

PDC ENERGY

**WELD COUNTY, COLORADO
SW SW SEC. 28 T5N R67W 6th P.M.
KINZER 28I-312**

**ORIGINAL WELLBORE
PROPOSAL #2**

Anticollision Report

25 March, 2016



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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	11,938.6	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
SW SW SEC. 28 T5N R67W 6th P.M.						
ABDN VERT OSTER POOLING UNIT #1 - Wellbore #1 -	11,378.2	6,926.8	125.6	-140.5	0.472	Level 1, CC, ES, SF
EXIST DD BINDER 20-28 - Wellbore #1 - Wellbore #1	10,588.9	6,948.4	786.7	665.8	6.507	CC
EXIST DD BINDER 20-28 - Wellbore #1 - Wellbore #1	10,600.0	6,948.3	786.7	665.5	6.491	ES
EXIST DD BINDER 20-28 - Wellbore #1 - Wellbore #1	10,800.0	6,946.4	813.3	686.0	6.390	SF
EXIST DD KINZER 28KD - Wellbore #1 - Wellbore #1	7,930.9	7,065.5	2,209.6	2,157.6	42.505	CC
EXIST DD KINZER 28KD - Wellbore #1 - Wellbore #1	8,000.0	7,065.0	2,210.7	2,157.0	41.153	ES
EXIST DD KINZER 28KD - Wellbore #1 - Wellbore #1	9,900.0	7,054.8	2,877.9	2,773.7	27.601	SF
EXIST DD KINZER 28LD - Wellbore #1 - Wellbore #1	928.6	928.1	304.4	300.5	78.363	CC, ES
EXIST DD KINZER 28LD - Wellbore #1 - Wellbore #1	8,000.0	6,936.5	432.0	375.8	7.692	SF
EXIST VERT BINDER 10-28 - Wellbore #1 - Design #1	9,904.8	6,953.2	1,541.9	1,316.3	6.834	CC, ES
EXIST VERT BINDER 10-28 - Wellbore #1 - Design #1	10,000.0	6,952.2	1,547.2	1,319.3	6.789	SF
EXIST VERT BINDER 15-28 - Wellbore #1 - Design #1	9,829.6	6,903.9	152.7	-71.4	0.681	Level 1, CC, ES, SF
EXIST VERT BINDER 16-28 - Wellbore #1 - Design #1	11,408.8	6,868.5	153.3	-114.1	0.573	Level 1, CC, ES, SF
EXIST VERT BINDER 9-28 - Wellbore #1 - Design #1	11,574.4	6,927.0	1,658.7	1,387.2	6.110	CC
EXIST VERT BINDER 9-28 - Wellbore #1 - Design #1	11,600.0	6,926.7	1,658.9	1,386.7	6.095	ES
EXIST VERT BINDER 9-28 - Wellbore #1 - Design #1	11,900.0	6,923.9	1,690.4	1,409.9	6.027	SF
EXIST VERT HELEN 1 - Wellbore #1 - Design #1	11,363.8	6,954.0	2,794.5	2,528.5	10.507	CC
EXIST VERT HELEN 1 - Wellbore #1 - Design #1	11,500.0	6,952.7	2,796.5	2,526.8	10.370	ES
EXIST VERT HELEN 1 - Wellbore #1 - Design #1	11,938.6	6,948.5	2,838.3	2,556.5	10.073	SF
EXIST VERT KINZER 13-28 - Wellbore #1 - Design #1	7,191.7	6,898.4	1,729.9	1,572.3	10.972	CC
EXIST VERT KINZER 13-28 - Wellbore #1 - Design #1	7,250.0	6,906.3	1,730.9	1,572.1	10.899	ES
EXIST VERT KINZER 13-28 - Wellbore #1 - Design #1	7,600.0	6,906.8	1,777.3	1,611.3	10.706	SF
EXIST VERT KINZER 28-2 - Wellbore #1 - Design #1	7,276.0	6,865.3	55.2	-103.7	0.347	Level 1, CC, ES, SF
EXIST VERT KINZER 28A - Wellbore #1 - Design #1	7,797.0	6,947.8	3,343.9	3,172.8	19.549	CC
EXIST VERT KINZER 28A - Wellbore #1 - Design #1	7,900.0	6,946.8	3,345.4	3,171.9	19.275	ES
EXIST VERT KINZER 28A - Wellbore #1 - Design #1	9,600.0	6,930.2	3,704.0	3,485.8	16.979	SF
EXIST VERT KINZER 28B - Wellbore #1 - Wellbore #1	7,734.2	6,900.6	1,185.6	1,150.1	33.342	CC, ES
EXIST VERT KINZER 28B - Wellbore #1 - Wellbore #1	9,100.0	6,863.4	1,774.2	1,703.5	25.116	SF
EXIST VERT KIZNER 28-1 - Wellbore #1 - Design #1	7,248.0	6,948.1	2,760.9	2,601.7	17.343	CC
EXIST VERT KIZNER 28-1 - Wellbore #1 - Design #1	7,300.0	6,951.3	2,761.4	2,601.2	17.237	ES
EXIST VERT KIZNER 28-1 - Wellbore #1 - Design #1	8,500.0	6,940.0	3,031.5	2,842.5	16.042	SF
EXIST VERT MELLON 28-1 - Wellbore #1 - Design #1	9,021.8	6,926.9	1,395.7	1,193.5	6.901	CC, ES
EXIST VERT MELLON 28-1 - Wellbore #1 - Design #1	9,300.0	6,924.1	1,423.1	1,213.5	6.788	SF
EXIST VERT MELLON 28-2 - Wellbore #1 - Design #1	8,583.0	6,888.2	36.0	-154.7	0.189	Level 1, CC, ES, SF
EXIST VERT MELLON 28-4 - Wellbore #1 - Design #1	9,017.4	6,957.9	2,566.2	2,364.8	12.740	CC
EXIST VERT MELLON 28-4 - Wellbore #1 - Design #1	9,100.0	6,957.1	2,567.5	2,363.9	12.609	ES
EXIST VERT MELLON 28-4 - Wellbore #1 - Design #1	9,600.0	6,952.2	2,645.1	2,427.7	12.169	SF

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

Anticollision Report



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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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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	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 ROGER 1 - Wellbore #1 - Design #1	9,930.0	6,962.9	2,669.3	2,565.1	25.630	CC, ES
EXIST VERT ROGER 1 - Wellbore #1 - Design #1	11,938.6	6,943.5	3,370.7	3,210.8	21.081	SF
KINZER 28G-232 - ORIGINAL WELLBORE - PROPOSA	300.0	300.0	92.0	90.9	84.098	CC
KINZER 28G-232 - ORIGINAL WELLBORE - PROPOSA	400.0	399.5	92.2	90.7	59.730	ES
KINZER 28G-232 - ORIGINAL WELLBORE - PROPOSA	11,938.6	12,140.7	1,800.6	1,509.9	6.194	SF
KINZER 28G-332 - ORIGINAL WELLBORE - PROPOSA	400.0	400.0	75.2	73.7	48.762	CC
KINZER 28G-332 - ORIGINAL WELLBORE - PROPOSA	500.0	499.5	75.6	73.6	37.917	ES
KINZER 28G-332 - ORIGINAL WELLBORE - PROPOSA	11,938.6	12,133.9	1,492.8	1,202.5	5.142	SF
KINZER 28H-202 - ORIGINAL WELLBORE - PROPOSA	700.0	700.0	30.7	27.8	10.601	CC, ES
KINZER 28H-202 - ORIGINAL WELLBORE - PROPOSA	11,938.6	11,880.6	670.9	383.5	2.334	SF
KINZER 28H-212 - ORIGINAL WELLBORE - PROPOSA	500.0	500.0	61.3	59.3	30.768	CC
KINZER 28H-212 - ORIGINAL WELLBORE - PROPOSA	600.0	599.5	61.7	59.3	25.273	ES
KINZER 28H-212 - ORIGINAL WELLBORE - PROPOSA	11,938.6	11,971.4	1,219.7	929.9	4.208	SF
KINZER 28H-302 - ORIGINAL WELLBORE - PROPOSA	600.0	600.0	44.6	42.1	18.258	CC, ES
KINZER 28H-302 - ORIGINAL WELLBORE - PROPOSA	11,938.6	11,999.0	955.3	665.5	3.296	SF
KINZER 28H-432 - ORIGINAL WELLBORE - PROPOSA	800.0	800.0	16.7	13.4	5.004	CC, ES
KINZER 28H-432 - ORIGINAL WELLBORE - PROPOSA	11,938.6	12,054.0	376.3	111.5	1.421	Level 3, SF
KINZER 28I-202 - ORIGINAL WELLBORE - PROPOSAL	900.0	900.0	13.9	10.1	3.676	CC, ES
KINZER 28I-202 - ORIGINAL WELLBORE - PROPOSAL	11,938.6	11,836.6	344.1	62.1	1.220	Level 2, SF

Offset Design												Offset Site Error:	0.0 usft	
Survey Program: 0-INC												Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	92.5	92.5	0.0	0.0	87.37	202.2	4,400.1	4,404.8					
100.0	100.0	192.5	192.5	0.1	1.2	87.37	202.2	4,400.1	4,404.8	4,403.5	1.25	3,510.256		
200.0	200.0	292.5	292.5	0.3	3.4	87.37	202.2	4,400.1	4,404.8	4,401.1	3.68	1,196.739		
300.0	300.0	392.5	392.5	0.5	5.5	87.37	202.2	4,400.1	4,404.8	4,398.8	6.00	734.400		
400.0	400.0	492.5	492.5	0.8	7.5	87.37	202.2	4,400.1	4,404.8	4,396.5	8.27	532.806		
500.0	500.0	592.5	592.5	1.0	9.5	87.37	202.2	4,400.1	4,404.8	4,394.2	10.52	418.632		
600.0	600.0	692.5	692.5	1.2	11.5	87.37	202.2	4,400.1	4,404.8	4,392.0	12.77	344.937		
700.0	700.0	792.5	792.5	1.4	13.6	87.37	202.2	4,400.1	4,404.8	4,389.7	15.01	293.376		
800.0	800.0	892.5	892.5	1.7	15.6	87.37	202.2	4,400.1	4,404.8	4,387.5	17.26	255.258		
900.0	900.0	992.5	992.5	1.9	17.6	87.37	202.2	4,400.1	4,404.8	4,385.3	19.50	225.923		
1,000.0	1,000.0	1,092.5	1,092.5	2.1	19.6	163.18	202.2	4,400.1	4,406.4	4,384.7	21.71	202.930		
1,100.0	1,099.8	1,192.3	1,192.3	2.3	21.6	163.17	202.2	4,400.1	4,411.4	4,387.6	23.89	184.633		
1,200.0	1,199.5	1,292.0	1,292.0	2.6	23.6	163.16	202.2	4,400.1	4,419.8	4,393.8	26.04	169.758		
1,300.0	1,298.7	1,391.2	1,391.2	2.8	25.6	163.13	202.2	4,400.1	4,431.5	4,403.3	28.13	157.511		
1,400.0	1,397.5	1,490.0	1,490.0	3.1	27.6	163.10	202.2	4,400.1	4,446.4	4,416.3	30.18	147.323		
1,500.0	1,495.6	1,588.1	1,588.1	3.4	29.6	163.07	202.2	4,400.1	4,464.7	4,432.6	32.17	138.781		
1,600.0	1,593.4	1,685.9	1,685.9	3.8	31.6	163.14	202.2	4,400.1	4,484.7	4,450.3	34.34	130.589		
1,700.0	1,691.3	1,783.8	1,783.8	4.1	33.5	163.22	202.2	4,400.1	4,504.6	4,468.1	36.52	123.350		
1,800.0	1,789.1	1,881.6	1,881.6	4.5	35.5	163.30	202.2	4,400.1	4,524.5	4,485.8	38.70	116.912		
1,900.0	1,886.9	1,979.4	1,979.4	4.9	37.5	163.37	202.2	4,400.1	4,544.5	4,503.6	40.89	111.151		
2,000.0	1,984.7	2,077.2	2,077.2	5.4	39.4	163.45	202.2	4,400.1	4,564.5	4,521.4	43.07	105.967		
2,100.0	2,082.5	2,175.0	2,175.0	5.8	41.4	163.52	202.2	4,400.1	4,584.4	4,539.2	45.27	101.279		
2,200.0	2,180.3	2,272.8	2,272.8	6.2	43.4	163.59	202.2	4,400.1	4,604.4	4,556.9	47.46	97.019		
2,300.0	2,278.1	2,370.6	2,370.6	6.6	45.3	163.67	202.2	4,400.1	4,624.4	4,574.7	49.65	93.133		
2,400.0	2,376.0	2,468.5	2,468.5	7.1	47.3	163.74	202.2	4,400.1	4,644.4	4,592.5	51.85	89.574		

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

Anticollision Report



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Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,500.0	2,473.8	2,566.3	2,566.3	7.5	49.3	163.81	202.2	4,400.1	4,664.4	4,610.3	54.05	86.302		
2,600.0	2,571.6	2,664.1	2,664.1	8.0	51.2	163.88	202.2	4,400.1	4,684.4	4,628.1	56.25	83.285		
2,695.7	2,665.2	2,757.7	2,757.7	8.4	53.1	163.95	202.2	4,400.1	4,703.5	4,645.2	58.35	80.609		
2,700.0	2,669.4	2,761.9	2,761.9	8.4	53.2	163.96	202.2	4,400.1	4,704.4	4,645.9	58.46	80.473		
2,800.0	2,767.6	2,860.1	2,860.1	8.7	55.2	164.12	202.2	4,400.1	4,722.6	4,661.6	60.97	77.461		
2,900.0	2,866.4	2,958.9	2,958.9	9.0	57.2	164.25	202.2	4,400.1	4,737.5	4,674.1	63.44	74.683		
3,000.0	2,965.6	3,058.1	3,058.1	9.3	59.2	164.36	202.2	4,400.1	4,749.1	4,683.3	65.85	72.120		
3,100.0	3,065.3	3,157.8	3,157.8	9.5	61.2	164.43	202.2	4,400.1	4,757.4	4,689.2	68.20	69.752		
3,200.0	3,165.1	3,257.6	3,257.6	9.7	63.2	164.47	202.2	4,400.1	4,762.3	4,691.8	70.49	67.563		
3,295.7	3,260.8	3,353.3	3,353.3	9.8	65.1	88.67	202.2	4,400.1	4,763.8	4,689.0	74.78	63.707		
3,300.0	3,265.1	3,357.6	3,357.6	9.8	65.2	88.67	202.2	4,400.1	4,763.8	4,688.9	74.87	63.628		
3,400.0	3,365.1	3,457.6	3,457.6	10.0	67.2	88.67	202.2	4,400.1	4,763.8	4,686.8	77.04	61.836		
3,500.0	3,465.1	3,557.6	3,557.6	10.1	69.2	88.67	202.2	4,400.1	4,763.8	4,684.6	79.21	60.141		
3,600.0	3,565.1	3,657.6	3,657.6	10.3	71.2	88.67	202.2	4,400.1	4,763.8	4,682.4	81.39	58.534		
3,700.0	3,665.1	3,757.6	3,757.6	10.5	73.2	88.67	202.2	4,400.1	4,763.8	4,680.2	83.56	57.009		
3,800.0	3,765.1	3,857.6	3,857.6	10.6	75.2	88.67	202.2	4,400.1	4,763.8	4,678.1	85.74	55.561		
3,900.0	3,865.1	3,957.6	3,957.6	10.8	77.3	88.67	202.2	4,400.1	4,763.8	4,675.9	87.92	54.182		
4,000.0	3,965.1	4,057.6	4,057.6	11.0	79.3	88.67	202.2	4,400.1	4,763.8	4,673.7	90.10	52.870		
4,100.0	4,065.1	4,157.6	4,157.6	11.1	81.3	88.67	202.2	4,400.1	4,763.8	4,671.5	92.29	51.618		
4,200.0	4,165.1	4,257.6	4,257.6	11.3	83.3	88.67	202.2	4,400.1	4,763.8	4,669.3	94.48	50.423		
4,300.0	4,265.1	4,357.6	4,357.6	11.5	85.3	88.67	202.2	4,400.1	4,763.8	4,667.1	96.66	49.282		
4,400.0	4,365.1	4,457.6	4,457.6	11.7	87.3	88.67	202.2	4,400.1	4,763.8	4,664.9	98.85	48.190		
4,500.0	4,465.1	4,557.6	4,557.6	11.8	89.3	88.67	202.2	4,400.1	4,763.8	4,662.8	101.05	47.145		
4,600.0	4,565.1	4,657.6	4,657.6	12.0	91.3	88.67	202.2	4,400.1	4,763.8	4,660.6	103.24	46.144		
4,700.0	4,665.1	4,757.6	4,757.6	12.2	93.3	88.67	202.2	4,400.1	4,763.8	4,658.4	105.43	45.183		
4,800.0	4,765.1	4,857.6	4,857.6	12.4	95.4	88.67	202.2	4,400.1	4,763.8	4,656.2	107.63	44.261		
4,900.0	4,865.1	4,957.6	4,957.6	12.6	97.4	88.67	202.2	4,400.1	4,763.8	4,654.0	109.83	43.376		
5,000.0	4,965.1	5,057.6	5,057.6	12.8	99.4	88.67	202.2	4,400.1	4,763.8	4,651.8	112.02	42.525		
5,100.0	5,065.1	5,157.6	5,157.6	12.9	101.4	88.67	202.2	4,400.1	4,763.8	4,649.6	114.22	41.706		
5,200.0	5,165.1	5,257.6	5,257.6	13.1	103.4	88.67	202.2	4,400.1	4,763.8	4,647.4	116.42	40.917		
5,300.0	5,265.1	5,357.6	5,357.6	13.3	105.4	88.67	202.2	4,400.1	4,763.8	4,645.2	118.63	40.158		
5,400.0	5,365.1	5,457.6	5,457.6	13.5	107.4	88.67	202.2	4,400.1	4,763.8	4,643.0	120.83	39.426		
5,500.0	5,465.1	5,557.6	5,557.6	13.7	109.4	88.67	202.2	4,400.1	4,763.8	4,640.8	123.03	38.720		
5,600.0	5,565.1	5,657.6	5,657.6	13.9	111.4	88.67	202.2	4,400.1	4,763.8	4,638.6	125.24	38.038		
5,700.0	5,665.1	5,757.6	5,757.6	14.1	113.5	88.67	202.2	4,400.1	4,763.8	4,636.4	127.44	37.380		
5,800.0	5,765.1	5,857.6	5,857.6	14.3	115.5	88.67	202.2	4,400.1	4,763.8	4,634.2	129.65	36.743		
5,900.0	5,865.1	5,957.6	5,957.6	14.5	117.5	88.67	202.2	4,400.1	4,763.8	4,631.9	131.86	36.128		
6,000.0	5,965.1	6,057.6	6,057.6	14.7	119.5	88.67	202.2	4,400.1	4,763.8	4,629.7	134.07	35.533		
6,100.0	6,065.1	6,157.6	6,157.6	14.9	121.5	88.67	202.2	4,400.1	4,763.8	4,627.5	136.28	34.957		
6,192.7	6,157.8	6,250.3	6,250.3	15.1	123.4	88.67	202.2	4,400.1	4,763.8	4,625.5	138.32	34.440		
6,200.0	6,165.1	6,257.6	6,257.6	15.1	123.5	-1.33	202.2	4,400.1	4,763.8	4,626.7	137.06	34.758		
6,250.0	6,215.1	6,307.6	6,307.6	15.1	124.5	-1.34	202.2	4,400.1	4,761.5	4,623.8	137.68	34.584		
6,300.0	6,264.7	6,357.2	6,357.2	15.2	125.5	-1.35	202.2	4,400.1	4,755.8	4,618.2	137.63	34.555		
6,350.0	6,313.9	6,406.4	6,406.4	15.2	126.5	-1.37	202.2	4,400.1	4,746.6	4,609.7	136.89	34.676		
6,400.0	6,362.2	6,454.7	6,454.7	15.3	127.5	-1.40	202.2	4,400.1	4,734.0	4,598.6	135.44	34.952		
6,450.0	6,409.6	6,502.1	6,502.1	15.3	128.4	-1.44	202.2	4,400.1	4,718.1	4,584.8	133.30	35.394		
6,500.0	6,455.8	6,548.3	6,548.3	15.3	129.4	-1.48	202.2	4,400.1	4,698.9	4,568.4	130.46	36.019		
6,550.0	6,500.5	6,593.0	6,593.0	15.3	130.3	-1.54	202.2	4,400.1	4,676.5	4,549.6	126.92	36.847		
6,600.0	6,543.5	6,636.0	6,636.0	15.3	131.1	-1.62	202.2	4,400.1	4,651.1	4,528.4	122.70	37.906		
6,650.0	6,584.7	6,677.2	6,677.2	15.3	131.9	-1.71	202.2	4,400.1	4,622.7	4,504.9	117.82	39.236		
6,700.0	6,623.7	6,716.2	6,716.2	15.4	132.7	-1.82	202.2	4,400.1	4,591.6	4,479.3	112.30	40.887		
6,750.0	6,660.6	6,753.1	6,753.1	15.5	133.5	-1.95	202.2	4,400.1	4,557.7	4,451.6	106.18	42.926		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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
6,800.0	6,694.9	6,787.4	6,787.4	15.7	134.2	-2.12	202.2	4,400.1	4,521.4	4,422.0	99.49	45.446	
6,850.0	6,726.6	6,819.1	6,819.1	15.9	134.8	-2.33	202.2	4,400.1	4,482.8	4,390.5	92.29	48.573	
6,900.0	6,755.6	6,848.1	6,848.1	16.2	135.4	-2.59	202.2	4,400.1	4,442.1	4,357.5	84.64	52.485	
6,950.0	6,781.7	6,874.2	6,874.2	16.6	135.9	-2.93	202.2	4,400.1	4,399.5	4,322.9	76.60	57.431	
7,000.0	6,804.7	6,897.2	6,897.2	17.1	136.4	-3.39	202.2	4,400.1	4,355.1	4,286.8	68.30	63.763	
7,050.0	6,824.6	6,917.1	6,917.1	17.7	136.8	-4.02	202.2	4,400.1	4,309.2	4,249.3	59.89	71.952	
7,100.0	6,841.2	6,933.7	6,933.7	18.3	137.1	-4.96	202.2	4,400.1	4,262.1	4,210.4	51.69	82.453	
7,150.0	6,854.5	6,947.0	6,947.0	19.0	137.4	-6.46	202.2	4,400.1	4,213.9	4,169.4	44.52	94.663	
7,200.0	6,864.4	6,956.9	6,956.9	19.8	137.6	-9.23	202.2	4,400.1	4,164.9	4,124.0	40.97	101.655	
7,250.0	6,870.8	6,963.3	6,963.3	20.7	137.7	-15.91	202.2	4,400.1	4,115.4	4,065.0	50.37	81.711	
7,300.0	6,873.8	6,966.3	6,966.3	21.6	137.8	-47.79	202.2	4,400.1	4,065.5	3,946.1	119.40	34.049	
7,324.7	6,874.0	6,966.5	6,966.5	22.1	137.8	-109.64	202.2	4,400.1	4,040.8	3,890.2	150.61	26.830	
7,400.0	6,873.2	6,965.7	6,965.7	23.5	137.8	-109.30	202.2	4,400.1	3,965.6	3,813.2	152.30	26.037	
7,500.0	6,872.2	6,964.7	6,964.7	25.6	137.7	-108.85	202.2	4,400.1	3,865.6	3,710.9	154.69	24.990	
7,600.0	6,871.3	6,963.8	6,963.8	27.9	137.7	-108.40	202.2	4,400.1	3,765.6	3,608.4	157.19	23.956	
7,700.0	6,870.3	6,962.8	6,962.8	30.2	137.7	-107.94	202.2	4,400.1	3,665.7	3,505.9	159.79	22.940	
7,800.0	6,869.3	6,961.8	6,961.8	32.6	137.7	-107.48	202.2	4,400.1	3,565.7	3,403.3	162.47	21.947	
7,900.0	6,868.3	6,960.8	6,960.8	35.0	137.7	-107.02	202.2	4,400.1	3,465.8	3,300.6	165.21	20.978	
8,000.0	6,867.4	6,959.9	6,959.9	37.6	137.6	-106.55	202.2	4,400.1	3,365.9	3,197.9	168.00	20.035	
8,100.0	6,866.4	6,958.9	6,958.9	40.1	137.6	-106.09	202.2	4,400.1	3,265.9	3,095.1	170.83	19.118	
8,200.0	6,865.4	6,957.9	6,957.9	42.7	137.6	-105.62	202.2	4,400.1	3,166.0	2,992.3	173.69	18.227	
8,300.0	6,864.4	6,956.9	6,956.9	45.3	137.6	-105.15	202.2	4,400.1	3,066.0	2,889.5	176.58	17.363	
8,400.0	6,863.5	6,956.0	6,956.0	47.9	137.6	-104.68	202.2	4,400.1	2,966.1	2,786.6	179.50	16.525	
8,500.0	6,862.5	6,955.0	6,955.0	50.6	137.5	-104.20	202.2	4,400.1	2,866.2	2,683.8	182.43	15.711	
8,600.0	6,861.5	6,954.0	6,954.0	53.2	137.5	-103.72	202.2	4,400.1	2,766.3	2,580.9	185.37	14.923	
8,614.0	6,861.4	6,953.9	6,953.9	53.6	137.5	-103.66	202.2	4,400.1	2,752.3	2,566.5	185.79	14.814	
8,700.0	6,860.5	6,953.0	6,953.0	55.9	137.5	156.49	202.2	4,400.1	2,666.3	2,583.8	82.48	32.326	
8,800.0	6,859.5	6,952.0	6,952.0	58.6	137.5	99.64	202.2	4,400.1	2,566.4	2,373.2	193.23	13.282	
8,880.6	6,858.7	6,951.2	6,951.2	60.7	137.5	95.45	202.2	4,400.1	2,486.0	2,289.1	196.90	12.626	
8,900.0	6,858.6	6,951.1	6,951.1	61.2	137.5	95.41	202.2	4,400.1	2,466.8	2,269.3	197.42	12.495	
9,000.0	6,857.6	6,950.1	6,950.1	63.9	137.4	95.19	202.2	4,400.1	2,367.3	2,167.2	200.12	11.829	
9,100.0	6,856.6	6,949.1	6,949.1	66.5	137.4	94.97	202.2	4,400.1	2,267.9	2,065.1	202.83	11.181	
9,200.0	6,855.6	6,948.1	6,948.1	69.2	137.4	94.75	202.2	4,400.1	2,168.6	1,963.0	205.55	10.550	
9,300.0	6,854.6	6,947.1	6,947.1	71.8	137.4	94.53	202.2	4,400.1	2,069.3	1,861.1	208.27	9.936	
9,368.1	6,854.0	6,946.5	6,946.5	73.7	137.4	94.38	202.2	4,400.1	2,001.7	1,791.6	210.13	9.526	
9,400.0	6,853.6	6,946.1	6,946.1	74.5	137.4	94.96	202.2	4,400.1	1,970.1	1,759.2	210.92	9.341	
9,500.0	6,852.7	6,945.2	6,945.2	77.2	137.3	98.61	202.2	4,400.1	1,870.5	1,658.2	212.28	8.812	
9,600.0	6,851.7	6,944.2	6,944.2	80.0	137.3	123.54	202.2	4,400.1	1,770.6	1,588.0	182.56	9.698	
9,634.8	6,851.3	6,943.8	6,943.8	80.9	137.3	-161.85	202.2	4,400.1	1,735.8	1,659.5	76.31	22.748	
9,700.0	6,850.7	6,943.2	6,943.2	82.7	137.3	-161.19	202.2	4,400.1	1,670.6	1,591.5	79.11	21.117	
9,800.0	6,849.7	6,942.2	6,942.2	85.5	137.3	-160.08	202.2	4,400.1	1,570.6	1,486.8	83.79	18.745	
9,870.5	6,849.0	6,941.5	6,941.5	87.4	137.3	-159.22	202.2	4,400.1	1,500.1	1,412.7	87.38	17.167	
9,900.0	6,848.7	6,941.2	6,941.2	88.3	137.3	-116.89	202.2	4,400.1	1,470.6	1,269.0	201.65	7.293	
10,000.0	6,847.7	6,940.2	6,940.2	91.0	137.2	-97.44	202.2	4,400.1	1,370.7	1,144.9	225.84	6.069	
10,100.0	6,846.8	6,939.3	6,939.3	93.8	137.2	-94.11	202.2	4,400.1	1,271.3	1,042.0	229.30	5.544	
10,137.1	6,846.4	6,938.9	6,938.9	94.8	137.2	-93.48	202.2	4,400.1	1,234.6	1,004.4	230.20	5.363	
10,200.0	6,845.8	6,938.3	6,938.3	96.5	137.2	-93.30	202.2	4,400.1	1,172.6	940.6	231.97	5.055	
10,300.0	6,844.8	6,937.3	6,937.3	99.3	137.2	-93.01	202.2	4,400.1	1,074.1	839.3	234.80	4.575	
10,400.0	6,843.8	6,936.3	6,936.3	102.0	137.2	-92.73	202.2	4,400.1	975.9	738.3	237.62	4.107	
10,500.0	6,842.8	6,935.3	6,935.3	104.8	137.1	-92.44	202.2	4,400.1	878.2	637.8	240.43	3.653	
10,600.0	6,841.9	6,934.4	6,934.4	107.5	137.1	-92.16	202.2	4,400.1	781.0	537.8	243.25	3.211	
10,700.0	6,840.9	6,933.4	6,933.4	110.3	137.1	-91.87	202.2	4,400.1	684.7	438.6	246.06	2.783	

CC - Min centre 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 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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			
10,732.1	6,840.6	6,933.1	6,933.1	111.2	137.1	-91.78	202.2	4,400.1	654.0	407.0	246.96	2.648			
10,800.0	6,839.9	6,932.4	6,932.4	113.0	137.1	-91.80	202.2	4,400.1	589.2	339.9	249.34	2.363			
10,900.0	6,838.9	6,931.4	6,931.4	115.8	137.1	-91.78	202.2	4,400.1	493.7	241.1	252.58	1.955			
10,998.8	6,838.0	6,930.5	6,930.5	118.6	137.0	-91.67	202.2	4,400.1	399.6	144.1	255.48	1.564			
11,000.0	6,838.0	6,930.5	6,930.5	118.6	137.0	-91.67	202.2	4,400.1	398.5	143.0	255.52	1.560			
11,100.0	6,837.0	6,929.5	6,929.5	121.4	137.0	-91.23	202.2	4,400.1	305.2	46.9	258.33	1.181	Level 2		
11,200.0	6,836.0	6,928.5	6,928.5	124.2	137.0	-90.79	202.2	4,400.1	218.0	-43.1	261.13	0.835	Level 1		
11,300.0	6,835.1	6,927.6	6,927.6	126.9	137.0	-90.34	202.2	4,400.1	147.9	-116.0	263.92	0.561	Level 1		
11,378.2	6,834.3	6,926.8	6,926.8	129.1	137.0	-90.00	202.2	4,400.1	125.6	-140.5	266.09	0.472	Level 1, CC, ES, SF		
11,400.0	6,834.1	6,926.6	6,926.6	129.7	137.0	-89.90	202.2	4,400.1	127.5	-139.2	266.69	0.478	Level 1		
11,428.1	6,833.8	6,926.3	6,926.3	130.5	137.0	-89.78	202.2	4,400.1	135.1	-132.3	267.47	0.505	Level 1		
11,487.5	6,833.3	6,925.8	6,925.8	132.2	136.9	-89.55	202.2	4,400.1	165.8	-103.3	269.05	0.616	Level 1		
11,500.0	6,833.2	6,925.7	6,925.7	132.5	136.9	-89.50	202.2	4,400.1	174.0	-95.4	269.39	0.646	Level 1		
11,600.0	6,832.2	6,924.7	6,924.7	135.3	136.9	-89.08	202.2	4,400.1	252.7	-19.5	272.13	0.929	Level 1		
11,700.0	6,831.3	6,923.8	6,923.8	138.1	136.9	-88.65	202.2	4,400.1	342.7	67.8	274.86	1.247	Level 2		
11,800.0	6,830.3	6,922.8	6,922.8	140.8	136.9	-88.23	202.2	4,400.1	437.0	159.4	277.57	1.574			
11,900.0	6,829.4	6,921.9	6,921.9	143.6	136.9	-87.80	202.2	4,400.1	533.4	253.2	280.27	1.903			
11,938.6	6,829.0	6,921.5	6,921.5	144.7	136.9	-87.64	202.2	4,400.1	571.0	289.7	281.30	2.030			

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													Semi Major Axis		Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor							
0.0	0.0	91.5	91.5	0.0	0.1	74.42	943.8	3,385.7	3,514.7										
100.0	100.0	192.6	192.6	0.1	0.2	74.42	943.9	3,385.6	3,514.7	3,514.4	0.28	N/A							
200.0	200.0	293.7	293.7	0.3	0.3	74.42	944.0	3,385.5	3,514.6	3,514.0	0.61	5,777.536							
300.0	300.0	394.8	394.8	0.5	0.4	74.42	944.2	3,385.3	3,514.5	3,513.6	0.93	3,772.308							
400.0	400.0	495.9	495.9	0.8	0.5	74.41	944.4	3,385.1	3,514.4	3,513.1	1.25	2,800.305							
500.0	500.0	597.1	597.1	1.0	0.6	74.41	944.7	3,384.9	3,514.2	3,512.6	1.58	2,226.530							
600.0	600.0	698.2	698.2	1.2	0.7	74.40	945.0	3,384.6	3,514.0	3,512.1	1.90	1,847.853							
700.0	700.0	799.1	799.1	1.4	0.8	74.39	945.3	3,384.2	3,513.8	3,511.5	2.24	1,565.682							
800.0	800.0	899.7	899.7	1.7	1.0	74.39	945.7	3,383.8	3,513.5	3,510.9	2.68	1,311.451							
900.0	900.0	1,002.3	1,002.3	1.9	1.2	74.38	946.1	3,383.4	3,513.2	3,510.1	3.11	1,129.314							
911.1	911.1	1,013.4	1,013.4	1.9	1.2	150.19	946.1	3,383.4	3,513.2	3,510.0	3.16	1,112.575							
1,000.0	1,000.0	1,100.6	1,100.6	2.1	1.4	150.19	946.5	3,383.0	3,514.4	3,510.9	3.53	994.741							
1,100.0	1,099.8	1,200.6	1,200.6	2.3	1.6	150.18	947.1	3,382.6	3,518.7	3,514.8	3.95	890.784							
1,200.0	1,199.5	1,304.7	1,304.7	2.6	1.8	150.17	947.5	3,382.0	3,525.9	3,521.5	4.37	806.836							
1,300.0	1,298.7	1,407.6	1,407.6	2.8	2.0	150.16	947.8	3,381.5	3,536.0	3,531.3	4.79	738.041							
1,400.0	1,397.5	1,510.0	1,510.0	3.1	2.3	150.16	947.9	3,380.8	3,549.1	3,543.8	5.23	679.003							
1,500.0	1,495.6	1,605.8	1,605.8	3.4	2.5	150.14	948.0	3,380.2	3,565.1	3,559.4	5.66	629.953							
1,600.0	1,593.4	1,705.8	1,705.8	3.8	2.7	150.31	947.7	3,379.7	3,582.7	3,576.6	6.12	585.509							
1,700.0	1,691.3	1,805.8	1,805.8	4.1	2.9	150.48	947.4	3,379.1	3,600.2	3,593.6	6.59	546.098							
1,800.0	1,789.1	1,899.7	1,899.7	4.5	3.1	150.64	947.1	3,378.6	3,617.8	3,610.7	7.07	512.036							
1,900.0	1,886.9	2,028.5	2,028.5	4.9	3.3	150.84	946.9	3,377.4	3,635.1	3,627.5	7.61	477.424							
2,000.0	1,984.7	2,130.6	2,130.5	5.4	3.6	151.01	946.3	3,376.0	3,652.0	3,643.9	8.11	450.415							
2,100.0	2,082.5	2,217.3	2,217.3	5.8	3.7	151.16	945.7	3,374.9	3,668.9	3,660.3	8.57	428.046							
2,200.0	2,180.3	2,334.2	2,334.2	6.2	4.0	151.35	944.6	3,373.6	3,685.9	3,676.8	9.10	405.081							
2,300.0	2,278.1	2,419.9	2,419.8	6.6	4.2	151.50	943.6	3,372.4	3,702.7	3,693.1	9.57	386.994							
2,400.0	2,376.0	2,511.4	2,511.3	7.1	4.3	151.65	942.6	3,371.5	3,719.8	3,709.7	10.05	370.177							
2,500.0	2,473.8	2,589.4	2,589.3	7.5	4.5	151.78	942.1	3,370.8	3,737.2	3,726.7	10.51	355.702							
2,600.0	2,571.6	2,650.1	2,650.0	8.0	4.6	151.87	942.2	3,370.6	3,755.4	3,744.5	10.93	343.529							
2,695.7	2,665.2	2,717.0	2,716.9	8.4	4.8	151.96	942.7	3,371.3	3,774.0	3,762.6	11.36	332.263							
2,700.0	2,669.4	2,717.0	2,716.9	8.4	4.8	151.97	942.7	3,371.3	3,774.8	3,763.5	11.37	331.957							
2,800.0	2,767.6	2,758.1	2,758.0	8.7	4.9	152.20	943.0	3,372.2	3,793.7	3,782.0	11.72	323.605							
2,900.0	2,866.4	2,813.0	2,812.9	9.0	5.0	152.42	943.4	3,373.8	3,810.5	3,798.4	12.08	315.389							
3,000.0	2,965.6	2,886.5	2,886.3	9.3	5.1	152.63	943.5	3,376.8	3,825.2	3,812.7	12.46	307.109							
3,100.0	3,065.3	2,948.1	2,947.9	9.5	5.3	152.80	943.3	3,379.9	3,837.7	3,824.9	12.78	300.234							
3,200.0	3,165.1	3,003.0	3,002.6	9.7	5.4	152.93	942.8	3,383.4	3,848.2	3,835.1	13.07	294.377							
3,295.7	3,260.8	3,058.6	3,058.0	9.8	5.5	77.22	941.9	3,387.5	3,856.3	3,841.4	14.87	259.394							
3,300.0	3,265.1	3,060.9	3,060.3	9.8	5.5	77.22	941.9	3,387.7	3,856.6	3,841.8	14.88	259.218							
3,400.0	3,365.1	3,119.1	3,118.3	10.0	5.6	77.26	940.9	3,392.9	3,864.9	3,849.7	15.17	254.849							
3,500.0	3,465.1	3,193.0	3,191.8	10.1	5.8	77.31	938.8	3,400.3	3,874.0	3,858.5	15.49	250.070							
3,600.0	3,565.1	3,238.6	3,237.1	10.3	5.9	77.35	937.5	3,405.3	3,884.1	3,868.4	15.76	246.434							
3,700.0	3,665.1	3,293.1	3,291.2	10.5	6.0	77.38	936.5	3,412.0	3,895.5	3,879.5	16.05	242.669							
3,800.0	3,765.1	3,414.7	3,412.0	10.6	6.3	77.45	935.3	3,426.1	3,906.6	3,890.1	16.50	236.754							
3,900.0	3,865.1	3,475.0	3,471.8	10.8	6.4	77.48	934.5	3,433.8	3,918.6	3,901.8	16.81	233.052							
4,000.0	3,965.1	3,550.8	3,546.8	11.0	6.6	77.53	933.3	3,444.0	3,931.4	3,914.3	17.18	228.891							
4,100.0	4,065.1	3,632.0	3,627.2	11.1	6.8	77.59	931.9	3,455.2	3,944.6	3,927.0	17.56	224.660							
4,200.0	4,165.1	3,729.6	3,723.8	11.3	7.1	77.65	930.2	3,469.1	3,958.1	3,940.1	17.98	220.084							
4,300.0	4,265.1	3,848.9	3,842.1	11.5	7.4	77.73	928.6	3,485.6	3,971.3	3,952.8	18.46	215.072							
4,400.0	4,365.1	3,962.0	3,954.1	11.7	7.7	77.79	927.8	3,500.5	3,984.0	3,965.1	18.94	210.405							
4,500.0	4,465.1	4,068.7	4,059.8	11.8	7.9	77.85	926.4	3,514.4	3,996.6	3,977.2	19.40	206.058							
4,600.0	4,565.1	4,199.7	4,189.8	12.0	8.3	77.93	924.1	3,531.1	4,008.7	3,988.8	19.92	201.222							
4,700.0	4,665.1	4,342.4	4,331.5	12.2	8.7	78.01	922.0	3,547.8	4,019.8	3,999.3	20.48	196.294							
4,800.0	4,765.1	4,518.5	4,506.7	12.4	9.1	78.10	919.0	3,565.4	4,029.1	4,008.0	21.11	190.828							

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,900.0	4,865.1	4,616.0	4,603.8	12.6	9.4	78.15	917.6	3,574.1	4,037.6	4,016.0	21.55	187.384		
5,000.0	4,965.1	4,684.1	4,671.6	12.8	9.5	78.18	916.4	3,580.5	4,046.5	4,024.6	21.91	184.688		
5,100.0	5,065.1	4,812.9	4,799.7	12.9	9.9	78.26	914.0	3,593.4	4,056.1	4,033.6	22.43	180.822		
5,200.0	5,165.1	4,946.4	4,932.7	13.1	10.2	78.32	911.7	3,604.8	4,064.0	4,041.0	22.96	177.022		
5,300.0	5,265.1	5,015.3	5,001.3	13.3	10.4	78.35	910.6	3,610.9	4,072.2	4,048.9	23.32	174.602		
5,400.0	5,365.1	5,090.0	5,075.6	13.5	10.6	78.40	909.1	3,618.3	4,081.5	4,057.8	23.71	172.159		
5,500.0	5,465.1	5,213.0	5,198.0	13.7	10.9	78.47	906.2	3,630.5	4,090.8	4,066.6	24.22	168.899		
5,600.0	5,565.1	5,374.0	5,358.3	13.9	11.3	78.56	902.1	3,644.4	4,098.8	4,073.9	24.82	165.124		
5,700.0	5,665.1	5,440.7	5,424.8	14.1	11.5	78.60	900.4	3,649.8	4,106.3	4,081.1	25.19	163.045		
5,800.0	5,765.1	5,564.0	5,547.6	14.3	11.8	78.68	897.1	3,660.3	4,114.1	4,088.4	25.69	160.157		
5,900.0	5,865.1	5,633.6	5,616.9	14.5	12.0	78.71	895.6	3,665.9	4,121.7	4,095.6	26.06	158.159		
6,000.0	5,965.1	5,792.9	5,775.7	14.7	12.4	78.80	892.1	3,678.8	4,129.2	4,102.5	26.65	154.926		
6,100.0	6,065.1	5,849.0	5,831.6	14.9	12.5	78.83	890.4	3,683.1	4,136.3	4,109.3	26.99	153.260		
6,192.7	6,157.8	5,921.9	5,904.2	15.1	12.7	78.87	888.4	3,689.3	4,143.6	4,116.3	27.36	151.465		
6,200.0	6,165.1	5,943.0	5,925.2	15.1	12.8	-11.11	888.0	3,691.2	4,144.3	4,118.7	25.57	162.089		
6,250.0	6,215.1	5,960.3	5,942.4	15.1	12.8	-11.07	887.8	3,692.8	4,146.3	4,120.7	25.62	161.822		
6,300.0	6,264.7	5,995.7	5,977.7	15.2	12.9	-11.09	887.5	3,696.1	4,145.1	4,119.5	25.62	161.783		
6,350.0	6,313.9	6,039.0	6,020.8	15.2	13.0	-11.17	887.6	3,700.1	4,140.7	4,115.2	25.54	162.107		
6,400.0	6,362.2	6,115.8	6,097.3	15.3	13.2	-11.34	888.5	3,707.1	4,132.8	4,107.4	25.44	162.424		
6,450.0	6,409.6	6,522.8	6,503.7	15.3	14.1	-11.95	892.2	3,724.4	4,119.6	4,093.7	25.96	158.705		
6,500.0	6,455.8	6,578.5	6,559.5	15.3	14.2	-12.37	892.5	3,724.2	4,100.7	4,075.1	25.64	159.957		
6,550.0	6,500.5	6,628.7	6,609.6	15.3	14.3	-12.88	892.8	3,724.0	4,078.6	4,053.4	25.23	161.657		
6,600.0	6,543.5	6,672.4	6,653.3	15.3	14.4	-13.50	893.1	3,723.7	4,053.5	4,028.7	24.75	163.788		
6,650.0	6,584.7	6,713.7	6,694.6	15.3	14.5	-14.25	893.3	3,723.5	4,025.4	4,001.2	24.22	166.225		
6,700.0	6,623.7	6,751.8	6,732.7	15.4	14.5	-15.16	893.4	3,723.3	3,994.7	3,971.1	23.65	168.879		
6,750.0	6,660.6	6,787.7	6,768.6	15.5	14.6	-16.25	893.6	3,723.1	3,961.4	3,938.3	23.09	171.559		
6,800.0	6,694.9	6,819.0	6,800.0	15.7	14.7	-17.58	893.7	3,722.9	3,925.7	3,903.2	22.56	174.029		
6,850.0	6,726.6	6,847.1	6,828.0	15.9	14.7	-19.21	893.8	3,722.8	3,887.8	3,865.7	22.11	175.868		
6,900.0	6,755.6	6,872.7	6,853.6	16.2	14.7	-21.22	893.9	3,722.7	3,847.9	3,826.1	21.80	176.469		
6,950.0	6,781.7	6,891.0	6,871.9	16.6	14.8	-23.70	894.0	3,722.7	3,806.1	3,784.4	21.73	175.195		
7,000.0	6,804.7	6,915.0	6,895.9	17.1	14.8	-26.97	894.0	3,722.6	3,762.8	3,740.7	22.03	170.765		
7,050.0	6,824.6	6,931.8	6,912.7	17.7	14.9	-31.15	894.1	3,722.6	3,718.0	3,695.1	22.84	162.786		
7,100.0	6,841.2	6,945.8	6,926.8	18.3	14.9	-36.69	894.1	3,722.6	3,671.9	3,647.6	24.34	150.863		
7,150.0	6,854.5	6,957.2	6,938.1	19.0	14.9	-44.15	894.2	3,722.6	3,625.0	3,598.3	26.70	135.742		
7,200.0	6,864.4	6,965.6	6,946.6	19.8	14.9	-54.22	894.2	3,722.6	3,577.2	3,547.3	29.95	119.457		
7,250.0	6,870.8	6,971.2	6,952.1	20.7	14.9	-67.44	894.2	3,722.6	3,528.9	3,495.4	33.58	105.091		
7,300.0	6,873.8	6,973.8	6,954.7	21.6	14.9	-83.38	894.3	3,722.7	3,480.4	3,444.0	36.35	95.759		
7,324.7	6,874.0	6,974.0	6,954.9	22.1	14.9	-91.67	894.3	3,722.7	3,456.4	3,419.4	36.94	93.555		
7,400.0	6,873.2	6,973.5	6,954.4	23.5	14.9	-91.63	894.3	3,722.7	3,383.1	3,344.7	38.42	88.050		
7,500.0	6,872.2	6,972.8	6,953.7	25.6	14.9	-91.58	894.3	3,722.6	3,286.1	3,245.6	40.52	81.089		
7,600.0	6,871.3	6,972.1	6,953.0	27.9	14.9	-91.53	894.2	3,722.6	3,189.2	3,146.5	42.75	74.601		
7,700.0	6,870.3	6,971.4	6,952.3	30.2	14.9	-91.48	894.2	3,722.6	3,092.5	3,047.5	45.07	68.611		
7,800.0	6,869.3	6,970.7	6,951.6	32.6	14.9	-91.43	894.2	3,722.6	2,996.1	2,948.6	47.47	63.110		
7,900.0	6,868.3	6,970.0	6,950.9	35.0	14.9	-91.38	894.2	3,722.6	2,899.9	2,849.9	49.93	58.074		
8,000.0	6,867.4	6,969.3	6,950.2	37.6	14.9	-91.33	894.2	3,722.6	2,803.9	2,751.5	52.44	53.465		
8,100.0	6,866.4	6,968.5	6,949.5	40.1	14.9	-91.27	894.2	3,722.6	2,708.2	2,653.3	54.99	49.247		
8,200.0	6,865.4	6,967.8	6,948.7	42.7	14.9	-91.22	894.2	3,722.6	2,612.9	2,555.3	57.57	45.383		
8,300.0	6,864.4	6,967.1	6,948.0	45.3	14.9	-91.17	894.2	3,722.6	2,517.9	2,457.7	60.18	41.838		
8,400.0	6,863.5	6,966.3	6,947.2	47.9	14.9	-91.12	894.2	3,722.6	2,423.4	2,360.5	62.81	38.580		
8,500.0	6,862.5	6,965.6	6,946.5	50.6	14.9	-91.06	894.2	3,722.6	2,329.2	2,263.8	65.46	35.580		
8,600.0	6,861.5	6,964.8	6,945.7	53.2	14.9	-91.01	894.2	3,722.6	2,235.6	2,167.5	68.13	32.814		
8,614.0	6,861.4	6,964.7	6,945.6	53.6	14.9	-91.00	894.2	3,722.6	2,222.6	2,154.1	68.51	32.444		

CC - Min centre 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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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												Semi Major Axis		Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor						
8,700.0	6,860.5	6,964.1	6,945.0	55.9	14.9	-91.11	894.2	3,722.6	2,141.9	2,071.2	70.75	30.273						
8,800.0	6,859.5	6,963.3	6,944.2	58.6	14.9	-91.27	894.2	3,722.6	2,047.0	1,973.8	73.21	27.958						
8,880.6	6,858.7	6,962.7	6,943.6	60.7	14.9	-91.42	894.2	3,722.6	1,969.6	1,894.5	75.08	26.234						
8,900.0	6,858.6	6,962.6	6,943.5	61.2	14.9	-91.41	894.2	3,722.6	1,950.9	1,875.4	75.59	25.809						
9,000.0	6,857.6	6,961.8	6,942.8	63.9	14.9	-91.33	894.2	3,722.6	1,854.8	1,776.6	78.26	23.701						
9,100.0	6,856.6	6,961.1	6,942.0	66.5	14.9	-91.25	894.2	3,722.6	1,759.1	1,678.2	80.93	21.736						
9,200.0	6,855.6	6,960.4	6,941.3	69.2	14.9	-91.17	894.2	3,722.6	1,664.0	1,580.4	83.62	19.900						
9,300.0	6,854.6	6,959.6	6,940.5	71.8	14.9	-91.09	894.2	3,722.6	1,569.4	1,483.1	86.31	18.184						
9,368.1	6,854.0	6,959.1	6,940.0	73.7	14.9	-91.03	894.2	3,722.6	1,505.4	1,417.2	88.14	17.079						
9,400.0	6,853.6	6,958.9	6,939.8	74.5	14.9	-90.95	894.2	3,722.6	1,475.6	1,386.5	89.12	16.558						
9,500.0	6,852.7	6,958.1	6,939.0	77.2	14.9	-90.75	894.2	3,722.6	1,384.4	1,292.3	92.07	15.036						
9,600.0	6,851.7	6,957.3	6,938.2	80.0	14.9	-90.58	894.2	3,722.6	1,296.9	1,202.1	94.83	13.675						
9,634.8	6,851.3	6,957.0	6,937.9	80.9	14.9	-90.53	894.2	3,722.6	1,267.5	1,171.8	95.75	13.238						
9,700.0	6,850.7	6,956.4	6,937.3	82.7	14.9	-90.49	894.2	3,722.6	1,213.6	1,116.1	97.54	12.442						
9,800.0	6,849.7	6,955.6	6,936.5	85.5	14.9	-90.42	894.2	3,722.6	1,133.2	1,032.9	100.30	11.299						
9,870.5	6,849.0	6,955.0	6,935.9	87.4	14.9	-90.37	894.2	3,722.6	1,078.6	976.3	102.24	10.549						
9,900.0	6,848.7	6,954.7	6,935.7	88.3	14.9	-90.33	894.2	3,722.6	1,056.4	953.4	103.00	10.256						
10,000.0	6,847.7	6,953.9	6,934.8	91.0	14.9	-90.22	894.2	3,722.6	986.6	881.1	105.41	9.359						
10,100.0	6,846.8	6,953.0	6,933.9	93.8	14.9	-90.12	894.2	3,722.6	926.5	818.9	107.58	8.612						
10,137.1	6,846.4	6,952.6	6,933.5	94.8	14.9	-90.08	894.2	3,722.6	907.2	798.8	108.33	8.374						
10,200.0	6,845.8	6,952.0	6,933.0	96.5	14.9	-90.04	894.2	3,722.6	877.6	767.5	110.07	7.972						
10,300.0	6,844.8	6,951.1	6,932.0	99.3	14.9	-89.97	894.2	3,722.6	838.0	725.2	112.85	7.426						
10,400.0	6,843.8	6,950.2	6,931.1	102.0	14.9	-89.90	894.2	3,722.6	809.0	693.4	115.64	6.996						
10,500.0	6,842.8	6,949.2	6,930.2	104.8	14.9	-89.83	894.2	3,722.6	791.7	673.2	118.42	6.685						
10,588.9	6,842.0	6,948.4	6,929.3	107.2	14.9	-89.77	894.1	3,722.6	786.7	665.8	120.90	6.507 CC						
10,600.0	6,841.9	6,948.3	6,929.2	107.5	14.9	-89.76	894.1	3,722.6	786.7	665.5	121.21	6.491 ES						
10,700.0	6,840.9	6,947.3	6,928.3	110.3	14.9	-89.69	894.1	3,722.6	794.5	670.5	123.99	6.407						
10,732.1	6,840.6	6,947.0	6,928.0	111.2	14.9	-89.67	894.1	3,722.6	799.6	674.7	124.89	6.402						
10,800.0	6,839.9	6,946.4	6,927.3	113.0	14.9	-89.65	894.1	3,722.6	813.3	686.0	127.27	6.390 SF						
10,900.0	6,838.9	6,945.4	6,926.4	115.8	14.9	-89.61	894.1	3,722.6	839.0	708.5	130.53	6.428						
10,998.8	6,838.0	6,944.5	6,925.4	118.6	14.9	-89.58	894.1	3,722.6	870.2	736.7	133.42	6.522						
11,000.0	6,838.0	6,944.5	6,925.4	118.6	14.9	-89.58	894.1	3,722.6	870.6	737.1	133.45	6.524						
11,100.0	6,837.0	6,943.6	6,924.5	121.4	14.9	-89.52	894.1	3,722.6	909.8	773.6	136.23	6.678						
11,200.0	6,836.0	6,942.6	6,923.6	124.2	14.9	-89.45	894.1	3,722.6	957.9	818.9	139.01	6.891						
11,300.0	6,835.1	6,941.7	6,922.6	126.9	14.9	-89.39	894.1	3,722.6	1,013.6	871.8	141.79	7.149						
11,400.0	6,834.1	6,940.7	6,921.7	129.7	14.9	-89.32	894.1	3,722.6	1,075.8	931.2	144.58	7.441						
11,428.1	6,833.8	6,940.5	6,921.4	130.5	14.9	-89.30	894.1	3,722.6	1,094.3	948.9	145.36	7.528						
11,487.5	6,833.3	6,939.9	6,920.8	132.2	14.9	-89.31	894.1	3,722.6	1,133.9	987.0	146.94	7.717						
11,500.0	6,833.2	6,939.8	6,920.7	132.5	14.9	-89.30	894.1	3,722.6	1,142.4	995.1	147.29	7.756						
11,600.0	6,832.2	6,938.9	6,919.8	135.3	14.9	-89.24	894.1	3,722.6	1,212.3	1,062.2	150.06	8.079						
11,700.0	6,831.3	6,937.9	6,918.8	138.1	14.9	-89.17	894.1	3,722.6	1,286.2	1,133.4	152.84	8.415						
11,800.0	6,830.3	6,937.0	6,917.9	140.8	14.9	-89.11	894.1	3,722.6	1,363.5	1,207.9	155.62	8.762						
11,900.0	6,829.4	6,936.0	6,916.9	143.6	14.9	-89.04	894.1	3,722.6	1,443.5	1,285.1	158.40	9.113						
11,938.6	6,829.0	6,935.6	6,916.5	144.7	14.9	-89.02	894.1	3,722.6	1,475.1	1,315.6	159.47	9.250						

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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-MWVD													Offset Well Error:		0.0 usft
Reference				Offset		Semi Major Axis			Distance				Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	81.3	81.3	0.0	0.0	13.67	3,413.6	830.3	3,513.1						
100.0	100.0	183.5	183.5	0.1	0.2	13.67	3,413.4	830.5	3,513.0	3,512.8	0.27	N/A			
200.0	200.0	286.0	286.0	0.3	0.4	13.68	3,413.2	830.7	3,512.9	3,512.1	0.73	4,839.825			
300.0	300.0	388.3	388.3	0.5	0.6	13.69	3,412.9	831.1	3,512.7	3,511.5	1.18	2,975.128			
400.0	400.0	490.5	490.5	0.8	0.9	13.69	3,412.5	831.5	3,512.4	3,510.7	1.64	2,147.413			
500.0	500.0	592.7	592.7	1.0	1.1	13.70	3,412.0	832.1	3,512.0	3,509.9	2.09	1,679.829			
600.0	600.0	699.9	699.9	1.2	1.3	13.72	3,411.4	832.6	3,511.6	3,509.0	2.54	1,383.302			
700.0	700.0	813.0	813.0	1.4	1.5	13.72	3,410.5	832.5	3,510.8	3,507.8	2.99	1,174.839			
800.0	800.0	929.0	928.9	1.7	1.8	13.72	3,409.1	832.4	3,509.6	3,506.1	3.47	1,011.208			
900.0	900.0	1,010.0	1,009.9	1.9	2.0	13.72	3,408.1	832.4	3,508.4	3,504.6	3.85	911.556			
1,000.0	1,000.0	1,107.2	1,107.2	2.1	2.1	89.58	3,407.5	832.0	3,507.7	3,503.4	4.25	825.348			
1,100.0	1,099.8	2,187.0	2,168.2	2.3	5.6	91.76	3,238.4	846.4	3,490.3	3,483.2	7.13	489.621			
1,200.0	1,199.5	2,401.5	2,371.7	2.6	6.8	93.16	3,171.0	854.9	3,461.5	3,453.5	8.03	430.874			
1,300.0	1,298.7	2,511.9	2,475.4	2.8	7.4	94.32	3,133.4	859.6	3,430.1	3,421.4	8.68	395.259			
1,400.0	1,397.5	2,575.2	2,534.8	3.1	7.7	95.29	3,112.0	862.3	3,399.3	3,390.1	9.17	370.623			
1,500.0	1,495.6	2,617.9	2,575.1	3.4	7.9	96.14	3,098.1	864.0	3,370.2	3,360.5	9.64	349.471			
1,600.0	1,593.4	2,696.4	2,649.6	3.8	8.3	96.61	3,073.4	866.9	3,342.6	3,332.3	10.27	325.474			
1,700.0	1,691.3	2,796.4	2,744.3	4.1	8.9	97.23	3,041.6	870.8	3,314.9	3,303.9	11.02	300.679			
1,800.0	1,789.1	2,857.2	2,802.0	4.5	9.2	97.61	3,022.3	873.3	3,287.9	3,276.3	11.62	282.836			
1,900.0	1,886.9	2,899.8	2,842.5	4.9	9.4	97.88	3,009.4	875.1	3,262.5	3,250.3	12.17	268.020			
2,000.0	1,984.7	2,960.0	2,900.1	5.4	9.7	98.25	2,992.0	877.6	3,238.6	3,225.8	12.79	253.201			
2,100.0	2,082.5	3,064.8	3,000.5	5.8	10.3	98.90	2,961.9	881.3	3,214.9	3,201.4	13.59	236.527			
2,200.0	2,180.3	3,142.3	3,074.7	6.2	10.6	99.38	2,939.8	883.9	3,191.9	3,177.6	14.29	223.315			
2,300.0	2,278.1	3,228.0	3,156.7	6.6	11.1	99.93	2,915.5	887.3	3,169.4	3,154.4	15.05	210.603			
2,400.0	2,376.0	3,359.8	3,282.8	7.1	11.8	100.79	2,877.4	893.0	3,147.1	3,131.0	16.03	196.384			
2,500.0	2,473.8	3,468.2	3,386.0	7.5	12.5	101.53	2,844.4	898.1	3,123.7	3,106.8	16.93	184.494			
2,600.0	2,571.6	3,659.4	3,566.6	8.0	13.6	102.93	2,782.9	909.3	3,100.1	3,081.9	18.28	169.628			
2,695.7	2,665.2	3,800.0	3,697.8	8.4	14.6	104.02	2,733.1	917.6	3,074.8	3,055.3	19.42	158.309			
2,700.0	2,669.4	3,800.0	3,697.8	8.4	14.6	103.99	2,733.1	917.6	3,073.6	3,054.2	19.44	158.128			
2,800.0	2,767.6	3,866.4	3,759.9	8.7	15.0	103.95	2,709.8	920.7	3,047.1	3,027.0	20.03	152.090			
2,900.0	2,866.4	3,920.0	3,810.4	9.0	15.3	103.77	2,691.8	922.7	3,021.2	3,000.7	20.52	147.242			
3,000.0	2,965.6	3,947.2	3,836.2	9.3	15.4	103.42	2,683.3	923.6	2,996.3	2,975.5	20.84	143.767			
3,100.0	3,065.3	4,000.0	3,886.6	9.5	15.7	103.19	2,667.8	925.1	2,972.6	2,951.4	21.22	140.054			
3,200.0	3,165.1	4,080.0	3,963.2	9.7	16.1	103.05	2,644.8	927.5	2,949.1	2,927.4	21.69	135.953			
3,295.7	3,260.8	4,153.6	4,033.7	9.8	16.5	27.05	2,623.8	930.3	2,926.4	2,904.1	22.25	131.510			
3,300.0	3,265.1	4,160.0	4,039.8	9.8	16.6	27.07	2,621.9	930.6	2,925.3	2,903.1	22.29	131.249			
3,400.0	3,365.1	4,252.4	4,128.3	10.0	17.1	27.40	2,595.5	935.3	2,901.9	2,879.0	22.90	126.709			
3,500.0	3,465.1	4,434.3	4,301.3	10.1	18.1	28.05	2,540.0	942.3	2,875.6	2,851.7	23.95	120.092			
3,600.0	3,565.1	4,600.0	4,458.2	10.3	19.1	28.62	2,486.9	944.8	2,847.5	2,822.5	24.96	114.066			
3,700.0	3,665.1	4,643.3	4,499.3	10.5	19.4	28.78	2,473.0	945.8	2,820.0	2,794.6	25.36	111.176			
3,800.0	3,765.1	4,729.1	4,580.7	10.6	19.9	29.11	2,446.0	948.4	2,793.4	2,767.4	25.97	107.573			
3,900.0	3,865.1	4,780.7	4,629.7	10.8	20.1	29.30	2,430.2	949.8	2,767.8	2,741.4	26.40	104.844			
4,000.0	3,965.1	4,822.1	4,669.4	11.0	20.3	29.44	2,418.6	950.7	2,744.0	2,717.2	26.77	102.505			
4,100.0	4,065.1	4,871.0	4,716.7	11.1	20.6	29.58	2,406.0	951.4	2,722.2	2,695.0	27.16	100.223			
4,200.0	4,165.1	4,920.0	4,764.3	11.3	20.8	29.72	2,394.3	952.1	2,701.9	2,674.4	27.54	98.092			
4,300.0	4,265.1	4,986.0	4,828.6	11.5	21.1	29.90	2,379.5	953.2	2,683.2	2,655.2	27.98	95.895			
4,400.0	4,365.1	5,049.3	4,890.4	11.7	21.3	30.08	2,366.0	954.8	2,665.8	2,637.4	28.40	93.870			
4,500.0	4,465.1	5,120.0	4,959.6	11.8	21.6	30.28	2,351.6	957.1	2,649.7	2,620.9	28.83	91.902			
4,600.0	4,565.1	5,172.8	5,011.3	12.0	21.8	30.43	2,341.5	959.0	2,634.9	2,605.7	29.19	90.254			
4,700.0	4,665.1	5,228.1	5,065.8	12.2	22.0	30.57	2,332.1	960.9	2,621.9	2,592.3	29.55	88.715			
4,800.0	4,765.1	5,280.0	5,117.1	12.4	22.2	30.69	2,324.2	962.5	2,610.4	2,580.5	29.90	87.319			
4,900.0	4,865.1	5,347.2	5,183.6	12.6	22.4	30.83	2,315.2	964.7	2,600.5	2,570.2	30.26	85.933			

CC - Min centre 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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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-MWVD												Offset Well Error:	0.0 usft	
Reference				Offset			Semi Major Axis			Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	4,965.1	5,410.9	5,246.9	12.8	22.6	30.95	2,307.8	966.5	2,592.0	2,561.4	30.61	84.680		
5,100.0	5,065.1	5,480.0	5,315.7	12.9	22.7	31.05	2,301.1	967.9	2,584.7	2,553.8	30.96	83.488		
5,200.0	5,165.1	5,560.0	5,395.4	13.1	22.9	31.13	2,294.9	968.5	2,578.5	2,547.2	31.32	82.321		
5,300.0	5,265.1	5,625.1	5,460.4	13.3	23.0	31.18	2,291.1	968.5	2,573.4	2,541.7	31.65	81.308		
5,400.0	5,365.1	5,690.0	5,525.3	13.5	23.1	31.20	2,288.3	968.2	2,569.6	2,537.6	31.97	80.381		
5,500.0	5,465.1	5,760.0	5,595.2	13.7	23.2	31.22	2,286.4	967.8	2,567.0	2,534.7	32.28	79.510		
5,600.0	5,565.1	5,828.8	5,664.0	13.9	23.3	31.23	2,285.3	967.5	2,565.4	2,532.8	32.59	78.714		
5,644.5	5,609.6	5,853.9	5,689.1	14.0	23.3	31.23	2,285.2	967.6	2,565.2	2,532.5	32.72	78.407		
5,700.0	5,665.1	5,887.7	5,722.9	14.1	23.4	31.23	2,285.2	967.8	2,565.5	2,532.6	32.87	78.041		
5,800.0	5,765.1	5,975.6	5,810.8	14.3	23.4	31.23	2,286.0	968.4	2,566.6	2,533.5	33.18	77.359		
5,900.0	5,865.1	6,078.9	5,914.1	14.5	23.5	31.23	2,287.2	968.9	2,567.9	2,534.4	33.50	76.656		
6,000.0	5,965.1	6,185.8	6,021.0	14.7	23.6	31.22	2,288.5	969.0	2,568.9	2,535.1	33.83	75.934		
6,100.0	6,065.1	6,284.4	6,119.6	14.9	23.7	31.20	2,289.7	968.8	2,569.9	2,535.7	34.16	75.237		
6,192.7	6,157.8	6,377.8	6,213.0	15.1	23.8	31.18	2,290.9	968.5	2,570.7	2,536.3	34.46	74.593		
6,200.0	6,165.1	6,384.2	6,219.3	15.1	23.8	-58.82	2,291.0	968.4	2,570.8	2,537.1	33.70	76.278		
6,250.0	6,215.1	6,426.7	6,261.8	15.1	23.8	-58.91	2,291.6	968.3	2,570.2	2,536.5	33.72	76.228		
6,300.0	6,264.7	6,479.0	6,314.2	15.2	23.9	-59.20	2,292.5	968.1	2,567.9	2,534.2	33.65	76.320		
6,350.0	6,313.9	6,560.0	6,395.1	15.2	24.0	-59.82	2,293.6	967.2	2,563.4	2,529.9	33.51	76.506		
6,400.0	6,362.2	6,600.0	6,435.1	15.3	24.0	-60.48	2,293.9	966.6	2,557.0	2,523.7	33.26	76.876		
6,450.0	6,409.6	6,640.0	6,475.1	15.3	24.0	-61.30	2,294.4	966.2	2,549.2	2,516.2	32.96	77.332		
6,500.0	6,455.8	6,687.7	6,522.9	15.3	24.1	-62.36	2,294.9	966.0	2,539.9	2,507.2	32.64	77.816		
6,550.0	6,500.5	6,741.9	6,577.1	15.3	24.2	-63.66	2,295.2	965.7	2,528.9	2,496.6	32.31	78.266		
6,600.0	6,543.5	6,780.0	6,615.1	15.3	24.2	-64.99	2,295.3	965.6	2,516.6	2,484.6	31.99	78.671		
6,650.0	6,584.7	6,811.4	6,646.6	15.3	24.2	-66.39	2,295.5	965.6	2,503.2	2,471.5	31.70	78.961		
6,700.0	6,623.7	6,840.0	6,675.1	15.4	24.3	-67.88	2,295.8	965.6	2,489.0	2,457.5	31.48	79.063		
6,750.0	6,660.6	6,867.5	6,702.6	15.5	24.3	-69.48	2,296.2	965.6	2,473.9	2,442.6	31.35	78.909		
6,800.0	6,694.9	6,892.0	6,727.1	15.7	24.3	-71.13	2,296.6	965.7	2,458.2	2,426.9	31.33	78.458		
6,850.0	6,726.6	6,920.0	6,755.1	15.9	24.3	-72.94	2,297.2	965.8	2,442.1	2,410.7	31.45	77.642		
6,900.0	6,755.6	6,939.2	6,774.3	16.2	24.4	-74.66	2,297.7	965.9	2,425.6	2,393.9	31.69	76.530		
6,950.0	6,781.7	6,963.5	6,798.6	16.6	24.4	-76.55	2,298.3	966.0	2,408.9	2,376.8	32.09	75.057		
7,000.0	6,804.7	6,990.1	6,825.2	17.1	24.4	-78.53	2,299.0	966.2	2,392.1	2,359.4	32.64	73.280		
7,050.0	6,824.6	7,013.1	6,848.2	17.7	24.4	-80.46	2,299.6	966.3	2,375.3	2,342.0	33.31	71.312		
7,100.0	6,841.2	7,032.3	6,867.4	18.3	24.4	-82.31	2,300.0	966.4	2,358.7	2,324.7	34.07	69.227		
7,150.0	6,854.5	7,047.5	6,882.6	19.0	24.4	-84.04	2,300.3	966.4	2,342.6	2,307.7	34.91	67.094		
7,200.0	6,864.4	7,058.7	6,893.8	19.8	24.5	-85.63	2,300.6	966.5	2,327.0	2,291.1	35.82	64.967		
7,250.0	6,870.8	7,066.1	6,901.2	20.7	24.5	-87.07	2,300.7	966.5	2,312.0	2,275.3	36.76	62.887		
7,300.0	6,873.8	7,069.6	6,904.6	21.6	24.5	-88.34	2,300.8	966.5	2,297.9	2,260.2	37.74	60.885		
7,324.7	6,874.0	7,069.9	6,904.9	22.1	24.5	-88.90	2,300.8	966.5	2,291.3	2,253.0	38.23	59.930		
7,400.0	6,873.2	7,069.3	6,904.4	23.5	24.5	-88.88	2,300.8	966.5	2,272.5	2,232.8	39.71	57.228		
7,500.0	6,872.2	7,068.6	6,903.7	25.6	24.5	-88.86	2,300.8	966.5	2,251.2	2,209.4	41.81	53.846		
7,600.0	6,871.3	7,067.9	6,902.9	27.9	24.5	-88.84	2,300.8	966.5	2,234.3	2,190.2	44.03	50.740		
7,700.0	6,870.3	7,067.1	6,902.2	30.2	24.5	-88.82	2,300.8	966.5	2,221.7	2,175.3	46.35	47.927		
7,800.0	6,869.3	7,066.4	6,901.5	32.6	24.5	-88.81	2,300.7	966.5	2,213.5	2,164.7	48.75	45.403		
7,900.0	6,868.3	7,065.7	6,900.8	35.0	24.5	-88.79	2,300.7	966.5	2,209.8	2,158.6	51.21	43.152		
7,930.9	6,868.0	7,065.5	6,900.6	35.8	24.5	-88.78	2,300.7	966.5	2,209.6	2,157.6	51.98	42.505 CC		
8,000.0	6,867.4	7,065.0	6,900.1	37.6	24.5	-88.77	2,300.7	966.5	2,210.7	2,157.0	53.72	41.153 ES		
8,100.0	6,866.4	7,064.3	6,899.4	40.1	24.5	-88.75	2,300.7	966.5	2,216.1	2,159.8	56.27	39.386		
8,200.0	6,865.4	7,063.6	6,898.7	42.7	24.5	-88.73	2,300.7	966.5	2,226.0	2,167.1	58.85	37.827		
8,300.0	6,864.4	7,063.0	6,898.0	45.3	24.5	-88.72	2,300.7	966.5	2,240.2	2,178.8	61.45	36.455		
8,400.0	6,863.5	7,062.3	6,897.3	47.9	24.5	-88.70	2,300.7	966.5	2,258.9	2,194.8	64.08	35.251		
8,500.0	6,862.5	7,061.6	6,896.7	50.6	24.5	-88.68	2,300.6	966.5	2,281.7	2,215.0	66.73	34.194		
8,600.0	6,861.5	7,060.9	6,896.0	53.2	24.5	-88.66	2,300.6	966.5	2,308.7	2,239.3	69.39	33.270		

