

PDC ENERGY

**WELD COUNTY, COLORADO
NW NW SEC. 5 T5N R64W 6th P.M.
EHRlich 5M-243**

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

16 March, 2016



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

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

Survey Tool Program	Date 16/03/2016			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	14,034.1	PROPOSAL #1 (ORIGINAL WELLBORE)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
NW NW SEC. 5 T5N R64W 6th P.M.						
ABDN VERT LITTLE WILL #11 - Wellbore #1 - Design #1	9,726.4	6,676.3	1,607.8	1,419.9	8.559	CC
ABDN VERT LITTLE WILL #11 - Wellbore #1 - Design #1	9,744.1	6,676.1	1,607.9	1,419.7	8.545	ES
ABDN VERT LITTLE WILL #11 - Wellbore #1 - Design #1	10,000.0	6,674.4	1,630.9	1,438.1	8.458	SF
ABDN VERT LITTLE WILL #12 - Wellbore #1 - Design #	9,920.1	6,680.9	768.8	579.3	4.058	CC
ABDN VERT LITTLE WILL #12 - Wellbore #1 - Design #	9,940.9	6,680.8	769.0	579.2	4.052	ES
ABDN VERT LITTLE WILL #12 - Wellbore #1 - Design #	10,000.0	6,680.4	772.9	582.0	4.049	SF
ABDN VERT NOFFSINGER #1 - Wellbore #1 - Wellbore	8,572.0	6,400.0	464.4	434.6	15.574	CC, ES
ABDN VERT NOFFSINGER #1 - Wellbore #1 - Wellbore	8,661.4	6,400.0	473.0	441.9	15.219	SF
ABDN VERT PLUMB #2 - Wellbore #1 - Wellbore #1	12,592.7	6,400.0	439.3	342.6	4.541	CC
ABDN VERT PLUMB #2 - Wellbore #1 - Wellbore #1	12,600.0	6,400.0	439.4	342.5	4.536	ES, SF
EHRLICH 5E-323 - ORIGINAL WELLBORE - PROPOSA	1,200.0	1,200.0	104.9	99.8	20.502	CC, ES
EHRLICH 5E-323 - ORIGINAL WELLBORE - PROPOSA	14,034.1	13,903.3	1,819.8	1,547.4	6.681	SF
EHRLICH 5E-423 - ORIGINAL WELLBORE - PROPOSA	1,037.2	1,037.2	119.9	115.5	27.331	CC
EHRLICH 5E-423 - ORIGINAL WELLBORE - PROPOSA	1,100.0	1,099.5	120.0	115.3	25.736	ES
EHRLICH 5E-423 - ORIGINAL WELLBORE - PROPOSA	14,034.1	14,002.4	2,107.5	1,835.5	7.749	SF
EHRLICH 5J-203 - ORIGINAL WELLBORE - PROPOSA	1,637.5	1,637.5	60.1	53.0	8.486	CC
EHRLICH 5J-203 - ORIGINAL WELLBORE - PROPOSA	1,673.2	1,672.8	60.2	52.9	8.310	ES
EHRLICH 5J-203 - ORIGINAL WELLBORE - PROPOSA	14,034.1	13,803.2	954.8	683.0	3.513	SF
EHRLICH 5J-223 - ORIGINAL WELLBORE - PROPOSA	1,937.2	1,937.2	29.9	21.4	3.543	CC
EHRLICH 5J-223 - ORIGINAL WELLBORE - PROPOSA	1,968.5	1,968.4	29.9	21.3	3.489	ES
EHRLICH 5J-223 - ORIGINAL WELLBORE - PROPOSA	14,034.1	13,845.4	504.0	232.7	1.857	SF
EHRLICH 5J-243 - ORIGINAL WELLBORE - PROPOSA	1,337.5	1,337.5	90.0	84.3	15.690	CC
EHRLICH 5J-243 - ORIGINAL WELLBORE - PROPOSA	1,377.9	1,377.3	90.1	84.2	15.230	ES
EHRLICH 5J-243 - ORIGINAL WELLBORE - PROPOSA	14,034.1	13,797.5	1,453.9	1,181.6	5.340	SF
EHRLICH 5J-303 - ORIGINAL WELLBORE - PROPOSA	1,500.0	1,500.0	75.1	68.6	11.606	CC, ES
EHRLICH 5J-303 - ORIGINAL WELLBORE - PROPOSA	14,034.1	13,869.9	1,213.3	941.4	4.462	SF
EHRLICH 5J-323 - ORIGINAL WELLBORE - PROPOSA	1,800.0	1,800.0	45.2	37.4	5.781	CC, ES
EHRLICH 5J-323 - ORIGINAL WELLBORE - PROPOSA	14,034.1	13,903.6	659.2	388.5	2.435	SF
EHRLICH 5M-343 - ORIGINAL WELLBORE - PROPOSA	2,100.0	2,100.0	14.9	5.8	1.630	CC
EHRLICH 5M-343 - ORIGINAL WELLBORE - PROPOSA	14,034.1	13,995.1	265.3	0.5	1.002	Level 2, ES, SF
EXIST DD PJ #8I - Wellbore #1 - Wellbore #1	14,034.1	6,708.5	1,153.4	1,015.3	8.352	CC, ES, SF
EXIST VERT EHRLICH #1 - Wellbore #1 - Wellbore #1	98.4	73.9	472.3	472.1	3,577.116	CC
EXIST VERT EHRLICH #1 - Wellbore #1 - Wellbore #1	787.4	762.9	473.8	471.7	228.252	ES
EXIST VERT EHRLICH #1 - Wellbore #1 - Wellbore #1	11,220.4	6,803.8	4,079.9	3,996.3	48.783	SF
EXIST VERT EHRLICH #2 - Wellbore #1 - Wellbore #1	2,322.3	2,318.0	1,576.2	1,570.2	259.918	CC, ES
EXIST VERT EHRLICH #2 - Wellbore #1 - Wellbore #1	10,000.0	6,500.0	2,130.0	2,069.9	35.471	SF
EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore	13,850.3	6,633.8	1,009.3	875.9	7.566	CC

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
NW NW SEC. 5 T5N R64W 6th P.M.						
EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore	13,877.9	6,633.4	1,009.7	875.8	7.539	ES
EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore	14,000.0	6,631.5	1,020.4	884.1	7.488	SF
EXIST VERT LDS #5-25 - Wellbore #1 - Wellbore #1	10,565.5	6,648.3	876.5	805.4	12.322	CC, ES
EXIST VERT LDS #5-25 - Wellbore #1 - Wellbore #1	10,800.0	6,654.0	907.3	831.8	12.009	SF
EXIST VERT NOFFSINGER #21-5 - Wellbore #1 - Wellb	7,341.9	6,712.3	334.2	315.2	17.603	CC, ES
EXIST VERT NOFFSINGER #21-5 - Wellbore #1 - Wellb	7,381.9	6,715.3	336.5	317.3	17.455	SF
EXIST VERT NOFFSINGER #31-5 - Wellbore #1 - Wellb	6,350.0	6,051.3	1,085.3	1,061.2	45.136	SF
EXIST VERT NOFFSINGER #31-5 - Wellbore #1 - Wellb	7,125.9	6,500.0	982.8	964.0	52.188	CC, ES
EXIST VERT NOFFSINGER #32-5 - Wellbore #1 - Wellb	8,737.3	6,715.7	988.0	950.0	26.035	CC
EXIST VERT NOFFSINGER #32-5 - Wellbore #1 - Wellb	8,759.8	6,715.4	988.2	949.9	25.777	ES
EXIST VERT NOFFSINGER #32-5 - Wellbore #1 - Wellb	9,200.0	6,710.8	1,090.9	1,044.8	23.667	SF
EXIST VERT PAULINE #5 - Wellbore #1 - Wellbore #1	14,034.1	6,625.5	547.4	410.3	3.993	CC, ES, SF
EXIST VERT PJ #3 - Wellbore #1 - Wellbore #1	14,026.4	6,500.0	1,735.2	1,598.6	12.708	CC
EXIST VERT PJ #3 - Wellbore #1 - Wellbore #1	14,034.1	6,500.0	1,735.2	1,598.5	12.695	ES, SF
EXIST VERT PJ #5 - Wellbore #1 - Wellbore #1	13,383.7	6,475.0	1,101.7	978.3	8.931	CC
EXIST VERT PJ #5 - Wellbore #1 - Wellbore #1	13,400.0	6,475.0	1,101.8	978.2	8.910	ES
EXIST VERT PJ #5 - Wellbore #1 - Wellbore #1	13,582.6	6,475.0	1,119.5	992.4	8.807	SF
EXIST VERT PLUMB #1 - Wellbore #1 - Wellbore #1	12,581.5	6,653.1	1,573.5	1,464.2	14.393	CC
EXIST VERT PLUMB #1 - Wellbore #1 - Wellbore #1	12,600.0	6,653.0	1,573.6	1,464.0	14.348	ES
EXIST VERT PLUMB #1 - Wellbore #1 - Wellbore #1	13,000.0	6,652.2	1,628.2	1,511.0	13.883	SF
EXIST VERT PLUMB #B5-11 - Wellbore #1 - Wellbore #	9,925.7	6,678.3	514.5	454.5	8.572	CC
EXIST VERT PLUMB #B5-11 - Wellbore #1 - Wellbore #	9,940.9	6,677.6	514.7	454.4	8.537	ES
EXIST VERT PLUMB #B5-11 - Wellbore #1 - Wellbore #	10,000.0	6,674.9	519.8	458.5	8.472	SF
EXIST VERT PLUMB B5-14 - Wellbore #1 - Wellbore #1	11,130.5	6,657.2	311.0	228.9	3.787	CC, ES, SF

Offset Design		NW NW SEC. 5 T5N R64W 6th P.M. - ABDN VERT LITTLE WILL #11 - Wellbore #1 - Design #1										Offset Site Error:		0.0 usft		
Survey Program: 0-INC														Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
0.0	0.0	0.0	0.0	0.0	0.0	-171.14	-2,640.2	-411.8	2,672.5							
98.4	98.4	50.4	50.4	0.1	0.6	-171.14	-2,640.2	-411.8	2,672.1	2,671.4	0.65	4,119.223				
100.0	100.0	52.0	52.0	0.1	0.6	-171.14	-2,640.2	-411.8	2,672.1	2,671.4	0.67	3,999.705				
196.8	196.8	148.8	148.8	0.3	2.2	-171.14	-2,640.2	-411.8	2,672.1	2,669.5	2.55	1,047.937				
200.0	200.0	152.0	152.0	0.3	2.3	-171.14	-2,640.2	-411.8	2,672.1	2,669.5	2.63	1,016.147				
295.3	295.3	247.3	247.3	0.5	4.4	-171.14	-2,640.2	-411.8	2,672.1	2,667.2	4.93	541.500				
300.0	300.0	252.0	252.0	0.5	4.5	-171.14	-2,640.2	-411.8	2,672.1	2,667.0	5.04	529.810				
393.7	393.7	345.7	345.7	0.7	6.4	-171.14	-2,640.2	-411.8	2,672.1	2,664.9	7.19	371.860				
400.0	400.0	352.0	352.0	0.8	6.6	-171.14	-2,640.2	-411.8	2,672.1	2,664.8	7.33	364.612				
492.1	492.1	444.1	444.1	1.0	8.4	-171.14	-2,640.2	-411.8	2,672.1	2,662.7	9.41	283.920				
500.0	500.0	452.0	452.0	1.0	8.6	-171.14	-2,640.2	-411.8	2,672.1	2,662.5	9.59	278.665				
590.5	590.5	542.5	542.5	1.2	10.4	-171.14	-2,640.2	-411.8	2,672.1	2,660.5	11.63	229.815				
600.0	600.0	552.0	552.0	1.2	10.6	-171.14	-2,640.2	-411.8	2,672.1	2,660.3	11.84	225.693				
689.0	689.0	641.0	641.0	1.4	12.4	-171.14	-2,640.2	-411.8	2,672.1	2,658.3	13.84	193.100				
700.0	700.0	652.0	652.0	1.4	12.7	-171.14	-2,640.2	-411.8	2,672.1	2,658.0	14.09	189.708				
787.4	787.4	739.4	739.4	1.6	14.4	-171.14	-2,640.2	-411.8	2,672.1	2,656.0	16.05	166.530				
800.0	800.0	752.0	752.0	1.7	14.7	-171.14	-2,640.2	-411.8	2,672.1	2,655.8	16.33	163.649				
885.8	885.8	837.8	837.8	1.9	16.4	-171.14	-2,640.2	-411.8	2,672.1	2,653.8	18.25	146.402				
900.0	900.0	852.0	852.0	1.9	16.7	-171.14	-2,640.2	-411.8	2,672.1	2,653.5	18.57	143.898				
984.2	984.2	936.2	936.2	2.1	18.4	-171.14	-2,640.2	-411.8	2,672.1	2,651.6	20.46	130.622				

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,000.0	1,000.0	952.0	952.0	2.1	18.7	-171.14	-2,640.2	-411.8	2,672.1	2,651.3	20.81	128.408	
1,082.7	1,082.7	1,034.7	1,034.7	2.3	20.4	-171.14	-2,640.2	-411.8	2,672.1	2,649.4	22.66	117.918	
1,100.0	1,100.0	1,052.0	1,052.0	2.3	20.7	-171.14	-2,640.2	-411.8	2,672.1	2,649.0	23.05	115.933	
1,181.1	1,181.1	1,133.1	1,133.1	2.5	22.3	-171.14	-2,640.2	-411.8	2,672.1	2,647.2	24.86	107.468	
1,200.0	1,200.0	1,152.0	1,152.0	2.6	22.7	-171.14	-2,640.2	-411.8	2,672.1	2,646.8	25.29	105.670	
1,279.5	1,279.5	1,231.5	1,231.5	2.7	24.3	-171.14	-2,640.2	-411.8	2,672.1	2,645.0	27.07	98.722	
1,300.0	1,300.0	1,252.0	1,252.0	2.8	24.7	-171.14	-2,640.2	-411.8	2,672.1	2,644.6	27.53	97.078	
1,377.9	1,377.9	1,329.9	1,329.9	3.0	26.3	-171.14	-2,640.2	-411.8	2,672.1	2,642.8	29.27	91.293	
1,400.0	1,400.0	1,352.0	1,352.0	3.0	26.8	-171.14	-2,640.2	-411.8	2,672.1	2,642.3	29.76	89.780	
1,476.4	1,476.4	1,428.4	1,428.4	3.2	28.3	-171.14	-2,640.2	-411.8	2,672.1	2,640.6	31.47	84.905	
1,500.0	1,500.0	1,452.0	1,452.0	3.2	28.8	-171.14	-2,640.2	-411.8	2,672.1	2,640.1	32.00	83.502	
