332.9	6,370.9	6,334.2	24.4	15.2	90.33	91.6	-295.7	955.3	923.6	31.76	30.082	
6,500.0	6,380.9	6,421.3	6,382.6	24.4	15.3	90.32	91.6	-281.6	955.3	923.5	31.79	30.047	
6,550.0	6,427.8	6,471.7	6,429.8	24.4	15.3	90.31	91.6	-264.1	955.3	923.5	31.82	30.025	
6,600.0	6,473.5	6,522.1	6,475.7	24.4	15.3	90.30	91.6	-243.4	955.3	923.5	31.84	30.006	
6,650.0	6,517.5	6,572.4	6,520.0	24.4	15.3	90.29	91.6	-219.5	955.3	923.4	31.87	29.976	
6,700.0	6,559.9	6,622.7	6,562.5	24.4	15.3	90.28	91.6	-192.5	955.3	923.4	31.93	29.920	
6,750.0	6,600.2	6,673.1	6,603.0	24.4	15.4	90.26	91.6	-162.7	955.3	923.3	32.04	29.819	
6,800.0	6,638.4	6,723.4	6,641.2	24.3	15.5	90.25	91.6	-130.0	955.3	923.1	32.21	29.656	
6,850.0	6,674.3	6,773.6	6,677.1	24.3	15.6	90.23	91.6	-94.8	955.3	922.8	32.48	29.412	
6,900.0	6,707.6	6,823.9	6,710.4	24.3	15.8	90.21	91.6	-57.2	955.3	922.4	32.86	29.072	
6,950.0	6,738.3	6,874.1	6,741.0	24.3	16.1	90.20	91.6	-17.3	955.3	921.9	33.37	28.626	
7,000.0	6,766.2	6,924.4	6,768.7	24.3	16.4	90.18	91.6	24.5	955.3	921.3	34.03	28.070	
7,050.0	6,791.0	6,974.5	6,793.4	24.3	16.8	90.16	91.6	68.2	955.3	920.4	34.85	27.408	
7,100.0	6,812.8	7,024.7	6,814.9	24.3	17.4	90.14	91.6	113.5	955.3	919.5	35.84	26.652	
7,150.0	6,831.4	7,074.9	6,833.2	24.3	18.0	90.11	91.6	160.2	955.3	918.3	37.00	25.819	
7,200.0	6,846.8	7,125.0	6,848.2	24.4	18.7	90.09	91.6	208.0	955.3	917.0	38.32	24.932	
7,250.0	6,858.7	7,175.1	6,859.8	24.5	19.4	90.07	91.6	256.7	955.3	915.5	39.78	24.013	
7,300.0	6,867.3	7,225.1	6,868.0	24.7	20.3	90.04	91.6	306.1	955.3	913.9	41.38	23.085	
7,350.0	6,872.4	7,275.2	6,872.7	25.0	21.1	90.02	91.6	355.9	955.3	912.2	43.09	22.168	
7,400.0	6,874.0	7,325.2	6,874.0	25.4	22.1	90.00	91.6	405.9	955.3	910.4	44.89	21.279	
7,405.6	6,874.0	7,330.8	6,873.9	25.5	22.2	90.00	91.6	411.5	955.3	910.2	45.11	21.179	
7,500.0	6,873.0	7,425.2	6,873.0	26.7	24.1	90.00	91.6	505.9	955.3	906.5	48.79	19.580	
7,600.0	6,871.9	7,525.2	6,872.0	28.4	26.2	90.00	91.6	605.9	955.3	902.3	52.98	18.030	
7,700.0	6,870.9	7,625.2	6,871.0	30.4	28.4	90.01	91.6	705.9	955.3	897.9	57.42	16.636	
7,800.0	6,869.8	7,725.2	6,870.0	32.5	30.8	90.01	91.6	805.9	955.3	893.2	62.05	15.395	
7,900.0	6,868.8	7,825.2	6,869.1	34.8	33.2	90.02	91.6	905.9	955.3	888.5	66.84	14.293	
8,000.0	6,867.7	7,925.2	6,868.1	37.1	35.7	90.02	91.6	1,005.9	955.3	883.6	71.74	13.316	
8,100.0	6,866.7	8,025.2	6,867.1	39.5	38.2	90.03	91.6	1,105.8	955.3	878.6	76.74	12.448	
8,200.0	6,865.6	8,125.2	6,866.1	42.0	40.8	90.03	91.6	1,205.8	955.3	873.5	81.82	11.675	
8,300.0	6,864.6	8,225.2	6,865.2	44.5	43.3	90.03	91.6	1,305.8	955.3	868.3	86.97	10.984	
8,400.0	6,863.6	8,325.2	6,864.2	47.0	46.0	90.04	91.6	1,405.8	955.3	863.1	92.17	10.364	
8,500.0	6,862.5	8,425.2	6,863.2	49.6	48.6	90.04	91.6	1,505.8	955.3	857.9	97.42	9.806	
8,600.0	6,861.5	8,525.2	6,862.2	52.2	51.3	90.05	91.6	1,605.8	955.3	852.6	102.71	9.301	
8,700.0	6,860.4	8,636.4	6,861.1	54.8	54.2	90.05	91.7	1,717.0	955.2	846.9	108.33	8.818	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW SW SEC. 28 T5N R67W 6th P.M. - KINZER 28H-312 - ORIGINAL WELLBORE - PROPOSAL #2												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
8,800.0	6,859.4	8,835.5	6,859.2	57.5	59.5	90.06	104.4	1,915.6	948.8	832.6	116.27	8.161	