CC - Min centre 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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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		
8,614.0	6,861.4	7,060.8	6,895.9	53.6	24.5	-88.66	2,300.6	966.5	2,312.8	2,243.0	69.77	33.151		
8,700.0	6,860.5	7,060.3	6,895.4	55.9	24.5	-88.69	2,300.6	966.5	2,337.8	2,265.9	71.94	32.496		
8,800.0	6,859.5	7,059.8	6,894.9	58.6	24.5	-88.73	2,300.6	966.5	2,365.9	2,291.5	74.38	31.809		
8,880.6	6,858.7	7,059.5	6,894.5	60.7	24.5	-88.76	2,300.6	966.5	2,387.7	2,311.4	76.27	31.306		
8,900.0	6,858.6	7,059.4	6,894.5	61.2	24.5	-88.76	2,300.6	966.5	2,392.9	2,316.1	76.78	31.165		
9,000.0	6,857.6	7,059.0	6,894.1	63.9	24.5	-88.75	2,300.6	966.5	2,422.2	2,342.7	79.45	30.488		
9,100.0	6,856.6	7,058.7	6,893.8	66.5	24.5	-88.74	2,300.6	966.5	2,455.1	2,373.0	82.12	29.897		
9,200.0	6,855.6	7,058.4	6,893.4	69.2	24.5	-88.73	2,300.6	966.5	2,491.7	2,406.9	84.80	29.383		
9,300.0	6,854.6	7,058.0	6,893.1	71.8	24.5	-88.72	2,300.6	966.5	2,531.7	2,444.2	87.49	28.938		
9,368.1	6,854.0	7,057.8	6,892.9	73.7	24.5	-88.71	2,300.6	966.5	2,560.8	2,471.5	89.32	28.670		
9,400.0	6,853.6	7,057.7	6,892.7	74.5	24.5	-88.69	2,300.6	966.5	2,575.2	2,484.9	90.28	28.523		
9,500.0	6,852.7	7,057.2	6,892.3	77.2	24.5	-88.61	2,300.5	966.5	2,625.2	2,532.0	93.23	28.160		
9,600.0	6,851.7	7,056.7	6,891.8	80.0	24.5	-88.51	2,300.5	966.4	2,682.4	2,586.4	96.04	27.929		
9,634.8	6,851.3	7,056.5	6,891.6	80.9	24.5	-88.48	2,300.5	966.4	2,703.8	2,606.9	96.99	27.878		
9,700.0	6,850.7	7,056.1	6,891.1	82.7	24.5	-88.46	2,300.5	966.4	2,745.3	2,646.5	98.78	27.791		
9,800.0	6,849.7	7,055.4	6,890.5	85.5	24.5	-88.45	2,300.5	966.4	2,810.5	2,709.0	101.54	27.680		
9,870.5	6,849.0	7,055.0	6,890.1	87.4	24.5	-88.44	2,300.5	966.4	2,857.7	2,754.2	103.48	27.617		
9,900.0	6,848.7	7,054.8	6,889.9	88.3	24.5	-88.40	2,300.5	966.4	2,877.9	2,773.7	104.27	27.601 SF		
10,000.0	6,847.7	7,054.1	6,889.2	91.0	24.5	-88.26	2,300.5	966.4	2,949.9	2,843.1	106.83	27.613		
10,100.0	6,846.8	7,053.3	6,888.4	93.8	24.5	-88.09	2,300.5	966.4	3,026.9	2,917.7	109.21	27.717		
10,137.1	6,846.4	7,053.0	6,888.0	94.8	24.5	-88.02	2,300.5	966.4	3,056.7	2,946.6	110.04	27.778		
10,200.0	6,845.8	7,052.4	6,887.5	96.5	24.5	-88.00	2,300.4	966.4	3,107.7	2,996.0	111.78	27.802		
10,300.0	6,844.8	7,051.5	6,886.6	99.3	24.5	-87.98	2,300.4	966.4	3,189.9	3,075.3	114.56	27.845		
10,400.0	6,843.8	7,050.6	6,885.7	102.0	24.5	-87.95	2,300.4	966.4	3,273.0	3,155.6	117.33	27.894		
10,500.0	6,842.8	7,049.7	6,884.8	104.8	24.5	-87.92	2,300.4	966.4	3,357.0	3,236.9	120.11	27.948		
10,600.0	6,841.9	7,048.8	6,883.9	107.5	24.4	-87.89	2,300.4	966.4	3,441.9	3,319.0	122.90	28.007		
10,700.0	6,840.9	7,047.9	6,883.0	110.3	24.4	-87.86	2,300.3	966.4	3,527.6	3,401.9	125.68	28.068		
10,732.1	6,840.6	7,047.7	6,882.7	111.2	24.4	-87.85	2,300.3	966.4	3,555.3	3,428.7	126.57	28.088		
10,800.0	6,839.9	7,047.1	6,882.2	113.0	24.4	-87.98	2,300.3	966.4	3,613.4	3,484.6	128.80	28.054		
10,900.0	6,838.9	7,046.4	6,881.4	115.8	24.4	-88.15	2,300.3	966.4	3,697.3	3,565.5	131.87	28.039		
10,998.8	6,838.0	7,045.7	6,880.8	118.6	24.4	-88.30	2,300.3	966.4	3,778.2	3,643.6	134.63	28.064		
11,000.0	6,838.0	7,045.7	6,880.8	118.6	24.4	-88.30	2,300.3	966.4	3,779.2	3,644.5	134.66	28.064		
11,100.0	6,837.0	7,045.2	6,880.3	121.4	24.4	-88.28	2,300.3	966.4	3,860.5	3,723.0	137.44	28.088		
11,200.0	6,836.0	7,044.6	6,879.7	124.2	24.4	-88.27	2,300.3	966.4	3,942.6	3,802.4	140.22	28.117		
11,300.0	6,835.1	7,044.1	6,879.2	126.9	24.4	-88.25	2,300.3	966.4	4,025.6	3,882.6	143.00	28.150		
11,400.0	6,834.1	7,043.6	6,878.6	129.7	24.4	-88.24	2,300.3	966.4	4,109.3	3,963.5	145.78	28.187		
11,428.1	6,833.8	7,043.4	6,878.5	130.5	24.4	-88.24	2,300.2	966.4	4,132.9	3,986.4	146.57	28.198		
11,487.5	6,833.3	7,043.1	6,878.2	132.2	24.4	-88.34	2,300.2	966.4	4,182.6	4,034.5	148.10	28.242		
11,500.0	6,833.2	7,043.1	6,878.1	132.5	24.4	-88.34	2,300.2	966.4	4,193.0	4,044.6	148.45	28.246		
11,600.0	6,832.2	7,042.6	6,877.7	135.3	24.4	-88.33	2,300.2	966.4	4,276.5	4,125.3	151.22	28.279		
11,700.0	6,831.3	7,042.2	6,877.2	138.1	24.4	-88.32	2,300.2	966.4	4,360.6	4,206.6	154.00	28.315		
11,800.0	6,830.3	7,041.7	6,876.8	140.8	24.4	-88.31	2,300.2	966.4	4,445.4	4,288.7	156.78	28.354		
11,900.0	6,829.4	7,041.3	6,876.3	143.6	24.4	-88.30	2,300.2	966.4	4,530.9	4,371.3	159.56	28.396		
11,938.6	6,829.0	7,040.0	6,875.1	144.7	24.4	-88.27	2,300.2	966.4	4,564.0	4,403.4	160.63	28.413		

CC - Min centre 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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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	92.70	-14.6	309.3	309.7					
100.0	100.0	96.9	96.9	0.1	0.1	92.71	-14.6	309.2	309.6	309.4	0.21	1,447.167		
200.0	200.0	197.3	197.3	0.3	0.3	92.73	-14.8	309.1	309.4	308.8	0.66	465.754		
300.0	300.0	297.7	297.7	0.5	0.6	92.78	-15.0	308.8	309.1	308.0	1.12	277.224		
400.0	400.0	397.7	397.7	0.8	0.8	92.85	-15.3	308.3	308.7	307.2	1.56	197.290		
500.0	500.0	498.3	498.3	1.0	1.0	92.93	-15.8	307.8	308.2	306.2	2.02	152.884		
600.0	600.0	598.5	598.5	1.2	1.2	93.04	-16.3	307.1	307.6	305.1	2.47	124.696		
700.0	700.0	699.4	699.4	1.4	1.5	93.16	-16.9	306.3	306.8	303.9	2.92	105.163		
800.0	800.0	800.3	800.3	1.7	1.7	93.30	-17.6	305.1	305.7	302.3	3.36	90.985		
900.0	900.0	899.8	899.8	1.9	1.9	93.38	-18.0	304.0	304.5	300.7	3.77	80.792		
928.6	928.6	928.1	928.1	2.0	1.9	169.22	-18.0	303.7	304.4	300.5	3.88	78.363 CC, ES		
1,000.0	1,000.0	999.7	999.7	2.1	2.1	169.33	-18.3	302.9	305.2	301.0	4.18	72.962		
1,100.0	1,099.8	1,099.8	1,099.8	2.3	2.3	169.58	-18.7	301.8	309.3	304.7	4.60	67.214		
1,200.0	1,199.5	1,199.8	1,199.7	2.6	2.5	169.95	-19.2	300.6	316.7	311.6	5.02	63.088		
1,300.0	1,298.7	1,299.4	1,299.3	2.8	2.7	170.41	-19.8	299.3	327.5	322.0	5.42	60.363		
1,400.0	1,397.5	1,398.1	1,398.1	3.1	2.9	170.87	-20.1	298.0	341.6	335.8	5.82	58.672		
1,500.0	1,495.6	1,496.5	1,496.5	3.4	3.1	171.32	-20.2	296.8	359.3	353.1	6.22	57.766		
1,600.0	1,593.4	1,594.0	1,593.9	3.8	3.3	171.81	-20.2	295.7	378.8	372.1	6.64	57.016		
1,700.0	1,691.3	1,686.1	1,686.0	4.1	3.5	172.22	-20.2	295.3	398.9	391.8	7.06	56.468		
1,800.0	1,789.1	1,774.0	1,773.9	4.5	3.7	172.61	-20.6	296.6	421.0	413.5	7.49	56.248		
1,900.0	1,886.9	1,860.5	1,860.3	4.9	3.8	173.02	-21.8	299.9	445.5	437.6	7.91	56.337		
2,000.0	1,984.7	1,949.6	1,949.3	5.4	4.0	173.53	-24.3	305.0	472.1	463.8	8.34	56.599		
2,100.0	2,082.5	2,040.0	2,039.3	5.8	4.2	174.18	-28.5	311.0	499.8	491.0	8.78	56.916		
2,200.0	2,180.3	2,120.0	2,118.9	6.2	4.4	174.84	-33.7	318.0	529.8	520.6	9.21	57.557		
2,300.0	2,278.1	2,196.7	2,194.8	6.6	4.6	175.49	-39.8	326.9	562.8	553.2	9.63	58.468		
2,400.0	2,376.0	2,272.9	2,269.8	7.1	4.8	176.16	-47.0	337.6	598.6	588.6	10.05	59.558		
2,500.0	2,473.8	2,347.4	2,342.9	7.5	5.0	176.82	-55.0	350.1	637.2	626.7	10.48	60.825		
2,600.0	2,571.6	2,429.1	2,422.5	8.0	5.2	177.43	-64.0	366.0	678.2	667.3	10.91	62.152		
2,695.7	2,665.2	2,520.4	2,511.7	8.4	5.5	177.97	-73.1	383.7	717.3	706.0	11.34	63.249		
2,700.0	2,669.4	2,524.4	2,515.5	8.4	5.5	177.99	-73.4	384.4	719.1	707.7	11.36	63.291		
2,800.0	2,767.6	2,614.1	2,603.2	8.7	5.8	178.39	-81.2	402.0	758.2	746.4	11.80	64.236		
2,900.0	2,866.4	2,705.6	2,692.5	9.0	6.1	178.77	-89.7	420.2	794.5	782.3	12.25	64.881		
3,000.0	2,965.6	2,805.0	2,789.5	9.3	6.4	179.13	-98.8	439.5	827.1	814.5	12.68	65.207		
3,100.0	3,065.3	2,899.5	2,881.8	9.5	6.8	179.44	-107.4	457.8	856.4	843.3	13.11	65.342		
3,200.0	3,165.1	2,997.8	2,977.9	9.7	7.1	179.69	-115.8	476.8	882.2	868.7	13.52	65.270		
3,295.7	3,260.8	3,089.8	3,067.8	9.8	7.5	104.12	-124.0	494.6	903.8	886.6	17.20	52.538		
3,300.0	3,265.1	3,093.8	3,071.7	9.8	7.5	104.13	-124.3	495.4	904.7	887.5	17.22	52.525		
3,400.0	3,365.1	3,190.0	3,165.7	10.0	7.8	104.37	-133.0	514.1	925.8	908.1	17.75	52.171		
3,500.0	3,465.1	3,287.4	3,260.8	10.1	8.2	104.59	-141.6	533.2	947.0	928.7	18.28	51.793		
3,600.0	3,565.1	3,378.3	3,349.5	10.3	8.6	104.81	-149.9	551.1	968.4	949.6	18.81	51.483		
3,700.0	3,665.1	3,457.9	3,427.0	10.5	8.9	105.02	-158.0	567.7	991.2	971.9	19.31	51.320		
3,800.0	3,765.1	3,541.0	3,507.5	10.6	9.3	105.24	-166.8	586.4	1,015.6	995.8	19.86	51.153		
3,900.0	3,865.1	3,634.4	3,597.7	10.8	9.8	105.48	-177.1	608.0	1,040.9	1,020.4	20.46	50.871		
4,000.0	3,965.1	3,747.4	3,707.1	11.0	10.3	105.73	-189.0	633.7	1,065.7	1,044.5	21.13	50.435		
4,100.0	4,065.1	3,863.2	3,819.8	11.1	10.8	105.93	-199.6	658.2	1,088.5	1,066.8	21.79	49.963		
4,200.0	4,165.1	3,965.0	3,919.1	11.3	11.2	106.14	-209.6	678.5	1,110.4	1,088.0	22.39	49.606		
4,300.0	4,265.1	4,064.8	4,016.3	11.5	11.6	106.33	-219.3	698.4	1,132.3	1,109.4	22.98	49.270		
4,400.0	4,365.1	4,161.6	4,110.9	11.7	12.0	106.51	-228.4	717.5	1,153.9	1,130.3	23.56	48.969		
4,500.0	4,465.1	4,272.1	4,218.7	11.8	12.5	106.67	-238.3	739.2	1,175.3	1,151.1	24.21	48.550		
4,600.0	4,565.1	4,377.5	4,321.9	12.0	12.9	106.82	-247.4	758.7	1,195.5	1,170.7	24.81	48.181		
4,700.0	4,665.1	4,460.9	4,403.5	12.2	13.2	106.97	-255.3	774.2	1,216.0	1,190.7	25.34	47.985		
4,800.0	4,765.1	4,551.5	4,491.9	12.4	13.6	107.11	-263.7	792.0	1,237.6	1,211.7	25.92	47.751		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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-MWVD													Offset Well Error:	0.0 usft
Reference				Offset		Semi Major Axis			Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,900.0	4,865.1	4,647.7	4,585.7	12.6	14.1	107.22	-272.1	811.5	1,259.5	1,233.0	26.52	47.488		
5,000.0	4,965.1	4,779.7	4,714.8	12.8	14.6	107.32	-282.4	837.1	1,280.5	1,253.2	27.26	46.974		
5,100.0	5,065.1	4,895.5	4,828.6	12.9	15.1	107.41	-290.6	856.8	1,298.8	1,270.9	27.89	46.573		
5,200.0	5,165.1	4,987.4	4,919.0	13.1	15.4	107.45	-296.6	872.6	1,317.1	1,288.7	28.43	46.327		
5,300.0	5,265.1	5,093.0	5,022.8	13.3	15.8	107.52	-303.9	890.3	1,335.2	1,306.2	29.02	46.015		
5,400.0	5,365.1	5,227.8	5,155.6	13.5	16.3	107.64	-313.3	911.2	1,352.2	1,322.5	29.69	45.535		
5,500.0	5,465.1	5,440.4	5,366.6	13.7	16.9	107.77	-323.9	934.3	1,364.9	1,334.4	30.52	44.729		
5,600.0	5,565.1	5,594.1	5,520.2	13.9	17.2	107.80	-326.9	940.8	1,369.4	1,338.4	31.02	44.151		
5,700.0	5,665.1	5,716.2	5,642.3	14.1	17.4	107.82	-328.1	943.3	1,371.6	1,340.2	31.42	43.657		
5,800.0	5,765.1	5,828.7	5,754.7	14.3	17.6	107.81	-328.2	944.3	1,372.5	1,340.7	31.79	43.178		
5,900.0	5,865.1	5,925.8	5,851.8	14.5	17.8	107.79	-328.0	944.9	1,373.0	1,340.9	32.13	42.738		
6,000.0	5,965.1	6,017.9	5,943.9	14.7	17.9	107.79	-328.1	945.9	1,374.1	1,341.6	32.47	42.323		
6,100.0	6,065.1	6,116.7	6,042.7	14.9	18.1	107.79	-328.5	947.2	1,375.5	1,342.6	32.82	41.904		
6,192.7	6,157.8	6,209.5	6,135.5	15.1	18.2	107.80	-329.2	948.3	1,376.7	1,343.6	33.16	41.518		
6,200.0	6,165.1	6,216.8	6,142.8	15.1	18.2	17.80	-329.2	948.4	1,376.8	1,349.5	27.26	50.510		
6,250.0	6,215.1	6,268.7	6,194.7	15.1	18.3	17.87	-329.6	949.0	1,375.3	1,347.9	27.43	50.135		
6,300.0	6,264.7	6,321.2	6,247.2	15.2	18.4	18.08	-329.9	949.5	1,370.4	1,342.9	27.50	49.828		
6,350.0	6,313.9	6,370.8	6,296.8	15.2	18.5	18.41	-330.1	950.0	1,362.2	1,334.7	27.46	49.599		
6,400.0	6,362.2	6,422.4	6,348.4	15.3	18.6	18.89	-330.2	950.4	1,350.6	1,323.3	27.33	49.417		
6,450.0	6,409.6	6,472.7	6,398.7	15.3	18.6	19.54	-330.3	950.8	1,335.8	1,308.7	27.11	49.274		
6,500.0	6,455.8	6,521.3	6,447.2	15.3	18.7	20.36	-330.4	951.0	1,317.8	1,291.0	26.81	49.153		
6,550.0	6,500.5	6,568.1	6,494.0	15.3	18.8	21.39	-330.6	951.0	1,296.8	1,270.4	26.45	49.025		
6,600.0	6,543.5	6,612.2	6,538.2	15.3	18.8	22.64	-330.9	951.0	1,272.9	1,246.8	26.06	48.847		
6,650.0	6,584.7	6,653.2	6,579.2	15.3	18.9	24.15	-331.0	951.1	1,246.2	1,220.5	25.66	48.565		
6,700.0	6,623.7	6,691.2	6,617.2	15.4	19.0	25.95	-331.1	951.1	1,217.0	1,191.7	25.31	48.090		
6,750.0	6,660.6	6,725.4	6,651.4	15.5	19.0	28.07	-331.2	951.2	1,185.4	1,160.4	25.05	47.323		
6,800.0	6,694.9	6,757.6	6,683.6	15.7	19.1	30.62	-331.3	951.3	1,151.8	1,126.8	24.97	46.119		
6,850.0	6,726.6	6,789.0	6,715.0	15.9	19.1	33.72	-331.6	951.5	1,116.2	1,091.0	25.18	44.329		
6,900.0	6,755.6	6,818.4	6,744.4	16.2	19.2	37.45	-331.8	951.6	1,078.8	1,053.0	25.76	41.877		
6,950.0	6,781.7	6,845.3	6,771.3	16.6	19.2	41.88	-331.9	951.8	1,039.9	1,013.1	26.80	38.796		
7,000.0	6,804.7	6,869.7	6,795.7	17.1	19.3	47.10	-332.0	951.9	999.7	971.3	28.35	35.259		
7,050.0	6,824.6	6,890.2	6,816.2	17.7	19.3	53.07	-332.0	952.0	958.4	928.1	30.34	31.591		
7,100.0	6,841.2	6,907.0	6,833.0	18.3	19.3	59.69	-332.0	952.1	916.4	883.8	32.61	28.100		
7,150.0	6,854.5	6,920.5	6,846.4	19.0	19.3	66.78	-332.1	952.1	874.1	839.1	34.95	25.008		
7,200.0	6,864.4	6,930.7	6,856.7	19.8	19.4	74.05	-332.1	952.2	831.6	794.5	37.10	22.415		
7,250.0	6,870.8	6,937.5	6,863.5	20.7	19.4	81.06	-332.1	952.2	789.4	750.5	38.86	20.316		
7,300.0	6,873.8	6,940.7	6,866.6	21.6	19.4	87.45	-332.1	952.2	747.8	707.6	40.16	18.619		
7,324.7	6,874.0	6,940.9	6,866.9	22.1	19.4	90.30	-332.1	952.2	727.6	686.9	40.66	17.896		
7,400.0	6,873.2	6,940.4	6,866.4	23.5	19.4	90.23	-332.1	952.2	667.8	625.6	42.13	15.849		
7,500.0	6,872.2	6,939.8	6,865.7	25.6	19.4	90.14	-332.1	952.2	593.9	549.7	44.24	13.426		
7,600.0	6,871.3	6,939.1	6,865.1	27.9	19.4	90.05	-332.1	952.2	528.7	482.2	46.46	11.378		
7,700.0	6,870.3	6,938.5	6,864.4	30.2	19.4	89.97	-332.1	952.2	475.7	426.9	48.79	9.750		
7,800.0	6,869.3	6,937.8	6,863.8	32.6	19.4	89.88	-332.1	952.2	439.4	388.2	51.19	8.584		
7,900.0	6,868.3	6,937.2	6,863.2	35.0	19.4	89.79	-332.1	952.2	424.0	370.4	53.65	7.904		
7,916.1	6,868.2	6,937.1	6,863.1	35.5	19.4	89.78	-332.1	952.2	423.7	369.7	54.05	7.840		
8,000.0	6,867.4	6,936.5	6,862.5	37.6	19.4	89.71	-332.1	952.2	432.0	375.8	56.15	7.692 SF		
8,100.0	6,866.4	6,935.9	6,861.9	40.1	19.4	89.62	-332.1	952.2	461.9	403.2	58.70	7.868		
8,200.0	6,865.4	6,935.3	6,861.3	42.7	19.4	89.54	-332.1	952.2	510.0	448.7	61.28	8.322		
8,300.0	6,864.4	6,934.7	6,860.7	45.3	19.4	89.46	-332.1	952.2	571.7	507.9	63.89	8.949		
8,400.0	6,863.5	6,934.1	6,860.1	47.9	19.4	89.38	-332.1	952.2	643.2	576.6	66.52	9.668		
8,500.0	6,862.5	6,933.5	6,859.5	50.6	19.4	89.29	-332.1	952.2	721.4	652.2	69.17	10.429		
8,600.0	6,861.5	6,932.9	6,858.9	53.2	19.4	89.21	-332.1	952.2	804.5	732.7	71.84	11.199		

CC - Min centre 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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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		
8,614.0	6,861.4	6,932.8	6,858.8	53.6	19.4	89.20	-332.1	952.2	816.4	744.2	72.21	11.306		
8,700.0	6,860.5	6,932.3	6,858.3	55.9	19.4	89.03	-332.1	952.2	891.9	817.6	74.33	12.000		
8,800.0	6,859.5	6,931.7	6,857.6	58.6	19.4	88.76	-332.1	952.2	983.9	907.2	76.63	12.839		
8,880.6	6,858.7	6,931.2	6,857.1	60.7	19.4	88.48	-332.1	952.2	1,060.3	981.9	78.36	13.531		
8,900.0	6,858.6	6,931.0	6,857.0	61.2	19.4	88.45	-332.1	952.2	1,078.8	1,000.0	78.87	13.679		
9,000.0	6,857.6	6,930.4	6,856.4	63.9	19.4	88.33	-332.1	952.2	1,175.1	1,093.6	81.53	14.413		
9,100.0	6,856.6	6,929.8	6,855.8	66.5	19.4	88.22	-332.1	952.2	1,272.0	1,187.8	84.20	15.107		
9,200.0	6,855.6	6,929.2	6,855.2	69.2	19.4	88.10	-332.1	952.2	1,369.3	1,282.4	86.88	15.761		
9,300.0	6,854.6	6,928.6	6,854.5	71.8	19.3	87.99	-332.1	952.2	1,467.0	1,377.4	89.56	16.380		
9,368.1	6,854.0	6,928.1	6,854.1	73.7	19.3	87.91	-332.1	952.2	1,533.7	1,442.3	91.39	16.782		
9,400.0	6,853.6	6,928.0	6,853.9	74.5	19.3	88.04	-332.1	952.2	1,564.9	1,472.5	92.42	16.932		
9,500.0	6,852.7	6,927.4	6,853.3	77.2	19.3	88.37	-332.1	952.2	1,662.2	1,566.7	95.54	17.398		
9,600.0	6,851.7	6,926.8	6,852.8	80.0	19.3	88.62	-332.1	952.2	1,758.6	1,660.2	98.47	17.860		
9,634.8	6,851.3	6,926.6	6,852.6	80.9	19.3	88.69	-332.1	952.2	1,791.9	1,692.5	99.43	18.021		
9,700.0	6,850.7	6,926.3	6,852.2	82.7	19.3	88.65	-332.1	952.2	1,854.3	1,753.1	101.23	18.319		
9,800.0	6,849.7	6,925.7	6,851.7	85.5	19.3	88.59	-332.1	952.2	1,950.4	1,846.4	103.98	18.758		
9,870.5	6,849.0	6,925.3	6,851.3	87.4	19.3	88.55	-332.1	952.2	2,018.3	1,912.4	105.92	19.055		
9,900.0	6,848.7	6,925.2	6,851.2	88.3	19.3	88.62	-332.1	952.2	2,046.8	1,940.0	106.72	19.179		
10,000.0	6,847.7	6,924.7	6,850.6	91.0	19.3	88.83	-332.1	952.2	2,142.4	2,033.1	109.28	19.605		
10,100.0	6,846.8	6,924.2	6,850.2	93.8	19.3	88.99	-332.1	952.2	2,236.9	2,125.3	111.59	20.046		
10,137.1	6,846.4	6,924.0	6,850.0	94.8	19.3	89.04	-332.1	952.2	2,271.6	2,159.3	112.37	20.215		
10,200.0	6,845.8	6,923.7	6,849.7	96.5	19.3	89.02	-332.1	952.2	2,330.4	2,216.3	114.12	20.421		
10,300.0	6,844.8	6,923.2	6,849.2	99.3	19.3	88.99	-332.1	952.2	2,424.4	2,307.5	116.90	20.739		
10,400.0	6,843.8	6,922.8	6,848.7	102.0	19.3	88.95	-332.1	952.2	2,518.8	2,399.2	119.68	21.047		
10,500.0	6,842.8	6,920.0	6,846.0	104.8	19.3	88.76	-332.1	952.1	2,613.7	2,491.2	122.45	21.345		
10,600.0	6,841.9	6,920.0	6,846.0	107.5	19.3	88.76	-332.1	952.1	2,708.9	2,583.7	125.24	21.630		
10,700.0	6,840.9	6,920.0	6,846.0	110.3	19.3	88.76	-332.1	952.1	2,804.4	2,676.4	128.03	21.905		
10,732.1	6,840.6	6,920.0	6,846.0	111.2	19.3	88.76	-332.1	952.1	2,835.2	2,706.3	128.92	21.991		
10,800.0	6,839.9	6,920.0	6,846.0	113.0	19.3	88.57	-332.1	952.1	2,900.6	2,769.4	131.22	22.105		
10,900.0	6,838.9	6,920.0	6,846.0	115.8	19.3	88.16	-332.1	952.1	2,998.2	2,863.9	134.31	22.323		
10,998.8	6,838.0	6,920.0	6,846.0	118.6	19.3	87.46	-332.1	952.1	3,095.7	2,958.7	137.01	22.595		
11,000.0	6,838.0	6,920.0	6,846.0	118.6	19.3	87.46	-332.1	952.1	3,096.9	2,959.9	137.04	22.598		
11,100.0	6,837.0	6,920.0	6,846.0	121.4	19.3	87.46	-332.1	952.1	3,196.1	3,056.2	139.82	22.858		
11,200.0	6,836.0	6,920.0	6,846.0	124.2	19.3	87.46	-332.1	952.1	3,295.3	3,152.7	142.60	23.108		
11,300.0	6,835.1	6,920.0	6,846.0	126.9	19.3	87.46	-332.1	952.1	3,394.5	3,249.1	145.39	23.348		
11,400.0	6,834.1	6,918.0	6,844.0	129.7	19.3	87.17	-332.1	952.1	3,493.8	3,345.7	148.13	23.585		
11,428.1	6,833.8	6,917.8	6,843.8	130.5	19.3	87.16	-332.1	952.1	3,521.7	3,372.8	148.91	23.649		
11,487.5	6,833.3	6,917.6	6,843.5	132.2	19.3	86.16	-332.1	952.1	3,580.8	3,430.5	150.27	23.829		
11,500.0	6,833.2	6,917.5	6,843.5	132.5	19.3	86.15	-332.1	952.1	3,593.3	3,442.7	150.61	23.857		
11,600.0	6,832.2	6,917.0	6,843.0	135.3	19.3	86.05	-332.1	952.1	3,692.9	3,539.6	153.37	24.078		
11,700.0	6,831.3	6,916.5	6,842.5	138.1	19.3	85.96	-332.1	952.1	3,792.6	3,636.5	156.13	24.291		
11,800.0	6,830.3	6,916.1	6,842.0	140.8	19.3	85.87	-332.1	952.1	3,892.3	3,733.4	158.89	24.497		
11,900.0	6,829.4	6,915.6	6,841.6	143.6	19.3	85.78	-332.1	952.1	3,992.0	3,830.4	161.65	24.696		
11,938.6	6,829.0	6,915.4	6,841.4	144.7	19.3	85.75	-332.1	952.1	4,030.5	3,867.8	162.71	24.771		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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)	Offset Wellbore Centre +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	59.60	1,737.9	2,962.0	3,434.2					
100.0	100.0	204.5	204.5	0.1	1.2	59.60	1,737.9	2,962.0	3,434.2	3,432.9	1.29	2,655.925		
200.0	200.0	304.5	304.5	0.3	3.5	59.60	1,737.9	2,962.0	3,434.2	3,430.4	3.82	898.747		
300.0	300.0	404.5	404.5	0.5	5.6	59.60	1,737.9	2,962.0	3,434.2	3,428.1	6.12	560.762		
400.0	400.0	504.5	504.5	0.8	7.6	59.60	1,737.9	2,962.0	3,434.2	3,425.8	8.39	409.278		
500.0	500.0	604.5	604.5	1.0	9.6	59.60	1,737.9	2,962.0	3,434.2	3,423.6	10.64	322.627		
600.0	600.0	704.5	704.5	1.2	11.7	59.60	1,737.9	2,962.0	3,434.2	3,421.3	12.89	266.385		
700.0	700.0	804.5	804.5	1.4	13.7	59.60	1,737.9	2,962.0	3,434.2	3,419.1	15.14	226.892		
800.0	800.0	904.5	904.5	1.7	15.7	59.60	1,737.9	2,962.0	3,434.2	3,416.9	17.38	197.622		
900.0	900.0	1,004.5	1,004.5	1.9	17.7	59.60	1,737.9	2,962.0	3,434.2	3,414.6	19.62	175.053		
1,000.0	1,000.0	1,104.5	1,104.5	2.1	19.7	135.42	1,737.9	2,962.0	3,435.5	3,413.6	21.84	157.296		
1,100.0	1,099.8	1,204.3	1,204.3	2.3	21.7	135.43	1,737.9	2,962.0	3,439.2	3,415.2	24.04	143.068		
1,200.0	1,199.5	1,304.0	1,304.0	2.6	23.8	135.44	1,737.9	2,962.0	3,445.4	3,419.2	26.22	131.403		
1,300.0	1,298.7	1,403.2	1,403.2	2.8	25.8	135.46	1,737.9	2,962.0	3,454.2	3,425.8	28.38	121.698		
1,400.0	1,397.5	1,502.0	1,502.0	3.1	27.7	135.48	1,737.9	2,962.0	3,465.4	3,434.8	30.53	113.520		
1,500.0	1,495.6	1,600.1	1,600.1	3.4	29.7	135.50	1,737.9	2,962.0	3,479.1	3,446.4	32.65	106.554		
1,600.0	1,593.4	1,697.9	1,697.9	3.8	31.7	135.74	1,737.9	2,962.0	3,494.1	3,459.2	34.89	100.157		
1,700.0	1,691.3	1,795.8	1,795.8	4.1	33.7	135.98	1,737.9	2,962.0	3,509.2	3,472.1	37.13	94.503		
1,800.0	1,789.1	1,893.6	1,893.6	4.5	35.6	136.21	1,737.9	2,962.0	3,524.3	3,484.9	39.39	89.475		
1,900.0	1,886.9	1,991.4	1,991.4	4.9	37.6	136.44	1,737.9	2,962.0	3,539.5	3,497.9	41.65	84.979		
2,000.0	1,984.7	2,089.2	2,089.2	5.4	39.6	136.67	1,737.9	2,962.0	3,554.8	3,510.9	43.92	80.940		
2,100.0	2,082.5	2,187.0	2,187.0	5.8	41.5	136.89	1,737.9	2,962.0	3,570.1	3,523.9	46.19	77.292		
2,200.0	2,180.3	2,284.8	2,284.8	6.2	43.5	137.12	1,737.9	2,962.0	3,585.5	3,537.0	48.46	73.983		
2,300.0	2,278.1	2,382.6	2,382.6	6.6	45.5	137.34	1,737.9	2,962.0	3,600.9	3,550.1	50.74	70.970		
2,400.0	2,376.0	2,480.5	2,480.5	7.1	47.4	137.56	1,737.9	2,962.0	3,616.3	3,563.3	53.01	68.214		
2,500.0	2,473.8	2,578.3	2,578.3	7.5	49.4	137.78	1,737.9	2,962.0	3,631.9	3,576.6	55.29	65.685		
2,600.0	2,571.6	2,676.1	2,676.1	8.0	51.4	138.00	1,737.9	2,962.0	3,647.4	3,589.9	57.57	63.357		
2,695.7	2,665.2	2,769.7	2,769.7	8.4	53.2	138.20	1,737.9	2,962.0	3,662.4	3,602.6	59.75	61.296		
2,700.0	2,669.4	2,773.9	2,773.9	8.4	53.3	138.22	1,737.9	2,962.0	3,663.1	3,603.2	59.85	61.199		
2,800.0	2,767.6	2,872.1	2,872.1	8.7	55.3	138.61	1,737.9	2,962.0	3,677.3	3,615.1	62.27	59.056		
2,900.0	2,866.4	2,970.9	2,970.9	9.0	57.3	138.92	1,737.9	2,962.0	3,689.1	3,624.4	64.65	57.058		
3,000.0	2,965.6	3,070.1	3,070.1	9.3	59.3	139.16	1,737.9	2,962.0	3,698.2	3,631.2	67.00	55.195		
3,100.0	3,065.3	3,169.8	3,169.8	9.5	61.3	139.34	1,737.9	2,962.0	3,704.7	3,635.4	69.30	53.456		
3,200.0	3,165.1	3,269.6	3,269.6	9.7	63.3	139.44	1,737.9	2,962.0	3,708.5	3,637.0	71.55	51.832		
3,295.7	3,260.8	3,365.3	3,365.3	9.8	65.2	63.65	1,737.9	2,962.0	3,709.7	3,635.6	74.10	50.062		
3,300.0	3,265.1	3,369.6	3,369.6	9.8	65.3	63.65	1,737.9	2,962.0	3,709.7	3,635.5	74.20	49.998		
3,400.0	3,365.1	3,469.6	3,469.6	10.0	67.3	63.65	1,737.9	2,962.0	3,709.7	3,633.4	76.38	48.570		
3,500.0	3,465.1	3,569.6	3,569.6	10.1	69.3	63.65	1,737.9	2,962.0	3,709.7	3,631.2	78.56	47.220		
3,600.0	3,565.1	3,669.6	3,669.6	10.3	71.3	63.65	1,737.9	2,962.0	3,709.7	3,629.0	80.75	45.942		
3,700.0	3,665.1	3,769.6	3,769.6	10.5	73.4	63.65	1,737.9	2,962.0	3,709.7	3,626.8	82.94	44.730		
3,800.0	3,765.1	3,869.6	3,869.6	10.6	75.4	63.65	1,737.9	2,962.0	3,709.7	3,624.6	85.13	43.579		
3,900.0	3,865.1	3,969.6	3,969.6	10.8	77.4	63.65	1,737.9	2,962.0	3,709.7	3,622.4	87.32	42.485		
4,000.0	3,965.1	4,069.6	4,069.6	11.0	79.4	63.65	1,737.9	2,962.0	3,709.7	3,620.2	89.51	41.444		
4,100.0	4,065.1	4,169.6	4,169.6	11.1	81.4	63.65	1,737.9	2,962.0	3,709.7	3,618.0	91.71	40.452		
4,200.0	4,165.1	4,269.6	4,269.6	11.3	83.4	63.65	1,737.9	2,962.0	3,709.7	3,615.8	93.90	39.506		
4,300.0	4,265.1	4,369.6	4,369.6	11.5	85.4	63.65	1,737.9	2,962.0	3,709.7	3,613.6	96.10	38.602		
4,400.0	4,365.1	4,469.6	4,469.6	11.7	87.4	63.65	1,737.9	2,962.0	3,709.7	3,611.4	98.30	37.738		
4,500.0	4,465.1	4,569.6	4,569.6	11.8	89.4	63.65	1,737.9	2,962.0	3,709.7	3,609.2	100.50	36.912		
4,600.0	4,565.1	4,669.6	4,669.6	12.0	91.5	63.65	1,737.9	2,962.0	3,709.7	3,607.0	102.71	36.120		
4,700.0	4,665.1	4,769.6	4,769.6	12.2	93.5	63.65	1,737.9	2,962.0	3,709.7	3,604.8	104.91	35.361		
4,800.0	4,765.1	4,869.6	4,869.6	12.4	95.5	63.65	1,737.9	2,962.0	3,709.7	3,602.6	107.11	34.633		
4,900.0	4,865.1	4,969.6	4,969.6	12.6	97.5	63.65	1,737.9	2,962.0	3,709.7	3,600.4	109.32	33.935		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT BINDER 10-28 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	4,965.1	5,069.6	5,069.6	12.8	99.5	63.65	1,737.9	2,962.0	3,709.7	3,598.2	111.53	33.263				
5,100.0	5,065.1	5,169.6	5,169.6	12.9	101.5	63.65	1,737.9	2,962.0	3,709.7	3,596.0	113.74	32.617				
5,200.0	5,165.1	5,269.6	5,269.6	13.1	103.5	63.65	1,737.9	2,962.0	3,709.7	3,593.8	115.94	31.996				
5,300.0	5,265.1	5,369.6	5,369.6	13.3	105.5	63.65	1,737.9	2,962.0	3,709.7	3,591.6	118.15	31.398				
5,400.0	5,365.1	5,469.6	5,469.6	13.5	107.5	63.65	1,737.9	2,962.0	3,709.7	3,589.4	120.36	30.821				
5,500.0	5,465.1	5,569.6	5,569.6	13.7	109.6	63.65	1,737.9	2,962.0	3,709.7	3,587.2	122.58	30.265				
5,600.0	5,565.1	5,669.6	5,669.6	13.9	111.6	63.65	1,737.9	2,962.0	3,709.7	3,585.0	124.79	29.728				
5,700.0	5,665.1	5,769.6	5,769.6	14.1	113.6	63.65	1,737.9	2,962.0	3,709.7	3,582.7	127.00	29.210				
5,800.0	5,765.1	5,869.6	5,869.6	14.3	115.6	63.65	1,737.9	2,962.0	3,709.7	3,580.5	129.21	28.710				
5,900.0	5,865.1	5,969.6	5,969.6	14.5	117.6	63.65	1,737.9	2,962.0	3,709.7	3,578.3	131.43	28.226				
6,000.0	5,965.1	6,069.6	6,069.6	14.7	119.6	63.65	1,737.9	2,962.0	3,709.7	3,576.1	133.64	27.758				
6,100.0	6,065.1	6,169.6	6,169.6	14.9	121.6	63.65	1,737.9	2,962.0	3,709.7	3,573.9	135.86	27.306				
6,192.7	6,157.8	6,262.3	6,262.3	15.1	123.5	63.65	1,737.9	2,962.0	3,709.7	3,571.8	137.91	26.899				
6,200.0	6,165.1	6,269.6	6,269.6	15.1	123.6	-26.35	1,737.9	2,962.0	3,709.7	3,572.0	137.74	26.932				
6,250.0	6,215.1	6,319.6	6,319.6	15.1	124.6	-26.43	1,737.9	2,962.0	3,707.7	3,569.2	138.47	26.777				
6,300.0	6,264.7	6,369.2	6,369.2	15.2	125.6	-26.66	1,737.9	2,962.0	3,702.6	3,563.9	138.65	26.705				
6,350.0	6,313.9	6,418.4	6,418.4	15.2	126.6	-27.02	1,737.9	2,962.0	3,694.3	3,556.0	138.29	26.714				
6,400.0	6,362.2	6,466.7	6,466.7	15.3	127.6	-27.54	1,737.9	2,962.0	3,683.1	3,545.6	137.42	26.801				
6,450.0	6,409.6	6,514.1	6,514.1	15.3	128.5	-28.21	1,737.9	2,962.0	3,668.8	3,532.7	136.08	26.961				
6,500.0	6,455.8	6,560.3	6,560.3	15.3	129.5	-29.05	1,737.9	2,962.0	3,651.7	3,517.4	134.31	27.188				
6,550.0	6,500.5	6,605.0	6,605.0	15.3	130.4	-30.08	1,737.9	2,962.0	3,631.7	3,499.5	132.22	27.468				
6,600.0	6,543.5	6,648.0	6,648.0	15.3	131.2	-31.32	1,737.9	2,962.0	3,609.1	3,479.2	129.90	27.783				
6,650.0	6,584.7	6,689.2	6,689.2	15.3	132.1	-32.78	1,737.9	2,962.0	3,583.8	3,456.3	127.52	28.103				
6,700.0	6,623.7	6,728.2	6,728.2	15.4	132.9	-34.52	1,737.9	2,962.0	3,556.2	3,430.9	125.28	28.386				
6,750.0	6,660.6	6,765.1	6,765.1	15.5	133.6	-36.55	1,737.9	2,962.0	3,526.2	3,402.8	123.41	28.573				
6,800.0	6,694.9	6,799.4	6,799.4	15.7	134.3	-38.92	1,737.9	2,962.0	3,494.2	3,372.0	122.20	28.595				
6,850.0	6,726.6	6,831.1	6,831.1	15.9	134.9	-41.68	1,737.9	2,962.0	3,460.1	3,338.2	121.94	28.376				
6,900.0	6,755.6	6,860.1	6,860.1	16.2	135.5	-44.88	1,737.9	2,962.0	3,424.4	3,301.4	122.92	27.858				
6,950.0	6,781.7	6,886.2	6,886.2	16.6	136.0	-48.56	1,737.9	2,962.0	3,387.0	3,261.7	125.33	27.024				
7,000.0	6,804.7	6,909.2	6,909.2	17.1	136.5	-52.76	1,737.9	2,962.0	3,348.3	3,219.1	129.22	25.911				
7,050.0	6,824.6	6,929.1	6,929.1	17.7	136.9	-57.53	1,737.9	2,962.0	3,308.4	3,174.0	134.41	24.615				
7,100.0	6,841.2	6,945.7	6,945.7	18.3	137.2	-62.84	1,737.9	2,962.0	3,267.6	3,127.2	140.46	23.264				
7,150.0	6,854.5	6,959.0	6,959.0	19.0	137.5	-68.65	1,737.9	2,962.0	3,226.1	3,079.4	146.72	21.989				
7,200.0	6,864.4	6,968.9	6,968.9	19.8	137.7	-74.85	1,737.9	2,962.0	3,184.0	3,031.6	152.40	20.892				
7,250.0	6,870.8	6,975.3	6,975.3	20.7	137.8	-81.28	1,737.9	2,962.0	3,141.7	2,984.9	156.79	20.038				
7,300.0	6,873.8	6,978.3	6,978.3	21.6	137.9	-87.75	1,737.9	2,962.0	3,099.3	2,940.0	159.37	19.448				
7,324.7	6,874.0	6,978.5	6,978.5	22.1	137.9	-90.88	1,737.9	2,962.0	3,078.4	2,918.5	159.91	19.251				
7,400.0	6,873.2	6,977.7	6,977.7	23.5	137.9	-90.86	1,737.9	2,962.0	3,015.1	2,853.7	161.38	18.683				
7,500.0	6,872.2	6,976.7	6,976.7	25.6	137.9	-90.83	1,737.9	2,962.0	2,931.8	2,768.3	163.46	17.936				
7,600.0	6,871.3	6,975.8	6,975.8	27.9	137.8	-90.79	1,737.9	2,962.0	2,849.6	2,683.9	165.67	17.200				
7,700.0	6,870.3	6,974.8	6,974.8	30.2	137.8	-90.76	1,737.9	2,962.0	2,768.6	2,600.6	167.98	16.482				
7,800.0	6,869.3	6,973.8	6,973.8	32.6	137.8	-90.72	1,737.9	2,962.0	2,688.9	2,518.5	170.36	15.783				
7,900.0	6,868.3	6,972.8	6,972.8	35.0	137.8	-90.69	1,737.9	2,962.0	2,610.5	2,437.7	172.80	15.107				
8,000.0	6,867.4	6,971.9	6,971.9	37.6	137.8	-90.66	1,737.9	2,962.0	2,533.7	2,358.4	175.29	14.454				
8,100.0	6,866.4	6,970.9	6,970.9	40.1	137.7	-90.62	1,737.9	2,962.0	2,458.6	2,280.7	177.83	13.826				
8,200.0	6,865.4	6,969.9	6,969.9	42.7	137.7	-90.59	1,737.9	2,962.0	2,385.2	2,204.8	180.39	13.223				
8,300.0	6,864.4	6,968.9	6,968.9	45.3	137.7	-90.55	1,737.9	2,962.0	2,313.9	2,130.9	182.98	12.646				
8,400.0	6,863.5	6,968.0	6,968.0	47.9	137.7	-90.52	1,737.9	2,962.0	2,244.8	2,059.2	185.59	12.095				
8,500.0	6,862.5	6,967.0	6,967.0	50.6	137.7	-90.49	1,737.9	2,962.0	2,178.0	1,989.8	188.23	11.571				
8,600.0	6,861.5	6,966.0	6,966.0	53.2	137.6	-90.45	1,737.9	2,962.0	2,113.9	1,923.0	190.87	11.075				
8,614.0	6,861.4	6,965.9	6,965.9	53.6	137.6	-90.45	1,737.9	2,962.0	2,105.2	1,913.9	191.25	11.008				
8,700.0	6,860.5	6,965.0	6,965.0	55.9	137.6	-90.46	1,737.9	2,962.0	2,051.1	1,857.6	193.50	10.600				

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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												SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT BINDER 10-28 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance					Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,859.5	6,964.0	6,964.0	58.6	137.6	-90.47	1,737.9	2,962.0	1,987.3	1,791.3	195.97	10.141			
8,880.6	6,858.7	6,963.2	6,963.2	60.7	137.6	-90.48	1,737.9	2,962.0	1,935.0	1,737.1	197.84	9.780			
8,900.0	6,858.6	6,963.1	6,963.1	61.2	137.6	-90.48	1,737.9	2,962.0	1,922.4	1,724.0	198.35	9.692			
9,000.0	6,857.6	6,962.1	6,962.1	63.9	137.6	-90.44	1,737.9	2,962.0	1,859.3	1,658.3	201.00	9.250			
9,100.0	6,856.6	6,961.1	6,961.1	66.5	137.5	-90.40	1,737.9	2,962.0	1,799.5	1,595.9	203.66	8.836			
9,200.0	6,855.6	6,960.1	6,960.1	69.2	137.5	-90.36	1,737.9	2,962.0	1,743.5	1,537.2	206.32	8.450			
9,300.0	6,854.6	6,959.1	6,959.1	71.8	137.5	-90.32	1,737.9	2,962.0	1,691.5	1,482.5	208.99	8.094			
9,368.1	6,854.0	6,958.5	6,958.5	73.7	137.5	-90.30	1,737.9	2,962.0	1,658.6	1,447.7	210.81	7.867			
9,400.0	6,853.6	6,958.1	6,958.1	74.5	137.5	-90.27	1,737.9	2,962.0	1,644.1	1,432.4	211.77	7.764			
9,500.0	6,852.7	6,957.2	6,957.2	77.2	137.5	-90.20	1,737.9	2,962.0	1,605.4	1,390.7	214.68	7.478			
9,600.0	6,851.7	6,956.2	6,956.2	80.0	137.4	-90.13	1,737.9	2,962.0	1,577.1	1,359.7	217.40	7.254			
9,634.8	6,851.3	6,955.8	6,955.8	80.9	137.4	-90.11	1,737.9	2,962.0	1,569.8	1,351.5	218.30	7.191			
9,700.0	6,850.7	6,955.2	6,955.2	82.7	137.4	-90.09	1,737.9	2,962.0	1,558.8	1,338.7	220.09	7.083			
9,800.0	6,849.7	6,954.2	6,954.2	85.5	137.4	-90.05	1,737.9	2,962.0	1,547.0	1,324.2	222.82	6.943			
9,870.5	6,849.0	6,953.5	6,953.5	87.4	137.4	-90.02	1,737.9	2,962.0	1,542.6	1,317.8	224.75	6.863			
9,900.0	6,848.7	6,953.2	6,953.2	88.3	137.4	-90.00	1,737.9	2,962.0	1,541.9	1,316.4	225.50	6.838			
9,904.8	6,848.7	6,953.2	6,953.2	88.4	137.4	-90.00	1,737.9	2,962.0	1,541.9	1,316.3	225.62	6.834	CC, ES		
10,000.0	6,847.7	6,952.2	6,952.2	91.0	137.4	-89.94	1,737.9	2,962.0	1,547.2	1,319.3	227.88	6.789	SF		
10,100.0	6,846.8	6,951.3	6,951.3	93.8	137.3	-89.87	1,737.9	2,962.0	1,564.0	1,334.0	230.03	6.799			
10,137.1	6,846.4	6,950.9	6,950.9	94.8	137.3	-89.85	1,737.9	2,962.0	1,573.2	1,342.4	230.76	6.817			
10,200.0	6,845.8	6,950.3	6,950.3	96.5	137.3	-89.82	1,737.9	2,962.0	1,591.0	1,358.5	232.50	6.843			
10,300.0	6,844.8	6,949.3	6,949.3	99.3	137.3	-89.79	1,737.9	2,962.0	1,624.1	1,388.9	235.26	6.904			
10,400.0	6,843.8	6,948.3	6,948.3	102.0	137.3	-89.75	1,737.9	2,962.0	1,662.6	1,424.5	238.02	6.985			
10,500.0	6,842.8	6,947.3	6,947.3	104.8	137.3	-89.71	1,737.9	2,962.0	1,706.0	1,465.2	240.79	7.085			
10,600.0	6,841.9	6,946.4	6,946.4	107.5	137.2	-89.68	1,737.9	2,962.0	1,754.1	1,510.5	243.56	7.202			
10,700.0	6,840.9	6,945.4	6,945.4	110.3	137.2	-89.64	1,737.9	2,962.0	1,806.4	1,560.1	246.32	7.333			
10,732.1	6,840.6	6,945.1	6,945.1	111.2	137.2	-89.63	1,737.9	2,962.0	1,824.1	1,576.9	247.22	7.378			
10,800.0	6,839.9	6,944.4	6,944.4	113.0	137.2	-89.63	1,737.9	2,962.0	1,861.7	1,612.1	249.59	7.459			
10,900.0	6,838.9	6,943.4	6,943.4	115.8	137.2	-89.64	1,737.9	2,962.0	1,916.5	1,663.7	252.83	7.580			
10,998.8	6,838.0	6,942.5	6,942.5	118.6	137.2	-89.65	1,737.9	2,962.0	1,970.0	1,714.2	255.72	7.704			
11,000.0	6,838.0	6,942.5	6,942.5	118.6	137.2	-89.65	1,737.9	2,962.0	1,970.6	1,714.9	255.75	7.705			
11,100.0	6,837.0	6,941.5	6,941.5	121.4	137.1	-89.61	1,737.9	2,962.0	2,026.2	1,767.6	258.52	7.838			
11,200.0	6,836.0	6,940.5	6,940.5	124.2	137.1	-89.58	1,737.9	2,962.0	2,085.0	1,823.7	261.28	7.980			
11,300.0	6,835.1	6,939.6	6,939.6	126.9	137.1	-89.55	1,737.9	2,962.0	2,146.9	1,882.9	264.04	8.131			
11,400.0	6,834.1	6,938.6	6,938.6	129.7	137.1	-89.51	1,737.9	2,962.0	2,211.6	1,944.8	266.81	8.289			
11,428.1	6,833.8	6,938.3	6,938.3	130.5	137.1	-89.50	1,737.9	2,962.0	2,230.3	1,962.7	267.59	8.335			
11,487.5	6,833.3	6,937.8	6,937.8	132.2	137.1	-89.52	1,737.9	2,962.0	2,269.6	2,000.4	269.17	8.432			
11,500.0	6,833.2	6,937.7	6,937.7	132.5	137.1	-89.52	1,737.9	2,962.0	2,277.9	2,008.4	269.51	8.452			
11,600.0	6,832.2	6,936.7	6,936.7	135.3	137.0	-89.49	1,737.9	2,962.0	2,345.3	2,073.0	272.27	8.614			
11,700.0	6,831.3	6,935.8	6,935.8	138.1	137.0	-89.46	1,737.9	2,962.0	2,414.9	2,139.9	275.03	8.780			
11,800.0	6,830.3	6,934.8	6,934.8	140.8	137.0	-89.43	1,737.9	2,962.0	2,486.6	2,208.8	277.80	8.951			
11,900.0	6,829.4	6,933.9	6,933.9	143.6	137.0	-89.39	1,737.9	2,962.0	2,560.2	2,279.7	280.56	9.125			
11,938.6	6,829.0	6,933.5	6,933.5	144.7	137.0	-89.38	1,737.9	2,962.0	2,589.1	2,307.5	281.62	9.193			

CC - Min centre 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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT BINDER 15-28 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	89.12	43.9	2,859.1	2,859.5							
100.0	100.0	154.5	154.5	0.1	1.8	89.12	43.9	2,859.1	2,859.5	2,857.6	1.89	1,516.061				
200.0	200.0	254.5	254.5	0.3	4.1	89.12	43.9	2,859.1	2,859.5	2,855.1	4.38	652.745				
300.0	300.0	354.5	354.5	0.5	6.1	89.12	43.9	2,859.1	2,859.5	2,852.8	6.66	429.244				
400.0	400.0	454.5	454.5	0.8	8.1	89.12	43.9	2,859.1	2,859.5	2,850.5	8.92	320.625				
500.0	500.0	554.5	554.5	1.0	10.2	89.12	43.9	2,859.1	2,859.5	2,848.3	11.17	256.076				
600.0	600.0	654.5	654.5	1.2	12.2	89.12	43.9	2,859.1	2,859.5	2,846.0	13.41	213.228				
700.0	700.0	754.5	754.5	1.4	14.2	89.12	43.9	2,859.1	2,859.5	2,843.8	15.65	182.692				
800.0	800.0	854.5	854.5	1.7	16.2	89.12	43.9	2,859.1	2,859.5	2,841.6	17.89	159.819				
900.0	900.0	954.5	954.5	1.9	18.2	89.12	43.9	2,859.1	2,859.5	2,839.3	20.13	142.043				
1,000.0	1,000.0	1,054.5	1,054.5	2.1	20.2	164.94	43.9	2,859.1	2,861.1	2,838.8	22.35	128.035				
1,100.0	1,099.8	1,154.3	1,154.3	2.3	22.3	164.94	43.9	2,859.1	2,866.2	2,841.7	24.52	116.879				
1,200.0	1,199.5	1,254.0	1,254.0	2.6	24.3	164.94	43.9	2,859.1	2,874.6	2,848.0	26.66	107.820				
1,300.0	1,298.7	1,353.2	1,353.2	2.8	26.3	164.94	43.9	2,859.1	2,886.4	2,857.6	28.75	100.382				
1,400.0	1,397.5	1,452.0	1,452.0	3.1	28.2	164.94	43.9	2,859.1	2,901.5	2,870.7	30.79	94.224				
1,500.0	1,495.6	1,550.1	1,550.1	3.4	30.2	164.94	43.9	2,859.1	2,920.0	2,887.2	32.77	89.097				
1,600.0	1,593.4	1,647.9	1,647.9	3.8	32.2	165.05	43.9	2,859.1	2,940.1	2,905.1	34.94	84.145				
1,700.0	1,691.3	1,745.8	1,745.8	4.1	34.2	165.15	43.9	2,859.1	2,960.2	2,923.1	37.11	79.761				
1,800.0	1,789.1	1,843.6	1,843.6	4.5	36.1	165.25	43.9	2,859.1	2,980.3	2,941.0	39.29	75.852				
1,900.0	1,886.9	1,941.4	1,941.4	4.9	38.1	165.35	43.9	2,859.1	3,000.5	2,959.0	41.47	72.348				
2,000.0	1,984.7	2,039.2	2,039.2	5.4	40.1	165.45	43.9	2,859.1	3,020.6	2,976.9	43.66	69.190				
2,100.0	2,082.5	2,137.0	2,137.0	5.8	42.0	165.55	43.9	2,859.1	3,040.8	2,994.9	45.84	66.330				
2,200.0	2,180.3	2,234.8	2,234.8	6.2	44.0	165.65	43.9	2,859.1	3,060.9	3,012.9	48.03	63.727				
2,300.0	2,278.1	2,332.6	2,332.6	6.6	46.0	165.74	43.9	2,859.1	3,081.1	3,030.9	50.22	61.350				
2,400.0	2,376.0	2,430.5	2,430.5	7.1	47.9	165.84	43.9	2,859.1	3,101.3	3,048.9	52.41	59.170				
2,500.0	2,473.8	2,528.3	2,528.3	7.5	49.9	165.93	43.9	2,859.1	3,121.5	3,066.9	54.61	57.164				
2,600.0	2,571.6	2,626.1	2,626.1	8.0	51.9	166.02	43.9	2,859.1	3,141.7	3,084.9	56.80	55.312				
2,695.7	2,665.2	2,719.7	2,719.7	8.4	53.8	166.11	43.9	2,859.1	3,161.0	3,102.1	58.90	53.669				
2,700.0	2,669.4	2,723.9	2,723.9	8.4	53.8	166.12	43.9	2,859.1	3,161.9	3,102.9	59.01	53.583				
2,800.0	2,767.6	2,822.1	2,822.1	8.7	55.8	166.29	43.9	2,859.1	3,180.3	3,118.7	61.52	51.691				
2,900.0	2,866.4	2,920.9	2,920.9	9.0	57.8	166.43	43.9	2,859.1	3,195.3	3,131.3	64.00	49.928				
3,000.0	2,965.6	3,020.1	3,020.1	9.3	59.8	166.53	43.9	2,859.1	3,207.0	3,140.6	66.42	48.285				
3,100.0	3,065.3	3,119.8	3,119.8	9.5	61.8	166.61	43.9	2,859.1	3,215.4	3,146.6	68.78	46.751				
3,200.0	3,165.1	3,219.6	3,219.6	9.7	63.8	166.65	43.9	2,859.1	3,220.3	3,149.3	71.06	45.318				
3,295.7	3,260.8	3,315.3	3,315.3	9.8	65.7	90.85	43.9	2,859.1	3,221.9	3,146.4	75.44	42.707				
3,300.0	3,265.1	3,319.6	3,319.6	9.8	65.8	90.85	43.9	2,859.1	3,221.9	3,146.3	75.53	42.654				
3,400.0	3,365.1	3,419.6	3,419.6	10.0	67.8	90.85	43.9	2,859.1	3,221.9	3,144.2	77.70	41.464				
3,500.0	3,465.1	3,519.6	3,519.6	10.1	69.8	90.85	43.9	2,859.1	3,221.9	3,142.0	79.87	40.337				
3,600.0	3,565.1	3,619.6	3,619.6	10.3	71.8	90.85	43.9	2,859.1	3,221.9	3,139.8	82.05	39.268				
3,700.0	3,665.1	3,719.6	3,719.6	10.5	73.9	90.85	43.9	2,859.1	3,221.9	3,137.7	84.22	38.254				
3,800.0	3,765.1	3,819.6	3,819.6	10.6	75.9	90.85	43.9	2,859.1	3,221.9	3,135.5	86.40	37.289				
3,900.0	3,865.1	3,919.6	3,919.6	10.8	77.9	90.85	43.9	2,859.1	3,221.9	3,133.3	88.58	36.371				
4,000.0	3,965.1	4,019.6	4,019.6	11.0	79.9	90.85	43.9	2,859.1	3,221.9	3,131.1	90.76	35.497				
4,100.0	4,065.1	4,119.6	4,119.6	11.1	81.9	90.85	43.9	2,859.1	3,221.9	3,128.9	92.95	34.663				
4,200.0	4,165.1	4,219.6	4,219.6	11.3	83.9	90.85	43.9	2,859.1	3,221.9	3,126.7	95.13	33.866				
4,300.0	4,265.1	4,319.6	4,319.6	11.5	85.9	90.85	43.9	2,859.1	3,221.9	3,124.6	97.32	33.105				
4,400.0	4,365.1	4,419.6	4,419.6	11.7	87.9	90.85	43.9	2,859.1	3,221.9	3,122.4	99.51	32.377				
4,500.0	4,465.1	4,519.6	4,519.6	11.8	89.9	90.85	43.9	2,859.1	3,221.9	3,120.2	101.70	31.679				
4,600.0	4,565.1	4,619.6	4,619.6	12.0	92.0	90.85	43.9	2,859.1	3,221.9	3,118.0	103.90	31.011				
4,700.0	4,665.1	4,719.6	4,719.6	12.2	94.0	90.85	43.9	2,859.1	3,221.9	3,115.8	106.09	30.369				
4,800.0	4,765.1	4,819.6	4,819.6	12.4	96.0	90.85	43.9	2,859.1	3,221.9	3,113.6	108.29	29.754				
4,900.0	4,865.1	4,919.6	4,919.6	12.6	98.0	90.85	43.9	2,859.1	3,221.9	3,111.4	110.48	29.162				

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.0	4,965.1	5,019.6	5,019.6	12.8	100.0	90.85	43.9	2,859.1	3,221.9	3,109.2	112.68	28.593		
5,100.0	5,065.1	5,119.6	5,119.6	12.9	102.0	90.85	43.9	2,859.1	3,221.9	3,107.0	114.88	28.046		
5,200.0	5,165.1	5,219.6	5,219.6	13.1	104.0	90.85	43.9	2,859.1	3,221.9	3,104.8	117.08	27.519		
5,300.0	5,265.1	5,319.6	5,319.6	13.3	106.0	90.85	43.9	2,859.1	3,221.9	3,102.6	119.28	27.011		
5,400.0	5,365.1	5,419.6	5,419.6	13.5	108.0	90.85	43.9	2,859.1	3,221.9	3,100.4	121.48	26.521		
5,500.0	5,465.1	5,519.6	5,519.6	13.7	110.1	90.85	43.9	2,859.1	3,221.9	3,098.2	123.69	26.049		
5,600.0	5,565.1	5,619.6	5,619.6	13.9	112.1	90.85	43.9	2,859.1	3,221.9	3,096.0	125.89	25.593		
5,700.0	5,665.1	5,719.6	5,719.6	14.1	114.1	90.85	43.9	2,859.1	3,221.9	3,093.8	128.10	25.152		
5,800.0	5,765.1	5,819.6	5,819.6	14.3	116.1	90.85	43.9	2,859.1	3,221.9	3,091.6	130.30	24.726		
5,900.0	5,865.1	5,919.6	5,919.6	14.5	118.1	90.85	43.9	2,859.1	3,221.9	3,089.4	132.51	24.314		
6,000.0	5,965.1	6,019.6	6,019.6	14.7	120.1	90.85	43.9	2,859.1	3,221.9	3,087.2	134.72	23.916		
6,100.0	6,065.1	6,119.6	6,119.6	14.9	122.1	90.85	43.9	2,859.1	3,221.9	3,084.9	136.93	23.530		
6,192.7	6,157.8	6,212.3	6,212.3	15.1	124.0	90.85	43.9	2,859.1	3,221.9	3,082.9	138.97	23.183		
6,200.0	6,165.1	6,219.6	6,219.6	15.1	124.1	0.85	43.9	2,859.1	3,221.8	3,084.2	137.65	23.406		
6,250.0	6,215.1	6,269.6	6,269.6	15.1	125.1	0.85	43.9	2,859.1	3,219.6	3,081.3	138.27	23.284		
6,300.0	6,264.7	6,319.2	6,319.2	15.2	126.1	0.86	43.9	2,859.1	3,213.8	3,075.6	138.21	23.253		
6,350.0	6,313.9	6,368.4	6,368.4	15.2	127.1	0.87	43.9	2,859.1	3,204.7	3,067.2	137.46	23.313		
6,400.0	6,362.2	6,416.7	6,416.7	15.3	128.1	0.89	43.9	2,859.1	3,192.1	3,056.1	136.01	23.470		
6,450.0	6,409.6	6,464.1	6,464.1	15.3	129.1	0.92	43.9	2,859.1	3,176.1	3,042.3	133.85	23.729		
6,500.0	6,455.8	6,510.3	6,510.3	15.3	130.0	0.95	43.9	2,859.1	3,157.0	3,026.0	130.99	24.101		
6,550.0	6,500.5	6,555.0	6,555.0	15.3	130.9	0.99	43.9	2,859.1	3,134.6	3,007.2	127.43	24.599		
6,600.0	6,543.5	6,598.0	6,598.0	15.3	131.7	1.04	43.9	2,859.1	3,109.1	2,986.0	123.18	25.241		
6,650.0	6,584.7	6,639.2	6,639.2	15.3	132.6	1.11	43.9	2,859.1	3,080.8	2,962.5	118.27	26.050		
6,700.0	6,623.7	6,678.2	6,678.2	15.4	133.4	1.18	43.9	2,859.1	3,049.6	2,936.9	112.71	27.057		
6,750.0	6,660.6	6,715.1	6,715.1	15.5	134.1	1.27	43.9	2,859.1	3,015.8	2,909.2	106.54	28.305		
6,800.0	6,694.9	6,749.4	6,749.4	15.7	134.8	1.39	43.9	2,859.1	2,979.5	2,879.7	99.81	29.852		
6,850.0	6,726.6	6,781.1	6,781.1	15.9	135.4	1.53	43.9	2,859.1	2,940.9	2,848.3	92.54	31.778		
6,900.0	6,755.6	6,810.1	6,810.1	16.2	136.0	1.71	43.9	2,859.1	2,900.1	2,815.3	84.81	34.195		
6,950.0	6,781.7	6,836.2	6,836.2	16.6	136.5	1.95	43.9	2,859.1	2,857.5	2,780.8	76.67	37.268		
7,000.0	6,804.7	6,859.2	6,859.2	17.1	137.0	2.26	43.9	2,859.1	2,813.1	2,744.9	68.21	41.239		
7,050.0	6,824.6	6,879.1	6,879.1	17.7	137.4	2.70	43.9	2,859.1	2,767.2	2,707.7	59.55	46.470		
7,100.0	6,841.2	6,895.7	6,895.7	18.3	137.7	3.36	43.9	2,859.1	2,720.1	2,669.2	50.88	53.466		
7,150.0	6,854.5	6,909.0	6,909.0	19.0	138.0	4.40	43.9	2,859.1	2,671.9	2,629.2	42.65	62.640		
7,200.0	6,864.4	6,918.9	6,918.9	19.8	138.2	6.35	43.9	2,859.1	2,622.9	2,586.4	36.47	71.925		
7,250.0	6,870.8	6,925.3	6,925.3	20.7	138.3	11.12	43.9	2,859.1	2,573.3	2,534.0	39.34	65.414		
7,300.0	6,873.8	6,928.3	6,928.3	21.6	138.4	37.46	43.9	2,859.1	2,523.5	2,424.6	98.87	25.524		
7,324.7	6,874.0	6,928.5	6,928.5	22.1	138.4	117.10	43.9	2,859.1	2,498.8	2,355.3	143.43	17.422		
7,400.0	6,873.2	6,927.7	6,927.7	23.5	138.4	116.39	43.9	2,859.1	2,423.5	2,277.9	145.61	16.644		
7,500.0	6,872.2	6,926.7	6,926.7	25.6	138.4	115.45	43.9	2,859.1	2,323.5	2,174.9	148.63	15.633		
7,600.0	6,871.3	6,925.8	6,925.8	27.9	138.3	114.48	43.9	2,859.1	2,223.5	2,071.8	151.77	14.651		
7,700.0	6,870.3	6,924.8	6,924.8	30.2	138.3	113.50	43.9	2,859.1	2,123.6	1,968.5	155.01	13.699		
7,800.0	6,869.3	6,923.8	6,923.8	32.6	138.3	112.51	43.9	2,859.1	2,023.6	1,865.3	158.33	12.781		
7,900.0	6,868.3	6,922.8	6,922.8	35.0	138.3	111.50	43.9	2,859.1	1,923.6	1,761.9	161.70	11.896		
8,000.0	6,867.4	6,921.9	6,921.9	37.6	138.3	110.48	43.9	2,859.1	1,823.7	1,658.6	165.11	11.045		
8,100.0	6,866.4	6,920.9	6,920.9	40.1	138.2	109.44	43.9	2,859.1	1,723.7	1,555.1	168.56	10.226		
8,200.0	6,865.4	6,919.9	6,919.9	42.7	138.2	108.39	43.9	2,859.1	1,623.7	1,451.7	172.02	9.439		
8,300.0	6,864.4	6,918.9	6,918.9	45.3	138.2	107.33	43.9	2,859.1	1,523.8	1,348.3	175.50	8.683		
8,400.0	6,863.5	6,918.0	6,918.0	47.9	138.2	106.25	43.9	2,859.1	1,423.9	1,244.9	178.97	7.956		
8,500.0	6,862.5	6,917.0	6,917.0	50.6	138.2	105.16	43.9	2,859.1	1,323.9	1,141.5	182.44	7.257		
8,600.0	6,861.5	6,916.0	6,916.0	53.2	138.1	104.06	43.9	2,859.1	1,224.0	1,038.1	185.90	6.584		
8,614.0	6,861.4	6,915.9	6,915.9	53.6	138.1	103.91	43.9	2,859.1	1,210.0	1,023.6	186.38	6.492		
8,700.0	6,860.5	6,915.0	6,915.0	55.9	138.1	96.26	43.9	2,859.1	1,124.2	931.3	192.92	5.827		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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		
8,800.0	6,859.5	6,914.0	6,914.0	58.6	138.1	93.65	43.9	2,859.1	1,024.9	828.8	196.12	5.226		
8,880.6	6,858.7	6,913.2	6,913.2	60.7	138.1	92.64	43.9	2,859.1	945.6	747.5	198.17	4.772		
8,900.0	6,858.6	6,913.1	6,913.1	61.2	138.1	92.59	43.9	2,859.1	926.7	728.0	198.68	4.664		
9,000.0	6,857.6	6,912.1	6,912.1	63.9	138.1	92.30	43.9	2,859.1	829.3	627.9	201.37	4.118		
9,100.0	6,856.6	6,911.1	6,911.1	66.5	138.0	92.02	43.9	2,859.1	732.5	528.5	204.06	3.590		
9,200.0	6,855.6	6,910.1	6,910.1	69.2	138.0	91.73	43.9	2,859.1	636.8	430.0	206.75	3.080		
9,300.0	6,854.6	6,909.1	6,909.1	71.8	138.0	91.44	43.9	2,859.1	542.6	333.1	209.44	2.591		
9,368.1	6,854.0	6,908.5	6,908.5	73.7	138.0	91.25	43.9	2,859.1	479.7	268.4	211.28	2.271		
9,400.0	6,853.6	6,908.1	6,908.1	74.5	138.0	91.21	43.9	2,859.1	450.7	238.5	212.24	2.124		
9,500.0	6,852.7	6,907.2	6,907.2	77.2	138.0	91.05	43.9	2,859.1	361.2	146.0	215.16	1.679		
9,600.0	6,851.7	6,906.2	6,906.2	80.0	137.9	90.82	43.9	2,859.1	275.6	57.7	217.89	1.265	Level 3	
9,634.8	6,851.3	6,905.8	6,905.8	80.9	137.9	90.72	43.9	2,859.1	247.5	28.7	218.80	1.131	Level 2	
9,700.0	6,850.7	6,905.2	6,905.2	82.7	137.9	90.48	43.9	2,859.1	200.3	-20.3	220.59	0.908	Level 1	
9,800.0	6,849.7	6,904.2	6,904.2	85.5	137.9	90.11	43.9	2,859.1	155.6	-67.8	223.33	0.697	Level 1	
9,829.6	6,849.4	6,903.9	6,903.9	86.3	137.9	90.00	43.9	2,859.1	152.7	-71.4	224.14	0.681	Level 1, CC, ES, SF	
9,870.5	6,849.0	6,903.5	6,903.5	87.4	137.9	89.85	43.9	2,859.1	158.1	-67.1	225.25	0.702	Level 1	
9,900.0	6,848.7	6,903.2	6,903.2	88.3	137.9	89.75	43.9	2,859.1	168.0	-58.0	226.00	0.743	Level 1	
10,000.0	6,847.7	6,902.2	6,902.2	91.0	137.9	89.44	43.9	2,859.1	225.8	-2.5	228.37	0.989	Level 1	
10,100.0	6,846.8	6,901.3	6,901.3	93.8	137.8	89.17	43.9	2,859.1	303.5	73.0	230.50	1.317	Level 3	
10,137.1	6,846.4	6,900.9	6,900.9	94.8	137.8	89.09	43.9	2,859.1	334.7	103.5	231.23	1.448	Level 3	
10,200.0	6,845.8	6,900.3	6,900.3	96.5	137.8	88.89	43.9	2,859.1	389.6	156.7	232.95	1.673		
10,300.0	6,844.8	6,899.3	6,899.3	99.3	137.8	88.57	43.9	2,859.1	481.0	245.3	235.68	2.041		
10,400.0	6,843.8	6,898.3	6,898.3	102.0	137.8	88.26	43.9	2,859.1	575.3	336.9	238.40	2.413		
10,500.0	6,842.8	6,897.3	6,897.3	104.8	137.8	87.94	43.9	2,859.1	671.2	430.1	241.12	2.784		
10,600.0	6,841.9	6,896.4	6,896.4	107.5	137.7	87.62	43.9	2,859.1	768.2	524.3	243.83	3.150		
10,700.0	6,840.9	6,895.4	6,895.4	110.3	137.7	87.30	43.9	2,859.1	865.8	619.3	246.54	3.512		
10,732.1	6,840.6	6,895.1	6,895.1	111.2	137.7	87.20	43.9	2,859.1	897.3	649.9	247.41	3.627		
10,800.0	6,839.9	6,894.4	6,894.4	113.0	137.7	86.28	43.9	2,859.1	964.2	714.6	249.55	3.864		
10,900.0	6,838.9	6,893.4	6,893.4	115.8	137.7	83.49	43.9	2,859.1	1,063.5	811.8	251.71	4.225		
10,998.8	6,838.0	6,892.5	6,892.5	118.6	137.7	71.09	43.9	2,859.1	1,162.1	919.3	242.77	4.787		
11,000.0	6,838.0	6,892.5	6,892.5	118.6	137.7	71.07	43.9	2,859.1	1,163.3	920.5	242.77	4.792		
11,100.0	6,837.0	6,891.5	6,891.5	121.4	137.6	69.58	43.9	2,859.1	1,263.2	1,020.1	243.19	5.194		
11,200.0	6,836.0	6,890.5	6,890.5	124.2	137.6	68.11	43.9	2,859.1	1,363.2	1,119.8	243.45	5.599		
11,300.0	6,835.1	6,889.6	6,889.6	126.9	137.6	66.67	43.9	2,859.1	1,463.2	1,219.6	243.57	6.007		
11,400.0	6,834.1	6,888.6	6,888.6	129.7	137.6	65.26	43.9	2,859.1	1,563.1	1,319.6	243.54	6.418		
11,428.1	6,833.8	6,888.3	6,888.3	130.5	137.6	64.87	43.9	2,859.1	1,591.2	1,347.7	243.51	6.534		
11,487.5	6,833.3	6,887.8	6,887.8	132.2	137.6	-48.41	43.9	2,859.1	1,650.6	1,445.7	204.95	8.054		
11,500.0	6,833.2	6,887.7	6,887.7	132.5	137.6	-48.19	43.9	2,859.1	1,663.1	1,458.6	204.57	8.130		
11,600.0	6,832.2	6,886.7	6,886.7	135.3	137.6	-46.53	43.9	2,859.1	1,763.1	1,561.5	201.60	8.745		
11,700.0	6,831.3	6,885.8	6,885.8	138.1	137.5	-44.95	43.9	2,859.1	1,863.1	1,664.4	198.67	9.378		
11,800.0	6,830.3	6,884.8	6,884.8	140.8	137.5	-43.45	43.9	2,859.1	1,963.1	1,767.3	195.78	10.027		
11,900.0	6,829.4	6,883.9	6,883.9	143.6	137.5	-42.03	43.9	2,859.1	2,063.1	1,870.2	192.95	10.693		
11,938.6	6,829.0	6,883.5	6,883.5	144.7	137.5	-41.50	43.9	2,859.1	2,101.7	1,909.8	191.87	10.954		