1,574.8	1,574.8	1,526.8	1,526.8	3.4	30.3	-171.14	-2,640.2	-411.8	2,672.1	2,638.4	33.67	79.353	
1,600.0	1,600.0	1,552.0	1,552.0	3.5	30.8	-171.14	-2,640.2	-411.8	2,672.1	2,637.9	34.24	78.046	
1,673.2	1,673.2	1,625.2	1,625.2	3.6	32.3	-171.14	-2,640.2	-411.8	2,672.1	2,636.2	35.88	74.482	
1,700.0	1,700.0	1,652.0	1,652.0	3.7	32.8	-171.14	-2,640.2	-411.8	2,672.1	2,635.6	36.47	73.259	
1,771.6	1,771.6	1,723.6	1,723.6	3.8	34.2	-171.14	-2,640.2	-411.8	2,672.1	2,634.0	38.08	70.176	
1,800.0	1,800.0	1,752.0	1,752.0	3.9	34.8	-171.14	-2,640.2	-411.8	2,672.1	2,633.4	38.71	69.026	
1,870.1	1,870.1	1,822.1	1,822.1	4.1	36.2	-171.14	-2,640.2	-411.8	2,672.1	2,631.8	40.28	66.340	
1,900.0	1,900.0	1,852.0	1,852.0	4.1	36.8	-171.14	-2,640.2	-411.8	2,672.1	2,631.1	40.95	65.256	
1,968.5	1,968.5	1,920.5	1,920.5	4.3	38.2	-171.14	-2,640.2	-411.8	2,672.1	2,629.6	42.48	62.902	
2,000.0	2,000.0	1,952.0	1,952.0	4.4	38.8	-171.14	-2,640.2	-411.8	2,672.1	2,628.9	43.18	61.876	
2,066.9	2,066.9	2,018.9	2,018.9	4.5	40.2	-171.14	-2,640.2	-411.8	2,672.1	2,627.4	44.68	59.803	
2,100.0	2,100.0	2,052.0	2,052.0	4.6	40.8	-171.14	-2,640.2	-411.8	2,672.1	2,626.7	45.42	58.829	
2,165.3	2,165.3	2,117.3	2,117.3	4.7	42.2	-171.14	-2,640.2	-411.8	2,672.1	2,625.2	46.88	56.995	
2,200.0	2,200.0	2,152.0	2,152.0	4.8	42.9	-171.14	-2,640.2	-411.8	2,672.1	2,624.4	47.66	56.068	
2,250.0	2,250.0	2,202.0	2,202.0	4.9	43.9	-171.14	-2,640.2	-411.8	2,672.1	2,623.3	48.78	54.783	
2,263.8	2,263.8	2,215.8	2,215.8	4.9	44.1	116.96	-2,640.2	-411.8	2,672.1	2,623.0	49.08	54.441	
2,300.0	2,300.0	2,252.0	2,252.0	5.0	44.9	116.96	-2,640.2	-411.8	2,672.3	2,622.4	49.89	53.566	
2,362.2	2,362.2	2,314.2	2,314.2	5.2	46.1	116.98	-2,640.2	-411.8	2,673.1	2,621.8	51.26	52.146	
2,400.0	2,399.9	2,351.9	2,351.9	5.2	46.9	117.00	-2,640.2	-411.8	2,673.9	2,621.8	52.09	51.329	
2,460.6	2,460.4	2,412.4	2,412.4	5.4	48.1	117.04	-2,640.2	-411.8	2,675.6	2,622.2	53.42	50.082	
2,500.0	2,499.7	2,451.7	2,451.7	5.4	48.9	117.07	-2,640.2	-411.8	2,677.1	2,622.8	54.29	49.315	
2,559.0	2,558.5	2,510.5	2,510.5	5.6	50.1	117.14	-2,640.2	-411.8	2,679.7	2,624.1	55.57	48.218	
2,600.0	2,599.1	2,551.1	2,551.1	5.7	50.9	117.19	-2,640.2	-411.8	2,681.8	2,625.4	56.46	47.497	
2,657.5	2,656.1	2,608.1	2,608.1	5.8	52.0	117.27	-2,640.2	-411.8	2,685.3	2,627.6	57.71	46.531	
2,700.0	2,698.2	2,650.2	2,650.2	5.9	52.9	117.33	-2,640.2	-411.8	2,688.3	2,629.6	58.63	45.854	
2,755.9	2,753.3	2,705.3	2,705.3	6.1	54.0	117.43	-2,640.2	-411.8	2,692.6	2,632.7	59.83	45.002	
2,800.0	2,796.6	2,748.6	2,748.6	6.2	54.9	117.51	-2,640.2	-411.8	2,696.4	2,635.6	60.78	44.366	
2,854.3	2,849.9	2,801.9	2,801.9	6.3	55.9	117.63	-2,640.2	-411.8	2,701.5	2,639.5	61.94	43.613	
2,900.0	2,894.4	2,846.4	2,846.4	6.5	56.8	117.72	-2,640.2	-411.8	2,706.2	2,643.3	62.91	43.014	
2,952.7	2,945.7	2,897.7	2,897.7	6.6	57.9	117.85	-2,640.2	-411.8	2,712.0	2,648.0	64.04	42.349	
3,000.0	2,991.5	2,943.5	2,943.5	6.8	58.8	117.96	-2,640.2	-411.8	2,717.7	2,652.7	65.04	41.785	
3,051.2	3,040.8	2,992.8	2,992.8	7.0	59.8	118.09	-2,640.2	-411.8	2,724.4	2,658.2	66.13	41.197	
3,100.0	3,087.6	3,039.6	3,039.6	7.1	60.7	118.22	-2,640.2	-411.8	2,731.1	2,664.0	67.16	40.667	
3,149.6	3,134.9	3,086.9	3,086.9	7.4	61.7	118.35	-2,640.2	-411.8	2,738.4	2,670.2	68.21	40.145	
3,200.0	3,182.7	3,134.7	3,134.7	7.6	62.6	118.49	-2,640.2	-411.8	2,746.4	2,677.1	69.27	39.647	
3,248.0	3,228.0	3,180.0	3,180.0	7.8	63.5	118.63	-2,640.2	-411.8	2,754.4	2,684.1	70.29	39.186	
3,300.0	3,276.6	3,228.6	3,228.6	8.1	64.5	118.78	-2,640.2	-411.8	2,763.6	2,692.2	71.38	38.717	
3,346.4	3,319.9	3,271.9	3,271.9	8.3	65.4	118.92	-2,640.2	-411.8	2,772.2	2,699.8	72.36	38.309	
3,400.0	3,369.4	3,321.4	3,321.4	8.6	66.4	119.08	-2,640.2	-411.8	2,782.7	2,709.3	73.48	37.869	
3,444.9	3,410.5	3,362.5	3,362.5	8.9	67.2	119.21	-2,640.2	-411.8	2,792.0	2,717.6	74.43	37.510	
3,500.0	3,460.7	3,412.7	3,412.7	9.2	68.2	119.38	-2,640.2	-411.8	2,804.0	2,728.4	75.58	37.097	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
3,543.3	3,499.8	3,451.8	3,451.8	9.5	69.0	119.51	-2,640.2	-411.8	2,813.8	2,737.3	76.50	36.781	
3,600.0	3,550.6	3,502.6	3,502.6	9.9	70.0	119.68	-2,640.2	-411.8	2,827.4	2,749.7	77.69	36.395	
3,641.7	3,587.6	3,539.6	3,539.6	10.3	70.8	119.80	-2,640.2	-411.8	2,837.8	2,759.2	78.57	36.116	
3,709.9	3,647.5	3,599.5	3,599.5	10.8	72.0	120.00	-2,640.2	-411.8	2,855.6	2,775.6	79.99	35.698	
3,740.1	3,673.9	3,625.9	3,625.9	11.1	72.5	120.23	-2,640.2	-411.8	2,863.8	2,783.1	80.70	35.488	
3,800.0	3,726.2	3,678.2	3,678.2	11.6	73.5	120.69	-2,640.2	-411.8	2,880.1	2,798.0	82.08	35.088	
3,838.6	3,759.9	3,711.9	3,711.9	11.9	74.2	120.98	-2,640.2	-411.8	2,890.7	2,807.7	82.98	34.836	
3,900.0	3,813.5	3,765.5	3,765.5	12.5	75.3	121.44	-2,640.2	-411.8	2,907.8	2,823.4	84.41	34.449	
3,937.0	3,845.8	3,797.8	3,797.8	12.8	76.0	121.71	-2,640.2	-411.8	2,918.2	2,832.9	85.27	34.221	
4,000.0	3,900.8	3,852.8	3,852.8	13.4	77.1	122.18	-2,640.2	-411.8	2,936.0	2,849.3	86.74	33.847	
4,035.4	3,931.7	3,883.7	3,883.7	13.7	77.7	122.44	-2,640.2	-411.8	2,946.2	2,858.6	87.57	33.643	
4,100.0	3,988.1	3,940.1	3,940.1	14.3	78.8	122.91	-2,640.2	-411.8	2,964.8	2,875.7	89.08	33.283	
4,133.8	4,017.6	3,969.6	3,969.6	14.7	79.4	123.15	-2,640.2	-411.8	2,974.7	2,884.8	89.87	33.099	
4,200.0	4,075.4	4,027.4	4,027.4	15.3	80.6	123.62	-2,640.2	-411.8	2,994.1	2,902.7	91.42	32.753	
4,232.3	4,103.5	4,055.5	4,055.5	15.6	81.1	123.85	-2,640.2	-411.8	3,003.7	2,911.5	92.17	32.588	
4,300.0	4,162.6	4,114.6	4,114.6	16.2	82.3	124.33	-2,640.2	-411.8	3,023.9	2,930.2	93.75	32.256	
4,330.7	4,189.4	4,141.4	4,141.4	16.5	82.9	124.54	-2,640.2	-411.8	3,033.2	2,938.7	94.47	32.109	
4,400.0	4,249.9	4,201.9	4,201.9	17.2	84.1	125.02	-2,640.2	-411.8	3,054.2	2,958.2	96.08	31.789	
4,429.1	4,275.4	4,227.4	4,227.4	17.5	84.6	125.22	-2,640.2	-411.8	3,063.1	2,966.4	96.75	31.659	
4,500.0	4,337.2	4,289.2	4,289.2	18.2	85.8	125.70	-2,640.2	-411.8	3,085.0	2,986.6	98.40	31.352	
4,527.5	4,361.3	4,313.3	4,313.3	18.5	86.3	125.89	-2,640.2	-411.8	3,093.6	2,994.5	99.04	31.237	
4,600.0	4,424.5	4,376.5	4,376.5	19.2	87.6	126.37	-2,640.2	-411.8	3,116.2	3,015.5	100.71	30.942	
4,626.0	4,447.2	4,399.2	4,399.2	19.5	88.0	126.54	-2,640.2	-411.8	3,124.4	3,023.1	101.31	30.840	
4,700.0	4,511.8	4,463.8	4,463.8	20.2	89.3	127.03	-2,640.2	-411.8	3,147.9	3,044.9	103.02	30.558	
4,724.4	4,533.1	4,485.1	4,485.1	20.5	89.8	127.19	-2,640.2	-411.8	3,155.7	3,052.1	103.58	30.467	
4,796.7	4,596.3	4,548.3	4,548.3	21.2	91.0	127.66	-2,640.2	-411.8	3,179.0	3,073.7	105.24	30.208	
4,800.0	4,599.1	4,551.1	4,551.1	21.2	91.1	127.69	-2,640.2	-411.8	3,180.0	3,074.7	105.32	30.194	
4,822.8	4,619.1	4,571.1	4,571.1	21.4	91.5	127.96	-2,640.2	-411.8	3,187.3	3,081.5	105.89	30.100	
4,900.0	4,687.3	4,639.3	4,639.3	22.0	92.9	128.83	-2,640.2	-411.8	3,211.5	3,103.6	107.85	29.778	
4,921.2	4,706.2	4,658.2	4,658.2	22.2	93.3	129.06	-2,640.2	-411.8	3,217.9	3,109.5	108.39	29.689	
5,000.0	4,777.1	4,729.1	4,729.1	22.8	94.7	129.88	-2,640.2	-411.8	3,241.2	3,130.8	110.41	29.355	
5,019.7	4,794.9	4,746.9	4,746.9	22.9	95.0	130.08	-2,640.2	-411.8	3,246.8	3,135.9	110.92	29.271	
5,100.0	4,868.3	4,820.3	4,820.3	23.5	96.5	130.84	-2,640.2	-411.8	3,269.0	3,156.0	113.01	28.926	
5,118.1	4,885.0	4,837.0	4,837.0	23.6	96.9	131.01	-2,640.2	-411.8	3,273.9	3,160.4	113.48	28.849	
5,200.0	4,961.0	4,913.0	4,913.0	24.2	98.4	131.72	-2,640.2	-411.8	3,294.9	3,179.3	115.63	28.496	
5,216.5	4,976.4	4,928.4	4,928.4	24.3	98.7	131.86	-2,640.2	-411.8	3,299.0	3,183.0	116.06	28.426	
5,300.0	5,054.8	5,006.8	5,006.8	24.8	100.3	132.51	-2,640.2	-411.8	3,318.8	3,200.6	118.25	28.067	
5,314.9	5,069.0	5,021.0	5,021.0	24.8	100.6	132.62	-2,640.2	-411.8	3,322.2	3,203.6	118.64	28.003	
5,400.0	5,149.9	5,101.9	5,101.9	25.3	102.2	133.22	-2,640.2	-411.8	3,340.6	3,219.7	120.86	27.640	
5,413.4	5,162.7	5,114.7	5,114.7	25.4	102.4	133.31	-2,640.2	-411.8	3,343.3	3,222.1	121.21	27.583	
5,500.0	5,245.9	5,197.9	5,197.9	25.8	104.1	133.85	-2,640.2	-411.8	3,360.1	3,236.7	123.46	27.217	
5,511.8	5,257.3	5,209.3	5,209.3	25.9	104.3	133.92	-2,640.2	-411.8	3,362.3	3,238.5	123.76	27.168	
5,600.0	5,342.9	5,294.9	5,294.9	26.3	106.1	134.39	-2,640.2	-411.8	3,377.4	3,251.4	126.02	26.800	
5,610.2	5,352.9	5,304.9	5,304.9	26.3	106.3	134.44	-2,640.2	-411.8	3,379.0	3,252.7	126.28	26.758	
5,700.0	5,440.7	5,392.7	5,392.7	26.7	108.0	134.86	-2,640.2	-411.8	3,392.3	3,263.8	128.55	26.390	
5,708.6	5,449.1	5,401.1	5,401.1	26.7	108.2	134.90	-2,640.2	-411.8	3,393.5	3,264.7	128.76	26.355	
5,800.0	5,539.1	5,491.1	5,491.1	27.0	110.0	135.25	-2,640.2	-411.8	3,404.9	3,273.8	131.02	25.988	
5,807.1	5,546.1	5,498.1	5,498.1	27.0	110.1	135.27	-2,640.2	-411.8	3,405.7	3,274.5	131.19	25.960	
5,900.0	5,638.1	5,590.1	5,590.1	27.3	112.0	135.55	-2,640.2	-411.8	3,415.0	3,281.6	133.43	25.594	
5,905.5	5,643.5	5,595.5	5,595.5	27.3	112.1	135.57	-2,640.2	-411.8	3,415.5	3,281.9	133.56	25.573	
6,000.0	5,737.5	5,689.5	5,689.5	27.5	114.0	135.79	-2,640.2	-411.8	3,422.6	3,286.9	135.77	25.210	
6,003.9	5,741.4	5,693.4	5,693.4	27.5	114.1	135.79	-2,640.2	-411.8	3,422.9	3,287.0	135.86	25.195	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
6,100.0	5,837.2	5,789.2	5,789.2	27.7	116.0	135.94	-2,640.2	-411.8	3,427.8	3,289.8	138.03	24.835	
6,102.3	5,839.6	5,791.6	5,791.6	27.7	116.1	135.95	-2,640.2	-411.8	3,427.9	3,289.8	138.08	24.826	