8,900.0	6,858.3	8,956.9	6,858.0	60.1	62.7	90.06	120.8	2,036.0	935.2	813.0	122.15	7.656	
9,000.0	6,857.3	9,056.0	6,857.0	62.8	65.3	90.07	134.6	2,134.0	921.3	793.8	127.46	7.228	
9,100.0	6,856.2	9,155.0	6,856.0	65.5	68.0	90.07	148.4	2,232.1	907.4	774.6	132.79	6.833	
9,200.0	6,855.2	9,254.0	6,855.1	68.1	70.6	90.08	162.2	2,330.1	893.4	755.3	138.13	6.468	
9,300.0	6,854.1	9,353.0	6,854.1	70.8	73.3	90.08	175.9	2,428.2	879.5	736.0	143.48	6.130	
9,400.0	6,853.1	9,425.9	6,853.4	73.6	75.2	90.08	185.2	2,500.4	866.9	718.7	148.16	5.851	
9,500.0	6,852.1	9,500.0	6,852.7	76.3	77.2	90.09	191.9	2,574.2	857.8	704.9	152.90	5.610	
9,600.0	6,851.0	9,563.5	6,852.0	79.0	79.0	90.09	195.3	2,637.6	852.2	694.8	157.37	5.415	
9,700.0	6,850.0	9,634.8	6,851.3	81.7	80.9	90.09	196.6	2,708.9	850.3	688.2	162.07	5.246	
9,734.4	6,849.6	9,666.1	6,851.0	82.6	81.8	90.10	196.6	2,740.2	850.3	686.4	163.88	5.188	
9,800.0	6,848.9	9,731.7	6,850.4	84.4	83.6	90.10	196.6	2,805.8	850.3	682.8	167.49	5.077	
9,900.0	6,847.9	9,831.7	6,849.4	87.2	86.4	90.10	196.6	2,905.8	850.3	677.3	172.99	4.915	
9,938.8	6,847.5	9,870.4	6,849.0	88.2	87.4	90.10	196.6	2,944.5	850.3	675.2	175.13	4.855	
10,000.0	6,846.8	9,900.0	6,848.7	89.9	88.3	90.10	196.4	2,974.1	851.1	673.5	177.63	4.791	
10,100.0	6,845.8	9,981.9	6,847.9	92.7	90.5	90.11	193.4	3,055.9	855.0	672.3	182.65	4.681	
10,200.0	6,844.7	10,050.7	6,847.2	95.4	92.4	90.11	188.1	3,124.5	862.6	675.3	187.32	4.605	
10,300.0	6,843.7	10,119.0	6,846.6	98.2	94.3	90.11	180.5	3,192.4	873.8	681.8	191.96	4.552	
10,400.0	6,842.7	10,209.7	6,845.7	100.9	96.8	90.11	167.9	3,282.2	887.6	690.4	197.23	4.500	
10,500.0	6,841.6	10,308.7	6,844.7	103.7	99.5	90.11	154.2	3,380.3	901.5	698.8	202.72	4.447	
10,600.0	6,840.6	10,407.8	6,843.7	106.4	102.2	90.12	140.4	3,478.3	915.4	707.2	208.22	4.396	
10,700.0	6,839.5	10,506.8	6,842.8	109.2	104.9	90.12	126.6	3,576.4	929.4	715.6	213.73	4.348	
10,800.0	6,838.5	10,605.8	6,841.8	112.0	107.7	90.12	112.8	3,674.5	943.3	724.0	219.24	4.303	
10,900.0	6,837.4	10,704.8	6,840.9	114.7	110.4	90.12	99.0	3,772.5	957.2	732.4	224.75	4.259	
11,000.0	6,836.4	10,877.8	6,839.2	117.5	115.2	90.13	80.5	3,944.4	968.4	736.0	232.32	4.168	
11,100.0	6,835.4	11,039.2	6,837.6	120.3	119.7	90.13	76.6	4,105.7	970.3	730.7	239.59	4.050	
11,176.7	6,834.6	11,115.8	6,836.9	122.4	121.8	90.14	76.6	4,182.4	970.3	726.4	243.85	3.979	
11,200.0	6,834.3	11,139.2	6,836.6	123.0	122.5	90.14	76.6	4,205.7	970.3	725.1	245.15	3.958	
11,300.0	6,833.3	11,239.2	6,835.7	125.8	125.2	90.14	76.6	4,305.7	970.3	719.5	250.71	3.870	
11,400.0	6,832.2	11,339.2	6,834.7	128.6	128.0	90.15	76.6	4,405.7	970.3	714.0	256.28	3.786	
11,500.0	6,831.2	11,450.6	6,833.6	131.4	131.1	90.15	76.8	4,517.1	970.2	708.0	262.17	3.701	
11,600.0	6,830.2	11,569.3	6,832.5	134.1	134.4	90.16	80.1	4,635.7	967.3	699.0	268.25	3.606	
11,700.0	6,829.1	11,669.2	6,831.6	136.9	137.2	90.16	83.2	4,735.6	964.1	690.3	273.81	3.521	
11,800.0	6,828.1	11,769.2	6,830.6	139.7	140.0	90.17	86.3	4,835.5	961.0	681.7	279.38	3.440	
11,900.0	6,827.0	11,869.1	6,829.7	142.5	142.8	90.18	89.4	4,935.4	957.9	673.0	284.94	3.362	
11,999.0	6,826.0	11,938.6	6,829.0	145.2	144.7	90.18	91.6	5,004.8	955.3	665.7	289.64	3.298 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB-EST @ 4797.5usft (Original Well ECoordinates are relative to: KINZER 28H-302