CC - Min centre 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 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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)	Offset Wellbore Centre +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	87.03	229.9	4,430.8	4,436.7				
100.0	100.0	134.5	134.5	0.1	1.5	87.03	229.9	4,430.8	4,436.7	4,435.1	1.62	2,732.607	
200.0	200.0	234.5	234.5	0.3	3.8	87.03	229.9	4,430.8	4,436.7	4,432.6	4.15	1,069.057	
300.0	300.0	334.5	334.5	0.5	5.9	87.03	229.9	4,430.8	4,436.7	4,430.3	6.44	688.640	
400.0	400.0	434.5	434.5	0.8	7.9	87.03	229.9	4,430.8	4,436.7	4,428.0	8.70	509.700	
500.0	500.0	534.5	534.5	1.0	10.0	87.03	229.9	4,430.8	4,436.7	4,425.8	10.96	404.978	
600.0	600.0	634.5	634.5	1.2	12.0	87.03	229.9	4,430.8	4,436.7	4,423.5	13.20	336.087	
700.0	700.0	734.5	734.5	1.4	14.0	87.03	229.9	4,430.8	4,436.7	4,421.3	15.44	287.280	
800.0	800.0	834.5	834.5	1.7	16.0	87.03	229.9	4,430.8	4,436.7	4,419.0	17.68	250.877	
900.0	900.0	934.5	934.5	1.9	18.0	87.03	229.9	4,430.8	4,436.7	4,416.8	19.92	222.676	
1,000.0	1,000.0	1,034.5	1,034.5	2.1	20.0	162.84	229.9	4,430.8	4,438.4	4,416.3	22.14	200.459	
1,100.0	1,099.8	1,134.3	1,134.3	2.3	22.1	162.83	229.9	4,430.8	4,443.4	4,419.1	24.32	182.712	
1,200.0	1,199.5	1,234.0	1,234.0	2.6	24.1	162.82	229.9	4,430.8	4,451.7	4,425.3	26.46	168.241	
1,300.0	1,298.7	1,333.2	1,333.2	2.8	26.1	162.79	229.9	4,430.8	4,463.4	4,434.8	28.56	156.294	
1,400.0	1,397.5	1,432.0	1,432.0	3.1	28.0	162.76	229.9	4,430.8	4,478.3	4,447.7	30.60	146.336	
1,500.0	1,495.6	1,530.1	1,530.1	3.4	30.0	162.72	229.9	4,430.8	4,496.6	4,464.0	32.59	137.971	
1,600.0	1,593.4	1,627.9	1,627.9	3.8	32.0	162.80	229.9	4,430.8	4,516.5	4,481.7	34.76	129.926	
1,700.0	1,691.3	1,725.8	1,725.8	4.1	34.0	162.88	229.9	4,430.8	4,536.4	4,499.4	36.94	122.807	
1,800.0	1,789.1	1,823.6	1,823.6	4.5	35.9	162.96	229.9	4,430.8	4,556.3	4,517.2	39.12	116.466	
1,900.0	1,886.9	1,921.4	1,921.4	4.9	37.9	163.03	229.9	4,430.8	4,576.2	4,534.9	41.31	110.785	
2,000.0	1,984.7	2,019.2	2,019.2	5.4	39.9	163.11	229.9	4,430.8	4,596.1	4,552.6	43.50	105.667	
2,100.0	2,082.5	2,117.0	2,117.0	5.8	41.8	163.18	229.9	4,430.8	4,616.1	4,570.4	45.69	101.035	
2,200.0	2,180.3	2,214.8	2,214.8	6.2	43.8	163.26	229.9	4,430.8	4,636.0	4,588.1	47.88	96.822	
2,300.0	2,278.1	2,312.6	2,312.6	6.6	45.8	163.33	229.9	4,430.8	4,656.0	4,605.9	50.08	92.976	
2,400.0	2,376.0	2,410.5	2,410.5	7.1	47.7	163.40	229.9	4,430.8	4,675.9	4,623.6	52.27	89.450	
2,500.0	2,473.8	2,508.3	2,508.3	7.5	49.7	163.48	229.9	4,430.8	4,695.9	4,641.4	54.47	86.207	
2,600.0	2,571.6	2,606.1	2,606.1	8.0	51.7	163.55	229.9	4,430.8	4,715.9	4,659.2	56.67	83.215	
2,695.7	2,665.2	2,699.7	2,699.7	8.4	53.5	163.62	229.9	4,430.8	4,735.0	4,676.2	58.78	80.560	
2,700.0	2,669.4	2,703.9	2,703.9	8.4	53.6	163.62	229.9	4,430.8	4,735.8	4,676.9	58.89	80.424	
2,800.0	2,767.6	2,802.1	2,802.1	8.7	55.6	163.79	229.9	4,430.8	4,754.0	4,692.6	61.40	77.433	
2,900.0	2,866.4	2,900.9	2,900.9	9.0	57.6	163.93	229.9	4,430.8	4,768.9	4,705.1	63.86	74.672	
3,000.0	2,965.6	3,000.1	3,000.1	9.3	59.6	164.03	229.9	4,430.8	4,780.5	4,714.2	66.28	72.125	
3,100.0	3,065.3	3,099.8	3,099.8	9.5	61.6	164.11	229.9	4,430.8	4,788.7	4,720.1	68.64	69.771	
3,200.0	3,165.1	3,199.6	3,199.6	9.7	63.6	164.15	229.9	4,430.8	4,793.6	4,722.7	70.92	67.594	
3,295.7	3,260.8	3,295.3	3,295.3	9.8	65.5	88.35	229.9	4,430.8	4,795.2	4,720.0	75.19	63.770	
3,300.0	3,265.1	3,299.6	3,299.6	9.8	65.6	88.35	229.9	4,430.8	4,795.2	4,719.9	75.29	63.691	
3,400.0	3,365.1	3,399.6	3,399.6	10.0	67.6	88.35	229.9	4,430.8	4,795.2	4,717.7	77.46	61.908	
3,500.0	3,465.1	3,499.6	3,499.6	10.1	69.6	88.35	229.9	4,430.8	4,795.2	4,715.5	79.63	60.219	
3,600.0	3,565.1	3,599.6	3,599.6	10.3	71.6	88.35	229.9	4,430.8	4,795.2	4,713.4	81.80	58.618	
3,700.0	3,665.1	3,699.6	3,699.6	10.5	73.7	88.35	229.9	4,430.8	4,795.2	4,711.2	83.98	57.099	
3,800.0	3,765.1	3,799.6	3,799.6	10.6	75.7	88.35	229.9	4,430.8	4,795.2	4,709.0	86.16	55.655	
3,900.0	3,865.1	3,899.6	3,899.6	10.8	77.7	88.35	229.9	4,430.8	4,795.2	4,706.8	88.34	54.281	
4,000.0	3,965.1	3,999.6	3,999.6	11.0	79.7	88.35	229.9	4,430.8	4,795.2	4,704.6	90.52	52.972	
4,100.0	4,065.1	4,099.6	4,099.6	11.1	81.7	88.35	229.9	4,430.8	4,795.2	4,702.5	92.71	51.724	
4,200.0	4,165.1	4,199.6	4,199.6	11.3	83.7	88.35	229.9	4,430.8	4,795.2	4,700.3	94.89	50.532	
4,300.0	4,265.1	4,299.6	4,299.6	11.5	85.7	88.35	229.9	4,430.8	4,795.2	4,698.1	97.08	49.393	
4,400.0	4,365.1	4,399.6	4,399.6	11.7	87.7	88.35	229.9	4,430.8	4,795.2	4,695.9	99.27	48.303	
4,500.0	4,465.1	4,499.6	4,499.6	11.8	89.7	88.35	229.9	4,430.8	4,795.2	4,693.7	101.46	47.260	
4,600.0	4,565.1	4,599.6	4,599.6	12.0	91.8	88.35	229.9	4,430.8	4,795.2	4,691.5	103.66	46.260	
4,700.0	4,665.1	4,699.6	4,699.6	12.2	93.8	88.35	229.9	4,430.8	4,795.2	4,689.3	105.85	45.301	
4,800.0	4,765.1	4,799.6	4,799.6	12.4	95.8	88.35	229.9	4,430.8	4,795.2	4,687.1	108.05	44.380	
4,900.0	4,865.1	4,899.6	4,899.6	12.6	97.8	88.35	229.9	4,430.8	4,795.2	4,684.9	110.24	43.496	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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	4,965.1	4,999.6	4,999.6	12.8	99.8	88.35	229.9	4,430.8	4,795.2	4,682.7	112.44	42.645		
5,100.0	5,065.1	5,099.6	5,099.6	12.9	101.8	88.35	229.9	4,430.8	4,795.2	4,680.5	114.64	41.827		
5,200.0	5,165.1	5,199.6	5,199.6	13.1	103.8	88.35	229.9	4,430.8	4,795.2	4,678.3	116.84	41.039		
5,300.0	5,265.1	5,299.6	5,299.6	13.3	105.8	88.35	229.9	4,430.8	4,795.2	4,676.1	119.05	40.280		
5,400.0	5,365.1	5,399.6	5,399.6	13.5	107.8	88.35	229.9	4,430.8	4,795.2	4,673.9	121.25	39.548		
5,500.0	5,465.1	5,499.6	5,499.6	13.7	109.9	88.35	229.9	4,430.8	4,795.2	4,671.7	123.45	38.842		
5,600.0	5,565.1	5,599.6	5,599.6	13.9	111.9	88.35	229.9	4,430.8	4,795.2	4,669.5	125.66	38.161		
5,700.0	5,665.1	5,699.6	5,699.6	14.1	113.9	88.35	229.9	4,430.8	4,795.2	4,667.3	127.86	37.502		
5,800.0	5,765.1	5,799.6	5,799.6	14.3	115.9	88.35	229.9	4,430.8	4,795.2	4,665.1	130.07	36.866		
5,900.0	5,865.1	5,899.6	5,899.6	14.5	117.9	88.35	229.9	4,430.8	4,795.2	4,662.9	132.28	36.251		
6,000.0	5,965.1	5,999.6	5,999.6	14.7	119.9	88.35	229.9	4,430.8	4,795.2	4,660.7	134.49	35.656		
6,100.0	6,065.1	6,099.6	6,099.6	14.9	121.9	88.35	229.9	4,430.8	4,795.2	4,658.5	136.69	35.079		
6,192.7	6,157.8	6,192.3	6,192.3	15.1	123.8	88.35	229.9	4,430.8	4,795.2	4,656.4	138.74	34.562		
6,200.0	6,165.1	6,199.6	6,199.6	15.1	123.9	-1.65	229.9	4,430.8	4,795.1	4,657.6	137.48	34.878		
6,250.0	6,215.1	6,249.6	6,249.6	15.1	124.9	-1.66	229.9	4,430.8	4,792.9	4,654.8	138.11	34.704		
6,300.0	6,264.7	6,299.2	6,299.2	15.2	125.9	-1.67	229.9	4,430.8	4,787.1	4,649.1	138.05	34.677		
6,350.0	6,313.9	6,348.4	6,348.4	15.2	126.9	-1.70	229.9	4,430.8	4,778.0	4,640.7	137.30	34.799		
6,400.0	6,362.2	6,396.7	6,396.7	15.3	127.9	-1.74	229.9	4,430.8	4,765.4	4,629.5	135.86	35.077		
6,450.0	6,409.6	6,444.1	6,444.1	15.3	128.9	-1.78	229.9	4,430.8	4,749.5	4,615.7	133.70	35.522		
6,500.0	6,455.8	6,490.3	6,490.3	15.3	129.8	-1.84	229.9	4,430.8	4,730.3	4,599.4	130.85	36.150		
6,550.0	6,500.5	6,535.0	6,535.0	15.3	130.7	-1.92	229.9	4,430.8	4,707.9	4,580.6	127.30	36.982		
6,600.0	6,543.5	6,578.0	6,578.0	15.3	131.5	-2.01	229.9	4,430.8	4,682.5	4,559.4	123.07	38.047		
6,650.0	6,584.7	6,619.2	6,619.2	15.3	132.4	-2.12	229.9	4,430.8	4,654.1	4,535.9	118.18	39.383		
6,700.0	6,623.7	6,658.2	6,658.2	15.4	133.2	-2.26	229.9	4,430.8	4,622.9	4,510.3	112.65	41.039		
6,750.0	6,660.6	6,695.1	6,695.1	15.5	133.9	-2.42	229.9	4,430.8	4,589.1	4,482.6	106.51	43.085		
6,800.0	6,694.9	6,729.4	6,729.4	15.7	134.6	-2.63	229.9	4,430.8	4,552.8	4,453.0	99.82	45.611		
6,850.0	6,726.6	6,761.1	6,761.1	15.9	135.2	-2.89	229.9	4,430.8	4,514.2	4,421.6	92.62	48.741		
6,900.0	6,755.6	6,790.1	6,790.1	16.2	135.8	-3.21	229.9	4,430.8	4,473.5	4,388.5	84.97	52.646		
6,950.0	6,781.7	6,816.2	6,816.2	16.6	136.3	-3.64	229.9	4,430.8	4,430.9	4,353.9	76.97	57.563		
7,000.0	6,804.7	6,839.2	6,839.2	17.1	136.8	-4.20	229.9	4,430.8	4,386.5	4,317.8	68.75	63.808		
7,050.0	6,824.6	6,859.1	6,859.1	17.7	137.2	-4.99	229.9	4,430.8	4,340.7	4,280.2	60.50	71.747		
7,100.0	6,841.2	6,875.7	6,875.7	18.3	137.5	-6.15	229.9	4,430.8	4,293.5	4,240.9	52.67	81.520		
7,150.0	6,854.5	6,889.0	6,889.0	19.0	137.8	-8.00	229.9	4,430.8	4,245.4	4,199.0	46.37	91.561		
7,200.0	6,864.4	6,898.9	6,898.9	19.8	138.0	-11.40	229.9	4,430.8	4,196.4	4,151.5	44.94	93.382		
7,250.0	6,870.8	6,905.3	6,905.3	20.7	138.1	-19.48	229.9	4,430.8	4,146.9	4,088.1	58.80	70.521		
7,300.0	6,873.8	6,908.3	6,908.3	21.6	138.2	-53.84	229.9	4,430.8	4,097.0	3,967.0	130.01	31.512		
7,324.7	6,874.0	6,908.5	6,908.5	22.1	138.2	-106.05	229.9	4,430.8	4,072.3	3,918.3	154.04	26.437		
7,400.0	6,873.2	6,907.7	6,907.7	23.5	138.2	-105.76	229.9	4,430.8	3,997.0	3,841.4	155.66	25.678		
7,500.0	6,872.2	6,906.7	6,906.7	25.6	138.2	-105.39	229.9	4,430.8	3,897.1	3,739.2	157.95	24.673		
7,600.0	6,871.3	6,905.8	6,905.8	27.9	138.1	-105.01	229.9	4,430.8	3,797.2	3,636.8	160.36	23.678		
7,700.0	6,870.3	6,904.8	6,904.8	30.2	138.1	-104.63	229.9	4,430.8	3,697.3	3,534.4	162.87	22.700		
7,800.0	6,869.3	6,903.8	6,903.8	32.6	138.1	-104.25	229.9	4,430.8	3,597.3	3,431.9	165.46	21.741		
7,900.0	6,868.3	6,902.8	6,902.8	35.0	138.1	-103.87	229.9	4,430.8	3,497.4	3,329.3	168.11	20.805		
8,000.0	6,867.4	6,901.9	6,901.9	37.6	138.1	-103.49	229.9	4,430.8	3,397.5	3,226.7	170.80	19.892		
8,100.0	6,866.4	6,900.9	6,900.9	40.1	138.0	-103.11	229.9	4,430.8	3,297.6	3,124.1	173.53	19.003		
8,200.0	6,865.4	6,899.9	6,899.9	42.7	138.0	-102.72	229.9	4,430.8	3,197.7	3,021.4	176.30	18.138		
8,300.0	6,864.4	6,898.9	6,898.9	45.3	138.0	-102.34	229.9	4,430.8	3,097.8	2,918.7	179.09	17.297		
8,400.0	6,863.5	6,898.0	6,898.0	47.9	138.0	-101.95	229.9	4,430.8	2,997.9	2,816.0	181.91	16.480		
8,500.0	6,862.5	6,897.0	6,897.0	50.6	138.0	-101.56	229.9	4,430.8	2,898.0	2,713.3	184.74	15.687		
8,600.0	6,861.5	6,896.0	6,896.0	53.2	137.9	-101.17	229.9	4,430.8	2,798.1	2,610.5	187.59	14.916		
8,614.0	6,861.4	6,895.9	6,895.9	53.6	137.9	-101.12	229.9	4,430.8	2,784.2	2,596.2	187.99	14.810		
8,700.0	6,860.5	6,895.0	6,895.0	55.9	137.9	-150.62	229.9	4,430.8	2,698.2	2,599.6	98.62	27.360		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT BINDER 16-28 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,859.5	6,894.0	6,894.0	58.6	137.9	101.65	229.9	4,430.8	2,598.2	2,405.8	192.42	13.503				
8,880.6	6,858.7	6,893.2	6,893.2	60.7	137.9	96.07	229.9	4,430.8	2,517.8	2,320.7	197.11	12.774				
8,900.0	6,858.6	6,893.1	6,893.1	61.2	137.9	96.03	229.9	4,430.8	2,498.5	2,300.9	197.63	12.642				
9,000.0	6,857.6	6,892.1	6,892.1	63.9	137.9	95.79	229.9	4,430.8	2,399.0	2,198.6	200.35	11.974				
9,100.0	6,856.6	6,891.1	6,891.1	66.5	137.8	95.55	229.9	4,430.8	2,299.5	2,096.4	203.07	11.323				
9,200.0	6,855.6	6,890.1	6,890.1	69.2	137.8	95.31	229.9	4,430.8	2,200.0	1,994.2	205.80	10.690				
9,300.0	6,854.6	6,889.1	6,889.1	71.8	137.8	95.06	229.9	4,430.8	2,100.6	1,892.1	208.54	10.073				
9,368.1	6,854.0	6,888.5	6,888.5	73.7	137.8	94.90	229.9	4,430.8	2,032.9	1,822.5	210.40	9.662				
9,400.0	6,853.6	6,888.1	6,888.1	74.5	137.8	95.65	229.9	4,430.8	2,001.2	1,790.1	211.12	9.479				
9,500.0	6,852.7	6,887.2	6,887.2	77.2	137.8	101.03	229.9	4,430.8	1,901.5	1,690.3	211.21	9.003				
9,600.0	6,851.7	6,886.2	6,886.2	80.0	137.7	-177.42	229.9	4,430.8	1,801.5	1,769.0	32.55	55.342				
9,634.8	6,851.3	6,885.8	6,885.8	80.9	137.7	-117.59	229.9	4,430.8	1,766.8	1,572.4	194.38	9.089				
9,700.0	6,850.7	6,885.2	6,885.2	82.7	137.7	-116.71	229.9	4,430.8	1,701.6	1,504.1	197.46	8.617				
9,800.0	6,849.7	6,884.2	6,884.2	85.5	137.7	-115.35	229.9	4,430.8	1,601.6	1,399.4	202.18	7.921				
9,870.5	6,849.0	6,883.5	6,883.5	87.4	137.7	-114.36	229.9	4,430.8	1,531.1	1,325.6	205.51	7.450				
9,900.0	6,848.7	6,883.2	6,883.2	88.3	137.7	-104.60	229.9	4,430.8	1,501.6	1,283.0	218.63	6.868				
10,000.0	6,847.7	6,882.2	6,882.2	91.0	137.7	-95.91	229.9	4,430.8	1,401.9	1,174.9	226.96	6.177				
10,100.0	6,846.8	6,881.3	6,881.3	93.8	137.6	-93.55	229.9	4,430.8	1,302.7	1,072.8	229.87	5.667				
10,137.1	6,846.4	6,880.9	6,880.9	94.8	137.6	-93.06	229.9	4,430.8	1,266.0	1,035.3	230.72	5.487				
10,200.0	6,845.8	6,880.3	6,880.3	96.5	137.6	-92.90	229.9	4,430.8	1,204.3	971.8	232.48	5.180				
10,300.0	6,844.8	6,879.3	6,879.3	99.3	137.6	-92.66	229.9	4,430.8	1,106.2	870.9	235.29	4.702				
10,400.0	6,843.8	6,878.3	6,878.3	102.0	137.6	-92.41	229.9	4,430.8	1,008.6	770.5	238.10	4.236				
10,500.0	6,842.8	6,877.3	6,877.3	104.8	137.6	-92.17	229.9	4,430.8	911.4	670.5	240.90	3.783				
10,600.0	6,841.9	6,876.4	6,876.4	107.5	137.5	-91.92	229.9	4,430.8	815.0	571.3	243.71	3.344				
10,700.0	6,840.9	6,875.4	6,875.4	110.3	137.5	-91.68	229.9	4,430.8	719.5	473.0	246.51	2.919				
10,732.1	6,840.6	6,875.1	6,875.1	111.2	137.5	-91.60	229.9	4,430.8	689.1	441.7	247.41	2.785				
10,800.0	6,839.9	6,874.4	6,874.4	113.0	137.5	-91.60	229.9	4,430.8	625.0	375.2	249.78	2.502				
10,900.0	6,838.9	6,873.4	6,873.4	115.8	137.5	-91.57	229.9	4,430.8	530.6	277.6	253.03	2.097				
10,998.8	6,838.0	6,872.5	6,872.5	118.6	137.5	-91.48	229.9	4,430.8	437.7	181.8	255.93	1.710				
11,000.0	6,838.0	6,872.5	6,872.5	118.6	137.5	-91.48	229.9	4,430.8	436.6	180.6	255.96	1.706				
11,100.0	6,837.0	6,871.5	6,871.5	121.4	137.4	-91.11	229.9	4,430.8	344.8	86.0	258.76	1.332	Level 3			
11,200.0	6,836.0	6,870.5	6,870.5	124.2	137.4	-90.75	229.9	4,430.8	259.0	-2.5	261.56	0.990	Level 1			
11,300.0	6,835.1	6,869.6	6,869.6	126.9	137.4	-90.39	229.9	4,430.8	188.0	-76.4	264.34	0.711	Level 1			
11,400.0	6,834.1	6,868.6	6,868.6	129.7	137.4	-90.03	229.9	4,430.8	153.5	-113.6	267.12	0.575	Level 1			
11,408.8	6,834.0	6,868.5	6,868.5	130.0	137.4	-90.00	229.9	4,430.8	153.3	-114.1	267.36	0.573	Level 1, CC, ES, SF			
11,428.1	6,833.8	6,868.3	6,868.3	130.5	137.4	-89.93	229.9	4,430.8	154.5	-113.4	267.89	0.577	Level 1			
11,487.5	6,833.3	6,867.8	6,867.8	132.2	137.4	-89.74	229.9	4,430.8	171.4	-98.0	269.47	0.636	Level 1			
11,500.0	6,833.2	6,867.7	6,867.7	132.5	137.4	-89.70	229.9	4,430.8	177.2	-92.6	269.82	0.657	Level 1			
11,600.0	6,832.2	6,866.7	6,866.7	135.3	137.4	-89.35	229.9	4,430.8	242.2	-30.4	272.57	0.889	Level 1			
11,700.0	6,831.3	6,865.8	6,865.8	138.1	137.3	-88.99	229.9	4,430.8	325.5	50.2	275.31	1.182	Level 2			
11,800.0	6,830.3	6,864.8	6,864.8	140.8	137.3	-88.64	229.9	4,430.8	416.2	138.1	278.04	1.497	Level 3			
11,900.0	6,829.4	6,863.9	6,863.9	143.6	137.3	-88.29	229.9	4,430.8	510.4	229.6	280.76	1.818				
11,938.6	6,829.0	6,863.5	6,863.5	144.7	137.3	-88.16	229.9	4,430.8	547.3	265.5	281.81	1.942				

CC - Min centre 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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT BINDER 9-28 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	69.07	1,738.2	4,544.7	4,865.8							
100.0	100.0	194.5	194.5	0.1	1.2	69.07	1,738.2	4,544.7	4,865.8	4,864.5	1.25	3,878.071				
200.0	200.0	294.5	294.5	0.3	3.4	69.07	1,738.2	4,544.7	4,865.8	4,862.1	3.71	1,313.296				
300.0	300.0	394.5	394.5	0.5	5.5	69.07	1,738.2	4,544.7	4,865.8	4,859.8	6.02	808.413				
400.0	400.0	494.5	494.5	0.8	7.5	69.07	1,738.2	4,544.7	4,865.8	4,857.5	8.29	587.107				
500.0	500.0	594.5	594.5	1.0	9.5	69.07	1,738.2	4,544.7	4,865.8	4,855.2	10.54	461.553				
600.0	600.0	694.5	694.5	1.2	11.6	69.07	1,738.2	4,544.7	4,865.8	4,853.0	12.79	380.434				
700.0	700.0	794.5	794.5	1.4	13.6	69.07	1,738.2	4,544.7	4,865.8	4,850.8	15.03	323.645				
800.0	800.0	894.5	894.5	1.7	15.6	69.07	1,738.2	4,544.7	4,865.8	4,848.5	17.28	281.645				
900.0	900.0	994.5	994.5	1.9	17.6	69.07	1,738.2	4,544.7	4,865.8	4,846.3	19.52	249.311				
1,000.0	1,000.0	1,094.5	1,094.5	2.1	19.6	144.88	1,738.2	4,544.7	4,867.2	4,845.5	21.74	223.909				
1,100.0	1,099.8	1,194.3	1,194.3	2.3	21.6	144.87	1,738.2	4,544.7	4,871.5	4,847.6	23.93	203.589				
1,200.0	1,199.5	1,294.0	1,294.0	2.6	23.7	144.84	1,738.2	4,544.7	4,878.6	4,852.5	26.09	186.963				
1,300.0	1,298.7	1,393.2	1,393.2	2.8	25.7	144.81	1,738.2	4,544.7	4,888.6	4,860.4	28.23	173.161				
1,400.0	1,397.5	1,492.0	1,492.0	3.1	27.6	144.77	1,738.2	4,544.7	4,901.5	4,871.1	30.34	161.563				
1,500.0	1,495.6	1,590.1	1,590.1	3.4	29.6	144.71	1,738.2	4,544.7	4,917.1	4,884.7	32.41	151.714				
1,600.0	1,593.4	1,687.9	1,687.9	3.8	31.6	144.85	1,738.2	4,544.7	4,934.2	4,899.6	34.62	142.520				
1,700.0	1,691.3	1,785.8	1,785.8	4.1	33.6	144.99	1,738.2	4,544.7	4,951.4	4,914.5	36.84	134.395				
1,800.0	1,789.1	1,883.6	1,883.6	4.5	35.5	145.12	1,738.2	4,544.7	4,968.5	4,929.5	39.07	127.170				
1,900.0	1,886.9	1,981.4	1,981.4	4.9	37.5	145.26	1,738.2	4,544.7	4,985.7	4,944.4	41.30	120.708				
2,000.0	1,984.7	2,079.2	2,079.2	5.4	39.5	145.39	1,738.2	4,544.7	5,003.0	4,959.4	43.54	114.897				
2,100.0	2,082.5	2,177.0	2,177.0	5.8	41.4	145.53	1,738.2	4,544.7	5,020.2	4,974.4	45.78	109.647				
2,200.0	2,180.3	2,274.8	2,274.8	6.2	43.4	145.66	1,738.2	4,544.7	5,037.5	4,989.4	48.03	104.882				
2,300.0	2,278.1	2,372.6	2,372.6	6.6	45.4	145.79	1,738.2	4,544.7	5,054.8	5,004.5	50.28	100.539				
2,400.0	2,376.0	2,470.5	2,470.5	7.1	47.3	145.92	1,738.2	4,544.7	5,072.1	5,019.6	52.53	96.565				
2,500.0	2,473.8	2,568.3	2,568.3	7.5	49.3	146.05	1,738.2	4,544.7	5,089.4	5,034.7	54.77	92.916				
2,600.0	2,571.6	2,666.1	2,666.1	8.0	51.3	146.18	1,738.2	4,544.7	5,106.8	5,049.8	57.03	89.554				
2,695.7	2,665.2	2,759.7	2,759.7	8.4	53.1	146.31	1,738.2	4,544.7	5,123.5	5,064.3	59.18	86.575				
2,700.0	2,669.4	2,763.9	2,763.9	8.4	53.2	146.32	1,738.2	4,544.7	5,124.2	5,064.9	59.29	86.431				
2,800.0	2,767.6	2,862.1	2,862.1	8.7	55.2	146.61	1,738.2	4,544.7	5,140.1	5,078.4	61.74	83.258				
2,900.0	2,866.4	2,960.9	2,960.9	9.0	57.2	146.85	1,738.2	4,544.7	5,153.1	5,088.9	64.15	80.324				
3,000.0	2,965.6	3,060.1	3,060.1	9.3	59.2	147.04	1,738.2	4,544.7	5,163.2	5,096.7	66.53	77.610				
3,100.0	3,065.3	3,159.8	3,159.8	9.5	61.2	147.17	1,738.2	4,544.7	5,170.4	5,101.6	68.85	75.099				
3,200.0	3,165.1	3,259.6	3,259.6	9.7	63.2	147.24	1,738.2	4,544.7	5,174.7	5,103.6	71.11	72.772				
3,295.7	3,260.8	3,355.3	3,355.3	9.8	65.1	71.45	1,738.2	4,544.7	5,176.0	5,101.7	74.31	69.656				
3,300.0	3,265.1	3,359.6	3,359.6	9.8	65.2	71.45	1,738.2	4,544.7	5,176.0	5,101.6	74.40	69.568				
3,400.0	3,365.1	3,459.6	3,459.6	10.0	67.2	71.45	1,738.2	4,544.7	5,176.0	5,099.4	76.58	67.591				
3,500.0	3,465.1	3,559.6	3,559.6	10.1	69.2	71.45	1,738.2	4,544.7	5,176.0	5,097.3	78.76	65.721				
3,600.0	3,565.1	3,659.6	3,659.6	10.3	71.2	71.45	1,738.2	4,544.7	5,176.0	5,095.1	80.94	63.950				
3,700.0	3,665.1	3,759.6	3,759.6	10.5	73.3	71.45	1,738.2	4,544.7	5,176.0	5,092.9	83.12	62.270				
3,800.0	3,765.1	3,859.6	3,859.6	10.6	75.3	71.45	1,738.2	4,544.7	5,176.0	5,090.7	85.31	60.675				
3,900.0	3,865.1	3,959.6	3,959.6	10.8	77.3	71.45	1,738.2	4,544.7	5,176.0	5,088.5	87.50	59.158				
4,000.0	3,965.1	4,059.6	4,059.6	11.0	79.3	71.45	1,738.2	4,544.7	5,176.0	5,086.3	89.68	57.713				
4,100.0	4,065.1	4,159.6	4,159.6	11.1	81.3	71.45	1,738.2	4,544.7	5,176.0	5,084.2	91.88	56.337				
4,200.0	4,165.1	4,259.6	4,259.6	11.3	83.3	71.45	1,738.2	4,544.7	5,176.0	5,082.0	94.07	55.024				
4,300.0	4,265.1	4,359.6	4,359.6	11.5	85.3	71.45	1,738.2	4,544.7	5,176.0	5,079.8	96.26	53.769				
4,400.0	4,365.1	4,459.6	4,459.6	11.7	87.3	71.45	1,738.2	4,544.7	5,176.0	5,077.6	98.46	52.570				
4,500.0	4,465.1	4,559.6	4,559.6	11.8	89.3	71.45	1,738.2	4,544.7	5,176.0	5,075.4	100.66	51.423				
4,600.0	4,565.1	4,659.6	4,659.6	12.0	91.4	71.45	1,738.2	4,544.7	5,176.0	5,073.2	102.86	50.323				
4,700.0	4,665.1	4,759.6	4,759.6	12.2	93.4	71.45	1,738.2	4,544.7	5,176.0	5,071.0	105.06	49.270				
4,800.0	4,765.1	4,859.6	4,859.6	12.4	95.4	71.45	1,738.2	4,544.7	5,176.0	5,068.8	107.26	48.258				
4,900.0	4,865.1	4,959.6	4,959.6	12.6	97.4	71.45	1,738.2	4,544.7	5,176.0	5,066.6	109.46	47.287				

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT BINDER 9-28 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	4,965.1	5,059.6	5,059.6	12.8	99.4	71.45	1,738.2	4,544.7	5,176.0	5,064.4	111.66	46.354				
5,100.0	5,065.1	5,159.6	5,159.6	12.9	101.4	71.45	1,738.2	4,544.7	5,176.0	5,062.2	113.87	45.457				
5,200.0	5,165.1	5,259.6	5,259.6	13.1	103.4	71.45	1,738.2	4,544.7	5,176.0	5,060.0	116.07	44.593				
5,300.0	5,265.1	5,359.6	5,359.6	13.3	105.4	71.45	1,738.2	4,544.7	5,176.0	5,057.7	118.28	43.761				
5,400.0	5,365.1	5,459.6	5,459.6	13.5	107.4	71.45	1,738.2	4,544.7	5,176.0	5,055.5	120.49	42.959				
5,500.0	5,465.1	5,559.6	5,559.6	13.7	109.5	71.45	1,738.2	4,544.7	5,176.0	5,053.3	122.70	42.186				
5,600.0	5,565.1	5,659.6	5,659.6	13.9	111.5	71.45	1,738.2	4,544.7	5,176.0	5,051.1	124.91	41.440				
5,700.0	5,665.1	5,759.6	5,759.6	14.1	113.5	71.45	1,738.2	4,544.7	5,176.0	5,048.9	127.12	40.719				
5,800.0	5,765.1	5,859.6	5,859.6	14.3	115.5	71.45	1,738.2	4,544.7	5,176.0	5,046.7	129.33	40.023				
5,900.0	5,865.1	5,959.6	5,959.6	14.5	117.5	71.45	1,738.2	4,544.7	5,176.0	5,044.5	131.54	39.350				
6,000.0	5,965.1	6,059.6	6,059.6	14.7	119.5	71.45	1,738.2	4,544.7	5,176.0	5,042.3	133.75	38.699				
6,100.0	6,065.1	6,159.6	6,159.6	14.9	121.5	71.45	1,738.2	4,544.7	5,176.0	5,040.1	135.96	38.069				
6,192.7	6,157.8	6,252.3	6,252.3	15.1	123.4	71.45	1,738.2	4,544.7	5,176.0	5,038.0	138.02	37.503				
6,200.0	6,165.1	6,259.6	6,259.6	15.1	123.5	-18.55	1,738.2	4,544.7	5,176.0	5,038.6	137.43	37.662				
6,250.0	6,215.1	6,309.6	6,309.6	15.1	124.5	-18.61	1,738.2	4,544.7	5,173.9	5,035.7	138.11	37.462				
6,300.0	6,264.7	6,359.2	6,359.2	15.2	125.5	-18.77	1,738.2	4,544.7	5,168.4	5,030.2	138.18	37.404				
6,350.0	6,313.9	6,408.4	6,408.4	15.2	126.5	-19.04	1,738.2	4,544.7	5,159.7	5,022.1	137.64	37.488				
6,400.0	6,362.2	6,456.7	6,456.7	15.3	127.5	-19.40	1,738.2	4,544.7	5,147.8	5,011.3	136.50	37.714				
6,450.0	6,409.6	6,504.1	6,504.1	15.3	128.4	-19.89	1,738.2	4,544.7	5,132.7	4,997.9	134.77	38.084				
6,500.0	6,455.8	6,550.3	6,550.3	15.3	129.4	-20.50	1,738.2	4,544.7	5,114.5	4,982.0	132.50	38.599				
6,550.0	6,500.5	6,595.0	6,595.0	15.3	130.3	-21.26	1,738.2	4,544.7	5,093.3	4,963.6	129.74	39.257				
6,600.0	6,543.5	6,638.0	6,638.0	15.3	131.1	-22.18	1,738.2	4,544.7	5,069.3	4,942.7	126.57	40.050				
6,650.0	6,584.7	6,679.2	6,679.2	15.3	132.0	-23.28	1,738.2	4,544.7	5,042.4	4,919.3	123.10	40.961				
6,700.0	6,623.7	6,718.2	6,718.2	15.4	132.8	-24.60	1,738.2	4,544.7	5,013.0	4,893.5	119.50	41.951				
6,750.0	6,660.6	6,755.1	6,755.1	15.5	133.5	-26.19	1,738.2	4,544.7	4,981.0	4,865.1	115.97	42.952				
6,800.0	6,694.9	6,789.4	6,789.4	15.7	134.2	-28.08	1,738.2	4,544.7	4,946.8	4,834.0	112.81	43.853				
6,850.0	6,726.6	6,821.1	6,821.1	15.9	134.8	-30.36	1,738.2	4,544.7	4,910.4	4,800.0	110.39	44.484				
6,900.0	6,755.6	6,850.1	6,850.1	16.2	135.4	-33.11	1,738.2	4,544.7	4,872.0	4,762.8	109.18	44.625				
6,950.0	6,781.7	6,876.2	6,876.2	16.6	135.9	-36.43	1,738.2	4,544.7	4,831.9	4,722.2	109.70	44.047				
7,000.0	6,804.7	6,899.2	6,899.2	17.1	136.4	-40.46	1,738.2	4,544.7	4,790.2	4,677.7	112.45	42.598				
7,050.0	6,824.6	6,919.1	6,919.1	17.7	136.8	-45.37	1,738.2	4,544.7	4,747.1	4,629.4	117.77	40.310				
7,100.0	6,841.2	6,935.7	6,935.7	18.3	137.1	-51.32	1,738.2	4,544.7	4,703.0	4,577.4	125.59	37.446				
7,150.0	6,854.5	6,949.0	6,949.0	19.0	137.4	-58.45	1,738.2	4,544.7	4,657.8	4,522.5	135.30	34.426				
7,200.0	6,864.4	6,958.9	6,958.9	19.8	137.6	-66.83	1,738.2	4,544.7	4,612.0	4,466.5	145.49	31.700				
7,250.0	6,870.8	6,965.3	6,965.3	20.7	137.7	-76.29	1,738.2	4,544.7	4,565.8	4,411.7	154.12	29.625				
7,300.0	6,873.8	6,968.3	6,968.3	21.6	137.8	-86.39	1,738.2	4,544.7	4,519.3	4,360.2	159.09	28.408				
7,324.7	6,874.0	6,968.5	6,968.5	22.1	137.8	-91.42	1,738.2	4,544.7	4,496.3	4,336.5	159.78	28.141				
7,400.0	6,873.2	6,967.7	6,967.7	23.5	137.8	-91.40	1,738.2	4,544.7	4,426.3	4,265.0	161.24	27.451				
7,500.0	6,872.2	6,966.7	6,966.7	25.6	137.8	-91.36	1,738.2	4,544.7	4,333.6	4,170.3	163.33	26.533				
7,600.0	6,871.3	6,965.8	6,965.8	27.9	137.7	-91.33	1,738.2	4,544.7	4,241.3	4,075.8	165.54	25.621				
7,700.0	6,870.3	6,964.8	6,964.8	30.2	137.7	-91.30	1,738.2	4,544.7	4,149.3	3,981.5	167.85	24.721				
7,800.0	6,869.3	6,963.8	6,963.8	32.6	137.7	-91.26	1,738.2	4,544.7	4,057.7	3,887.5	170.23	23.837				
7,900.0	6,868.3	6,962.8	6,962.8	35.0	137.7	-91.23	1,738.2	4,544.7	3,966.6	3,793.9	172.67	22.972				
8,000.0	6,867.4	6,961.9	6,961.9	37.6	137.7	-91.19	1,738.2	4,544.7	3,875.8	3,700.6	175.16	22.127				
8,100.0	6,866.4	6,960.9	6,960.9	40.1	137.6	-91.16	1,738.2	4,544.7	3,785.5	3,607.8	177.70	21.303				
8,200.0	6,865.4	6,959.9	6,959.9	42.7	137.6	-91.13	1,738.2	4,544.7	3,695.7	3,515.5	180.26	20.502				
8,300.0	6,864.4	6,958.9	6,958.9	45.3	137.6	-91.09	1,738.2	4,544.7	3,606.5	3,423.6	182.85	19.724				
8,400.0	6,863.5	6,958.0	6,958.0	47.9	137.6	-91.06	1,738.2	4,544.7	3,517.8	3,332.4	185.47	18.967				
8,500.0	6,862.5	6,957.0	6,957.0	50.6	137.6	-91.02	1,738.2	4,544.7	3,429.8	3,241.7	188.10	18.234				
8,600.0	6,861.5	6,956.0	6,956.0	53.2	137.5	-90.99	1,738.2	4,544.7	3,342.4	3,151.7	190.75	17.523				
8,614.0	6,861.4	6,955.9	6,955.9	53.6	137.5	-90.98	1,738.2	4,544.7	3,330.2	3,139.1	191.12	17.425				
8,700.0	6,860.5	6,955.0	6,955.0	55.9	137.5	-91.07	1,738.2	4,544.7	3,254.8	3,061.4	193.37	16.832				

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT BINDER 9-28 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,859.5	6,954.0	6,954.0	58.6	137.5	-91.18	1,738.2	4,544.7	3,165.5	2,969.6	195.83	16.164				
8,880.6	6,858.7	6,953.2	6,953.2	60.7	137.5	-91.28	1,738.2	4,544.7	3,092.2	2,894.5	197.70	15.641				
8,900.0	6,858.6	6,953.1	6,953.1	61.2	137.5	-91.27	1,738.2	4,544.7	3,074.5	2,876.3	198.21	15.511				
9,000.0	6,857.6	6,952.1	6,952.1	63.9	137.5	-91.22	1,738.2	4,544.7	2,983.3	2,782.5	200.86	14.853				
9,100.0	6,856.6	6,951.1	6,951.1	66.5	137.4	-91.18	1,738.2	4,544.7	2,892.8	2,689.3	203.51	14.214				
9,200.0	6,855.6	6,950.1	6,950.1	69.2	137.4	-91.13	1,738.2	4,544.7	2,802.9	2,596.7	206.18	13.594				
9,300.0	6,854.6	6,949.1	6,949.1	71.8	137.4	-91.09	1,738.2	4,544.7	2,713.7	2,504.8	208.85	12.993				
9,368.1	6,854.0	6,948.5	6,948.5	73.7	137.4	-91.06	1,738.2	4,544.7	2,653.3	2,442.7	210.67	12.595				
9,400.0	6,853.6	6,948.1	6,948.1	74.5	137.4	-91.00	1,738.2	4,544.7	2,625.4	2,413.7	211.64	12.405				
9,500.0	6,852.7	6,947.2	6,947.2	77.2	137.4	-90.85	1,738.2	4,544.7	2,540.0	2,325.5	214.55	11.839				
9,600.0	6,851.7	6,946.2	6,946.2	80.0	137.3	-90.73	1,738.2	4,544.7	2,458.7	2,241.5	217.28	11.316				
9,634.8	6,851.3	6,945.8	6,945.8	80.9	137.3	-90.69	1,738.2	4,544.7	2,431.5	2,213.4	218.18	11.145				
9,700.0	6,850.7	6,945.2	6,945.2	82.7	137.3	-90.66	1,738.2	4,544.7	2,381.5	2,161.5	219.97	10.827				
9,800.0	6,849.7	6,944.2	6,944.2	85.5	137.3	-90.63	1,738.2	4,544.7	2,306.2	2,083.5	222.70	10.355				
9,870.5	6,849.0	6,943.5	6,943.5	87.4	137.3	-90.60	1,738.2	4,544.7	2,254.2	2,029.6	224.64	10.035				
9,900.0	6,848.7	6,943.2	6,943.2	88.3	137.3	-90.57	1,738.2	4,544.7	2,233.0	2,007.6	225.38	9.907				
10,000.0	6,847.7	6,942.2	6,942.2	91.0	137.3	-90.48	1,738.2	4,544.7	2,164.8	1,937.0	227.77	9.504				
10,100.0	6,846.8	6,941.3	6,941.3	93.8	137.2	-90.40	1,738.2	4,544.7	2,103.2	1,873.3	229.92	9.148				
10,137.1	6,846.4	6,940.9	6,940.9	94.8	137.2	-90.37	1,738.2	4,544.7	2,082.2	1,851.6	230.65	9.027				
10,200.0	6,845.8	6,940.3	6,940.3	96.5	137.2	-90.35	1,738.2	4,544.7	2,048.2	1,815.8	232.39	8.814				
10,300.0	6,844.8	6,939.3	6,939.3	99.3	137.2	-90.32	1,738.2	4,544.7	1,997.0	1,761.9	235.15	8.492				
10,400.0	6,843.8	6,938.3	6,938.3	102.0	137.2	-90.28	1,738.2	4,544.7	1,949.6	1,711.7	237.92	8.195				
10,500.0	6,842.8	6,937.3	6,937.3	104.8	137.2	-90.25	1,738.2	4,544.7	1,906.3	1,665.6	240.68	7.920				
10,600.0	6,841.9	6,936.4	6,936.4	107.5	137.1	-90.22	1,738.2	4,544.7	1,867.3	1,623.8	243.45	7.670				
10,700.0	6,840.9	6,935.4	6,935.4	110.3	137.1	-90.19	1,738.2	4,544.7	1,832.9	1,586.7	246.22	7.444				
10,732.1	6,840.6	6,935.1	6,935.1	111.2	137.1	-90.18	1,738.2	4,544.7	1,822.9	1,575.8	247.11	7.377				
10,800.0	6,839.9	6,934.4	6,934.4	113.0	137.1	-90.18	1,738.2	4,544.7	1,802.3	1,552.8	249.49	7.224				
10,900.0	6,838.9	6,933.4	6,933.4	115.8	137.1	-90.18	1,738.2	4,544.7	1,772.0	1,519.3	252.73	7.012				
10,998.8	6,838.0	6,932.5	6,932.5	118.6	137.1	-90.17	1,738.2	4,544.7	1,742.2	1,486.6	255.62	6.816				
11,000.0	6,838.0	6,932.5	6,932.5	118.6	137.1	-90.17	1,738.2	4,544.7	1,741.8	1,486.2	255.65	6.813				
11,100.0	6,837.0	6,931.5	6,931.5	121.4	137.0	-90.14	1,738.2	4,544.7	1,714.5	1,456.1	258.42	6.635				
11,200.0	6,836.0	6,930.5	6,930.5	124.2	137.0	-90.11	1,738.2	4,544.7	1,692.6	1,431.4	261.18	6.481				
11,300.0	6,835.1	6,929.6	6,929.6	126.9	137.0	-90.07	1,738.2	4,544.7	1,676.4	1,412.5	263.95	6.351				
11,400.0	6,834.1	6,928.6	6,928.6	129.7	137.0	-90.04	1,738.2	4,544.7	1,666.1	1,399.4	266.71	6.247				
11,428.1	6,833.8	6,928.3	6,928.3	130.5	137.0	-90.03	1,738.2	4,544.7	1,664.2	1,396.7	267.49	6.222				
11,487.5	6,833.3	6,927.8	6,927.8	132.2	137.0	-90.03	1,738.2	4,544.7	1,661.0	1,391.9	269.07	6.173				
11,500.0	6,833.2	6,927.7	6,927.7	132.5	137.0	-90.02	1,738.2	4,544.7	1,660.4	1,391.0	269.42	6.163				
11,574.4	6,832.5	6,927.0	6,927.0	134.6	137.0	-90.00	1,738.2	4,544.7	1,658.7	1,387.2	271.47	6.110 CC				
11,600.0	6,832.2	6,926.7	6,926.7	135.3	136.9	-89.99	1,738.2	4,544.7	1,658.9	1,386.7	272.18	6.095 ES				
11,700.0	6,831.3	6,925.8	6,925.8	138.1	136.9	-89.96	1,738.2	4,544.7	1,663.5	1,388.5	274.94	6.050				
11,800.0	6,830.3	6,924.8	6,924.8	140.8	136.9	-89.93	1,738.2	4,544.7	1,674.0	1,396.3	277.70	6.028				
11,900.0	6,829.4	6,923.9	6,923.9	143.6	136.9	-89.89	1,738.2	4,544.7	1,690.4	1,409.9	280.47	6.027 SF				
11,938.6	6,829.0	6,923.5	6,923.5	144.7	136.9	-89.88	1,738.2	4,544.7	1,698.2	1,416.7	281.53	6.032				

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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)	Offset Wellbore Centre +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	56.79	2,871.1	4,385.7	5,241.9				
100.0	100.0	219.5	219.5	0.1	1.4	56.79	2,871.1	4,385.7	5,241.9	5,240.5	1.45	3,615.115	
200.0	200.0	319.5	319.5	0.3	3.7	56.79	2,871.1	4,385.7	5,241.9	5,238.0	3.98	1,316.094	
300.0	300.0	419.5	419.5	0.5	5.7	56.79	2,871.1	4,385.7	5,241.9	5,235.7	6.28	834.447	
400.0	400.0	519.5	519.5	0.8	7.8	56.79	2,871.1	4,385.7	5,241.9	5,233.4	8.55	613.331	
500.0	500.0	619.5	619.5	1.0	9.8	56.79	2,871.1	4,385.7	5,241.9	5,231.1	10.80	485.402	
600.0	600.0	719.5	719.5	1.2	11.8	56.79	2,871.1	4,385.7	5,241.9	5,228.9	13.05	401.809	
700.0	700.0	819.5	819.5	1.4	13.8	56.79	2,871.1	4,385.7	5,241.9	5,226.7	15.29	342.850	
800.0	800.0	919.5	919.5	1.7	15.9	56.79	2,871.1	4,385.7	5,241.9	5,224.4	17.53	299.013	
900.0	900.0	1,019.5	1,019.5	1.9	17.9	56.79	2,871.1	4,385.7	5,241.9	5,222.2	19.77	265.133	
1,000.0	1,000.0	1,119.5	1,119.5	2.1	19.9	132.60	2,871.1	4,385.7	5,243.1	5,221.1	21.99	238.389	
1,100.0	1,099.8	1,219.3	1,219.3	2.3	21.9	132.59	2,871.1	4,385.7	5,246.7	5,222.5	24.19	216.856	
1,200.0	1,199.5	1,319.0	1,319.0	2.6	23.9	132.57	2,871.1	4,385.7	5,252.6	5,226.2	26.38	199.111	
1,300.0	1,298.7	1,418.2	1,418.2	2.8	25.9	132.55	2,871.1	4,385.7	5,260.9	5,232.3	28.55	184.264	
1,400.0	1,397.5	1,517.0	1,517.0	3.1	27.9	132.51	2,871.1	4,385.7	5,271.5	5,240.8	30.71	171.674	
1,500.0	1,495.6	1,615.1	1,615.1	3.4	29.9	132.47	2,871.1	4,385.7	5,284.5	5,251.7	32.85	160.874	
1,600.0	1,593.4	1,712.9	1,712.9	3.8	31.8	132.64	2,871.1	4,385.7	5,298.7	5,263.7	35.09	150.986	
1,700.0	1,691.3	1,810.8	1,810.8	4.1	33.8	132.80	2,871.1	4,385.7	5,313.0	5,275.7	37.35	142.239	
1,800.0	1,789.1	1,908.6	1,908.6	4.5	35.8	132.96	2,871.1	4,385.7	5,327.3	5,287.7	39.62	134.457	
1,900.0	1,886.9	2,006.4	2,006.4	4.9	37.7	133.12	2,871.1	4,385.7	5,341.7	5,299.8	41.90	127.496	
2,000.0	1,984.7	2,104.2	2,104.2	5.4	39.7	133.28	2,871.1	4,385.7	5,356.1	5,311.9	44.18	121.237	
2,100.0	2,082.5	2,202.0	2,202.0	5.8	41.7	133.44	2,871.1	4,385.7	5,370.5	5,324.1	46.46	115.584	
2,200.0	2,180.3	2,299.8	2,299.8	6.2	43.6	133.60	2,871.1	4,385.7	5,385.0	5,336.3	48.75	110.454	
2,300.0	2,278.1	2,397.6	2,397.6	6.6	45.6	133.76	2,871.1	4,385.7	5,399.5	5,348.5	51.04	105.780	
2,400.0	2,376.0	2,495.5	2,495.5	7.1	47.6	133.92	2,871.1	4,385.7	5,414.1	5,360.8	53.34	101.505	
2,500.0	2,473.8	2,593.3	2,593.3	7.5	49.5	134.07	2,871.1	4,385.7	5,428.7	5,373.1	55.63	97.581	
2,600.0	2,571.6	2,691.1	2,691.1	8.0	51.5	134.23	2,871.1	4,385.7	5,443.4	5,385.4	57.93	93.966	
2,695.7	2,665.2	2,784.7	2,784.7	8.4	53.4	134.38	2,871.1	4,385.7	5,457.4	5,397.3	60.13	90.766	
2,700.0	2,669.4	2,788.9	2,788.9	8.4	53.5	134.39	2,871.1	4,385.7	5,458.0	5,397.8	60.23	90.618	
2,800.0	2,767.6	2,887.1	2,887.1	8.7	55.5	134.73	2,871.1	4,385.7	5,471.4	5,408.8	62.63	87.357	
2,900.0	2,866.4	2,985.9	2,985.9	9.0	57.4	135.00	2,871.1	4,385.7	5,482.4	5,417.4	65.01	84.335	
3,000.0	2,965.6	3,085.1	3,085.1	9.3	59.4	135.21	2,871.1	4,385.7	5,491.0	5,423.7	67.35	81.535	
3,100.0	3,065.3	3,184.8	3,184.8	9.5	61.4	135.35	2,871.1	4,385.7	5,497.1	5,427.5	69.64	78.939	
3,200.0	3,165.1	3,284.6	3,284.6	9.7	63.5	135.44	2,871.1	4,385.7	5,500.7	5,428.8	71.88	76.528	
3,295.7	3,260.8	3,380.3	3,380.3	9.8	65.4	59.66	2,871.1	4,385.7	5,501.9	5,427.8	74.09	74.263	
3,300.0	3,265.1	3,384.6	3,384.6	9.8	65.5	59.66	2,871.1	4,385.7	5,501.9	5,427.7	74.18	74.169	
3,400.0	3,365.1	3,484.6	3,484.6	10.0	67.5	59.66	2,871.1	4,385.7	5,501.9	5,425.5	76.36	72.048	
3,500.0	3,465.1	3,584.6	3,584.6	10.1	69.5	59.66	2,871.1	4,385.7	5,501.9	5,423.3	78.55	70.042	
3,600.0	3,565.1	3,684.6	3,684.6	10.3	71.5	59.66	2,871.1	4,385.7	5,501.9	5,421.1	80.74	68.144	
3,700.0	3,665.1	3,784.6	3,784.6	10.5	73.5	59.66	2,871.1	4,385.7	5,501.9	5,418.9	82.93	66.343	
3,800.0	3,765.1	3,884.6	3,884.6	10.6	75.5	59.66	2,871.1	4,385.7	5,501.9	5,416.7	85.12	64.635	
3,900.0	3,865.1	3,984.6	3,984.6	10.8	77.5	59.66	2,871.1	4,385.7	5,501.9	5,414.5	87.32	63.010	
4,000.0	3,965.1	4,084.6	4,084.6	11.0	79.5	59.66	2,871.1	4,385.7	5,501.9	5,412.3	89.51	61.464	
4,100.0	4,065.1	4,184.6	4,184.6	11.1	81.6	59.66	2,871.1	4,385.7	5,501.9	5,410.1	91.71	59.991	
4,200.0	4,165.1	4,284.6	4,284.6	11.3	83.6	59.66	2,871.1	4,385.7	5,501.9	5,407.9	93.91	58.587	
4,300.0	4,265.1	4,384.6	4,384.6	11.5	85.6	59.66	2,871.1	4,385.7	5,501.9	5,405.7	96.11	57.245	
4,400.0	4,365.1	4,484.6	4,484.6	11.7	87.6	59.66	2,871.1	4,385.7	5,501.9	5,403.5	98.31	55.963	
4,500.0	4,465.1	4,584.6	4,584.6	11.8	89.6	59.66	2,871.1	4,385.7	5,501.9	5,401.3	100.52	54.736	
4,600.0	4,565.1	4,684.6	4,684.6	12.0	91.6	59.66	2,871.1	4,385.7	5,501.9	5,399.1	102.72	53.562	
4,700.0	4,665.1	4,784.6	4,784.6	12.2	93.6	59.66	2,871.1	4,385.7	5,501.9	5,396.9	104.93	52.436	
4,800.0	4,765.1	4,884.6	4,884.6	12.4	95.6	59.66	2,871.1	4,385.7	5,501.9	5,394.7	107.13	51.356	
4,900.0	4,865.1	4,984.6	4,984.6	12.6	97.6	59.66	2,871.1	4,385.7	5,501.9	5,392.5	109.34	50.319	

CC - Min centre 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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT HELEN 1 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	4,965.1	5,084.6	5,084.6	12.8	99.7	59.66	2,871.1	4,385.7	5,501.9	5,390.3	111.55	49.322				
5,100.0	5,065.1	5,184.6	5,184.6	12.9	101.7	59.66	2,871.1	4,385.7	5,501.9	5,388.1	113.76	48.364				
5,200.0	5,165.1	5,284.6	5,284.6	13.1	103.7	59.66	2,871.1	4,385.7	5,501.9	5,385.9	115.97	47.442				
5,300.0	5,265.1	5,384.6	5,384.6	13.3	105.7	59.66	2,871.1	4,385.7	5,501.9	5,383.7	118.18	46.555				
5,400.0	5,365.1	5,484.6	5,484.6	13.5	107.7	59.66	2,871.1	4,385.7	5,501.9	5,381.5	120.39	45.699				
5,500.0	5,465.1	5,584.6	5,584.6	13.7	109.7	59.66	2,871.1	4,385.7	5,501.9	5,379.3	122.61	44.874				
5,600.0	5,565.1	5,684.6	5,684.6	13.9	111.7	59.66	2,871.1	4,385.7	5,501.9	5,377.0	124.82	44.078				
5,700.0	5,665.1	5,784.6	5,784.6	14.1	113.7	59.66	2,871.1	4,385.7	5,501.9	5,374.8	127.03	43.310				
5,800.0	5,765.1	5,884.6	5,884.6	14.3	115.7	59.66	2,871.1	4,385.7	5,501.9	5,372.6	129.25	42.568				
5,900.0	5,865.1	5,984.6	5,984.6	14.5	117.8	59.66	2,871.1	4,385.7	5,501.9	5,370.4	131.47	41.850				
6,000.0	5,965.1	6,084.6	6,084.6	14.7	119.8	59.66	2,871.1	4,385.7	5,501.9	5,368.2	133.68	41.156				
6,100.0	6,065.1	6,184.6	6,184.6	14.9	121.8	59.66	2,871.1	4,385.7	5,501.9	5,366.0	135.90	40.485				
6,192.7	6,157.8	6,277.3	6,277.3	15.1	123.6	59.66	2,871.1	4,385.7	5,501.9	5,363.9	137.95	39.882				
6,200.0	6,165.1	6,284.6	6,284.6	15.1	123.8	-30.35	2,871.1	4,385.7	5,501.8	5,363.8	138.01	39.866				
6,250.0	6,215.1	6,334.6	6,334.6	15.1	124.8	-30.44	2,871.1	4,385.7	5,499.9	5,361.1	138.76	39.637				
6,300.0	6,264.7	6,384.2	6,384.2	15.2	125.8	-30.67	2,871.1	4,385.7	5,494.9	5,355.9	139.00	39.531				
6,350.0	6,313.9	6,433.4	6,433.4	15.2	126.8	-31.05	2,871.1	4,385.7	5,487.0	5,348.3	138.76	39.544				
6,400.0	6,362.2	6,481.7	6,481.7	15.3	127.7	-31.58	2,871.1	4,385.7	5,476.2	5,338.1	138.04	39.671				
6,450.0	6,409.6	6,529.1	6,529.1	15.3	128.7	-32.27	2,871.1	4,385.7	5,462.4	5,325.5	136.90	39.902				
6,500.0	6,455.8	6,575.3	6,575.3	15.3	129.6	-33.13	2,871.1	4,385.7	5,445.9	5,310.5	135.39	40.225				
6,550.0	6,500.5	6,620.0	6,620.0	15.3	130.5	-34.18	2,871.1	4,385.7	5,426.7	5,293.1	133.61	40.617				
6,600.0	6,543.5	6,663.0	6,663.0	15.3	131.4	-35.44	2,871.1	4,385.7	5,404.9	5,273.2	131.67	41.049				
6,650.0	6,584.7	6,704.2	6,704.2	15.3	132.2	-36.92	2,871.1	4,385.7	5,380.6	5,250.8	129.73	41.475				
6,700.0	6,623.7	6,743.2	6,743.2	15.4	133.0	-38.65	2,871.1	4,385.7	5,353.9	5,225.9	127.97	41.836				
6,750.0	6,660.6	6,780.1	6,780.1	15.5	133.7	-40.67	2,871.1	4,385.7	5,325.0	5,198.4	126.62	42.056				
6,800.0	6,694.9	6,814.4	6,814.4	15.7	134.4	-43.00	2,871.1	4,385.7	5,294.1	5,168.2	125.91	42.048				
6,850.0	6,726.6	6,846.1	6,846.1	15.9	135.1	-45.68	2,871.1	4,385.7	5,261.2	5,135.2	126.08	41.731				
6,900.0	6,755.6	6,875.1	6,875.1	16.2	135.7	-48.75	2,871.1	4,385.7	5,226.7	5,099.4	127.33	41.049				
6,950.0	6,781.7	6,901.2	6,901.2	16.6	136.2	-52.24	2,871.1	4,385.7	5,190.6	5,060.8	129.78	39.995				
7,000.0	6,804.7	6,924.2	6,924.2	17.1	136.6	-56.18	2,871.1	4,385.7	5,153.2	5,019.8	133.42	38.624				
7,050.0	6,824.6	6,944.1	6,944.1	17.7	137.0	-60.58	2,871.1	4,385.7	5,114.6	4,976.6	138.05	37.050				
7,100.0	6,841.2	6,960.7	6,960.7	18.3	137.4	-65.43	2,871.1	4,385.7	5,075.1	4,931.8	143.30	35.417				
7,150.0	6,854.5	6,974.0	6,974.0	19.0	137.6	-70.69	2,871.1	4,385.7	5,034.8	4,886.2	148.64	33.873				
7,200.0	6,864.4	6,983.9	6,983.9	19.8	137.8	-76.28	2,871.1	4,385.7	4,994.1	4,840.6	153.47	32.540				
7,250.0	6,870.8	6,990.3	6,990.3	20.7	138.0	-82.08	2,871.1	4,385.7	4,953.0	4,795.7	157.24	31.499				
7,300.0	6,873.8	6,993.3	6,993.3	21.6	138.0	-87.94	2,871.1	4,385.7	4,911.7	4,752.2	159.53	30.788				
7,324.7	6,874.0	6,993.5	6,993.5	22.1	138.0	-90.81	2,871.1	4,385.7	4,891.4	4,731.3	160.07	30.558				
7,400.0	6,873.2	6,992.7	6,992.7	23.5	138.0	-90.80	2,871.1	4,385.7	4,829.6	4,668.1	161.53	29.899				
7,500.0	6,872.2	6,991.7	6,991.7	25.6	138.0	-90.78	2,871.1	4,385.7	4,748.2	4,584.6	163.62	29.020				
7,600.0	6,871.3	6,990.8	6,990.8	27.9	138.0	-90.76	2,871.1	4,385.7	4,667.5	4,501.7	165.82	28.147				
7,700.0	6,870.3	6,989.8	6,989.8	30.2	138.0	-90.74	2,871.1	4,385.7	4,587.5	4,419.4	168.13	27.286				
7,800.0	6,869.3	6,988.8	6,988.8	32.6	137.9	-90.72	2,871.1	4,385.7	4,508.4	4,337.9	170.51	26.441				
7,900.0	6,868.3	6,987.8	6,987.8	35.0	137.9	-90.69	2,871.1	4,385.7	4,430.1	4,257.1	172.95	25.614				
8,000.0	6,867.4	6,986.9	6,986.9	37.6	137.9	-90.67	2,871.1	4,385.7	4,352.7	4,177.2	175.44	24.809				
8,100.0	6,866.4	6,985.9	6,985.9	40.1	137.9	-90.65	2,871.1	4,385.7	4,276.2	4,098.2	177.98	24.027				
8,200.0	6,865.4	6,984.9	6,984.9	42.7	137.9	-90.63	2,871.1	4,385.7	4,200.7	4,020.2	180.54	23.268				
8,300.0	6,864.4	6,983.9	6,983.9	45.3	137.8	-90.61	2,871.1	4,385.7	4,126.3	3,943.2	183.13	22.532				
8,400.0	6,863.5	6,983.0	6,983.0	47.9	137.8	-90.59	2,871.1	4,385.7	4,052.9	3,867.2	185.74	21.820				
8,500.0	6,862.5	6,982.0	6,982.0	50.6	137.8	-90.57	2,871.1	4,385.7	3,980.8	3,792.4	188.37	21.132				
8,600.0	6,861.5	6,981.0	6,981.0	53.2	137.8	-90.55	2,871.1	4,385.7	3,909.8	3,718.8	191.02	20.468				
8,614.0	6,861.4	6,980.9	6,980.9	53.6	137.8	-90.55	2,871.1	4,385.7	3,900.0	3,708.6	191.39	20.377				
8,700.0	6,860.5	6,980.0	6,980.0	55.9	137.8	-90.59	2,871.1	4,385.7	3,838.7	3,645.1	193.64	19.824				

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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												SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT HELEN 1 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance					Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,859.5	6,979.0	6,979.0	58.6	137.7	-90.63	2,871.1	4,385.7	3,765.4	3,569.2	196.11	19.200			
8,880.6	6,858.7	6,978.2	6,978.2	60.7	137.7	-90.67	2,871.1	4,385.7	3,704.5	3,506.5	197.99	18.711			
8,900.0	6,858.6	6,978.1	6,978.1	61.2	137.7	-90.66	2,871.1	4,385.7	3,689.7	3,491.2	198.50	18.588			
9,000.0	6,857.6	6,977.1	6,977.1	63.9	137.7	-90.64	2,871.1	4,385.7	3,614.1	3,413.0	201.14	17.968			
9,100.0	6,856.6	6,976.1	6,976.1	66.5	137.7	-90.61	2,871.1	4,385.7	3,539.8	3,336.0	203.80	17.369			
9,200.0	6,855.6	6,975.1	6,975.1	69.2	137.7	-90.59	2,871.1	4,385.7	3,466.7	3,260.2	206.46	16.791			
9,300.0	6,854.6	6,974.1	6,974.1	71.8	137.6	-90.57	2,871.1	4,385.7	3,394.9	3,185.8	209.13	16.233			
9,368.1	6,854.0	6,973.5	6,973.5	73.7	137.6	-90.55	2,871.1	4,385.7	3,346.9	3,135.9	210.95	15.866			
9,400.0	6,853.6	6,973.1	6,973.1	74.5	137.6	-90.53	2,871.1	4,385.7	3,324.9	3,113.0	211.92	15.690			
9,500.0	6,852.7	6,972.2	6,972.2	77.2	137.6	-90.45	2,871.1	4,385.7	3,259.4	3,044.6	214.82	15.172			
9,600.0	6,851.7	6,971.2	6,971.2	80.0	137.6	-90.39	2,871.1	4,385.7	3,199.8	2,982.3	217.55	14.709			
9,634.8	6,851.3	6,970.8	6,970.8	80.9	137.6	-90.36	2,871.1	4,385.7	3,180.6	2,962.2	218.45	14.560			
9,700.0	6,850.7	6,970.2	6,970.2	82.7	137.6	-90.35	2,871.1	4,385.7	3,145.8	2,925.6	220.23	14.284			
9,800.0	6,849.7	6,969.2	6,969.2	85.5	137.6	-90.33	2,871.1	4,385.7	3,094.3	2,871.4	222.97	13.878			
9,870.5	6,849.0	6,968.5	6,968.5	87.4	137.5	-90.31	2,871.1	4,385.7	3,059.5	2,834.6	224.90	13.604			
9,900.0	6,848.7	6,968.2	6,968.2	88.3	137.5	-90.30	2,871.1	4,385.7	3,045.5	2,819.8	225.64	13.497			
10,000.0	6,847.7	6,967.2	6,967.2	91.0	137.5	-90.24	2,871.1	4,385.7	3,002.7	2,774.7	228.03	13.168			
10,100.0	6,846.8	6,966.3	6,966.3	93.8	137.5	-90.18	2,871.1	4,385.7	2,967.6	2,737.4	230.18	12.893			
10,137.1	6,846.4	6,965.9	6,965.9	94.8	137.5	-90.16	2,871.1	4,385.7	2,956.5	2,725.6	230.91	12.804			
10,200.0	6,845.8	6,965.3	6,965.3	96.5	137.5	-90.15	2,871.1	4,385.7	2,939.4	2,706.8	232.65	12.635			
10,300.0	6,844.8	6,964.3	6,964.3	99.3	137.5	-90.13	2,871.1	4,385.7	2,914.8	2,679.4	235.41	12.382			
10,400.0	6,843.8	6,963.3	6,963.3	102.0	137.4	-90.11	2,871.1	4,385.7	2,893.5	2,655.3	238.17	12.149			
10,500.0	6,842.8	6,962.3	6,962.3	104.8	137.4	-90.09	2,871.1	4,385.7	2,875.4	2,634.5	240.94	11.934			
10,600.0	6,841.9	6,961.4	6,961.4	107.5	137.4	-90.07	2,871.1	4,385.7	2,860.8	2,617.1	243.71	11.739			
10,700.0	6,840.9	6,960.4	6,960.4	110.3	137.4	-90.05	2,871.1	4,385.7	2,849.6	2,603.1	246.48	11.561			
10,732.1	6,840.6	6,960.1	6,960.1	111.2	137.4	-90.05	2,871.1	4,385.7	2,846.7	2,599.3	247.37	11.508			
10,800.0	6,839.9	6,959.4	6,959.4	113.0	137.4	-90.05	2,871.1	4,385.7	2,840.6	2,590.9	249.74	11.374			
10,900.0	6,838.9	6,958.4	6,958.4	115.8	137.3	-90.06	2,871.1	4,385.7	2,830.2	2,577.2	252.98	11.187			
10,998.8	6,838.0	6,957.5	6,957.5	118.6	137.3	-90.07	2,871.1	4,385.7	2,818.2	2,562.4	255.87	11.014			
11,000.0	6,838.0	6,957.5	6,957.5	118.6	137.3	-90.07	2,871.1	4,385.7	2,818.1	2,562.2	255.91	11.012			
11,100.0	6,837.0	6,956.5	6,956.5	121.4	137.3	-90.05	2,871.1	4,385.7	2,806.9	2,548.3	258.67	10.851			
11,200.0	6,836.0	6,955.5	6,955.5	124.2	137.3	-90.03	2,871.1	4,385.7	2,799.3	2,537.9	261.43	10.708			
11,300.0	6,835.1	6,954.6	6,954.6	126.9	137.3	-90.01	2,871.1	4,385.7	2,795.2	2,531.0	264.20	10.580			
11,363.8	6,834.5	6,954.0	6,954.0	128.7	137.2	-90.00	2,871.1	4,385.7	2,794.5	2,528.5	265.96	10.507 CC			
11,400.0	6,834.1	6,953.6	6,953.6	129.7	137.2	-89.99	2,871.1	4,385.7	2,794.7	2,527.8	266.97	10.469			
11,428.1	6,833.8	6,953.3	6,953.3	130.5	137.2	-89.99	2,871.1	4,385.7	2,795.2	2,527.5	267.74	10.440			
11,487.5	6,833.3	6,952.8	6,952.8	132.2	137.2	-89.99	2,871.1	4,385.7	2,796.3	2,527.0	269.32	10.383			
11,500.0	6,833.2	6,952.7	6,952.7	132.5	137.2	-89.99	2,871.1	4,385.7	2,796.5	2,526.8	269.67	10.370 ES			
11,600.0	6,832.2	6,951.7	6,951.7	135.3	137.2	-89.97	2,871.1	4,385.7	2,800.1	2,527.6	272.43	10.278			
11,700.0	6,831.3	6,950.8	6,950.8	138.1	137.2	-89.95	2,871.1	4,385.7	2,807.2	2,532.0	275.19	10.201			
11,800.0	6,830.3	6,949.8	6,949.8	140.8	137.2	-89.93	2,871.1	4,385.7	2,817.8	2,539.9	277.96	10.138			
11,900.0	6,829.4	6,948.9	6,948.9	143.6	137.1	-89.91	2,871.1	4,385.7	2,831.9	2,551.2	280.72	10.088			
11,938.6	6,829.0	6,948.5	6,948.5	144.7	137.1	-89.91	2,871.1	4,385.7	2,838.3	2,556.5	281.79	10.073 SF			