6,200.0	5,937.2	5,889.2	5,889.2	27.9	118.0	136.02	-2,640.2	-411.8	3,430.5	3,290.3	140.20	24.469	
6,200.8	5,937.9	5,889.9	5,889.9	27.9	118.0	136.02	-2,640.2	-411.8	3,430.5	3,290.3	140.22	24.466	
6,256.6	5,993.8	5,945.8	5,945.8	27.9	119.2	-152.06	-2,640.2	-411.8	3,430.9	3,289.5	141.39	24.266	
6,286.6	6,023.8	5,975.8	5,975.8	27.9	119.8	-152.06	-2,640.2	-411.8	3,430.9	3,288.9	142.03	24.157	
6,299.2	6,036.4	5,988.4	5,988.4	27.9	120.0	27.95	-2,640.2	-411.8	3,430.8	3,288.6	142.25	24.118	
6,300.0	6,037.2	5,989.2	5,989.2	27.9	120.0	27.95	-2,640.2	-411.8	3,430.8	3,288.5	142.26	24.116	
6,350.0	6,087.1	6,039.1	6,039.1	28.0	121.0	28.06	-2,640.2	-411.8	3,428.4	3,285.7	142.77	24.014	
6,397.6	6,134.3	6,086.3	6,086.3	28.0	122.0	28.30	-2,640.2	-411.8	3,423.3	3,280.6	142.71	23.989	
6,400.0	6,136.7	6,088.7	6,088.7	28.0	122.0	28.31	-2,640.2	-411.8	3,423.0	3,280.3	142.69	23.989	
6,450.0	6,185.7	6,137.7	6,137.7	28.0	123.0	28.72	-2,640.2	-411.8	3,414.5	3,272.5	142.04	24.040	
6,496.0	6,230.2	6,182.2	6,182.2	28.0	123.9	29.23	-2,640.2	-411.8	3,404.1	3,263.1	140.95	24.152	
6,500.0	6,234.0	6,186.0	6,186.0	28.0	124.0	29.28	-2,640.2	-411.8	3,403.1	3,262.2	140.83	24.164	
6,550.0	6,281.3	6,233.3	6,233.3	28.0	124.9	30.01	-2,640.2	-411.8	3,388.7	3,249.6	139.12	24.359	
6,594.5	6,322.2	6,274.2	6,274.2	27.9	125.8	30.81	-2,640.2	-411.8	3,373.5	3,236.3	137.22	24.585	
6,600.0	6,327.3	6,279.3	6,279.3	27.9	125.9	30.92	-2,640.2	-411.8	3,371.5	3,234.5	136.96	24.617	
6,650.0	6,371.8	6,323.8	6,323.8	27.9	126.8	32.03	-2,640.2	-411.8	3,351.5	3,217.0	134.45	24.927	
6,692.9	6,408.6	6,360.6	6,360.6	27.9	127.5	33.15	-2,640.2	-411.8	3,332.2	3,200.1	132.11	25.223	
6,700.0	6,414.6	6,366.6	6,366.6	27.8	127.6	33.35	-2,640.2	-411.8	3,328.9	3,197.2	131.71	25.274	
6,750.0	6,455.5	6,407.5	6,407.5	27.8	128.4	34.92	-2,640.2	-411.8	3,303.7	3,174.8	128.91	25.628	
6,791.3	6,487.7	6,439.7	6,439.7	27.7	129.1	36.42	-2,640.2	-411.8	3,281.2	3,154.5	126.69	25.899	
6,800.0	6,494.3	6,446.3	6,446.3	27.7	129.2	36.76	-2,640.2	-411.8	3,276.3	3,150.0	126.25	25.951	
6,850.0	6,530.8	6,482.8	6,482.8	27.7	130.0	38.91	-2,640.2	-411.8	3,246.6	3,122.6	123.97	26.188	
6,889.7	6,558.1	6,510.1	6,510.1	27.6	130.5	40.86	-2,640.2	-411.8	3,221.5	3,098.9	122.62	26.271	
6,900.0	6,564.9	6,516.9	6,516.9	27.6	130.6	41.40	-2,640.2	-411.8	3,214.8	3,092.5	122.36	26.274	
6,950.0	6,596.3	6,548.3	6,548.3	27.6	131.3	44.27	-2,640.2	-411.8	3,181.2	3,059.5	121.70	26.141	
6,988.2	6,618.4	6,570.4	6,570.4	27.5	131.7	46.74	-2,640.2	-411.8	3,154.4	3,032.4	122.00	25.857	
7,000.0	6,624.9	6,576.9	6,576.9	27.5	131.8	47.56	-2,640.2	-411.8	3,145.9	3,023.7	122.24	25.736	
7,050.0	6,650.6	6,602.6	6,602.6	27.5	132.4	51.32	-2,640.2	-411.8	3,109.1	2,985.0	124.13	25.047	
7,086.6	6,667.5	6,619.5	6,619.5	27.5	132.7	54.37	-2,640.2	-411.8	3,081.4	2,955.0	126.39	24.380	
7,100.0	6,673.3	6,625.3	6,625.3	27.5	132.8	55.55	-2,640.2	-411.8	3,071.1	2,943.7	127.37	24.111	
7,150.0	6,692.7	6,644.7	6,644.7	27.5	133.2	60.27	-2,640.2	-411.8	3,031.9	2,900.2	131.73	23.017	
7,185.0	6,704.4	6,656.4	6,656.4	27.5	133.4	63.84	-2,640.2	-411.8	3,004.0	2,868.8	135.18	22.223	
7,200.0	6,709.0	6,661.0	6,661.0	27.5	133.5	65.44	-2,640.2	-411.8	2,991.9	2,855.2	136.75	21.879	
7,250.0	6,721.8	6,673.8	6,673.8	27.5	133.8	70.99	-2,640.2	-411.8	2,951.3	2,809.5	141.84	20.808	
7,283.4	6,728.6	6,680.6	6,680.6	27.5	133.9	74.87	-2,640.2	-411.8	2,923.9	2,778.9	144.96	20.171	
7,300.0	6,731.3	6,683.3	6,683.3	27.6	134.0	76.82	-2,640.2	-411.8	2,910.3	2,763.9	146.34	19.887	
7,350.0	6,737.3	6,689.3	6,689.3	27.7	134.1	82.76	-2,640.2	-411.8	2,869.0	2,719.3	149.72	19.163	
7,381.9	6,739.4	6,691.4	6,691.4	27.7	134.1	86.53	-2,640.2	-411.8	2,842.8	2,691.6	151.14	18.809	
7,400.0	6,739.9	6,691.9	6,691.9	27.8	134.2	88.65	-2,640.2	-411.8	2,827.8	2,676.2	151.67	18.645	
7,416.5	6,740.0	6,692.0	6,692.0	27.8	134.2	90.56	-2,640.2	-411.8	2,814.3	2,662.3	151.98	18.517	
7,480.3	6,739.5	6,691.5	6,691.5	28.0	134.1	90.54	-2,640.2	-411.8	2,762.2	2,609.7	152.51	18.112	
7,500.0	6,739.4	6,691.4	6,691.4	28.1	134.1	90.54	-2,640.2	-411.8	2,746.2	2,593.5	152.67	17.988	
7,578.7	6,738.9	6,690.9	6,690.9	28.5	134.1	90.52	-2,640.2	-411.8	2,682.7	2,529.3	153.43	17.486	
7,600.0	6,738.7	6,690.7	6,690.7	28.6	134.1	90.52	-2,640.2	-411.8	2,665.7	2,512.1	153.63	17.352	
7,677.1	6,738.2	6,690.2	6,690.2	29.1	134.1	90.50	-2,640.2	-411.8	2,604.6	2,450.1	154.47	16.861	
7,700.0	6,738.1	6,690.1	6,690.1	29.2	134.1	90.49	-2,640.2	-411.8	2,586.7	2,432.0	154.72	16.718	
7,775.6	6,737.5	6,689.5	6,689.5	29.7	134.1	90.47	-2,640.2	-411.8	2,527.9	2,372.3	155.64	16.242	
7,800.0	6,737.4	6,689.4	6,689.4	29.9	134.1	90.47	-2,640.2	-411.8	2,509.1	2,353.2	155.93	16.091	
7,874.0	6,736.9	6,688.9	6,688.9	30.6	134.1	90.45	-2,640.2	-411.8	2,452.8	2,295.9	156.90	15.633	
7,900.0	6,736.7	6,688.7	6,688.7	30.8	134.1	90.44	-2,640.2	-411.8	2,433.2	2,276.0	157.24	15.475	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,972.4	6,736.2	6,688.2	6,688.2	31.5	134.1	90.43	-2,640.2	-411.8	2,379.3	2,221.1	158.24	15.036	
8,000.0	6,736.0	6,688.0	6,688.0	31.8	134.1	90.42	-2,640.2	-411.8	2,359.1	2,200.4	158.62	14.873	
8,070.8	6,735.5	6,687.5	6,687.5	32.5	134.1	90.40	-2,640.2	-411.8	2,307.7	2,148.1	159.65	14.455	
8,100.0	6,735.3	6,687.3	6,687.3	32.8	134.1	90.39	-2,640.2	-411.8	2,286.9	2,126.8	160.07	14.287	
8,169.3	6,734.9	6,686.9	6,686.9	33.6	134.1	90.38	-2,640.2	-411.8	2,238.2	2,077.0	161.11	13.892	
8,200.0	6,734.6	6,686.6	6,686.6	34.0	134.1	90.37	-2,640.2	-411.8	2,216.9	2,055.3	161.57	13.721	
8,267.7	6,734.2	6,686.2	6,686.2	34.8	134.0	90.35	-2,640.2	-411.8	2,170.8	2,008.2	162.63	13.349	
8,300.0	6,734.0	6,686.0	6,686.0	35.2	134.0	90.35	-2,640.2	-411.8	2,149.3	1,986.1	163.13	13.175	
8,366.1	6,733.5	6,685.5	6,685.5	36.1	134.0	90.33	-2,640.2	-411.8	2,106.0	1,941.8	164.18	12.827	
8,400.0	6,733.3	6,685.3	6,685.3	36.5	134.0	90.32	-2,640.2	-411.8	2,084.3	1,919.5	164.72	12.653	
8,464.5	6,732.8	6,684.8	6,684.8	37.4	134.0	90.31	-2,640.2	-411.8	2,043.8	1,878.0	165.77	12.329	
8,500.0	6,732.6	6,684.6	6,684.6	37.9	134.0	90.30	-2,640.2	-411.8	2,022.1	1,855.7	166.35	12.156	
8,563.0	6,732.2	6,684.2	6,684.2	38.8	134.0	90.28	-2,640.2	-411.8	1,984.5	1,817.1	167.39	11.855	
8,600.0	6,731.9	6,683.9	6,683.9	39.3	134.0	90.27	-2,640.2	-411.8	1,963.1	1,795.0	168.01	11.684	
8,661.4	6,731.5	6,683.5	6,683.5	40.2	134.0	90.26	-2,640.2	-411.8	1,928.5	1,759.4	169.04	11.408	
8,700.0	6,731.2	6,683.2	6,683.2	40.8	134.0	90.25	-2,640.2	-411.8	1,907.4	1,737.7	169.69	11.241	
8,759.8	6,730.8	6,682.8	6,682.8	41.7	134.0	90.23	-2,640.2	-411.8	1,875.9	1,705.2	170.71	10.989	
8,800.0	6,730.6	6,682.6	6,682.6	42.3	134.0	90.22	-2,640.2	-411.8	1,855.5	1,684.1	171.39	10.826	
8,858.2	6,730.2	6,682.2	6,682.2	43.2	134.0	90.21	-2,640.2	-411.8	1,827.2	1,654.8	172.40	10.599	
8,900.0	6,729.9	6,681.9	6,681.9	43.8	134.0	90.20	-2,640.2	-411.8	1,807.7	1,634.6	173.12	10.442	
8,956.7	6,729.5	6,681.5	6,681.5	44.7	133.9	90.19	-2,640.2	-411.8	1,782.5	1,608.4	174.10	10.238	
9,000.0	6,729.2	6,681.2	6,681.2	45.4	133.9	90.18	-2,640.2	-411.8	1,764.2	1,589.4	174.86	10.090	
9,055.1	6,728.8	6,680.8	6,680.8	46.3	133.9	90.16	-2,640.2	-411.8	1,742.3	1,566.4	175.82	9.909	
9,100.0	6,728.5	6,680.5	6,680.5	47.0	133.9	90.15	-2,640.2	-411.8	1,725.5	1,548.9	176.61	9.770	
9,153.5	6,728.2	6,680.2	6,680.2	47.9	133.9	90.14	-2,640.2	-411.8	1,706.8	1,529.2	177.56	9.613	
9,200.0	6,727.8	6,679.8	6,679.8	48.6	133.9	90.13	-2,640.2	-411.8	1,691.7	1,513.4	178.38	9.484	
9,251.9	6,727.5	6,679.5	6,679.5	49.5	133.9	90.12	-2,640.2	-411.8	1,676.3	1,497.0	179.30	9.349	
9,300.0	6,727.2	6,679.2	6,679.2	50.3	133.9	90.10	-2,640.2	-411.8	1,663.3	1,483.2	180.16	9.233	
9,350.4	6,726.8	6,678.8	6,678.8	51.1	133.9	90.09	-2,640.2	-411.8	1,651.1	1,470.1	181.06	9.119	
9,400.0	6,726.5	6,678.5	6,678.5	51.9	133.9	90.08	-2,640.2	-411.8	1,640.6	1,458.6	181.94	9.017	
9,448.8	6,726.1	6,678.1	6,678.1	52.7	133.9	90.07	-2,640.2	-411.8	1,631.6	1,448.7	182.82	8.924	
9,500.0	6,725.8	6,677.8	6,677.8	53.6	133.9	90.05	-2,640.2	-411.8	1,623.6	1,439.9	183.74	8.836	
9,547.2	6,725.5	6,677.5	6,677.5	54.4	133.9	90.04	-2,640.2	-411.8	1,617.7	1,433.1	184.59	8.764	
9,600.0	6,725.1	6,677.1	6,677.1	55.3	133.9	90.03	-2,640.2	-411.8	1,612.7	1,427.2	185.55	8.692	
9,645.6	6,724.8	6,676.8	6,676.8	56.1	133.9	90.02	-2,640.2	-411.8	1,609.8	1,423.4	186.37	8.637	
9,700.0	6,724.4	6,676.4	6,676.4	57.0	133.8	90.01	-2,640.2	-411.8	1,608.0	1,420.6	187.36	8.582	
9,726.4	6,724.3	6,676.3	6,676.3	57.5	133.8	90.00	-2,640.2	-411.8	1,607.8	1,419.9	187.84	8.559 CC	
9,744.1	6,724.1	6,676.1	6,676.1	57.8	133.8	90.00	-2,640.2	-411.8	1,607.9	1,419.7	188.16	8.545 ES	
9,800.0	6,723.8	6,675.8	6,675.8	58.7	133.8	89.98	-2,640.2	-411.8	1,609.5	1,420.3	189.18	8.508	
9,842.5	6,723.5	6,675.5	6,675.5	59.5	133.8	89.97	-2,640.2	-411.8	1,612.0	1,422.0	189.95	8.486	
9,900.0	6,723.1	6,675.1	6,675.1	60.5	133.8	89.96	-2,640.2	-411.8	1,617.1	1,426.1	191.00	8.467	
9,940.9	6,722.8	6,674.8	6,674.8	61.2	133.8	89.95	-2,640.2	-411.8	1,622.0	1,430.3	191.75	8.459	
10,000.0	6,722.4	6,674.4	6,674.4	62.2	133.8	89.93	-2,640.2	-411.8	1,630.9	1,438.1	192.83	8.458 SF	
10,039.3	6,722.1	6,674.1	6,674.1	62.9	133.8	89.92	-2,640.2	-411.8	1,637.9	1,444.4	193.55	8.463	
10,100.0	6,721.7	6,673.7	6,673.7	64.0	133.8	89.91	-2,640.2	-411.8	1,650.6	1,455.9	194.67	8.479	