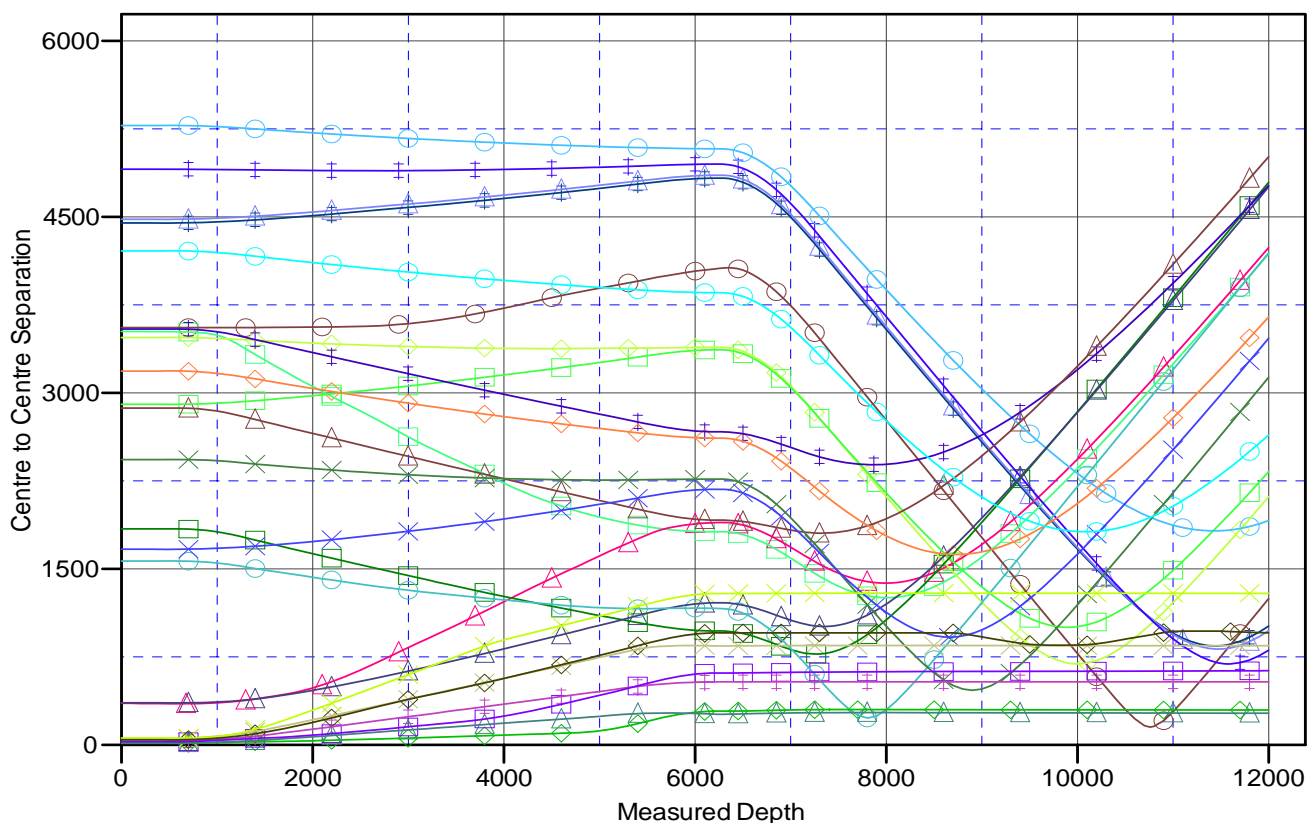
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.500000