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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 Tooflace (°)	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	7.15	1,821.5	228.5	1,835.8					
100.0	100.0	135.5	135.5	0.1	1.5	7.15	1,821.5	228.5	1,835.8	1,834.2	1.64	1,122.237		
200.0	200.0	235.5	235.5	0.3	3.8	7.15	1,821.5	228.5	1,835.8	1,831.7	4.16	441.148		
300.0	300.0	335.5	335.5	0.5	5.9	7.15	1,821.5	228.5	1,835.8	1,829.4	6.45	284.466		
400.0	400.0	435.5	435.5	0.8	7.9	7.15	1,821.5	228.5	1,835.8	1,827.1	8.72	210.646		
500.0	500.0	535.5	535.5	1.0	10.0	7.15	1,821.5	228.5	1,835.8	1,824.9	10.97	167.411		
600.0	600.0	635.5	635.5	1.2	12.0	7.15	1,821.5	228.5	1,835.8	1,822.6	13.21	138.956		
700.0	700.0	735.5	735.5	1.4	14.0	7.15	1,821.5	228.5	1,835.8	1,820.4	15.45	118.791		
800.0	800.0	835.5	835.5	1.7	16.0	7.15	1,821.5	228.5	1,835.8	1,818.1	17.70	103.747		
900.0	900.0	935.5	935.5	1.9	18.0	7.15	1,821.5	228.5	1,835.8	1,815.9	19.93	92.091		
1,000.0	1,000.0	1,035.5	1,035.5	2.1	20.1	83.02	1,821.5	228.5	1,835.6	1,813.4	22.16	82.820		
1,100.0	1,099.8	1,135.3	1,135.3	2.3	22.1	83.20	1,821.5	228.5	1,835.0	1,810.6	24.39	75.245		
1,200.0	1,199.5	1,235.0	1,235.0	2.6	24.1	83.49	1,821.5	228.5	1,834.0	1,807.3	26.62	68.900		
1,300.0	1,298.7	1,334.2	1,334.2	2.8	26.1	83.89	1,821.5	228.5	1,832.6	1,803.8	28.86	63.494		
1,400.0	1,397.5	1,433.0	1,433.0	3.1	28.1	84.40	1,821.5	228.5	1,831.0	1,799.9	31.13	58.818		
1,500.0	1,495.6	1,531.1	1,531.1	3.4	30.0	85.02	1,821.5	228.5	1,829.2	1,795.8	33.43	54.723		
1,600.0	1,593.4	1,628.9	1,628.9	3.8	32.0	85.66	1,821.5	228.5	1,827.5	1,791.7	35.76	51.111		
1,700.0	1,691.3	1,726.8	1,726.8	4.1	34.0	86.29	1,821.5	228.5	1,826.0	1,787.9	38.10	47.922		
1,800.0	1,789.1	1,824.6	1,824.6	4.5	35.9	86.93	1,821.5	228.5	1,824.7	1,784.3	40.47	45.092		
1,900.0	1,886.9	1,922.4	1,922.4	4.9	37.9	87.57	1,821.5	228.5	1,823.7	1,780.9	42.84	42.568		
2,000.0	1,984.7	2,020.2	2,020.2	5.4	39.9	88.21	1,821.5	228.5	1,822.9	1,777.7	45.23	40.307		
2,100.0	2,082.5	2,118.0	2,118.0	5.8	41.8	88.85	1,821.5	228.5	1,822.4	1,774.8	47.62	38.272		
2,200.0	2,180.3	2,215.8	2,215.8	6.2	43.8	89.49	1,821.5	228.5	1,822.1	1,772.1	50.01	36.433		
2,280.4	2,259.0	2,294.5	2,294.5	6.6	45.4	90.00	1,821.5	228.5	1,822.0	1,770.1	51.94	35.079		
2,300.0	2,278.1	2,313.6	2,313.6	6.6	45.8	90.13	1,821.5	228.5	1,822.0	1,769.6	52.41	34.764		
2,400.0	2,376.0	2,411.5	2,411.5	7.1	47.7	90.76	1,821.5	228.5	1,822.2	1,767.4	54.81	33.244		
2,500.0	2,473.8	2,509.3	2,509.3	7.5	49.7	91.40	1,821.5	228.5	1,822.6	1,765.4	57.22	31.854		
2,600.0	2,571.6	2,607.1	2,607.1	8.0	51.7	92.04	1,821.5	228.5	1,823.2	1,763.6	59.62	30.580		
2,695.7	2,665.2	2,700.7	2,700.7	8.4	53.6	92.65	1,821.5	228.5	1,824.0	1,762.1	61.92	29.456		
2,700.0	2,669.4	2,704.9	2,704.9	8.4	53.6	92.68	1,821.5	228.5	1,824.1	1,762.1	62.03	29.408		
2,800.0	2,767.6	2,803.1	2,803.1	8.7	55.6	93.29	1,821.5	228.5	1,825.1	1,760.8	64.32	28.375		
2,900.0	2,866.4	2,901.9	2,901.9	9.0	57.6	93.78	1,821.5	228.5	1,826.1	1,759.5	66.59	27.420		
3,000.0	2,965.6	3,001.1	3,001.1	9.3	59.6	94.17	1,821.5	228.5	1,826.9	1,758.1	68.85	26.536		
3,100.0	3,065.3	3,100.8	3,100.8	9.5	61.6	94.45	1,821.5	228.5	1,827.5	1,756.5	71.07	25.715		
3,200.0	3,165.1	3,200.6	3,200.6	9.7	63.6	94.62	1,821.5	228.5	1,827.9	1,754.7	73.26	24.951		
3,295.7	3,260.8	3,296.3	3,296.3	9.8	65.5	18.86	1,821.5	228.5	1,828.1	1,755.2	72.87	25.087		
3,300.0	3,265.1	3,300.6	3,300.6	9.8	65.6	18.86	1,821.5	228.5	1,828.1	1,755.1	72.97	25.054		
3,400.0	3,365.1	3,400.6	3,400.6	10.0	67.6	18.86	1,821.5	228.5	1,828.1	1,752.9	75.18	24.317		
3,500.0	3,465.1	3,500.6	3,500.6	10.1	69.6	18.86	1,821.5	228.5	1,828.1	1,750.7	77.39	23.621		
3,600.0	3,565.1	3,600.6	3,600.6	10.3	71.7	18.86	1,821.5	228.5	1,828.1	1,748.5	79.60	22.964		
3,700.0	3,665.1	3,700.6	3,700.6	10.5	73.7	18.86	1,821.5	228.5	1,828.1	1,746.3	81.82	22.343		
3,800.0	3,765.1	3,800.6	3,800.6	10.6	75.7	18.86	1,821.5	228.5	1,828.1	1,744.0	84.04	21.753		
3,900.0	3,865.1	3,900.6	3,900.6	10.8	77.7	18.86	1,821.5	228.5	1,828.1	1,741.8	86.25	21.194		
4,000.0	3,965.1	4,000.6	4,000.6	11.0	79.7	18.86	1,821.5	228.5	1,828.1	1,739.6	88.47	20.663		
4,100.0	4,065.1	4,100.6	4,100.6	11.1	81.7	18.86	1,821.5	228.5	1,828.1	1,737.4	90.69	20.157		
4,200.0	4,165.1	4,200.6	4,200.6	11.3	83.7	18.86	1,821.5	228.5	1,828.1	1,735.2	92.91	19.675		
4,300.0	4,265.1	4,300.6	4,300.6	11.5	85.7	18.86	1,821.5	228.5	1,828.1	1,732.9	95.13	19.216		
4,400.0	4,365.1	4,400.6	4,400.6	11.7	87.7	18.86	1,821.5	228.5	1,828.1	1,730.7	97.35	18.778		
4,500.0	4,465.1	4,500.6	4,500.6	11.8	89.8	18.86	1,821.5	228.5	1,828.1	1,728.5	99.58	18.359		
4,600.0	4,565.1	4,600.6	4,600.6	12.0	91.8	18.86	1,821.5	228.5	1,828.1	1,726.3	101.80	17.958		
4,700.0	4,665.1	4,700.6	4,700.6	12.2	93.8	18.86	1,821.5	228.5	1,828.1	1,724.1	104.02	17.574		
4,800.0	4,765.1	4,800.6	4,800.6	12.4	95.8	18.86	1,821.5	228.5	1,828.1	1,721.8	106.25	17.206		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT KINZER 13-28 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
4,900.0	4,865.1	4,900.6	4,900.6	12.6	97.8	18.86	1,821.5	228.5	1,828.1	1,719.6	108.47	16.853				
5,000.0	4,965.1	5,000.6	5,000.6	12.8	99.8	18.86	1,821.5	228.5	1,828.1	1,717.4	110.70	16.515				
5,100.0	5,065.1	5,100.6	5,100.6	12.9	101.8	18.86	1,821.5	228.5	1,828.1	1,715.2	112.92	16.189				
5,200.0	5,165.1	5,200.6	5,200.6	13.1	103.8	18.86	1,821.5	228.5	1,828.1	1,712.9	115.15	15.876				
5,300.0	5,265.1	5,300.6	5,300.6	13.3	105.8	18.86	1,821.5	228.5	1,828.1	1,710.7	117.37	15.575				
5,400.0	5,365.1	5,400.6	5,400.6	13.5	107.9	18.86	1,821.5	228.5	1,828.1	1,708.5	119.60	15.285				
5,500.0	5,465.1	5,500.6	5,500.6	13.7	109.9	18.86	1,821.5	228.5	1,828.1	1,706.3	121.82	15.006				
5,600.0	5,565.1	5,600.6	5,600.6	13.9	111.9	18.86	1,821.5	228.5	1,828.1	1,704.0	124.05	14.736				
5,700.0	5,665.1	5,700.6	5,700.6	14.1	113.9	18.86	1,821.5	228.5	1,828.1	1,701.8	126.28	14.477				
5,800.0	5,765.1	5,800.6	5,800.6	14.3	115.9	18.86	1,821.5	228.5	1,828.1	1,699.6	128.51	14.226				
5,900.0	5,865.1	5,900.6	5,900.6	14.5	117.9	18.86	1,821.5	228.5	1,828.1	1,697.3	130.73	13.983				
6,000.0	5,965.1	6,000.6	6,000.6	14.7	119.9	18.86	1,821.5	228.5	1,828.1	1,695.1	132.96	13.749				
6,100.0	6,065.1	6,100.6	6,100.6	14.9	121.9	18.86	1,821.5	228.5	1,828.1	1,692.9	135.19	13.522				
6,192.7	6,157.8	6,193.3	6,193.3	15.1	123.8	18.86	1,821.5	228.5	1,828.1	1,690.8	137.26	13.319				
6,200.0	6,165.1	6,200.6	6,200.6	15.1	123.9	-71.14	1,821.5	228.5	1,828.1	1,689.1	138.99	13.152				
6,250.0	6,215.1	6,250.6	6,250.6	15.1	124.9	-71.27	1,821.5	228.5	1,827.3	1,687.3	140.03	13.050				
6,300.0	6,264.7	6,300.2	6,300.2	15.2	125.9	-71.57	1,821.5	228.5	1,825.5	1,684.5	140.97	12.949				
6,350.0	6,313.9	6,349.4	6,349.4	15.2	126.9	-72.07	1,821.5	228.5	1,822.6	1,680.7	141.84	12.849				
6,400.0	6,362.2	6,397.7	6,397.7	15.3	127.9	-72.73	1,821.5	228.5	1,818.7	1,676.0	142.65	12.749				
6,450.0	6,409.6	6,445.1	6,445.1	15.3	128.9	-73.56	1,821.5	228.5	1,813.8	1,670.4	143.43	12.646				
6,500.0	6,455.8	6,491.3	6,491.3	15.3	129.8	-74.55	1,821.5	228.5	1,808.1	1,663.9	144.19	12.540				
6,550.0	6,500.5	6,536.0	6,536.0	15.3	130.7	-75.66	1,821.5	228.5	1,801.8	1,656.8	144.98	12.428				
6,600.0	6,543.5	6,579.0	6,579.0	15.3	131.6	-76.89	1,821.5	228.5	1,794.8	1,649.0	145.79	12.311				
6,650.0	6,584.7	6,620.2	6,620.2	15.3	132.4	-78.21	1,821.5	228.5	1,787.5	1,640.8	146.66	12.188				
6,700.0	6,623.7	6,659.2	6,659.2	15.4	133.2	-79.59	1,821.5	228.5	1,779.9	1,632.3	147.59	12.060				
6,750.0	6,660.6	6,696.1	6,696.1	15.5	133.9	-81.00	1,821.5	228.5	1,772.2	1,623.7	148.56	11.929				
6,800.0	6,694.9	6,730.4	6,730.4	15.7	134.6	-82.41	1,821.5	228.5	1,764.7	1,615.1	149.58	11.797				
6,850.0	6,726.6	6,762.1	6,762.1	15.9	135.2	-83.79	1,821.5	228.5	1,757.5	1,606.8	150.63	11.668				
6,900.0	6,755.6	6,791.1	6,791.1	16.2	135.8	-85.10	1,821.5	228.5	1,750.8	1,599.1	151.68	11.542				
6,950.0	6,781.7	6,817.2	6,817.2	16.6	136.3	-86.32	1,821.5	228.5	1,744.7	1,592.0	152.74	11.423				
7,000.0	6,804.7	6,840.2	6,840.2	17.1	136.8	-87.41	1,821.5	228.5	1,739.5	1,585.7	153.78	11.311				
7,050.0	6,824.6	6,860.1	6,860.1	17.7	137.2	-88.35	1,821.5	228.5	1,735.3	1,580.5	154.81	11.209				
7,100.0	6,841.2	6,876.7	6,876.7	18.3	137.5	-89.12	1,821.5	228.5	1,732.2	1,576.4	155.83	11.116				
7,150.0	6,854.5	6,890.0	6,890.0	19.0	137.8	-89.69	1,821.5	228.5	1,730.4	1,573.6	156.83	11.034				
7,191.7	6,862.9	6,898.4	6,898.4	19.7	138.0	-90.00	1,821.5	228.5	1,729.9	1,572.3	157.67	10.972 CC				
7,200.0	6,864.4	6,899.9	6,899.9	19.8	138.0	-90.04	1,821.5	228.5	1,730.0	1,572.1	157.83	10.961				
7,250.0	6,870.8	6,906.3	6,906.3	20.7	138.1	-90.18	1,821.5	228.5	1,730.9	1,572.1	158.81	10.899 ES				
7,300.0	6,873.8	6,909.3	6,909.3	21.6	138.2	-90.09	1,821.5	228.5	1,733.3	1,573.5	159.78	10.848				
7,324.7	6,874.0	6,909.5	6,909.5	22.1	138.2	-89.96	1,821.5	228.5	1,735.0	1,574.7	160.25	10.827				
7,400.0	6,873.2	6,908.7	6,908.7	23.5	138.2	-89.93	1,821.5	228.5	1,742.4	1,580.6	161.71	10.774				
7,500.0	6,872.2	6,907.7	6,907.7	25.6	138.2	-89.90	1,821.5	228.5	1,757.1	1,593.3	163.80	10.727				
7,600.0	6,871.3	6,906.8	6,906.8	27.9	138.1	-89.87	1,821.5	228.5	1,777.3	1,611.3	166.00	10.706 SF				
7,700.0	6,870.3	6,905.8	6,905.8	30.2	138.1	-89.84	1,821.5	228.5	1,802.9	1,634.6	168.31	10.712				
7,800.0	6,869.3	6,904.8	6,904.8	32.6	138.1	-89.80	1,821.5	228.5	1,833.5	1,662.9	170.69	10.742				
7,900.0	6,868.3	6,903.8	6,903.8	35.0	138.1	-89.77	1,821.5	228.5	1,869.1	1,695.9	173.13	10.796				
8,000.0	6,867.4	6,902.9	6,902.9	37.6	138.1	-89.74	1,821.5	228.5	1,909.2	1,733.5	175.62	10.871				
8,100.0	6,866.4	6,901.9	6,901.9	40.1	138.0	-89.71	1,821.5	228.5	1,953.6	1,775.4	178.15	10.966				
8,200.0	6,865.4	6,900.9	6,900.9	42.7	138.0	-89.67	1,821.5	228.5	2,002.0	1,821.3	180.71	11.078				
8,300.0	6,864.4	6,899.9	6,899.9	45.3	138.0	-89.64	1,821.5	228.5	2,054.1	1,870.8	183.30	11.206				
8,400.0	6,863.5	6,899.0	6,899.0	47.9	138.0	-89.61	1,821.5	228.5	2,109.7	1,923.8	185.92	11.348				
8,500.0	6,862.5	6,898.0	6,898.0	50.6	138.0	-89.58	1,821.5	228.5	2,168.5	1,980.0	188.55	11.501				
8,600.0	6,861.5	6,897.0	6,897.0	53.2	137.9	-89.54	1,821.5	228.5	2,230.2	2,039.0	191.19	11.665				

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT KINZER 13-28 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
8,614.0	6,861.4	6,896.9	6,896.9	53.6	137.9	-89.54	1,821.5	228.5	2,239.1	2,047.5	191.56	11.688				
8,700.0	6,860.5	6,896.0	6,896.0	55.9	137.9	-89.55	1,821.5	228.5	2,293.2	2,099.4	193.81	11.832				
8,800.0	6,859.5	6,895.0	6,895.0	58.6	137.9	-89.57	1,821.5	228.5	2,354.7	2,158.4	196.29	11.996				
8,880.6	6,858.7	6,894.2	6,894.2	60.7	137.9	-89.58	1,821.5	228.5	2,403.3	2,205.1	198.16	12.128				
8,900.0	6,858.6	6,894.1	6,894.1	61.2	137.9	-89.58	1,821.5	228.5	2,414.9	2,216.2	198.67	12.155				
9,000.0	6,857.6	6,893.1	6,893.1	63.9	137.9	-89.55	1,821.5	228.5	2,476.3	2,275.0	201.32	12.300				
9,100.0	6,856.6	6,892.1	6,892.1	66.5	137.9	-89.52	1,821.5	228.5	2,540.2	2,336.2	203.97	12.454				
9,200.0	6,855.6	6,891.1	6,891.1	69.2	137.8	-89.49	1,821.5	228.5	2,606.3	2,399.7	206.63	12.613				
9,300.0	6,854.6	6,890.1	6,890.1	71.8	137.8	-89.46	1,821.5	228.5	2,674.6	2,465.3	209.30	12.779				
9,368.1	6,854.0	6,889.5	6,889.5	73.7	137.8	-89.44	1,821.5	228.5	2,722.2	2,511.1	211.12	12.894				
9,400.0	6,853.6	6,889.1	6,889.1	74.5	137.8	-89.41	1,821.5	228.5	2,744.9	2,532.9	212.08	12.943				
9,500.0	6,852.7	6,888.2	6,888.2	77.2	137.8	-89.31	1,821.5	228.5	2,819.8	2,604.8	214.98	13.116				
9,600.0	6,851.7	6,887.2	6,887.2	80.0	137.8	-89.20	1,821.5	228.5	2,899.4	2,681.7	217.70	13.318				
9,634.8	6,851.3	6,886.8	6,886.8	80.9	137.7	-89.15	1,821.5	228.5	2,928.1	2,709.5	218.60	13.395				
9,700.0	6,850.7	6,886.2	6,886.2	82.7	137.7	-89.13	1,821.5	228.5	2,982.5	2,762.2	220.38	13.534				
9,800.0	6,849.7	6,885.2	6,885.2	85.5	137.7	-89.10	1,821.5	228.5	3,066.9	2,843.8	223.11	13.746				
9,870.5	6,849.0	6,884.5	6,884.5	87.4	137.7	-89.07	1,821.5	228.5	3,126.9	2,901.8	225.04	13.895				
9,900.0	6,848.7	6,884.2	6,884.2	88.3	137.7	-89.03	1,821.5	228.5	3,152.3	2,926.5	225.79	13.961				
10,000.0	6,847.7	6,883.2	6,883.2	91.0	137.7	-88.86	1,821.5	228.5	3,240.3	3,012.2	228.16	14.202				
10,100.0	6,846.8	6,882.3	6,882.3	93.8	137.7	-88.65	1,821.5	228.5	3,331.4	3,101.1	230.29	14.466				
10,137.1	6,846.4	6,881.9	6,881.9	94.8	137.6	-88.56	1,821.5	228.5	3,365.8	3,134.8	231.02	14.570				
10,200.0	6,845.8	6,881.3	6,881.3	96.5	137.6	-88.53	1,821.5	228.5	3,424.5	3,191.8	232.75	14.713				
10,300.0	6,844.8	6,880.3	6,880.3	99.3	137.6	-88.49	1,821.5	228.5	3,518.1	3,282.6	235.51	14.939				
10,400.0	6,843.8	6,879.3	6,879.3	102.0	137.6	-88.44	1,821.5	228.5	3,612.1	3,373.8	238.26	15.160				
10,500.0	6,842.8	6,878.3	6,878.3	104.8	137.6	-88.40	1,821.5	228.5	3,706.4	3,465.4	241.02	15.378				
10,600.0	6,841.9	6,877.4	6,877.4	107.5	137.6	-88.35	1,821.5	228.5	3,801.0	3,557.2	243.79	15.591				
10,700.0	6,840.9	6,876.4	6,876.4	110.3	137.5	-88.30	1,821.5	228.5	3,895.8	3,649.3	246.55	15.801				
10,732.1	6,840.6	6,876.1	6,876.1	111.2	137.5	-88.29	1,821.5	228.5	3,926.3	3,678.9	247.44	15.868				
10,800.0	6,839.9	6,875.4	6,875.4	113.0	137.5	-88.45	1,821.5	228.5	3,990.5	3,740.7	249.83	15.973				
10,900.0	6,838.9	6,874.4	6,874.4	115.8	137.5	-88.64	1,821.5	228.5	4,083.8	3,830.8	253.09	16.136				
10,998.8	6,838.0	6,873.5	6,873.5	118.6	137.5	-88.80	1,821.5	228.5	4,174.4	3,918.4	255.99	16.307				
11,000.0	6,838.0	6,873.5	6,873.5	118.6	137.5	-88.80	1,821.5	228.5	4,175.5	3,919.5	256.02	16.309				
11,100.0	6,837.0	6,872.5	6,872.5	121.4	137.5	-88.77	1,821.5	228.5	4,266.6	4,007.8	258.78	16.487				
11,200.0	6,836.0	6,871.5	6,871.5	124.2	137.4	-88.73	1,821.5	228.5	4,358.0	4,096.5	261.54	16.663				
11,300.0	6,835.1	6,870.6	6,870.6	126.9	137.4	-88.70	1,821.5	228.5	4,449.8	4,185.5	264.31	16.836				
11,400.0	6,834.1	6,869.6	6,869.6	129.7	137.4	-88.67	1,821.5	228.5	4,542.0	4,274.9	267.07	17.007				
11,428.1	6,833.8	6,869.3	6,869.3	130.5	137.4	-88.66	1,821.5	228.5	4,567.9	4,300.1	267.85	17.054				
11,487.5	6,833.3	6,868.8	6,868.8	132.2	137.4	-88.78	1,821.5	228.5	4,622.5	4,353.1	269.44	17.156				
11,500.0	6,833.2	6,868.7	6,868.7	132.5	137.4	-88.77	1,821.5	228.5	4,634.0	4,364.2	269.78	17.177				
11,600.0	6,832.2	6,867.7	6,867.7	135.3	137.4	-88.74	1,821.5	228.5	4,725.6	4,453.0	272.54	17.339				
11,700.0	6,831.3	6,866.8	6,866.8	138.1	137.3	-88.72	1,821.5	228.5	4,817.5	4,542.2	275.30	17.499				
11,800.0	6,830.3	6,865.8	6,865.8	140.8	137.3	-88.69	1,821.5	228.5	4,909.8	4,631.7	278.06	17.657				
11,900.0	6,829.4	6,864.9	6,864.9	143.6	137.3	-88.66	1,821.5	228.5	5,002.3	4,721.5	280.82	17.813				
11,938.6	6,829.0	6,864.5	6,864.5	144.7	137.3	-88.65	1,821.5	228.5	5,038.1	4,756.2	281.88	17.873				

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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 Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.0	0.0	0.0	0.0	0.0	0.0	83.34	36.4	312.1	314.3						
100.0	100.0	92.5	92.5	0.1	1.2	83.34	36.4	312.1	314.2	313.0	1.25	250.414			
200.0	200.0	192.5	192.5	0.3	3.4	83.34	36.4	312.1	314.2	310.5	3.68	85.373			
300.0	300.0	292.5	292.5	0.5	5.5	83.34	36.4	312.1	314.2	308.2	6.00	52.390			
400.0	400.0	392.5	392.5	0.8	7.5	83.34	36.4	312.1	314.2	306.0	8.27	38.009			
500.0	500.0	492.5	492.5	1.0	9.5	83.34	36.4	312.1	314.2	303.7	10.52	29.864			
600.0	600.0	592.5	592.5	1.2	11.5	83.34	36.4	312.1	314.2	301.5	12.77	24.607			
700.0	700.0	692.5	692.5	1.4	13.6	83.34	36.4	312.1	314.2	299.2	15.01	20.929			
800.0	800.0	792.5	792.5	1.7	15.6	83.34	36.4	312.1	314.2	297.0	17.26	18.210			
900.0	900.0	892.5	892.5	1.9	17.6	83.34	36.4	312.1	314.2	294.7	19.50	16.117			
1,000.0	1,000.0	992.5	992.5	2.1	19.6	159.26	36.4	312.1	315.9	294.1	21.71	14.546			
1,100.0	1,099.8	1,092.3	1,092.3	2.3	21.6	159.55	36.4	312.1	320.8	296.9	23.90	13.423			
1,200.0	1,199.5	1,192.0	1,192.0	2.6	23.6	160.03	36.4	312.1	328.9	302.9	26.04	12.632			
1,300.0	1,298.7	1,291.2	1,291.2	2.8	25.6	160.65	36.4	312.1	340.4	312.3	28.14	12.097			
1,400.0	1,397.5	1,390.0	1,390.0	3.1	27.6	161.39	36.4	312.1	355.2	325.0	30.19	11.766			
1,500.0	1,495.6	1,488.1	1,488.1	3.4	29.6	162.21	36.4	312.1	373.4	341.2	32.18	11.604			
1,600.0	1,593.4	1,585.9	1,585.9	3.8	31.6	163.14	36.4	312.1	393.3	358.9	34.34	11.452			
1,700.0	1,691.3	1,683.8	1,683.8	4.1	33.5	163.97	36.4	312.1	413.3	376.7	36.51	11.319			
1,800.0	1,789.1	1,781.6	1,781.6	4.5	35.5	164.73	36.4	312.1	433.3	394.6	38.68	11.202			
1,900.0	1,886.9	1,879.4	1,879.4	4.9	37.5	165.42	36.4	312.1	453.4	412.6	40.86	11.098			
2,000.0	1,984.7	1,977.2	1,977.2	5.4	39.4	166.05	36.4	312.1	473.6	430.6	43.03	11.006			
2,100.0	2,082.5	2,075.0	2,075.0	5.8	41.4	166.63	36.4	312.1	493.8	448.6	45.21	10.923			
2,200.0	2,180.3	2,172.8	2,172.8	6.2	43.4	167.17	36.4	312.1	514.1	466.7	47.39	10.848			
2,300.0	2,278.1	2,270.6	2,270.6	6.6	45.3	167.66	36.4	312.1	534.4	484.8	49.57	10.781			
2,400.0	2,376.0	2,368.5	2,368.5	7.1	47.3	168.12	36.4	312.1	554.8	503.0	51.75	10.720			
2,500.0	2,473.8	2,466.3	2,466.3	7.5	49.3	168.55	36.4	312.1	575.1	521.2	53.93	10.664			
2,600.0	2,571.6	2,564.1	2,564.1	8.0	51.2	168.94	36.4	312.1	595.6	539.4	56.12	10.613			
2,695.7	2,665.2	2,657.7	2,657.7	8.4	53.1	169.30	36.4	312.1	615.1	556.9	58.21	10.568			
2,700.0	2,669.4	2,661.9	2,661.9	8.4	53.2	169.32	36.4	312.1	616.0	557.7	58.32	10.563			
2,800.0	2,767.6	2,760.1	2,760.1	8.7	55.2	169.70	36.4	312.1	634.6	573.8	60.83	10.433			
2,900.0	2,866.4	2,858.9	2,858.9	9.0	57.2	170.00	36.4	312.1	649.9	586.6	63.30	10.266			
3,000.0	2,965.6	2,958.1	2,958.1	9.3	59.2	170.22	36.4	312.1	661.7	596.0	65.72	10.069			
3,100.0	3,065.3	3,057.8	3,057.8	9.5	61.2	170.37	36.4	312.1	670.2	602.1	68.08	9.844			
3,200.0	3,165.1	3,157.6	3,157.6	9.7	63.2	170.46	36.4	312.1	675.2	604.8	70.37	9.595			
3,295.7	3,260.8	3,253.3	3,253.3	9.8	65.1	170.46	36.4	312.1	676.8	601.9	74.87	9.039			
3,300.0	3,265.1	3,257.6	3,257.6	9.8	65.2	170.46	36.4	312.1	676.8	601.8	74.96	9.028			
3,400.0	3,365.1	3,357.6	3,357.6	10.0	67.2	170.46	36.4	312.1	676.8	599.6	77.13	8.774			
3,500.0	3,465.1	3,457.6	3,457.6	10.1	69.2	170.46	36.4	312.1	676.8	597.5	79.30	8.534			
3,600.0	3,565.1	3,557.6	3,557.6	10.3	71.2	170.46	36.4	312.1	676.8	595.3	81.47	8.307			
3,700.0	3,665.1	3,657.6	3,657.6	10.5	73.2	170.46	36.4	312.1	676.8	593.1	83.65	8.091			
3,800.0	3,765.1	3,757.6	3,757.6	10.6	75.2	170.46	36.4	312.1	676.8	590.9	85.83	7.885			
3,900.0	3,865.1	3,857.6	3,857.6	10.8	77.3	170.46	36.4	312.1	676.8	588.8	88.01	7.690			
4,000.0	3,965.1	3,957.6	3,957.6	11.0	79.3	170.46	36.4	312.1	676.8	586.6	90.19	7.504			
4,100.0	4,065.1	4,057.6	4,057.6	11.1	81.3	170.46	36.4	312.1	676.8	584.4	92.37	7.327			
4,200.0	4,165.1	4,157.6	4,157.6	11.3	83.3	170.46	36.4	312.1	676.8	582.2	94.56	7.157			
4,300.0	4,265.1	4,257.6	4,257.6	11.5	85.3	170.46	36.4	312.1	676.8	580.0	96.74	6.995			
4,400.0	4,365.1	4,357.6	4,357.6	11.7	87.3	170.46	36.4	312.1	676.8	577.8	98.93	6.841			
4,500.0	4,465.1	4,457.6	4,457.6	11.8	89.3	170.46	36.4	312.1	676.8	575.6	101.12	6.692			
4,600.0	4,565.1	4,557.6	4,557.6	12.0	91.3	170.46	36.4	312.1	676.8	573.4	103.31	6.550			
4,700.0	4,665.1	4,657.6	4,657.6	12.2	93.3	170.46	36.4	312.1	676.8	571.3	105.51	6.414			
4,800.0	4,765.1	4,757.6	4,757.6	12.4	95.4	170.46	36.4	312.1	676.8	569.1	107.70	6.284			
4,900.0	4,865.1	4,857.6	4,857.6	12.6	97.4	170.46	36.4	312.1	676.8	566.9	109.90	6.158			

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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT KINZER 28-2 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	4,965.1	4,957.6	4,957.6	12.8	99.4	94.68	36.4	312.1	676.8	564.7	112.10	6.037				
5,100.0	5,065.1	5,057.6	5,057.6	12.9	101.4	94.68	36.4	312.1	676.8	562.5	114.29	5.921				
5,200.0	5,165.1	5,157.6	5,157.6	13.1	103.4	94.68	36.4	312.1	676.8	560.3	116.49	5.809				
5,300.0	5,265.1	5,257.6	5,257.6	13.3	105.4	94.68	36.4	312.1	676.8	558.1	118.70	5.702				
5,400.0	5,365.1	5,357.6	5,357.6	13.5	107.4	94.68	36.4	312.1	676.8	555.9	120.90	5.598				
5,500.0	5,465.1	5,457.6	5,457.6	13.7	109.4	94.68	36.4	312.1	676.8	553.7	123.10	5.498				
5,600.0	5,565.1	5,557.6	5,557.6	13.9	111.4	94.68	36.4	312.1	676.8	551.5	125.30	5.401				
5,700.0	5,665.1	5,657.6	5,657.6	14.1	113.5	94.68	36.4	312.1	676.8	549.2	127.51	5.308				
5,800.0	5,765.1	5,757.6	5,757.6	14.3	115.5	94.68	36.4	312.1	676.8	547.0	129.72	5.217				
5,900.0	5,865.1	5,857.6	5,857.6	14.5	117.5	94.68	36.4	312.1	676.8	544.8	131.92	5.130				
6,000.0	5,965.1	5,957.6	5,957.6	14.7	119.5	94.68	36.4	312.1	676.8	542.6	134.13	5.046				
6,100.0	6,065.1	6,057.6	6,057.6	14.9	121.5	94.68	36.4	312.1	676.8	540.4	136.34	4.964				
6,192.7	6,157.8	6,150.3	6,150.3	15.1	123.4	94.68	36.4	312.1	676.8	538.4	138.39	4.890				
6,200.0	6,165.1	6,157.6	6,157.6	15.1	123.5	4.68	36.4	312.1	676.7	539.7	136.99	4.940				
6,250.0	6,215.1	6,207.6	6,207.6	15.1	124.5	4.71	36.4	312.1	674.5	536.9	137.61	4.901				
6,300.0	6,264.7	6,257.2	6,257.2	15.2	125.5	4.79	36.4	312.1	668.8	531.2	137.57	4.861				
6,350.0	6,313.9	6,306.4	6,306.4	15.2	126.5	4.92	36.4	312.1	659.6	522.8	136.83	4.820				
6,400.0	6,362.2	6,354.7	6,354.7	15.3	127.5	5.10	36.4	312.1	647.1	511.7	135.41	4.778				
6,450.0	6,409.6	6,402.1	6,402.1	15.3	128.4	5.35	36.4	312.1	631.2	497.9	133.30	4.735				
6,500.0	6,455.8	6,448.3	6,448.3	15.3	129.4	5.68	36.4	312.1	612.1	481.6	130.50	4.690				
6,550.0	6,500.5	6,493.0	6,493.0	15.3	130.3	6.11	36.4	312.1	589.8	462.8	127.03	4.643				
6,600.0	6,543.5	6,536.0	6,536.0	15.3	131.1	6.65	36.4	312.1	564.5	441.6	122.92	4.592				
6,650.0	6,584.7	6,577.2	6,577.2	15.3	131.9	7.34	36.4	312.1	536.2	418.0	118.21	4.536				
6,700.0	6,623.7	6,616.2	6,616.2	15.4	132.7	8.23	36.4	312.1	505.2	392.3	112.98	4.472				
6,750.0	6,660.6	6,653.1	6,653.1	15.5	133.5	9.39	36.4	312.1	471.6	364.3	107.33	4.394				
6,800.0	6,694.9	6,687.4	6,687.4	15.7	134.2	10.92	36.4	312.1	435.6	334.1	101.48	4.292				
6,850.0	6,726.6	6,719.1	6,719.1	15.9	134.8	12.99	36.4	312.1	397.3	301.5	95.79	4.148				
6,900.0	6,755.6	6,748.1	6,748.1	16.2	135.4	15.86	36.4	312.1	357.0	266.0	90.96	3.925				
6,950.0	6,781.7	6,774.2	6,774.2	16.6	135.9	19.91	36.4	312.1	314.9	226.6	88.33	3.565				
7,000.0	6,804.7	6,797.2	6,797.2	17.1	136.4	25.82	36.4	312.1	271.3	181.1	90.26	3.006				
7,050.0	6,824.6	6,817.1	6,817.1	17.7	136.8	34.51	36.4	312.1	226.6	126.7	99.87	2.269				
7,100.0	6,841.2	6,833.7	6,833.7	18.3	137.1	46.87	36.4	312.1	181.3	62.9	118.31	1.532				
7,150.0	6,854.5	6,847.0	6,847.0	19.0	137.4	62.37	36.4	312.1	136.1	-3.6	139.75	0.974 Level 1				
7,200.0	6,864.4	6,856.9	6,856.9	19.8	137.6	77.39	36.4	312.1	93.5	-60.2	153.69	0.608 Level 1				
7,250.0	6,870.8	6,863.3	6,863.3	20.7	137.7	87.46	36.4	312.1	60.9	-97.3	158.22	0.385 Level 1				
7,276.0	6,872.8	6,865.3	6,865.3	21.2	137.7	90.00	36.4	312.1	55.2	-103.7	158.89	0.347 Level 1, CC, ES, SF				
7,300.0	6,873.8	6,866.3	6,866.3	21.6	137.8	90.62	36.4	312.1	60.2	-99.2	159.35	0.378 Level 1				
7,324.7	6,874.0	6,866.5	6,866.5	22.1	137.8	89.51	36.4	312.1	73.6	-86.2	159.81	0.460 Level 1				
7,400.0	6,873.2	6,865.7	6,865.7	23.5	137.8	88.74	36.4	312.1	135.7	-25.5	161.23	0.842 Level 1				
7,500.0	6,872.2	6,864.7	6,864.7	25.6	137.7	87.73	36.4	312.1	230.7	67.5	163.22	1.413 Level 3				
7,600.0	6,871.3	6,863.8	6,863.8	27.9	137.7	86.71	36.4	312.1	328.7	163.4	165.28	1.988				
7,700.0	6,870.3	6,862.8	6,862.8	30.2	137.7	85.70	36.4	312.1	427.6	260.2	167.39	2.554				
7,800.0	6,869.3	6,861.8	6,861.8	32.6	137.7	84.70	36.4	312.1	526.9	357.4	169.51	3.108				
7,900.0	6,868.3	6,860.8	6,860.8	35.0	137.7	83.69	36.4	312.1	626.4	454.8	171.64	3.650				
8,000.0	6,867.4	6,859.9	6,859.9	37.6	137.6	82.69	36.4	312.1	726.1	552.3	173.75	4.179				
8,100.0	6,866.4	6,858.9	6,858.9	40.1	137.6	81.69	36.4	312.1	825.8	650.0	175.85	4.696				
8,200.0	6,865.4	6,857.9	6,857.9	42.7	137.6	80.70	36.4	312.1	925.6	747.7	177.91	5.203				
8,300.0	6,864.4	6,856.9	6,856.9	45.3	137.6	79.72	36.4	312.1	1,025.4	845.5	179.94	5.699				
8,400.0	6,863.5	6,856.0	6,856.0	47.9	137.6	78.74	36.4	312.1	1,125.3	943.4	181.93	6.185				
8,500.0	6,862.5	6,855.0	6,855.0	50.6	137.5	77.77	36.4	312.1	1,225.2	1,041.3	183.88	6.663				
8,600.0	6,861.5	6,854.0	6,854.0	53.2	137.5	76.80	36.4	312.1	1,325.1	1,139.3	185.77	7.133				
8,614.0	6,861.4	6,853.9	6,853.9	53.6	137.5	76.67	36.4	312.1	1,339.1	1,153.0	186.03	7.198				

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT KINZER 28-2 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,860.5	6,853.0	6,853.0	55.9	137.5	-26.82	36.4	312.1	1,425.1	1,333.2	91.83	15.519				
8,800.0	6,859.5	6,852.0	6,852.0	58.6	137.5	-79.93	36.4	312.1	1,525.0	1,332.0	192.98	7.902				
8,880.6	6,858.7	6,851.2	6,851.2	60.7	137.5	-84.03	36.4	312.1	1,605.4	1,408.7	196.73	8.161				
8,900.0	6,858.6	6,851.1	6,851.1	61.2	137.5	-83.96	36.4	312.1	1,624.7	1,427.5	197.21	8.238				
9,000.0	6,857.6	6,850.1	6,850.1	63.9	137.4	-83.59	36.4	312.1	1,724.3	1,524.6	199.71	8.634				
9,100.0	6,856.6	6,849.1	6,849.1	66.5	137.4	-83.22	36.4	312.1	1,823.9	1,621.7	202.20	9.020				
9,200.0	6,855.6	6,848.1	6,848.1	69.2	137.4	-82.85	36.4	312.1	1,923.6	1,718.9	204.69	9.397				
9,300.0	6,854.6	6,847.1	6,847.1	71.8	137.4	-82.48	36.4	312.1	2,023.3	1,816.1	207.18	9.766				
9,368.1	6,854.0	6,846.5	6,846.5	73.7	137.4	-82.23	36.4	312.1	2,091.2	1,882.4	208.87	10.012				
9,400.0	6,853.6	6,846.1	6,846.1	74.5	137.4	-79.73	36.4	312.1	2,123.0	1,914.6	208.43	10.186				
9,500.0	6,852.7	6,845.2	6,845.2	77.2	137.3	-3.50	36.4	312.1	2,223.0	2,189.3	33.67	66.029				
9,600.0	6,851.7	6,844.2	6,844.2	80.0	137.3	79.00	36.4	312.1	2,322.9	2,109.6	213.33	10.889				
9,634.8	6,851.3	6,843.8	6,843.8	80.9	137.3	81.77	36.4	312.1	2,357.7	2,141.7	215.95	10.918				
9,700.0	6,850.7	6,843.2	6,843.2	82.7	137.3	81.54	36.4	312.1	2,422.7	2,205.1	217.59	11.134				
9,800.0	6,849.7	6,842.2	6,842.2	85.5	137.3	81.20	36.4	312.1	2,522.5	2,302.4	220.10	11.461				
9,870.5	6,849.0	6,841.5	6,841.5	87.4	137.3	80.96	36.4	312.1	2,592.9	2,371.0	221.86	11.687				
9,900.0	6,848.7	6,841.2	6,841.2	88.3	137.3	82.68	36.4	312.1	2,622.3	2,398.7	223.54	11.731				
10,000.0	6,847.7	6,840.2	6,840.2	91.0	137.2	85.53	36.4	312.1	2,721.8	2,494.7	227.05	11.987				
10,100.0	6,846.8	6,839.3	6,839.3	93.8	137.2	86.78	36.4	312.1	2,820.7	2,591.1	229.53	12.289				
10,137.1	6,846.4	6,838.9	6,838.9	94.8	137.2	87.08	36.4	312.1	2,857.2	2,626.9	230.33	12.405				
10,200.0	6,845.8	6,838.3	6,838.3	96.5	137.2	87.02	36.4	312.1	2,918.9	2,686.9	232.05	12.579				
10,300.0	6,844.8	6,837.3	6,837.3	99.3	137.2	86.92	36.4	312.1	3,017.3	2,782.5	234.78	12.852				
10,400.0	6,843.8	6,836.3	6,836.3	102.0	137.2	86.81	36.4	312.1	3,115.7	2,878.2	237.52	13.118				
10,500.0	6,842.8	6,835.3	6,835.3	104.8	137.1	86.71	36.4	312.1	3,214.3	2,974.0	240.25	13.379				
10,600.0	6,841.9	6,834.4	6,834.4	107.5	137.1	86.60	36.4	312.1	3,312.9	3,069.9	242.99	13.634				
10,700.0	6,840.9	6,833.4	6,833.4	110.3	137.1	86.50	36.4	312.1	3,411.6	3,165.9	245.73	13.884				
10,732.1	6,840.6	6,833.1	6,833.1	111.2	137.1	86.47	36.4	312.1	3,443.4	3,196.8	246.61	13.963				
10,800.0	6,839.9	6,832.4	6,832.4	113.0	137.1	85.32	36.4	312.1	3,510.6	3,261.9	248.62	14.120				
10,900.0	6,838.9	6,831.4	6,831.4	115.8	137.1	81.32	36.4	312.1	3,610.1	3,360.3	249.85	14.449				
10,998.8	6,838.0	6,830.5	6,830.5	118.6	137.0	48.30	36.4	312.1	3,708.9	3,515.6	193.26	19.191				
11,000.0	6,838.0	6,830.5	6,830.5	118.6	137.0	48.29	36.4	312.1	3,710.1	3,516.8	193.26	19.198				
11,100.0	6,837.0	6,829.5	6,829.5	121.4	137.0	47.53	36.4	312.1	3,810.0	3,616.9	193.19	19.722				
11,200.0	6,836.0	6,828.5	6,828.5	124.2	137.0	46.79	36.4	312.1	3,910.0	3,716.9	193.10	20.249				
11,300.0	6,835.1	6,827.6	6,827.6	126.9	137.0	46.07	36.4	312.1	4,010.0	3,817.0	192.99	20.778				
11,400.0	6,834.1	6,826.6	6,826.6	129.7	137.0	45.36	36.4	312.1	4,110.0	3,917.1	192.87	21.310				
11,428.1	6,833.8	6,826.3	6,826.3	130.5	137.0	45.17	36.4	312.1	4,138.1	3,945.3	192.83	21.460				
11,487.5	6,833.3	6,825.8	6,825.8	132.2	136.9	-66.00	36.4	312.1	4,197.5	3,950.6	246.89	17.001				
11,500.0	6,833.2	6,825.7	6,825.7	132.5	136.9	-65.93	36.4	312.1	4,210.0	3,962.9	247.09	17.038				
11,600.0	6,832.2	6,824.7	6,824.7	135.3	136.9	-65.43	36.4	312.1	4,310.0	4,061.3	248.69	17.331				
11,700.0	6,831.3	6,823.8	6,823.8	138.1	136.9	-64.93	36.4	312.1	4,410.0	4,159.7	250.26	17.622				
11,800.0	6,830.3	6,822.8	6,822.8	140.8	136.9	-64.43	36.4	312.1	4,509.9	4,258.1	251.80	17.911				
11,900.0	6,829.4	6,821.9	6,821.9	143.6	136.9	-63.94	36.4	312.1	4,609.9	4,356.6	253.31	18.199				
11,938.6	6,829.0	6,821.5	6,821.5	144.7	136.9	-63.75	36.4	312.1	4,648.5	4,394.6	253.89	18.309				

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT KINZER 28A - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	13.63	3,435.5	833.1	3,535.0							
100.0	100.0	178.5	178.5	0.1	2.2	13.63	3,435.5	833.1	3,535.0	3,532.8	2.26	1,564.771				
200.0	200.0	278.5	278.5	0.3	4.3	13.63	3,435.5	833.1	3,535.0	3,530.4	4.67	757.531				
300.0	300.0	378.5	378.5	0.5	6.4	13.63	3,435.5	833.1	3,535.0	3,528.1	6.93	510.101				
400.0	400.0	478.5	478.5	0.8	8.4	13.63	3,435.5	833.1	3,535.0	3,525.8	9.18	385.108				
500.0	500.0	578.5	578.5	1.0	10.4	13.63	3,435.5	833.1	3,535.0	3,523.6	11.42	309.461				
600.0	600.0	678.5	678.5	1.2	12.4	13.63	3,435.5	833.1	3,535.0	3,521.4	13.66	258.705				
700.0	700.0	778.5	778.5	1.4	14.5	13.63	3,435.5	833.1	3,535.0	3,519.1	15.90	222.274				
800.0	800.0	878.5	878.5	1.7	16.5	13.63	3,435.5	833.1	3,535.0	3,516.9	18.14	194.847				
900.0	900.0	978.5	978.5	1.9	18.5	13.63	3,435.5	833.1	3,535.0	3,514.6	20.38	173.451				
1,000.0	1,000.0	1,078.5	1,078.5	2.1	20.5	89.47	3,435.5	833.1	3,535.0	3,512.4	22.61	156.358				
1,100.0	1,099.8	1,178.3	1,178.3	2.3	22.5	89.56	3,435.5	833.1	3,535.0	3,510.1	24.83	142.364				
1,200.0	1,199.5	1,278.0	1,278.0	2.6	24.5	89.70	3,435.5	833.1	3,534.9	3,507.8	27.06	130.625				
1,300.0	1,298.7	1,377.2	1,377.2	2.8	26.5	89.90	3,435.5	833.1	3,534.9	3,505.6	29.31	120.615				
1,342.9	1,341.1	1,419.6	1,419.6	2.9	27.4	90.00	3,435.5	833.1	3,534.9	3,504.6	30.28	116.735				
1,400.0	1,397.5	1,476.0	1,476.0	3.1	28.5	90.15	3,435.5	833.1	3,534.9	3,503.3	31.57	111.954				
1,500.0	1,495.6	1,574.1	1,574.1	3.4	30.5	90.45	3,435.5	833.1	3,535.0	3,501.1	33.87	104.366				
1,600.0	1,593.4	1,671.9	1,671.9	3.8	32.4	90.78	3,435.5	833.1	3,535.2	3,499.0	36.20	97.664				
1,700.0	1,691.3	1,769.8	1,769.8	4.1	34.4	91.11	3,435.5	833.1	3,535.6	3,497.0	38.54	91.728				
1,800.0	1,789.1	1,867.6	1,867.6	4.5	36.4	91.44	3,435.5	833.1	3,536.0	3,495.1	40.91	86.445				
1,900.0	1,886.9	1,965.4	1,965.4	4.9	38.3	91.77	3,435.5	833.1	3,536.6	3,493.3	43.28	81.720				
2,000.0	1,984.7	2,063.2	2,063.2	5.4	40.3	92.10	3,435.5	833.1	3,537.3	3,491.7	45.66	77.474				
2,100.0	2,082.5	2,161.0	2,161.0	5.8	42.3	92.43	3,435.5	833.1	3,538.2	3,490.1	48.05	73.641				
2,200.0	2,180.3	2,258.8	2,258.8	6.2	44.2	92.76	3,435.5	833.1	3,539.1	3,488.7	50.44	70.166				
2,300.0	2,278.1	2,356.6	2,356.6	6.6	46.2	93.08	3,435.5	833.1	3,540.2	3,487.4	52.84	67.004				
2,400.0	2,376.0	2,454.5	2,454.5	7.1	48.2	93.41	3,435.5	833.1	3,541.4	3,486.2	55.24	64.114				
2,500.0	2,473.8	2,552.3	2,552.3	7.5	50.1	93.74	3,435.5	833.1	3,542.8	3,485.1	57.64	61.464				
2,600.0	2,571.6	2,650.1	2,650.1	8.0	52.1	94.07	3,435.5	833.1	3,544.2	3,484.2	60.04	59.027				
2,695.7	2,665.2	2,743.7	2,743.7	8.4	54.0	94.38	3,435.5	833.1	3,545.7	3,483.4	62.35	56.871				
2,700.0	2,669.4	2,747.9	2,747.9	8.4	54.1	94.40	3,435.5	833.1	3,545.8	3,483.3	62.45	56.780				
2,800.0	2,767.6	2,846.1	2,846.1	8.7	56.1	94.73	3,435.5	833.1	3,547.3	3,482.6	64.74	54.790				
2,900.0	2,866.4	2,944.9	2,944.9	9.0	58.0	95.00	3,435.5	833.1	3,548.6	3,481.6	67.02	52.949				
3,000.0	2,965.6	3,044.1	3,044.1	9.3	60.0	95.22	3,435.5	833.1	3,549.7	3,480.4	69.27	51.242				
3,100.0	3,065.3	3,143.8	3,143.8	9.5	62.0	95.37	3,435.5	833.1	3,550.5	3,479.0	71.50	49.659				
3,200.0	3,165.1	3,243.6	3,243.6	9.7	64.0	95.46	3,435.5	833.1	3,551.0	3,477.3	73.69	48.187				
3,295.7	3,260.8	3,339.3	3,339.3	9.8	66.0	19.67	3,435.5	833.1	3,551.1	3,477.8	73.31	48.437				
3,300.0	3,265.1	3,343.6	3,343.6	9.8	66.1	19.67	3,435.5	833.1	3,551.1	3,477.7	73.41	48.374				
3,400.0	3,365.1	3,443.6	3,443.6	10.0	68.1	19.67	3,435.5	833.1	3,551.1	3,475.5	75.62	46.959				
3,500.0	3,465.1	3,543.6	3,543.6	10.1	70.1	19.67	3,435.5	833.1	3,551.1	3,473.3	77.83	45.624				
3,600.0	3,565.1	3,643.6	3,643.6	10.3	72.1	19.67	3,435.5	833.1	3,551.1	3,471.1	80.05	44.362				
3,700.0	3,665.1	3,743.6	3,743.6	10.5	74.1	19.67	3,435.5	833.1	3,551.1	3,468.9	82.26	43.168				
3,800.0	3,765.1	3,843.6	3,843.6	10.6	76.1	19.67	3,435.5	833.1	3,551.1	3,466.7	84.48	42.035				
3,900.0	3,865.1	3,943.6	3,943.6	10.8	78.1	19.67	3,435.5	833.1	3,551.1	3,464.4	86.70	40.960				
4,000.0	3,965.1	4,043.6	4,043.6	11.0	80.1	19.67	3,435.5	833.1	3,551.1	3,462.2	88.92	39.938				
4,100.0	4,065.1	4,143.6	4,143.6	11.1	82.1	19.67	3,435.5	833.1	3,551.1	3,460.0	91.13	38.966				
4,200.0	4,165.1	4,243.6	4,243.6	11.3	84.2	19.67	3,435.5	833.1	3,551.1	3,457.8	93.35	38.039				
4,300.0	4,265.1	4,343.6	4,343.6	11.5	86.2	19.67	3,435.5	833.1	3,551.1	3,455.6	95.58	37.155				
4,400.0	4,365.1	4,443.6	4,443.6	11.7	88.2	19.67	3,435.5	833.1	3,551.1	3,453.3	97.80	36.312				
4,500.0	4,465.1	4,543.6	4,543.6	11.8	90.2	19.67	3,435.5	833.1	3,551.1	3,451.1	100.02	35.505				
4,600.0	4,565.1	4,643.6	4,643.6	12.0	92.2	19.67	3,435.5	833.1	3,551.1	3,448.9	102.24	34.733				
4,700.0	4,665.1	4,743.6	4,743.6	12.2	94.2	19.67	3,435.5	833.1	3,551.1	3,446.7	104.46	33.994				
4,800.0	4,765.1	4,843.6	4,843.6	12.4	96.2	19.67	3,435.5	833.1	3,551.1	3,444.4	106.69	33.285				

CC - Min centre 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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT KINZER 28A - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
4,900.0	4,865.1	4,943.6	4,943.6	12.6	98.2	19.67	3,435.5	833.1	3,551.1	3,442.2	108.91	32.606				
5,000.0	4,965.1	5,043.6	5,043.6	12.8	100.2	19.67	3,435.5	833.1	3,551.1	3,440.0	111.14	31.953				
5,100.0	5,065.1	5,143.6	5,143.6	12.9	102.3	19.67	3,435.5	833.1	3,551.1	3,437.8	113.36	31.326				
5,200.0	5,165.1	5,243.6	5,243.6	13.1	104.3	19.67	3,435.5	833.1	3,551.1	3,435.5	115.59	30.723				
5,300.0	5,265.1	5,343.6	5,343.6	13.3	106.3	19.67	3,435.5	833.1	3,551.1	3,433.3	117.81	30.142				
5,400.0	5,365.1	5,443.6	5,443.6	13.5	108.3	19.67	3,435.5	833.1	3,551.1	3,431.1	120.04	29.583				
5,500.0	5,465.1	5,543.6	5,543.6	13.7	110.3	19.67	3,435.5	833.1	3,551.1	3,428.9	122.26	29.045				
5,600.0	5,565.1	5,643.6	5,643.6	13.9	112.3	19.67	3,435.5	833.1	3,551.1	3,426.6	124.49	28.525				
5,700.0	5,665.1	5,743.6	5,743.6	14.1	114.3	19.67	3,435.5	833.1	3,551.1	3,424.4	126.72	28.024				
5,800.0	5,765.1	5,843.6	5,843.6	14.3	116.3	19.67	3,435.5	833.1	3,551.1	3,422.2	128.95	27.540				
5,900.0	5,865.1	5,943.6	5,943.6	14.5	118.3	19.67	3,435.5	833.1	3,551.1	3,420.0	131.17	27.072				
6,000.0	5,965.1	6,043.6	6,043.6	14.7	120.4	19.67	3,435.5	833.1	3,551.1	3,417.7	133.40	26.620				
6,100.0	6,065.1	6,143.6	6,143.6	14.9	122.4	19.67	3,435.5	833.1	3,551.1	3,415.5	135.63	26.182				
6,192.7	6,157.8	6,236.3	6,236.3	15.1	124.2	19.67	3,435.5	833.1	3,551.1	3,413.4	137.70	25.790				
6,200.0	6,165.1	6,243.6	6,243.6	15.1	124.4	-70.33	3,435.5	833.1	3,551.1	3,411.7	139.42	25.470				
6,250.0	6,215.1	6,293.6	6,293.6	15.1	125.4	-70.42	3,435.5	833.1	3,550.4	3,409.9	140.45	25.278				
6,300.0	6,264.7	6,343.2	6,343.2	15.2	126.4	-70.65	3,435.5	833.1	3,548.4	3,407.1	141.39	25.097				
6,350.0	6,313.9	6,392.4	6,392.4	15.2	127.4	-71.02	3,435.5	833.1	3,545.4	3,403.1	142.24	24.926				
6,400.0	6,362.2	6,440.7	6,440.7	15.3	128.3	-71.53	3,435.5	833.1	3,541.2	3,398.2	143.01	24.762				
6,450.0	6,409.6	6,488.1	6,488.1	15.3	129.3	-72.16	3,435.5	833.1	3,536.0	3,392.3	143.73	24.601				
6,500.0	6,455.8	6,534.3	6,534.3	15.3	130.2	-72.91	3,435.5	833.1	3,529.8	3,385.4	144.43	24.439				
6,550.0	6,500.5	6,579.0	6,579.0	15.3	131.1	-73.77	3,435.5	833.1	3,522.7	3,377.6	145.13	24.273				
6,600.0	6,543.5	6,622.0	6,622.0	15.3	132.0	-74.74	3,435.5	833.1	3,514.8	3,368.9	145.85	24.099				
6,650.0	6,584.7	6,663.2	6,663.2	15.3	132.8	-75.79	3,435.5	833.1	3,506.1	3,359.5	146.62	23.913				
6,700.0	6,623.7	6,702.2	6,702.2	15.4	133.6	-76.92	3,435.5	833.1	3,496.9	3,349.5	147.45	23.716				
6,750.0	6,660.6	6,739.1	6,739.1	15.5	134.3	-78.10	3,435.5	833.1	3,487.2	3,338.8	148.35	23.506				
6,800.0	6,694.9	6,773.4	6,773.4	15.7	135.0	-79.32	3,435.5	833.1	3,477.0	3,327.7	149.32	23.285				
6,850.0	6,726.6	6,805.1	6,805.1	15.9	135.7	-80.57	3,435.5	833.1	3,466.6	3,316.3	150.36	23.055				
6,900.0	6,755.6	6,834.1	6,834.1	16.2	136.3	-81.81	3,435.5	833.1	3,456.1	3,304.7	151.46	22.819				
6,950.0	6,781.7	6,860.2	6,860.2	16.6	136.8	-83.04	3,435.5	833.1	3,445.6	3,293.0	152.59	22.581				
7,000.0	6,804.7	6,883.2	6,883.2	17.1	137.2	-84.23	3,435.5	833.1	3,435.1	3,281.4	153.74	22.344				
7,050.0	6,824.6	6,903.1	6,903.1	17.7	137.6	-85.38	3,435.5	833.1	3,424.9	3,270.0	154.89	22.112				
7,100.0	6,841.2	6,919.7	6,919.7	18.3	138.0	-86.45	3,435.5	833.1	3,415.0	3,259.0	156.03	21.887				
7,150.0	6,854.5	6,933.0	6,933.0	19.0	138.2	-87.44	3,435.5	833.1	3,405.6	3,248.4	157.14	21.673				
7,200.0	6,864.4	6,942.9	6,942.9	19.8	138.4	-88.33	3,435.5	833.1	3,396.6	3,238.4	158.21	21.469				
7,250.0	6,870.8	6,949.3	6,949.3	20.7	138.6	-89.12	3,435.5	833.1	3,388.3	3,229.0	159.24	21.278				
7,300.0	6,873.8	6,952.3	6,952.3	21.6	138.6	-89.79	3,435.5	833.1	3,380.6	3,220.4	160.22	21.100				
7,324.7	6,874.0	6,952.5	6,952.5	22.1	138.6	-90.08	3,435.5	833.1	3,377.0	3,216.4	160.68	21.017				
7,400.0	6,873.2	6,951.7	6,951.7	23.5	138.6	-90.07	3,435.5	833.1	3,367.3	3,205.2	162.15	20.767				
7,500.0	6,872.2	6,950.7	6,950.7	25.6	138.6	-90.05	3,435.5	833.1	3,357.0	3,192.8	164.23	20.441				
7,600.0	6,871.3	6,949.8	6,949.8	27.9	138.6	-90.03	3,435.5	833.1	3,349.7	3,183.2	166.44	20.126				
7,700.0	6,870.3	6,948.8	6,948.8	30.2	138.6	-90.02	3,435.5	833.1	3,345.3	3,176.5	168.74	19.825				
7,797.0	6,869.3	6,947.8	6,947.8	32.5	138.5	-90.00	3,435.5	833.1	3,343.9	3,172.8	171.05	19.549 CC				
7,800.0	6,869.3	6,947.8	6,947.8	32.6	138.5	-90.00	3,435.5	833.1	3,343.9	3,172.7	171.12	19.541				
7,900.0	6,868.3	6,946.8	6,946.8	35.0	138.5	-89.98	3,435.5	833.1	3,345.4	3,171.9	173.57	19.275 ES				
8,000.0	6,867.4	6,945.9	6,945.9	37.6	138.5	-89.97	3,435.5	833.1	3,350.0	3,174.0	176.06	19.028				
8,100.0	6,866.4	6,944.9	6,944.9	40.1	138.5	-89.95	3,435.5	833.1	3,357.6	3,179.0	178.59	18.801				
8,200.0	6,865.4	6,943.9	6,943.9	42.7	138.5	-89.93	3,435.5	833.1	3,368.0	3,186.9	181.15	18.593				
8,300.0	6,864.4	6,942.9	6,942.9	45.3	138.4	-89.92	3,435.5	833.1	3,381.5	3,197.7	183.74	18.404				
8,400.0	6,863.5	6,942.0	6,942.0	47.9	138.4	-89.90	3,435.5	833.1	3,397.8	3,211.4	186.35	18.233				
8,500.0	6,862.5	6,941.0	6,941.0	50.6	138.4	-89.88	3,435.5	833.1	3,416.9	3,228.0	188.98	18.081				
8,600.0	6,861.5	6,940.0	6,940.0	53.2	138.4	-89.87	3,435.5	833.1	3,438.9	3,247.3	191.63	17.946				

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT KINZER 28A - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
8,614.0	6,861.4	6,939.9	6,939.9	53.6	138.4	-89.86	3,435.5	833.1	3,442.2	3,250.2	192.00	17.928				
8,700.0	6,860.5	6,939.0	6,939.0	55.9	138.4	-89.87	3,435.5	833.1	3,461.7	3,267.5	194.25	17.821				
8,800.0	6,859.5	6,938.0	6,938.0	58.6	138.3	-89.89	3,435.5	833.1	3,482.3	3,285.5	196.72	17.701				
8,880.6	6,858.7	6,937.2	6,937.2	60.7	138.3	-89.90	3,435.5	833.1	3,497.1	3,298.5	198.60	17.609				
8,900.0	6,858.6	6,937.1	6,937.1	61.2	138.3	-89.90	3,435.5	833.1	3,500.5	3,301.4	199.11	17.581				
9,000.0	6,857.6	6,936.1	6,936.1	63.9	138.3	-89.88	3,435.5	833.1	3,519.9	3,318.1	201.76	17.446				
9,100.0	6,856.6	6,935.1	6,935.1	66.5	138.3	-89.86	3,435.5	833.1	3,541.9	3,337.5	204.41	17.327				
9,200.0	6,855.6	6,934.1	6,934.1	69.2	138.3	-89.85	3,435.5	833.1	3,566.6	3,359.6	207.07	17.224				
9,300.0	6,854.6	6,933.1	6,933.1	71.8	138.2	-89.83	3,435.5	833.1	3,594.0	3,384.2	209.74	17.135				
9,368.1	6,854.0	6,932.5	6,932.5	73.7	138.2	-89.82	3,435.5	833.1	3,614.1	3,402.5	211.56	17.083				
9,400.0	6,853.6	6,932.1	6,932.1	74.5	138.2	-89.80	3,435.5	833.1	3,624.1	3,411.6	212.52	17.053				
9,500.0	6,852.7	6,931.2	6,931.2	77.2	138.2	-89.75	3,435.5	833.1	3,660.5	3,445.1	215.43	16.992				
9,600.0	6,851.7	6,930.2	6,930.2	80.0	138.2	-89.70	3,435.5	833.1	3,704.0	3,485.8	218.15	16.979 SF				
9,634.8	6,851.3	6,929.8	6,929.8	80.9	138.2	-89.68	3,435.5	833.1	3,720.7	3,501.6	219.05	16.986				
9,700.0	6,850.7	6,929.2	6,929.2	82.7	138.2	-89.67	3,435.5	833.1	3,753.2	3,532.4	220.83	16.996				
9,800.0	6,849.7	6,928.2	6,928.2	85.5	138.1	-89.65	3,435.5	833.1	3,804.7	3,581.1	223.57	17.018				
9,870.5	6,849.0	6,927.5	6,927.5	87.4	138.1	-89.64	3,435.5	833.1	3,842.2	3,616.7	225.50	17.039				
9,900.0	6,848.7	6,927.2	6,927.2	88.3	138.1	-89.62	3,435.5	833.1	3,858.3	3,632.1	226.24	17.054				
10,000.0	6,847.7	6,926.2	6,926.2	91.0	138.1	-89.56	3,435.5	833.1	3,916.9	3,688.3	228.62	17.133				
10,100.0	6,846.8	6,925.3	6,925.3	93.8	138.1	-89.49	3,435.5	833.1	3,981.3	3,750.5	230.77	17.252				
10,137.1	6,846.4	6,924.9	6,924.9	94.8	138.1	-89.47	3,435.5	833.1	4,006.5	3,775.0	231.50	17.307				
10,200.0	6,845.8	6,924.3	6,924.3	96.5	138.1	-89.46	3,435.5	833.1	4,050.1	3,816.9	233.24	17.365				
10,300.0	6,844.8	6,923.3	6,923.3	99.3	138.0	-89.44	3,435.5	833.1	4,120.5	3,884.5	236.00	17.460				
10,400.0	6,843.8	6,922.3	6,922.3	102.0	138.0	-89.42	3,435.5	833.1	4,192.1	3,953.4	238.76	17.558				
10,500.0	6,842.8	6,921.3	6,921.3	104.8	138.0	-89.40	3,435.5	833.1	4,264.9	4,023.3	241.53	17.658				
10,600.0	6,841.9	6,920.4	6,920.4	107.5	138.0	-89.38	3,435.5	833.1	4,338.7	4,094.4	244.29	17.760				
10,700.0	6,840.9	6,919.4	6,919.4	110.3	138.0	-89.36	3,435.5	833.1	4,413.6	4,166.5	247.06	17.864				
10,732.1	6,840.6	6,919.1	6,919.1	111.2	138.0	-89.35	3,435.5	833.1	4,437.8	4,189.9	247.95	17.898				
10,800.0	6,839.9	6,918.4	6,918.4	113.0	137.9	-89.39	3,435.5	833.1	4,488.6	4,238.3	250.33	17.931				
10,900.0	6,838.9	6,917.4	6,917.4	115.8	137.9	-89.43	3,435.5	833.1	4,561.3	4,307.8	253.57	17.988				
10,998.8	6,838.0	6,916.5	6,916.5	118.6	137.9	-89.47	3,435.5	833.1	4,630.6	4,374.2	256.46	18.056				
11,000.0	6,838.0	6,916.5	6,916.5	118.6	137.9	-89.47	3,435.5	833.1	4,631.5	4,375.0	256.50	18.057				
11,100.0	6,837.0	6,915.5	6,915.5	121.4	137.9	-89.46	3,435.5	833.1	4,700.9	4,441.6	259.26	18.132				
11,200.0	6,836.0	6,914.5	6,914.5	124.2	137.9	-89.44	3,435.5	833.1	4,771.4	4,509.3	262.02	18.210				
11,300.0	6,835.1	6,913.6	6,913.6	126.9	137.9	-89.43	3,435.5	833.1	4,842.9	4,578.1	264.79	18.290				
11,400.0	6,834.1	6,912.6	6,912.6	129.7	137.8	-89.41	3,435.5	833.1	4,915.4	4,647.9	267.55	18.372				
11,428.1	6,833.8	6,912.3	6,912.3	130.5	137.8	-89.40	3,435.5	833.1	4,936.0	4,667.6	268.33	18.395				
11,487.5	6,833.3	6,911.8	6,911.8	132.2	137.8	-89.44	3,435.5	833.1	4,979.0	4,709.1	269.91	18.447				
11,500.0	6,833.2	6,911.7	6,911.7	132.5	137.8	-89.44	3,435.5	833.1	4,988.0	4,717.7	270.26	18.457				
11,600.0	6,832.2	6,910.7	6,910.7	135.3	137.8	-89.42	3,435.5	833.1	5,060.3	4,787.3	273.02	18.535				
11,700.0	6,831.3	6,909.8	6,909.8	138.1	137.8	-89.41	3,435.5	833.1	5,133.5	4,857.7	275.78	18.615				
11,800.0	6,830.3	6,908.8	6,908.8	140.8	137.8	-89.39	3,435.5	833.1	5,207.6	4,929.1	278.54	18.696				
11,900.0	6,829.4	6,907.9	6,907.9	143.6	137.7	-89.38	3,435.5	833.1	5,282.6	5,001.3	281.30	18.779				
11,938.6	6,829.0	6,907.5	6,907.5	144.7	137.7	-89.37	3,435.5	833.1	5,311.8	5,029.4	282.37	18.811				

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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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 Tooflace (°)	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	33.30	1,289.7	847.1	1,543.0					
100.0	100.0	141.2	141.2	0.1	0.1	33.31	1,289.5	847.4	1,543.0	1,542.8	0.23	6,574.190		
200.0	200.0	241.0	241.0	0.3	0.2	33.34	1,289.1	848.0	1,543.0	1,542.5	0.56	2,772.047		
300.0	300.0	340.8	340.8	0.5	0.3	33.38	1,288.6	848.9	1,543.1	1,542.2	0.88	1,756.346		
400.0	400.0	440.6	440.6	0.8	0.4	33.43	1,287.9	850.1	1,543.1	1,541.9	1.20	1,285.410		
500.0	500.0	540.4	540.4	1.0	0.5	33.49	1,286.9	851.6	1,543.2	1,541.7	1.52	1,013.653		
600.0	600.0	640.2	640.1	1.2	0.6	33.57	1,285.8	853.4	1,543.3	1,541.4	1.84	836.777		
700.0	700.0	741.9	741.8	1.4	0.7	33.66	1,284.6	855.3	1,543.3	1,541.1	2.17	711.239		
800.0	800.0	843.9	843.8	1.7	0.8	33.73	1,283.4	857.0	1,543.2	1,540.7	2.50	618.284		
900.0	900.0	945.9	945.8	1.9	0.9	33.80	1,282.2	858.4	1,543.0	1,540.2	2.82	546.750		
926.4	926.3	972.7	972.6	2.0	1.0	109.64	1,281.9	858.7	1,543.0	1,540.1	2.89	534.443		
1,000.0	1,000.0	1,046.9	1,046.8	2.1	1.0	109.73	1,281.0	859.6	1,543.3	1,540.2	3.11	495.571		
1,100.0	1,099.8	1,146.7	1,146.6	2.3	1.1	109.94	1,279.9	860.5	1,544.7	1,541.3	3.42	452.193		
1,200.0	1,199.5	1,246.3	1,246.1	2.6	1.2	110.24	1,279.0	861.3	1,547.4	1,543.6	3.73	414.851		
1,300.0	1,298.7	1,345.5	1,345.3	2.8	1.3	110.62	1,278.2	861.9	1,551.3	1,547.3	4.06	381.851		
1,400.0	1,397.5	1,444.2	1,444.1	3.1	1.4	111.08	1,277.5	862.4	1,556.6	1,552.2	4.42	352.008		
1,500.0	1,495.6	1,543.3	1,543.2	3.4	1.5	111.62	1,276.8	862.7	1,563.3	1,558.5	4.82	324.479		
1,600.0	1,593.4	1,643.4	1,643.3	3.8	1.6	112.35	1,276.2	862.8	1,570.8	1,565.6	5.25	299.470		
1,700.0	1,691.3	1,743.5	1,743.4	4.1	1.7	113.07	1,275.4	862.9	1,578.4	1,572.7	5.69	277.458		
1,800.0	1,789.1	1,843.7	1,843.5	4.5	1.8	113.78	1,274.5	862.7	1,586.0	1,579.9	6.14	258.168		
1,900.0	1,886.9	1,943.9	1,943.7	4.9	1.9	114.48	1,273.6	862.5	1,593.8	1,587.2	6.61	241.264		
2,000.0	1,984.7	2,044.1	2,043.9	5.4	2.0	115.17	1,272.5	862.1	1,601.6	1,594.6	7.07	226.415		
2,100.0	2,082.5	2,144.4	2,144.2	5.8	2.0	115.86	1,271.4	861.6	1,609.6	1,602.0	7.55	213.324		
2,200.0	2,180.3	2,244.7	2,244.5	6.2	2.1	116.54	1,270.2	861.0	1,617.6	1,609.5	8.02	201.732		
2,300.0	2,278.1	2,345.0	2,344.8	6.6	2.2	117.21	1,268.9	860.3	1,625.6	1,617.1	8.49	191.240		
2,400.0	2,376.0	2,445.4	2,445.2	7.1	2.3	117.87	1,267.5	859.4	1,633.8	1,624.8	8.97	182.203		
2,500.0	2,473.8	2,544.2	2,544.0	7.5	2.4	118.51	1,266.0	858.4	1,642.0	1,632.5	9.44	173.991		
2,600.0	2,571.6	2,641.0	2,640.8	8.0	2.5	119.14	1,264.7	857.4	1,650.4	1,640.5	9.90	166.666		
2,695.7	2,665.2	2,733.7	2,733.4	8.4	2.6	119.73	1,263.5	856.5	1,658.8	1,648.4	10.35	160.322		
2,700.0	2,669.4	2,737.8	2,737.6	8.4	2.6	119.76	1,263.4	856.5	1,659.2	1,648.8	10.36	160.080		
2,800.0	2,767.6	2,835.0	2,834.7	8.7	2.7	120.46	1,262.2	855.5	1,667.2	1,656.5	10.73	155.390		
2,900.0	2,866.4	2,932.7	2,932.5	9.0	2.7	121.02	1,261.0	854.6	1,673.7	1,662.6	11.07	151.211		
3,000.0	2,965.6	3,030.9	3,030.6	9.3	2.8	121.45	1,259.9	853.7	1,678.5	1,667.1	11.38	147.482		
3,100.0	3,065.3	3,129.5	3,129.2	9.5	2.9	121.76	1,258.9	852.8	1,681.7	1,670.0	11.67	144.141		
3,200.0	3,165.1	3,228.2	3,227.9	9.7	3.0	121.93	1,258.0	851.9	1,683.0	1,671.1	11.93	141.129		
3,295.7	3,260.8	3,322.8	3,322.5	9.8	3.1	46.15	1,257.2	851.1	1,682.7	1,671.6	11.14	151.027		
3,300.0	3,265.1	3,327.1	3,326.8	9.8	3.1	46.15	1,257.1	851.0	1,682.7	1,671.5	11.15	150.876		
3,400.0	3,365.1	3,426.0	3,425.6	10.0	3.1	46.15	1,256.4	850.2	1,681.5	1,670.1	11.42	147.303		
3,500.0	3,465.1	3,526.4	3,526.1	10.1	3.2	46.15	1,255.6	849.3	1,680.4	1,668.7	11.68	143.926		
3,600.0	3,565.1	3,631.6	3,631.2	10.3	3.3	46.14	1,254.9	848.1	1,679.1	1,667.2	11.92	140.807		
3,700.0	3,665.1	3,736.8	3,736.4	10.5	3.3	46.12	1,254.2	846.4	1,677.5	1,665.3	12.18	137.761		
3,800.0	3,765.1	3,841.9	3,841.6	10.6	3.4	46.08	1,253.5	844.3	1,675.5	1,663.1	12.43	134.802		
3,900.0	3,865.1	3,947.1	3,946.7	10.8	3.5	46.04	1,252.8	841.7	1,673.3	1,660.6	12.68	131.938		
4,000.0	3,965.1	4,052.2	4,051.7	11.0	3.5	45.98	1,252.1	838.6	1,670.7	1,657.8	12.94	129.164		
4,100.0	4,065.1	4,157.3	4,156.8	11.1	3.6	45.91	1,251.5	835.1	1,667.9	1,654.7	13.19	126.474		
4,200.0	4,165.1	4,262.4	4,261.7	11.3	3.7	45.83	1,250.8	831.1	1,664.7	1,651.3	13.44	123.864		
4,300.0	4,265.1	4,367.4	4,366.7	11.5	3.7	45.74	1,250.2	826.7	1,661.3	1,647.6	13.69	121.330		
4,400.0	4,365.1	4,472.4	4,471.5	11.7	3.8	45.64	1,249.5	821.8	1,657.5	1,643.6	13.94	118.867		
4,500.0	4,465.1	4,568.2	4,567.3	11.8	3.8	45.54	1,249.0	817.1	1,653.6	1,639.5	14.18	116.653		
4,600.0	4,565.1	4,660.9	4,659.9	12.0	3.9	45.45	1,248.7	812.9	1,650.2	1,635.8	14.40	114.588		
4,700.0	4,665.1	4,753.6	4,752.5	12.2	3.9	45.36	1,248.5	809.2	1,647.2	1,632.5	14.63	112.607		
4,800.0	4,765.1	4,846.3	4,845.2	12.4	3.9	45.28	1,248.5	805.9	1,644.6	1,629.8	14.86	110.708		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT KINZER 28B - Wellbore #1 - Wellbore #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
4,900.0	4,865.1	4,939.1	4,937.9	12.6	4.0	45.20	1,248.7	802.9	1,642.5	1,627.4	15.08	108.888				
5,000.0	4,965.1	5,031.9	5,030.6	12.8	4.0	45.13	1,249.0	800.4	1,640.8	1,625.5	15.31	107.144				
5,100.0	5,065.1	5,124.7	5,123.4	12.9	4.0	45.07	1,249.5	798.3	1,639.6	1,624.0	15.54	105.472				
5,200.0	5,165.1	5,217.5	5,216.2	13.1	4.0	45.01	1,250.2	796.5	1,638.8	1,623.0	15.78	103.872				
5,300.0	5,265.1	5,310.3	5,309.0	13.3	4.1	44.95	1,251.0	795.2	1,638.4	1,622.4	16.01	102.339				
5,333.0	5,298.1	5,340.9	5,339.6	13.4	4.1	44.94	1,251.4	794.9	1,638.4	1,622.3	16.09	101.848				
5,400.0	5,365.1	5,403.1	5,401.8	13.5	4.1	44.91	1,252.1	794.3	1,638.5	1,622.2	16.24	100.872				
5,500.0	5,465.1	5,500.0	5,498.7	13.7	4.1	44.86	1,253.3	793.8	1,639.0	1,622.5	16.48	99.462				
5,600.0	5,565.1	5,597.5	5,596.1	13.9	4.2	44.82	1,254.7	793.3	1,639.7	1,623.0	16.73	98.005				
5,700.0	5,665.1	5,699.3	5,698.0	14.1	4.2	44.76	1,256.2	792.6	1,640.3	1,623.3	16.98	96.572				
5,800.0	5,765.1	5,801.2	5,799.9	14.3	4.3	44.70	1,257.8	791.7	1,640.7	1,623.5	17.24	95.172				
5,900.0	5,865.1	5,903.1	5,901.7	14.5	4.3	44.63	1,259.5	790.5	1,641.1	1,623.6	17.49	93.805				
6,000.0	5,965.1	6,005.0	6,003.6	14.7	4.3	44.55	1,261.2	789.1	1,641.3	1,623.6	17.75	92.470				
6,100.0	6,065.1	6,106.8	6,105.4	14.9	4.4	44.47	1,263.0	787.5	1,641.5	1,623.5	18.01	91.165				
6,192.7	6,157.8	6,201.2	6,199.7	15.1	4.4	44.38	1,264.8	785.7	1,641.5	1,623.2	18.24	89.981				
6,200.0	6,165.1	6,208.7	6,207.2	15.1	4.4	-45.63	1,264.9	785.5	1,641.5	1,622.4	19.07	86.079				
6,250.0	6,215.1	6,259.5	6,258.0	15.1	4.4	-45.83	1,265.9	784.5	1,639.8	1,620.7	19.15	85.610				
6,300.0	6,264.7	6,309.9	6,308.4	15.2	4.5	-46.26	1,266.9	783.4	1,635.8	1,616.6	19.22	85.112				
6,350.0	6,313.9	6,359.7	6,358.2	15.2	4.5	-46.93	1,267.9	782.3	1,629.4	1,610.1	19.27	84.571				
6,400.0	6,362.2	6,408.6	6,407.1	15.3	4.5	-47.83	1,268.9	781.1	1,620.6	1,601.3	19.30	83.973				
6,450.0	6,409.6	6,456.4	6,454.8	15.3	4.5	-48.97	1,269.9	779.9	1,609.6	1,590.3	19.32	83.299				
6,500.0	6,455.8	6,502.8	6,501.2	15.3	4.6	-50.36	1,270.8	778.7	1,596.5	1,577.1	19.34	82.531				
6,550.0	6,500.5	6,547.0	6,545.4	15.3	4.6	-51.98	1,271.7	777.5	1,581.4	1,562.0	19.36	81.681				
6,600.0	6,543.5	6,589.5	6,587.9	15.3	4.6	-53.84	1,272.6	776.4	1,564.5	1,545.1	19.39	80.670				
6,650.0	6,584.7	6,630.2	6,628.5	15.3	4.6	-55.94	1,273.3	775.5	1,546.0	1,526.5	19.45	79.468				
6,700.0	6,623.7	6,668.7	6,667.0	15.4	4.6	-58.26	1,274.0	774.6	1,526.0	1,506.4	19.55	78.045				
6,750.0	6,660.6	6,705.0	6,703.2	15.5	4.6	-60.78	1,274.6	773.8	1,504.8	1,485.1	19.70	76.377				
6,800.0	6,694.9	6,738.8	6,737.0	15.7	4.6	-63.49	1,275.1	773.1	1,482.6	1,462.7	19.91	74.451				
6,850.0	6,726.6	6,770.0	6,768.2	15.9	4.6	-66.34	1,275.5	772.5	1,459.7	1,439.5	20.20	72.272				
6,900.0	6,755.6	6,798.4	6,796.7	16.2	4.6	-69.29	1,275.9	771.9	1,436.3	1,415.7	20.56	69.861				
6,950.0	6,781.7	6,823.9	6,822.2	16.6	4.6	-72.27	1,276.3	771.4	1,412.6	1,391.6	21.00	67.259				
7,000.0	6,804.7	6,846.4	6,844.6	17.1	4.6	-75.23	1,276.5	771.0	1,388.9	1,367.4	21.53	64.517				
7,050.0	6,824.6	6,865.7	6,863.9	17.7	4.6	-78.10	1,276.8	770.7	1,365.6	1,343.5	22.13	61.696				
7,100.0	6,841.2	6,881.7	6,880.0	18.3	4.6	-80.83	1,276.9	770.4	1,342.8	1,320.0	22.82	58.855				
7,150.0	6,854.5	6,894.4	6,892.7	19.0	4.6	-83.34	1,277.1	770.2	1,320.9	1,297.3	23.57	56.050				
7,200.0	6,864.4	6,903.7	6,901.9	19.8	4.6	-85.60	1,277.2	770.1	1,300.1	1,275.7	24.38	53.330				
7,250.0	6,870.8	6,909.4	6,907.7	20.7	4.6	-87.57	1,277.2	770.0	1,280.5	1,255.3	25.24	50.733				
7,300.0	6,873.8	6,911.7	6,909.9	21.6	4.6	-89.22	1,277.3	770.0	1,262.6	1,236.4	26.15	48.289				
7,324.7	6,874.0	6,911.5	6,909.7	22.1	4.6	-89.91	1,277.3	770.0	1,254.3	1,227.7	26.61	47.143				
7,400.0	6,873.2	6,909.5	6,907.7	23.5	4.6	-89.82	1,277.2	770.0	1,231.8	1,203.7	28.09	43.858				
7,500.0	6,872.2	6,906.9	6,905.1	25.6	4.6	-89.69	1,277.2	770.0	1,208.5	1,178.3	30.19	40.033				
7,600.0	6,871.3	6,904.2	6,902.5	27.9	4.6	-89.56	1,277.2	770.1	1,193.2	1,160.8	32.42	36.809				
7,700.0	6,870.3	6,901.6	6,899.8	30.2	4.6	-89.44	1,277.2	770.1	1,186.1	1,151.4	34.74	34.143				
7,734.2	6,870.0	6,900.6	6,898.9	31.0	4.6	-89.39	1,277.1	770.1	1,185.6	1,150.1	35.56	33.342 CC, ES				
7,800.0	6,869.3	6,898.9	6,897.1	32.6	4.6	-89.31	1,277.1	770.2	1,187.4	1,150.3	37.14	31.972				
7,900.0	6,868.3	6,896.2	6,894.4	35.0	4.6	-89.18	1,277.1	770.2	1,197.2	1,157.6	39.60	30.230				
8,000.0	6,867.4	6,893.5	6,891.7	37.6	4.6	-89.05	1,277.1	770.2	1,215.0	1,172.9	42.11	28.853				
8,100.0	6,866.4	6,890.8	6,889.0	40.1	4.6	-88.92	1,277.0	770.3	1,240.7	1,196.1	44.66	27.782				
8,200.0	6,865.4	6,888.0	6,886.3	42.7	4.6	-88.78	1,277.0	770.3	1,273.8	1,226.6	47.24	26.964				
8,300.0	6,864.4	6,885.3	6,883.5	45.3	4.6	-88.65	1,277.0	770.4	1,313.6	1,263.8	49.85	26.353				
8,400.0	6,863.5	6,882.5	6,880.8	47.9	4.6	-88.52	1,277.0	770.4	1,359.7	1,307.2	52.48	25.910				
8,500.0	6,862.5	6,879.8	6,878.0	50.6	4.6	-88.38	1,276.9	770.5	1,411.3	1,356.2	55.13	25.602				