10,137.8	6,721.5	6,673.5	6,673.5	64.7	133.8	89.90	-2,640.2	-411.8	1,659.6	1,464.2	195.36	8.495	
10,200.0	6,721.0	6,673.0	6,673.0	65.8	133.8	89.89	-2,640.2	-411.8	1,676.1	1,479.6	196.50	8.529	
10,236.2	6,720.8	6,672.8	6,672.8	66.4	133.8	89.88	-2,640.2	-411.8	1,686.7	1,489.5	197.17	8.554	
10,300.0	6,720.4	6,672.4	6,672.4	67.5	133.8	89.86	-2,640.2	-411.8	1,707.0	1,508.7	198.35	8.606	
10,334.6	6,720.1	6,672.1	6,672.1	68.2	133.8	89.85	-2,640.2	-411.8	1,719.0	1,520.0	198.99	8.639	
10,400.0	6,719.7	6,671.7	6,671.7	69.3	133.7	89.84	-2,640.2	-411.8	1,743.2	1,543.0	200.19	8.707	
10,433.0	6,719.4	6,671.4	6,671.4	69.9	133.7	89.83	-2,640.2	-411.8	1,756.2	1,555.4	200.80	8.746	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
10,500.0	6,719.0	6,671.0	6,671.0	71.1	133.7	89.81	-2,640.2	-411.8	1,784.2	1,582.2	202.04	8.831	
10,531.5	6,718.8	6,670.8	6,670.8	71.7	133.7	89.80	-2,640.2	-411.8	1,798.1	1,595.5	202.63	8.874	
10,600.0	6,718.3	6,670.3	6,670.3	72.9	133.7	89.79	-2,640.2	-411.8	1,829.8	1,625.9	203.90	8.974	
10,629.9	6,718.1	6,670.1	6,670.1	73.4	133.7	89.78	-2,640.2	-411.8	1,844.2	1,639.8	204.45	9.021	
10,700.0	6,717.6	6,669.6	6,669.6	74.7	133.7	89.76	-2,640.2	-411.8	1,879.6	1,673.8	205.75	9.135	
10,728.3	6,717.4	6,669.4	6,669.4	75.2	133.7	89.76	-2,640.2	-411.8	1,894.4	1,688.1	206.28	9.184	
10,800.0	6,717.0	6,669.0	6,669.0	76.5	133.7	89.74	-2,640.2	-411.8	1,933.3	1,725.7	207.61	9.312	
10,826.7	6,716.8	6,668.8	6,668.8	77.0	133.7	89.73	-2,640.2	-411.8	1,948.3	1,740.1	208.11	9.362	
10,900.0	6,716.3	6,668.3	6,668.3	78.3	133.7	89.72	-2,640.2	-411.8	1,990.5	1,781.1	209.47	9.503	
10,925.2	6,716.1	6,668.1	6,668.1	78.8	133.7	89.71	-2,640.2	-411.8	2,005.5	1,795.6	209.94	9.553	
11,000.0	6,715.6	6,667.6	6,667.6	80.2	133.7	89.69	-2,640.2	-411.8	2,051.1	1,839.8	211.33	9.706	
11,023.6	6,715.4	6,667.4	6,667.4	80.6	133.7	89.69	-2,640.2	-411.8	2,065.8	1,854.1	211.77	9.755	
11,100.0	6,714.9	6,666.9	6,666.9	82.0	133.7	89.67	-2,640.2	-411.8	2,114.6	1,901.4	213.20	9.919	
11,122.0	6,714.8	6,666.8	6,666.8	82.4	133.7	89.66	-2,640.2	-411.8	2,129.0	1,915.4	213.61	9.967	
11,200.0	6,714.2	6,666.2	6,666.2	83.8	133.6	89.64	-2,640.2	-411.8	2,180.9	1,965.9	215.06	10.141	
11,220.4	6,714.1	6,666.1	6,666.1	84.2	133.6	89.64	-2,640.2	-411.8	2,194.8	1,979.3	215.45	10.187	
11,300.0	6,713.5	6,665.5	6,665.5	85.7	133.6	89.62	-2,640.2	-411.8	2,249.7	2,032.8	216.93	10.370	
11,318.9	6,713.4	6,665.4	6,665.4	86.0	133.6	89.61	-2,640.2	-411.8	2,262.9	2,045.6	217.29	10.415	
11,400.0	6,712.9	6,664.9	6,664.9	87.5	133.6	89.59	-2,640.2	-411.8	2,320.7	2,101.9	218.80	10.607	
11,417.3	6,712.7	6,664.7	6,664.7	87.8	133.6	89.59	-2,640.2	-411.8	2,333.2	2,114.1	219.13	10.648	
11,500.0	6,712.2	6,664.2	6,664.2	89.3	133.6	89.57	-2,640.2	-411.8	2,393.9	2,173.2	220.67	10.848	
11,515.7	6,712.1	6,664.1	6,664.1	89.6	133.6	89.57	-2,640.2	-411.8	2,405.5	2,184.6	220.97	10.886	
11,600.0	6,711.5	6,663.5	6,663.5	91.2	133.6	89.55	-2,640.2	-411.8	2,468.9	2,246.3	222.55	11.094	
11,614.1	6,711.4	6,663.4	6,663.4	91.4	133.6	89.54	-2,640.2	-411.8	2,479.6	2,256.8	222.81	11.129	
11,700.0	6,710.8	6,662.8	6,662.8	93.0	133.6	89.52	-2,640.2	-411.8	2,545.6	2,321.2	224.42	11.343	
11,712.6	6,710.7	6,662.7	6,662.7	93.3	133.6	89.52	-2,640.2	-411.8	2,555.3	2,330.7	224.66	11.374	
11,800.0	6,710.1	6,662.1	6,662.1	94.9	133.6	89.50	-2,640.2	-411.8	2,623.9	2,397.6	226.30	11.595	
11,811.0	6,710.1	6,662.1	6,662.1	95.1	133.6	89.49	-2,640.2	-411.8	2,632.6	2,406.1	226.50	11.623	
11,900.0	6,709.5	6,661.5	6,661.5	96.7	133.5	89.47	-2,640.2	-411.8	2,703.6	2,475.4	228.18	11.849	
11,909.4	6,709.4	6,661.4	6,661.4	96.9	133.5	89.47	-2,640.2	-411.8	2,711.2	2,482.8	228.35	11.873	
12,000.0	6,708.8	6,660.8	6,660.8	98.6	133.5	89.45	-2,640.2	-411.8	2,784.6	2,554.6	230.05	12.104	
12,007.8	6,708.7	6,660.7	6,660.7	98.7	133.5	89.45	-2,640.2	-411.8	2,791.0	2,560.8	230.20	12.124	
12,100.0	6,708.1	6,660.1	6,660.1	100.4	133.5	89.42	-2,640.2	-411.8	2,866.8	2,634.9	231.93	12.361	
12,106.3	6,708.1	6,660.1	6,660.1	100.6	133.5	89.42	-2,640.2	-411.8	2,872.0	2,640.0	232.05	12.377	
12,200.0	6,707.4	6,659.4	6,659.4	102.3	133.5	89.40	-2,640.2	-411.8	2,950.2	2,716.4	233.81	12.618	
12,204.7	6,707.4	6,659.4	6,659.4	102.4	133.5	89.40	-2,640.2	-411.8	2,954.1	2,720.2	233.90	12.630	
12,300.0	6,706.7	6,658.7	6,658.7	104.2	133.5	89.38	-2,640.2	-411.8	3,034.5	2,798.8	235.69	12.875	
12,303.1	6,706.7	6,658.7	6,658.7	104.2	133.5	89.37	-2,640.2	-411.8	3,037.1	2,801.4	235.75	12.883	
12,400.0	6,706.1	6,658.1	6,658.1	106.0	133.5	89.35	-2,640.2	-411.8	3,119.8	2,882.2	237.58	13.132	
12,401.5	6,706.0	6,658.0	6,658.0	106.1	133.5	89.35	-2,640.2	-411.8	3,121.1	2,883.5	237.61	13.136	
12,500.0	6,705.4	6,657.4	6,657.4	107.9	133.5	89.33	-2,640.2	-411.8	3,205.9	2,966.4	239.46	13.388	
12,598.4	6,704.7	6,656.7	6,656.7	109.7	133.4	89.30	-2,640.2	-411.8	3,291.4	3,050.1	241.31	13.639	
12,600.0	6,704.7	6,656.7	6,656.7	109.8	133.4	89.30	-2,640.2	-411.8	3,292.8	3,051.4	241.34	13.644	
12,696.8	6,704.0	6,656.0	6,656.0	111.6	133.4	89.28	-2,640.2	-411.8	3,377.6	3,134.4	243.17	13.890	
12,700.0	6,704.0	6,656.0	6,656.0	111.6	133.4	89.28	-2,640.2	-411.8	3,380.4	3,137.2	243.23	13.898	
12,795.2	6,703.4	6,655.4	6,655.4	113.4	133.4	89.26	-2,640.2	-411.8	3,464.5	3,219.4	245.02	14.139	
12,800.0	6,703.3	6,655.3	6,655.3	113.5	133.4	89.25	-2,640.2	-411.8	3,468.7	3,223.6	245.11	14.151	
12,893.7	6,702.7	6,654.7	6,654.7	115.3	133.4	89.23	-2,640.2	-411.8	3,551.9	3,305.1	246.88	14.387	
12,900.0	6,702.7	6,654.7	6,654.7	115.4	133.4	89.23	-2,640.2	-411.8	3,557.6	3,310.6	247.00	14.403	
12,992.1	6,702.0	6,654.0	6,654.0	117.1	133.4	89.21	-2,640.2	-411.8	3,640.0	3,391.2	248.73	14.634	
13,000.0	6,702.0	6,654.0	6,654.0	117.3	133.4	89.21	-2,640.2	-411.8	3,647.1	3,398.2	248.88	14.654	
13,090.5	6,701.4	6,653.4	6,653.4	119.0	133.4	89.18	-2,640.2	-411.8	3,728.5	3,477.9	250.59	14.879	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - ABDN VERT LITTLE WILL #11 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,100.0	6,701.3	6,653.3	6,653.3	119.1	133.4	89.18	-2,640.2	-411.8	3,737.1	3,486.3	250.77	14.902	
13,188.9	6,700.7	6,652.7	6,652.7	120.8	133.4	89.16	-2,640.2	-411.8	3,817.6	3,565.1	252.45	15.122	
13,200.0	6,700.6	6,652.6	6,652.6	121.0	133.4	89.16	-2,640.2	-411.8	3,827.6	3,574.9	252.66	15.149	
13,287.4	6,700.0	6,652.0	6,652.0	122.7	133.4	89.14	-2,640.2	-411.8	3,907.1	3,652.7	254.31	15.364	
13,300.0	6,699.9	6,651.9	6,651.9	122.9	133.4	89.13	-2,640.2	-411.8	3,918.6	3,664.0	254.55	15.394	
13,385.8	6,699.3	6,651.3	6,651.3	124.5	133.3	89.11	-2,640.2	-411.8	3,997.0	3,740.8	256.17	15.603	
13,400.0	6,699.3	6,651.3	6,651.3	124.8	133.3	89.11	-2,640.2	-411.8	4,010.0	3,753.5	256.43	15.637	
13,484.2	6,698.7	6,650.7	6,650.7	126.4	133.3	89.09	-2,640.2	-411.8	4,087.3	3,829.2	258.03	15.841	
13,500.0	6,698.6	6,650.6	6,650.6	126.7	133.3	89.08	-2,640.2	-411.8	4,101.8	3,843.4	258.32	15.878	
13,582.6	6,698.0	6,650.0	6,650.0	128.2	133.3	89.06	-2,640.2	-411.8	4,177.9	3,918.0	259.88	16.076	
13,600.0	6,697.9	6,649.9	6,649.9	128.5	133.3	89.06	-2,640.2	-411.8	4,194.0	3,933.7	260.21	16.117	
13,681.1	6,697.3	6,649.3	6,649.3	130.1	133.3	89.04	-2,640.2	-411.8	4,268.9	4,007.2	261.74	16.310	
13,700.0	6,697.2	6,649.2	6,649.2	130.4	133.3	89.04	-2,640.2	-411.8	4,286.5	4,024.4	262.10	16.354	
13,779.5	6,696.7	6,648.7	6,648.7	131.9	133.3	89.02	-2,640.2	-411.8	4,360.3	4,096.7	263.60	16.541	
13,800.0	6,696.5	6,648.5	6,648.5	132.3	133.3	89.01	-2,640.2	-411.8	4,379.3	4,115.3	263.99	16.589	
13,877.9	6,696.0	6,648.0	6,648.0	133.8	133.3	88.99	-2,640.2	-411.8	4,451.9	4,186.4	265.47	16.770	
13,900.0	6,695.8	6,647.8	6,647.8	134.2	133.3	88.99	-2,640.2	-411.8	4,472.5	4,206.6	265.88	16.821	
13,976.3	6,695.3	6,647.3	6,647.3	135.6	133.3	88.97	-2,640.2	-411.8	4,543.8	4,276.5	267.33	16.997	
14,000.0	6,695.2	6,647.2	6,647.2	136.1	133.3	88.96	-2,640.2	-411.8	4,566.0	4,298.2	267.77	17.052	
14,034.1	6,695.0	6,647.0	6,647.0	136.7	133.3	88.96	-2,640.2	-411.8	4,597.9	4,329.4	268.42	17.129	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	145.27	-2,833.9	1,964.8	3,448.6				
98.4	98.4	56.4	56.4	0.1	0.0	145.27	-2,833.9	1,964.8	3,448.4	3,448.3	0.08	N/A	
100.0	100.0	58.0	58.0	0.1	0.0	145.27	-2,833.9	1,964.8	3,448.4	3,448.3	0.09	N/A	
196.8	196.8	154.8	154.8	0.3	0.6	145.27	-2,833.9	1,964.8	3,448.4	3,447.5	0.87	3,946.349	
200.0	200.0	158.0	158.0	0.3	0.6	145.27	-2,833.9	1,964.8	3,448.4	3,447.5	0.91	3,774.469	
295.3	295.3	253.3	253.3	0.5	2.3	145.27	-2,833.9	1,964.8	3,448.4	3,445.6	2.80	1,230.104	
300.0	300.0	258.0	258.0	0.5	2.4	145.27	-2,833.9	1,964.8	3,448.4	3,445.5	2.92	1,179.389	
393.7	393.7	351.7	351.7	0.7	4.4	145.27	-2,833.9	1,964.8	3,448.4	3,443.2	5.19	664.773	
400.0	400.0	358.0	358.0	0.8	4.6	145.27	-2,833.9	1,964.8	3,448.4	3,443.1	5.33	646.667	
492.1	492.1	450.1	450.1	1.0	6.5	145.27	-2,833.9	1,964.8	3,448.4	3,440.9	7.44	463.655	
500.0	500.0	458.0	458.0	1.0	6.6	145.27	-2,833.9	1,964.8	3,448.4	3,440.8	7.62	452.784	
590.5	590.5	548.5	548.5	1.2	8.5	145.27	-2,833.9	1,964.8	3,448.4	3,438.7	9.66	356.881	
600.0	600.0	558.0	558.0	1.2	8.7	145.27	-2,833.9	1,964.8	3,448.4	3,438.5	9.88	349.183	
689.0	689.0	647.0	647.0	1.4	10.5	145.27	-2,833.9	1,964.8	3,448.4	3,436.5	11.88	290.317	