Grid Convergence at Surface is: 0.38°

Ladder Plot



LEGEND

ING UNIT #1, Wellbore #1, Design #1 V0	EXIST VERT KINZER 13-28, Wellbore #1, Design #1 V0	KINZER 28G-232, ORIGINAL WEL
Wellbore #1, Wellbore #1 V0	EXIST VERT KINZER 28-2, Wellbore #1, Design #1 V0	KINZER 28G-332, ORIGINAL WEL
Wellbore #1, Wellbore #1 V0	EXIST VERT KINZER 28A, Wellbore #1, Design #1 V0	KINZER 28H-202, ORIGINAL WEL
Wellbore #1, Wellbore #1 V0	EXIST VERT KINZER 28B, Wellbore #1, Wellbore #1 V0	KINZER 28H-212, ORIGINAL WEL
i, Wellbore #1, Design #1 V0	EXIST VERT KINZER 28-1, Wellbore #1, Design #1 V0	KINZER 28H-432, ORIGINAL WEL
i, Wellbore #1, Design #1 V0	EXIST VERT MELLON 28-1, Wellbore #1, Design #1 V0	KINZER 28I-202, ORIGINAL WEL
i, Wellbore #1, Design #1 V0	EXIST VERT MELLON 28-2, Wellbore #1, Design #1 V0	KINZER 28I-312, ORIGINAL WEL
Wellbore #1, Design #1 V0	EXIST VERT MELLON 28-4, Wellbore #1, Design #1 V0	
Wellbore #1, Design #1 V0	EXIST VERT ROGER 1, Wellbore #1, Design #1 V0	



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28H-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R67W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28H-302	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB-EST @ 4797.5usft (Original Well ECoordinates are relative to: KINZER 28H-302