CC - Min centre 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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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		
8,600.0	6,861.5	6,877.0	6,875.2	53.2	4.6	-88.25	1,276.9	770.5	1,467.9	1,410.1	57.79	25.401		
8,614.0	6,861.4	6,876.6	6,874.8	53.6	4.6	-88.23	1,276.9	770.5	1,476.2	1,418.1	58.16	25.381		
8,700.0	6,860.5	6,874.2	6,872.4	55.9	4.6	-88.20	1,276.9	770.6	1,527.5	1,467.1	60.42	25.279		
8,800.0	6,859.5	6,871.4	6,869.7	58.6	4.6	-88.17	1,276.8	770.6	1,587.1	1,524.2	62.91	25.229		
8,880.6	6,858.7	6,869.3	6,867.5	60.7	4.6	-88.16	1,276.8	770.6	1,635.1	1,570.3	64.80	25.234		
8,900.0	6,858.6	6,868.7	6,867.0	61.2	4.6	-88.14	1,276.8	770.7	1,646.7	1,581.3	65.31	25.214		
9,000.0	6,857.6	6,866.1	6,864.3	63.9	4.6	-88.02	1,276.8	770.7	1,708.7	1,640.7	67.97	25.139		
9,100.0	6,856.6	6,863.4	6,861.6	66.5	4.6	-87.90	1,276.7	770.7	1,774.2	1,703.5	70.64	25.116 SF		
9,200.0	6,855.6	6,860.7	6,858.9	69.2	4.6	-87.78	1,276.7	770.8	1,842.8	1,769.5	73.32	25.134		
9,300.0	6,854.6	6,858.0	6,856.2	71.8	4.6	-87.67	1,276.7	770.8	1,914.1	1,838.1	76.00	25.186		
9,368.1	6,854.0	6,856.1	6,854.4	73.7	4.6	-87.59	1,276.7	770.9	1,964.2	1,886.3	77.83	25.237		
9,400.0	6,853.6	6,855.2	6,853.5	74.5	4.6	-87.49	1,276.6	770.9	1,988.1	1,909.3	78.79	25.232		
9,500.0	6,852.7	6,852.4	6,850.7	77.2	4.6	-87.15	1,276.6	770.9	2,066.8	1,985.1	81.70	25.296		
9,600.0	6,851.7	6,849.5	6,847.8	80.0	4.6	-86.74	1,276.6	771.0	2,150.2	2,065.8	84.42	25.469		
9,634.8	6,851.3	6,848.5	6,846.8	80.9	4.6	-86.57	1,276.6	771.0	2,180.1	2,094.8	85.32	25.552		
9,700.0	6,850.7	6,846.6	6,844.8	82.7	4.6	-86.47	1,276.5	771.0	2,237.0	2,149.9	87.11	25.680		
9,800.0	6,849.7	6,843.6	6,841.8	85.5	4.6	-86.31	1,276.5	771.1	2,325.0	2,235.2	89.85	25.877		
9,870.5	6,849.0	6,841.5	6,839.7	87.4	4.6	-86.20	1,276.5	771.1	2,387.6	2,295.9	91.78	26.015		
9,900.0	6,848.7	6,840.6	6,838.8	88.3	4.6	-86.02	1,276.5	771.1	2,414.1	2,321.6	92.52	26.093		
10,000.0	6,847.7	6,837.5	6,835.7	91.0	4.6	-85.30	1,276.4	771.2	2,505.6	2,410.7	94.86	26.415		
10,100.0	6,846.8	6,834.3	6,832.6	93.8	4.6	-84.32	1,276.4	771.3	2,599.6	2,502.6	96.91	26.824		
10,137.1	6,846.4	6,833.1	6,831.4	94.8	4.6	-83.86	1,276.4	771.3	2,635.0	2,537.4	97.59	27.000		
10,200.0	6,845.8	6,831.1	6,829.4	96.5	4.6	-83.71	1,276.3	771.3	2,695.3	2,595.9	99.31	27.140		
10,300.0	6,844.8	6,827.9	6,826.1	99.3	4.6	-83.47	1,276.3	771.4	2,791.3	2,689.3	102.04	27.357		
10,400.0	6,843.8	6,824.6	6,822.8	102.0	4.6	-83.22	1,276.3	771.4	2,887.7	2,782.9	104.76	27.564		
10,500.0	6,842.8	6,821.3	6,819.6	104.8	4.6	-82.98	1,276.2	771.5	2,984.3	2,876.8	107.49	27.764		
10,600.0	6,841.9	6,818.0	6,816.2	107.5	4.6	-82.73	1,276.2	771.5	3,081.1	2,970.9	110.21	27.957		
10,700.0	6,840.9	6,814.7	6,812.9	110.3	4.6	-82.48	1,276.1	771.6	3,178.1	3,065.2	112.93	28.143		
10,732.1	6,840.6	6,813.6	6,811.8	111.2	4.6	-82.40	1,276.1	771.6	3,209.3	3,095.5	113.80	28.201		
10,800.0	6,839.9	6,811.3	6,809.6	113.0	4.6	-83.24	1,276.1	771.7	3,275.0	3,158.7	116.33	28.152		
10,900.0	6,838.9	6,808.0	6,806.3	115.8	4.6	-84.17	1,276.1	771.7	3,370.8	3,251.0	119.73	28.153		
10,998.8	6,838.0	6,804.8	6,803.1	118.6	4.6	-84.86	1,276.0	771.8	3,464.1	3,341.4	122.73	28.226		
11,000.0	6,838.0	6,804.8	6,803.0	118.6	4.6	-84.86	1,276.0	771.8	3,465.2	3,342.5	122.76	28.227		
11,100.0	6,837.0	6,801.5	6,799.8	121.4	4.6	-84.71	1,276.0	771.9	3,559.2	3,433.7	125.51	28.358		
11,200.0	6,836.0	6,798.3	6,796.6	124.2	4.6	-84.56	1,275.9	771.9	3,653.4	3,525.2	128.26	28.485		
11,300.0	6,835.1	6,795.0	6,793.3	126.9	4.6	-84.40	1,275.9	772.0	3,748.0	3,617.0	131.00	28.610		
11,400.0	6,834.1	6,791.8	6,790.0	129.7	4.6	-84.25	1,275.8	772.0	3,842.8	3,709.0	133.75	28.732		
11,428.1	6,833.8	6,790.8	6,789.1	130.5	4.6	-84.20	1,275.8	772.1	3,869.5	3,735.0	134.52	28.766		
11,487.5	6,833.3	6,788.9	6,787.1	132.2	4.6	-84.66	1,275.8	772.1	3,925.7	3,789.5	136.18	28.826		
11,500.0	6,833.2	6,788.5	6,786.7	132.5	4.6	-84.65	1,275.8	772.1	3,937.5	3,800.9	136.53	28.840		
11,600.0	6,832.2	6,785.2	6,783.5	135.3	4.6	-84.51	1,275.7	772.2	4,031.8	3,892.5	139.27	28.950		
11,700.0	6,831.3	6,782.0	6,780.2	138.1	4.6	-84.37	1,275.7	772.2	4,126.4	3,984.4	142.01	29.057		
11,800.0	6,830.3	6,778.7	6,776.9	140.8	4.6	-84.22	1,275.7	772.3	4,221.3	4,076.5	144.75	29.162		
11,900.0	6,829.4	6,775.3	6,773.6	143.6	4.6	-84.08	1,275.6	772.4	4,316.4	4,168.9	147.49	29.266		
11,938.6	6,829.0	6,774.1	6,772.3	144.7	4.6	-84.02	1,275.6	772.4	4,353.1	4,204.6	148.55	29.305		

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT KIZNER 28-1 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	5.69	2,852.5	284.2	2,866.7							
100.0	100.0	177.5	177.5	0.1	2.1	5.69	2,852.5	284.2	2,866.7	2,864.4	2.24	1,278.556				
200.0	200.0	277.5	277.5	0.3	4.3	5.69	2,852.5	284.2	2,866.7	2,862.0	4.65	615.899				
300.0	300.0	377.5	377.5	0.5	6.4	5.69	2,852.5	284.2	2,866.7	2,859.7	6.92	414.333				
400.0	400.0	477.5	477.5	0.8	8.4	5.69	2,852.5	284.2	2,866.7	2,857.5	9.17	312.670				
500.0	500.0	577.5	577.5	1.0	10.4	5.69	2,852.5	284.2	2,866.7	2,855.3	11.41	251.189				
600.0	600.0	677.5	677.5	1.2	12.4	5.69	2,852.5	284.2	2,866.7	2,853.0	13.65	209.956				
700.0	700.0	777.5	777.5	1.4	14.4	5.69	2,852.5	284.2	2,866.7	2,850.8	15.89	180.369				
800.0	800.0	877.5	877.5	1.7	16.5	5.69	2,852.5	284.2	2,866.7	2,848.5	18.13	158.099				
900.0	900.0	977.5	977.5	1.9	18.5	5.69	2,852.5	284.2	2,866.7	2,846.3	20.37	140.729				
1,000.0	1,000.0	1,077.5	1,077.5	2.1	20.5	81.54	2,852.5	284.2	2,866.4	2,843.8	22.60	126.845				
1,100.0	1,099.8	1,177.3	1,177.3	2.3	22.5	81.66	2,852.5	284.2	2,865.6	2,840.8	24.82	115.462				
1,200.0	1,199.5	1,277.0	1,277.0	2.6	24.5	81.86	2,852.5	284.2	2,864.4	2,837.3	27.05	105.898				
1,300.0	1,298.7	1,376.2	1,376.2	2.8	26.5	82.13	2,852.5	284.2	2,862.7	2,833.4	29.29	97.729				
1,400.0	1,397.5	1,475.0	1,475.0	3.1	28.5	82.48	2,852.5	284.2	2,860.6	2,829.0	31.56	90.648				
1,500.0	1,495.6	1,573.1	1,573.1	3.4	30.5	82.90	2,852.5	284.2	2,858.1	2,824.2	33.85	84.433				
1,600.0	1,593.4	1,670.9	1,670.9	3.8	32.4	83.31	2,852.5	284.2	2,855.5	2,819.4	36.18	78.931				
1,700.0	1,691.3	1,768.8	1,768.8	4.1	34.4	83.71	2,852.5	284.2	2,853.1	2,814.6	38.52	74.059				
1,800.0	1,789.1	1,866.6	1,866.6	4.5	36.4	84.12	2,852.5	284.2	2,850.9	2,810.0	40.89	69.725				
1,900.0	1,886.9	1,964.4	1,964.4	4.9	38.3	84.53	2,852.5	284.2	2,848.8	2,805.5	43.26	65.849				
2,000.0	1,984.7	2,062.2	2,062.2	5.4	40.3	84.93	2,852.5	284.2	2,846.8	2,801.2	45.65	62.368				
2,100.0	2,082.5	2,160.0	2,160.0	5.8	42.3	85.34	2,852.5	284.2	2,845.0	2,797.0	48.04	59.226				
2,200.0	2,180.3	2,257.8	2,257.8	6.2	44.2	85.75	2,852.5	284.2	2,843.4	2,792.9	50.43	56.379				
2,300.0	2,278.1	2,355.6	2,355.6	6.6	46.2	86.16	2,852.5	284.2	2,841.9	2,789.0	52.83	53.789				
2,400.0	2,376.0	2,453.5	2,453.5	7.1	48.2	86.57	2,852.5	284.2	2,840.5	2,785.3	55.24	51.423				
2,500.0	2,473.8	2,551.3	2,551.3	7.5	50.1	86.98	2,852.5	284.2	2,839.3	2,781.7	57.65	49.255				
2,600.0	2,571.6	2,649.1	2,649.1	8.0	52.1	87.39	2,852.5	284.2	2,838.3	2,778.2	60.06	47.261				
2,695.7	2,665.2	2,742.7	2,742.7	8.4	54.0	87.78	2,852.5	284.2	2,837.4	2,775.1	62.36	45.498				
2,700.0	2,669.4	2,746.9	2,746.9	8.4	54.1	87.80	2,852.5	284.2	2,837.4	2,774.9	62.47	45.423				
2,800.0	2,767.6	2,845.1	2,845.1	8.7	56.0	88.16	2,852.5	284.2	2,836.7	2,772.0	64.76	43.802				
2,900.0	2,866.4	2,943.9	2,943.9	9.0	58.0	88.46	2,852.5	284.2	2,836.3	2,769.2	67.04	42.307				
3,000.0	2,965.6	3,043.1	3,043.1	9.3	60.0	88.70	2,852.5	284.2	2,836.0	2,766.7	69.29	40.927				
3,100.0	3,065.3	3,142.8	3,142.8	9.5	62.0	88.86	2,852.5	284.2	2,835.8	2,764.3	71.52	39.652				
3,200.0	3,165.1	3,242.6	3,242.6	9.7	64.0	88.96	2,852.5	284.2	2,835.7	2,762.0	73.71	38.471				
3,295.7	3,260.8	3,338.3	3,338.3	9.8	66.0	13.18	2,852.5	284.2	2,835.7	2,762.4	73.27	38.702				
3,300.0	3,265.1	3,342.6	3,342.6	9.8	66.0	13.18	2,852.5	284.2	2,835.7	2,762.3	73.36	38.652				
3,400.0	3,365.1	3,442.6	3,442.6	10.0	68.1	13.18	2,852.5	284.2	2,835.7	2,760.1	75.58	37.521				
3,500.0	3,465.1	3,542.6	3,542.6	10.1	70.1	13.18	2,852.5	284.2	2,835.7	2,757.9	77.79	36.453				
3,600.0	3,565.1	3,642.6	3,642.6	10.3	72.1	13.18	2,852.5	284.2	2,835.7	2,755.6	80.00	35.444				
3,700.0	3,665.1	3,742.6	3,742.6	10.5	74.1	13.18	2,852.5	284.2	2,835.7	2,753.4	82.22	34.489				
3,800.0	3,765.1	3,842.6	3,842.6	10.6	76.1	13.18	2,852.5	284.2	2,835.7	2,751.2	84.44	33.583				
3,900.0	3,865.1	3,942.6	3,942.6	10.8	78.1	13.18	2,852.5	284.2	2,835.7	2,749.0	86.65	32.723				
4,000.0	3,965.1	4,042.6	4,042.6	11.0	80.1	13.18	2,852.5	284.2	2,835.7	2,746.8	88.87	31.907				
4,100.0	4,065.1	4,142.6	4,142.6	11.1	82.1	13.18	2,852.5	284.2	2,835.7	2,744.6	91.09	31.129				
4,200.0	4,165.1	4,242.6	4,242.6	11.3	84.1	13.18	2,852.5	284.2	2,835.7	2,742.3	93.31	30.388				
4,300.0	4,265.1	4,342.6	4,342.6	11.5	86.2	13.18	2,852.5	284.2	2,835.7	2,740.1	95.53	29.682				
4,400.0	4,365.1	4,442.6	4,442.6	11.7	88.2	13.18	2,852.5	284.2	2,835.7	2,737.9	97.76	29.007				
4,500.0	4,465.1	4,542.6	4,542.6	11.8	90.2	13.18	2,852.5	284.2	2,835.7	2,735.7	99.98	28.363				
4,600.0	4,565.1	4,642.6	4,642.6	12.0	92.2	13.18	2,852.5	284.2	2,835.7	2,733.4	102.20	27.746				
4,700.0	4,665.1	4,742.6	4,742.6	12.2	94.2	13.18	2,852.5	284.2	2,835.7	2,731.2	104.43	27.155				
4,800.0	4,765.1	4,842.6	4,842.6	12.4	96.2	13.18	2,852.5	284.2	2,835.7	2,729.0	106.65	26.589				
4,900.0	4,865.1	4,942.6	4,942.6	12.6	98.2	13.18	2,852.5	284.2	2,835.7	2,726.8	108.87	26.045				

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.0	4,965.1	5,042.6	5,042.6	12.8	100.2	13.18	2,852.5	284.2	2,835.7	2,724.6	111.10	25.524		
5,100.0	5,065.1	5,142.6	5,142.6	12.9	102.2	13.18	2,852.5	284.2	2,835.7	2,722.3	113.32	25.023		
5,200.0	5,165.1	5,242.6	5,242.6	13.1	104.3	13.18	2,852.5	284.2	2,835.7	2,720.1	115.55	24.541		
5,300.0	5,265.1	5,342.6	5,342.6	13.3	106.3	13.18	2,852.5	284.2	2,835.7	2,717.9	117.78	24.077		
5,400.0	5,365.1	5,442.6	5,442.6	13.5	108.3	13.18	2,852.5	284.2	2,835.7	2,715.6	120.00	23.630		
5,500.0	5,465.1	5,542.6	5,542.6	13.7	110.3	13.18	2,852.5	284.2	2,835.7	2,713.4	122.23	23.199		
5,600.0	5,565.1	5,642.6	5,642.6	13.9	112.3	13.18	2,852.5	284.2	2,835.7	2,711.2	124.46	22.784		
5,700.0	5,665.1	5,742.6	5,742.6	14.1	114.3	13.18	2,852.5	284.2	2,835.7	2,709.0	126.68	22.384		
5,800.0	5,765.1	5,842.6	5,842.6	14.3	116.3	13.18	2,852.5	284.2	2,835.7	2,706.7	128.91	21.997		
5,900.0	5,865.1	5,942.6	5,942.6	14.5	118.3	13.18	2,852.5	284.2	2,835.7	2,704.5	131.14	21.623		
6,000.0	5,965.1	6,042.6	6,042.6	14.7	120.3	13.18	2,852.5	284.2	2,835.7	2,702.3	133.37	21.262		
6,100.0	6,065.1	6,142.6	6,142.6	14.9	122.4	13.18	2,852.5	284.2	2,835.7	2,700.1	135.60	20.912		
6,192.7	6,157.8	6,235.3	6,235.3	15.1	124.2	13.18	2,852.5	284.2	2,835.7	2,698.0	137.66	20.599		
6,200.0	6,165.1	6,242.6	6,242.6	15.1	124.4	-76.82	2,852.5	284.2	2,835.6	2,696.2	139.43	20.337		
6,250.0	6,215.1	6,292.6	6,292.6	15.1	125.4	-76.90	2,852.5	284.2	2,835.1	2,694.6	140.49	20.180		
6,300.0	6,264.7	6,342.2	6,342.2	15.2	126.4	-77.12	2,852.5	284.2	2,833.8	2,692.3	141.49	20.029		
6,350.0	6,313.9	6,391.4	6,391.4	15.2	127.4	-77.46	2,852.5	284.2	2,831.8	2,689.3	142.43	19.881		
6,400.0	6,362.2	6,439.7	6,439.7	15.3	128.3	-77.91	2,852.5	284.2	2,829.0	2,685.7	143.34	19.737		
6,450.0	6,409.6	6,487.1	6,487.1	15.3	129.3	-78.48	2,852.5	284.2	2,825.6	2,681.4	144.20	19.594		
6,500.0	6,455.8	6,533.3	6,533.3	15.3	130.2	-79.15	2,852.5	284.2	2,821.6	2,676.5	145.05	19.452		
6,550.0	6,500.5	6,578.0	6,578.0	15.3	131.1	-79.91	2,852.5	284.2	2,817.0	2,671.1	145.89	19.309		
6,600.0	6,543.5	6,621.0	6,621.0	15.3	132.0	-80.75	2,852.5	284.2	2,812.1	2,665.3	146.74	19.164		
6,650.0	6,584.7	6,662.2	6,662.2	15.3	132.8	-81.64	2,852.5	284.2	2,806.8	2,659.2	147.60	19.016		
6,700.0	6,623.7	6,701.2	6,701.2	15.4	133.6	-82.57	2,852.5	284.2	2,801.4	2,652.9	148.49	18.866		
6,750.0	6,660.6	6,738.1	6,738.1	15.5	134.3	-83.52	2,852.5	284.2	2,795.9	2,646.5	149.40	18.714		
6,800.0	6,694.9	6,772.4	6,772.4	15.7	135.0	-84.47	2,852.5	284.2	2,790.4	2,640.0	150.33	18.561		
6,850.0	6,726.6	6,804.1	6,804.1	15.9	135.7	-85.40	2,852.5	284.2	2,785.0	2,633.8	151.29	18.409		
6,900.0	6,755.6	6,833.1	6,833.1	16.2	136.2	-86.29	2,852.5	284.2	2,780.0	2,627.7	152.26	18.258		
6,950.0	6,781.7	6,859.2	6,859.2	16.6	136.8	-87.13	2,852.5	284.2	2,775.3	2,622.1	153.25	18.110		
7,000.0	6,804.7	6,882.2	6,882.2	17.1	137.2	-87.88	2,852.5	284.2	2,771.2	2,616.9	154.24	17.966		
7,050.0	6,824.6	6,902.1	6,902.1	17.7	137.6	-88.55	2,852.5	284.2	2,767.6	2,612.4	155.25	17.827		
7,100.0	6,841.2	6,918.7	6,918.7	18.3	138.0	-89.10	2,852.5	284.2	2,764.7	2,608.5	156.25	17.694		
7,150.0	6,854.5	6,932.0	6,932.0	19.0	138.2	-89.54	2,852.5	284.2	2,762.6	2,605.4	157.25	17.568		
7,200.0	6,864.4	6,941.9	6,941.9	19.8	138.4	-89.84	2,852.5	284.2	2,761.4	2,603.1	158.25	17.449		
7,248.0	6,870.6	6,948.1	6,948.1	20.6	138.6	-90.00	2,852.5	284.2	2,760.9	2,601.7	159.20	17.343 CC		
7,250.0	6,870.8	6,948.3	6,948.3	20.7	138.6	-90.00	2,852.5	284.2	2,760.9	2,601.7	159.24	17.338		
7,300.0	6,873.8	6,951.3	6,951.3	21.6	138.6	-90.03	2,852.5	284.2	2,761.4	2,601.2	160.21	17.237 ES		
7,324.7	6,874.0	6,951.5	6,951.5	22.1	138.6	-89.98	2,852.5	284.2	2,762.0	2,601.3	160.67	17.190		
7,400.0	6,873.2	6,950.7	6,950.7	23.5	138.6	-89.97	2,852.5	284.2	2,765.1	2,603.0	162.14	17.054		
7,500.0	6,872.2	6,949.7	6,949.7	25.6	138.6	-89.95	2,852.5	284.2	2,772.4	2,608.2	164.22	16.882		
7,600.0	6,871.3	6,948.8	6,948.8	27.9	138.6	-89.93	2,852.5	284.2	2,783.3	2,616.9	166.43	16.724		
7,700.0	6,870.3	6,947.8	6,947.8	30.2	138.6	-89.91	2,852.5	284.2	2,797.7	2,628.9	168.73	16.581		
7,800.0	6,869.3	6,946.8	6,946.8	32.6	138.5	-89.89	2,852.5	284.2	2,815.6	2,644.4	171.11	16.454		
7,900.0	6,868.3	6,945.8	6,945.8	35.0	138.5	-89.87	2,852.5	284.2	2,836.9	2,663.3	173.56	16.345		
8,000.0	6,867.4	6,944.9	6,944.9	37.6	138.5	-89.85	2,852.5	284.2	2,861.5	2,685.4	176.05	16.254		
8,100.0	6,866.4	6,943.9	6,943.9	40.1	138.5	-89.83	2,852.5	284.2	2,889.4	2,710.8	178.58	16.180		
8,200.0	6,865.4	6,942.9	6,942.9	42.7	138.5	-89.81	2,852.5	284.2	2,920.4	2,739.3	181.14	16.123		
8,300.0	6,864.4	6,941.9	6,941.9	45.3	138.4	-89.79	2,852.5	284.2	2,954.5	2,770.8	183.73	16.081		
8,400.0	6,863.5	6,941.0	6,941.0	47.9	138.4	-89.77	2,852.5	284.2	2,991.6	2,805.2	186.34	16.054		
8,500.0	6,862.5	6,940.0	6,940.0	50.6	138.4	-89.75	2,852.5	284.2	3,031.5	2,842.5	188.97	16.042 SF		
8,600.0	6,861.5	6,939.0	6,939.0	53.2	138.4	-89.73	2,852.5	284.2	3,074.1	2,882.5	191.62	16.043		
8,614.0	6,861.4	6,938.9	6,938.9	53.6	138.4	-89.72	2,852.5	284.2	3,080.3	2,888.3	191.99	16.044		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT KIZNER 28-1 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,860.5	6,938.0	6,938.0	55.9	138.4	-89.74	2,852.5	284.2	3,117.7	2,923.4	194.24	16.051				
8,800.0	6,859.5	6,937.0	6,937.0	58.6	138.3	-89.75	2,852.5	284.2	3,159.1	2,962.4	196.71	16.060				
8,880.6	6,858.7	6,936.2	6,936.2	60.7	138.3	-89.76	2,852.5	284.2	3,191.0	2,992.4	198.59	16.069				
8,900.0	6,858.6	6,936.1	6,936.1	61.2	138.3	-89.76	2,852.5	284.2	3,198.6	2,999.5	199.10	16.065				
9,000.0	6,857.6	6,935.1	6,935.1	63.9	138.3	-89.74	2,852.5	284.2	3,239.1	3,037.3	201.74	16.055				
9,100.0	6,856.6	6,934.1	6,934.1	66.5	138.3	-89.72	2,852.5	284.2	3,282.1	3,077.7	204.40	16.057				
9,200.0	6,855.6	6,933.1	6,933.1	69.2	138.3	-89.70	2,852.5	284.2	3,327.6	3,120.5	207.06	16.071				
9,300.0	6,854.6	6,932.1	6,932.1	71.8	138.2	-89.68	2,852.5	284.2	3,375.4	3,165.7	209.73	16.094				
9,368.1	6,854.0	6,931.5	6,931.5	73.7	138.2	-89.67	2,852.5	284.2	3,409.3	3,197.8	211.55	16.116				
9,400.0	6,853.6	6,931.1	6,931.1	74.5	138.2	-89.65	2,852.5	284.2	3,425.7	3,213.2	212.51	16.120				
9,500.0	6,852.7	6,930.2	6,930.2	77.2	138.2	-89.59	2,852.5	284.2	3,481.6	3,266.1	215.42	16.162				
9,600.0	6,851.7	6,929.2	6,929.2	80.0	138.2	-89.52	2,852.5	284.2	3,543.5	3,325.3	218.13	16.244				
9,634.8	6,851.3	6,928.8	6,928.8	80.9	138.2	-89.49	2,852.5	284.2	3,566.4	3,347.3	219.04	16.282				
9,700.0	6,850.7	6,928.2	6,928.2	82.7	138.2	-89.48	2,852.5	284.2	3,610.2	3,389.4	220.82	16.349				
9,800.0	6,849.7	6,927.2	6,927.2	85.5	138.1	-89.46	2,852.5	284.2	3,678.7	3,455.1	223.55	16.455				
9,870.5	6,849.0	6,926.5	6,926.5	87.4	138.1	-89.44	2,852.5	284.2	3,727.8	3,502.3	225.48	16.532				
9,900.0	6,848.7	6,926.2	6,926.2	88.3	138.1	-89.42	2,852.5	284.2	3,748.7	3,522.5	226.23	16.571				
10,000.0	6,847.7	6,925.2	6,925.2	91.0	138.1	-89.33	2,852.5	284.2	3,822.8	3,594.1	228.61	16.722				
10,100.0	6,846.8	6,924.3	6,924.3	93.8	138.1	-89.24	2,852.5	284.2	3,901.3	3,670.5	230.75	16.907				
10,137.1	6,846.4	6,923.9	6,923.9	94.8	138.1	-89.20	2,852.5	284.2	3,931.5	3,700.0	231.48	16.984				
10,200.0	6,845.8	6,923.3	6,923.3	96.5	138.1	-89.18	2,852.5	284.2	3,983.2	3,750.0	233.22	17.079				
10,300.0	6,844.8	6,922.3	6,922.3	99.3	138.0	-89.16	2,852.5	284.2	4,066.2	3,830.2	235.98	17.231				
10,400.0	6,843.8	6,921.3	6,921.3	102.0	138.0	-89.13	2,852.5	284.2	4,149.9	3,911.1	238.74	17.382				
10,500.0	6,842.8	6,920.3	6,920.3	104.8	138.0	-89.11	2,852.5	284.2	4,234.3	3,992.8	241.50	17.533				
10,600.0	6,841.9	6,919.4	6,919.4	107.5	138.0	-89.08	2,852.5	284.2	4,319.3	4,075.1	244.27	17.683				
10,700.0	6,840.9	6,918.4	6,918.4	110.3	138.0	-89.06	2,852.5	284.2	4,405.0	4,158.0	247.04	17.831				
10,732.1	6,840.6	6,918.1	6,918.1	111.2	138.0	-89.05	2,852.5	284.2	4,432.7	4,184.8	247.93	17.879				
10,800.0	6,839.9	6,917.4	6,917.4	113.0	137.9	-89.11	2,852.5	284.2	4,490.7	4,240.4	250.31	17.941				
10,900.0	6,838.9	6,916.4	6,916.4	115.8	137.9	-89.19	2,852.5	284.2	4,574.4	4,320.8	253.55	18.041				
10,998.8	6,838.0	6,915.5	6,915.5	118.6	137.9	-89.26	2,852.5	284.2	4,654.8	4,398.4	256.44	18.151				
11,000.0	6,838.0	6,915.5	6,915.5	118.6	137.9	-89.25	2,852.5	284.2	4,655.8	4,399.3	256.48	18.153				
11,100.0	6,837.0	6,914.5	6,914.5	121.4	137.9	-89.23	2,852.5	284.2	4,736.4	4,477.2	259.24	18.271				
11,200.0	6,836.0	6,913.5	6,913.5	124.2	137.9	-89.21	2,852.5	284.2	4,817.8	4,555.8	262.00	18.389				
11,300.0	6,835.1	6,912.6	6,912.6	126.9	137.8	-89.20	2,852.5	284.2	4,899.9	4,635.1	264.77	18.506				
11,400.0	6,834.1	6,911.6	6,911.6	129.7	137.8	-89.18	2,852.5	284.2	4,982.6	4,715.1	267.53	18.624				
11,428.1	6,833.8	6,911.3	6,911.3	130.5	137.8	-89.17	2,852.5	284.2	5,006.0	4,737.7	268.31	18.658				
11,487.5	6,833.3	6,910.8	6,910.8	132.2	137.8	-89.23	2,852.5	284.2	5,055.0	4,785.1	269.89	18.730				
11,500.0	6,833.2	6,910.7	6,910.7	132.5	137.8	-89.22	2,852.5	284.2	5,065.2	4,795.0	270.24	18.744				
11,600.0	6,832.2	6,909.7	6,909.7	135.3	137.8	-89.21	2,852.5	284.2	5,147.5	4,874.5	273.00	18.855				
11,700.0	6,831.3	6,908.8	6,908.8	138.1	137.8	-89.19	2,852.5	284.2	5,230.3	4,954.6	275.76	18.967				
11,800.0	6,830.3	6,907.8	6,907.8	140.8	137.7	-89.17	2,852.5	284.2	5,313.8	5,035.2	278.52	19.079				
11,900.0	6,829.4	6,906.9	6,906.9	143.6	137.7	-89.15	2,852.5	284.2	5,397.8	5,116.5	281.28	19.190				
11,938.6	6,829.0	6,906.5	6,906.5	144.7	137.7	-89.14	2,852.5	284.2	5,430.3	5,148.0	282.35	19.233				

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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					Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.0	0.0	69.5	69.5	0.0	0.2	50.91	1,512.0	1,861.4	2,398.1						
100.0	100.0	169.5	169.5	0.1	2.0	50.91	1,512.0	1,861.4	2,398.1	2,396.0	2.11	1,136.073			
200.0	200.0	269.5	269.5	0.3	4.2	50.91	1,512.0	1,861.4	2,398.1	2,393.5	4.56	526.080			
300.0	300.0	369.5	369.5	0.5	6.3	50.91	1,512.0	1,861.4	2,398.1	2,391.2	6.83	351.174			
400.0	400.0	469.5	469.5	0.8	8.3	50.91	1,512.0	1,861.4	2,398.1	2,389.0	9.08	264.077			
500.0	500.0	569.5	569.5	1.0	10.3	50.91	1,512.0	1,861.4	2,398.1	2,386.7	11.33	211.723			
600.0	600.0	669.5	669.5	1.2	12.3	50.91	1,512.0	1,861.4	2,398.1	2,384.5	13.57	176.736			
700.0	700.0	769.5	769.5	1.4	14.4	50.91	1,512.0	1,861.4	2,398.1	2,382.3	15.81	151.690			
800.0	800.0	869.5	869.5	1.7	16.4	50.91	1,512.0	1,861.4	2,398.1	2,380.0	18.05	132.870			
900.0	900.0	969.5	969.5	1.9	18.4	50.91	1,512.0	1,861.4	2,398.1	2,377.8	20.29	118.209			
1,000.0	1,000.0	1,069.5	1,069.5	2.1	20.4	126.75	1,512.0	1,861.4	2,399.1	2,376.6	22.51	106.582			
1,100.0	1,099.8	1,169.3	1,169.3	2.3	22.4	126.80	1,512.0	1,861.4	2,402.3	2,377.5	24.71	97.205			
1,200.0	1,199.5	1,269.0	1,269.0	2.6	24.4	126.88	1,512.0	1,861.4	2,407.5	2,380.6	26.91	89.474			
1,300.0	1,298.7	1,368.2	1,368.2	2.8	26.4	126.99	1,512.0	1,861.4	2,414.8	2,385.8	29.09	83.010			
1,400.0	1,397.5	1,467.0	1,467.0	3.1	28.4	127.13	1,512.0	1,861.4	2,424.4	2,393.1	31.27	77.538			
1,500.0	1,495.6	1,565.1	1,565.1	3.4	30.4	127.30	1,512.0	1,861.4	2,436.0	2,402.6	33.44	72.858			
1,600.0	1,593.4	1,662.9	1,662.9	3.8	32.3	127.68	1,512.0	1,861.4	2,448.9	2,413.2	35.69	68.612			
1,700.0	1,691.3	1,760.8	1,760.8	4.1	34.3	128.06	1,512.0	1,861.4	2,461.8	2,423.8	37.96	64.852			
1,800.0	1,789.1	1,858.6	1,858.6	4.5	36.3	128.43	1,512.0	1,861.4	2,474.8	2,434.6	40.24	61.503			
1,900.0	1,886.9	1,956.4	1,956.4	4.9	38.2	128.80	1,512.0	1,861.4	2,488.0	2,445.5	42.52	58.507			
2,000.0	1,984.7	2,054.2	2,054.2	5.4	40.2	129.17	1,512.0	1,861.4	2,501.2	2,456.4	44.81	55.813			
2,100.0	2,082.5	2,152.0	2,152.0	5.8	42.2	129.53	1,512.0	1,861.4	2,514.6	2,467.5	47.11	53.379			
2,200.0	2,180.3	2,249.8	2,249.8	6.2	44.2	129.89	1,512.0	1,861.4	2,528.1	2,478.7	49.40	51.171			
2,300.0	2,278.1	2,347.6	2,347.6	6.6	46.1	130.24	1,512.0	1,861.4	2,541.6	2,489.9	51.70	49.160			
2,400.0	2,376.0	2,445.5	2,445.5	7.1	48.1	130.59	1,512.0	1,861.4	2,555.3	2,501.3	54.00	47.321			
2,500.0	2,473.8	2,543.3	2,543.3	7.5	50.1	130.94	1,512.0	1,861.4	2,569.0	2,512.7	56.30	45.634			
2,600.0	2,571.6	2,641.1	2,641.1	8.0	52.0	131.29	1,512.0	1,861.4	2,582.9	2,524.3	58.59	44.081			
2,695.7	2,665.2	2,734.7	2,734.7	8.4	53.9	131.61	1,512.0	1,861.4	2,596.2	2,535.4	60.79	42.707			
2,700.0	2,669.4	2,738.9	2,738.9	8.4	54.0	131.64	1,512.0	1,861.4	2,596.8	2,535.9	60.90	42.643			
2,800.0	2,767.6	2,837.1	2,837.1	8.7	56.0	132.14	1,512.0	1,861.4	2,609.6	2,546.3	63.28	41.239			
2,900.0	2,866.4	2,935.9	2,935.9	9.0	57.9	132.54	1,512.0	1,861.4	2,620.1	2,554.4	65.64	39.917			
3,000.0	2,965.6	3,035.1	3,035.1	9.3	59.9	132.85	1,512.0	1,861.4	2,628.3	2,560.3	67.96	38.671			
3,100.0	3,065.3	3,134.8	3,134.8	9.5	61.9	133.08	1,512.0	1,861.4	2,634.1	2,563.9	70.25	37.497			
3,200.0	3,165.1	3,234.6	3,234.6	9.7	64.0	133.21	1,512.0	1,861.4	2,637.6	2,565.1	72.48	36.389			
3,295.7	3,260.8	3,330.3	3,330.3	9.8	65.9	57.43	1,512.0	1,861.4	2,638.7	2,564.2	74.50	35.420			
3,300.0	3,265.1	3,334.6	3,334.6	9.8	66.0	57.43	1,512.0	1,861.4	2,638.7	2,564.1	74.59	35.376			
3,400.0	3,365.1	3,434.6	3,434.6	10.0	68.0	57.43	1,512.0	1,861.4	2,638.7	2,561.9	76.78	34.369			
3,500.0	3,465.1	3,534.6	3,534.6	10.1	70.0	57.43	1,512.0	1,861.4	2,638.7	2,559.7	78.96	33.416			
3,600.0	3,565.1	3,634.6	3,634.6	10.3	72.0	57.43	1,512.0	1,861.4	2,638.7	2,557.5	81.15	32.514			
3,700.0	3,665.1	3,734.6	3,734.6	10.5	74.0	57.43	1,512.0	1,861.4	2,638.7	2,555.3	83.35	31.659			
3,800.0	3,765.1	3,834.6	3,834.6	10.6	76.0	57.43	1,512.0	1,861.4	2,638.7	2,553.1	85.54	30.847			
3,900.0	3,865.1	3,934.6	3,934.6	10.8	78.0	57.43	1,512.0	1,861.4	2,638.7	2,550.9	87.74	30.075			
4,000.0	3,965.1	4,034.6	4,034.6	11.0	80.0	57.43	1,512.0	1,861.4	2,638.7	2,548.7	89.93	29.340			
4,100.0	4,065.1	4,134.6	4,134.6	11.1	82.1	57.43	1,512.0	1,861.4	2,638.7	2,546.5	92.13	28.640			
4,200.0	4,165.1	4,234.6	4,234.6	11.3	84.1	57.43	1,512.0	1,861.4	2,638.7	2,544.3	94.33	27.972			
4,300.0	4,265.1	4,334.6	4,334.6	11.5	86.1	57.43	1,512.0	1,861.4	2,638.7	2,542.1	96.53	27.334			
4,400.0	4,365.1	4,434.6	4,434.6	11.7	88.1	57.43	1,512.0	1,861.4	2,638.7	2,539.9	98.74	26.724			
4,500.0	4,465.1	4,534.6	4,534.6	11.8	90.1	57.43	1,512.0	1,861.4	2,638.7	2,537.7	100.94	26.140			
4,600.0	4,565.1	4,634.6	4,634.6	12.0	92.1	57.43	1,512.0	1,861.4	2,638.7	2,535.5	103.15	25.581			
4,700.0	4,665.1	4,734.6	4,734.6	12.2	94.1	57.43	1,512.0	1,861.4	2,638.7	2,533.3	105.35	25.046			
4,800.0	4,765.1	4,834.6	4,834.6	12.4	96.1	57.43	1,512.0	1,861.4	2,638.7	2,531.1	107.56	24.532			
4,900.0	4,865.1	4,934.6	4,934.6	12.6	98.1	57.43	1,512.0	1,861.4	2,638.7	2,528.9	109.77	24.038			

CC - Min centre 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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT MELLON 28-1 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	4,965.1	5,034.6	5,034.6	12.8	100.2	57.43	1,512.0	1,861.4	2,638.7	2,526.7	111.98	23.564				
5,100.0	5,065.1	5,134.6	5,134.6	12.9	102.2	57.43	1,512.0	1,861.4	2,638.7	2,524.5	114.19	23.107				
5,200.0	5,165.1	5,234.6	5,234.6	13.1	104.2	57.43	1,512.0	1,861.4	2,638.7	2,522.3	116.40	22.668				
5,300.0	5,265.1	5,334.6	5,334.6	13.3	106.2	57.43	1,512.0	1,861.4	2,638.7	2,520.1	118.62	22.246				
5,400.0	5,365.1	5,434.6	5,434.6	13.5	108.2	57.43	1,512.0	1,861.4	2,638.7	2,517.8	120.83	21.838				
5,500.0	5,465.1	5,534.6	5,534.6	13.7	110.2	57.43	1,512.0	1,861.4	2,638.7	2,515.6	123.04	21.445				
5,600.0	5,565.1	5,634.6	5,634.6	13.9	112.2	57.43	1,512.0	1,861.4	2,638.7	2,513.4	125.26	21.066				
5,700.0	5,665.1	5,734.6	5,734.6	14.1	114.2	57.43	1,512.0	1,861.4	2,638.7	2,511.2	127.47	20.700				
5,800.0	5,765.1	5,834.6	5,834.6	14.3	116.2	57.43	1,512.0	1,861.4	2,638.7	2,509.0	129.69	20.346				
5,900.0	5,865.1	5,934.6	5,934.6	14.5	118.3	57.43	1,512.0	1,861.4	2,638.7	2,506.8	131.91	20.004				
6,000.0	5,965.1	6,034.6	6,034.6	14.7	120.3	57.43	1,512.0	1,861.4	2,638.7	2,504.6	134.12	19.674				
6,100.0	6,065.1	6,134.6	6,134.6	14.9	122.3	57.43	1,512.0	1,861.4	2,638.7	2,502.3	136.34	19.354				
6,192.7	6,157.8	6,227.3	6,227.3	15.1	124.1	57.43	1,512.0	1,861.4	2,638.7	2,500.3	138.40	19.066				
6,200.0	6,165.1	6,234.6	6,234.6	15.1	124.3	-32.57	1,512.0	1,861.4	2,638.6	2,500.1	138.58	19.041				
6,250.0	6,215.1	6,284.6	6,284.6	15.1	125.3	-32.68	1,512.0	1,861.4	2,636.7	2,497.4	139.34	18.923				
6,300.0	6,264.7	6,334.2	6,334.2	15.2	126.3	-32.95	1,512.0	1,861.4	2,631.9	2,492.3	139.62	18.850				
6,350.0	6,313.9	6,383.4	6,383.4	15.2	127.3	-33.41	1,512.0	1,861.4	2,624.2	2,484.7	139.44	18.819				
6,400.0	6,362.2	6,431.7	6,431.7	15.3	128.3	-34.04	1,512.0	1,861.4	2,613.6	2,474.8	138.83	18.826				
6,450.0	6,409.6	6,479.1	6,479.1	15.3	129.2	-34.86	1,512.0	1,861.4	2,600.3	2,462.4	137.83	18.866				
6,500.0	6,455.8	6,525.3	6,525.3	15.3	130.1	-35.89	1,512.0	1,861.4	2,584.2	2,447.7	136.52	18.929				
6,550.0	6,500.5	6,570.0	6,570.0	15.3	131.0	-37.13	1,512.0	1,861.4	2,565.5	2,430.5	135.00	19.003				
6,600.0	6,543.5	6,613.0	6,613.0	15.3	131.9	-38.61	1,512.0	1,861.4	2,544.4	2,411.0	133.42	19.070				
6,650.0	6,584.7	6,654.2	6,654.2	15.3	132.7	-40.34	1,512.0	1,861.4	2,520.9	2,389.0	131.93	19.108				
6,700.0	6,623.7	6,693.2	6,693.2	15.4	133.5	-42.35	1,512.0	1,861.4	2,495.2	2,364.5	130.73	19.087				
6,750.0	6,660.6	6,730.1	6,730.1	15.5	134.3	-44.67	1,512.0	1,861.4	2,467.5	2,337.4	130.03	18.976				
6,800.0	6,694.9	6,764.4	6,764.4	15.7	134.9	-47.30	1,512.0	1,861.4	2,437.9	2,307.8	130.04	18.774				
6,850.0	6,726.6	6,796.1	6,796.1	15.9	135.6	-50.27	1,512.0	1,861.4	2,406.6	2,275.6	130.93	18.380				
6,900.0	6,755.6	6,825.1	6,825.1	16.2	136.2	-53.59	1,512.0	1,861.4	2,373.8	2,241.0	132.81	17.874				
6,950.0	6,781.7	6,851.2	6,851.2	16.6	136.7	-57.26	1,512.0	1,861.4	2,339.8	2,204.1	135.66	17.247				
7,000.0	6,804.7	6,874.2	6,874.2	17.1	137.1	-61.26	1,512.0	1,861.4	2,304.7	2,165.3	139.34	16.540				
7,050.0	6,824.6	6,894.1	6,894.1	17.7	137.5	-65.55	1,512.0	1,861.4	2,268.7	2,125.1	143.57	15.802				
7,100.0	6,841.2	6,910.7	6,910.7	18.3	137.9	-70.06	1,512.0	1,861.4	2,232.1	2,084.2	147.96	15.086				
7,150.0	6,854.5	6,924.0	6,924.0	19.0	138.2	-74.71	1,512.0	1,861.4	2,195.2	2,043.1	152.12	14.431				
7,200.0	6,864.4	6,933.9	6,933.9	19.8	138.3	-79.40	1,512.0	1,861.4	2,158.0	2,002.4	155.67	13.863				
7,250.0	6,870.8	6,940.3	6,940.3	20.7	138.5	-84.03	1,512.0	1,861.4	2,121.0	1,962.6	158.36	13.393				
7,300.0	6,873.8	6,943.3	6,943.3	21.6	138.5	-88.48	1,512.0	1,861.4	2,084.2	1,924.1	160.08	13.020				
7,324.7	6,874.0	6,943.5	6,943.5	22.1	138.5	-90.59	1,512.0	1,861.4	2,066.2	1,905.6	160.58	12.867				
7,400.0	6,873.2	6,942.7	6,942.7	23.5	138.5	-90.56	1,512.0	1,861.4	2,012.2	1,850.1	162.05	12.417				
7,500.0	6,872.2	6,941.7	6,941.7	25.6	138.5	-90.52	1,512.0	1,861.4	1,942.6	1,778.5	164.13	11.836				
7,600.0	6,871.3	6,940.8	6,940.8	27.9	138.5	-90.48	1,512.0	1,861.4	1,875.8	1,709.5	166.34	11.277				
7,700.0	6,870.3	6,939.8	6,939.8	30.2	138.5	-90.44	1,512.0	1,861.4	1,812.1	1,643.4	168.64	10.745				
7,800.0	6,869.3	6,938.8	6,938.8	32.6	138.4	-90.40	1,512.0	1,861.4	1,751.7	1,580.7	171.03	10.243				
7,900.0	6,868.3	6,937.8	6,937.8	35.0	138.4	-90.36	1,512.0	1,861.4	1,695.2	1,521.7	173.47	9.772				
8,000.0	6,867.4	6,936.9	6,936.9	37.6	138.4	-90.33	1,512.0	1,861.4	1,642.7	1,466.8	175.96	9.336				
8,100.0	6,866.4	6,935.9	6,935.9	40.1	138.4	-90.29	1,512.0	1,861.4	1,594.8	1,416.3	178.49	8.935				
8,200.0	6,865.4	6,934.9	6,934.9	42.7	138.4	-90.25	1,512.0	1,861.4	1,551.9	1,370.9	181.06	8.571				
8,300.0	6,864.4	6,933.9	6,933.9	45.3	138.4	-90.21	1,512.0	1,861.4	1,514.4	1,330.7	183.65	8.246				
8,400.0	6,863.5	6,933.0	6,933.0	47.9	138.3	-90.17	1,512.0	1,861.4	1,482.7	1,296.4	186.26	7.960				
8,500.0	6,862.5	6,932.0	6,932.0	50.6	138.3	-90.13	1,512.0	1,861.4	1,457.1	1,268.2	188.89	7.714				
8,600.0	6,861.5	6,931.0	6,931.0	53.2	138.3	-90.09	1,512.0	1,861.4	1,438.1	1,246.6	191.54	7.508				
8,614.0	6,861.4	6,930.9	6,930.9	53.6	138.3	-90.08	1,512.0	1,861.4	1,436.0	1,244.1	191.91	7.483				
8,700.0	6,860.5	6,930.0	6,930.0	55.9	138.3	-90.08	1,512.0	1,861.4	1,423.9	1,229.8	194.16	7.334				

CC - Min centre 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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT MELLON 28-1 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,859.5	6,929.0	6,929.0	58.6	138.3	-90.07	1,512.0	1,861.4	1,411.5	1,214.9	196.63	7.179				
8,880.6	6,858.7	6,928.2	6,928.2	60.7	138.2	-90.06	1,512.0	1,861.4	1,402.8	1,204.3	198.51	7.067				
8,900.0	6,858.6	6,928.1	6,928.1	61.2	138.2	-90.05	1,512.0	1,861.4	1,401.0	1,202.0	199.02	7.040				
9,000.0	6,857.6	6,927.1	6,927.1	63.9	138.2	-90.01	1,512.0	1,861.4	1,395.9	1,194.2	201.66	6.922				
9,021.8	6,857.4	6,926.9	6,926.9	64.4	138.2	-90.00	1,512.0	1,861.4	1,395.7	1,193.5	202.24	6.901	CC, ES			
9,100.0	6,856.6	6,926.1	6,926.1	66.5	138.2	-89.97	1,512.0	1,861.4	1,397.9	1,193.6	204.32	6.842				
9,200.0	6,855.6	6,925.1	6,925.1	69.2	138.2	-89.93	1,512.0	1,861.4	1,407.0	1,200.0	206.98	6.798				
9,300.0	6,854.6	6,924.1	6,924.1	71.8	138.2	-89.89	1,512.0	1,861.4	1,423.1	1,213.5	209.65	6.788	SF			
9,368.1	6,854.0	6,923.5	6,923.5	73.7	138.1	-89.86	1,512.0	1,861.4	1,438.0	1,226.5	211.47	6.800				
9,400.0	6,853.6	6,923.1	6,923.1	74.5	138.1	-89.84	1,512.0	1,861.4	1,446.3	1,233.8	212.43	6.808				
9,500.0	6,852.7	6,922.2	6,922.2	77.2	138.1	-89.76	1,512.0	1,861.4	1,479.6	1,264.3	215.34	6.871				
9,600.0	6,851.7	6,921.2	6,921.2	80.0	138.1	-89.68	1,512.0	1,861.4	1,523.5	1,305.4	218.06	6.987				
9,634.8	6,851.3	6,920.8	6,920.8	80.9	138.1	-89.66	1,512.0	1,861.4	1,541.0	1,322.1	218.96	7.038				
9,700.0	6,850.7	6,920.2	6,920.2	82.7	138.1	-89.63	1,512.0	1,861.4	1,576.0	1,355.3	220.74	7.140				
9,800.0	6,849.7	6,919.2	6,919.2	85.5	138.1	-89.58	1,512.0	1,861.4	1,633.2	1,409.7	223.47	7.308				
9,870.5	6,849.0	6,918.5	6,918.5	87.4	138.0	-89.55	1,512.0	1,861.4	1,676.0	1,450.6	225.40	7.435				
9,900.0	6,848.7	6,918.2	6,918.2	88.3	138.0	-89.53	1,512.0	1,861.4	1,694.6	1,468.4	226.15	7.493				
10,000.0	6,847.7	6,917.2	6,917.2	91.0	138.0	-89.43	1,512.0	1,861.4	1,762.4	1,533.8	228.53	7.712				
10,100.0	6,846.8	6,916.3	6,916.3	93.8	138.0	-89.32	1,512.0	1,861.4	1,836.6	1,606.0	230.67	7.962				
10,137.1	6,846.4	6,915.9	6,915.9	94.8	138.0	-89.28	1,512.0	1,861.4	1,865.7	1,634.3	231.41	8.062				
10,200.0	6,845.8	6,915.3	6,915.3	96.5	138.0	-89.24	1,512.0	1,861.4	1,915.8	1,682.7	233.14	8.218				
10,300.0	6,844.8	6,914.3	6,914.3	99.3	138.0	-89.20	1,512.0	1,861.4	1,997.1	1,761.2	235.90	8.466				
10,400.0	6,843.8	6,913.3	6,913.3	102.0	137.9	-89.15	1,512.0	1,861.4	2,080.0	1,841.4	238.66	8.715				
10,500.0	6,842.8	6,912.3	6,912.3	104.8	137.9	-89.10	1,512.0	1,861.4	2,164.4	1,923.0	241.42	8.965				
10,600.0	6,841.9	6,911.4	6,911.4	107.5	137.9	-89.05	1,512.0	1,861.4	2,250.0	2,005.8	244.19	9.214				
10,700.0	6,840.9	6,910.4	6,910.4	110.3	137.9	-89.00	1,512.0	1,861.4	2,336.8	2,089.8	246.95	9.462				
10,732.1	6,840.6	6,910.1	6,910.1	111.2	137.9	-88.98	1,512.0	1,861.4	2,364.9	2,117.1	247.84	9.542				
10,800.0	6,839.9	6,909.4	6,909.4	113.0	137.9	-88.93	1,512.0	1,861.4	2,424.0	2,173.8	250.22	9.687				
10,900.0	6,838.9	6,908.4	6,908.4	115.8	137.8	-89.10	1,512.0	1,861.4	2,509.8	2,256.3	253.47	9.902				
10,998.8	6,838.0	6,907.5	6,907.5	118.6	137.8	-89.17	1,512.0	1,861.4	2,592.9	2,336.5	256.36	10.114				
11,000.0	6,838.0	6,907.5	6,907.5	118.6	137.8	-89.17	1,512.0	1,861.4	2,593.9	2,337.5	256.39	10.117				
11,100.0	6,837.0	6,906.5	6,906.5	121.4	137.8	-89.13	1,512.0	1,861.4	2,677.7	2,418.6	259.15	10.333				
11,200.0	6,836.0	6,905.5	6,905.5	124.2	137.8	-89.09	1,512.0	1,861.4	2,762.7	2,500.8	261.91	10.548				
11,300.0	6,835.1	6,904.6	6,904.6	126.9	137.8	-89.05	1,512.0	1,861.4	2,848.6	2,583.9	264.68	10.763				
11,400.0	6,834.1	6,903.6	6,903.6	129.7	137.7	-89.01	1,512.0	1,861.4	2,935.4	2,667.9	267.44	10.976				
11,428.1	6,833.8	6,903.3	6,903.3	130.5	137.7	-89.00	1,512.0	1,861.4	2,959.9	2,691.7	268.22	11.036				
11,487.5	6,833.3	6,902.8	6,902.8	132.2	137.7	-89.07	1,512.0	1,861.4	3,011.5	2,741.7	269.80	11.162				
11,500.0	6,833.2	6,902.7	6,902.7	132.5	137.7	-89.06	1,512.0	1,861.4	3,022.4	2,752.2	270.15	11.188				
11,600.0	6,832.2	6,901.7	6,901.7	135.3	137.7	-89.03	1,512.0	1,861.4	3,109.3	2,836.4	272.90	11.393				
11,700.0	6,831.3	6,900.8	6,900.8	138.1	137.7	-88.99	1,512.0	1,861.4	3,197.0	2,921.3	275.66	11.597				
11,800.0	6,830.3	6,899.8	6,899.8	140.8	137.7	-88.96	1,512.0	1,861.4	3,285.3	3,006.9	278.42	11.800				
11,900.0	6,829.4	6,898.9	6,898.9	143.6	137.6	-88.92	1,512.0	1,861.4	3,374.4	3,093.2	281.18	12.001				
11,938.6	6,829.0	6,898.5	6,898.5	144.7	137.6	-88.91	1,512.0	1,861.4	3,408.9	3,126.6	282.25	12.078				

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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												Warning		
Reference				Offset		Semi Major Axis			Distance					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	26.5	26.5	0.0	0.2	85.50	127.6	1,619.0	1,624.1					
100.0	100.0	126.5	126.5	0.1	1.4	85.50	127.6	1,619.0	1,624.1	1,622.5	1.53	1,062.320		
200.0	200.0	226.5	226.5	0.3	3.7	85.50	127.6	1,619.0	1,624.1	1,620.0	4.06	399.984		
300.0	300.0	326.5	326.5	0.5	5.8	85.50	127.6	1,619.0	1,624.1	1,617.7	6.36	255.493		
400.0	400.0	426.5	426.5	0.8	7.8	85.50	127.6	1,619.0	1,624.1	1,615.4	8.62	188.405		
500.0	500.0	526.5	526.5	1.0	9.9	85.50	127.6	1,619.0	1,624.1	1,613.2	10.87	149.382		
600.0	600.0	626.5	626.5	1.2	11.9	85.50	127.6	1,619.0	1,624.1	1,610.9	13.12	123.803		
700.0	700.0	726.5	726.5	1.4	13.9	85.50	127.6	1,619.0	1,624.1	1,608.7	15.36	105.724		
800.0	800.0	826.5	826.5	1.7	15.9	85.50	127.6	1,619.0	1,624.1	1,606.5	17.60	92.263		
900.0	900.0	926.5	926.5	1.9	17.9	85.50	127.6	1,619.0	1,624.1	1,604.2	19.84	81.848		
1,000.0	1,000.0	1,026.5	1,026.5	2.1	20.0	161.32	127.6	1,619.0	1,625.7	1,603.7	22.06	73.697		
1,100.0	1,099.8	1,126.3	1,126.3	2.3	22.0	161.35	127.6	1,619.0	1,630.7	1,606.4	24.24	67.277		
1,200.0	1,199.5	1,226.0	1,226.0	2.6	24.0	161.39	127.6	1,619.0	1,638.9	1,612.6	26.38	62.125		
1,300.0	1,298.7	1,325.2	1,325.2	2.8	26.0	161.45	127.6	1,619.0	1,650.5	1,622.0	28.48	57.951		
1,400.0	1,397.5	1,424.0	1,424.0	3.1	28.0	161.53	127.6	1,619.0	1,665.4	1,634.8	30.53	54.549		
1,500.0	1,495.6	1,522.1	1,522.1	3.4	29.9	161.62	127.6	1,619.0	1,683.5	1,651.0	32.52	51.766		
1,600.0	1,593.4	1,619.9	1,619.9	3.8	31.9	161.84	127.6	1,619.0	1,703.3	1,668.6	34.69	49.096		
1,700.0	1,691.3	1,717.8	1,717.8	4.1	33.9	162.05	127.6	1,619.0	1,723.1	1,686.2	36.87	46.734		
1,800.0	1,789.1	1,815.6	1,815.6	4.5	35.8	162.26	127.6	1,619.0	1,742.9	1,703.9	39.05	44.631		
1,900.0	1,886.9	1,913.4	1,913.4	4.9	37.8	162.47	127.6	1,619.0	1,762.8	1,721.5	41.24	42.747		
2,000.0	1,984.7	2,011.2	2,011.2	5.4	39.8	162.67	127.6	1,619.0	1,782.6	1,739.2	43.42	41.051		
2,100.0	2,082.5	2,109.0	2,109.0	5.8	41.7	162.87	127.6	1,619.0	1,802.5	1,756.9	45.61	39.516		
2,200.0	2,180.3	2,206.8	2,206.8	6.2	43.7	163.06	127.6	1,619.0	1,822.4	1,774.6	47.81	38.121		
2,300.0	2,278.1	2,304.6	2,304.6	6.6	45.7	163.25	127.6	1,619.0	1,842.4	1,792.4	50.00	36.848		
2,400.0	2,376.0	2,402.5	2,402.5	7.1	47.6	163.43	127.6	1,619.0	1,862.3	1,810.1	52.19	35.681		
2,500.0	2,473.8	2,500.3	2,500.3	7.5	49.6	163.61	127.6	1,619.0	1,882.3	1,827.9	54.39	34.608		
2,600.0	2,571.6	2,598.1	2,598.1	8.0	51.6	163.79	127.6	1,619.0	1,902.3	1,845.7	56.58	33.619		
2,695.7	2,665.2	2,691.7	2,691.7	8.4	53.5	163.95	127.6	1,619.0	1,921.4	1,862.8	58.69	32.741		
2,700.0	2,669.4	2,695.9	2,695.9	8.4	53.6	163.96	127.6	1,619.0	1,922.3	1,863.5	58.80	32.695		
2,800.0	2,767.6	2,794.1	2,794.1	8.7	55.5	164.22	127.6	1,619.0	1,940.5	1,879.2	61.30	31.655		
2,900.0	2,866.4	2,892.9	2,892.9	9.0	57.5	164.42	127.6	1,619.0	1,955.5	1,891.7	63.77	30.664		
3,000.0	2,965.6	2,992.1	2,992.1	9.3	59.5	164.58	127.6	1,619.0	1,967.1	1,900.9	66.19	29.720		
3,100.0	3,065.3	3,091.8	3,091.8	9.5	61.5	164.69	127.6	1,619.0	1,975.3	1,906.8	68.54	28.820		
3,200.0	3,165.1	3,191.6	3,191.6	9.7	63.5	164.76	127.6	1,619.0	1,980.2	1,909.4	70.82	27.961		
3,295.7	3,260.8	3,287.3	3,287.3	9.8	65.4	88.96	127.6	1,619.0	1,981.8	1,906.6	75.13	26.380		
3,300.0	3,265.1	3,291.6	3,291.6	9.8	65.5	88.96	127.6	1,619.0	1,981.8	1,906.6	75.22	26.347		
3,400.0	3,365.1	3,391.6	3,391.6	10.0	67.5	88.96	127.6	1,619.0	1,981.8	1,904.4	77.39	25.608		
3,500.0	3,465.1	3,491.6	3,491.6	10.1	69.6	88.96	127.6	1,619.0	1,981.8	1,902.2	79.56	24.909		
3,600.0	3,565.1	3,591.6	3,591.6	10.3	71.6	88.96	127.6	1,619.0	1,981.8	1,900.0	81.73	24.247		
3,700.0	3,665.1	3,691.6	3,691.6	10.5	73.6	88.96	127.6	1,619.0	1,981.8	1,897.9	83.91	23.618		
3,800.0	3,765.1	3,791.6	3,791.6	10.6	75.6	88.96	127.6	1,619.0	1,981.8	1,895.7	86.09	23.020		
3,900.0	3,865.1	3,891.6	3,891.6	10.8	77.6	88.96	127.6	1,619.0	1,981.8	1,893.5	88.27	22.451		
4,000.0	3,965.1	3,991.6	3,991.6	11.0	79.6	88.96	127.6	1,619.0	1,981.8	1,891.3	90.45	21.910		
4,100.0	4,065.1	4,091.6	4,091.6	11.1	81.6	88.96	127.6	1,619.0	1,981.8	1,889.1	92.64	21.393		
4,200.0	4,165.1	4,191.6	4,191.6	11.3	83.6	88.96	127.6	1,619.0	1,981.8	1,887.0	94.82	20.900		
4,300.0	4,265.1	4,291.6	4,291.6	11.5	85.6	88.96	127.6	1,619.0	1,981.8	1,884.8	97.01	20.428		
4,400.0	4,365.1	4,391.6	4,391.6	11.7	87.7	88.96	127.6	1,619.0	1,981.8	1,882.6	99.20	19.977		
4,500.0	4,465.1	4,491.6	4,491.6	11.8	89.7	88.96	127.6	1,619.0	1,981.8	1,880.4	101.39	19.546		
4,600.0	4,565.1	4,591.6	4,591.6	12.0	91.7	88.96	127.6	1,619.0	1,981.8	1,878.2	103.59	19.132		
4,700.0	4,665.1	4,691.6	4,691.6	12.2	93.7	88.96	127.6	1,619.0	1,981.8	1,876.0	105.78	18.735		
4,800.0	4,765.1	4,791.6	4,791.6	12.4	95.7	88.96	127.6	1,619.0	1,981.8	1,873.8	107.98	18.354		
4,900.0	4,865.1	4,891.6	4,891.6	12.6	97.7	88.96	127.6	1,619.0	1,981.8	1,871.6	110.17	17.988		