700.0	700.0	658.0	658.0	1.4	10.7	145.27	-2,833.9	1,964.8	3,448.4	3,436.3	12.13	284.384	
787.4	787.4	745.4	745.4	1.6	12.5	145.27	-2,833.9	1,964.8	3,448.4	3,434.3	14.09	244.765	
800.0	800.0	758.0	758.0	1.7	12.7	145.27	-2,833.9	1,964.8	3,448.4	3,434.0	14.37	239.949	
885.8	885.8	843.8	843.8	1.9	14.4	145.27	-2,833.9	1,964.8	3,448.4	3,432.1	16.30	211.605	
900.0	900.0	858.0	858.0	1.9	14.7	145.27	-2,833.9	1,964.8	3,448.4	3,431.8	16.61	207.558	
984.2	984.2	942.2	942.2	2.1	16.4	145.27	-2,833.9	1,964.8	3,448.4	3,429.9	18.50	186.376	
1,000.0	1,000.0	958.0	958.0	2.1	16.7	145.27	-2,833.9	1,964.8	3,448.4	3,429.5	18.86	182.888	
1,082.7	1,082.7	1,040.7	1,040.7	2.3	18.4	145.27	-2,833.9	1,964.8	3,448.4	3,427.7	20.71	166.532	
1,100.0	1,100.0	1,058.0	1,058.0	2.3	18.8	145.27	-2,833.9	1,964.8	3,448.4	3,427.3	21.10	163.469	
1,181.1	1,181.1	1,139.1	1,139.1	2.5	20.4	145.27	-2,833.9	1,964.8	3,448.4	3,425.5	22.91	150.512	
1,200.0	1,200.0	1,158.0	1,158.0	2.6	20.8	145.27	-2,833.9	1,964.8	3,448.4	3,425.0	23.33	147.783	
1,279.5	1,279.5	1,237.5	1,237.5	2.7	22.4	145.27	-2,833.9	1,964.8	3,448.4	3,423.3	25.11	137.308	
1,300.0	1,300.0	1,258.0	1,258.0	2.8	22.8	145.27	-2,833.9	1,964.8	3,448.4	3,422.8	25.57	134.847	
1,377.9	1,377.9	1,335.9	1,335.9	3.0	24.4	145.27	-2,833.9	1,964.8	3,448.4	3,421.1	27.32	126.235	
1,400.0	1,400.0	1,358.0	1,358.0	3.0	24.8	145.27	-2,833.9	1,964.8	3,448.4	3,420.6	27.81	123.995	
1,476.4	1,476.4	1,434.4	1,434.4	3.2	26.3	145.27	-2,833.9	1,964.8	3,448.4	3,418.9	29.52	116.816	
1,500.0	1,500.0	1,458.0	1,458.0	3.2	26.8	145.27	-2,833.9	1,964.8	3,448.4	3,418.3	30.05	114.761	
1,574.8	1,574.8	1,532.8	1,532.8	3.4	28.3	145.27	-2,833.9	1,964.8	3,448.4	3,416.7	31.72	108.707	
1,600.0	1,600.0	1,558.0	1,558.0	3.5	28.8	145.27	-2,833.9	1,964.8	3,448.4	3,416.1	32.29	106.808	
1,673.2	1,673.2	1,631.2	1,631.2	3.6	30.3	145.27	-2,833.9	1,964.8	3,448.4	3,414.5	33.92	101.651	
1,700.0	1,700.0	1,658.0	1,658.0	3.7	30.8	145.27	-2,833.9	1,964.8	3,448.4	3,413.9	34.52	99.887	
1,771.6	1,771.6	1,729.6	1,729.6	3.8	32.3	145.27	-2,833.9	1,964.8	3,448.4	3,412.3	36.13	95.455	
1,800.0	1,800.0	1,758.0	1,758.0	3.9	32.9	145.27	-2,833.9	1,964.8	3,448.4	3,411.6	36.76	93.808	
1,870.1	1,870.1	1,828.1	1,828.1	4.1	34.3	145.27	-2,833.9	1,964.8	3,448.4	3,410.1	38.33	89.972	
1,900.0	1,900.0	1,858.0	1,858.0	4.1	34.9	145.27	-2,833.9	1,964.8	3,448.4	3,409.4	39.00	88.428	
1,968.5	1,968.5	1,926.5	1,926.5	4.3	36.2	145.27	-2,833.9	1,964.8	3,448.4	3,407.9	40.53	85.085	
2,000.0	2,000.0	1,958.0	1,958.0	4.4	36.9	145.27	-2,833.9	1,964.8	3,448.4	3,407.1	41.23	83.631	
2,066.9	2,066.9	2,024.9	2,024.9	4.5	38.2	145.27	-2,833.9	1,964.8	3,448.4	3,405.7	42.73	80.701	
2,100.0	2,100.0	2,058.0	2,058.0	4.6	38.9	145.27	-2,833.9	1,964.8	3,448.4	3,404.9	43.47	79.328	
2,165.3	2,165.3	2,123.3	2,123.3	4.7	40.2	145.27	-2,833.9	1,964.8	3,448.4	3,403.5	44.93	76.747	
2,200.0	2,200.0	2,158.0	2,158.0	4.8	40.9	145.27	-2,833.9	1,964.8	3,448.4	3,402.7	45.71	75.446	
2,250.0	2,250.0	2,208.0	2,208.0	4.9	41.9	145.27	-2,833.9	1,964.8	3,448.4	3,401.6	46.82	73.644	
2,263.8	2,263.8	2,221.8	2,221.8	4.9	42.2	73.36	-2,833.9	1,964.8	3,448.4	3,401.2	47.13	73.165	
2,300.0	2,300.0	2,258.0	2,258.0	5.0	42.9	73.37	-2,833.9	1,964.8	3,448.3	3,400.3	47.94	71.932	
2,362.2	2,362.2	2,320.2	2,320.2	5.2	44.2	73.40	-2,833.9	1,964.8	3,447.8	3,398.4	49.31	69.914	
2,400.0	2,399.9	2,357.9	2,357.9	5.2	44.9	73.44	-2,833.9	1,964.8	3,447.3	3,397.1	50.15	68.739	
2,460.6	2,460.4	2,418.4	2,418.4	5.4	46.1	73.52	-2,833.9	1,964.8	3,446.2	3,394.7	51.49	66.930	
2,500.0	2,499.7	2,457.7	2,457.7	5.4	46.9	73.59	-2,833.9	1,964.8	3,445.3	3,392.9	52.36	65.803	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,558.5	2,516.5	2,516.5	5.6	48.1	73.71	-2,833.9	1,964.8	3,443.6	3,390.0	53.66	64.174	
2,600.0	2,599.1	2,557.1	2,557.1	5.7	48.9	73.81	-2,833.9	1,964.8	3,442.3	3,387.8	54.56	63.090	
2,657.5	2,656.1	2,614.1	2,614.1	5.8	50.1	73.97	-2,833.9	1,964.8	3,440.2	3,384.4	55.83	61.619	
2,700.0	2,698.2	2,656.2	2,656.2	5.9	50.9	74.11	-2,833.9	1,964.8	3,438.4	3,381.7	56.77	60.572	
2,755.9	2,753.3	2,711.3	2,711.3	6.1	52.0	74.30	-2,833.9	1,964.8	3,435.9	3,377.9	58.00	59.237	
2,800.0	2,796.6	2,754.6	2,754.6	6.2	52.9	74.47	-2,833.9	1,964.8	3,433.7	3,374.7	58.97	58.223	
2,854.3	2,849.9	2,807.9	2,807.9	6.3	54.0	74.70	-2,833.9	1,964.8	3,430.7	3,370.6	60.18	57.006	
2,900.0	2,894.4	2,852.4	2,852.4	6.5	54.9	74.91	-2,833.9	1,964.8	3,428.1	3,366.9	61.19	56.019	
2,952.7	2,945.7	2,903.7	2,903.7	6.6	55.9	75.17	-2,833.9	1,964.8	3,424.8	3,362.4	62.38	54.906	
3,000.0	2,991.5	2,949.5	2,949.5	6.8	56.8	75.41	-2,833.9	1,964.8	3,421.7	3,358.3	63.43	53.943	
3,051.2	3,040.8	2,998.8	2,998.8	7.0	57.8	75.70	-2,833.9	1,964.8	3,418.2	3,353.6	64.59	52.920	
3,100.0	3,087.6	3,045.6	3,045.6	7.1	58.8	75.98	-2,833.9	1,964.8	3,414.6	3,348.9	65.70	51.976	
3,149.6	3,134.9	3,092.9	3,092.9	7.4	59.7	76.29	-2,833.9	1,964.8	3,410.9	3,344.1	66.84	51.033	
3,200.0	3,182.7	3,140.7	3,140.7	7.6	60.7	76.61	-2,833.9	1,964.8	3,407.0	3,339.0	68.00	50.106	
3,248.0	3,228.0	3,186.0	3,186.0	7.8	61.6	76.94	-2,833.9	1,964.8	3,403.1	3,334.0	69.12	49.234	
3,300.0	3,276.6	3,234.6	3,234.6	8.1	62.6	77.30	-2,833.9	1,964.8	3,398.8	3,328.4	70.34	48.321	
3,346.4	3,319.9	3,277.9	3,277.9	8.3	63.4	77.64	-2,833.9	1,964.8	3,394.8	3,323.4	71.45	47.514	
3,400.0	3,369.4	3,327.4	3,327.4	8.6	64.4	78.05	-2,833.9	1,964.8	3,390.2	3,317.5	72.73	46.614	
3,444.9	3,410.5	3,368.5	3,368.5	8.9	65.2	78.40	-2,833.9	1,964.8	3,386.2	3,312.4	73.83	45.866	
3,500.0	3,460.7	3,418.7	3,418.7	9.2	66.3	78.84	-2,833.9	1,964.8	3,381.3	3,306.1	75.18	44.978	
3,543.3	3,499.8	3,457.8	3,457.8	9.5	67.0	79.20	-2,833.9	1,964.8	3,377.4	3,301.1	76.26	44.286	
3,600.0	3,550.6	3,508.6	3,508.6	9.9	68.1	79.68	-2,833.9	1,964.8	3,372.3	3,294.6	77.68	43.410	
3,641.7	3,587.6	3,545.6	3,545.6	10.3	68.8	80.04	-2,833.9	1,964.8	3,368.5	3,289.7	78.76	42.769	
3,709.9	3,647.5	3,605.5	3,605.5	10.8	70.0	80.64	-2,833.9	1,964.8	3,362.3	3,281.8	80.51	41.761	
3,740.1	3,673.9	3,631.9	3,631.9	11.1	70.5	80.86	-2,833.9	1,964.8	3,359.6	3,278.2	81.31	41.317	
3,800.0	3,726.2	3,684.2	3,684.2	11.6	71.6	81.29	-2,833.9	1,964.8	3,354.4	3,271.5	82.89	40.466	
3,838.6	3,759.9	3,717.9	3,717.9	11.9	72.3	81.57	-2,833.9	1,964.8	3,351.2	3,267.3	83.93	39.931	
3,900.0	3,813.5	3,771.5	3,771.5	12.5	73.4	82.02	-2,833.9	1,964.8	3,346.3	3,260.7	85.57	39.106	
3,937.0	3,845.8	3,803.8	3,803.8	12.8	74.0	82.28	-2,833.9	1,964.8	3,343.5	3,256.9	86.57	38.623	
4,000.0	3,900.8	3,858.8	3,858.8	13.4	75.1	82.74	-2,833.9	1,964.8	3,338.9	3,250.6	88.27	37.826	
4,035.4	3,931.7	3,889.7	3,889.7	13.7	75.7	83.00	-2,833.9	1,964.8	3,336.5	3,247.2	89.23	37.390	
4,100.0	3,988.1	3,946.1	3,946.1	14.3	76.9	83.47	-2,833.9	1,964.8	3,332.2	3,241.2	90.99	36.621	
4,133.8	4,017.6	3,975.6	3,975.6	14.7	77.5	83.72	-2,833.9	1,964.8	3,330.1	3,238.2	91.92	36.228	
4,200.0	4,075.4	4,033.4	4,033.4	15.3	78.6	84.20	-2,833.9	1,964.8	3,326.2	3,232.5	93.73	35.487	
4,232.3	4,103.5	4,061.5	4,061.5	15.6	79.2	84.43	-2,833.9	1,964.8	3,324.4	3,229.8	94.62	35.135	
4,300.0	4,162.6	4,120.6	4,120.6	16.2	80.4	84.93	-2,833.9	1,964.8	3,320.9	3,224.5	96.48	34.420	
4,330.7	4,189.4	4,147.4	4,147.4	16.5	80.9	85.16	-2,833.9	1,964.8	3,319.5	3,222.1	97.33	34.105	
4,400.0	4,249.9	4,207.9	4,207.9	17.2	82.1	85.66	-2,833.9	1,964.8	3,316.4	3,217.1	99.25	33.416	
4,429.1	4,275.4	4,233.4	4,233.4	17.5	82.6	85.88	-2,833.9	1,964.8	3,315.2	3,215.1	100.05	33.134	
4,500.0	4,337.2	4,295.2	4,295.2	18.2	83.9	86.40	-2,833.9	1,964.8	3,312.5	3,210.5	102.02	32.471	
4,527.5	4,361.3	4,319.3	4,319.3	18.5	84.4	86.60	-2,833.9	1,964.8	3,311.6	3,208.8	102.78	32.220	
4,600.0	4,424.5	4,382.5	4,382.5	19.2	85.6	87.13	-2,833.9	1,964.8	3,309.4	3,204.6	104.79	31.581	
4,626.0	4,447.2	4,405.2	4,405.2	19.5	86.1	87.33	-2,833.9	1,964.8	3,308.6	3,203.1	105.51	31.358	
4,700.0	4,511.8	4,469.8	4,469.8	20.2	87.4	87.87	-2,833.9	1,964.8	3,306.9	3,199.3	107.57	30.742	
4,724.4	4,533.1	4,491.1	4,491.1	20.5	87.8	88.05	-2,833.9	1,964.8	3,306.4	3,198.2	108.25	30.545	
4,796.7	4,596.3	4,554.3	4,554.3	21.2	89.1	88.59	-2,833.9	1,964.8	3,305.2	3,195.0	110.26	29.977	
4,800.0	4,599.1	4,557.1	4,557.1	21.2	89.2	88.61	-2,833.9	1,964.8	3,305.2	3,194.9	110.35	29.953	
4,822.8	4,619.1	4,577.1	4,577.1	21.4	89.6	88.77	-2,833.9	1,964.8	3,304.9	3,194.0	110.93	29.791	
4,900.0	4,687.3	4,645.3	4,645.3	22.0	90.9	89.31	-2,833.9	1,964.8	3,304.2	3,191.3	112.94	29.257	
4,921.2	4,706.2	4,664.2	4,664.2	22.2	91.3	89.46	-2,833.9	1,964.8	3,304.1	3,190.6	113.48	29.116	
5,000.0	4,777.1	4,735.1	4,735.1	22.8	92.7	89.99	-2,833.9	1,964.8	3,303.9	3,188.4	115.51	28.603	
5,001.6	4,778.5	4,736.5	4,736.5	22.8	92.8	90.00	-2,833.9	1,964.8	3,303.9	3,188.4	115.55	28.593	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,794.9	4,752.9	4,752.9	22.9	93.1	90.12	-2,833.9	1,964.8	3,303.9	3,187.9	116.01	28.480	
5,100.0	4,868.3	4,826.3	4,826.3	23.5	94.6	90.64	-2,833.9	1,964.8	3,304.2	3,186.1	118.06	27.987	
5,118.1	4,885.0	4,843.0	4,843.0	23.6	94.9	90.76	-2,833.9	1,964.8	3,304.3	3,185.7	118.51	27.881	
5,200.0	4,961.0	4,919.0	4,919.0	24.2	96.4	91.26	-2,833.9	1,964.8	3,304.8	3,184.3	120.58	27.407	
5,216.5	4,976.4	4,934.4	4,934.4	24.3	96.7	91.36	-2,833.9	1,964.8	3,305.0	3,184.0	120.99	27.316	
5,300.0	5,054.8	5,012.8	5,012.8	24.8	98.3	91.84	-2,833.9	1,964.8	3,305.8	3,182.8	123.08	26.860	