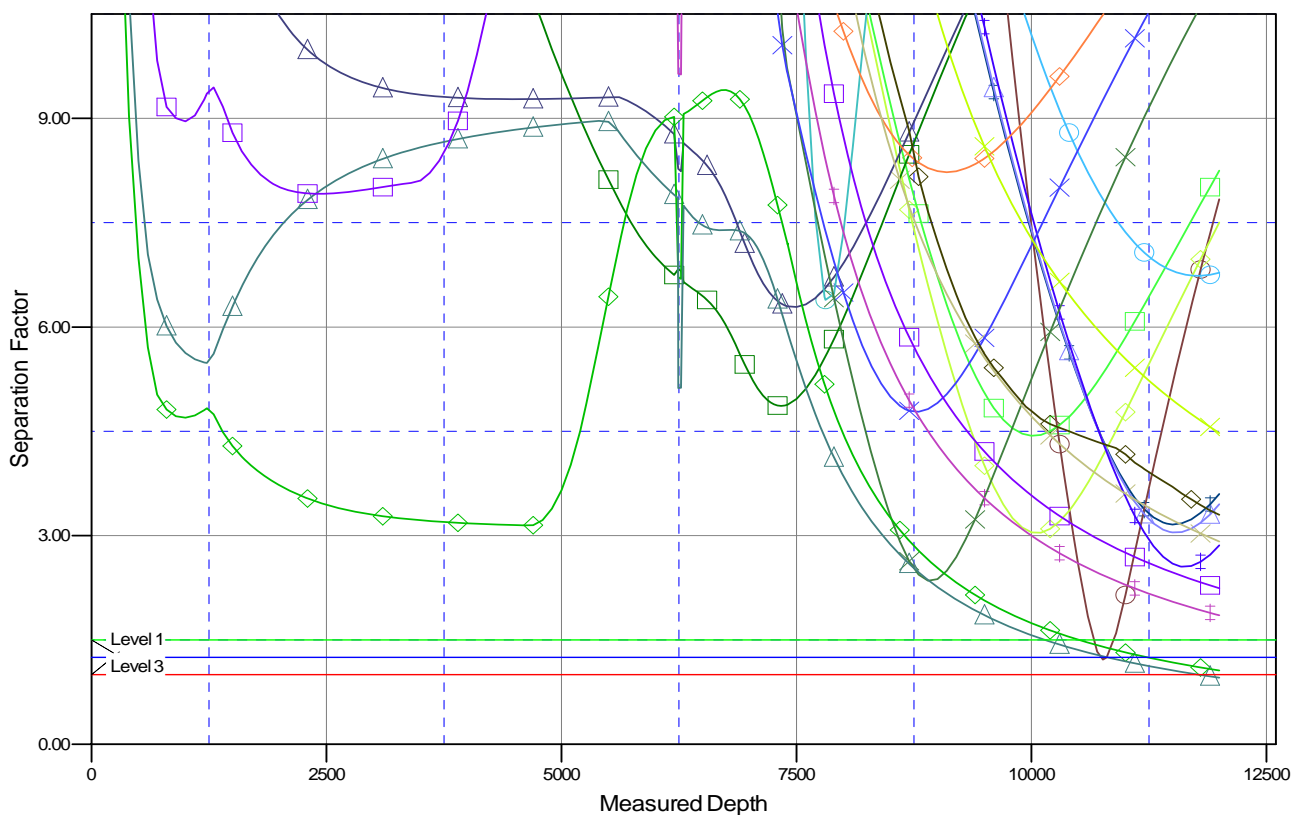
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.500000

Grid Convergence at Surface is: 0.38°

Separation Factor Plot



LEGEND

ING UNIT #1, Wellbore #1, Design #1 V0	EXIST VERT KINZER 13-28, Wellbore #1, Design #1 V0	KINZER 28G-232, ORIGINAL WEL
Wellbore #1, Wellbore #1 V0	EXIST VERT KINZER 28-2, Wellbore #1, Design #1 V0	KINZER 28G-332, ORIGINAL WEL
Wellbore #1, Wellbore #1 V0	EXIST VERT KINZER 28A, Wellbore #1, Design #1 V0	KINZER 28H-202, ORIGINAL WEL
Wellbore #1, Wellbore #1 V0	EXIST VERT KINZER 28B, Wellbore #1, Wellbore #1 V0	KINZER 28H-212, ORIGINAL WEL
i, Wellbore #1, Design #1 V0	EXIST VERT KINZER 28-1, Wellbore #1, Design #1 V0	KINZER 28H-432, ORIGINAL WEL
i, Wellbore #1, Design #1 V0	EXIST VERT MELLON 28-1, Wellbore #1, Design #1 V0	KINZER 28I-202, ORIGINAL WEL
i, Wellbore #1, Design #1 V0	EXIST VERT MELLON 28-2, Wellbore #1, Design #1 V0	KINZER 28I-312, ORIGINAL WEL
Wellbore #1, Design #1 V0	EXIST VERT MELLON 28-4, Wellbore #1, Design #1 V0	
Wellbore #1, Design #1 V0	EXIST VERT ROGER 1, Wellbore #1, Design #1 V0	