CC - Min centre 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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.0	4,965.1	4,991.6	4,991.6	12.8	99.7	88.96	127.6	1,619.0	1,981.8	1,869.4	112.37	17.636		
5,100.0	5,065.1	5,091.6	5,091.6	12.9	101.7	88.96	127.6	1,619.0	1,981.8	1,867.2	114.57	17.297		
5,200.0	5,165.1	5,191.6	5,191.6	13.1	103.7	88.96	127.6	1,619.0	1,981.8	1,865.0	116.77	16.971		
5,300.0	5,265.1	5,291.6	5,291.6	13.3	105.8	88.96	127.6	1,619.0	1,981.8	1,862.8	118.97	16.657		
5,400.0	5,365.1	5,391.6	5,391.6	13.5	107.8	88.96	127.6	1,619.0	1,981.8	1,860.6	121.18	16.354		
5,500.0	5,465.1	5,491.6	5,491.6	13.7	109.8	88.96	127.6	1,619.0	1,981.8	1,858.4	123.38	16.062		
5,600.0	5,565.1	5,591.6	5,591.6	13.9	111.8	88.96	127.6	1,619.0	1,981.8	1,856.2	125.58	15.780		
5,700.0	5,665.1	5,691.6	5,691.6	14.1	113.8	88.96	127.6	1,619.0	1,981.8	1,854.0	127.79	15.508		
5,800.0	5,765.1	5,791.6	5,791.6	14.3	115.8	88.96	127.6	1,619.0	1,981.8	1,851.8	130.00	15.245		
5,900.0	5,865.1	5,891.6	5,891.6	14.5	117.8	88.96	127.6	1,619.0	1,981.8	1,849.6	132.20	14.990		
6,000.0	5,965.1	5,991.6	5,991.6	14.7	119.8	88.96	127.6	1,619.0	1,981.8	1,847.4	134.41	14.744		
6,100.0	6,065.1	6,091.6	6,091.6	14.9	121.8	88.96	127.6	1,619.0	1,981.8	1,845.2	136.62	14.506		
6,192.7	6,157.8	6,184.3	6,184.3	15.1	123.7	88.96	127.6	1,619.0	1,981.8	1,843.1	138.67	14.291		
6,200.0	6,165.1	6,191.6	6,191.6	15.1	123.9	-1.04	127.6	1,619.0	1,981.7	1,844.3	137.39	14.424		
6,250.0	6,215.1	6,241.6	6,241.6	15.1	124.9	-1.04	127.6	1,619.0	1,979.5	1,841.5	138.02	14.342		
6,300.0	6,264.7	6,291.2	6,291.2	15.2	125.9	-1.06	127.6	1,619.0	1,973.8	1,835.8	137.96	14.307		
6,350.0	6,313.9	6,340.4	6,340.4	15.2	126.8	-1.07	127.6	1,619.0	1,964.6	1,827.4	137.21	14.318		
6,400.0	6,362.2	6,388.7	6,388.7	15.3	127.8	-1.10	127.6	1,619.0	1,952.0	1,816.2	135.77	14.378		
6,450.0	6,409.6	6,436.1	6,436.1	15.3	128.8	-1.14	127.6	1,619.0	1,936.1	1,802.4	133.61	14.490		
6,500.0	6,455.8	6,482.3	6,482.3	15.3	129.7	-1.18	127.6	1,619.0	1,916.9	1,786.1	130.76	14.659		
6,550.0	6,500.5	6,527.0	6,527.0	15.3	130.6	-1.24	127.6	1,619.0	1,894.5	1,767.3	127.21	14.893		
6,600.0	6,543.5	6,570.0	6,570.0	15.3	131.5	-1.31	127.6	1,619.0	1,869.1	1,746.1	122.97	15.199		
6,650.0	6,584.7	6,611.2	6,611.2	15.3	132.3	-1.39	127.6	1,619.0	1,840.7	1,722.6	118.08	15.589		
6,700.0	6,623.7	6,650.2	6,650.2	15.4	133.1	-1.50	127.6	1,619.0	1,809.5	1,697.0	112.54	16.079		
6,750.0	6,660.6	6,687.1	6,687.1	15.5	133.8	-1.63	127.6	1,619.0	1,775.7	1,669.3	106.39	16.690		
6,800.0	6,694.9	6,721.4	6,721.4	15.7	134.5	-1.79	127.6	1,619.0	1,739.4	1,639.7	99.68	17.449		
6,850.0	6,726.6	6,753.1	6,753.1	15.9	135.1	-1.99	127.6	1,619.0	1,700.8	1,608.3	92.45	18.396		
6,900.0	6,755.6	6,782.1	6,782.1	16.2	135.7	-2.25	127.6	1,619.0	1,660.0	1,575.3	84.77	19.584		
6,950.0	6,781.7	6,808.2	6,808.2	16.6	136.3	-2.59	127.6	1,619.0	1,617.4	1,540.7	76.69	21.089		
7,000.0	6,804.7	6,831.2	6,831.2	17.1	136.7	-3.05	127.6	1,619.0	1,573.0	1,504.7	68.34	23.018		
7,050.0	6,824.6	6,851.1	6,851.1	17.7	137.1	-3.69	127.6	1,619.0	1,527.2	1,467.3	59.86	25.511		
7,100.0	6,841.2	6,867.7	6,867.7	18.3	137.4	-4.64	127.6	1,619.0	1,480.0	1,428.5	51.58	28.696		
7,150.0	6,854.5	6,881.0	6,881.0	19.0	137.7	-6.18	127.6	1,619.0	1,431.9	1,387.6	44.29	32.328		
7,200.0	6,864.4	6,890.9	6,890.9	19.8	137.9	-9.04	127.6	1,619.0	1,382.9	1,342.2	40.70	33.977		
7,250.0	6,870.8	6,897.3	6,897.3	20.7	138.0	-15.96	127.6	1,619.0	1,333.3	1,282.8	50.56	26.370		
7,300.0	6,873.8	6,900.3	6,900.3	21.6	138.1	-48.63	127.6	1,619.0	1,283.4	1,162.3	121.15	10.594		
7,324.7	6,874.0	6,900.5	6,900.5	22.1	138.1	-108.88	127.6	1,619.0	1,258.8	1,107.1	151.62	8.302		
7,400.0	6,873.2	6,899.7	6,899.7	23.5	138.1	-107.82	127.6	1,619.0	1,183.5	1,029.6	153.93	7.688		
7,500.0	6,872.2	6,898.7	6,898.7	25.6	138.1	-106.40	127.6	1,619.0	1,083.5	926.4	157.09	6.897		
7,600.0	6,871.3	6,897.8	6,897.8	27.9	138.1	-104.96	127.6	1,619.0	983.6	823.3	160.33	6.135		
7,700.0	6,870.3	6,896.8	6,896.8	30.2	138.0	-103.49	127.6	1,619.0	883.7	720.1	163.60	5.402		
7,800.0	6,869.3	6,895.8	6,895.8	32.6	138.0	-102.01	127.6	1,619.0	783.8	616.9	166.87	4.697		
7,900.0	6,868.3	6,894.8	6,894.8	35.0	138.0	-100.52	127.6	1,619.0	683.9	513.8	170.14	4.020		
8,000.0	6,867.4	6,893.9	6,893.9	37.6	138.0	-99.00	127.6	1,619.0	584.1	410.7	173.36	3.369		
8,100.0	6,866.4	6,892.9	6,892.9	40.1	138.0	-97.48	127.6	1,619.0	484.3	307.8	176.54	2.743		
8,200.0	6,865.4	6,891.9	6,891.9	42.7	137.9	-95.94	127.6	1,619.0	384.7	205.0	179.64	2.141		
8,300.0	6,864.4	6,890.9	6,890.9	45.3	137.9	-94.40	127.6	1,619.0	285.3	102.6	182.66	1.562		
8,400.0	6,863.5	6,890.0	6,890.0	47.9	137.9	-92.85	127.6	1,619.0	186.5	0.9	185.58	1.005 Level 2		
8,500.0	6,862.5	6,889.0	6,889.0	50.6	137.9	-91.29	127.6	1,619.0	90.4	-98.0	188.40	0.480 Level 1		
8,583.0	6,861.7	6,888.2	6,888.2	52.8	137.9	-90.00	127.6	1,619.0	36.0	-154.7	190.65	0.189 Level 1, CC, ES, SF		
8,600.0	6,861.5	6,888.0	6,888.0	53.2	137.9	-89.74	127.6	1,619.0	39.8	-151.3	191.10	0.208 Level 1		
8,614.0	6,861.4	6,887.9	6,887.9	53.6	137.9	-89.52	127.6	1,619.0	47.5	-144.0	191.47	0.248 Level 1		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT MELLON 28-2 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,860.5	6,887.0	6,887.0	55.9	137.8	-88.35	127.6	1,619.0	121.8	-71.8	193.66	0.629	Level 1			
8,800.0	6,859.5	6,886.0	6,886.0	58.6	137.8	-87.49	127.6	1,619.0	218.4	22.3	196.03	1.114	Level 2			
8,880.6	6,858.7	6,885.2	6,885.2	60.7	137.8	-87.20	127.6	1,619.0	297.3	99.4	197.86	1.502				
8,900.0	6,858.6	6,885.1	6,885.1	61.2	137.8	-87.01	127.6	1,619.0	316.3	117.9	198.34	1.595				
9,000.0	6,857.6	6,884.1	6,884.1	63.9	137.8	-86.05	127.6	1,619.0	415.0	214.2	200.79	2.067				
9,100.0	6,856.6	6,883.1	6,883.1	66.5	137.8	-85.10	127.6	1,619.0	514.2	311.0	203.19	2.530				
9,200.0	6,855.6	6,882.1	6,882.1	69.2	137.7	-84.14	127.6	1,619.0	613.6	408.1	205.54	2.985				
9,300.0	6,854.6	6,881.1	6,881.1	71.8	137.7	-83.19	127.6	1,619.0	713.2	505.4	207.83	3.432				
9,368.1	6,854.0	6,880.5	6,880.5	73.7	137.7	-82.55	127.6	1,619.0	781.1	571.8	209.35	3.731				
9,400.0	6,853.6	6,880.1	6,880.1	74.5	137.7	-79.99	127.6	1,619.0	812.9	604.0	208.93	3.891				
9,500.0	6,852.7	6,879.2	6,879.2	77.2	137.7	-0.50	127.6	1,619.0	912.9	883.3	29.57	30.870				
9,600.0	6,851.7	6,878.2	6,878.2	80.0	137.7	78.79	127.6	1,619.0	1,012.8	799.3	213.52	4.743				
9,634.8	6,851.3	6,877.8	6,877.8	80.9	137.7	81.52	127.6	1,619.0	1,047.5	831.4	216.15	4.846				
9,700.0	6,850.7	6,877.2	6,877.2	82.7	137.6	81.00	127.6	1,619.0	1,112.6	895.0	217.61	5.113				
9,800.0	6,849.7	6,876.2	6,876.2	85.5	137.6	80.20	127.6	1,619.0	1,212.4	992.6	219.82	5.516				
9,870.5	6,849.0	6,875.5	6,875.5	87.4	137.6	79.64	127.6	1,619.0	1,282.8	1,061.5	221.35	5.795				
9,900.0	6,848.7	6,875.2	6,875.2	88.3	137.6	81.76	127.6	1,619.0	1,312.3	1,088.9	223.40	5.874				
10,000.0	6,847.7	6,874.2	6,874.2	91.0	137.6	85.08	127.6	1,619.0	1,411.8	1,184.6	227.25	6.213				
10,100.0	6,846.8	6,873.3	6,873.3	93.8	137.6	86.46	127.6	1,619.0	1,510.9	1,281.1	229.79	6.575				
10,137.1	6,846.4	6,872.9	6,872.9	94.8	137.6	86.79	127.6	1,619.0	1,547.6	1,317.0	230.60	6.711				
10,200.0	6,845.8	6,872.3	6,872.3	96.5	137.5	86.66	127.6	1,619.0	1,609.5	1,377.2	232.31	6.928				
10,300.0	6,844.8	6,871.3	6,871.3	99.3	137.5	86.45	127.6	1,619.0	1,708.2	1,473.2	235.01	7.269				
10,400.0	6,843.8	6,870.3	6,870.3	102.0	137.5	86.24	127.6	1,619.0	1,807.1	1,569.4	237.71	7.602				
10,500.0	6,842.8	6,869.3	6,869.3	104.8	137.5	86.03	127.6	1,619.0	1,906.0	1,665.6	240.41	7.928				
10,600.0	6,841.9	6,868.4	6,868.4	107.5	137.5	85.82	127.6	1,619.0	2,005.1	1,762.0	243.11	8.248				
10,700.0	6,840.9	6,867.4	6,867.4	110.3	137.4	85.61	127.6	1,619.0	2,104.3	1,858.5	245.81	8.561				
10,732.1	6,840.6	6,867.1	6,867.1	111.2	137.4	85.54	127.6	1,619.0	2,136.2	1,889.5	246.67	8.660				
10,800.0	6,839.9	6,866.4	6,866.4	113.0	137.4	83.52	127.6	1,619.0	2,203.6	1,955.4	248.22	8.878				
10,900.0	6,838.9	6,865.4	6,865.4	115.8	137.4	72.46	127.6	1,619.0	2,303.5	2,061.9	241.57	9.535				
10,998.8	6,838.0	6,864.5	6,864.5	118.6	137.4	-65.51	127.6	1,619.0	2,402.2	2,168.3	233.97	10.267				
11,000.0	6,838.0	6,864.5	6,864.5	118.6	137.4	-65.50	127.6	1,619.0	2,403.4	2,169.4	233.98	10.272				
11,100.0	6,837.0	6,863.5	6,863.5	121.4	137.4	-64.60	127.6	1,619.0	2,503.4	2,268.5	234.89	10.658				
11,200.0	6,836.0	6,862.5	6,862.5	124.2	137.3	-63.72	127.6	1,619.0	2,603.4	2,367.6	235.74	11.044				
11,300.0	6,835.1	6,861.6	6,861.6	126.9	137.3	-62.86	127.6	1,619.0	2,703.4	2,466.8	236.52	11.430				
11,400.0	6,834.1	6,860.6	6,860.6	129.7	137.3	-62.00	127.6	1,619.0	2,803.3	2,566.1	237.25	11.816				
11,428.1	6,833.8	6,860.3	6,860.3	130.5	137.3	-61.76	127.6	1,619.0	2,831.4	2,594.0	237.44	11.925				
11,487.5	6,833.3	6,859.8	6,859.8	132.2	137.3	-78.92	127.6	1,619.0	2,890.8	2,626.1	264.65	10.923				
11,500.0	6,833.2	6,859.7	6,859.7	132.5	137.3	-78.88	127.6	1,619.0	2,903.3	2,638.3	264.95	10.958				
11,600.0	6,832.2	6,858.7	6,858.7	135.3	137.3	-78.50	127.6	1,619.0	3,003.2	2,735.8	267.33	11.234				
11,700.0	6,831.3	6,857.8	6,857.8	138.1	137.3	-78.13	127.6	1,619.0	3,103.1	2,833.4	269.70	11.506				
11,800.0	6,830.3	6,856.8	6,856.8	140.8	137.2	-77.76	127.6	1,619.0	3,203.0	2,930.9	272.05	11.773				
11,900.0	6,829.4	6,855.9	6,855.9	143.6	137.2	-77.39	127.6	1,619.0	3,302.9	3,028.5	274.38	12.037				
11,938.6	6,829.0	6,855.5	6,855.5	144.7	137.2	-77.24	127.6	1,619.0	3,341.4	3,066.1	275.28	12.138				

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT MELLON 28-4 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	32.39	2,670.4	1,694.1	3,162.5							
100.0	100.0	200.5	200.5	0.1	1.2	32.39	2,670.4	1,694.1	3,162.5	3,161.2	1.25	2,522.546				
200.0	200.0	300.5	300.5	0.3	3.5	32.39	2,670.4	1,694.1	3,162.5	3,158.7	3.78	836.874				
300.0	300.0	400.5	400.5	0.5	5.5	32.39	2,670.4	1,694.1	3,162.5	3,156.4	6.08	519.912				
400.0	400.0	500.5	500.5	0.8	7.6	32.39	2,670.4	1,694.1	3,162.5	3,154.1	8.35	378.748				
500.0	500.0	600.5	600.5	1.0	9.6	32.39	2,670.4	1,694.1	3,162.5	3,151.9	10.60	298.243				
600.0	600.0	700.5	700.5	1.2	11.6	32.39	2,670.4	1,694.1	3,162.5	3,149.6	12.85	246.084				
700.0	700.0	800.5	800.5	1.4	13.6	32.39	2,670.4	1,694.1	3,162.5	3,147.4	15.10	209.501				
800.0	800.0	900.5	900.5	1.7	15.7	32.39	2,670.4	1,694.1	3,162.5	3,145.1	17.34	182.410				
900.0	900.0	1,000.5	1,000.5	1.9	17.7	32.39	2,670.4	1,694.1	3,162.5	3,142.9	19.58	161.535				
1,000.0	1,000.0	1,100.5	1,100.5	2.1	19.7	108.23	2,670.4	1,694.1	3,163.0	3,141.2	21.81	145.053				
1,100.0	1,099.8	1,200.3	1,200.3	2.3	21.7	108.28	2,670.4	1,694.1	3,164.7	3,140.6	24.02	131.728				
1,200.0	1,199.5	1,300.0	1,300.0	2.6	23.7	108.38	2,670.4	1,694.1	3,167.4	3,141.2	26.25	120.682				
1,300.0	1,298.7	1,399.2	1,399.2	2.8	25.7	108.51	2,670.4	1,694.1	3,171.3	3,142.8	28.47	111.372				
1,400.0	1,397.5	1,498.0	1,498.0	3.1	27.7	108.68	2,670.4	1,694.1	3,176.4	3,145.6	30.72	103.409				
1,500.0	1,495.6	1,596.1	1,596.1	3.4	29.7	108.89	2,670.4	1,694.1	3,182.6	3,149.6	32.98	96.513				
1,600.0	1,593.4	1,693.9	1,693.9	3.8	31.6	109.23	2,670.4	1,694.1	3,189.5	3,154.2	35.28	90.407				
1,700.0	1,691.3	1,791.8	1,791.8	4.1	33.6	109.58	2,670.4	1,694.1	3,196.6	3,159.0	37.60	85.013				
1,800.0	1,789.1	1,889.6	1,889.6	4.5	35.6	109.92	2,670.4	1,694.1	3,203.7	3,163.8	39.94	80.223				
1,900.0	1,886.9	1,987.4	1,987.4	4.9	37.5	110.26	2,670.4	1,694.1	3,211.0	3,168.7	42.28	75.949				
2,000.0	1,984.7	2,085.2	2,085.2	5.4	39.5	110.60	2,670.4	1,694.1	3,218.4	3,173.8	44.63	72.115				
2,100.0	2,082.5	2,183.0	2,183.0	5.8	41.5	110.94	2,670.4	1,694.1	3,225.9	3,178.9	46.98	68.660				
2,200.0	2,180.3	2,280.8	2,280.8	6.2	43.5	111.28	2,670.4	1,694.1	3,233.6	3,184.2	49.34	65.532				
2,300.0	2,278.1	2,378.6	2,378.6	6.6	45.4	111.62	2,670.4	1,694.1	3,241.3	3,189.6	51.70	62.689				
2,400.0	2,376.0	2,476.5	2,476.5	7.1	47.4	111.95	2,670.4	1,694.1	3,249.2	3,195.1	54.07	60.094				
2,500.0	2,473.8	2,574.3	2,574.3	7.5	49.4	112.28	2,670.4	1,694.1	3,257.2	3,200.7	56.43	57.717				
2,600.0	2,571.6	2,672.1	2,672.1	8.0	51.3	112.61	2,670.4	1,694.1	3,265.2	3,206.4	58.80	55.533				
2,695.7	2,665.2	2,765.7	2,765.7	8.4	53.2	112.93	2,670.4	1,694.1	3,273.1	3,212.0	61.06	53.603				
2,700.0	2,669.4	2,769.9	2,769.9	8.4	53.3	112.95	2,670.4	1,694.1	3,273.4	3,212.3	61.16	53.519				
2,800.0	2,767.6	2,868.1	2,868.1	8.7	55.3	113.39	2,670.4	1,694.1	3,281.0	3,217.5	63.48	51.682				
2,900.0	2,866.4	2,966.9	2,966.9	9.0	57.3	113.75	2,670.4	1,694.1	3,287.3	3,221.5	65.79	49.968				
3,000.0	2,965.6	3,066.1	3,066.1	9.3	59.2	114.03	2,670.4	1,694.1	3,292.2	3,224.1	68.06	48.369				
3,100.0	3,065.3	3,165.8	3,165.8	9.5	61.3	114.23	2,670.4	1,694.1	3,295.7	3,225.4	70.31	46.875				
3,200.0	3,165.1	3,265.6	3,265.6	9.7	63.3	114.35	2,670.4	1,694.1	3,297.8	3,225.3	72.52	45.477				
3,295.7	3,260.8	3,361.3	3,361.3	9.8	65.2	38.57	2,670.4	1,694.1	3,298.4	3,225.4	73.01	45.179				
3,300.0	3,265.1	3,365.6	3,365.6	9.8	65.3	38.57	2,670.4	1,694.1	3,298.4	3,225.3	73.10	45.121				
3,400.0	3,365.1	3,465.6	3,465.6	10.0	67.3	38.57	2,670.4	1,694.1	3,298.4	3,223.1	75.30	43.802				
3,500.0	3,465.1	3,565.6	3,565.6	10.1	69.3	38.57	2,670.4	1,694.1	3,298.4	3,220.9	77.51	42.557				
3,600.0	3,565.1	3,665.6	3,665.6	10.3	71.3	38.57	2,670.4	1,694.1	3,298.4	3,218.7	79.71	41.380				
3,700.0	3,665.1	3,765.6	3,765.6	10.5	73.3	38.57	2,670.4	1,694.1	3,298.4	3,216.5	81.92	40.266				
3,800.0	3,765.1	3,865.6	3,865.6	10.6	75.3	38.57	2,670.4	1,694.1	3,298.4	3,214.3	84.12	39.209				
3,900.0	3,865.1	3,965.6	3,965.6	10.8	77.3	38.57	2,670.4	1,694.1	3,298.4	3,212.1	86.33	38.206				
4,000.0	3,965.1	4,065.6	4,065.6	11.0	79.3	38.57	2,670.4	1,694.1	3,298.4	3,209.9	88.54	37.252				
4,100.0	4,065.1	4,165.6	4,165.6	11.1	81.4	38.57	2,670.4	1,694.1	3,298.4	3,207.7	90.75	36.345				
4,200.0	4,165.1	4,265.6	4,265.6	11.3	83.4	38.57	2,670.4	1,694.1	3,298.4	3,205.5	92.97	35.480				
4,300.0	4,265.1	4,365.6	4,365.6	11.5	85.4	38.57	2,670.4	1,694.1	3,298.4	3,203.3	95.18	34.655				
4,400.0	4,365.1	4,465.6	4,465.6	11.7	87.4	38.57	2,670.4	1,694.1	3,298.4	3,201.0	97.39	33.867				
4,500.0	4,465.1	4,565.6	4,565.6	11.8	89.4	38.57	2,670.4	1,694.1	3,298.4	3,198.8	99.61	33.114				
4,600.0	4,565.1	4,665.6	4,665.6	12.0	91.4	38.57	2,670.4	1,694.1	3,298.4	3,196.6	101.82	32.393				
4,700.0	4,665.1	4,765.6	4,765.6	12.2	93.4	38.57	2,670.4	1,694.1	3,298.4	3,194.4	104.04	31.703				
4,800.0	4,765.1	4,865.6	4,865.6	12.4	95.4	38.57	2,670.4	1,694.1	3,298.4	3,192.2	106.26	31.041				
4,900.0	4,865.1	4,965.6	4,965.6	12.6	97.4	38.57	2,670.4	1,694.1	3,298.4	3,190.0	108.48	30.407				

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT MELLON 28-4 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	4,965.1	5,065.6	5,065.6	12.8	99.5	38.57	2,670.4	1,694.1	3,298.4	3,187.7	110.70	29.797				
5,100.0	5,065.1	5,165.6	5,165.6	12.9	101.5	38.57	2,670.4	1,694.1	3,298.4	3,185.5	112.92	29.211				
5,200.0	5,165.1	5,265.6	5,265.6	13.1	103.5	38.57	2,670.4	1,694.1	3,298.4	3,183.3	115.14	28.648				
5,300.0	5,265.1	5,365.6	5,365.6	13.3	105.5	38.57	2,670.4	1,694.1	3,298.4	3,181.1	117.36	28.106				
5,400.0	5,365.1	5,465.6	5,465.6	13.5	107.5	38.57	2,670.4	1,694.1	3,298.4	3,178.9	119.58	27.584				
5,500.0	5,465.1	5,565.6	5,565.6	13.7	109.5	38.57	2,670.4	1,694.1	3,298.4	3,176.6	121.80	27.081				
5,600.0	5,565.1	5,665.6	5,665.6	13.9	111.5	38.57	2,670.4	1,694.1	3,298.4	3,174.4	124.02	26.596				
5,700.0	5,665.1	5,765.6	5,765.6	14.1	113.5	38.57	2,670.4	1,694.1	3,298.4	3,172.2	126.24	26.127				
5,800.0	5,765.1	5,865.6	5,865.6	14.3	115.5	38.57	2,670.4	1,694.1	3,298.4	3,170.0	128.47	25.675				
5,900.0	5,865.1	5,965.6	5,965.6	14.5	117.6	38.57	2,670.4	1,694.1	3,298.4	3,167.7	130.69	25.238				
6,000.0	5,965.1	6,065.6	6,065.6	14.7	119.6	38.57	2,670.4	1,694.1	3,298.4	3,165.5	132.92	24.816				
6,100.0	6,065.1	6,165.6	6,165.6	14.9	121.6	38.57	2,670.4	1,694.1	3,298.4	3,163.3	135.14	24.408				
6,192.7	6,157.8	6,258.3	6,258.3	15.1	123.4	38.57	2,670.4	1,694.1	3,298.4	3,161.2	137.20	24.041				
6,200.0	6,165.1	6,265.6	6,265.6	15.1	123.6	-51.43	2,670.4	1,694.1	3,298.4	3,160.0	138.37	23.838				
6,250.0	6,215.1	6,315.6	6,315.6	15.1	124.6	-51.55	2,670.4	1,694.1	3,297.0	3,157.7	139.28	23.673				
6,300.0	6,264.7	6,365.2	6,365.2	15.2	125.6	-51.85	2,670.4	1,694.1	3,293.4	3,153.5	139.92	23.538				
6,350.0	6,313.9	6,414.4	6,414.4	15.2	126.6	-52.34	2,670.4	1,694.1	3,287.7	3,147.4	140.32	23.431				
6,400.0	6,362.2	6,462.7	6,462.7	15.3	127.6	-53.01	2,670.4	1,694.1	3,279.9	3,139.4	140.50	23.345				
6,450.0	6,409.6	6,510.1	6,510.1	15.3	128.5	-53.87	2,670.4	1,694.1	3,270.1	3,129.6	140.52	23.272				
6,500.0	6,455.8	6,556.3	6,556.3	15.3	129.4	-54.92	2,670.4	1,694.1	3,258.4	3,117.9	140.44	23.201				
6,550.0	6,500.5	6,601.0	6,601.0	15.3	130.3	-56.16	2,670.4	1,694.1	3,244.7	3,104.4	140.35	23.119				
6,600.0	6,543.5	6,644.0	6,644.0	15.3	131.2	-57.58	2,670.4	1,694.1	3,229.4	3,089.0	140.32	23.015				
6,650.0	6,584.7	6,685.2	6,685.2	15.3	132.0	-59.19	2,670.4	1,694.1	3,212.4	3,071.9	140.44	22.874				
6,700.0	6,623.7	6,724.2	6,724.2	15.4	132.8	-60.98	2,670.4	1,694.1	3,193.9	3,053.1	140.80	22.684				
6,750.0	6,660.6	6,761.1	6,761.1	15.5	133.6	-62.93	2,670.4	1,694.1	3,174.0	3,032.6	141.45	22.440				
6,800.0	6,694.9	6,795.4	6,795.4	15.7	134.2	-65.05	2,670.4	1,694.1	3,153.0	3,010.6	142.43	22.137				
6,850.0	6,726.6	6,827.1	6,827.1	15.9	134.9	-67.30	2,670.4	1,694.1	3,130.9	2,987.2	143.75	21.780				
6,900.0	6,755.6	6,856.1	6,856.1	16.2	135.5	-69.67	2,670.4	1,694.1	3,108.0	2,962.6	145.38	21.379				
6,950.0	6,781.7	6,882.2	6,882.2	16.6	136.0	-72.14	2,670.4	1,694.1	3,084.4	2,937.2	147.24	20.947				
7,000.0	6,804.7	6,905.2	6,905.2	17.1	136.5	-74.67	2,670.4	1,694.1	3,060.3	2,911.0	149.26	20.502				
7,050.0	6,824.6	6,925.1	6,925.1	17.7	136.9	-77.22	2,670.4	1,694.1	3,035.8	2,884.5	151.33	20.061				
7,100.0	6,841.2	6,941.7	6,941.7	18.3	137.2	-79.77	2,670.4	1,694.1	3,011.2	2,857.9	153.35	19.637				
7,150.0	6,854.5	6,955.0	6,955.0	19.0	137.5	-82.28	2,670.4	1,694.1	2,986.6	2,831.4	155.22	19.242				
7,200.0	6,864.4	6,964.9	6,964.9	19.8	137.7	-84.72	2,670.4	1,694.1	2,962.2	2,805.3	156.87	18.883				
7,250.0	6,870.8	6,971.3	6,971.3	20.7	137.8	-87.05	2,670.4	1,694.1	2,938.1	2,779.9	158.28	18.563				
7,300.0	6,873.8	6,974.3	6,974.3	21.6	137.8	-89.26	2,670.4	1,694.1	2,914.5	2,755.1	159.42	18.282				
7,324.7	6,874.0	6,974.5	6,974.5	22.1	137.8	-90.29	2,670.4	1,694.1	2,903.1	2,743.2	159.89	18.157				
7,400.0	6,873.2	6,973.7	6,973.7	23.5	137.8	-90.27	2,670.4	1,694.1	2,869.3	2,708.0	161.36	17.782				
7,500.0	6,872.2	6,972.7	6,972.7	25.6	137.8	-90.25	2,670.4	1,694.1	2,826.9	2,663.5	163.44	17.296				
7,600.0	6,871.3	6,971.8	6,971.8	27.9	137.8	-90.23	2,670.4	1,694.1	2,787.4	2,621.8	165.65	16.827				
7,700.0	6,870.3	6,970.8	6,970.8	30.2	137.8	-90.21	2,670.4	1,694.1	2,751.0	2,583.1	167.95	16.380				
7,800.0	6,869.3	6,969.8	6,969.8	32.6	137.8	-90.19	2,670.4	1,694.1	2,717.8	2,547.5	170.34	15.956				
7,900.0	6,868.3	6,968.8	6,968.8	35.0	137.7	-90.16	2,670.4	1,694.1	2,687.9	2,515.2	172.78	15.557				
8,000.0	6,867.4	6,967.9	6,967.9	37.6	137.7	-90.14	2,670.4	1,694.1	2,661.5	2,486.2	175.27	15.185				
8,100.0	6,866.4	6,966.9	6,966.9	40.1	137.7	-90.12	2,670.4	1,694.1	2,638.5	2,460.7	177.80	14.840				
8,200.0	6,865.4	6,965.9	6,965.9	42.7	137.7	-90.10	2,670.4	1,694.1	2,619.2	2,438.8	180.36	14.522				
8,300.0	6,864.4	6,964.9	6,964.9	45.3	137.7	-90.08	2,670.4	1,694.1	2,603.6	2,420.6	182.95	14.231				
8,400.0	6,863.5	6,964.0	6,964.0	47.9	137.6	-90.06	2,670.4	1,694.1	2,591.7	2,406.2	185.56	13.967				
8,500.0	6,862.5	6,963.0	6,963.0	50.6	137.6	-90.03	2,670.4	1,694.1	2,583.7	2,395.5	188.20	13.729				
8,600.0	6,861.5	6,962.0	6,962.0	53.2	137.6	-90.01	2,670.4	1,694.1	2,579.5	2,388.7	190.84	13.516				
8,614.0	6,861.4	6,961.9	6,961.9	53.6	137.6	-90.01	2,670.4	1,694.1	2,579.2	2,388.0	191.21	13.489				
8,700.0	6,860.5	6,961.0	6,961.0	55.9	137.6	-90.02	2,670.4	1,694.1	2,577.3	2,383.8	193.46	13.322				

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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			
8,800.0	6,859.5	6,960.0	6,960.0	58.6	137.6	-90.02	2,670.4	1,694.1	2,573.7	2,377.8	195.94	13.135			
8,880.6	6,858.7	6,959.2	6,959.2	60.7	137.5	-90.03	2,670.4	1,694.1	2,569.8	2,372.0	197.81	12.991			
8,900.0	6,858.6	6,959.1	6,959.1	61.2	137.5	-90.03	2,670.4	1,694.1	2,568.9	2,370.6	198.32	12.953			
9,000.0	6,857.6	6,958.1	6,958.1	63.9	137.5	-90.00	2,670.4	1,694.1	2,566.3	2,365.3	200.97	12.769			
9,017.4	6,857.4	6,957.9	6,957.9	64.3	137.5	-90.00	2,670.4	1,694.1	2,566.2	2,364.8	201.43	12.740	CC		
9,100.0	6,856.6	6,957.1	6,957.1	66.5	137.5	-89.98	2,670.4	1,694.1	2,567.5	2,363.9	203.62	12.609	ES		
9,200.0	6,855.6	6,956.1	6,956.1	69.2	137.5	-89.96	2,670.4	1,694.1	2,572.7	2,366.4	206.29	12.471			
9,300.0	6,854.6	6,955.1	6,955.1	71.8	137.5	-89.94	2,670.4	1,694.1	2,581.7	2,372.8	208.95	12.355			
9,368.1	6,854.0	6,954.5	6,954.5	73.7	137.4	-89.92	2,670.4	1,694.1	2,590.1	2,379.3	210.78	12.288			
9,400.0	6,853.6	6,954.1	6,954.1	74.5	137.4	-89.91	2,670.4	1,694.1	2,594.8	2,383.1	211.74	12.255			
9,500.0	6,852.7	6,953.2	6,953.2	77.2	137.4	-89.85	2,670.4	1,694.1	2,615.6	2,401.0	214.64	12.186			
9,600.0	6,851.7	6,952.2	6,952.2	80.0	137.4	-89.80	2,670.4	1,694.1	2,645.1	2,427.7	217.36	12.169	SF		
9,634.8	6,851.3	6,951.8	6,951.8	80.9	137.4	-89.78	2,670.4	1,694.1	2,657.3	2,439.0	218.26	12.175			
9,700.0	6,850.7	6,951.2	6,951.2	82.7	137.4	-89.76	2,670.4	1,694.1	2,681.8	2,461.7	220.05	12.187			
9,800.0	6,849.7	6,950.2	6,950.2	85.5	137.4	-89.74	2,670.4	1,694.1	2,721.9	2,499.2	222.78	12.218			
9,870.5	6,849.0	6,949.5	6,949.5	87.4	137.3	-89.72	2,670.4	1,694.1	2,752.1	2,527.4	224.71	12.247			
9,900.0	6,848.7	6,949.2	6,949.2	88.3	137.3	-89.71	2,670.4	1,694.1	2,765.4	2,539.9	225.46	12.266			
10,000.0	6,847.7	6,948.2	6,948.2	91.0	137.3	-89.65	2,670.4	1,694.1	2,815.1	2,587.2	227.84	12.356			
10,100.0	6,846.8	6,947.3	6,947.3	93.8	137.3	-89.58	2,670.4	1,694.1	2,871.8	2,641.8	229.98	12.487			
10,137.1	6,846.4	6,946.9	6,946.9	94.8	137.3	-89.55	2,670.4	1,694.1	2,894.5	2,663.8	230.72	12.545			
10,200.0	6,845.8	6,946.3	6,946.3	96.5	137.3	-89.54	2,670.4	1,694.1	2,934.1	2,701.6	232.45	12.622			
10,300.0	6,844.8	6,945.3	6,945.3	99.3	137.3	-89.51	2,670.4	1,694.1	2,998.7	2,763.5	235.21	12.749			
10,400.0	6,843.8	6,944.3	6,944.3	102.0	137.2	-89.49	2,670.4	1,694.1	3,065.2	2,827.2	237.98	12.880			
10,500.0	6,842.8	6,943.3	6,943.3	104.8	137.2	-89.46	2,670.4	1,694.1	3,133.5	2,892.8	240.74	13.016			
10,600.0	6,841.9	6,942.4	6,942.4	107.5	137.2	-89.44	2,670.4	1,694.1	3,203.5	2,960.0	243.51	13.155			
10,700.0	6,840.9	6,941.4	6,941.4	110.3	137.2	-89.42	2,670.4	1,694.1	3,275.0	3,028.7	246.28	13.298			
10,732.1	6,840.6	6,941.1	6,941.1	111.2	137.2	-89.41	2,670.4	1,694.1	3,298.3	3,051.1	247.17	13.344			
10,800.0	6,839.9	6,940.4	6,940.4	113.0	137.2	-89.43	2,670.4	1,694.1	3,347.2	3,097.6	249.54	13.413			
10,900.0	6,838.9	6,939.4	6,939.4	115.8	137.1	-89.47	2,670.4	1,694.1	3,417.3	3,164.5	252.79	13.519			
10,998.8	6,838.0	6,938.5	6,938.5	118.6	137.1	-89.50	2,670.4	1,694.1	3,484.4	3,228.7	255.68	13.628			
11,000.0	6,838.0	6,938.5	6,938.5	118.6	137.1	-89.50	2,670.4	1,694.1	3,485.2	3,229.5	255.71	13.630			
11,100.0	6,837.0	6,937.5	6,937.5	121.4	137.1	-89.48	2,670.4	1,694.1	3,552.8	3,294.3	258.47	13.745			
11,200.0	6,836.0	6,936.5	6,936.5	124.2	137.1	-89.46	2,670.4	1,694.1	3,621.8	3,360.6	261.24	13.864			
11,300.0	6,835.1	6,935.6	6,935.6	126.9	137.1	-89.44	2,670.4	1,694.1	3,692.3	3,428.3	264.00	13.986			
11,400.0	6,834.1	6,934.6	6,934.6	129.7	137.0	-89.42	2,670.4	1,694.1	3,764.1	3,497.4	266.77	14.110			
11,428.1	6,833.8	6,934.3	6,934.3	130.5	137.0	-89.41	2,670.4	1,694.1	3,784.6	3,517.0	267.54	14.146			
11,487.5	6,833.3	6,933.8	6,933.8	132.2	137.0	-89.45	2,670.4	1,694.1	3,827.4	3,558.2	269.12	14.222			
11,500.0	6,833.2	6,933.7	6,933.7	132.5	137.0	-89.44	2,670.4	1,694.1	3,836.3	3,566.9	269.47	14.237			
11,600.0	6,832.2	6,932.7	6,932.7	135.3	137.0	-89.42	2,670.4	1,694.1	3,908.5	3,636.3	272.23	14.357			
11,700.0	6,831.3	6,931.8	6,931.8	138.1	137.0	-89.40	2,670.4	1,694.1	3,981.9	3,706.9	274.99	14.480			
11,800.0	6,830.3	6,930.8	6,930.8	140.8	137.0	-89.38	2,670.4	1,694.1	4,056.5	3,778.7	277.75	14.605			
11,900.0	6,829.4	6,929.9	6,929.9	143.6	137.0	-89.36	2,670.4	1,694.1	4,132.1	3,851.6	280.52	14.730			
11,938.6	6,829.0	6,929.5	6,929.5	144.7	136.9	-89.35	2,670.4	1,694.1	4,161.5	3,879.9	281.58	14.779			

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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)	Offset Wellbore Centre +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	46.74	2,863.7	3,042.7	4,178.3						
100.0	100.0	214.5	214.5	0.1	0.1	46.74	2,863.7	3,042.7	4,178.3	4,178.1	0.21	N/A			
200.0	200.0	314.5	314.5	0.3	0.3	46.74	2,863.7	3,042.7	4,178.3	4,177.7	0.66	6,328.418			
300.0	300.0	414.5	414.5	0.5	0.6	46.74	2,863.7	3,042.7	4,178.3	4,177.2	1.11	3,765.008			
400.0	400.0	514.5	514.5	0.8	0.8	46.74	2,863.7	3,042.7	4,178.3	4,176.8	1.56	2,679.601			
500.0	500.0	614.5	614.5	1.0	1.0	46.74	2,863.7	3,042.7	4,178.3	4,176.3	2.01	2,079.970			
600.0	600.0	714.5	714.5	1.2	1.2	46.74	2,863.7	3,042.7	4,178.3	4,175.9	2.46	1,699.633			
700.0	700.0	814.5	814.5	1.4	1.5	46.74	2,863.7	3,042.7	4,178.3	4,175.4	2.91	1,436.887			
800.0	800.0	914.5	914.5	1.7	1.7	46.74	2,863.7	3,042.7	4,178.3	4,175.0	3.36	1,244.501			
900.0	900.0	1,014.5	1,014.5	1.9	1.9	46.74	2,863.7	3,042.7	4,178.3	4,174.5	3.81	1,097.549			
1,000.0	1,000.0	1,114.5	1,114.5	2.1	2.1	122.56	2,863.7	3,042.7	4,179.3	4,175.0	4.25	984.169			
1,100.0	1,099.8	1,214.3	1,214.3	2.3	2.4	122.57	2,863.7	3,042.7	4,182.1	4,177.4	4.68	893.561			
1,200.0	1,199.5	1,314.0	1,314.0	2.6	2.6	122.59	2,863.7	3,042.7	4,186.8	4,181.7	5.12	817.327			
1,300.0	1,298.7	1,413.2	1,413.2	2.8	2.8	122.62	2,863.7	3,042.7	4,193.4	4,187.8	5.58	751.693			
1,400.0	1,397.5	1,512.0	1,512.0	3.1	3.0	122.65	2,863.7	3,042.7	4,201.9	4,195.9	6.06	693.950			
1,500.0	1,495.6	1,610.1	1,610.1	3.4	3.3	122.69	2,863.7	3,042.7	4,212.4	4,205.8	6.56	642.208			
1,600.0	1,593.4	1,707.9	1,707.9	3.8	3.5	122.92	2,863.7	3,042.7	4,223.8	4,216.7	7.10	595.250			
1,700.0	1,691.3	1,805.8	1,805.8	4.1	3.7	123.16	2,863.7	3,042.7	4,235.3	4,227.7	7.65	553.770			
1,800.0	1,789.1	1,903.6	1,903.6	4.5	3.9	123.39	2,863.7	3,042.7	4,246.9	4,238.7	8.21	517.150			
1,900.0	1,886.9	2,001.4	2,001.4	4.9	4.1	123.62	2,863.7	3,042.7	4,258.5	4,249.8	8.78	484.761			
2,000.0	1,984.7	2,099.2	2,099.2	5.4	4.3	123.85	2,863.7	3,042.7	4,270.3	4,260.9	9.36	456.024			
2,100.0	2,082.5	2,197.0	2,197.0	5.8	4.6	124.07	2,863.7	3,042.7	4,282.1	4,272.1	9.95	430.427			
2,200.0	2,180.3	2,294.8	2,294.8	6.2	4.8	124.30	2,863.7	3,042.7	4,293.9	4,283.4	10.54	407.531			
2,300.0	2,278.1	2,392.6	2,392.6	6.6	5.0	124.53	2,863.7	3,042.7	4,305.8	4,294.7	11.13	386.964			
2,400.0	2,376.0	2,490.5	2,490.5	7.1	5.2	124.75	2,863.7	3,042.7	4,317.8	4,306.1	11.72	368.410			
2,500.0	2,473.8	2,588.3	2,588.3	7.5	5.4	124.97	2,863.7	3,042.7	4,329.9	4,317.6	12.31	351.605			
2,600.0	2,571.6	2,686.1	2,686.1	8.0	5.7	125.19	2,863.7	3,042.7	4,342.0	4,329.1	12.91	336.324			
2,695.7	2,665.2	2,779.7	2,779.7	8.4	5.9	125.41	2,863.7	3,042.7	4,353.7	4,340.2	13.48	322.954			
2,700.0	2,669.4	2,783.9	2,783.9	8.4	5.9	125.42	2,863.7	3,042.7	4,354.2	4,340.7	13.51	322.409			
2,800.0	2,767.6	2,882.1	2,882.1	8.7	6.1	125.81	2,863.7	3,042.7	4,365.4	4,351.4	14.02	311.331			
2,900.0	2,866.4	2,980.9	2,980.9	9.0	6.3	126.12	2,863.7	3,042.7	4,374.5	4,360.0	14.51	301.419			
3,000.0	2,965.6	3,080.1	3,080.1	9.3	6.6	126.36	2,863.7	3,042.7	4,381.7	4,366.7	14.98	292.553			
3,100.0	3,065.3	3,179.8	3,179.8	9.5	6.8	126.53	2,863.7	3,042.7	4,386.8	4,371.4	15.41	284.613			
3,200.0	3,165.1	3,279.6	3,279.6	9.7	7.0	126.63	2,863.7	3,042.7	4,389.8	4,374.0	15.82	277.485			
3,295.7	3,260.8	3,375.3	3,375.3	9.8	7.2	50.85	2,863.7	3,042.7	4,390.8	4,375.2	15.54	282.458			
3,300.0	3,265.1	3,379.6	3,379.6	9.8	7.2	50.85	2,863.7	3,042.7	4,390.8	4,375.2	15.56	282.150			
3,400.0	3,365.1	3,479.6	3,479.6	10.0	7.5	50.85	2,863.7	3,042.7	4,390.8	4,374.8	15.97	274.998			
3,500.0	3,465.1	3,579.6	3,579.6	10.1	7.7	50.85	2,863.7	3,042.7	4,390.8	4,374.4	16.37	268.165			
3,600.0	3,565.1	3,679.6	3,679.6	10.3	7.9	50.85	2,863.7	3,042.7	4,390.8	4,374.0	16.78	261.633			
3,700.0	3,665.1	3,779.6	3,779.6	10.5	8.1	50.85	2,863.7	3,042.7	4,390.8	4,373.6	17.19	255.385			
3,800.0	3,765.1	3,879.6	3,879.6	10.6	8.4	50.85	2,863.7	3,042.7	4,390.8	4,373.2	17.61	249.403			
3,900.0	3,865.1	3,979.6	3,979.6	10.8	8.6	50.85	2,863.7	3,042.7	4,390.8	4,372.8	18.02	243.673			
4,000.0	3,965.1	4,079.6	4,079.6	11.0	8.8	50.85	2,863.7	3,042.7	4,390.8	4,372.3	18.43	238.181			
4,100.0	4,065.1	4,179.6	4,179.6	11.1	9.0	50.85	2,863.7	3,042.7	4,390.8	4,371.9	18.85	232.913			
4,200.0	4,165.1	4,279.6	4,279.6	11.3	9.3	50.85	2,863.7	3,042.7	4,390.8	4,371.5	19.27	227.858			
4,300.0	4,265.1	4,379.6	4,379.6	11.5	9.5	50.85	2,863.7	3,042.7	4,390.8	4,371.1	19.69	223.002			
4,400.0	4,365.1	4,479.6	4,479.6	11.7	9.7	50.85	2,863.7	3,042.7	4,390.8	4,370.7	20.11	218.336			
4,500.0	4,465.1	4,579.6	4,579.6	11.8	9.9	50.85	2,863.7	3,042.7	4,390.8	4,370.3	20.53	213.849			
4,600.0	4,565.1	4,679.6	4,679.6	12.0	10.1	50.85	2,863.7	3,042.7	4,390.8	4,369.8	20.96	209.533			
4,700.0	4,665.1	4,779.6	4,779.6	12.2	10.4	50.85	2,863.7	3,042.7	4,390.8	4,369.4	21.38	205.377			
4,800.0	4,765.1	4,879.6	4,879.6	12.4	10.6	50.85	2,863.7	3,042.7	4,390.8	4,369.0	21.80	201.374			
4,900.0	4,865.1	4,979.6	4,979.6	12.6	10.8	50.85	2,863.7	3,042.7	4,390.8	4,368.6	22.23	197.516			

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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			
5,000.0	4,965.1	5,079.6	5,079.6	12.8	11.0	50.85	2,863.7	3,042.7	4,390.8	4,368.1	22.66	193.795			
5,100.0	5,065.1	5,179.6	5,179.6	12.9	11.3	50.85	2,863.7	3,042.7	4,390.8	4,367.7	23.08	190.206			
5,200.0	5,165.1	5,279.6	5,279.6	13.1	11.5	50.85	2,863.7	3,042.7	4,390.8	4,367.3	23.51	186.740			
5,300.0	5,265.1	5,379.6	5,379.6	13.3	11.7	50.85	2,863.7	3,042.7	4,390.8	4,366.8	23.94	183.393			
5,400.0	5,365.1	5,479.6	5,479.6	13.5	11.9	50.85	2,863.7	3,042.7	4,390.8	4,366.4	24.37	180.159			
5,500.0	5,465.1	5,579.6	5,579.6	13.7	12.2	50.85	2,863.7	3,042.7	4,390.8	4,366.0	24.80	177.032			
5,600.0	5,565.1	5,679.6	5,679.6	13.9	12.4	50.85	2,863.7	3,042.7	4,390.8	4,365.5	25.23	174.007			
5,700.0	5,665.1	5,779.6	5,779.6	14.1	12.6	50.85	2,863.7	3,042.7	4,390.8	4,365.1	25.67	171.080			
5,800.0	5,765.1	5,879.6	5,879.6	14.3	12.8	50.85	2,863.7	3,042.7	4,390.8	4,364.7	26.10	168.246			
5,900.0	5,865.1	5,979.6	5,979.6	14.5	13.1	50.85	2,863.7	3,042.7	4,390.8	4,364.3	26.53	165.501			
6,000.0	5,965.1	6,079.6	6,079.6	14.7	13.3	50.85	2,863.7	3,042.7	4,390.8	4,363.8	26.96	162.841			
6,100.0	6,065.1	6,179.6	6,179.6	14.9	13.5	50.85	2,863.7	3,042.7	4,390.8	4,363.4	27.40	160.262			
6,192.7	6,157.8	6,272.3	6,272.3	15.1	13.7	50.85	2,863.7	3,042.7	4,390.8	4,363.0	27.80	157.941			
6,200.0	6,165.1	6,279.6	6,279.6	15.1	13.7	-39.15	2,863.7	3,042.7	4,390.8	4,362.5	28.22	155.589			
6,250.0	6,215.1	6,329.6	6,329.6	15.1	13.9	-39.26	2,863.7	3,042.7	4,389.0	4,360.6	28.36	154.778			
6,300.0	6,264.7	6,379.2	6,379.2	15.2	14.0	-39.53	2,863.7	3,042.7	4,384.6	4,356.1	28.42	154.260			
6,350.0	6,313.9	6,428.4	6,428.4	15.2	14.1	-39.98	2,863.7	3,042.7	4,377.5	4,349.0	28.42	154.005			
6,400.0	6,362.2	6,476.7	6,476.7	15.3	14.2	-40.59	2,863.7	3,042.7	4,367.7	4,339.3	28.37	153.969			
6,450.0	6,409.6	6,524.1	6,524.1	15.3	14.3	-41.39	2,863.7	3,042.7	4,355.4	4,327.1	28.26	154.095			
6,500.0	6,455.8	6,570.3	6,570.3	15.3	14.4	-42.39	2,863.7	3,042.7	4,340.6	4,312.5	28.13	154.305			
6,550.0	6,500.5	6,615.0	6,615.0	15.3	14.5	-43.58	2,863.7	3,042.7	4,323.4	4,295.4	27.98	154.498			
6,600.0	6,543.5	6,658.0	6,658.0	15.3	14.6	-44.98	2,863.7	3,042.7	4,303.9	4,276.1	27.85	154.550			
6,650.0	6,584.7	6,699.2	6,699.2	15.3	14.7	-46.61	2,863.7	3,042.7	4,282.3	4,254.5	27.75	154.313			
6,700.0	6,623.7	6,738.2	6,738.2	15.4	14.8	-48.47	2,863.7	3,042.7	4,258.6	4,230.8	27.72	153.623			
6,750.0	6,660.6	6,775.1	6,775.1	15.5	14.9	-50.58	2,863.7	3,042.7	4,232.9	4,205.1	27.79	152.316			
6,800.0	6,694.9	6,809.4	6,809.4	15.7	14.9	-52.96	2,863.7	3,042.7	4,205.6	4,177.6	27.99	150.253			
6,850.0	6,726.6	6,841.1	6,841.1	15.9	15.0	-55.60	2,863.7	3,042.7	4,176.6	4,148.3	28.34	147.350			
6,900.0	6,755.6	6,870.1	6,870.1	16.2	15.1	-58.51	2,863.7	3,042.7	4,146.2	4,117.3	28.87	143.609			
6,950.0	6,781.7	6,896.2	6,896.2	16.6	15.1	-61.69	2,863.7	3,042.7	4,114.6	4,085.0	29.57	139.128			
7,000.0	6,804.7	6,919.2	6,919.2	17.1	15.2	-65.11	2,863.7	3,042.7	4,081.9	4,051.5	30.44	134.092			
7,050.0	6,824.6	6,939.1	6,939.1	17.7	15.2	-68.76	2,863.7	3,042.7	4,048.3	4,016.9	31.44	128.746			
7,100.0	6,841.2	6,955.7	6,955.7	18.3	15.3	-72.60	2,863.7	3,042.7	4,014.1	3,981.6	32.54	123.345			
7,150.0	6,854.5	6,969.0	6,969.0	19.0	15.3	-76.56	2,863.7	3,042.7	3,979.4	3,945.7	33.69	118.120			
7,200.0	6,864.4	6,978.9	6,978.9	19.8	15.3	-80.60	2,863.7	3,042.7	3,944.4	3,909.6	34.83	113.245			
7,250.0	6,870.8	6,985.3	6,985.3	20.7	15.3	-84.64	2,863.7	3,042.7	3,909.3	3,873.4	35.92	108.830			
7,300.0	6,873.8	6,988.3	6,988.3	21.6	15.3	-88.62	2,863.7	3,042.7	3,874.3	3,837.3	36.93	104.920			
7,324.7	6,874.0	6,988.5	6,988.5	22.1	15.3	-90.54	2,863.7	3,042.7	3,857.1	3,819.7	37.38	103.174			
7,400.0	6,873.2	6,987.7	6,987.7	23.5	15.3	-90.53	2,863.7	3,042.7	3,805.1	3,766.2	38.86	97.914			
7,500.0	6,872.2	6,986.7	6,986.7	25.6	15.3	-90.51	2,863.7	3,042.7	3,737.3	3,696.3	40.96	91.238			
7,600.0	6,871.3	6,985.8	6,985.8	27.9	15.3	-90.49	2,863.7	3,042.7	3,671.0	3,627.8	43.19	85.002			
7,700.0	6,870.3	6,984.8	6,984.8	30.2	15.3	-90.47	2,863.7	3,042.7	3,606.2	3,560.7	45.51	79.241			
7,800.0	6,869.3	6,983.8	6,983.8	32.6	15.3	-90.45	2,863.7	3,042.7	3,543.1	3,495.2	47.91	73.956			
7,900.0	6,868.3	6,982.8	6,982.8	35.0	15.3	-90.43	2,863.7	3,042.7	3,481.7	3,431.3	50.37	69.126			
8,000.0	6,867.4	6,981.9	6,981.9	37.6	15.3	-90.41	2,863.7	3,042.7	3,422.1	3,369.2	52.88	64.720			
8,100.0	6,866.4	6,980.9	6,980.9	40.1	15.3	-90.39	2,863.7	3,042.7	3,364.4	3,309.0	55.42	60.705			
8,200.0	6,865.4	6,979.9	6,979.9	42.7	15.3	-90.36	2,863.7	3,042.7	3,308.8	3,250.8	58.00	57.045			
8,300.0	6,864.4	6,978.9	6,978.9	45.3	15.3	-90.34	2,863.7	3,042.7	3,255.3	3,194.7	60.61	53.708			
8,400.0	6,863.5	6,978.0	6,978.0	47.9	15.3	-90.32	2,863.7	3,042.7	3,204.0	3,140.8	63.24	50.663			
8,500.0	6,862.5	6,977.0	6,977.0	50.6	15.3	-90.30	2,863.7	3,042.7	3,155.0	3,089.1	65.89	47.883			
8,600.0	6,861.5	6,976.0	6,976.0	53.2	15.3	-90.28	2,863.7	3,042.7	3,108.5	3,040.0	68.56	45.344			
8,614.0	6,861.4	6,975.9	6,975.9	53.6	15.3	-90.28	2,863.7	3,042.7	3,102.2	3,033.3	68.93	45.006			
8,700.0	6,860.5	6,975.0	6,975.0	55.9	15.3	-90.30	2,863.7	3,042.7	3,062.8	2,991.6	71.19	43.021			

CC - Min centre 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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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													SW SW SEC. 28 T5N R67W 6th P.M. - EXIST VERT ROGER 1 - Wellbore #1 - Design #1		Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,859.5	6,974.0	6,974.0	58.6	15.3	-90.31	2,863.7	3,042.7	3,015.1	2,941.4	73.68	40.920				
8,880.6	6,858.7	6,973.2	6,973.2	60.7	15.3	-90.33	2,863.7	3,042.7	2,975.1	2,899.6	75.57	39.368				
8,900.0	6,858.6	6,973.1	6,973.1	61.2	15.3	-90.32	2,863.7	3,042.7	2,965.4	2,889.3	76.09	38.975				
9,000.0	6,857.6	6,972.1	6,972.1	63.9	15.3	-90.30	2,863.7	3,042.7	2,916.8	2,838.1	78.75	37.039				
9,100.0	6,856.6	6,971.1	6,971.1	66.5	15.3	-90.28	2,863.7	3,042.7	2,870.9	2,789.5	81.42	35.259				
9,200.0	6,855.6	6,970.1	6,970.1	69.2	15.3	-90.26	2,863.7	3,042.7	2,827.7	2,743.6	84.10	33.622				
9,300.0	6,854.6	6,969.1	6,969.1	71.8	15.3	-90.24	2,863.7	3,042.7	2,787.5	2,700.7	86.79	32.118				
9,368.1	6,854.0	6,968.5	6,968.5	73.7	15.3	-90.22	2,863.7	3,042.7	2,761.8	2,673.2	88.62	31.164				
9,400.0	6,853.6	6,968.1	6,968.1	74.5	15.3	-90.20	2,863.7	3,042.7	2,750.5	2,660.9	89.59	30.701				
9,500.0	6,852.7	6,967.2	6,967.2	77.2	15.3	-90.15	2,863.7	3,042.7	2,720.6	2,628.1	92.51	29.408				
9,600.0	6,851.7	6,966.2	6,966.2	80.0	15.3	-90.10	2,863.7	3,042.7	2,699.2	2,603.9	95.25	28.338				
9,634.8	6,851.3	6,965.8	6,965.8	80.9	15.3	-90.08	2,863.7	3,042.7	2,693.8	2,597.6	96.16	28.014				
9,700.0	6,850.7	6,965.2	6,965.2	82.7	15.3	-90.07	2,863.7	3,042.7	2,685.4	2,587.4	97.95	27.415				
9,800.0	6,849.7	6,964.2	6,964.2	85.5	15.3	-90.05	2,863.7	3,042.7	2,675.6	2,574.8	100.71	26.568				
9,870.5	6,849.0	6,963.5	6,963.5	87.4	15.3	-90.03	2,863.7	3,042.7	2,670.9	2,568.2	102.65	26.019				
9,900.0	6,848.7	6,963.2	6,963.2	88.3	15.3	-90.02	2,863.7	3,042.7	2,669.7	2,566.3	103.40	25.819				
9,930.0	6,848.4	6,962.9	6,962.9	89.1	15.3	-90.00	2,863.7	3,042.7	2,669.3	2,565.1	104.15	25.630	CC, ES			
10,000.0	6,847.7	6,962.2	6,962.2	91.0	15.3	-89.96	2,863.7	3,042.7	2,671.5	2,565.7	105.80	25.250				
10,100.0	6,846.8	6,961.3	6,961.3	93.8	15.3	-89.91	2,863.7	3,042.7	2,682.2	2,574.2	107.97	24.843				
10,137.1	6,846.4	6,960.9	6,960.9	94.8	15.3	-89.90	2,863.7	3,042.7	2,688.5	2,579.7	108.71	24.731				
10,200.0	6,845.8	6,960.3	6,960.3	96.5	15.3	-89.88	2,863.7	3,042.7	2,700.7	2,590.3	110.45	24.452				
10,300.0	6,844.8	6,959.3	6,959.3	99.3	15.3	-89.86	2,863.7	3,042.7	2,723.2	2,610.0	113.23	24.050				
10,400.0	6,843.8	6,958.3	6,958.3	102.0	15.3	-89.84	2,863.7	3,042.7	2,749.1	2,633.1	116.01	23.696				
10,500.0	6,842.8	6,957.3	6,957.3	104.8	15.3	-89.82	2,863.7	3,042.7	2,778.3	2,659.5	118.80	23.387				
10,600.0	6,841.9	6,956.4	6,956.4	107.5	15.3	-89.80	2,863.7	3,042.7	2,810.8	2,689.3	121.58	23.119				
10,700.0	6,840.9	6,955.4	6,955.4	110.3	15.3	-89.78	2,863.7	3,042.7	2,846.5	2,722.1	124.37	22.887				
10,732.1	6,840.6	6,955.1	6,955.1	111.2	15.3	-89.77	2,863.7	3,042.7	2,858.6	2,733.3	125.27	22.820				
10,800.0	6,839.9	6,954.4	6,954.4	113.0	15.3	-89.78	2,863.7	3,042.7	2,884.1	2,756.4	127.65	22.593				
10,900.0	6,838.9	6,953.4	6,953.4	115.8	15.3	-89.79	2,863.7	3,042.7	2,920.0	2,789.1	130.91	22.305				
10,998.8	6,838.0	6,952.5	6,952.5	118.6	15.3	-89.81	2,863.7	3,042.7	2,953.7	2,819.8	133.82	22.072				
11,000.0	6,838.0	6,952.5	6,952.5	118.6	15.3	-89.81	2,863.7	3,042.7	2,954.0	2,820.2	133.85	22.070				
11,100.0	6,837.0	6,951.5	6,951.5	121.4	15.3	-89.79	2,863.7	3,042.7	2,988.7	2,852.1	136.63	21.874				
11,200.0	6,836.0	6,950.5	6,950.5	124.2	15.3	-89.77	2,863.7	3,042.7	3,026.2	2,886.8	139.41	21.707				
11,300.0	6,835.1	6,949.6	6,949.6	126.9	15.3	-89.75	2,863.7	3,042.7	3,066.6	2,924.4	142.19	21.566				
11,400.0	6,834.1	6,948.6	6,948.6	129.7	15.2	-89.73	2,863.7	3,042.7	3,109.6	2,964.6	144.98	21.449				
11,428.1	6,833.8	6,948.3	6,948.3	130.5	15.2	-89.72	2,863.7	3,042.7	3,122.2	2,976.4	145.76	21.420				
11,487.5	6,833.3	6,947.8	6,947.8	132.2	15.2	-89.74	2,863.7	3,042.7	3,148.6	3,001.2	147.35	21.368				
11,500.0	6,833.2	6,947.7	6,947.7	132.5	15.2	-89.73	2,863.7	3,042.7	3,154.1	3,006.4	147.70	21.355				
11,600.0	6,832.2	6,946.7	6,946.7	135.3	15.2	-89.71	2,863.7	3,042.7	3,199.5	3,049.0	150.48	21.262				
11,700.0	6,831.3	6,945.8	6,945.8	138.1	15.2	-89.69	2,863.7	3,042.7	3,247.3	3,094.0	153.26	21.189				
11,800.0	6,830.3	6,944.8	6,944.8	140.8	15.2	-89.68	2,863.7	3,042.7	3,297.5	3,141.4	156.04	21.133				
11,900.0	6,829.4	6,943.9	6,943.9	143.6	15.2	-89.66	2,863.7	3,042.7	3,349.9	3,191.1	158.82	21.093				
11,938.6	6,829.0	6,943.5	6,943.5	144.7	15.2	-89.65	2,863.7	3,042.7	3,370.7	3,210.8	159.89	21.081	SF			

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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	-92.0	92.0						
100.0	100.0	100.0	100.0	0.1	0.1	-90.00	0.0	-92.0	92.0	91.8	0.19	472.991			
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-92.0	92.0	91.3	0.64	142.805			
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-92.0	92.0	90.9	1.09	84.098 CC			
400.0	400.0	399.5	399.5	0.8	0.8	-88.94	1.7	-92.2	92.2	90.7	1.54	59.730 ES			
500.0	500.0	498.8	498.7	1.0	1.0	-85.79	6.8	-92.9	93.2	91.2	2.00	46.552			
600.0	600.0	597.6	597.1	1.2	1.2	-80.76	15.3	-94.1	95.3	92.9	2.46	38.735			
700.0	700.0	695.7	694.5	1.4	1.5	-74.22	27.0	-95.7	99.6	96.6	2.93	34.038			
800.0	800.0	792.9	790.5	1.7	1.8	-66.78	41.9	-97.7	106.7	103.3	3.40	31.405			
900.0	900.0	889.0	884.8	1.9	2.2	-59.17	59.8	-100.2	117.6	113.7	3.90	30.194			
1,000.0	1,000.0	983.8	977.3	2.1	2.5	24.00	80.5	-103.0	131.1	126.6	4.47	29.328			
1,100.0	1,099.8	1,077.4	1,067.9	2.3	3.0	31.19	103.9	-106.2	146.1	141.1	4.95	29.519			
1,200.0	1,199.5	1,169.6	1,156.3	2.6	3.5	38.06	129.8	-109.8	163.3	157.8	5.42	30.132			
1,300.0	1,298.7	1,260.3	1,242.4	2.8	4.0	44.47	158.0	-113.6	183.1	177.2	5.89	31.102			
1,400.0	1,397.5	1,349.3	1,326.0	3.1	4.5	50.33	188.3	-117.8	205.8	199.4	6.37	32.300			
1,500.0	1,495.6	1,437.3	1,407.7	3.4	5.1	55.63	220.7	-122.2	231.7	224.8	6.90	33.595			
1,600.0	1,593.4	1,530.6	1,493.9	3.8	5.8	60.87	256.2	-127.1	260.0	252.6	7.49	34.706			
1,700.0	1,691.3	1,624.0	1,580.1	4.1	6.5	65.10	291.6	-131.9	290.0	281.9	8.13	35.657			
1,800.0	1,789.1	1,717.3	1,666.3	4.5	7.2	68.55	327.1	-136.8	321.3	312.4	8.82	36.430			
1,900.0	1,886.9	1,810.6	1,752.4	4.9	7.8	71.40	362.5	-141.7	353.4	343.8	9.54	37.043			
2,000.0	1,984.7	1,903.9	1,838.6	5.4	8.5	73.78	398.0	-146.5	386.2	375.9	10.29	37.527			
2,100.0	2,082.5	1,997.3	1,924.8	5.8	9.2	75.79	433.4	-151.4	419.5	408.4	11.07	37.907			
2,200.0	2,180.3	2,090.6	2,011.0	6.2	9.9	77.51	468.9	-156.2	453.2	441.3	11.86	38.209			
2,300.0	2,278.1	2,183.9	2,097.2	6.6	10.6	79.00	504.3	-161.1	487.2	474.5	12.67	38.449			
2,400.0	2,376.0	2,277.2	2,183.4	7.1	11.3	80.29	539.8	-166.0	521.5	508.0	13.49	38.643			
2,500.0	2,473.8	2,370.6	2,269.6	7.5	12.0	81.43	575.2	-170.8	556.0	541.6	14.33	38.802			
2,600.0	2,571.6	2,463.9	2,355.8	8.0	12.7	82.43	610.7	-175.7	590.6	575.4	15.17	38.932			
2,695.7	2,665.2	2,553.2	2,438.3	8.4	13.4	83.29	644.6	-180.3	623.9	607.9	15.98	39.035			
2,700.0	2,669.4	2,557.2	2,442.0	8.4	13.4	83.36	646.1	-180.6	625.4	609.4	16.02	39.040			
2,800.0	2,767.6	2,650.6	2,528.2	8.7	14.1	84.73	681.6	-185.4	660.5	643.7	16.79	39.337			
2,900.0	2,866.4	2,744.1	2,614.6	9.0	14.8	85.75	717.1	-190.3	695.9	678.4	17.52	39.721			
3,000.0	2,965.6	2,837.5	2,700.8	9.3	15.5	86.45	752.6	-195.2	731.6	713.4	18.20	40.198			
3,100.0	3,065.3	2,930.7	2,786.9	9.5	16.2	86.89	788.0	-200.0	767.5	748.7	18.83	40.771			
3,200.0	3,165.1	3,023.7	2,872.8	9.7	16.9	87.10	823.3	-204.9	803.6	784.2	19.39	41.440			
3,295.7	3,260.8	3,112.3	2,954.6	9.8	17.6	11.30	857.0	-209.5	838.4	814.3	24.11	34.771			
3,300.0	3,265.1	3,116.2	2,958.3	9.8	17.6	11.26	858.5	-209.7	840.0	815.9	24.15	34.779			
3,400.0	3,365.1	3,208.6	3,043.6	10.0	18.3	10.45	893.6	-214.5	876.6	851.5	25.08	34.949			
3,500.0	3,465.1	3,301.0	3,128.9	10.1	19.0	9.70	928.7	-219.3	913.4	887.4	26.01	35.113			
3,600.0	3,565.1	3,393.3	3,214.2	10.3	19.7	9.01	963.8	-224.1	950.2	923.3	26.94	35.270			
3,700.0	3,665.1	3,485.7	3,299.5	10.5	20.4	8.37	998.8	-228.9	987.2	959.4	27.87	35.422			
3,800.0	3,765.1	3,578.0	3,384.8	10.6	21.1	7.78	1,033.9	-233.7	1,024.3	995.5	28.80	35.568			
3,900.0	3,865.1	3,670.4	3,470.1	10.8	21.8	7.22	1,069.0	-238.5	1,061.5	1,031.8	29.73	35.708			
4,000.0	3,965.1	3,762.7	3,555.4	11.0	22.4	6.71	1,104.1	-243.3	1,098.7	1,068.1	30.65	35.843			
4,100.0	4,065.1	3,855.1	3,640.7	11.1	23.1	6.22	1,139.2	-248.2	1,136.1	1,104.5	31.58	35.973			
4,200.0	4,165.1	3,947.5	3,726.0	11.3	23.8	5.77	1,174.3	-253.0	1,173.5	1,140.9	32.51	36.098			
4,300.0	4,265.1	4,039.8	3,811.3	11.5	24.5	5.35	1,209.4	-257.8	1,210.9	1,177.5	33.43	36.218			
4,400.0	4,365.1	4,132.2	3,896.6	11.7	25.2	4.95	1,244.4	-262.6	1,248.4	1,214.1	34.36	36.334			
4,500.0	4,465.1	4,224.5	3,981.9	11.8	25.9	4.57	1,279.5	-267.4	1,286.0	1,250.7	35.28	36.446			
4,600.0	4,565.1	4,316.9	4,067.2	12.0	26.6	4.22	1,314.6	-272.2	1,323.6	1,287.4	36.21	36.553			
4,700.0	4,665.1	4,409.2	4,152.5	12.2	27.3	3.88	1,349.7	-277.0	1,361.2	1,324.1	37.13	36.657			
4,800.0	4,765.1	4,501.6	4,237.8	12.4	28.0	3.57	1,384.8	-281.8	1,398.9	1,360.8	38.06	36.757			
4,900.0	4,865.1	4,594.0	4,323.1	12.6	28.7	3.26	1,419.9	-286.6	1,436.6	1,397.6	38.98	36.853			

CC - Min centre 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 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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			
5,000.0	4,965.1	4,686.3	4,408.4	12.8	29.4	2.98	1,454.9	-291.5	1,474.4	1,434.5	39.91	36.946			
5,100.0	5,065.1	4,778.7	4,493.7	12.9	30.1	2.71	1,490.0	-296.3	1,512.1	1,471.3	40.83	37.036			
5,200.0	5,165.1	4,871.0	4,579.0	13.1	30.8	2.45	1,525.1	-301.1	1,549.9	1,508.2	41.75	37.122			
5,300.0	5,265.1	4,963.4	4,664.3	13.3	31.5	2.20	1,560.2	-305.9	1,587.8	1,545.1	42.68	37.206			
5,400.0	5,365.1	5,055.7	4,749.5	13.5	32.2	1.97	1,595.3	-310.7	1,625.6	1,582.0	43.60	37.286			
5,500.0	5,465.1	5,148.1	4,834.8	13.7	32.9	1.75	1,630.4	-315.5	1,663.5	1,619.0	44.52	37.364			
5,600.0	5,565.1	5,240.5	4,920.1	13.9	33.6	1.53	1,665.5	-320.3	1,701.4	1,656.0	45.44	37.440			
5,700.0	5,665.1	5,436.9	5,103.5	14.1	34.7	1.13	1,735.2	-329.9	1,737.2	1,690.4	46.83	37.097			
5,800.0	5,765.1	5,679.4	5,335.8	14.3	35.8	0.77	1,804.1	-339.3	1,765.6	1,717.4	48.18	36.646			
5,900.0	5,865.1	5,932.8	5,583.8	14.5	36.7	0.52	1,854.9	-346.3	1,785.7	1,736.4	49.29	36.228			
6,000.0	5,965.1	6,193.6	5,842.8	14.7	37.3	0.39	1,884.4	-350.3	1,797.0	1,746.9	50.11	35.861			
6,100.0	6,065.1	6,416.1	6,065.1	14.9	37.6	0.35	1,891.1	-351.3	1,799.5	1,749.0	50.58	35.580			
6,192.7	6,157.8	6,507.0	6,155.8	15.1	37.6	0.52	1,891.1	-346.1	1,799.6	1,748.7	50.83	35.405			
6,200.0	6,165.1	6,514.1	6,162.9	15.1	37.6	-89.45	1,891.1	-345.2	1,799.6	1,765.7	33.90	53.079			
6,250.0	6,215.1	6,562.3	6,210.5	15.1	37.6	-89.26	1,891.1	-337.3	1,799.7	1,765.6	34.05	52.859			
6,300.0	6,264.7	6,610.3	6,257.1	15.2	37.7	-89.08	1,891.1	-326.3	1,799.7	1,765.6	34.16	52.686			
6,350.0	6,313.9	6,657.8	6,302.6	15.2	37.7	-88.90	1,891.1	-312.4	1,799.8	1,765.6	34.25	52.554			
6,400.0	6,362.2	6,705.1	6,346.7	15.3	37.7	-88.73	1,891.1	-295.6	1,799.9	1,765.6	34.32	52.452			
6,450.0	6,409.6	6,752.0	6,389.4	15.3	37.7	-88.56	1,891.1	-276.0	1,800.1	1,765.7	34.37	52.369			
6,500.0	6,455.8	6,800.0	6,431.6	15.3	37.7	-88.40	1,891.1	-253.2	1,800.2	1,765.8	34.43	52.287			
6,550.0	6,500.5	6,844.9	6,469.6	15.3	37.7	-88.25	1,891.1	-229.3	1,800.3	1,765.9	34.49	52.192			
6,600.0	6,543.5	6,891.0	6,507.0	15.3	37.7	-88.10	1,891.1	-202.3	1,800.5	1,765.9	34.59	52.059			
6,650.0	6,584.7	6,936.9	6,542.4	15.3	37.7	-87.97	1,891.1	-173.2	1,800.6	1,765.9	34.72	51.864			
6,700.0	6,623.7	6,982.5	6,575.7	15.4	37.7	-87.84	1,891.1	-142.0	1,800.8	1,765.9	34.91	51.585			
6,750.0	6,660.6	7,028.0	6,606.8	15.5	37.7	-87.73	1,891.1	-108.9	1,800.9	1,765.7	35.18	51.196			
6,800.0	6,694.9	7,073.2	6,635.7	15.7	37.7	-87.62	1,891.1	-74.0	1,801.1	1,765.5	35.54	50.677			
6,850.0	6,726.6	7,118.3	6,662.2	15.9	37.7	-87.52	1,891.1	-37.6	1,801.2	1,765.2	36.01	50.017			
6,900.0	6,755.6	7,163.3	6,686.3	16.2	37.7	-87.44	1,891.1	0.4	1,801.3	1,764.7	36.62	49.185			
6,950.0	6,781.7	7,208.1	6,707.9	16.6	37.7	-87.37	1,891.1	39.7	1,801.4	1,764.0	37.36	48.221			
7,000.0	6,804.7	7,252.8	6,726.9	17.1	37.7	-87.31	1,891.1	80.1	1,801.5	1,763.3	38.24	47.109			
7,050.0	6,824.6	7,300.0	6,744.3	17.7	37.8	-87.25	1,891.1	124.0	1,801.6	1,762.3	39.30	45.839			
7,050.2	6,824.6	7,300.0	6,744.3	17.7	37.8	-87.25	1,891.1	124.0	1,801.6	1,762.3	39.30	45.837			
7,100.0	6,841.2	7,342.1	6,757.2	18.3	37.8	-87.22	1,891.1	164.0	1,801.6	1,761.2	40.46	44.530			
7,150.0	6,854.5	7,386.6	6,768.4	19.0	37.9	-87.19	1,891.1	207.1	1,801.7	1,759.9	41.78	43.125			
7,200.0	6,864.4	7,431.1	6,776.8	19.8	38.0	-87.18	1,891.1	250.8	1,801.7	1,758.5	43.22	41.686			
7,250.0	6,870.8	7,475.6	6,782.6	20.7	38.1	-87.18	1,891.1	294.9	1,801.7	1,756.9	44.77	40.240			
7,300.0	6,873.8	7,520.1	6,785.5	21.6	38.2	-87.19	1,891.1	339.3	1,801.7	1,755.2	46.42	38.813			
7,324.7	6,874.0	7,542.0	6,786.0	22.1	38.2	-87.20	1,891.1	361.3	1,801.6	1,754.4	47.26	38.124			
7,400.0	6,873.2	7,616.5	6,785.7	23.5	38.5	-87.22	1,891.1	435.7	1,801.6	1,751.6	50.06	35.991			
7,500.0	6,872.2	7,716.5	6,785.3	25.6	39.0	-87.23	1,891.1	535.7	1,801.6	1,747.5	54.06	33.323			
7,600.0	6,871.3	7,816.5	6,784.8	27.9	39.7	-87.25	1,891.1	635.7	1,801.6	1,743.2	58.33	30.883			
7,700.0	6,870.3	7,916.5	6,784.4	30.2	40.6	-87.27	1,891.1	735.7	1,801.5	1,738.7	62.82	28.680			
7,800.0	6,869.3	8,016.5	6,783.9	32.6	41.7	-87.28	1,891.1	835.7	1,801.5	1,734.1	67.47	26.702			
7,900.0	6,868.3	8,116.5	6,783.5	35.0	43.1	-87.30	1,891.1	935.7	1,801.5	1,729.2	72.25	24.933			
8,000.0	6,867.4	8,216.5	6,783.1	37.6	44.8	-87.32	1,891.1	1,035.7	1,801.5	1,724.3	77.15	23.350			
8,100.0	6,866.4	8,316.5	6,782.6	40.1	46.6	-87.34	1,891.1	1,135.7	1,801.4	1,719.3	82.14	21.932			
8,200.0	6,865.4	8,416.5	6,782.2	42.7	48.6	-87.35	1,891.1	1,235.7	1,801.4	1,714.2	87.20	20.658			
8,300.0	6,864.4	8,516.5	6,781.8	45.3	50.8	-87.37	1,891.1	1,335.7	1,801.4	1,709.1	92.33	19.510			
8,400.0	6,863.5	8,616.5	6,781.3	47.9	53.0	-87.39	1,891.1	1,435.7	1,801.4	1,703.9	97.51	18.473			
8,500.0	6,862.5	8,716.5	6,780.9	50.6	55.3	-87.40	1,891.1	1,535.7	1,801.3	1,698.6	102.74	17.533			
8,600.0	6,861.5	8,816.5	6,780.5	53.2	57.7	-87.42	1,891.1	1,635.7	1,801.3	1,693.3	108.00	16.678			
8,614.0	6,861.4	8,830.5	6,780.4	53.6	58.0	-87.42	1,891.1	1,649.7	1,801.3	1,692.6	108.74	16.565			