5,314.9	5,069.0	5,027.0	5,027.0	24.8	98.6	91.92	-2,833.9	1,964.8	3,306.0	3,182.6	123.44	26.782	
5,400.0	5,149.9	5,107.9	5,107.9	25.3	100.2	92.38	-2,833.9	1,964.8	3,307.0	3,181.5	125.54	26.343	
5,413.4	5,162.7	5,120.7	5,120.7	25.4	100.5	92.44	-2,833.9	1,964.8	3,307.2	3,181.3	125.86	26.277	
5,500.0	5,245.9	5,203.9	5,203.9	25.8	102.2	92.86	-2,833.9	1,964.8	3,308.4	3,180.4	127.96	25.854	
5,511.8	5,257.3	5,215.3	5,215.3	25.9	102.4	92.92	-2,833.9	1,964.8	3,308.5	3,180.3	128.24	25.799	
5,600.0	5,342.9	5,300.9	5,300.9	26.3	104.1	93.30	-2,833.9	1,964.8	3,309.7	3,179.4	130.35	25.391	
5,610.2	5,352.9	5,310.9	5,310.9	26.3	104.3	93.34	-2,833.9	1,964.8	3,309.8	3,179.3	130.59	25.345	
5,700.0	5,440.7	5,398.7	5,398.7	26.7	106.1	93.68	-2,833.9	1,964.8	3,311.0	3,178.3	132.70	24.950	
5,708.6	5,449.1	5,407.1	5,407.1	26.7	106.2	93.71	-2,833.9	1,964.8	3,311.1	3,178.2	132.90	24.914	
5,800.0	5,539.1	5,497.1	5,497.1	27.0	108.1	94.00	-2,833.9	1,964.8	3,312.2	3,177.2	135.02	24.532	
5,807.1	5,546.1	5,504.1	5,504.1	27.0	108.2	94.02	-2,833.9	1,964.8	3,312.3	3,177.1	135.18	24.503	
5,900.0	5,638.1	5,596.1	5,596.1	27.3	110.0	94.27	-2,833.9	1,964.8	3,313.2	3,176.0	137.29	24.133	
5,905.5	5,643.5	5,601.5	5,601.5	27.3	110.2	94.28	-2,833.9	1,964.8	3,313.3	3,175.9	137.41	24.112	
6,000.0	5,737.5	5,695.5	5,695.5	27.5	112.0	94.47	-2,833.9	1,964.8	3,314.1	3,174.5	139.52	23.753	
6,003.9	5,741.4	5,699.4	5,699.4	27.5	112.1	94.47	-2,833.9	1,964.8	3,314.1	3,174.5	139.61	23.739	
6,100.0	5,837.2	5,795.2	5,795.2	27.7	114.1	94.60	-2,833.9	1,964.8	3,314.6	3,172.9	141.71	23.390	
6,102.3	5,839.6	5,797.6	5,797.6	27.7	114.1	94.60	-2,833.9	1,964.8	3,314.6	3,172.9	141.76	23.382	
6,200.0	5,937.2	5,895.2	5,895.2	27.9	116.1	94.67	-2,833.9	1,964.8	3,314.9	3,171.1	143.86	23.043	
6,200.8	5,937.9	5,895.9	5,895.9	27.9	116.1	94.67	-2,833.9	1,964.8	3,314.9	3,171.1	143.88	23.040	
6,256.6	5,993.8	5,951.8	5,951.8	27.9	117.2	166.59	-2,833.9	1,964.8	3,315.0	3,169.9	145.05	22.853	
6,286.6	6,023.8	5,981.8	5,981.8	27.9	117.8	166.59	-2,833.9	1,964.8	3,315.0	3,169.3	145.69	22.754	
6,299.2	6,036.4	5,994.4	5,994.4	27.9	118.1	-13.41	-2,833.9	1,964.8	3,314.9	3,169.0	145.93	22.716	
6,300.0	6,037.2	5,995.2	5,995.2	27.9	118.1	-13.41	-2,833.9	1,964.8	3,314.9	3,168.9	145.94	22.714	
6,350.0	6,087.1	6,045.1	6,045.1	28.0	119.1	-13.47	-2,833.9	1,964.8	3,312.3	3,165.8	146.45	22.617	
6,397.6	6,134.3	6,092.3	6,092.3	28.0	120.0	-13.60	-2,833.9	1,964.8	3,306.6	3,160.3	146.30	22.601	
6,400.0	6,136.7	6,094.7	6,094.7	28.0	120.1	-13.61	-2,833.9	1,964.8	3,306.3	3,160.0	146.28	22.602	
6,450.0	6,185.7	6,143.7	6,143.7	28.0	121.1	-13.83	-2,833.9	1,964.8	3,296.9	3,151.5	145.42	22.672	
6,496.0	6,230.2	6,188.2	6,188.2	28.0	122.0	-14.11	-2,833.9	1,964.8	3,285.4	3,141.4	144.01	22.814	
6,500.0	6,234.0	6,192.0	6,192.0	28.0	122.0	-14.14	-2,833.9	1,964.8	3,284.3	3,140.4	143.86	22.829	
6,550.0	6,281.3	6,239.3	6,239.3	28.0	123.0	-14.54	-2,833.9	1,964.8	3,268.4	3,126.8	141.63	23.077	
6,594.5	6,322.2	6,280.2	6,280.2	27.9	123.8	-14.98	-2,833.9	1,964.8	3,251.7	3,112.6	139.10	23.377	
6,600.0	6,327.3	6,285.3	6,285.3	27.9	123.9	-15.05	-2,833.9	1,964.8	3,249.4	3,110.6	138.75	23.420	
6,650.0	6,371.8	6,329.8	6,329.8	27.9	124.8	-15.67	-2,833.9	1,964.8	3,227.3	3,092.1	135.25	23.862	
6,692.9	6,408.6	6,366.6	6,366.6	27.9	125.5	-16.32	-2,833.9	1,964.8	3,206.0	3,074.2	131.80	24.325	
6,700.0	6,414.6	6,372.6	6,372.6	27.8	125.7	-16.44	-2,833.9	1,964.8	3,202.2	3,071.1	131.19	24.409	
6,750.0	6,455.5	6,413.5	6,413.5	27.8	126.5	-17.37	-2,833.9	1,964.8	3,174.4	3,047.7	126.66	25.062	
6,791.3	6,487.7	6,445.7	6,445.7	27.7	127.1	-18.28	-2,833.9	1,964.8	3,149.3	3,026.7	122.64	25.678	
6,800.0	6,494.3	6,452.3	6,452.3	27.7	127.3	-18.50	-2,833.9	1,964.8	3,143.8	3,022.0	121.78	25.815	
6,850.0	6,530.8	6,488.8	6,488.8	27.7	128.0	-19.86	-2,833.9	1,964.8	3,110.7	2,994.0	116.72	26.650	
6,889.7	6,558.1	6,516.1	6,516.1	27.6	128.5	-21.14	-2,833.9	1,964.8	3,082.7	2,970.0	112.74	27.344	
6,900.0	6,564.9	6,522.9	6,522.9	27.6	128.7	-21.51	-2,833.9	1,964.8	3,075.3	2,963.5	111.74	27.522	
6,950.0	6,596.3	6,554.3	6,554.3	27.6	129.3	-23.53	-2,833.9	1,964.8	3,037.6	2,930.4	107.19	28.340	
6,988.2	6,618.4	6,576.4	6,576.4	27.5	129.8	-25.38	-2,833.9	1,964.8	3,007.5	2,903.2	104.30	28.837	
7,000.0	6,624.9	6,582.9	6,582.9	27.5	129.9	-26.01	-2,833.9	1,964.8	2,998.0	2,894.4	103.55	28.951	
7,050.0	6,650.6	6,608.6	6,608.6	27.5	130.4	-29.10	-2,833.9	1,964.8	2,956.6	2,855.1	101.50	29.128	
7,086.6	6,667.5	6,625.5	6,625.5	27.5	130.7	-31.85	-2,833.9	1,964.8	2,925.2	2,823.8	101.45	28.833	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - ABDN VERT LITTLE WILL #12 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,673.3	6,631.3	6,631.3	27.5	130.9	-32.98	-2,833.9	1,964.8	2,913.6	2,811.7	101.82	28.615	
7,150.0	6,692.7	6,650.7	6,650.7	27.5	131.3	-37.90	-2,833.9	1,964.8	2,869.2	2,763.9	105.28	27.254	
7,185.0	6,704.4	6,662.4	6,662.4	27.5	131.5	-42.13	-2,833.9	1,964.8	2,837.4	2,727.5	109.88	25.822	
7,200.0	6,709.0	6,667.0	6,667.0	27.5	131.6	-44.17	-2,833.9	1,964.8	2,823.7	2,711.3	112.33	25.136	
7,250.0	6,721.8	6,679.8	6,679.8	27.5	131.8	-52.16	-2,833.9	1,964.8	2,777.2	2,654.5	122.70	22.635	
7,283.4	6,728.6	6,686.6	6,686.6	27.5	132.0	-58.60	-2,833.9	1,964.8	2,745.7	2,615.0	130.73	21.003	
7,300.0	6,731.3	6,689.3	6,689.3	27.6	132.0	-62.12	-2,833.9	1,964.8	2,730.1	2,595.4	134.72	20.265	
7,350.0	6,737.3	6,695.3	6,695.3	27.7	132.2	-73.97	-2,833.9	1,964.8	2,682.5	2,537.4	145.10	18.487	
7,381.9	6,739.4	6,697.4	6,697.4	27.7	132.2	-82.19	-2,833.9	1,964.8	2,652.0	2,503.0	149.01	17.797	
7,400.0	6,739.9	6,697.9	6,697.9	27.8	132.2	-86.95	-2,833.9	1,964.8	2,634.7	2,484.8	149.91	17.575	
7,416.5	6,740.0	6,698.0	6,698.0	27.8	132.2	-91.27	-2,833.9	1,964.8	2,618.9	2,469.1	149.85	17.477	
7,480.3	6,739.5	6,697.5	6,697.5	28.0	132.2	-91.24	-2,833.9	1,964.8	2,558.0	2,407.6	150.38	17.011	
7,500.0	6,739.4	6,697.4	6,697.4	28.1	132.2	-91.23	-2,833.9	1,964.8	2,539.2	2,388.7	150.54	16.867	
7,578.7	6,738.9	6,696.9	6,696.9	28.5	132.2	-91.19	-2,833.9	1,964.8	2,464.3	2,313.0	151.30	16.287	
7,600.0	6,738.7	6,696.7	6,696.7	28.6	132.2	-91.18	-2,833.9	1,964.8	2,444.1	2,292.6	151.51	16.132	
7,677.1	6,738.2	6,696.2	6,696.2	29.1	132.2	-91.14	-2,833.9	1,964.8	2,371.0	2,218.6	152.36	15.562	
7,700.0	6,738.1	6,696.1	6,696.1	29.2	132.2	-91.13	-2,833.9	1,964.8	2,349.4	2,196.8	152.61	15.395	
7,775.6	6,737.5	6,695.5	6,695.5	29.7	132.2	-91.09	-2,833.9	1,964.8	2,278.1	2,124.6	153.53	14.838	
7,800.0	6,737.4	6,695.4	6,695.4	29.9	132.2	-91.08	-2,833.9	1,964.8	2,255.1	2,101.3	153.83	14.660	
7,874.0	6,736.9	6,694.9	6,694.9	30.6	132.1	-91.04	-2,833.9	1,964.8	2,185.7	2,030.9	154.80	14.120	
7,900.0	6,736.7	6,694.7	6,694.7	30.8	132.1	-91.02	-2,833.9	1,964.8	2,161.4	2,006.3	155.14	13.932	
7,972.4	6,736.2	6,694.2	6,694.2	31.5	132.1	-90.99	-2,833.9	1,964.8	2,093.9	1,937.7	156.15	13.410	
8,000.0	6,736.0	6,694.0	6,694.0	31.8	132.1	-90.97	-2,833.9	1,964.8	2,068.3	1,911.7	156.53	13.213	
8,070.8	6,735.5	6,693.5	6,693.5	32.5	132.1	-90.94	-2,833.9	1,964.8	2,002.7	1,845.1	157.56	12.710	
8,100.0	6,735.3	6,693.3	6,693.3	32.8	132.1	-90.92	-2,833.9	1,964.8	1,975.8	1,817.8	157.99	12.506	
8,169.3	6,734.9	6,692.9	6,692.9	33.6	132.1	-90.89	-2,833.9	1,964.8	1,912.1	1,753.1	159.04	12.023	
8,200.0	6,734.6	6,692.6	6,692.6	34.0	132.1	-90.87	-2,833.9	1,964.8	1,884.1	1,724.5	159.50	11.812	
8,267.7	6,734.2	6,692.2	6,692.2	34.8	132.1	-90.84	-2,833.9	1,964.8	1,822.5	1,661.9	160.56	11.351	
8,300.0	6,734.0	6,692.0	6,692.0	35.2	132.1	-90.82	-2,833.9	1,964.8	1,793.2	1,632.2	161.07	11.133	
8,366.1	6,733.5	6,691.5	6,691.5	36.1	132.1	-90.79	-2,833.9	1,964.8	1,733.7	1,571.6	162.13	10.694	
8,400.0	6,733.3	6,691.3	6,691.3	36.5	132.1	-90.77	-2,833.9	1,964.8	1,703.4	1,540.7	162.67	10.472	
8,464.5	6,732.8	6,690.8	6,690.8	37.4	132.1	-90.74	-2,833.9	1,964.8	1,646.1	1,482.3	163.72	10.054	
8,500.0	6,732.6	6,690.6	6,690.6	37.9	132.1	-90.72	-2,833.9	1,964.8	1,614.8	1,450.5	164.31	9.828	
8,563.0	6,732.2	6,690.2	6,690.2	38.8	132.1	-90.69	-2,833.9	1,964.8	1,559.7	1,394.4	165.35	9.433	
8,600.0	6,731.9	6,689.9	6,689.9	39.3	132.0	-90.67	-2,833.9	1,964.8	1,527.6	1,361.6	165.97	9.204	
8,661.4	6,731.5	6,689.5	6,689.5	40.2	132.0	-90.64	-2,833.9	1,964.8	1,474.9	1,307.9	167.01	8.831	
8,700.0	6,731.2	6,689.2	6,689.2	40.8	132.0	-90.62	-2,833.9	1,964.8	1,442.1	1,274.4	167.66	8.601	
8,759.8	6,730.8	6,688.8	6,688.8	41.7	132.0	-90.59	-2,833.9	1,964.8	1,391.8	1,223.1	168.69	8.251	
8,800.0	6,730.6	6,688.6	6,688.6	42.3	132.0	-90.57	-2,833.9	1,964.8	1,358.5	1,189.2	169.37	8.021	
8,858.2	6,730.2	6,688.2	6,688.2	43.2	132.0	-90.54	-2,833.9	1,964.8	1,310.9	1,140.5	170.38	7.694	
8,900.0	6,729.9	6,687.9	6,687.9	43.8	132.0	-90.52	-2,833.9	1,964.8	1,277.3	1,106.2	171.10	7.465	
8,956.7	6,729.5	6,687.5	6,687.5	44.7	132.0	-90.49	-2,833.9	1,964.8	1,232.5	1,060.4	172.09	7.162	
9,000.0	6,729.2	6,687.2	6,687.2	45.4	132.0	-90.47	-2,833.9	1,964.8	1,199.0	1,026.1	172.85	6.936	
9,055.1	6,728.8	6,686.8	6,686.8	46.3	132.0	-90.44	-2,833.9	1,964.8	1,157.2	983.4	173.82	6.658	
9,100.0	6,728.5	6,686.5	6,686.5	47.0	132.0	-90.42	-2,833.9	1,964.8	1,124.1	949.5	174.61	6.438	
9,153.5	6,728.2	6,686.2	6,686.2	47.9	132.0	-90.39	-2,833.9	1,964.8	1,085.6	910.1	175.56	6.184	