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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	6,860.5	8,916.5	6,780.0	55.9	60.1	-87.46	1,891.1	1,735.7	1,799.4	1,685.5	113.90	15.798			
8,800.0	6,859.5	9,016.2	6,779.6	58.6	62.6	-87.49	1,891.1	1,835.4	1,792.2	1,672.6	119.66	14.977			
8,880.6	6,858.7	9,096.3	6,779.2	60.7	64.6	-87.50	1,891.1	1,915.5	1,782.7	1,658.6	124.10	14.365			
8,900.0	6,858.6	9,115.5	6,779.2	61.2	65.1	-87.50	1,891.1	1,934.6	1,780.0	1,654.9	125.12	14.226			
9,000.0	6,857.6	9,214.5	6,778.7	63.9	67.6	-87.49	1,891.1	2,033.7	1,766.1	1,635.6	130.41	13.542			
9,100.0	6,856.6	9,313.5	6,778.3	66.5	70.1	-87.49	1,891.1	2,132.7	1,752.1	1,616.4	135.72	12.910			
9,200.0	6,855.6	9,412.5	6,777.9	69.2	72.7	-87.49	1,891.1	2,231.7	1,738.2	1,597.2	141.04	12.324			
9,300.0	6,854.6	9,511.6	6,777.4	71.8	75.3	-87.49	1,891.1	2,330.7	1,724.3	1,577.9	146.38	11.780			
9,368.1	6,854.0	9,579.0	6,777.1	73.7	77.0	-87.49	1,891.1	2,398.2	1,714.8	1,564.8	150.02	11.430			
9,400.0	6,853.6	9,610.6	6,777.0	74.5	77.9	-87.48	1,891.1	2,429.8	1,710.6	1,558.9	151.71	11.276			
9,500.0	6,852.7	9,710.1	6,776.6	77.2	80.5	-87.47	1,891.1	2,529.3	1,700.9	1,544.1	156.80	10.848			
9,600.0	6,851.7	9,810.0	6,776.1	80.0	83.1	-87.46	1,891.1	2,629.2	1,696.5	1,534.9	161.57	10.500			
9,634.8	6,851.3	9,844.8	6,776.0	80.9	84.1	-87.45	1,891.1	2,664.0	1,696.2	1,533.0	163.14	10.397			
9,700.0	6,850.7	9,910.0	6,775.7	82.7	85.8	-87.47	1,891.1	2,729.2	1,696.1	1,529.4	166.71	10.174			
9,800.0	6,849.7	10,010.0	6,775.3	85.5	88.5	-87.48	1,891.1	2,829.2	1,696.1	1,523.9	172.19	9.850			
9,870.5	6,849.0	10,080.5	6,774.9	87.4	90.4	-87.50	1,891.1	2,899.7	1,696.1	1,520.0	176.06	9.634			
9,871.0	6,849.0	10,081.0	6,774.9	87.4	90.4	-87.50	1,891.1	2,900.2	1,696.1	1,520.0	176.08	9.632			
9,900.0	6,848.7	10,110.0	6,774.8	88.3	91.1	-87.49	1,891.1	2,929.2	1,696.3	1,519.0	177.36	9.564			
10,000.0	6,847.7	10,209.9	6,774.4	91.0	93.8	-87.48	1,891.1	3,029.1	1,700.4	1,519.0	181.46	9.371			
10,100.0	6,846.8	10,309.5	6,773.9	93.8	96.5	-87.47	1,891.1	3,128.6	1,709.8	1,524.7	185.09	9.238			
10,137.1	6,846.4	10,346.3	6,773.8	94.8	97.5	-87.47	1,891.1	3,165.5	1,714.6	1,528.3	186.31	9.203			
10,200.0	6,845.8	10,408.5	6,773.5	96.5	99.2	-87.49	1,891.1	3,227.7	1,723.3	1,533.6	189.74	9.083			
10,300.0	6,844.8	10,507.6	6,773.1	99.3	101.9	-87.53	1,891.1	3,326.7	1,737.2	1,542.0	195.20	8.899			
10,400.0	6,843.8	10,606.6	6,772.6	102.0	104.6	-87.57	1,891.1	3,425.8	1,751.1	1,550.4	200.68	8.726			
10,500.0	6,842.8	10,705.6	6,772.2	104.8	107.2	-87.61	1,891.1	3,524.8	1,765.0	1,558.8	206.15	8.561			
10,600.0	6,841.9	10,804.6	6,771.8	107.5	109.9	-87.64	1,891.1	3,623.8	1,778.9	1,567.2	211.64	8.405			
10,700.0	6,840.9	10,903.7	6,771.4	110.3	112.6	-87.68	1,891.1	3,722.8	1,792.7	1,575.6	217.12	8.257			
10,732.1	6,840.6	10,935.5	6,771.2	111.2	113.5	-87.69	1,891.1	3,754.7	1,797.2	1,578.3	218.89	8.211			
10,800.0	6,839.9	11,002.8	6,770.9	113.0	115.4	-87.74	1,891.1	3,822.0	1,805.4	1,581.3	224.15	8.055			
10,900.0	6,838.9	11,102.5	6,770.5	115.8	118.1	-87.80	1,891.1	3,921.7	1,813.2	1,581.7	231.45	7.834			
10,998.8	6,838.0	11,201.3	6,770.1	118.6	120.8	-87.86	1,891.1	4,020.5	1,815.7	1,577.6	238.10	7.626			
11,000.0	6,838.0	11,202.5	6,770.0	118.6	120.8	-87.86	1,891.1	4,021.7	1,815.7	1,577.5	238.17	7.624			
11,100.0	6,837.0	11,302.5	6,769.6	121.4	123.6	-87.87	1,891.1	4,121.7	1,815.7	1,572.0	243.72	7.450			
11,200.0	6,836.0	11,402.5	6,769.2	124.2	126.3	-87.89	1,891.1	4,221.6	1,815.7	1,566.4	249.27	7.284			
11,300.0	6,835.1	11,502.5	6,768.7	126.9	129.1	-87.91	1,891.1	4,321.6	1,815.7	1,560.8	254.83	7.125			
11,400.0	6,834.1	11,602.5	6,768.3	129.7	131.8	-87.92	1,891.1	4,421.6	1,815.6	1,555.2	260.39	6.973			
11,428.1	6,833.8	11,630.6	6,768.2	130.5	132.6	-87.93	1,891.1	4,449.7	1,815.6	1,553.7	261.95	6.931			
11,487.5	6,833.3	11,689.9	6,767.9	132.2	134.2	-87.95	1,891.1	4,509.1	1,814.7	1,549.0	265.65	6.831			
11,500.0	6,833.2	11,702.5	6,767.9	132.5	134.6	-87.95	1,891.1	4,521.6	1,814.3	1,548.0	266.35	6.812			
11,600.0	6,832.2	11,802.4	6,767.4	135.3	137.3	-87.97	1,891.1	4,621.6	1,811.2	1,539.3	271.90	6.661			
11,700.0	6,831.3	11,902.4	6,767.0	138.1	140.1	-87.98	1,891.1	4,721.5	1,808.1	1,530.6	277.46	6.516			
11,800.0	6,830.3	12,002.3	6,766.6	140.8	142.8	-87.99	1,891.1	4,821.5	1,804.9	1,521.9	283.02	6.377			
11,900.0	6,829.4	12,102.3	6,766.1	143.6	145.6	-88.00	1,891.1	4,921.5	1,801.8	1,513.2	288.58	6.244			
11,938.6	6,829.0	12,140.7	6,766.0	144.7	146.6	-88.01	1,891.1	4,959.9	1,800.6	1,509.9	290.72	6.194 SF			

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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)	Offset Wellbore Centre +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	-75.2	75.2						
100.0	100.0	100.0	100.0	0.1	0.1	-90.00	0.0	-75.2	75.2	75.0	0.19	386.992			
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-75.2	75.2	74.6	0.64	116.841			
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-75.2	75.2	74.1	1.09	68.808			
400.0	400.0	400.0	400.0	0.8	0.8	-90.00	0.0	-75.2	75.2	73.7	1.54	48.762 CC			
500.0	500.0	499.5	499.5	1.0	1.0	-88.71	1.7	-75.5	75.6	73.6	1.99	37.917 ES			
600.0	600.0	598.8	598.6	1.2	1.2	-84.92	6.8	-76.4	76.7	74.3	2.45	31.348			
700.0	700.0	697.6	697.0	1.4	1.5	-78.96	15.2	-77.9	79.4	76.5	2.91	27.332			
800.0	800.0	795.7	794.4	1.7	1.7	-71.43	26.9	-80.0	84.5	81.2	3.37	25.092			
900.0	900.0	892.8	890.4	1.9	2.0	-63.24	41.6	-82.6	93.0	89.1	3.84	24.183			
1,000.0	1,000.0	989.0	984.8	2.1	2.3	20.80	59.4	-85.7	103.8	99.4	4.36	23.808			
1,100.0	1,099.8	1,084.1	1,077.6	2.3	2.7	28.99	80.1	-89.3	116.0	111.1	4.83	24.028			
1,200.0	1,199.5	1,177.9	1,168.4	2.6	3.2	36.92	103.4	-93.4	130.3	125.1	5.29	24.646			
1,300.0	1,298.7	1,270.4	1,257.1	2.8	3.6	44.35	129.2	-98.0	147.5	141.7	5.75	25.628			
1,400.0	1,397.5	1,363.3	1,345.4	3.1	4.1	51.23	157.8	-103.0	167.5	161.3	6.25	26.814			
1,500.0	1,495.6	1,458.9	1,436.0	3.4	4.7	57.55	187.7	-108.3	188.5	181.7	6.79	27.774			
1,600.0	1,593.4	1,554.3	1,526.5	3.8	5.3	63.28	217.6	-113.5	210.8	203.4	7.40	28.482			
1,700.0	1,691.3	1,649.8	1,617.0	4.1	5.8	67.92	247.4	-118.8	234.7	226.6	8.06	29.104			
1,800.0	1,789.1	1,745.2	1,707.5	4.5	6.4	71.71	277.3	-124.0	259.9	251.1	8.77	29.622			
1,900.0	1,886.9	1,840.7	1,798.0	4.9	7.0	74.83	307.2	-129.3	285.9	276.4	9.52	30.047			
2,000.0	1,984.7	1,936.1	1,888.5	5.4	7.6	77.44	337.1	-134.6	312.6	302.4	10.29	30.395			
2,100.0	2,082.5	2,031.6	1,979.0	5.8	8.2	79.63	366.9	-139.8	339.9	328.8	11.08	30.681			
2,200.0	2,180.3	2,127.0	2,069.5	6.2	8.8	81.51	396.8	-145.1	367.5	355.7	11.89	30.920			
2,300.0	2,278.1	2,222.5	2,160.0	6.6	9.4	83.12	426.7	-150.3	395.5	382.8	12.71	31.121			
2,400.0	2,376.0	2,317.9	2,250.5	7.1	10.0	84.52	456.6	-155.6	423.7	410.2	13.54	31.293			
2,500.0	2,473.8	2,413.4	2,341.0	7.5	10.6	85.75	486.4	-160.8	452.1	437.8	14.38	31.441			
2,600.0	2,571.6	2,508.8	2,431.5	8.0	11.2	86.83	516.3	-166.1	480.7	465.5	15.23	31.571			
2,695.7	2,665.2	2,600.2	2,518.1	8.4	11.8	87.75	544.9	-171.1	508.2	492.2	16.04	31.681			
2,700.0	2,669.4	2,604.3	2,522.0	8.4	11.8	87.82	546.2	-171.3	509.5	493.4	16.08	31.687			
2,800.0	2,767.6	2,699.9	2,612.6	8.7	12.4	89.07	576.1	-176.6	538.4	521.5	16.84	31.970			
2,900.0	2,866.4	2,795.5	2,703.3	9.0	13.0	89.90	606.0	-181.9	567.3	549.8	17.55	32.325			
3,000.0	2,965.6	2,891.2	2,794.1	9.3	13.6	90.35	636.0	-187.1	596.3	578.1	18.21	32.754			
3,100.0	3,065.3	2,986.8	2,884.7	9.5	14.2	90.48	665.9	-192.4	625.3	606.5	18.80	33.261			
3,200.0	3,165.1	3,082.2	2,975.1	9.7	14.8	90.34	695.7	-197.7	654.4	635.0	19.33	33.848			
3,295.7	3,260.8	3,173.1	3,061.3	9.8	15.4	14.17	724.2	-202.7	682.2	660.5	21.72	31.417			
3,300.0	3,265.1	3,177.2	3,065.2	9.8	15.4	14.13	725.5	-202.9	683.5	661.8	21.75	31.423			
3,400.0	3,365.1	3,272.0	3,155.1	10.0	16.0	13.09	755.1	-208.1	712.9	690.3	22.59	31.555			
3,500.0	3,465.1	3,366.8	3,245.0	10.1	16.6	12.14	784.8	-213.3	742.4	719.0	23.43	31.685			
3,600.0	3,565.1	3,461.6	3,334.9	10.3	17.2	11.25	814.5	-218.6	772.2	747.9	24.27	31.813			
3,700.0	3,665.1	3,556.4	3,424.8	10.5	17.8	10.44	844.1	-223.8	802.1	776.9	25.11	31.938			
3,800.0	3,765.1	3,651.2	3,514.7	10.6	18.4	9.68	873.8	-229.0	832.1	806.1	25.95	32.062			
3,900.0	3,865.1	3,746.1	3,604.6	10.8	19.0	8.97	903.5	-234.2	862.3	835.5	26.79	32.182			
4,000.0	3,965.1	3,840.9	3,694.5	11.0	19.6	8.31	933.2	-239.4	892.5	864.9	27.63	32.300			
4,100.0	4,065.1	3,935.7	3,784.4	11.1	20.2	7.70	962.8	-244.7	922.9	894.4	28.47	32.416			
4,200.0	4,165.1	4,030.5	3,874.3	11.3	20.8	7.12	992.5	-249.9	953.4	924.0	29.31	32.528			
4,300.0	4,265.1	4,125.3	3,964.2	11.5	21.4	6.58	1,022.2	-255.1	983.9	953.8	30.15	32.637			
4,400.0	4,365.1	4,220.1	4,054.1	11.7	22.0	6.07	1,051.9	-260.3	1,014.5	983.5	30.98	32.744			
4,500.0	4,465.1	4,315.0	4,144.0	11.8	22.6	5.59	1,081.5	-265.6	1,045.2	1,013.4	31.82	32.848			
4,600.0	4,565.1	4,409.8	4,233.9	12.0	23.2	5.14	1,111.2	-270.8	1,076.0	1,043.3	32.66	32.949			
4,700.0	4,665.1	4,504.6	4,323.8	12.2	23.8	4.71	1,140.9	-276.0	1,106.8	1,073.3	33.49	33.047			
4,800.0	4,765.1	4,599.4	4,413.7	12.4	24.4	4.30	1,170.6	-281.2	1,137.6	1,103.3	34.33	33.142			
4,900.0	4,865.1	4,694.2	4,503.6	12.6	25.0	3.92	1,200.2	-286.4	1,168.6	1,133.4	35.16	33.235			

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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			
5,000.0	4,965.1	4,789.0	4,593.5	12.8	25.6	3.56	1,229.9	-291.7	1,199.5	1,163.5	35.99	33.325			
5,100.0	5,065.1	4,883.9	4,683.4	12.9	26.2	3.21	1,259.6	-296.9	1,230.5	1,193.7	36.83	33.412			
5,200.0	5,165.1	4,978.7	4,773.3	13.1	26.8	2.88	1,289.3	-302.1	1,261.6	1,223.9	37.66	33.497			
5,300.0	5,265.1	5,073.5	4,863.2	13.3	27.4	2.57	1,318.9	-307.3	1,292.6	1,254.1	38.49	33.580			
5,400.0	5,365.1	5,168.3	4,953.1	13.5	28.0	2.27	1,348.6	-312.5	1,323.7	1,284.4	39.33	33.660			
5,500.0	5,465.1	5,263.1	5,043.0	13.7	28.6	1.99	1,378.3	-317.8	1,354.9	1,314.7	40.16	33.738			
5,600.0	5,565.1	5,357.9	5,132.9	13.9	29.2	1.72	1,407.9	-323.0	1,386.0	1,345.1	40.99	33.813			
5,700.0	5,665.1	5,452.8	5,222.8	14.1	29.8	1.46	1,437.6	-328.2	1,417.2	1,375.4	41.82	33.887			
5,800.0	5,765.1	5,539.3	5,401.5	14.3	30.7	1.02	1,490.4	-337.5	1,445.5	1,402.6	42.94	33.661			
5,900.0	5,865.1	5,834.2	5,591.4	14.5	31.5	0.69	1,533.2	-345.0	1,467.4	1,423.5	43.91	33.420			
6,000.0	5,965.1	6,034.4	5,789.1	14.7	32.0	0.47	1,563.8	-350.4	1,482.7	1,438.0	44.71	33.162			
6,100.0	6,065.1	6,238.0	5,992.0	14.9	32.4	0.35	1,580.9	-353.4	1,491.1	1,445.8	45.33	32.895			
6,192.7	6,157.8	6,403.9	6,157.8	15.1	32.6	0.32	1,584.4	-354.0	1,492.8	1,447.1	45.72	32.654			
6,200.0	6,165.1	6,411.2	6,165.1	15.1	32.6	-89.68	1,584.4	-354.0	1,492.8	1,459.9	32.93	45.331			
6,250.0	6,215.1	6,460.6	6,214.5	15.1	32.6	-89.70	1,584.4	-352.3	1,492.8	1,459.8	33.07	45.143			
6,300.0	6,264.7	6,510.1	6,263.7	15.2	32.7	-89.72	1,584.4	-347.2	1,492.8	1,459.6	33.17	45.005			
6,350.0	6,313.9	6,559.6	6,312.5	15.2	32.7	-89.74	1,584.4	-338.6	1,492.8	1,459.6	33.24	44.908			
6,400.0	6,362.2	6,609.2	6,360.6	15.3	32.7	-89.77	1,584.4	-326.8	1,492.8	1,459.5	33.29	44.844			
6,450.0	6,409.6	6,658.8	6,407.8	15.3	32.7	-89.79	1,584.4	-311.6	1,492.8	1,459.5	33.32	44.803			
6,500.0	6,455.8	6,708.4	6,453.9	15.3	32.7	-89.82	1,584.4	-293.1	1,492.8	1,459.5	33.34	44.770			
6,550.0	6,500.5	6,758.1	6,498.6	15.3	32.7	-89.84	1,584.4	-271.5	1,492.8	1,459.4	33.37	44.729			
6,600.0	6,543.5	6,807.9	6,541.8	15.3	32.7	-89.87	1,584.4	-246.8	1,492.8	1,459.4	33.42	44.662			
6,650.0	6,584.7	6,857.6	6,583.1	15.3	32.7	-89.90	1,584.4	-219.2	1,492.8	1,459.3	33.51	44.544			
6,700.0	6,623.7	6,907.5	6,622.5	15.4	32.7	-89.93	1,584.4	-188.7	1,492.8	1,459.1	33.66	44.352			
6,750.0	6,660.6	6,957.4	6,659.8	15.5	32.7	-89.96	1,584.4	-155.5	1,492.8	1,458.9	33.88	44.061			
6,800.0	6,694.9	7,007.3	6,694.6	15.7	32.7	-89.99	1,584.4	-119.7	1,492.8	1,458.6	34.20	43.648			
6,839.3	6,720.1	7,046.6	6,720.3	15.9	32.7	-90.01	1,584.4	-90.0	1,492.8	1,458.3	34.54	43.221			
6,850.0	6,726.6	7,057.3	6,727.0	15.9	32.7	-90.02	1,584.4	-81.6	1,492.8	1,458.2	34.64	43.095			
6,900.0	6,755.6	7,107.4	6,756.6	16.2	32.7	-90.04	1,584.4	-41.3	1,492.8	1,457.6	35.22	42.391			
6,950.0	6,781.7	7,157.5	6,783.3	16.6	32.7	-90.07	1,584.4	1.1	1,492.8	1,456.9	35.94	41.535			
7,000.0	6,804.7	7,207.6	6,807.1	17.1	32.7	-90.10	1,584.4	45.3	1,492.8	1,456.0	36.83	40.536			
7,050.0	6,824.6	7,257.8	6,827.7	17.7	32.7	-90.13	1,584.4	91.0	1,492.8	1,454.9	37.88	39.413			
7,100.0	6,841.2	7,308.1	6,845.1	18.3	32.8	-90.16	1,584.4	138.2	1,492.8	1,453.7	39.09	38.193			
7,150.0	6,854.5	7,358.4	6,859.1	19.0	32.9	-90.18	1,584.4	186.5	1,492.8	1,452.4	40.45	36.905			
7,200.0	6,864.4	7,408.7	6,869.7	19.8	32.9	-90.21	1,584.4	235.7	1,492.8	1,450.9	41.96	35.581			
7,250.0	6,870.8	7,459.1	6,876.9	20.7	33.1	-90.23	1,584.4	285.6	1,492.8	1,449.2	43.58	34.251			
7,300.0	6,873.8	7,509.6	6,880.5	21.6	33.2	-90.26	1,584.4	335.9	1,492.8	1,447.5	45.32	32.942			
7,324.7	6,874.0	7,534.5	6,881.0	22.1	33.3	-90.27	1,584.4	360.8	1,492.8	1,446.6	46.20	32.309			
7,400.0	6,873.2	7,609.9	6,880.4	23.5	33.7	-90.27	1,584.4	436.2	1,492.8	1,443.8	49.05	30.436			
7,500.0	6,872.2	7,709.9	6,879.5	25.6	34.4	-90.28	1,584.4	536.2	1,492.8	1,439.7	53.10	28.112			
7,600.0	6,871.3	7,809.9	6,878.6	27.9	35.3	-90.28	1,584.4	636.2	1,492.8	1,435.4	57.42	25.999			
7,700.0	6,870.3	7,909.9	6,877.8	30.2	36.6	-90.29	1,584.4	736.2	1,492.8	1,430.9	61.94	24.100			
7,800.0	6,869.3	8,009.9	6,876.9	32.6	38.2	-90.29	1,584.4	836.2	1,492.8	1,426.2	66.63	22.404			
7,900.0	6,868.3	8,109.9	6,876.0	35.0	40.0	-90.29	1,584.4	936.2	1,492.8	1,421.4	71.45	20.892			
8,000.0	6,867.4	8,209.9	6,875.1	37.6	42.1	-90.30	1,584.4	1,036.2	1,492.8	1,416.4	76.38	19.544			
8,100.0	6,866.4	8,309.9	6,874.3	40.1	44.2	-90.30	1,584.4	1,136.2	1,492.8	1,411.4	81.40	18.338			
8,200.0	6,865.4	8,409.9	6,873.4	42.7	46.5	-90.31	1,584.4	1,236.1	1,492.8	1,406.3	86.50	17.259			
8,300.0	6,864.4	8,509.9	6,872.5	45.3	48.8	-90.31	1,584.4	1,336.1	1,492.8	1,401.2	91.65	16.288			
8,400.0	6,863.5	8,609.9	6,871.7	47.9	51.2	-90.31	1,584.4	1,436.1	1,492.8	1,396.0	96.86	15.413			
8,500.0	6,862.5	8,709.9	6,870.8	50.6	53.7	-90.32	1,584.4	1,536.1	1,492.8	1,390.7	102.11	14.620			
8,600.0	6,861.5	8,809.9	6,869.9	53.2	56.2	-90.32	1,584.4	1,636.1	1,492.8	1,385.4	107.39	13.901			
8,614.0	6,861.4	8,823.9	6,869.8	53.6	56.5	-90.32	1,584.4	1,650.1	1,492.8	1,384.7	108.14	13.805			

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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	6,860.5	8,909.9	6,869.0	55.9	58.7	-90.35	1,584.4	1,736.1	1,490.9	1,377.7	113.20	13.170			
8,800.0	6,859.5	9,009.6	6,868.2	58.6	61.3	-90.39	1,584.4	1,835.8	1,483.8	1,364.9	118.84	12.485			
8,880.6	6,858.7	9,089.7	6,867.5	60.7	63.3	-90.42	1,584.4	1,915.9	1,474.2	1,351.1	123.17	11.969			
8,900.0	6,858.6	9,108.9	6,867.3	61.2	63.8	-90.42	1,584.4	1,935.1	1,471.5	1,347.3	124.19	11.849			
9,000.0	6,857.6	9,207.9	6,866.4	63.9	66.4	-90.43	1,584.4	2,034.1	1,457.6	1,328.1	129.50	11.256			
9,100.0	6,856.6	9,306.9	6,865.6	66.5	69.0	-90.44	1,584.4	2,133.1	1,443.7	1,308.9	134.82	10.708			
9,200.0	6,855.6	9,405.9	6,864.7	69.2	71.6	-90.45	1,584.4	2,232.1	1,429.8	1,289.6	140.16	10.202			
9,300.0	6,854.6	9,505.0	6,863.9	71.8	74.2	-90.46	1,584.4	2,331.2	1,415.9	1,270.4	145.50	9.731			
9,368.1	6,854.0	9,572.4	6,863.3	73.7	76.0	-90.46	1,584.4	2,398.6	1,406.4	1,257.2	149.16	9.429			
9,400.0	6,853.6	9,604.0	6,863.0	74.5	76.9	-90.45	1,584.4	2,430.2	1,402.2	1,251.3	150.89	9.293			
9,500.0	6,852.7	9,703.5	6,862.1	77.2	79.5	-90.43	1,584.4	2,529.7	1,392.6	1,236.4	156.14	8.918			
9,600.0	6,851.7	9,803.4	6,861.3	80.0	82.2	-90.41	1,584.4	2,629.6	1,388.1	1,227.1	161.06	8.619			
9,634.8	6,851.3	9,838.2	6,861.0	80.9	83.1	-90.40	1,584.4	2,664.4	1,387.8	1,225.1	162.68	8.531			
9,634.8	6,851.3	9,838.2	6,861.0	80.9	83.1	-90.40	1,584.4	2,664.4	1,387.8	1,225.1	162.68	8.531			
9,700.0	6,850.7	9,903.4	6,860.4	82.7	84.9	-90.40	1,584.4	2,729.6	1,387.8	1,221.6	166.26	8.347			
9,800.0	6,849.7	10,003.4	6,859.5	85.5	87.6	-90.41	1,584.4	2,829.6	1,387.8	1,216.1	171.75	8.080			
9,870.5	6,849.0	10,073.9	6,858.9	87.4	89.5	-90.41	1,584.4	2,900.1	1,387.8	1,212.2	175.63	7.902			
9,900.0	6,848.7	10,103.4	6,858.6	88.3	90.3	-90.40	1,584.4	2,929.6	1,388.0	1,211.1	176.97	7.844			
10,000.0	6,847.7	10,203.3	6,857.8	91.0	93.0	-90.38	1,584.4	3,029.5	1,392.2	1,211.0	181.21	7.683			
10,100.0	6,846.8	10,302.9	6,856.9	93.8	95.7	-90.35	1,584.4	3,129.0	1,401.6	1,216.6	184.96	7.578			
10,137.1	6,846.4	10,339.7	6,856.6	94.8	96.7	-90.34	1,584.4	3,165.9	1,406.4	1,220.2	186.23	7.552			
10,200.0	6,845.8	10,402.0	6,856.1	96.5	98.4	-90.34	1,584.4	3,228.1	1,415.1	1,225.5	189.66	7.461			
10,300.0	6,844.8	10,501.0	6,855.2	99.3	101.1	-90.34	1,584.4	3,327.1	1,429.1	1,233.9	195.14	7.323			
10,400.0	6,843.8	10,600.0	6,854.3	102.0	103.8	-90.34	1,584.4	3,426.2	1,443.0	1,242.4	200.62	7.193			
10,500.0	6,842.8	10,699.0	6,853.5	104.8	106.5	-90.34	1,584.4	3,525.2	1,456.9	1,250.8	206.11	7.069			
10,600.0	6,841.9	10,798.1	6,852.6	107.5	109.2	-90.34	1,584.4	3,624.2	1,470.8	1,259.2	211.60	6.951			
10,700.0	6,840.9	10,897.1	6,851.7	110.3	111.9	-90.34	1,584.4	3,723.2	1,484.7	1,267.6	217.09	6.839			
10,732.1	6,840.6	10,928.9	6,851.5	111.2	112.8	-90.34	1,584.4	3,755.1	1,489.2	1,270.3	218.86	6.804			
10,800.0	6,839.9	10,996.3	6,850.9	113.0	114.7	-90.36	1,584.4	3,822.4	1,497.5	1,273.4	224.04	6.684			
10,900.0	6,838.9	11,096.0	6,850.0	115.8	117.4	-90.39	1,584.4	3,922.1	1,505.2	1,274.0	231.23	6.510			
10,998.8	6,838.0	11,194.7	6,849.2	118.6	120.1	-90.42	1,584.4	4,020.8	1,507.8	1,270.0	237.75	6.342			
11,000.0	6,838.0	11,195.9	6,849.1	118.6	120.2	-90.42	1,584.4	4,022.0	1,507.8	1,270.0	237.82	6.340			
11,100.0	6,837.0	11,295.9	6,848.3	121.4	122.9	-90.43	1,584.4	4,122.0	1,507.8	1,264.4	243.37	6.195			
11,200.0	6,836.0	11,395.9	6,847.4	124.2	125.7	-90.43	1,584.4	4,222.0	1,507.8	1,258.9	248.93	6.057			
11,300.0	6,835.1	11,495.9	6,846.5	126.9	128.4	-90.44	1,584.4	4,322.0	1,507.8	1,253.3	254.49	5.925			
11,400.0	6,834.1	11,595.9	6,845.7	129.7	131.2	-90.44	1,584.4	4,422.0	1,507.8	1,247.7	260.05	5.798			
11,428.1	6,833.8	11,624.0	6,845.4	130.5	132.0	-90.44	1,584.4	4,450.1	1,507.8	1,246.2	261.62	5.763			
11,487.5	6,833.3	11,683.4	6,844.9	132.2	133.6	-90.46	1,584.4	4,509.5	1,506.9	1,241.6	265.24	5.681			
11,500.0	6,833.2	11,695.9	6,844.8	132.5	134.0	-90.46	1,584.4	4,522.0	1,506.5	1,240.5	265.94	5.665			
11,600.0	6,832.2	11,795.8	6,843.9	135.3	136.7	-90.46	1,584.4	4,622.0	1,503.4	1,231.9	271.50	5.537			
11,700.0	6,831.3	11,895.8	6,843.1	138.1	139.5	-90.47	1,584.4	4,721.9	1,500.3	1,223.2	277.06	5.415			
11,800.0	6,830.3	11,995.7	6,842.2	140.8	142.2	-90.47	1,584.4	4,821.9	1,497.2	1,214.5	282.62	5.297			
11,900.0	6,829.4	12,095.7	6,841.3	143.6	145.0	-90.48	1,584.4	4,921.8	1,494.0	1,205.9	288.18	5.184			
11,938.6	6,829.0	12,133.9	6,841.0	144.7	146.1	-90.48	1,584.4	4,960.0	1,492.8	1,202.5	290.32	5.142 SF			

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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			
500.0	500.0	500.0	500.0	1.0	1.0	-90.00	0.0	-30.7	30.7	28.7	1.99	15.384			
600.0	600.0	600.0	600.0	1.2	1.2	-90.00	0.0	-30.7	30.7	28.2	2.44	12.552			
700.0	700.0	700.0	700.0	1.4	1.4	-90.00	0.0	-30.7	30.7	27.8	2.89	10.601	CC, ES		
800.0	800.0	799.5	799.5	1.7	1.7	-87.10	1.6	-31.3	31.4	28.0	3.34	9.397			
900.0	900.0	898.8	898.7	1.9	1.9	-79.27	6.3	-33.4	34.0	30.2	3.79	8.972			
1,000.0	1,000.0	997.7	997.2	2.1	2.1	7.19	14.2	-36.8	37.8	33.6	4.22	8.951			
1,100.0	1,099.8	1,096.2	1,094.9	2.3	2.4	19.62	25.1	-41.5	42.2	37.5	4.66	9.058			
1,200.0	1,199.5	1,194.0	1,191.6	2.6	2.7	32.79	39.0	-47.6	48.4	43.3	5.10	9.492			
1,300.0	1,298.7	1,291.2	1,287.0	2.8	3.0	45.29	55.8	-54.8	57.5	51.9	5.57	10.326			
1,400.0	1,397.5	1,389.6	1,383.3	3.1	3.3	56.41	74.5	-63.0	68.6	62.5	6.09	11.270			
1,500.0	1,495.6	1,488.0	1,479.5	3.4	3.7	66.38	93.3	-71.1	80.3	73.6	6.69	11.990			
1,600.0	1,593.4	1,586.3	1,575.7	3.8	4.1	74.86	112.0	-79.3	93.3	85.9	7.38	12.638			
1,700.0	1,691.3	1,684.7	1,671.9	4.1	4.5	81.18	130.8	-87.4	107.9	99.8	8.11	13.297			
1,800.0	1,789.1	1,783.0	1,768.1	4.5	4.9	85.97	149.5	-95.5	123.4	114.6	8.87	13.916			
1,900.0	1,886.9	1,881.3	1,864.2	4.9	5.3	89.68	168.3	-103.7	139.7	130.0	9.64	14.479			
2,000.0	1,984.7	1,979.6	1,960.4	5.4	5.7	92.61	187.0	-111.8	156.3	145.9	10.43	14.986			
2,100.0	2,082.5	2,077.9	2,056.6	5.8	6.1	94.97	205.8	-119.9	173.3	162.1	11.23	15.438			
2,200.0	2,180.3	2,176.3	2,152.7	6.2	6.5	96.91	224.5	-128.1	190.5	178.5	12.03	15.841			
2,300.0	2,278.1	2,274.6	2,248.9	6.6	7.0	98.53	243.3	-136.2	207.9	195.1	12.84	16.201			
2,400.0	2,376.0	2,372.9	2,345.1	7.1	7.4	99.90	262.0	-144.3	225.5	211.8	13.65	16.524			
2,500.0	2,473.8	2,471.2	2,441.2	7.5	7.8	101.07	280.8	-152.5	243.1	228.7	14.46	16.814			
2,600.0	2,571.6	2,569.5	2,537.4	8.0	8.3	102.08	299.5	-160.6	260.9	245.6	15.28	17.076			
2,695.7	2,665.2	2,663.6	2,629.4	8.4	8.7	102.93	317.5	-168.4	277.9	261.8	16.06	17.304			
2,700.0	2,669.4	2,667.8	2,633.6	8.4	8.7	102.98	318.3	-168.7	278.7	262.6	16.09	17.315			
2,800.0	2,767.6	2,766.3	2,729.9	8.7	9.1	103.74	337.0	-176.9	296.1	279.3	16.81	17.613			
2,900.0	2,866.4	2,864.9	2,826.3	9.0	9.6	103.81	355.8	-185.0	312.7	295.2	17.48	17.884			
3,000.0	2,965.6	2,963.5	2,922.8	9.3	10.0	103.29	374.6	-193.2	328.5	310.4	18.11	18.141			
3,100.0	3,065.3	3,062.0	3,019.2	9.5	10.4	102.26	393.4	-201.4	343.7	325.0	18.68	18.399			
3,200.0	3,165.1	3,160.4	3,115.4	9.7	10.9	100.79	412.2	-209.5	358.4	339.2	19.19	18.676			
3,295.7	3,260.8	3,254.2	3,207.1	9.8	11.3	23.21	430.1	-217.2	372.2	355.3	16.90	22.016			
3,300.0	3,265.1	3,258.4	3,211.2	9.8	11.3	23.11	430.9	-217.6	372.8	355.9	16.93	22.017			
3,400.0	3,365.1	3,356.2	3,306.9	10.0	11.7	20.90	449.5	-225.7	387.5	370.0	17.59	22.036			
3,500.0	3,465.1	3,454.0	3,402.6	10.1	12.2	18.86	468.2	-233.8	402.8	384.6	18.25	22.067			
3,600.0	3,565.1	3,551.8	3,498.3	10.3	12.6	16.96	486.8	-241.9	418.6	399.6	18.93	22.108			
3,700.0	3,665.1	3,649.6	3,593.9	10.5	13.0	15.20	505.5	-250.0	434.8	415.1	19.62	22.160			
3,800.0	3,765.1	3,747.5	3,689.6	10.6	13.5	13.56	524.1	-258.1	451.3	431.0	20.31	22.221			
3,900.0	3,865.1	3,845.3	3,785.3	10.8	13.9	12.04	542.8	-266.2	468.2	447.2	21.01	22.290			
4,000.0	3,965.1	3,943.1	3,881.0	11.0	14.3	10.63	561.4	-274.2	485.4	463.7	21.70	22.366			
4,100.0	4,065.1	4,040.9	3,976.7	11.1	14.8	9.31	580.1	-282.3	502.9	480.5	22.40	22.449			
4,200.0	4,165.1	4,138.7	4,072.3	11.3	15.2	8.08	598.7	-290.4	520.6	497.5	23.10	22.537			
4,300.0	4,265.1	4,236.5	4,168.0	11.5	15.6	6.93	617.4	-298.5	538.5	514.7	23.80	22.629			
4,400.0	4,365.1	4,334.4	4,263.7	11.7	16.1	5.85	636.1	-306.6	556.6	532.1	24.49	22.724			
4,500.0	4,465.1	4,432.2	4,359.4	11.8	16.5	4.84	654.7	-314.7	574.9	549.7	25.19	22.822			
4,600.0	4,565.1	4,530.0	4,455.1	12.0	17.0	3.89	673.4	-322.8	593.4	567.5	25.89	22.923			
4,700.0	4,665.1	4,627.8	4,550.7	12.2	17.4	3.00	692.0	-330.9	612.0	585.4	26.58	23.024			
4,800.0	4,765.1	4,738.4	4,659.0	12.4	17.8	2.09	712.5	-339.8	630.3	603.0	27.28	23.103			
4,900.0	4,865.1	4,862.0	4,780.9	12.6	18.2	1.30	731.1	-347.9	645.2	617.3	27.92	23.108			

CC - Min centre 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 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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 Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor	
5,000.0	4,965.1	4,987.1	4,905.2	12.8	18.5	0.74	745.1	-353.9	656.3	627.8	28.49	23.034		
5,100.0	5,065.1	5,113.4	5,031.1	12.9	18.8	0.39	754.2	-357.9	663.5	634.5	28.99	22.887		
5,200.0	5,165.1	5,240.3	5,157.9	13.1	19.0	0.24	758.1	-359.6	666.6	637.2	29.41	22.668		
5,300.0	5,265.1	5,347.6	5,265.1	13.3	19.1	0.24	758.3	-359.7	666.7	636.9	29.76	22.403		
5,400.0	5,365.1	5,447.6	5,365.1	13.5	19.2	0.24	758.3	-359.7	666.7	636.6	30.11	22.143		
5,500.0	5,465.1	5,547.6	5,465.1	13.7	19.4	0.24	758.3	-359.7	666.7	636.2	30.46	21.888		
5,600.0	5,565.1	5,647.6	5,565.1	13.9	19.5	0.24	758.3	-359.7	666.7	635.9	30.81	21.637		
5,700.0	5,665.1	5,747.6	5,665.1	14.1	19.6	0.24	758.3	-359.7	666.7	635.5	31.17	21.390		
5,800.0	5,765.1	5,847.6	5,765.1	14.3	19.8	0.24	758.3	-359.7	666.7	635.2	31.53	21.148		
5,900.0	5,865.1	5,947.6	5,865.1	14.5	19.9	0.24	758.3	-359.7	666.7	634.8	31.89	20.909		
6,000.0	5,965.1	6,047.6	5,965.1	14.7	20.0	0.24	758.3	-359.7	666.7	634.5	32.25	20.675		
6,100.0	6,065.1	6,147.6	6,065.1	14.9	20.2	0.24	758.3	-359.7	666.7	634.1	32.61	20.445		
6,102.4	6,067.5	6,149.9	6,067.5	14.9	20.2	0.24	758.3	-359.7	666.7	634.1	32.62	20.440		
6,192.7	6,157.8	6,239.5	6,156.8	15.1	20.3	0.69	758.3	-354.3	666.7	633.9	32.90	20.267		
6,200.0	6,165.1	6,246.7	6,163.9	15.1	20.3	-89.23	758.3	-353.4	666.8	636.1	30.70	21.720		
6,250.0	6,215.1	6,295.5	6,212.1	15.1	20.3	-88.72	758.3	-345.4	666.9	636.0	30.86	21.609		
6,300.0	6,264.7	6,343.9	6,259.2	15.2	20.3	-88.21	758.3	-334.2	667.0	636.0	30.99	21.527		
6,350.0	6,313.9	6,392.0	6,305.1	15.2	20.3	-87.72	758.3	-319.9	667.2	636.2	31.08	21.469		
6,400.0	6,362.2	6,439.7	6,349.6	15.3	20.3	-87.23	758.3	-302.7	667.5	636.3	31.15	21.430		
6,450.0	6,409.6	6,487.0	6,392.5	15.3	20.3	-86.76	758.3	-282.8	667.8	636.6	31.20	21.404		
6,500.0	6,455.8	6,534.1	6,433.8	15.3	20.3	-86.31	758.3	-260.3	668.1	636.9	31.24	21.383		
6,550.0	6,500.5	6,580.9	6,473.3	15.3	20.3	-85.88	758.3	-235.2	668.4	637.2	31.30	21.359		
6,600.0	6,543.5	6,627.3	6,510.8	15.3	20.2	-85.46	758.3	-207.8	668.8	637.4	31.37	21.320		
6,650.0	6,584.7	6,673.5	6,546.3	15.3	20.2	-85.07	758.3	-178.2	669.2	637.7	31.48	21.256		
6,700.0	6,623.7	6,719.5	6,579.6	15.4	20.2	-84.70	758.3	-146.5	669.6	637.9	31.66	21.152		
6,750.0	6,660.6	6,765.2	6,610.6	15.5	20.1	-84.36	758.3	-113.0	670.0	638.1	31.91	20.998		
6,800.0	6,694.9	6,810.8	6,639.4	15.7	20.1	-84.04	758.3	-77.6	670.3	638.1	32.26	20.783		
6,850.0	6,726.6	6,856.1	6,665.7	15.9	20.1	-83.74	758.3	-40.7	670.7	638.0	32.72	20.498		
6,900.0	6,755.6	6,900.0	6,688.9	16.2	20.1	-83.49	758.3	-3.5	671.1	637.7	33.31	20.146		
6,950.0	6,781.7	6,946.4	6,710.9	16.6	20.1	-83.25	758.3	37.3	671.4	637.3	34.07	19.705		
7,000.0	6,804.7	6,991.3	6,729.7	17.1	20.1	-83.04	758.3	78.1	671.7	636.7	34.98	19.204		
7,050.0	6,824.6	7,036.1	6,745.8	17.7	20.1	-82.87	758.3	119.9	671.9	635.9	36.04	18.641		
7,100.0	6,841.2	7,080.8	6,759.2	18.3	20.2	-82.73	758.3	162.5	672.1	634.9	37.25	18.043		
7,150.0	6,854.5	7,125.4	6,770.0	19.0	20.4	-82.62	758.3	205.8	672.3	633.7	38.61	17.414		
7,200.0	6,864.4	7,170.0	6,778.0	19.8	20.9	-82.54	758.3	249.7	672.4	632.3	40.09	16.772		
7,250.0	6,870.8	7,214.5	6,783.3	20.7	21.6	-82.49	758.3	293.9	672.5	630.8	41.69	16.130		
7,300.0	6,873.8	7,259.1	6,785.8	21.6	22.3	-82.48	758.3	338.4	672.5	629.1	43.39	15.500		
7,324.7	6,874.0	7,282.3	6,786.0	22.1	22.7	-82.48	758.3	361.5	672.5	628.2	44.28	15.188		
7,358.7	6,873.6	7,314.9	6,785.8	22.7	23.3	-82.49	758.3	394.2	672.5	626.9	45.56	14.760		
7,400.0	6,873.2	7,356.2	6,785.5	23.5	24.1	-82.50	758.3	435.5	672.5	625.3	47.17	14.255		
7,500.0	6,872.2	7,456.2	6,784.8	25.6	26.2	-82.52	758.3	535.5	672.4	621.1	51.30	13.106		
7,600.0	6,871.3	7,556.2	6,784.1	27.9	28.4	-82.55	758.3	635.5	672.4	616.7	55.69	12.074		
7,700.0	6,870.3	7,656.2	6,783.4	30.2	30.7	-82.57	758.3	735.5	672.3	612.1	60.27	11.155		
7,800.0	6,869.3	7,756.2	6,782.7	32.6	33.0	-82.60	758.3	835.5	672.3	607.3	65.01	10.341		
7,900.0	6,868.3	7,856.2	6,782.0	35.0	35.5	-82.62	758.3	935.5	672.3	602.4	69.88	9.621		
8,000.0	6,867.4	7,956.2	6,781.3	37.6	37.9	-82.64	758.3	1,035.5	672.2	597.4	74.84	8.982		
8,100.0	6,866.4	8,056.2	6,780.6	40.1	40.5	-82.67	758.3	1,135.5	672.2	592.3	79.89	8.414		
8,200.0	6,865.4	8,156.2	6,779.9	42.7	43.0	-82.69	758.3	1,235.5	672.2	587.2	85.00	7.908		
8,300.0	6,864.4	8,256.2	6,779.2	45.3	45.6	-82.71	758.3	1,335.5	672.1	582.0	90.17	7.454		
8,400.0	6,863.5	8,356.2	6,778.5	47.9	48.2	-82.74	758.3	1,435.5	672.1	576.7	95.39	7.046		
8,500.0	6,862.5	8,456.2	6,777.8	50.6	50.8	-82.76	758.3	1,535.5	672.1	571.4	100.64	6.678		
8,600.0	6,861.5	8,556.2	6,777.1	53.2	53.5	-82.78	758.3	1,635.5	672.0	566.1	105.93	6.344		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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		
8,614.0	6,861.4	8,570.2	6,777.0	53.6	53.9	-82.79	758.3	1,649.5	672.0	565.3	106.67	6.300		
8,700.0	6,860.5	8,656.2	6,776.4	55.9	56.1	-82.81	758.3	1,735.4	670.1	558.7	111.41	6.014		
8,800.0	6,859.5	8,755.9	6,775.7	58.6	58.8	-82.76	758.3	1,835.2	663.0	546.3	116.63	5.684		
8,880.6	6,858.7	8,836.0	6,775.1	60.7	61.0	-82.66	758.3	1,915.2	653.5	532.9	120.59	5.419		
8,900.0	6,858.6	8,855.2	6,775.0	61.2	61.5	-82.63	758.3	1,934.4	650.8	529.2	121.60	5.352		
9,000.0	6,857.6	8,954.2	6,774.3	63.9	64.2	-82.50	758.3	2,033.4	637.0	510.1	126.86	5.021		
9,100.0	6,856.6	9,053.2	6,773.6	66.5	66.8	-82.35	758.3	2,132.5	623.1	491.0	132.12	4.716		
9,200.0	6,855.6	9,152.2	6,772.9	69.2	69.5	-82.21	758.3	2,231.5	609.3	471.9	137.40	4.435		
9,300.0	6,854.6	9,251.3	6,772.3	71.8	72.2	-82.05	758.3	2,330.5	595.5	452.8	142.67	4.174		
9,368.1	6,854.0	9,318.7	6,771.8	73.7	74.1	-81.94	758.3	2,398.0	586.1	439.8	146.27	4.007		
9,400.0	6,853.6	9,350.3	6,771.6	74.5	74.9	-81.90	758.3	2,429.6	581.9	433.8	148.12	3.929		
9,500.0	6,852.7	9,449.8	6,770.9	77.2	77.6	-81.80	758.3	2,529.1	572.3	418.6	153.73	3.723		
9,600.0	6,851.7	9,549.7	6,770.2	80.0	80.4	-81.76	758.3	2,629.0	567.9	408.9	159.01	3.571		
9,634.8	6,851.3	9,584.5	6,769.9	80.9	81.3	-81.75	758.3	2,663.8	567.5	406.8	160.76	3.530		
9,700.0	6,850.7	9,649.7	6,769.5	82.7	83.1	-81.77	758.3	2,729.0	567.5	403.2	164.32	3.454		
9,800.0	6,849.7	9,749.7	6,768.8	85.5	85.9	-81.80	758.3	2,829.0	567.5	397.7	169.79	3.342		
9,870.5	6,849.0	9,820.2	6,768.3	87.4	87.8	-81.82	758.3	2,899.5	567.4	393.8	173.65	3.268		
9,871.3	6,849.0	9,821.0	6,768.3	87.5	87.8	-81.82	758.3	2,900.3	567.4	393.8	173.69	3.267		
9,900.0	6,848.7	9,849.7	6,768.1	88.3	88.6	-81.83	758.3	2,929.0	567.7	392.6	175.10	3.242		
10,000.0	6,847.7	9,949.6	6,767.4	91.0	91.4	-81.87	758.3	3,028.9	571.7	392.0	179.72	3.181		
10,100.0	6,846.8	10,049.2	6,766.7	93.8	94.1	-81.96	758.3	3,128.4	581.0	397.1	183.87	3.160		
10,137.1	6,846.4	10,086.0	6,766.5	94.8	95.1	-82.00	758.3	3,165.2	585.7	400.5	185.29	3.161		
10,200.0	6,845.8	10,148.3	6,766.0	96.5	96.8	-82.14	758.3	3,227.5	594.4	405.6	188.75	3.149		
10,300.0	6,844.8	10,247.3	6,765.3	99.3	99.6	-82.34	758.3	3,326.5	608.1	413.9	194.28	3.130		
10,400.0	6,843.8	10,346.3	6,764.6	102.0	102.3	-82.54	758.3	3,425.5	621.9	422.1	199.80	3.113		
10,500.0	6,842.8	10,445.3	6,764.0	104.8	105.1	-82.72	758.3	3,524.5	635.7	430.3	205.33	3.096		
10,600.0	6,841.9	10,544.4	6,763.3	107.5	107.8	-82.90	758.3	3,623.6	649.4	438.6	210.87	3.080		
10,700.0	6,840.9	10,643.4	6,762.6	110.3	110.5	-83.07	758.3	3,722.6	663.2	446.8	216.40	3.065		
10,732.1	6,840.6	10,675.2	6,762.4	111.2	111.4	-83.13	758.3	3,754.4	667.7	449.5	218.18	3.060		
10,800.0	6,839.9	10,742.6	6,761.9	113.0	113.3	-83.28	758.3	3,821.8	675.8	452.7	223.13	3.029		
10,900.0	6,838.9	10,842.3	6,761.2	115.8	116.1	-83.43	758.3	3,921.5	683.5	453.6	229.94	2.973		
10,998.8	6,838.0	10,941.0	6,760.5	118.6	118.8	-83.52	758.3	4,020.2	686.0	450.0	236.06	2.906		
11,000.0	6,838.0	10,942.2	6,760.5	118.6	118.8	-83.52	758.3	4,021.4	686.0	449.9	236.13	2.905		
11,100.0	6,837.0	11,042.2	6,759.8	121.4	121.6	-83.54	758.3	4,121.4	686.0	444.3	241.67	2.839		
11,200.0	6,836.0	11,142.2	6,759.1	124.2	124.4	-83.56	758.3	4,221.4	686.0	438.8	247.21	2.775		
11,300.0	6,835.1	11,242.2	6,758.4	126.9	127.2	-83.58	758.3	4,321.4	685.9	433.2	252.76	2.714		
11,400.0	6,834.1	11,342.2	6,757.7	129.7	130.0	-83.61	758.3	4,421.4	685.9	427.6	258.31	2.655		
11,428.1	6,833.8	11,370.3	6,757.5	130.5	130.7	-83.61	758.3	4,449.5	685.9	426.0	259.87	2.639		
11,487.5	6,833.3	11,429.7	6,757.1	132.2	132.4	-83.63	758.3	4,508.9	685.0	421.7	263.23	2.602		
11,500.0	6,833.2	11,442.2	6,757.0	132.5	132.7	-83.63	758.3	4,521.4	684.6	420.6	263.93	2.594		
11,600.0	6,832.2	11,542.1	6,756.3	135.3	135.5	-83.62	758.3	4,621.3	681.4	412.0	269.46	2.529		
11,700.0	6,831.3	11,642.1	6,755.7	138.1	138.3	-83.61	758.3	4,721.3	678.3	403.3	274.99	2.467		
11,800.0	6,830.3	11,742.1	6,755.0	140.8	141.1	-83.61	758.3	4,821.2	675.2	394.7	280.52	2.407		
11,900.0	6,829.4	11,842.0	6,754.3	143.6	143.5	-83.60	758.3	4,921.2	672.1	386.5	285.64	2.353		
11,938.6	6,829.0	11,880.6	6,754.0	144.7	144.2	-83.60	758.3	4,959.7	670.9	383.5	287.40	2.334 SF		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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	-61.3	61.3					
100.0	100.0	100.0	100.0	0.1	0.1	-90.00	0.0	-61.3	61.3	61.1	0.19	315.327		
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-61.3	61.3	60.7	0.64	95.204		
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-61.3	61.3	60.2	1.09	56.065		
400.0	400.0	400.0	400.0	0.8	0.8	-90.00	0.0	-61.3	61.3	59.8	1.54	39.732		
500.0	500.0	500.0	500.0	1.0	1.0	-90.00	0.0	-61.3	61.3	59.3	1.99	30.768 CC		
600.0	600.0	599.5	599.5	1.2	1.2	-88.44	1.7	-61.7	61.7	59.3	2.44	25.273 ES		
700.0	700.0	698.7	698.6	1.4	1.5	-83.89	6.7	-62.8	63.2	60.3	2.90	21.823		
800.0	800.0	797.5	797.0	1.7	1.7	-76.90	15.1	-64.7	66.5	63.1	3.35	19.835		
900.0	900.0	895.6	894.3	1.9	1.9	-68.44	26.6	-67.3	72.6	68.8	3.82	19.028		
1,000.0	1,000.0	992.9	990.4	2.1	2.2	16.40	41.3	-70.6	80.7	76.4	4.29	18.824		
1,100.0	1,099.8	1,089.2	1,085.1	2.3	2.5	25.71	58.9	-74.6	89.9	85.2	4.74	18.964		
1,200.0	1,199.5	1,184.6	1,178.1	2.6	2.9	34.95	79.4	-79.2	101.3	96.1	5.20	19.487		
1,300.0	1,298.7	1,278.7	1,269.1	2.8	3.3	43.68	102.6	-84.5	115.5	109.9	5.66	20.401		
1,400.0	1,397.5	1,375.2	1,362.0	3.1	3.8	51.81	128.2	-90.2	131.8	125.7	6.16	21.398		
1,500.0	1,495.6	1,472.0	1,455.2	3.4	4.3	59.12	153.9	-96.0	148.6	141.9	6.72	22.128		
1,600.0	1,593.4	1,568.7	1,548.2	3.8	4.8	65.67	179.6	-101.8	166.8	159.4	7.34	22.706		
1,700.0	1,691.3	1,665.4	1,641.3	4.1	5.3	70.91	205.2	-107.6	186.7	178.6	8.03	23.241		
1,800.0	1,789.1	1,762.1	1,734.3	4.5	5.8	75.13	230.9	-113.4	207.8	199.0	8.76	23.722		
1,900.0	1,886.9	1,858.8	1,827.3	4.9	6.3	78.58	256.6	-119.2	229.8	220.3	9.52	24.143		
2,000.0	1,984.7	1,955.4	1,920.4	5.4	6.8	81.42	282.3	-125.0	252.5	242.2	10.30	24.510		
2,100.0	2,082.5	2,052.1	2,013.4	5.8	7.3	83.79	307.9	-130.8	275.7	264.6	11.10	24.831		
2,200.0	2,180.3	2,148.8	2,106.4	6.2	7.9	85.80	333.6	-136.6	299.3	287.4	11.92	25.113		
2,300.0	2,278.1	2,245.5	2,199.5	6.6	8.4	87.52	359.3	-142.4	323.1	310.4	12.74	25.363		
2,400.0	2,376.0	2,342.2	2,292.5	7.1	8.9	89.00	384.9	-148.2	347.3	333.7	13.57	25.586		
2,500.0	2,473.8	2,438.9	2,385.5	7.5	9.4	90.29	410.6	-154.0	371.6	357.2	14.41	25.786		
2,600.0	2,571.6	2,535.5	2,478.6	8.0	10.0	91.42	436.3	-159.8	396.0	380.8	15.25	25.965		
2,695.7	2,665.2	2,628.1	2,567.6	8.4	10.5	92.38	460.8	-165.3	419.5	403.5	16.06	26.121		
2,700.0	2,669.4	2,632.2	2,571.6	8.4	10.5	92.44	461.9	-165.6	420.6	404.5	16.10	26.130		
2,800.0	2,767.6	2,729.0	2,664.7	8.7	11.0	93.59	487.6	-171.4	445.2	428.4	16.84	26.431		
2,900.0	2,866.4	2,826.0	2,758.0	9.0	11.6	94.22	513.4	-177.2	469.6	452.1	17.54	26.776		
3,000.0	2,965.6	2,923.0	2,851.4	9.3	12.1	94.43	539.1	-183.0	493.8	475.6	18.17	27.167		
3,100.0	3,065.3	3,019.9	2,944.7	9.5	12.6	94.26	564.9	-188.8	517.7	498.9	18.75	27.612		
3,200.0	3,165.1	3,116.7	3,037.7	9.7	13.2	93.77	590.5	-194.6	541.5	522.2	19.26	28.117		
3,295.7	3,260.8	3,208.9	3,126.5	9.8	13.7	17.22	615.0	-200.1	564.2	544.4	19.81	28.486		
3,300.0	3,265.1	3,213.1	3,130.5	9.8	13.7	17.17	616.1	-200.4	565.3	545.4	19.84	28.491		
3,400.0	3,365.1	3,309.3	3,223.1	10.0	14.2	15.86	641.7	-206.1	589.2	568.6	20.61	28.587		
3,500.0	3,465.1	3,405.5	3,315.7	10.1	14.8	14.65	667.2	-211.9	613.5	592.1	21.39	28.686		
3,600.0	3,565.1	3,501.7	3,408.3	10.3	15.3	13.54	692.8	-217.7	637.9	615.8	22.16	28.787		
3,700.0	3,665.1	3,598.0	3,500.9	10.5	15.8	12.50	718.3	-223.4	662.6	639.7	22.94	28.889		
3,800.0	3,765.1	3,694.2	3,593.4	10.6	16.4	11.54	743.9	-229.2	687.5	663.8	23.71	28.992		
3,900.0	3,865.1	3,790.4	3,686.0	10.8	16.9	10.65	769.4	-235.0	712.6	688.1	24.49	29.096		
4,000.0	3,965.1	3,886.6	3,778.6	11.0	17.4	9.81	795.0	-240.7	737.8	712.5	25.27	29.199		
4,100.0	4,065.1	3,982.9	3,871.2	11.1	18.0	9.03	820.5	-246.5	763.1	737.1	26.04	29.302		
4,200.0	4,165.1	4,079.1	3,963.8	11.3	18.5	8.31	846.1	-252.3	788.6	761.8	26.82	29.405		
4,300.0	4,265.1	4,175.3	4,056.4	11.5	19.0	7.62	871.6	-258.0	814.2	786.6	27.59	29.506		
4,400.0	4,365.1	4,271.5	4,149.0	11.7	19.6	6.98	897.2	-263.8	839.8	811.5	28.37	29.606		
4,500.0	4,465.1	4,367.8	4,241.6	11.8	20.1	6.37	922.7	-269.6	865.6	836.5	29.14	29.704		
4,600.0	4,565.1	4,464.0	4,334.2	12.0	20.6	5.80	948.2	-275.3	891.5	861.6	29.91	29.801		
4,700.0	4,665.1	4,560.2	4,426.8	12.2	21.2	5.27	973.8	-281.1	917.4	886.7	30.69	29.897		
4,800.0	4,765.1	4,656.4	4,519.4	12.4	21.7	4.76	999.3	-286.9	943.4	912.0	31.46	29.990		
4,900.0	4,865.1	4,752.7	4,612.0	12.6	22.2	4.28	1,024.9	-292.6	969.5	937.3	32.23	30.082		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.0	4,965.1	4,848.9	4,704.6	12.8	22.8	3.82	1,050.4	-298.4	995.7	962.7	33.00	30.172		
5,100.0	5,065.1	4,945.1	4,797.1	12.9	23.3	3.39	1,076.0	-304.2	1,021.9	988.1	33.77	30.260		
5,200.0	5,165.1	5,041.3	4,889.7	13.1	23.8	2.97	1,101.5	-309.9	1,048.1	1,013.6	34.54	30.346		
5,300.0	5,265.1	5,137.6	4,982.3	13.3	24.4	2.58	1,127.1	-315.7	1,074.4	1,039.1	35.31	30.430		
5,400.0	5,365.1	5,233.8	5,074.9	13.5	24.9	2.21	1,152.6	-321.5	1,100.7	1,064.7	36.08	30.512		
5,500.0	5,465.1	5,330.0	5,167.5	13.7	25.4	1.85	1,178.2	-327.2	1,127.1	1,090.3	36.84	30.592		
5,600.0	5,565.1	5,426.2	5,260.1	13.9	26.0	1.51	1,203.7	-333.0	1,153.6	1,115.9	37.61	30.670		
5,700.0	5,665.1	5,586.6	5,415.6	14.1	26.7	1.03	1,242.1	-341.6	1,177.4	1,138.9	38.54	30.549		
5,800.0	5,765.1	5,751.1	5,577.1	14.3	27.2	0.67	1,272.5	-348.5	1,195.9	1,156.5	39.32	30.412		
5,900.0	5,865.1	5,918.8	5,743.2	14.5	27.6	0.43	1,294.2	-353.4	1,208.8	1,168.8	39.99	30.226		
6,000.0	5,965.1	6,088.5	5,912.4	14.7	27.9	0.29	1,306.4	-356.2	1,216.0	1,175.5	40.53	30.001		
6,100.0	6,065.1	6,241.2	6,065.1	14.9	28.1	0.26	1,309.2	-356.8	1,217.6	1,176.7	40.93	29.751		
6,192.7	6,157.8	6,332.8	6,156.5	15.1	28.2	0.51	1,309.2	-351.5	1,217.6	1,176.5	41.19	29.561		
6,200.0	6,165.1	6,339.9	6,163.6	15.1	28.2	-89.45	1,309.2	-350.6	1,217.7	1,185.6	32.06	37.984		
6,250.0	6,215.1	6,388.6	6,211.5	15.1	28.2	-89.17	1,309.2	-342.6	1,217.7	1,185.5	32.21	37.809		
6,300.0	6,264.7	6,436.8	6,258.5	15.2	28.2	-88.89	1,309.2	-331.5	1,217.8	1,185.5	32.33	37.674		
6,350.0	6,313.9	6,484.7	6,304.2	15.2	28.2	-88.62	1,309.2	-317.4	1,218.0	1,185.5	32.42	37.574		
6,400.0	6,362.2	6,532.2	6,348.6	15.3	28.2	-88.36	1,309.2	-300.3	1,218.1	1,185.6	32.48	37.500		
6,450.0	6,409.6	6,579.5	6,391.4	15.3	28.2	-88.11	1,309.2	-280.5	1,218.3	1,185.7	32.54	37.443		
6,500.0	6,455.8	6,626.4	6,432.6	15.3	28.2	-87.86	1,309.2	-258.1	1,218.5	1,185.9	32.59	37.391		
6,550.0	6,500.5	6,673.0	6,472.0	15.3	28.2	-87.63	1,309.2	-233.2	1,218.7	1,186.0	32.65	37.329		
6,600.0	6,543.5	6,719.3	6,509.5	15.3	28.2	-87.41	1,309.2	-205.9	1,218.9	1,186.1	32.73	37.240		
6,650.0	6,584.7	6,765.4	6,545.0	15.3	28.2	-87.20	1,309.2	-176.5	1,219.1	1,186.2	32.85	37.106		
6,700.0	6,623.7	6,811.3	6,578.3	15.4	28.2	-87.00	1,309.2	-145.0	1,219.3	1,186.2	33.04	36.907		
6,750.0	6,660.6	6,856.9	6,609.4	15.5	28.2	-86.81	1,309.2	-111.6	1,219.5	1,186.2	33.30	36.624		
6,800.0	6,694.9	6,902.3	6,638.1	15.7	28.2	-86.64	1,309.2	-76.4	1,219.7	1,186.0	33.66	36.239		
6,850.0	6,726.6	6,947.6	6,664.5	15.9	28.2	-86.49	1,309.2	-39.7	1,219.9	1,185.8	34.13	35.738		
6,900.0	6,755.6	6,992.7	6,688.5	16.2	28.2	-86.35	1,309.2	-1.4	1,220.1	1,185.3	34.75	35.114		
6,950.0	6,781.7	7,037.7	6,709.9	16.6	28.2	-86.23	1,309.2	38.1	1,220.2	1,184.7	35.50	34.370		
7,000.0	6,804.7	7,082.5	6,728.7	17.1	28.2	-86.12	1,309.2	78.8	1,220.4	1,184.0	36.41	33.519		
7,050.0	6,824.6	7,127.3	6,745.0	17.7	28.2	-86.04	1,309.2	120.5	1,220.5	1,183.1	37.46	32.578		
7,100.0	6,841.2	7,172.0	6,758.5	18.3	28.3	-85.97	1,309.2	163.0	1,220.6	1,182.0	38.67	31.566		
7,150.0	6,854.5	7,216.6	6,769.4	19.0	28.4	-85.91	1,309.2	206.3	1,220.7	1,180.7	40.01	30.507		
7,200.0	6,864.4	7,261.1	6,777.6	19.8	28.5	-85.88	1,309.2	250.0	1,220.8	1,179.3	41.49	29.426		
7,250.0	6,870.8	7,305.6	6,783.0	20.7	28.6	-85.86	1,309.2	294.2	1,220.8	1,177.7	43.07	28.344		
7,300.0	6,873.8	7,350.0	6,785.7	21.6	28.8	-85.86	1,309.2	338.5	1,220.8	1,176.0	44.75	27.282		
7,324.7	6,874.0	7,372.1	6,786.0	22.1	28.9	-85.87	1,309.2	360.6	1,220.8	1,175.2	45.61	26.766		
7,400.0	6,873.2	7,447.1	6,785.5	23.5	29.5	-85.88	1,309.2	435.6	1,220.8	1,172.3	48.49	25.175		
7,500.0	6,872.2	7,547.1	6,784.9	25.6	30.5	-85.90	1,309.2	535.6	1,220.7	1,168.1	52.58	23.218		
7,600.0	6,871.3	7,647.1	6,784.3	27.9	31.9	-85.92	1,309.2	635.6	1,220.7	1,163.8	56.92	21.445		
7,700.0	6,870.3	7,747.1	6,783.7	30.2	33.7	-85.93	1,309.2	735.6	1,220.7	1,159.2	61.47	19.859		
7,800.0	6,869.3	7,847.1	6,783.1	32.6	35.7	-85.95	1,309.2	835.6	1,220.6	1,154.5	66.18	18.445		
7,900.0	6,868.3	7,947.1	6,782.5	35.0	37.9	-85.97	1,309.2	935.6	1,220.6	1,149.6	71.02	17.188		
8,000.0	6,867.4	8,047.1	6,781.9	37.6	40.1	-85.98	1,309.2	1,035.6	1,220.6	1,144.6	75.96	16.068		
8,100.0	6,866.4	8,147.1	6,781.3	40.1	42.5	-86.00	1,309.2	1,135.6	1,220.6	1,139.6	80.99	15.070		
8,200.0	6,865.4	8,247.1	6,780.7	42.7	44.9	-86.02	1,309.2	1,235.6	1,220.5	1,134.4	86.10	14.176		
8,300.0	6,864.4	8,347.1	6,780.1	45.3	47.4	-86.04	1,309.2	1,335.6	1,220.5	1,129.3	91.26	13.374		
8,400.0	6,863.5	8,447.1	6,779.4	47.9	49.9	-86.05	1,309.2	1,435.6	1,220.5	1,124.0	96.47	12.651		
8,500.0	6,862.5	8,547.1	6,778.8	50.6	52.4	-86.07	1,309.2	1,535.6	1,220.5	1,118.7	101.73	11.997		
8,600.0	6,861.5	8,647.1	6,778.2	53.2	55.0	-86.09	1,309.2	1,635.6	1,220.4	1,113.4	107.02	11.404		
8,614.0	6,861.4	8,661.0	6,778.1	53.6	55.4	-86.09	1,309.2	1,649.5	1,220.4	1,112.7	107.76	11.326		
8,700.0	6,860.5	8,747.0	6,777.6	55.9	57.6	-86.12	1,309.2	1,735.5	1,218.5	1,105.8	112.72	10.810		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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			
8,800.0	6,859.5	8,846.8	6,777.0	58.6	60.2	-86.13	1,309.2	1,835.3	1,211.4	1,093.1	118.23	10.246			
8,880.6	6,858.7	8,926.8	6,776.5	60.7	62.3	-86.12	1,309.2	1,915.3	1,201.8	1,079.4	122.45	9.815			
8,900.0	6,858.6	8,946.0	6,776.4	61.2	62.8	-86.11	1,309.2	1,934.5	1,199.1	1,075.7	123.47	9.712			
9,000.0	6,857.6	9,045.0	6,775.8	63.9	65.4	-86.08	1,309.2	2,033.5	1,185.2	1,056.5	128.77	9.204			
9,100.0	6,856.6	9,144.1	6,775.2	66.5	68.1	-86.06	1,309.2	2,132.5	1,171.3	1,037.2	134.08	8.736			
9,200.0	6,855.6	9,243.1	6,774.6	69.2	70.7	-86.03	1,309.2	2,231.6	1,157.4	1,018.0	139.41	8.302			
9,300.0	6,854.6	9,342.1	6,774.0	71.8	73.4	-86.00	1,309.2	2,330.6	1,143.5	998.7	144.76	7.899			
9,368.1	6,854.0	9,409.6	6,773.6	73.7	75.2	-85.97	1,309.2	2,398.1	1,134.0	985.6	148.40	7.641			
9,400.0	6,853.6	9,441.2	6,773.4	74.5	76.0	-85.97	1,309.2	2,429.6	1,129.8	979.7	150.18	7.523			
9,500.0	6,852.7	9,540.7	6,772.8	77.2	78.7	-85.94	1,309.2	2,529.2	1,120.2	964.6	155.57	7.201			
9,600.0	6,851.7	9,640.6	6,772.2	80.0	81.4	-85.92	1,309.2	2,629.1	1,115.7	955.1	160.61	6.947			
9,634.8	6,851.3	9,675.4	6,772.0	80.9	82.4	-85.92	1,309.2	2,663.8	1,115.4	953.1	162.27	6.874			
9,700.0	6,850.7	9,740.6	6,771.6	82.7	84.1	-85.93	1,309.2	2,729.0	1,115.4	949.5	165.85	6.725			
9,800.0	6,849.7	9,840.6	6,771.0	85.5	86.9	-85.95	1,309.2	2,829.0	1,115.4	944.0	171.34	6.510			
9,870.5	6,849.0	9,911.1	6,770.5	87.4	88.8	-85.96	1,309.2	2,899.5	1,115.3	940.1	175.21	6.366			
9,871.0	6,849.0	9,911.6	6,770.5	87.5	88.8	-85.96	1,309.2	2,900.0	1,115.3	940.1	175.23	6.365			
9,900.0	6,848.7	9,940.6	6,770.3	88.3	89.6	-85.96	1,309.2	2,929.0	1,115.6	939.0	176.59	6.317			
10,000.0	6,847.7	10,040.5	6,769.7	91.0	92.3	-85.96	1,309.2	3,028.9	1,119.7	938.7	180.95	6.188			
10,100.0	6,846.8	10,140.0	6,769.1	93.8	95.0	-85.96	1,309.2	3,128.5	1,129.0	944.2	184.82	6.109			
10,137.1	6,846.4	10,176.9	6,768.9	94.8	96.0	-85.96	1,309.2	3,165.3	1,133.8	947.7	186.13	6.092			
10,200.0	6,845.8	10,239.1	6,768.5	96.5	97.7	-86.01	1,309.2	3,227.6	1,142.5	953.0	189.57	6.027			
10,300.0	6,844.8	10,338.1	6,767.9	99.3	100.5	-86.07	1,309.2	3,326.6	1,156.4	961.3	195.05	5.929			
10,400.0	6,843.8	10,437.2	6,767.3	102.0	103.2	-86.14	1,309.2	3,425.6	1,170.2	969.7	200.53	5.836			
10,500.0	6,842.8	10,536.2	6,766.7	104.8	105.9	-86.20	1,309.2	3,524.6	1,184.1	978.1	206.02	5.747			
10,600.0	6,841.9	10,635.2	6,766.1	107.5	108.6	-86.26	1,309.2	3,623.7	1,198.0	986.5	211.52	5.664			
10,700.0	6,840.9	10,734.2	6,765.5	110.3	111.4	-86.32	1,309.2	3,722.7	1,211.8	994.8	217.02	5.584			
10,732.1	6,840.6	10,766.1	6,765.3	111.2	112.2	-86.34	1,309.2	3,754.5	1,216.3	997.5	218.79	5.559			
10,800.0	6,839.9	10,833.4	6,764.9	113.0	114.1	-86.41	1,309.2	3,821.9	1,224.5	1,000.6	223.89	5.469			
10,900.0	6,838.9	10,933.1	6,764.3	115.8	116.8	-86.49	1,309.2	3,921.5	1,232.3	1,001.3	230.95	5.336			
10,998.8	6,838.0	11,031.8	6,763.7	118.6	119.6	-86.55	1,309.2	4,020.3	1,234.8	997.4	237.35	5.202			
11,000.0	6,838.0	11,033.0	6,763.7	118.6	119.6	-86.55	1,309.2	4,021.5	1,234.8	997.4	237.41	5.201			
11,100.0	6,837.0	11,133.0	6,763.1	121.4	122.4	-86.57	1,309.2	4,121.5	1,234.8	991.8	242.97	5.082			
11,200.0	6,836.0	11,233.0	6,762.5	124.2	125.1	-86.58	1,309.2	4,221.5	1,234.7	986.2	248.52	4.968			
11,300.0	6,835.1	11,333.0	6,761.9	126.9	127.9	-86.60	1,309.2	4,321.5	1,234.7	980.6	254.08	4.860			
11,400.0	6,834.1	11,433.0	6,761.3	129.7	130.7	-86.62	1,309.2	4,421.5	1,234.7	975.1	259.64	4.755			
11,428.1	6,833.8	11,461.1	6,761.1	130.5	131.4	-86.62	1,309.2	4,449.6	1,234.7	973.5	261.21	4.727			
11,487.5	6,833.3	11,520.5	6,760.7	132.2	133.1	-86.64	1,309.2	4,508.9	1,233.8	969.0	264.75	4.660			
11,500.0	6,833.2	11,533.0	6,760.7	132.5	133.4	-86.65	1,309.2	4,521.5	1,233.4	967.9	265.45	4.646			
11,600.0	6,832.2	11,633.0	6,760.1	135.3	136.2	-86.65	1,309.2	4,621.4	1,230.2	959.2	271.00	4.540			
11,700.0	6,831.3	11,732.9	6,759.4	138.1	139.0	-86.66	1,309.2	4,721.4	1,227.1	950.6	276.56	4.437			
11,800.0	6,830.3	11,832.9	6,758.8	140.8	141.8	-86.67	1,309.2	4,821.3	1,224.0	941.9	282.11	4.339			
11,900.0	6,829.4	11,932.8	6,758.2	143.6	144.5	-86.68	1,309.2	4,921.3	1,220.9	933.2	287.67	4.244			
11,938.6	6,829.0	11,971.4	6,758.0	144.7	145.6	-86.68	1,309.2	4,959.8	1,219.7	929.9	289.82	4.208 SF			

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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	-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	699.5	699.5	1.4	1.4	-87.90	1.7	-45.1	45.1	42.2	2.89	15.605			
800.0	800.0	798.8	798.6	1.7	1.7	-81.92	6.6	-46.6	47.0	43.7	3.34	14.068			
900.0	900.0	897.6	897.1	1.9	1.9	-73.19	14.8	-49.0	51.3	47.5	3.80	13.492			
1,000.0	1,000.0	995.8	994.5	2.1	2.2	12.69	26.2	-52.4	57.1	52.9	4.24	13.458			
1,100.0	1,099.8	1,093.3	1,090.9	2.3	2.4	23.56	40.6	-56.7	63.9	59.2	4.69	13.636			
1,200.0	1,199.5	1,190.0	1,185.8	2.6	2.8	34.56	58.0	-61.9	72.8	67.7	5.14	14.173			
1,300.0	1,298.7	1,287.3	1,280.9	2.8	3.1	45.04	78.1	-67.9	84.0	78.4	5.60	15.000			
1,400.0	1,397.5	1,385.4	1,376.6	3.1	3.5	54.53	98.6	-74.0	95.7	89.6	6.11	15.678			
1,500.0	1,495.6	1,483.4	1,472.2	3.4	3.9	63.33	119.0	-80.1	108.0	101.3	6.69	16.157			
1,600.0	1,593.4	1,581.2	1,567.7	3.8	4.3	71.16	139.4	-86.2	121.8	114.5	7.35	16.584			
1,700.0	1,691.3	1,678.9	1,663.1	4.1	4.7	77.34	159.8	-92.2	137.5	129.4	8.06	17.058			
1,800.0	1,789.1	1,776.7	1,758.5	4.5	5.2	82.23	180.2	-98.3	154.4	145.6	8.80	17.531			
1,900.0	1,886.9	1,874.5	1,854.0	4.9	5.6	86.15	200.6	-104.4	172.1	162.6	9.57	17.982			
2,000.0	1,984.7	1,972.3	1,949.4	5.4	6.0	89.33	221.0	-110.5	190.6	180.2	10.36	18.401			
2,100.0	2,082.5	2,070.1	2,044.9	5.8	6.5	91.95	241.4	-116.6	209.5	198.3	11.15	18.786			
2,200.0	2,180.3	2,167.9	2,140.3	6.2	6.9	94.13	261.8	-122.7	228.7	216.8	11.95	19.137			
2,300.0	2,278.1	2,265.7	2,235.7	6.6	7.3	95.98	282.2	-128.8	248.2	235.5	12.76	19.458			
2,400.0	2,376.0	2,363.4	2,331.2	7.1	7.8	97.56	302.6	-134.8	268.0	254.4	13.57	19.750			
2,500.0	2,473.8	2,461.2	2,426.6	7.5	8.2	98.92	323.0	-140.9	287.9	273.5	14.38	20.017			
2,600.0	2,571.6	2,559.0	2,522.0	8.0	8.7	100.10	343.5	-147.0	307.9	292.7	15.20	20.262			
2,695.7	2,665.2	2,652.6	2,613.4	8.4	9.1	101.10	363.0	-152.8	327.2	311.2	15.98	20.476			
2,700.0	2,669.4	2,656.8	2,617.5	8.4	9.1	101.16	363.9	-153.1	328.1	312.1	16.01	20.487			
2,800.0	2,767.6	2,754.7	2,713.1	8.7	9.6	102.16	384.3	-159.2	347.9	331.2	16.73	20.797			
2,900.0	2,866.4	2,852.9	2,808.9	9.0	10.0	102.55	404.8	-165.3	367.1	349.7	17.40	21.095			
3,000.0	2,965.6	2,951.1	2,904.7	9.3	10.5	102.40	425.3	-171.4	385.5	367.5	18.02	21.392			
3,100.0	3,065.3	3,049.3	3,000.6	9.5	10.9	101.79	445.8	-177.5	403.2	384.7	18.58	21.699			
3,200.0	3,165.1	3,147.3	3,096.3	9.7	11.4	100.79	466.2	-183.6	420.5	401.4	19.09	22.030			
3,295.7	3,260.8	3,240.9	3,187.6	9.8	11.8	23.69	485.7	-189.4	436.6	418.9	17.67	24.707			
3,300.0	3,265.1	3,245.1	3,191.7	9.8	11.8	23.61	486.6	-189.7	437.3	419.6	17.70	24.709			
3,400.0	3,365.1	3,342.7	3,286.9	10.0	12.3	21.86	507.0	-195.8	454.3	436.0	18.37	24.737			
3,500.0	3,465.1	3,440.3	3,382.2	10.1	12.7	20.23	527.4	-201.9	471.7	452.7	19.04	24.772			
3,600.0	3,565.1	3,537.9	3,477.4	10.3	13.2	18.71	547.7	-207.9	489.5	469.8	19.73	24.815			
3,700.0	3,665.1	3,635.5	3,572.7	10.5	13.6	17.30	568.1	-214.0	507.6	487.1	20.41	24.864			
3,800.0	3,765.1	3,733.1	3,668.0	10.6	14.1	15.98	588.5	-220.1	525.9	504.8	21.10	24.919			
3,900.0	3,865.1	3,830.7	3,763.2	10.8	14.5	14.76	608.8	-226.1	544.5	522.7	21.80	24.979			
4,000.0	3,965.1	3,928.3	3,858.5	11.0	15.0	13.61	629.2	-232.2	563.3	540.8	22.49	25.043			
4,100.0	4,065.1	4,025.9	3,953.7	11.1	15.4	12.54	649.6	-238.3	582.4	559.2	23.19	25.111			
4,200.0	4,165.1	4,123.5	4,049.0	11.3	15.9	11.54	669.9	-244.4	601.6	577.7	23.89	25.183			
4,300.0	4,265.1	4,221.1	4,144.2	11.5	16.3	10.59	690.3	-250.4	621.0	596.4	24.59	25.257			
4,400.0	4,365.1	4,318.7	4,239.5	11.7	16.8	9.71	710.7	-256.5	640.5	615.2	25.28	25.332			
4,500.0	4,465.1	4,416.3	4,334.8	11.8	17.2	8.87	731.0	-262.6	660.2	634.2	25.98	25.410			
4,600.0	4,565.1	4,513.9	4,430.0	12.0	17.7	8.09	751.4	-268.7	680.0	653.3	26.68	25.488			
4,700.0	4,665.1	4,611.5	4,525.3	12.2	18.1	7.34	771.8	-274.7	699.9	672.5	27.37	25.568			
4,800.0	4,765.1	4,709.1	4,620.5	12.4	18.6	6.64	792.1	-280.8	719.9	691.9	28.07	25.647			
4,900.0	4,865.1	4,806.7	4,715.8	12.6	19.0	5.98	812.5	-286.9	740.1	711.3	28.77	25.727			

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 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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	
5,000.0	4,965.1	4,904.3	4,811.1	12.8	19.5	5.35	832.9	-293.0	760.3	730.8	29.46	25.807		
5,100.0	5,065.1	5,001.9	4,906.3	12.9	19.9	4.76	853.2	-299.0	780.6	750.4	30.15	25.886		
5,200.0	5,165.1	5,099.5	5,001.6	13.1	20.4	4.19	873.6	-305.1	801.0	770.1	30.85	25.965		
5,300.0	5,265.1	5,197.1	5,096.8	13.3	20.8	3.65	894.0	-311.2	821.4	789.9	31.54	26.044		
5,400.0	5,365.1	5,294.7	5,192.1	13.5	21.3	3.14	914.3	-317.3	841.9	809.7	32.23	26.121		
5,500.0	5,465.1	5,392.3	5,287.3	13.7	21.7	2.65	934.7	-323.3	862.5	829.6	32.92	26.198		
5,600.0	5,565.1	5,489.9	5,382.6	13.9	22.2	2.19	955.1	-329.4	883.2	849.6	33.61	26.274		
5,700.0	5,665.1	5,587.5	5,477.9	14.1	22.6	1.74	975.4	-335.5	903.9	869.6	34.30	26.349		
5,800.0	5,765.1	5,716.6	5,604.2	14.3	23.1	1.22	1,000.7	-343.0	923.4	888.3	35.06	26.335		
5,900.0	5,865.1	5,859.7	5,745.5	14.5	23.5	0.80	1,022.3	-349.5	938.5	902.8	35.73	26.269		
6,000.0	5,965.1	6,004.8	5,889.7	14.7	23.9	0.51	1,037.4	-354.0	948.8	912.5	36.30	26.135		
6,100.0	6,065.1	6,151.1	6,035.8	14.9	24.1	0.36	1,045.5	-356.4	954.4	917.6	36.78	25.947		
6,192.7	6,157.8	6,273.1	6,157.8	15.1	24.3	0.34	1,046.9	-356.8	955.3	918.2	37.14	25.725		
6,200.0	6,165.1	6,280.4	6,165.1	15.1	24.3	-89.66	1,046.9	-356.7	955.3	923.9	31.42	30.407		
6,250.0	6,215.1	6,330.0	6,214.6	15.1	24.3	-89.66	1,046.9	-354.5	955.3	923.8	31.56	30.271		
6,300.0	6,264.7	6,379.6	6,263.9	15.2	24.4	-89.67	1,046.9	-348.9	955.3	923.7	31.66	30.171		
6,350.0	6,313.9	6,429.2	6,312.7	15.2	24.4	-89.67	1,046.9	-339.8	955.3	923.6	31.74	30.103		
6,400.0	6,362.2	6,478.8	6,360.7	15.3	24.4	-89.68	1,046.9	-327.4	955.3	923.5	31.78	30.059		
6,450.0	6,409.6	6,528.5	6,407.8	15.3	24.4	-89.68	1,046.9	-311.7	955.3	923.5	31.81	30.034		
6,500.0	6,455.8	6,578.1	6,453.7	15.3	24.4	-89.69	1,046.9	-292.8	955.3	923.5	31.83	30.015		
6,550.0	6,500.5	6,627.8	6,498.1	15.3	24.4	-89.70	1,046.9	-270.8	955.3	923.5	31.85	29.992		
6,600.0	6,543.5	6,677.4	6,541.0	15.3	24.4	-89.72	1,046.9	-245.7	955.3	923.4	31.90	29.950		
6,650.0	6,584.7	6,727.1	6,582.0	15.3	24.4	-89.73	1,046.9	-217.6	955.3	923.3	31.98	29.873		
6,700.0	6,623.7	6,776.8	6,621.0	15.4	24.3	-89.74	1,046.9	-186.8	955.3	923.2	32.12	29.741		
6,750.0	6,660.6	6,826.5	6,657.8	15.5	24.3	-89.76	1,046.9	-153.4	955.3	923.0	32.34	29.538		
6,800.0	6,694.9	6,876.2	6,692.1	15.7	24.3	-89.78	1,046.9	-117.5	955.3	922.6	32.66	29.247		
6,850.0	6,726.6	6,926.0	6,723.9	15.9	24.3	-89.79	1,046.9	-79.2	955.3	922.2	33.11	28.855		
6,900.0	6,755.6	6,975.8	6,753.0	16.2	24.3	-89.81	1,046.9	-38.9	955.3	921.6	33.69	28.354		
6,950.0	6,781.7	7,025.6	6,779.3	16.6	24.3	-89.83	1,046.9	3.4	955.3	920.9	34.43	27.745		
7,000.0	6,804.7	7,075.4	6,802.5	17.1	24.3	-89.85	1,046.9	47.5	955.3	920.0	35.34	27.035		
7,050.0	6,824.6	7,125.2	6,822.6	17.7	24.3	-89.88	1,046.9	93.1	955.3	918.9	36.41	26.240		
7,100.0	6,841.2	7,175.1	6,839.6	18.3	24.3	-89.90	1,046.9	140.0	955.3	917.7	37.64	25.379		
7,150.0	6,854.5	7,225.0	6,853.2	19.0	24.4	-89.92	1,046.9	188.0	955.3	916.3	39.03	24.475		
7,200.0	6,864.4	7,274.9	6,863.4	19.8	24.6	-89.94	1,046.9	236.8	955.3	914.7	40.56	23.550		
7,250.0	6,870.8	7,324.9	6,870.3	20.7	24.8	-89.97	1,046.9	286.3	955.3	913.1	42.22	22.626		
7,300.0	6,873.8	7,374.8	6,873.6	21.6	25.2	-89.99	1,046.9	336.1	955.3	911.3	43.98	21.721		
7,324.7	6,874.0	7,399.5	6,874.0	22.1	25.4	-90.00	1,046.9	360.8	955.3	910.4	44.88	21.287		
7,400.0	6,873.2	7,474.8	6,873.2	23.5	26.3	-90.00	1,046.9	436.1	955.3	907.5	47.78	19.993		
7,500.0	6,872.2	7,574.8	6,872.2	25.6	27.9	-90.00	1,046.9	536.1	955.3	903.4	51.90	18.405		
7,600.0	6,871.3	7,674.8	6,871.1	27.9	29.8	-89.99	1,046.9	636.1	955.3	899.0	56.29	16.972		
7,700.0	6,870.3	7,774.8	6,870.1	30.2	32.0	-89.99	1,046.9	736.1	955.3	894.4	60.87	15.693		
7,800.0	6,869.3	7,874.8	6,869.0	32.6	34.2	-89.98	1,046.9	836.1	955.3	889.7	65.62	14.558		
7,900.0	6,868.3	7,974.8	6,868.0	35.0	36.5	-89.98	1,046.9	936.1	955.3	884.8	70.49	13.551		
8,000.0	6,867.4	8,074.8	6,867.0	37.6	38.9	-89.98	1,046.9	1,036.1	955.3	879.8	75.47	12.657		
8,100.0	6,866.4	8,174.8	6,865.9	40.1	41.4	-89.97	1,046.9	1,136.1	955.3	874.8	80.54	11.862		
8,200.0	6,865.4	8,274.8	6,864.9	42.7	43.9	-89.97	1,046.9	1,236.1	955.3	869.6	85.67	11.151		
8,300.0	6,864.4	8,374.8	6,863.8	45.3	46.4	-89.96	1,046.9	1,336.1	955.3	864.4	90.86	10.514		
8,400.0	6,863.5	8,474.8	6,862.8	47.9	49.0	-89.96	1,046.9	1,436.1	955.3	859.2	96.10	9.941		
8,500.0	6,862.5	8,574.8	6,861.7	50.6	51.6	-89.95	1,046.9	1,536.1	955.3	853.9	101.37	9.423		
8,600.0	6,861.5	8,674.8	6,860.7	53.2	54.2	-89.95	1,046.9	1,636.0	955.3	848.6	106.69	8.954		
8,614.0	6,861.4	8,688.8	6,860.5	53.6	54.5	-89.95	1,046.9	1,650.0	955.3	847.9	107.43	8.892		
8,700.0	6,860.5	8,774.8	6,859.6	55.9	56.8	-89.97	1,046.9	1,736.0	953.4	841.1	112.31	8.489		

CC - Min centre 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 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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			
8,800.0	6,859.5	8,874.5	6,858.6	58.6	59.4	-90.00	1,046.9	1,835.7	946.2	828.5	117.71	8.039			
8,880.6	6,858.7	8,954.6	6,857.8	60.7	61.6	-90.02	1,046.9	1,915.8	936.7	814.9	121.84	7.688			
8,900.0	6,858.6	8,973.8	6,857.6	61.2	62.1	-90.02	1,046.9	1,935.0	934.0	811.2	122.86	7.602			
9,000.0	6,857.6	9,072.8	6,856.5	63.9	64.7	-90.01	1,046.9	2,034.0	920.1	791.9	128.18	7.178			
9,100.0	6,856.6	9,171.8	6,855.5	66.5	67.4	-90.01	1,046.9	2,133.0	906.2	772.7	133.52	6.787			
9,200.0	6,855.6	9,270.8	6,854.4	69.2	70.1	-90.00	1,046.9	2,232.0	892.3	753.4	138.87	6.425			
9,300.0	6,854.6	9,369.9	6,853.4	71.8	72.7	-90.00	1,046.9	2,331.1	878.4	734.1	144.23	6.090			
9,368.1	6,854.0	9,437.3	6,852.7	73.7	74.6	-90.00	1,046.9	2,398.5	868.9	721.0	147.89	5.875			
9,400.0	6,853.6	9,468.9	6,852.4	74.5	75.4	-89.99	1,046.9	2,430.1	864.7	715.0	149.72	5.775			
9,500.0	6,852.7	9,568.5	6,851.3	77.2	78.1	-89.95	1,046.9	2,529.6	855.0	699.8	155.25	5.507			
9,600.0	6,851.7	9,668.3	6,850.3	80.0	80.8	-89.92	1,046.9	2,629.5	850.6	690.2	160.44	5.302			
9,634.8	6,851.3	9,703.1	6,849.9	80.9	81.8	-89.91	1,046.9	2,664.3	850.3	688.1	162.16	5.244			
9,700.0	6,850.7	9,768.3	6,849.3	82.7	83.6	-89.90	1,046.9	2,729.5	850.3	684.5	165.74	5.130			
9,800.0	6,849.7	9,868.3	6,848.2	85.5	86.3	-89.90	1,046.9	2,829.5	850.3	679.0	171.25	4.965			
9,870.5	6,849.0	9,938.8	6,847.5	87.4	88.2	-89.90	1,046.9	2,900.0	850.3	675.2	175.13	4.855			
9,870.5	6,849.0	9,938.8	6,847.5	87.4	88.2	-89.90	1,046.9	2,900.0	850.3	675.2	175.13	4.855			
9,900.0	6,848.7	9,968.3	6,847.2	88.3	89.0	-89.89	1,046.9	2,929.5	850.5	674.0	176.55	4.817			
10,000.0	6,847.7	10,068.2	6,846.1	91.0	91.8	-89.85	1,046.9	3,029.4	854.7	673.6	181.05	4.721			
10,100.0	6,846.8	10,167.8	6,845.1	93.8	94.5	-89.82	1,046.9	3,128.9	864.1	679.0	185.06	4.669			
10,137.1	6,846.4	10,204.6	6,844.7	94.8	95.5	-89.81	1,046.9	3,165.8	868.9	682.5	186.41	4.661			
10,200.0	6,845.8	10,266.9	6,844.1	96.5	97.2	-89.81	1,046.9	3,228.0	877.6	687.8	189.86	4.622			
10,300.0	6,844.8	10,365.9	6,843.0	99.3	100.0	-89.81	1,046.9	3,327.0	891.5	696.2	195.35	4.564			
10,400.0	6,843.8	10,464.9	6,842.0	102.0	102.7	-89.80	1,046.9	3,426.1	905.4	704.6	200.84	4.508			
10,500.0	6,842.8	10,564.0	6,841.0	104.8	105.4	-89.80	1,046.9	3,525.1	919.4	713.0	206.33	4.456			
10,600.0	6,841.9	10,663.0	6,839.9	107.5	108.2	-89.80	1,046.9	3,624.1	933.3	721.4	211.84	4.406			
10,700.0	6,840.9	10,762.0	6,838.9	110.3	110.9	-89.80	1,046.9	3,723.1	947.2	729.9	217.34	4.358			
10,732.1	6,840.6	10,793.8	6,838.6	111.2	111.8	-89.80	1,046.9	3,754.9	951.7	732.6	219.11	4.343			
10,800.0	6,839.9	10,861.2	6,837.9	113.0	113.6	-89.82	1,046.9	3,822.3	959.9	735.8	224.13	4.283			
10,900.0	6,838.9	10,960.9	6,836.8	115.8	116.4	-89.84	1,046.9	3,922.0	967.7	736.6	231.07	4.188			
10,998.8	6,838.0	11,059.6	6,835.8	118.6	119.1	-89.87	1,046.9	4,020.7	970.3	732.9	237.34	4.088			
11,000.0	6,838.0	11,060.8	6,835.8	118.6	119.2	-89.87	1,046.9	4,021.9	970.3	732.8	237.41	4.087			
11,100.0	6,837.0	11,160.8	6,834.7	121.4	121.9	-89.87	1,046.9	4,121.9	970.3	727.3	242.97	3.993			
11,118.6	6,836.8	11,179.4	6,834.5	121.9	122.5	-89.86	1,046.9	4,140.5	970.3	726.3	244.00	3.976			
11,200.0	6,836.0	11,260.8	6,833.7	124.2	124.7	-89.86	1,046.9	4,221.9	970.3	721.7	248.53	3.904			
11,300.0	6,835.1	11,360.8	6,832.6	126.9	127.5	-89.86	1,046.9	4,321.9	970.3	716.2	254.10	3.818			
11,400.0	6,834.1	11,460.8	6,831.6	129.7	130.3	-89.85	1,046.9	4,421.9	970.3	710.6	259.67	3.737			
11,428.1	6,833.8	11,488.9	6,831.3	130.5	131.0	-89.85	1,046.9	4,450.0	970.3	709.0	261.23	3.714			
11,487.5	6,833.3	11,548.3	6,830.7	132.2	132.7	-89.86	1,046.9	4,509.4	969.3	704.6	264.70	3.662			
11,500.0	6,833.2	11,560.8	6,830.6	132.5	133.0	-89.86	1,046.9	4,521.9	968.9	703.5	265.40	3.651			
11,600.0	6,832.2	11,660.8	6,829.5	135.3	135.8	-89.86	1,046.9	4,621.8	965.8	694.9	270.96	3.564			
11,700.0	6,831.3	11,760.7	6,828.5	138.1	138.6	-89.85	1,046.9	4,721.8	962.7	686.2	276.53	3.482			
11,800.0	6,830.3	11,860.7	6,827.4	140.8	141.4	-89.85	1,046.9	4,821.7	959.6	677.5	282.09	3.402			
11,900.0	6,829.4	11,960.6	6,826.4	143.6	144.2	-89.84	1,046.9	4,921.7	956.5	668.9	287.66	3.325			
11,938.6	6,829.0	11,999.0	6,826.0	144.7	145.2	-89.84	1,046.9	4,960.1	955.3	665.5	289.80	3.296 SF			

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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	-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		
600.0	600.0	600.0	600.0	1.2	1.2	-90.00	0.0	-16.7	16.7	14.3	2.44	6.847		
700.0	700.0	700.0	700.0	1.4	1.4	-90.00	0.0	-16.7	16.7	13.8	2.89	5.782		
800.0	800.0	800.0	800.0	1.7	1.7	-90.00	0.0	-16.7	16.7	13.4	3.34	5.004 CC, ES		
900.0	900.0	899.6	899.6	1.9	1.9	-85.65	1.4	-17.8	17.9	14.1	3.79	4.714		
1,000.0	1,000.0	999.0	998.9	2.1	2.1	0.25	5.4	-21.0	20.0	15.8	4.22	4.740		
1,100.0	1,099.8	1,098.2	1,097.7	2.3	2.3	13.74	12.1	-26.4	22.3	17.7	4.64	4.807		
1,200.0	1,199.5	1,197.2	1,195.9	2.6	2.6	29.01	21.5	-33.8	25.9	20.8	5.08	5.103		
1,300.0	1,298.7	1,295.7	1,293.3	2.8	2.9	43.60	33.5	-43.4	31.7	26.2	5.55	5.717		
1,400.0	1,397.5	1,393.9	1,389.7	3.1	3.2	55.72	48.0	-54.9	40.2	34.1	6.08	6.606		
1,500.0	1,495.6	1,493.0	1,486.6	3.4	3.5	65.99	64.1	-67.8	50.1	43.4	6.71	7.460		
1,600.0	1,593.4	1,592.1	1,583.5	3.8	3.9	74.43	80.2	-80.6	60.6	53.2	7.43	8.156		
1,700.0	1,691.3	1,691.2	1,680.5	4.1	4.3	80.29	96.3	-93.5	72.0	63.8	8.18	8.802		
1,800.0	1,789.1	1,790.3	1,777.4	4.5	4.7	84.53	112.5	-106.3	84.0	75.0	8.96	9.374		
1,900.0	1,886.9	1,889.5	1,874.4	4.9	5.1	87.70	128.6	-119.2	96.3	86.5	9.76	9.870		
2,000.0	1,984.7	1,988.6	1,971.3	5.4	5.5	90.14	144.7	-132.0	108.8	98.3	10.57	10.300		
2,100.0	2,082.5	2,087.7	2,068.3	5.8	5.9	92.08	160.8	-144.8	121.5	110.1	11.39	10.673		
2,200.0	2,180.3	2,186.8	2,165.2	6.2	6.4	93.66	177.0	-157.7	134.3	122.1	12.21	10.997		
2,300.0	2,278.1	2,285.9	2,262.2	6.6	6.8	94.95	193.1	-170.5	147.2	134.1	13.05	11.281		
2,400.0	2,376.0	2,385.0	2,359.1	7.1	7.2	96.04	209.2	-183.4	160.1	146.3	13.89	11.531		
2,500.0	2,473.8	2,484.2	2,456.1	7.5	7.7	96.97	225.3	-196.2	173.1	158.4	14.73	11.753		
2,600.0	2,571.6	2,583.3	2,553.0	8.0	8.1	97.77	241.5	-209.1	186.2	170.6	15.58	11.950		
2,695.7	2,665.2	2,678.1	2,645.8	8.4	8.5	98.43	256.9	-221.4	198.7	182.3	16.39	12.119		
2,700.0	2,669.4	2,682.4	2,650.0	8.4	8.5	98.47	257.6	-221.9	199.2	182.8	16.43	12.127		
2,800.0	2,767.6	2,781.6	2,747.0	8.7	9.0	98.82	273.7	-234.8	212.0	194.9	17.16	12.353		
2,900.0	2,866.4	2,880.8	2,844.0	9.0	9.4	98.26	289.9	-247.6	224.3	206.4	17.85	12.565		
3,000.0	2,965.6	2,979.8	2,940.9	9.3	9.8	96.94	306.0	-260.5	236.2	217.7	18.48	12.779		
3,100.0	3,065.3	3,078.7	3,037.6	9.5	10.3	94.97	322.1	-273.3	247.9	228.9	19.05	13.017		
3,200.0	3,165.1	3,177.2	3,134.0	9.7	10.7	92.44	338.1	-286.0	259.9	240.3	19.53	13.305		
3,295.7	3,260.8	3,271.1	3,225.8	9.8	11.1	13.78	353.4	-298.2	271.8	255.4	16.37	16.606		
3,300.0	3,265.1	3,275.3	3,229.9	9.8	11.2	13.63	354.1	-298.7	272.3	256.0	16.40	16.609		
3,400.0	3,365.1	3,373.1	3,325.6	10.0	11.6	10.38	370.0	-311.4	285.7	268.6	17.14	16.673		
3,500.0	3,465.1	3,471.3	3,421.7	10.1	12.0	7.41	385.9	-324.1	300.0	282.1	17.90	16.762		
3,600.0	3,565.1	3,577.8	3,526.2	10.3	12.4	4.76	401.6	-336.6	313.5	294.9	18.61	16.842		
3,700.0	3,665.1	3,685.5	3,632.7	10.5	12.7	2.78	414.3	-346.7	324.7	305.4	19.26	16.862		
3,800.0	3,765.1	3,794.4	3,740.9	10.6	13.0	1.38	424.0	-354.4	333.3	313.5	19.83	16.811		
3,900.0	3,865.1	3,904.1	3,850.2	10.8	13.2	0.48	430.4	-359.6	339.2	318.8	20.33	16.686		
4,000.0	3,965.1	4,014.2	3,960.3	11.0	13.4	0.04	433.6	-362.1	342.1	321.3	20.75	16.486		
4,100.0	4,065.1	4,119.0	4,065.1	11.1	13.5	0.00	434.0	-362.4	342.4	321.3	21.11	16.218		
4,200.0	4,165.1	4,219.0	4,165.1	11.3	13.6	0.00	434.0	-362.4	342.4	320.9	21.48	15.943		
4,300.0	4,265.1	4,319.0	4,265.1	11.5	13.8	0.00	434.0	-362.4	342.4	320.6	21.84	15.676		
4,400.0	4,365.1	4,419.0	4,365.1	11.7	13.9	0.00	434.0	-362.4	342.4	320.2	22.21	15.416		
4,500.0	4,465.1	4,519.0	4,465.1	11.8	14.1	0.00	434.0	-362.4	342.4	319.8	22.58	15.162		
4,600.0	4,565.1	4,619.0	4,565.1	12.0	14.2	0.00	434.0	-362.4	342.4	319.4	22.96	14.915		
4,700.0	4,665.1	4,719.0	4,665.1	12.2	14.4	0.00	434.0	-362.4	342.4	319.1	23.33	14.674		
4,800.0	4,765.1	4,819.0	4,765.1	12.4	14.5	0.00	434.0	-362.4	342.4	318.7	23.71	14.440		
4,900.0	4,865.1	4,919.0	4,865.1	12.6	14.7	0.00	434.0	-362.4	342.4	318.3	24.09	14.212		

CC - Min centre 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 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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			
5,000.0	4,965.1	5,019.0	4,965.1	12.8	14.9	0.00	434.0	-362.4	342.4	317.9	24.48	13.989			
5,100.0	5,065.1	5,119.0	5,065.1	12.9	15.0	0.00	434.0	-362.4	342.4	317.5	24.86	13.772			
5,200.0	5,165.1	5,219.0	5,165.1	13.1	15.2	0.00	434.0	-362.4	342.4	317.2	25.25	13.561			
5,300.0	5,265.1	5,319.0	5,265.1	13.3	15.3	0.00	434.0	-362.4	342.4	316.8	25.64	13.355			
5,400.0	5,365.1	5,419.0	5,365.1	13.5	15.5	0.00	434.0	-362.4	342.4	316.4	26.03	13.155			
5,500.0	5,465.1	5,519.0	5,465.1	13.7	15.7	0.00	434.0	-362.4	342.4	316.0	26.42	12.959			
5,600.0	5,565.1	5,619.0	5,565.1	13.9	15.8	0.00	434.0	-362.4	342.4	315.6	26.82	12.769			
5,700.0	5,665.1	5,719.0	5,665.1	14.1	16.0	0.00	434.0	-362.4	342.4	315.2	27.21	12.583			
5,800.0	5,765.1	5,819.0	5,765.1	14.3	16.2	0.00	434.0	-362.4	342.4	314.8	27.61	12.402			
5,900.0	5,865.1	5,919.0	5,865.1	14.5	16.4	0.00	434.0	-362.4	342.4	314.4	28.01	12.225			
6,000.0	5,965.1	6,019.0	5,965.1	14.7	16.5	0.00	434.0	-362.4	342.4	314.0	28.41	12.053			
6,100.0	6,065.1	6,119.0	6,065.1	14.9	16.7	0.00	434.0	-362.4	342.4	313.6	28.81	11.885			
6,192.7	6,157.8	6,211.7	6,157.8	15.1	16.9	0.00	434.0	-362.4	342.4	313.2	29.18	11.733			
6,200.0	6,165.1	6,219.0	6,165.1	15.1	16.9	-90.01	434.0	-362.4	342.4	312.2	30.18	11.345			
6,204.8	6,169.9	6,223.8	6,169.9	15.1	16.9	-90.02	434.0	-362.4	342.4	312.2	30.20	11.339			
6,250.0	6,215.1	6,269.0	6,215.1	15.1	17.0	-90.39	434.0	-362.4	342.4	312.1	30.33	11.290			
6,300.0	6,264.7	6,318.6	6,264.7	15.2	17.1	-91.33	434.0	-362.4	342.5	312.1	30.42	11.260			
6,350.0	6,313.9	6,368.8	6,313.9	15.2	17.1	-92.61	434.0	-360.9	342.8	312.3	30.45	11.258			
6,400.0	6,362.2	6,419.6	6,362.2	15.3	17.2	-93.88	434.0	-355.9	343.2	312.8	30.44	11.274			
6,450.0	6,409.6	6,471.0	6,409.6	15.3	17.2	-95.13	434.0	-347.1	343.8	313.4	30.41	11.305			
6,500.0	6,455.8	6,523.0	6,455.8	15.3	17.2	-96.37	434.0	-334.6	344.6	314.2	30.37	11.347			
6,550.0	6,500.5	6,575.5	6,500.5	15.3	17.2	-97.57	434.0	-318.3	345.5	315.2	30.31	11.397			
6,600.0	6,543.5	6,628.7	6,543.5	15.3	17.2	-98.74	434.0	-298.1	346.5	316.2	30.27	11.448			
6,650.0	6,584.7	6,682.5	6,584.7	15.3	17.2	-99.86	434.0	-274.0	347.6	317.4	30.24	11.495			
6,700.0	6,623.7	6,736.8	6,623.7	15.4	17.2	-100.94	434.0	-246.0	348.8	318.6	30.26	11.528			
6,750.0	6,660.6	6,791.8	6,660.6	15.5	17.2	-101.96	434.0	-214.2	350.1	319.8	30.34	11.539			
6,800.0	6,694.9	6,847.3	6,694.9	15.7	17.2	-102.91	434.0	-178.7	351.4	320.9	30.51	11.519			
6,850.0	6,726.6	6,903.4	6,726.6	15.9	17.1	-103.80	434.0	-139.6	352.7	321.9	30.79	11.456			
6,900.0	6,755.6	6,960.1	6,755.6	16.2	17.1	-104.61	434.0	-97.1	353.9	322.7	31.21	11.341			
6,950.0	6,781.7	7,017.2	6,781.7	16.6	17.1	-105.34	434.0	-51.3	355.2	323.4	31.79	11.171			
7,000.0	6,804.7	7,074.8	6,804.7	17.1	17.2	-105.99	434.0	-2.5	356.3	323.7	32.55	10.944			
7,050.0	6,824.6	7,132.8	6,824.6	17.7	17.5	-106.56	434.0	48.9	357.3	323.8	33.50	10.664			
7,100.0	6,841.2	7,191.1	6,841.2	18.3	18.1	-107.03	434.0	102.6	358.1	323.5	34.64	10.338			
7,150.0	6,854.5	7,249.8	6,854.5	19.0	18.8	-107.41	434.0	158.3	358.9	322.9	35.98	9.975			
7,200.0	6,864.4	7,308.6	6,864.4	19.8	19.7	-107.69	434.0	215.6	359.4	321.9	37.50	9.584			
7,250.0	6,870.8	7,367.7	6,870.8	20.7	20.7	-107.87	434.0	273.9	359.8	320.6	39.18	9.182			
7,300.0	6,873.8	7,426.8	6,873.8	21.6	21.8	-107.96	434.0	332.9	359.9	318.9	41.00	8.779			
7,324.7	6,874.0	7,454.7	6,874.0	22.1	22.3	-107.97	434.0	360.8	360.0	318.0	41.92	8.587			
7,400.0	6,873.2	7,530.1	6,873.2	23.5	23.8	-108.08	434.0	436.1	360.2	315.5	44.70	8.058			
7,500.0	6,872.2	7,630.1	6,872.2	25.6	25.9	-108.23	434.0	536.1	360.5	311.8	48.64	7.412			
7,600.0	6,871.3	7,730.1	6,871.3	27.9	28.1	-108.37	434.0	636.1	360.8	308.0	52.81	6.832			
7,700.0	6,870.3	7,830.0	6,870.3	30.2	30.4	-108.52	434.0	736.1	361.1	303.9	57.17	6.316			
7,800.0	6,869.3	7,930.0	6,869.3	32.6	32.8	-108.67	434.0	836.1	361.4	299.7	61.67	5.861			
7,900.0	6,868.3	8,030.0	6,868.3	35.0	35.2	-108.81	434.0	936.1	361.7	295.4	66.28	5.458			
8,000.0	6,867.4	8,130.0	6,867.4	37.6	37.7	-108.96	434.0	1,036.1	362.0	291.1	70.97	5.101			
8,100.0	6,866.4	8,230.0	6,866.4	40.1	40.2	-109.11	434.0	1,136.1	362.4	286.6	75.74	4.784			
8,200.0	6,865.4	8,330.0	6,865.4	42.7	42.8	-109.25	434.0	1,236.1	362.7	282.1	80.56	4.502			
8,300.0	6,864.4	8,430.0	6,864.4	45.3	45.4	-109.40	434.0	1,336.1	363.0	277.6	85.42	4.249			
8,400.0	6,863.5	8,530.0	6,863.5	47.9	48.0	-109.54	434.0	1,436.1	363.3	273.0	90.32	4.023			
8,500.0	6,862.5	8,630.0	6,862.5	50.6	50.7	-109.69	434.0	1,536.1	363.7	268.4	95.25	3.818			
8,600.0	6,861.5	8,730.0	6,861.5	53.2	53.3	-109.83	434.0	1,636.1	364.0	263.8	100.20	3.633			
8,614.0	6,861.4	8,744.0	6,861.4	53.6	53.7	-109.85	434.0	1,650.0	364.0	263.1	100.89	3.608			

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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 Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
8,700.0	6,860.5	8,830.0	6,985.0	55.9	56.0	-110.12	434.0	1,736.0	362.5	257.4	105.12	3.448			
8,800.0	6,859.5	8,929.7	6,985.0	58.6	58.7	-110.76	434.0	1,835.8	356.2	246.6	109.54	3.252			
8,880.6	6,858.7	9,009.8	6,985.0	60.7	60.8	-111.56	434.0	1,915.8	347.6	234.9	112.64	3.086			
8,900.0	6,858.6	9,028.9	6,985.0	61.2	61.4	-111.75	434.0	1,935.0	345.1	231.7	113.46	3.042			
9,000.0	6,857.6	9,128.0	6,985.0	63.9	64.0	-112.79	434.0	2,034.0	332.6	215.0	117.61	2.828			
9,100.0	6,856.6	9,227.0	6,985.0	66.5	66.7	-113.92	434.0	2,133.0	320.2	198.6	121.60	2.633			
9,200.0	6,855.6	9,326.0	6,985.0	69.2	69.4	-115.13	434.0	2,232.1	307.9	182.5	125.40	2.455			
9,300.0	6,854.6	9,425.0	6,985.0	71.8	72.1	-116.44	434.0	2,331.1	295.7	166.8	128.96	2.293			
9,368.1	6,854.0	9,492.5	6,985.0	73.7	74.0	-117.40	434.0	2,398.5	287.6	156.3	131.24	2.191			
9,400.0	6,853.6	9,524.1	6,985.0	74.5	74.8	-117.78	434.0	2,430.1	284.0	151.5	132.53	2.143			
9,500.0	6,852.7	9,623.6	6,985.0	77.2	77.5	-118.75	434.0	2,529.6	275.9	139.4	136.56	2.021			
9,600.0	6,851.7	9,723.5	6,985.0	80.0	80.3	-119.30	434.0	2,629.5	272.5	131.8	140.70	1.937			
9,624.2	6,851.4	9,747.7	6,985.0	80.7	81.0	-119.36	434.0	2,653.7	272.4	130.7	141.73	1.922			
9,634.8	6,851.3	9,758.3	6,985.0	80.9	81.2	-119.38	434.0	2,664.3	272.4	130.2	142.19	1.916			
9,700.0	6,850.7	9,823.5	6,985.0	82.7	83.0	-119.50	434.0	2,729.5	272.7	127.6	145.19	1.879			
9,800.0	6,849.7	9,923.5	6,985.0	85.5	85.8	-119.68	434.0	2,829.5	273.2	123.4	149.79	1.824			
9,870.5	6,849.0	9,994.0	6,985.0	87.4	87.7	-119.81	434.0	2,900.0	273.6	120.6	153.02	1.788			
9,900.0	6,848.7	10,023.5	6,985.0	88.3	88.5	-119.83	434.0	2,929.5	273.9	119.6	154.30	1.775			
10,000.0	6,847.7	10,123.4	6,985.0	91.0	91.3	-119.61	434.0	3,029.4	278.0	119.2	158.80	1.751			
10,100.0	6,846.8	10,222.9	6,985.0	93.8	94.1	-118.95	434.0	3,129.0	286.7	123.2	163.53	1.753			
10,137.1	6,846.4	10,259.7	6,985.0	94.8	95.1	-118.61	434.0	3,165.8	291.1	125.8	165.31	1.761			
10,200.0	6,845.8	10,322.0	6,985.0	96.5	96.8	-117.91	434.0	3,228.0	299.1	129.7	169.39	1.766			
10,300.0	6,844.8	10,421.0	6,985.0	99.3	99.5	-116.87	434.0	3,327.0	311.9	136.1	175.80	1.774			
10,400.0	6,843.8	10,520.0	6,985.0	102.0	102.3	-115.92	434.0	3,426.1	324.8	142.7	182.13	1.784			
10,500.0	6,842.8	10,619.0	6,985.0	104.8	105.0	-115.03	434.0	3,525.1	337.8	149.4	188.39	1.793			
10,600.0	6,841.9	10,718.1	6,985.0	107.5	107.8	-114.21	434.0	3,624.1	350.9	156.3	194.59	1.803			
10,700.0	6,840.9	10,817.1	6,985.0	110.3	110.5	-113.46	434.0	3,723.1	364.0	163.3	200.74	1.813			
10,732.1	6,840.6	10,848.9	6,985.0	111.2	111.4	-113.22	434.0	3,755.0	368.3	165.6	202.70	1.817			
10,800.0	6,839.9	10,916.3	6,985.0	113.0	113.3	-112.75	434.0	3,822.3	376.1	168.3	207.86	1.810			
10,900.0	6,838.9	11,015.9	6,985.0	115.8	116.0	-112.38	434.0	3,922.0	383.7	169.1	214.59	1.788			
10,998.8	6,838.0	11,114.7	6,985.0	118.6	118.8	-112.36	434.0	4,020.7	386.4	166.2	220.20	1.755			
11,000.0	6,838.0	11,115.9	6,985.0	118.6	118.8	-112.36	434.0	4,021.9	386.4	166.2	220.26	1.754			
11,100.0	6,837.0	11,215.9	6,985.0	121.4	121.6	-112.49	434.0	4,121.9	386.8	161.6	225.23	1.717			
11,200.0	6,836.0	11,315.9	6,985.0	124.2	124.4	-112.63	434.0	4,221.9	387.2	157.0	230.20	1.682			
11,300.0	6,835.1	11,415.9	6,985.0	126.9	127.2	-112.76	434.0	4,321.9	387.5	152.4	235.15	1.648			
11,400.0	6,834.1	11,515.9	6,985.0	129.7	129.9	-112.89	434.0	4,421.9	387.9	147.8	240.10	1.616			
11,428.1	6,833.8	11,544.0	6,985.0	130.5	130.7	-112.93	434.0	4,450.0	388.0	146.5	241.49	1.607			
11,487.5	6,833.3	11,603.3	6,985.0	132.2	132.4	-113.08	434.0	4,509.4	387.4	143.1	244.30	1.586			
11,500.0	6,833.2	11,615.9	6,985.0	132.5	132.7	-113.12	434.0	4,521.9	387.1	142.2	244.88	1.581			
11,600.0	6,832.2	11,715.8	6,985.0	135.3	135.5	-113.43	434.0	4,621.9	384.6	135.1	249.48	1.542			
11,700.0	6,831.3	11,815.8	6,985.0	138.1	138.3	-113.75	434.0	4,721.8	382.1	128.1	254.05	1.504			
11,800.0	6,830.3	11,915.7	6,985.0	140.8	141.1	-114.07	434.0	4,821.7	379.7	121.1	258.58	1.468 Level 3			
11,900.0	6,829.4	12,015.4	6,985.0	143.6	143.9	-114.39	434.0	4,921.4	377.2	114.2	263.07	1.434 Level 3			
11,938.6	6,829.0	12,054.0	6,985.0	144.7	144.9	-114.51	434.0	4,960.0	376.3	111.5	264.80	1.421 Level 3, SF			

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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	89.97	0.0	13.9	13.9						
100.0	100.0	100.0	100.0	0.1	0.1	89.97	0.0	13.9	13.9	13.7	0.19	71.665			
200.0	200.0	200.0	200.0	0.3	0.3	89.97	0.0	13.9	13.9	13.3	0.64	21.637			
300.0	300.0	300.0	300.0	0.5	0.5	89.97	0.0	13.9	13.9	12.8	1.09	12.742			
400.0	400.0	400.0	400.0	0.8	0.8	89.97	0.0	13.9	13.9	12.4	1.54	9.030			
500.0	500.0	500.0	500.0	1.0	1.0	89.97	0.0	13.9	13.9	11.9	1.99	6.993			
600.0	600.0	600.0	600.0	1.2	1.2	89.97	0.0	13.9	13.9	11.5	2.44	5.706			
700.0	700.0	700.0	700.0	1.4	1.4	89.97	0.0	13.9	13.9	11.0	2.89	4.819			
800.0	800.0	800.0	800.0	1.7	1.7	89.97	0.0	13.9	13.9	10.6	3.34	4.170			
900.0	900.0	900.0	900.0	1.9	1.9	89.97	0.0	13.9	13.9	10.1	3.79	3.676	CC, ES		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	167.35	0.0	13.9	15.6	11.4	4.23	3.696			
1,100.0	1,099.8	1,100.4	1,100.4	2.3	2.3	173.67	-0.9	12.5	19.4	14.8	4.64	4.187			
1,200.0	1,199.5	1,200.7	1,200.5	2.6	2.5	-175.99	-3.8	8.0	24.5	19.5	5.03	4.871			
1,300.0	1,298.7	1,300.8	1,300.3	2.8	2.7	-165.14	-8.5	0.7	31.7	26.3	5.44	5.829			
1,400.0	1,397.5	1,400.7	1,399.4	3.1	3.0	-155.71	-15.1	-9.6	41.6	35.7	5.90	7.056			
1,500.0	1,495.6	1,500.1	1,497.5	3.4	3.2	-148.20	-23.5	-22.7	54.4	48.0	6.42	8.472			
1,600.0	1,593.4	1,598.9	1,594.8	3.8	3.5	-143.05	-32.8	-37.2	68.9	61.9	7.03	9.806			
1,700.0	1,691.3	1,697.7	1,692.1	4.1	3.8	-139.71	-42.2	-51.7	83.8	76.1	7.67	10.920			
1,800.0	1,789.1	1,796.5	1,789.4	4.5	4.2	-137.37	-51.5	-66.2	98.8	90.5	8.34	11.845			
1,900.0	1,886.9	1,895.3	1,886.7	4.9	4.5	-135.66	-60.8	-80.7	114.0	104.9	9.04	12.614			
2,000.0	1,984.7	1,994.1	1,983.9	5.4	4.9	-134.35	-70.1	-95.2	129.2	119.5	9.75	13.258			
2,100.0	2,082.5	2,092.9	2,081.2	5.8	5.2	-133.32	-79.5	-109.7	144.5	134.1	10.47	13.800			
2,200.0	2,180.3	2,191.6	2,178.5	6.2	5.6	-132.48	-88.8	-124.2	159.9	148.7	11.21	14.262			
2,300.0	2,278.1	2,290.4	2,275.8	6.6	5.9	-131.79	-98.1	-138.7	175.2	163.3	11.95	14.658			
2,400.0	2,376.0	2,389.2	2,373.1	7.1	6.3	-131.21	-107.4	-153.2	190.6	177.9	12.71	15.000			
2,500.0	2,473.8	2,488.0	2,470.3	7.5	6.7	-130.72	-116.7	-167.7	206.0	192.5	13.47	15.298			
2,600.0	2,571.6	2,586.8	2,567.6	8.0	7.1	-130.30	-126.1	-182.2	221.4	207.2	14.23	15.559			
2,695.7	2,665.2	2,681.4	2,660.7	8.4	7.4	-129.94	-135.0	-196.1	236.2	221.2	14.97	15.780			
2,700.0	2,669.4	2,685.6	2,664.9	8.4	7.5	-129.94	-135.4	-196.7	236.9	221.9	15.00	15.791			
2,800.0	2,767.6	2,784.5	2,762.3	8.7	7.8	-129.50	-144.7	-211.3	251.1	235.4	15.69	16.002			
2,900.0	2,866.4	2,883.7	2,859.9	9.0	8.2	-128.51	-154.1	-225.8	263.2	246.8	16.38	16.071			
3,000.0	2,965.6	2,982.8	2,957.6	9.3	8.6	-127.01	-163.4	-240.4	273.3	256.3	17.05	16.030			
3,100.0	3,065.3	3,082.0	3,055.2	9.5	9.0	-125.03	-172.8	-254.9	281.6	263.9	17.70	15.912			
3,200.0	3,165.1	3,180.9	3,152.6	9.7	9.4	-122.59	-182.1	-269.5	288.5	270.1	18.32	15.747			
3,295.7	3,260.8	3,275.3	3,245.5	9.8	9.8	164.37	-191.0	-283.3	293.9	278.3	15.51	18.945			
3,300.0	3,265.1	3,279.5	3,249.7	9.8	9.8	164.51	-191.4	-283.9	294.1	278.6	15.53	18.939			
3,400.0	3,365.1	3,378.0	3,346.7	10.0	10.2	167.65	-200.7	-298.4	299.8	283.8	15.96	18.786			
3,500.0	3,465.1	3,476.5	3,443.6	10.1	10.6	170.67	-210.0	-312.9	306.4	290.0	16.43	18.650			
3,600.0	3,565.1	3,574.9	3,540.6	10.3	11.0	173.56	-219.3	-327.3	313.8	296.9	16.94	18.530			
3,700.0	3,665.1	3,678.8	3,643.1	10.5	11.3	176.20	-228.2	-341.2	321.2	303.8	17.43	18.432			
3,800.0	3,765.1	3,784.0	3,747.5	10.6	11.5	178.18	-235.1	-352.0	327.4	309.5	17.91	18.283			
3,900.0	3,865.1	3,890.0	3,853.2	10.8	11.8	179.53	-240.1	-359.7	331.9	313.5	18.36	18.075			
4,000.0	3,965.1	3,996.6	3,959.6	11.0	12.0	-179.72	-242.9	-364.1	334.5	315.7	18.79	17.807			
4,100.0	4,065.1	4,102.2	4,065.1	11.1	12.1	-179.53	-243.6	-365.2	335.2	316.0	19.18	17.475			
4,200.0	4,165.1	4,202.2	4,165.1	11.3	12.3	-179.53	-243.6	-365.2	335.2	315.6	19.56	17.137			
4,300.0	4,265.1	4,302.2	4,265.1	11.5	12.4	-179.53	-243.6	-365.2	335.2	315.3	19.94	16.810			
4,400.0	4,365.1	4,402.2	4,365.1	11.7	12.6	-179.53	-243.6	-365.2	335.2	314.9	20.32	16.493			
4,500.0	4,465.1	4,502.2	4,465.1	11.8	12.7	-179.53	-243.6	-365.2	335.2	314.5	20.71	16.186			
4,600.0	4,565.1	4,602.2	4,565.1	12.0	12.9	-179.53	-243.6	-365.2	335.2	314.1	21.10	15.889			
4,700.0	4,665.1	4,702.2	4,665.1	12.2	13.0	-179.53	-243.6	-365.2	335.2	313.7	21.49	15.600			
4,800.0	4,765.1	4,802.2	4,765.1	12.4	13.2	-179.53	-243.6	-365.2	335.2	313.3	21.88	15.320			
4,900.0	4,865.1	4,902.2	4,865.1	12.6	13.4	-179.53	-243.6	-365.2	335.2	312.9	22.27	15.048			

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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			
5,000.0	4,965.1	5,002.2	4,965.1	12.8	13.5	-179.53	-243.6	-365.2	335.2	312.5	22.67	14.785			
5,100.0	5,065.1	5,102.2	5,065.1	12.9	13.7	-179.53	-243.6	-365.2	335.2	312.1	23.07	14.530			
5,200.0	5,165.1	5,202.2	5,165.1	13.1	13.9	-179.53	-243.6	-365.2	335.2	311.7	23.47	14.282			
5,300.0	5,265.1	5,302.2	5,265.1	13.3	14.0	-179.53	-243.6	-365.2	335.2	311.3	23.87	14.041			
5,400.0	5,365.1	5,402.2	5,365.1	13.5	14.2	-179.53	-243.6	-365.2	335.2	310.9	24.28	13.808			
5,500.0	5,465.1	5,502.2	5,465.1	13.7	14.4	-179.53	-243.6	-365.2	335.2	310.5	24.68	13.581			
5,600.0	5,565.1	5,602.2	5,565.1	13.9	14.5	-179.53	-243.6	-365.2	335.2	310.1	25.09	13.361			
5,700.0	5,665.1	5,702.2	5,665.1	14.1	14.7	-179.53	-243.6	-365.2	335.2	309.7	25.50	13.147			
5,800.0	5,765.1	5,802.2	5,765.1	14.3	14.9	-179.53	-243.6	-365.2	335.2	309.3	25.91	12.940			
5,900.0	5,865.1	5,902.2	5,865.1	14.5	15.1	-179.53	-243.6	-365.2	335.2	308.9	26.32	12.738			
6,000.0	5,965.1	6,002.2	5,965.1	14.7	15.2	-179.53	-243.6	-365.2	335.2	308.5	26.73	12.541			
6,100.0	6,065.1	6,102.2	6,065.1	14.9	15.4	-179.53	-243.6	-365.2	335.2	308.1	27.14	12.350			
6,163.6	6,128.7	6,165.8	6,128.7	15.0	15.5	-180.00	-243.6	-362.4	335.2	307.8	27.38	12.241			
6,192.7	6,157.8	6,194.7	6,157.4	15.1	15.5	179.47	-243.6	-359.3	335.2	307.7	27.48	12.198			
6,200.0	6,165.1	6,201.9	6,164.6	15.1	15.5	89.31	-243.6	-358.3	335.2	305.3	29.94	11.198			
6,250.0	6,215.1	6,251.0	6,212.9	15.1	15.6	88.23	-243.6	-349.9	335.4	305.3	30.06	11.155			
6,300.0	6,264.7	6,300.0	6,260.5	15.2	15.6	87.16	-243.6	-338.2	335.6	305.5	30.15	11.132			
6,350.0	6,313.9	6,348.0	6,306.2	15.2	15.6	86.12	-243.6	-323.6	336.0	305.8	30.20	11.126			
6,400.0	6,362.2	6,395.9	6,350.7	15.3	15.6	85.10	-243.6	-306.1	336.4	306.2	30.22	11.132			
6,450.0	6,409.6	6,443.4	6,393.7	15.3	15.6	84.11	-243.6	-285.7	337.0	306.8	30.23	11.149			
6,500.0	6,455.8	6,490.6	6,434.9	15.3	15.5	83.15	-243.6	-262.7	337.6	307.4	30.23	11.170			
6,550.0	6,500.5	6,537.5	6,474.2	15.3	15.5	82.23	-243.6	-237.3	338.3	308.1	30.23	11.191			
6,600.0	6,543.5	6,584.0	6,511.6	15.3	15.5	81.35	-243.6	-209.5	339.1	308.8	30.26	11.206			
6,650.0	6,584.7	6,630.3	6,546.8	15.3	15.5	80.51	-243.6	-179.6	339.9	309.6	30.32	11.208			
6,700.0	6,623.7	6,676.3	6,579.9	15.4	15.6	79.72	-243.6	-147.6	340.7	310.3	30.45	11.190			
6,750.0	6,660.6	6,722.0	6,610.7	15.5	15.7	78.98	-243.6	-113.8	341.5	310.9	30.65	11.144			
6,800.0	6,694.9	6,767.6	6,639.1	15.7	15.8	78.29	-243.6	-78.2	342.4	311.4	30.94	11.064			
6,850.0	6,726.6	6,812.9	6,665.1	15.9	16.0	77.66	-243.6	-41.1	343.2	311.8	31.35	10.945			
6,900.0	6,755.6	6,858.0	6,688.6	16.2	16.2	77.08	-243.6	-2.6	343.9	312.0	31.89	10.784			
6,950.0	6,781.7	6,903.0	6,709.6	16.6	16.6	76.57	-243.6	37.2	344.7	312.1	32.57	10.580			
7,000.0	6,804.7	6,950.0	6,728.8	17.1	17.0	76.09	-243.6	80.1	345.3	311.9	33.43	10.330			
7,050.0	6,824.6	6,992.5	6,743.7	17.7	17.5	75.71	-243.6	119.9	345.9	311.5	34.40	10.055			
7,100.0	6,841.2	7,037.1	6,756.7	18.3	18.1	75.38	-243.6	162.5	346.4	310.9	35.55	9.746			
7,150.0	6,854.5	7,081.5	6,767.1	19.0	18.8	75.10	-243.6	205.7	346.9	310.0	36.83	9.417			
7,200.0	6,864.4	7,125.9	6,774.8	19.8	19.5	74.89	-243.6	249.5	347.2	308.9	38.25	9.077			
7,250.0	6,870.8	7,170.3	6,779.7	20.7	20.3	74.75	-243.6	293.6	347.4	307.6	39.79	8.733			
7,300.0	6,873.8	7,214.6	6,781.9	21.6	21.1	74.67	-243.6	337.8	347.6	306.1	41.42	8.391			
7,324.7	6,874.0	7,237.0	6,782.0	22.1	21.5	74.65	-243.6	360.2	347.6	305.3	42.27	8.223			
7,400.0	6,873.2	7,312.3	6,781.5	23.5	23.0	74.69	-243.6	435.5	347.5	302.4	45.14	7.700			
7,500.0	6,872.2	7,412.3	6,780.8	25.6	25.1	74.74	-243.6	535.5	347.4	298.2	49.20	7.062			
7,600.0	6,871.3	7,512.3	6,780.1	27.9	27.3	74.79	-243.6	635.5	347.4	293.8	53.51	6.491			
7,700.0	6,870.3	7,612.3	6,779.5	30.2	29.7	74.84	-243.6	735.5	347.3	289.3	58.02	5.986			
7,800.0	6,869.3	7,712.3	6,778.8	32.6	32.1	74.89	-243.6	835.5	347.2	284.5	62.67	5.540			
7,900.0	6,868.3	7,812.3	6,778.1	35.0	34.5	74.94	-243.6	935.5	347.1	279.7	67.45	5.146			
8,000.0	6,867.4	7,912.3	6,777.5	37.6	37.0	74.99	-243.6	1,035.5	347.0	274.7	72.32	4.798			
8,100.0	6,866.4	8,012.3	6,776.8	40.1	39.6	75.04	-243.6	1,135.5	347.0	269.7	77.27	4.490			
8,200.0	6,865.4	8,112.3	6,776.1	42.7	42.2	75.09	-243.6	1,235.5	346.9	264.6	82.29	4.215			
8,300.0	6,864.4	8,212.3	6,775.5	45.3	44.8	75.13	-243.6	1,335.5	346.8	259.4	87.36	3.970			
8,400.0	6,863.5	8,312.3	6,774.8	47.9	47.4	75.18	-243.6	1,435.5	346.7	254.2	92.48	3.749			
8,500.0	6,862.5	8,412.3	6,774.1	50.6	50.1	75.23	-243.6	1,535.5	346.6	249.0	97.64	3.550			
8,600.0	6,861.5	8,512.3	6,773.5	53.2	52.8	75.28	-243.6	1,635.5	346.6	243.7	102.83	3.370			
8,614.0	6,861.4	8,526.3	6,773.4	53.6	53.1	75.29	-243.6	1,649.4	346.5	243.0	103.56	3.346			

CC - Min centre 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 281-312
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 281-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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

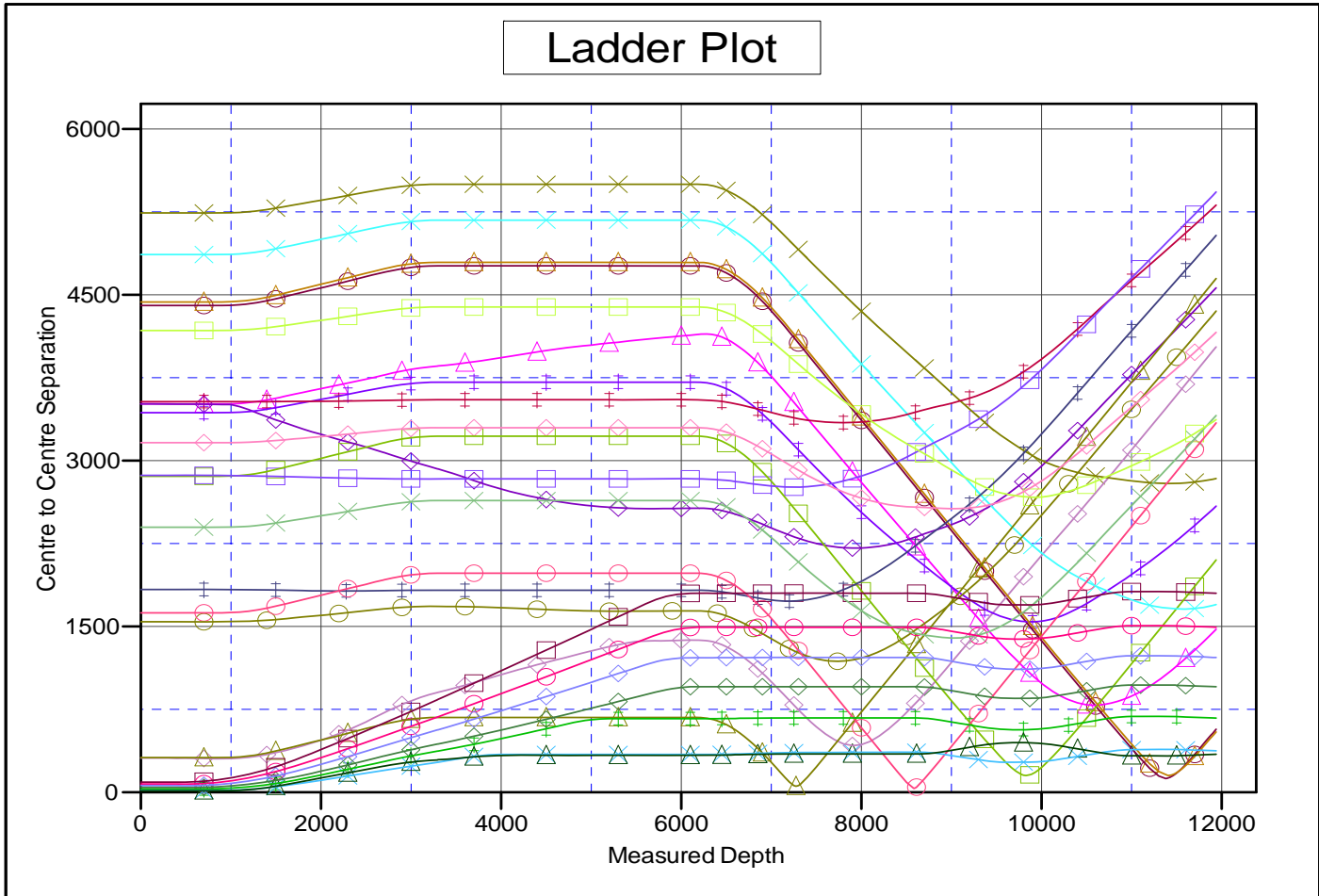
Offset Design													Offset Site Error:	0.0 usft	
Survey Program: 0-MWD													Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
8,615.5	6,861.3	8,527.8	6,773.4	53.7	53.2	75.29	-243.6	1,651.0	346.5	242.9	103.64	3.344			
8,700.0	6,860.5	8,612.3	6,772.8	55.9	55.4	75.37	-243.6	1,735.4	348.4	240.4	107.91	3.228			
8,800.0	6,859.5	8,712.0	6,772.1	58.6	58.1	75.63	-243.6	1,835.2	355.2	242.4	112.77	3.149			
8,880.6	6,858.7	8,792.1	6,771.6	60.7	60.3	75.95	-243.6	1,915.2	364.4	247.8	116.51	3.127			
8,900.0	6,858.6	8,811.2	6,771.5	61.2	60.8	76.06	-243.6	1,934.4	367.0	249.4	117.56	3.121			
9,000.0	6,857.6	8,910.3	6,770.8	63.9	63.5	76.61	-243.6	2,033.4	380.4	257.4	123.00	3.093			
9,100.0	6,856.6	9,009.3	6,770.1	66.5	66.2	77.12	-243.6	2,132.5	393.9	265.5	128.44	3.067			
9,200.0	6,855.6	9,108.3	6,769.5	69.2	68.9	77.60	-243.6	2,231.5	407.4	273.5	133.90	3.043			
9,300.0	6,854.6	9,207.4	6,768.8	71.8	71.6	78.05	-243.6	2,330.5	421.0	281.6	139.36	3.021			
9,368.1	6,854.0	9,274.8	6,768.3	73.7	73.5	78.33	-243.6	2,398.0	430.2	287.1	143.09	3.007			
9,400.0	6,853.6	9,306.4	6,768.1	74.5	74.3	78.49	-243.6	2,429.6	434.3	289.2	145.13	2.992			
9,500.0	6,852.7	9,405.9	6,767.5	77.2	77.1	78.86	-243.6	2,529.1	443.7	292.4	151.28	2.933			
9,600.0	6,851.7	9,505.8	6,766.8	80.0	79.8	79.07	-243.6	2,629.0	448.0	291.0	157.02	2.853			
9,634.8	6,851.3	9,540.6	6,766.6	80.9	80.8	79.10	-243.6	2,663.7	448.3	289.4	158.92	2.821			
9,700.0	6,850.7	9,605.8	6,766.1	82.7	82.6	79.13	-243.6	2,729.0	448.3	285.8	162.46	2.759			
9,800.0	6,849.7	9,705.8	6,765.5	85.5	85.3	79.17	-243.6	2,829.0	448.2	280.3	167.90	2.669			
9,870.5	6,849.0	9,776.3	6,765.0	87.4	87.3	79.19	-243.6	2,899.4	448.1	276.4	171.74	2.610			
9,900.0	6,848.7	9,805.8	6,764.8	88.3	88.1	79.21	-243.6	2,929.0	447.9	274.6	173.30	2.585			
10,000.0	6,847.7	9,905.7	6,764.1	91.0	90.8	79.15	-243.6	3,028.8	443.8	265.5	178.24	2.490			
10,100.0	6,846.8	10,005.3	6,763.4	93.8	93.6	78.93	-243.6	3,128.4	434.5	251.9	182.59	2.380			
10,137.1	6,846.4	10,042.1	6,763.2	94.8	94.6	78.81	-243.6	3,165.2	429.7	245.7	184.05	2.335			
10,200.0	6,845.8	10,104.3	6,762.8	96.5	96.3	78.60	-243.6	3,227.5	421.1	233.8	187.31	2.248			
10,300.0	6,844.8	10,203.4	6,762.1	99.3	99.1	78.25	-243.6	3,326.5	407.4	214.9	192.49	2.117			
10,400.0	6,843.8	10,302.4	6,761.4	102.0	101.8	77.88	-243.6	3,425.5	393.8	196.1	197.63	1.992			
10,500.0	6,842.8	10,401.4	6,760.8	104.8	104.6	77.49	-243.6	3,524.5	380.1	177.4	202.73	1.875			
10,600.0	6,841.9	10,500.4	6,760.1	107.5	107.3	77.06	-243.6	3,623.6	366.4	158.6	207.80	1.763			
10,700.0	6,840.9	10,599.5	6,759.4	110.3	110.1	76.60	-243.6	3,722.6	352.8	140.0	212.80	1.658			
10,732.1	6,840.6	10,631.3	6,759.2	111.2	111.0	76.44	-243.6	3,754.4	348.4	134.0	214.40	1.625			
10,800.0	6,839.9	10,698.6	6,758.7	113.0	112.8	76.19	-243.6	3,821.8	340.4	121.7	218.72	1.556			
10,900.0	6,838.9	10,798.3	6,758.1	115.8	115.6	75.94	-243.6	3,921.4	332.8	108.0	224.72	1.481 Level 3			
10,998.8	6,838.0	10,897.1	6,757.4	118.6	118.3	75.87	-243.6	4,020.2	330.2	100.0	230.22	1.434 Level 3			
11,000.0	6,838.0	10,898.3	6,757.4	118.6	118.4	75.87	-243.6	4,021.4	330.2	99.9	230.29	1.434 Level 3			
11,100.0	6,837.0	10,998.3	6,756.7	121.4	121.2	75.92	-243.6	4,121.4	330.1	94.4	235.74	1.400 Level 3			
11,200.0	6,836.0	11,098.3	6,756.0	124.2	123.9	75.97	-243.6	4,221.4	330.1	88.9	241.20	1.368 Level 3			
11,300.0	6,835.1	11,198.3	6,755.4	126.9	126.7	76.02	-243.6	4,321.4	330.0	83.3	246.66	1.338 Level 3			
11,400.0	6,834.1	11,298.3	6,754.7	129.7	129.5	76.07	-243.6	4,421.4	329.9	77.8	252.13	1.309 Level 3			
11,428.1	6,833.8	11,326.4	6,754.5	130.5	130.3	76.08	-243.6	4,449.5	329.9	76.2	253.66	1.301 Level 3			
11,429.5	6,833.8	11,327.7	6,754.5	130.5	130.3	76.08	-243.6	4,450.8	329.9	76.2	253.74	1.300 Level 3			
11,487.5	6,833.3	11,385.7	6,754.1	132.2	132.0	76.12	-243.6	4,508.8	330.8	74.0	256.76	1.288 Level 3			
11,500.0	6,833.2	11,398.3	6,754.0	132.5	132.3	76.14	-243.6	4,521.4	331.1	73.7	257.46	1.286 Level 3			
11,600.0	6,832.2	11,498.2	6,753.3	135.3	135.1	76.32	-243.6	4,621.3	334.1	71.0	263.05	1.270 Level 3			
11,700.0	6,831.3	11,598.2	6,752.6	138.1	137.9	76.49	-243.6	4,721.3	337.1	68.4	268.64	1.255 Level 3			
11,800.0	6,830.3	11,698.1	6,751.9	140.8	140.7	76.65	-243.6	4,821.2	340.0	65.8	274.24	1.240 Level 2			
11,900.0	6,829.4	11,798.1	6,751.3	143.6	143.5	76.81	-243.6	4,921.2	343.0	63.1	279.85	1.226 Level 2			
11,938.6	6,829.0	11,836.6	6,751.0	144.7	144.5	76.88	-243.6	4,959.7	344.1	62.1	282.01	1.220 Level 2, SF			

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28I-312
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Reference Site:	SW SW SEC. 28 T5N R6W 6th P.M.	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	KINZER 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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 28I-312
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.38°



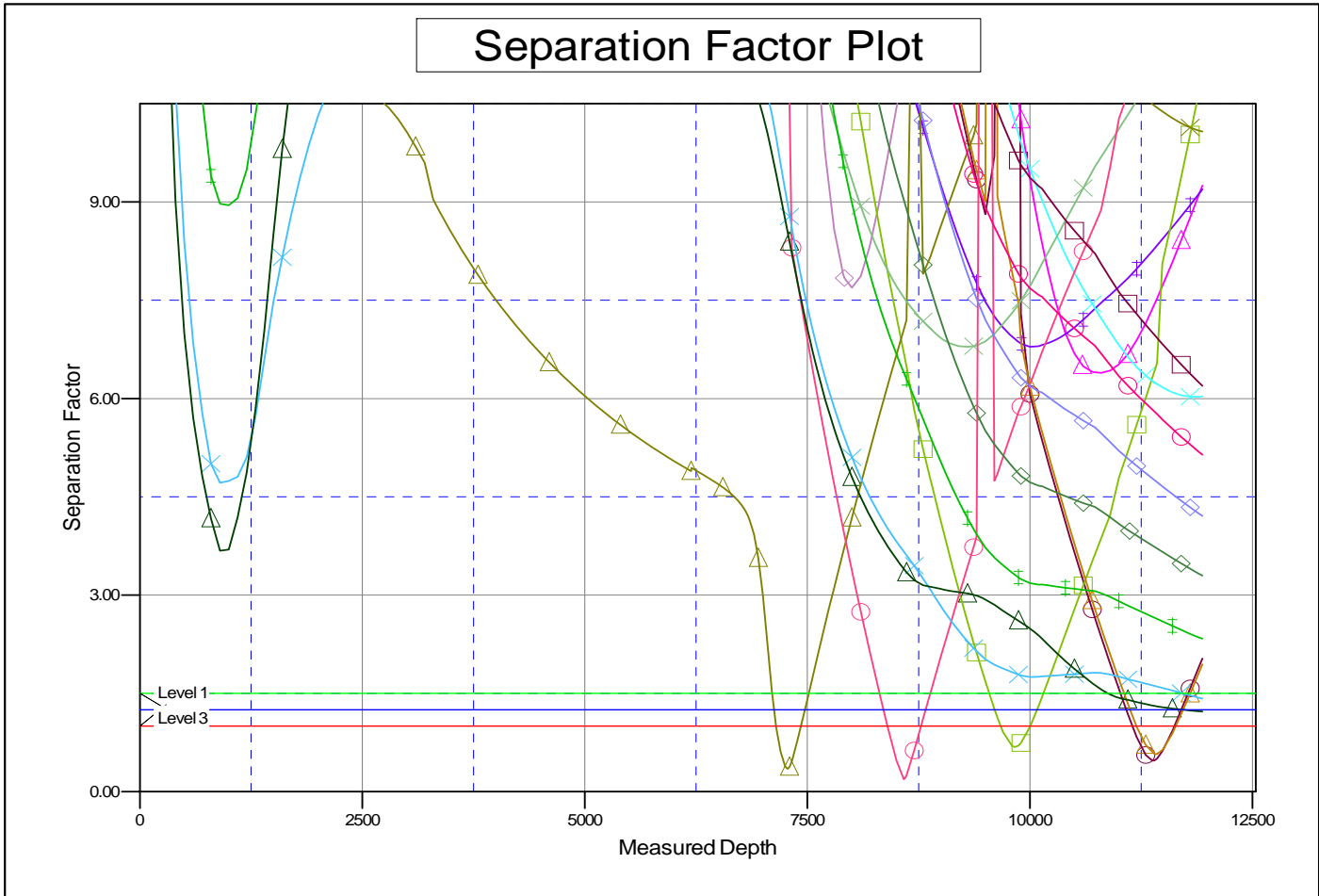
LEGEND

EXIST VERT KINZER 13-28, Wellbore #1, Design #1 V0	EXIST VERT KINZER 28-2, Wellbore #1, Design #1 V0	KINZER 28G-232, ORIGINAL WEL
Wellbore #1, Wellbore #1 V0	EXIST VERT KINZER 28A, Wellbore #1, Design #1 V0	KINZER 28G-332, ORIGINAL WEL
Wellbore #1, Wellbore #1 V0	EXIST VERT KINZER 28B, Wellbore #1, Wellbore #1 V0	KINZER 28H-202, ORIGINAL WEL
Wellbore #1, Wellbore #1 V0	EXIST VERT KINZER 28-1, Wellbore #1, Design #1 V0	KINZER 28H-212, ORIGINAL WEL
Wellbore #1, Design #1 V0	EXIST VERT MELLON 28-1, Wellbore #1, Design #1 V0	KINZER 28H-302, ORIGINAL WEL
Wellbore #1, Design #1 V0	EXIST VERT MELLON 28-2, Wellbore #1, Design #1 V0	KINZER 28H-432, ORIGINAL WEL
Wellbore #1, Design #1 V0	EXIST VERT MELLON 28-4, Wellbore #1, Design #1 V0	KINZER 28I-202, ORIGINAL WEL
Wellbore #1, Design #1 V0	EXIST VERT ROGER 1, Wellbore #1, Design #1 V0	



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well KINZER 28I-312
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 28I-312	Survey Calculation Method:	Minimum Curvature
Well Error:	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 Elev) Coordinates are relative to: KINZER 28I-312
 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°



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
Wellbore #1, Design #1 V0	EXIST VERT KINZER 28-1, Wellbore #1, Design #1 V0	KINZER 28H-302, ORIGINAL WEL
Wellbore #1, Design #1 V0	EXIST VERT MELLON 28-1, Wellbore #1, Design #1 V0	KINZER 28H-432, ORIGINAL WEL
Wellbore #1, Design #1 V0	EXIST VERT MELLON 28-2, Wellbore #1, Design #1 V0	KINZER 28I-202, 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	