9,200.0	6,727.8	6,685.8	6,685.8	48.6	132.0	-90.37	-2,833.9	1,964.8	1,053.3	877.0	176.39	5.972	
9,251.9	6,727.5	6,685.5	6,685.5	49.5	132.0	-90.34	-2,833.9	1,964.8	1,018.5	841.2	177.31	5.744	
9,300.0	6,727.2	6,685.2	6,685.2	50.3	131.9	-90.31	-2,833.9	1,964.8	987.7	809.5	178.17	5.543	
9,350.4	6,726.8	6,684.8	6,684.8	51.1	131.9	-90.29	-2,833.9	1,964.8	956.9	777.8	179.08	5.343	
9,400.0	6,726.5	6,684.5	6,684.5	51.9	131.9	-90.26	-2,833.9	1,964.8	928.2	748.2	179.97	5.157	
9,448.8	6,726.1	6,684.1	6,684.1	52.7	131.9	-90.24	-2,833.9	1,964.8	901.7	720.9	180.85	4.986	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	6,725.8	6,683.8	6,683.8	53.6	131.9	-90.21	-2,833.9	1,964.8	876.1	694.3	181.77	4.820	
9,547.2	6,725.5	6,683.5	6,683.5	54.4	131.9	-90.19	-2,833.9	1,964.8	854.4	671.8	182.62	4.679	
9,600.0	6,725.1	6,683.1	6,683.1	55.3	131.9	-90.16	-2,833.9	1,964.8	832.7	649.2	183.58	4.536	
9,645.6	6,724.8	6,682.8	6,682.8	56.1	131.9	-90.14	-2,833.9	1,964.8	816.3	631.9	184.41	4.426	
9,700.0	6,724.4	6,682.4	6,682.4	57.0	131.9	-90.11	-2,833.9	1,964.8	799.6	614.2	185.40	4.313	
9,744.1	6,724.1	6,682.1	6,682.1	57.8	131.9	-90.09	-2,833.9	1,964.8	788.7	602.5	186.20	4.235	
9,800.0	6,723.8	6,681.8	6,681.8	58.7	131.9	-90.06	-2,833.9	1,964.8	778.1	590.9	187.22	4.156	
9,842.5	6,723.5	6,681.5	6,681.5	59.5	131.9	-90.04	-2,833.9	1,964.8	772.7	584.7	188.00	4.110	
9,900.0	6,723.1	6,681.1	6,681.1	60.5	131.9	-90.01	-2,833.9	1,964.8	769.0	580.0	189.05	4.068	
9,920.1	6,722.9	6,680.9	6,680.9	60.8	131.9	-90.00	-2,833.9	1,964.8	768.8	579.3	189.42	4.058 CC	
9,940.9	6,722.8	6,680.8	6,680.8	61.2	131.9	-89.99	-2,833.9	1,964.8	769.0	579.2	189.80	4.052 ES	
10,000.0	6,722.4	6,680.4	6,680.4	62.2	131.9	-89.96	-2,833.9	1,964.8	772.9	582.0	190.89	4.049 SF	
10,039.3	6,722.1	6,680.1	6,680.1	62.9	131.8	-89.94	-2,833.9	1,964.8	777.9	586.3	191.61	4.060	
10,100.0	6,721.7	6,679.7	6,679.7	64.0	131.8	-89.91	-2,833.9	1,964.8	789.5	596.8	192.73	4.097	
10,137.8	6,721.5	6,679.5	6,679.5	64.7	131.8	-89.89	-2,833.9	1,964.8	799.0	605.6	193.42	4.131	
10,200.0	6,721.0	6,679.0	6,679.0	65.8	131.8	-89.86	-2,833.9	1,964.8	818.1	623.5	194.57	4.205	
10,236.2	6,720.8	6,678.8	6,678.8	66.4	131.8	-89.84	-2,833.9	1,964.8	831.2	636.0	195.24	4.257	
10,300.0	6,720.4	6,678.4	6,678.4	67.5	131.8	-89.81	-2,833.9	1,964.8	857.5	661.1	196.42	4.366	
10,334.6	6,720.1	6,678.1	6,678.1	68.2	131.8	-89.79	-2,833.9	1,964.8	873.4	676.3	197.06	4.432	
10,400.0	6,719.7	6,677.7	6,677.7	69.3	131.8	-89.76	-2,833.9	1,964.8	906.2	708.0	198.27	4.571	
10,433.0	6,719.4	6,677.4	6,677.4	69.9	131.8	-89.74	-2,833.9	1,964.8	924.2	725.3	198.88	4.647	
10,500.0	6,719.0	6,677.0	6,677.0	71.1	131.8	-89.71	-2,833.9	1,964.8	962.9	762.8	200.12	4.812	
10,531.5	6,718.8	6,676.8	6,676.8	71.7	131.8	-89.69	-2,833.9	1,964.8	982.2	781.5	200.71	4.894	
10,600.0	6,718.3	6,676.3	6,676.3	72.9	131.8	-89.66	-2,833.9	1,964.8	1,026.3	824.3	201.98	5.081	
10,629.9	6,718.1	6,676.1	6,676.1	73.4	131.8	-89.64	-2,833.9	1,964.8	1,046.3	843.8	202.54	5.166	
10,700.0	6,717.6	6,675.6	6,675.6	74.7	131.8	-89.60	-2,833.9	1,964.8	1,095.1	891.2	203.84	5.372	
10,728.3	6,717.4	6,675.4	6,675.4	75.2	131.8	-89.59	-2,833.9	1,964.8	1,115.4	911.1	204.37	5.458	
10,800.0	6,717.0	6,675.0	6,675.0	76.5	131.7	-89.55	-2,833.9	1,964.8	1,168.4	962.7	205.70	5.680	
10,826.7	6,716.8	6,674.8	6,674.8	77.0	131.7	-89.54	-2,833.9	1,964.8	1,188.7	982.5	206.20	5.765	
10,900.0	6,716.3	6,674.3	6,674.3	78.3	131.7	-89.50	-2,833.9	1,964.8	1,245.4	1,037.9	207.57	6.000	
10,925.2	6,716.1	6,674.1	6,674.1	78.8	131.7	-89.49	-2,833.9	1,964.8	1,265.3	1,057.3	208.04	6.082	
11,000.0	6,715.6	6,673.6	6,673.6	80.2	131.7	-89.45	-2,833.9	1,964.8	1,325.6	1,116.1	209.44	6.329	
11,023.6	6,715.4	6,673.4	6,673.4	80.6	131.7	-89.44	-2,833.9	1,964.8	1,344.8	1,135.0	209.88	6.408	
11,100.0	6,714.9	6,672.9	6,672.9	82.0	131.7	-89.40	-2,833.9	1,964.8	1,408.2	1,196.9	211.30	6.664	
11,122.0	6,714.8	6,672.8	6,672.8	82.4	131.7	-89.39	-2,833.9	1,964.8	1,426.7	1,215.0	211.72	6.739	
11,200.0	6,714.2	6,672.2	6,672.2	83.8	131.7	-89.35	-2,833.9	1,964.8	1,493.0	1,279.8	213.17	7.004	
11,220.4	6,714.1	6,672.1	6,672.1	84.2	131.7	-89.34	-2,833.9	1,964.8	1,510.6	1,297.0	213.56	7.073	
11,300.0	6,713.5	6,671.5	6,671.5	85.7	131.7	-89.30	-2,833.9	1,964.8	1,579.6	1,364.5	215.05	7.345	
11,318.9	6,713.4	6,671.4	6,671.4	86.0	131.7	-89.29	-2,833.9	1,964.8	1,596.1	1,380.7	215.40	7.410	
11,400.0	6,712.9	6,670.9	6,670.9	87.5	131.7	-89.25	-2,833.9	1,964.8	1,667.6	1,450.7	216.92	7.688	
11,417.3	6,712.7	6,670.7	6,670.7	87.8	131.7	-89.24	-2,833.9	1,964.8	1,683.0	1,465.7	217.24	7.747	
11,500.0	6,712.2	6,670.2	6,670.2	89.3	131.6	-89.20	-2,833.9	1,964.8	1,757.0	1,538.2	218.79	8.030	
11,515.7	6,712.1	6,670.1	6,670.1	89.6	131.6	-89.19	-2,833.9	1,964.8	1,771.1	1,552.0	219.09	8.084	
11,600.0	6,711.5	6,669.5	6,669.5	91.2	131.6	-89.15	-2,833.9	1,964.8	1,847.4	1,626.7	220.67	8.372	
11,614.1	6,711.4	6,669.4	6,669.4	91.4	131.6	-89.14	-2,833.9	1,964.8	1,860.3	1,639.3	220.94	8.420	
11,700.0	6,710.8	6,668.8	6,668.8	93.0	131.6	-89.10	-2,833.9	1,964.8	1,938.8	1,716.2	222.55	8.712	
11,712.6	6,710.7	6,668.7	6,668.7	93.3	131.6	-89.09	-2,833.9	1,964.8	1,950.3	1,727.5	222.78	8.754	
11,800.0	6,710.1	6,668.1	6,668.1	94.9	131.6	-89.05	-2,833.9	1,964.8	2,031.0	1,806.5	224.43	9.050	
11,811.0	6,710.1	6,668.1	6,668.1	95.1	131.6	-89.04	-2,833.9	1,964.8	2,041.1	1,816.5	224.63	9.087	
11,900.0	6,709.5	6,667.5	6,667.5	96.7	131.6	-89.00	-2,833.9	1,964.8	2,123.9	1,897.5	226.30	9.385	
11,909.4	6,709.4	6,667.4	6,667.4	96.9	131.6	-88.99	-2,833.9	1,964.8	2,132.6	1,906.2	226.48	9.416	
12,000.0	6,708.8	6,666.8	6,666.8	98.6	131.6	-88.95	-2,833.9	1,964.8	2,217.4	1,989.2	228.18	9.717	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,007.8	6,708.7	6,666.7	6,666.7	98.7	131.6	-88.94	-2,833.9	1,964.8	2,224.7	1,996.4	228.33	9.743	
12,100.0	6,708.1	6,666.1	6,666.1	100.4	131.6	-88.89	-2,833.9	1,964.8	2,311.4	2,081.4	230.07	10.047	
12,106.3	6,708.1	6,666.1	6,666.1	100.6	131.6	-88.89	-2,833.9	1,964.8	2,317.3	2,087.2	230.18	10.067	
12,200.0	6,707.4	6,665.4	6,665.4	102.3	131.6	-88.84	-2,833.9	1,964.8	2,406.0	2,174.0	231.95	10.373	
12,204.7	6,707.4	6,665.4	6,665.4	102.4	131.6	-88.84	-2,833.9	1,964.8	2,410.4	2,178.4	232.04	10.388	
12,300.0	6,706.7	6,664.7	6,664.7	104.2	131.5	-88.79	-2,833.9	1,964.8	2,500.9	2,267.1	233.83	10.695	
12,303.1	6,706.7	6,664.7	6,664.7	104.2	131.5	-88.79	-2,833.9	1,964.8	2,503.9	2,270.0	233.89	10.705	
12,400.0	6,706.1	6,664.1	6,664.1	106.0	131.5	-88.74	-2,833.9	1,964.8	2,596.3	2,360.5	235.71	11.014	
12,401.5	6,706.0	6,664.0	6,664.0	106.1	131.5	-88.74	-2,833.9	1,964.8	2,597.7	2,362.0	235.74	11.019	
12,500.0	6,705.4	6,663.4	6,663.4	107.9	131.5	-88.69	-2,833.9	1,964.8	2,691.9	2,454.3	237.60	11.330	
12,598.4	6,704.7	6,662.7	6,662.7	109.7	131.5	-88.64	-2,833.9	1,964.8	2,786.4	2,546.9	239.45	11.636	
12,600.0	6,704.7	6,662.7	6,662.7	109.8	131.5	-88.64	-2,833.9	1,964.8	2,787.9	2,548.4	239.48	11.641	
12,696.8	6,704.0	6,662.0	6,662.0	111.6	131.5	-88.59	-2,833.9	1,964.8	2,881.1	2,639.8	241.31	11.940	
12,700.0	6,704.0	6,662.0	6,662.0	111.6	131.5	-88.59	-2,833.9	1,964.8	2,884.2	2,642.8	241.37	11.949	
12,795.2	6,703.4	6,661.4	6,661.4	113.4	131.5	-88.54	-2,833.9	1,964.8	2,976.1	2,732.9	243.16	12.239	
12,800.0	6,703.3	6,661.3	6,661.3	113.5	131.5	-88.54	-2,833.9	1,964.8	2,980.7	2,737.4	243.25	12.253	
12,893.7	6,702.7	6,660.7	6,660.7	115.3	131.5	-88.49	-2,833.9	1,964.8	3,071.3	2,826.2	245.02	12.535	
12,900.0	6,702.7	6,660.7	6,660.7	115.4	131.5	-88.49	-2,833.9	1,964.8	3,077.4	2,832.2	245.14	12.554	
12,992.1	6,702.0	6,660.0	6,660.0	117.1	131.4	-88.44	-2,833.9	1,964.8	3,166.6	2,919.8	246.88	12.827	
13,000.0	6,702.0	6,660.0	6,660.0	117.3	131.4	-88.44	-2,833.9	1,964.8	3,174.3	2,927.3	247.03	12.850	
13,090.5	6,701.4	6,659.4	6,659.4	119.0	131.4	-88.39	-2,833.9	1,964.8	3,262.2	3,013.5	248.73	13.115	
13,100.0	6,701.3	6,659.3	6,659.3	119.1	131.4	-88.39	-2,833.9	1,964.8	3,271.4	3,022.5	248.91	13.143	
13,188.9	6,700.7	6,658.7	6,658.7	120.8	131.4	-88.34	-2,833.9	1,964.8	3,357.9	3,107.4	250.59	13.400	
13,200.0	6,700.6	6,658.6	6,658.6	121.0	131.4	-88.34	-2,833.9	1,964.8	3,368.7	3,117.9	250.80	13.432	
13,287.4	6,700.0	6,658.0	6,658.0	122.7	131.4	-88.29	-2,833.9	1,964.8	3,453.8	3,201.4	252.45	13.681	
13,300.0	6,699.9	6,657.9	6,657.9	122.9	131.4	-88.29	-2,833.9	1,964.8	3,466.1	3,213.4	252.69	13.717	
13,385.8	6,699.3	6,657.3	6,657.3	124.5	131.4	-88.24	-2,833.9	1,964.8	3,549.8	3,295.5	254.31	13.959	
13,400.0	6,699.3	6,657.3	6,657.3	124.8	131.4	-88.24	-2,833.9	1,964.8	3,563.7	3,309.1	254.58	13.999	
13,484.2	6,698.7	6,656.7	6,656.7	126.4	131.4	-88.19	-2,833.9	1,964.8	3,646.0	3,389.8	256.17	14.233	
13,500.0	6,698.6	6,656.6	6,656.6	126.7	131.4	-88.18	-2,833.9	1,964.8	3,661.4	3,405.0	256.46	14.277	
13,582.6	6,698.0	6,656.0	6,656.0	128.2	131.4	-88.14	-2,833.9	1,964.8	3,742.3	3,484.2	258.02	14.504	
13,600.0	6,697.9	6,655.9	6,655.9	128.5	131.4	-88.13	-2,833.9	1,964.8	3,759.2	3,500.9	258.35	14.551	
13,681.1	6,697.3	6,655.3	6,655.3	130.1	131.3	-88.09	-2,833.9	1,964.8	3,838.6	3,578.8	259.88	14.771	
13,700.0	6,697.2	6,655.2	6,655.2	130.4	131.3	-88.08	-2,833.9	1,964.8	3,857.2	3,596.9	260.24	14.822	
13,779.5	6,696.7	6,654.7	6,654.7	131.9	131.3	-88.04	-2,833.9	1,964.8	3,935.1	3,673.4	261.74	15.034	
13,800.0	6,696.5	6,654.5	6,654.5	132.3	131.3	-88.03	-2,833.9	1,964.8	3,955.2	3,693.1	262.13	15.089	
13,877.9	6,696.0	6,654.0	6,654.0	133.8	131.3	-87.99	-2,833.9	1,964.8	4,031.7	3,768.1	263.60	15.295	
13,900.0	6,695.8	6,653.8	6,653.8	134.2	131.3	-87.98	-2,833.9	1,964.8	4,053.4	3,789.3	264.02	15.353	
13,976.3	6,695.3	6,653.3	6,653.3	135.6	131.3	-87.94	-2,833.9	1,964.8	4,128.3	3,862.9	265.46	15.552	
14,000.0	6,695.2	6,653.2	6,653.2	136.1	131.3	-87.93	-2,833.9	1,964.8	4,151.6	3,885.7	265.91	15.613	
14,034.1	6,695.0	6,653.0	6,653.0	136.7	131.3	-87.91	-2,833.9	1,964.8	4,185.1	3,918.5	266.55	15.701	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	150.64	-1,500.6	844.1	1,722.1				
98.4	98.4	63.0	63.0	0.1	0.0	150.64	-1,500.5	844.1	1,721.7	1,721.6	0.08	N/A	
100.0	100.0	64.6	64.6	0.1	0.0	150.64	-1,500.5	844.1	1,721.7	1,721.6	0.09	N/A	
196.8	196.8	169.5	169.5	0.3	0.1	150.64	-1,500.2	844.0	1,721.3	1,721.0	0.36	4,805.086	
200.0	200.0	172.9	172.9	0.3	0.1	150.64	-1,500.2	844.0	1,721.3	1,720.9	0.37	4,677.263	
295.3	295.3	263.8	263.8	0.5	0.1	150.63	-1,499.6	843.9	1,720.7	1,720.1	0.67	2,574.401	
300.0	300.0	268.0	268.0	0.5	0.1	150.63	-1,499.5	843.9	1,720.7	1,720.0	0.68	2,518.081	
393.7	393.7	356.1	356.1	0.7	0.2	150.60	-1,499.0	844.5	1,720.6	1,719.6	0.98	1,752.966	
400.0	400.0	362.2	362.2	0.8	0.2	150.60	-1,499.0	844.6	1,720.6	1,719.6	1.00	1,717.726	
404.6	404.6	366.6	366.6	0.8	0.2	150.60	-1,499.0	844.6	1,720.6	1,719.6	1.02	1,692.725	
492.1	492.1	453.2	453.2	1.0	0.3	150.58	-1,498.7	845.2	1,720.6	1,719.3	1.29	1,338.137	
500.0	500.0	461.1	461.1	1.0	0.3	150.58	-1,498.7	845.3	1,720.6	1,719.3	1.31	1,313.987	
590.5	590.5	559.5	559.5	1.2	0.4	150.55	-1,498.2	845.9	1,720.5	1,719.0	1.58	1,091.748	
600.0	600.0	570.4	570.3	1.2	0.4	150.55	-1,498.1	846.0	1,720.5	1,718.9	1.60	1,073.062	
689.0	689.0	657.8	657.8	1.4	0.4	150.53	-1,497.4	846.3	1,720.0	1,718.2	1.83	939.060	
700.0	700.0	667.9	667.8	1.4	0.4	150.52	-1,497.3	846.3	1,720.0	1,718.1	1.86	925.509	
787.4	787.4	753.0	753.0	1.6	0.5	150.53	-1,497.2	846.1	1,719.8	1,717.7	2.08	825.245	
800.0	800.0	765.8	765.7	1.7	0.5	150.53	-1,497.2	846.1	1,719.7	1,717.6	2.12	812.047	
885.8	885.8	857.7	857.7	1.9	0.5	150.54	-1,497.0	845.8	1,719.5	1,717.1	2.33	736.386	
900.0	900.0	873.4	873.4	1.9	0.5	150.53	-1,496.9	845.8	1,719.4	1,717.0	2.37	725.646	
984.2	984.2	962.7	962.7	2.1	0.5	150.51	-1,496.0	846.0	1,718.7	1,716.1	2.59	663.509	
1,000.0	1,000.0	979.1	979.1	2.1	0.5	150.51	-1,495.8	846.0	1,718.5	1,715.9	2.63	652.743	
1,082.7	1,082.7	1,054.2	1,054.2	2.3	0.6	150.50	-1,495.0	846.0	1,717.8	1,715.0	2.85	603.021	
1,100.0	1,100.0	1,069.3	1,069.2	2.3	0.6	150.49	-1,494.9	846.0	1,717.7	1,714.8	2.89	593.661	
1,181.1	1,181.1	1,156.0	1,155.9	2.5	0.6	150.49	-1,494.5	846.0	1,717.4	1,714.3	3.11	552.944	
1,200.0	1,200.0	1,179.1	1,179.1	2.6	0.6	150.49	-1,494.3	845.9	1,717.2	1,714.1	3.16	544.122	
1,279.5	1,279.5	1,252.8	1,252.8	2.7	0.7	150.48	-1,493.7	845.7	1,716.5	1,713.1	3.35	511.682	
1,300.0	1,300.0	1,270.1	1,270.0	2.8	0.7	150.48	-1,493.6	845.6	1,716.4	1,713.0	3.40	504.086	
1,377.9	1,377.9	1,348.9	1,348.9	3.0	0.7	150.48	-1,493.4	845.4	1,716.1	1,712.5	3.60	477.047	
1,400.0	1,400.0	1,374.3	1,374.2	3.0	0.7	150.48	-1,493.2	845.4	1,716.0	1,712.3	3.65	469.832	
1,476.4	1,476.4	1,454.0	1,454.0	3.2	0.7	150.47	-1,492.5	845.3	1,715.3	1,711.5	3.85	445.806	
1,500.0	1,500.0	1,477.7	1,477.6	3.2	0.7	150.47	-1,492.2	845.3	1,715.1	1,711.2	3.91	438.797	
1,574.8	1,574.8	1,550.5	1,550.4	3.4	0.8	150.46	-1,491.5	845.3	1,714.4	1,710.3	4.10	418.132	
1,600.0	1,600.0	1,574.7	1,574.7	3.5	0.8	150.45	-1,491.3	845.3	1,714.2	1,710.1	4.16	411.623	
1,673.2	1,673.2	1,643.8	1,643.8	3.6	0.8	150.44	-1,490.7	845.4	1,713.8	1,709.4	4.35	393.968	
1,700.0	1,700.0	1,668.8	1,668.8	3.7	0.8	150.44	-1,490.6	845.4	1,713.7	1,709.2	4.42	387.912	
1,771.6	1,771.6	1,741.1	1,741.1	3.8	0.8	150.43	-1,490.2	845.7	1,713.4	1,708.8	4.60	372.439	
1,800.0	1,800.0	1,771.6	1,771.6	3.9	0.8	150.42	-1,489.9	845.7	1,713.3	1,708.6	4.67	366.601	
1,870.1	1,870.1	1,838.8	1,838.7	4.1	0.9	150.41	-1,489.4	845.9	1,712.9	1,708.0	4.85	353.220	
1,900.0	1,900.0	1,865.4	1,865.3	4.1	0.9	150.40	-1,489.3	846.0	1,712.8	1,707.9	4.92	347.889	
1,929.6	1,929.6	1,891.6	1,891.6	4.2	0.9	150.39	-1,489.1	846.2	1,712.8	1,707.8	5.00	342.788	
1,968.5	1,968.5	1,928.6	1,928.6	4.3	0.9	150.39	-1,489.0	846.4	1,712.8	1,707.7	5.09	336.181	
2,000.0	2,000.0	1,959.2	1,959.1	4.4	0.9	150.38	-1,489.0	846.6	1,712.8	1,707.7	5.17	330.990	
2,066.9	2,066.9	2,025.1	2,025.1	4.5	0.9	150.37	-1,489.0	846.8	1,713.0	1,707.6	5.34	320.522	
2,100.0	2,100.0	2,058.6	2,058.5	4.6	0.9	150.37	-1,489.0	846.9	1,713.0	1,707.6	5.43	315.625	
2,165.3	2,165.3	2,128.1	2,128.0	4.7	0.9	150.37	-1,489.1	847.0	1,713.1	1,707.6	5.59	306.703	
2,200.0	2,200.0	2,167.9	2,167.9	4.8	0.9	150.37	-1,489.1	846.9	1,713.1	1,707.4	5.66	302.444	
2,250.0	2,250.0	2,222.4	2,222.4	4.9	0.9	150.38	-1,489.0	846.5	1,712.8	1,707.0	5.78	296.265	
2,263.8	2,263.8	2,236.4	2,236.3	4.9	0.9	78.48	-1,489.0	846.3	1,712.7	1,706.9	5.85	292.697	
2,300.0	2,300.0	2,273.1	2,273.1	5.0	0.9	78.51	-1,488.9	846.0	1,712.4	1,706.5	5.94	288.232	
2,362.2	2,362.2	2,333.1	2,333.0	5.2	1.0	78.60	-1,488.9	845.3	1,711.7	1,705.6	6.09	281.171	
2,400.0	2,399.9	2,368.1	2,368.0	5.2	1.0	78.67	-1,488.9	844.9	1,711.2	1,705.0	6.18	277.093	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,460.6	2,460.4	2,427.2	2,427.1	5.4	1.0	78.84	-1,489.1	844.2	1,710.3	1,703.9	6.32	270.567	
2,500.0	2,499.7	2,468.2	2,468.1	5.4	1.0	78.97	-1,489.2	843.8	1,709.5	1,703.1	6.41	266.494	
2,559.0	2,558.5	2,528.7	2,528.7	5.6	1.0	79.21	-1,489.3	843.1	1,708.2	1,701.6	6.56	260.384	
2,600.0	2,599.1	2,570.0	2,569.9	5.7	1.0	79.40	-1,489.3	842.7	1,707.1	1,700.4	6.66	256.229	
2,657.5	2,656.1	2,627.6	2,627.5	5.8	1.0	79.70	-1,489.2	842.1	1,705.4	1,698.6	6.81	250.285	
2,700.0	2,698.2	2,669.9	2,669.8	5.9	1.0	79.95	-1,489.2	841.7	1,704.0	1,697.1	6.93	246.020	
2,755.9	2,753.3	2,722.2	2,722.1	6.1	1.0	80.29	-1,489.1	841.2	1,702.1	1,695.0	7.08	240.345	
2,800.0	2,796.6	2,760.4	2,760.3	6.2	1.1	80.56	-1,489.2	840.9	1,700.6	1,693.4	7.20	236.106	
2,854.3	2,849.9	2,808.8	2,808.7	6.3	1.1	80.94	-1,489.5	840.4	1,698.9	1,691.5	7.37	230.635	
2,900.0	2,894.4	2,856.1	2,856.0	6.5	1.1	81.32	-1,489.7	840.1	1,697.4	1,689.9	7.51	226.141	
2,952.7	2,945.7	2,910.0	2,909.9	6.6	1.1	81.79	-1,489.8	839.8	1,695.5	1,687.8	7.69	220.599	
3,000.0	2,991.5	2,955.7	2,955.6	6.8	1.1	82.22	-1,489.8	839.7	1,693.7	1,685.9	7.85	215.774	
3,051.2	3,040.8	3,005.1	3,005.1	7.0	1.1	82.71	-1,489.9	839.4	1,691.8	1,683.7	8.05	210.204	
3,100.0	3,087.6	3,053.5	3,053.4	7.1	1.1	83.21	-1,489.9	839.2	1,689.9	1,681.7	8.24	205.081	
3,149.6	3,134.9	3,102.4	3,102.3	7.4	1.1	83.75	-1,489.8	839.0	1,688.0	1,679.5	8.46	199.515	
3,200.0	3,182.7	3,153.0	3,152.9	7.6	1.1	84.34	-1,489.7	838.8	1,686.0	1,677.3	8.69	194.047	
3,248.0	3,228.0	3,200.0	3,199.9	7.8	1.2	84.90	-1,489.4	838.7	1,684.2	1,675.2	8.93	188.503	
3,300.0	3,276.6	3,245.4	3,245.3	8.1	1.2	85.48	-1,489.2	838.7	1,682.2	1,673.0	9.20	182.910	
3,346.4	3,319.9	3,285.1	3,285.0	8.3	1.2	86.00	-1,489.1	838.7	1,680.7	1,671.3	9.46	177.622	
3,400.0	3,369.4	3,339.8	3,339.7	8.6	1.2	86.74	-1,488.9	838.8	1,679.2	1,669.4	9.77	171.807	
3,444.9	3,410.5	3,389.2	3,389.1	8.9	1.2	87.43	-1,488.5	838.8	1,677.8	1,667.8	10.07	166.647	
3,500.0	3,460.7	3,437.8	3,437.7	9.2	1.2	88.15	-1,488.0	838.7	1,676.3	1,665.8	10.43	160.699	
3,543.3	3,499.8	3,473.7	3,473.6	9.5	1.2	88.69	-1,487.7	838.7	1,675.3	1,664.6	10.75	155.853	
3,600.0	3,550.6	3,520.2	3,520.1	9.9	1.2	89.41	-1,487.4	838.8	1,674.5	1,663.3	11.16	150.000	
3,641.7	3,587.6	3,553.9	3,553.8	10.3	1.2	89.94	-1,487.2	838.9	1,674.2	1,662.7	11.50	145.593	
3,660.8	3,604.5	3,569.2	3,569.1	10.4	1.2	90.19	-1,487.2	838.9	1,674.2	1,662.5	11.65	143.669	
3,709.9	3,647.5	3,609.1	3,609.0	10.8	1.2	90.84	-1,487.2	838.9	1,674.4	1,662.3	12.05	138.955	
3,740.1	3,673.9	3,635.5	3,635.4	11.1	1.2	91.28	-1,487.2	838.9	1,674.7	1,662.4	12.31	136.010	
3,800.0	3,726.2	3,687.9	3,687.8	11.6	1.2	92.15	-1,487.2	839.0	1,675.7	1,662.9	12.83	130.564	
3,838.6	3,759.9	3,721.6	3,721.5	11.9	1.2	92.71	-1,487.2	839.0	1,676.7	1,663.5	13.18	127.197	
3,900.0	3,813.5	3,775.3	3,775.2	12.5	1.3	93.60	-1,487.1	839.1	1,678.6	1,664.8	13.73	122.216	
3,937.0	3,845.8	3,807.6	3,807.5	12.8	1.3	94.14	-1,487.1	839.1	1,680.0	1,665.9	14.07	119.365	
4,000.0	3,900.8	3,862.2	3,862.1	13.4	1.3	95.05	-1,487.2	839.1	1,682.8	1,668.2	14.64	114.908	
4,035.4	3,931.7	3,892.8	3,892.7	13.7	1.3	95.56	-1,487.2	839.0	1,684.6	1,669.7	14.97	112.524	
4,100.0	3,988.1	3,948.7	3,948.6	14.3	1.3	96.49	-1,487.3	838.8	1,688.5	1,672.9	15.57	108.424	
4,133.8	4,017.6	3,978.1	3,978.0	14.7	1.3	96.97	-1,487.3	838.7	1,690.7	1,674.8	15.89	106.383	
4,200.0	4,075.4	4,035.5	4,035.4	15.3	1.3	97.92	-1,487.4	838.5	1,695.6	1,679.1	16.52	102.667	
4,232.3	4,103.5	4,063.6	4,063.5	15.6	1.3	98.38	-1,487.5	838.4	1,698.2	1,681.3	16.82	100.951	
4,300.0	4,162.6	4,123.0	4,122.8	16.2	1.3	99.36	-1,487.6	838.0	1,704.1	1,686.6	17.46	97.591	
4,330.7	4,189.4	4,150.3	4,150.2	16.5	1.3	99.81	-1,487.7	837.8	1,707.0	1,689.2	17.75	96.148	
4,400.0	4,249.9	4,211.2	4,211.1	17.2	1.3	100.81	-1,487.7	837.5	1,713.9	1,695.5	18.41	93.105	
4,429.1	4,275.4	4,235.1	4,235.0	17.5	1.3	101.19	-1,487.8	837.4	1,717.0	1,698.3	18.68	91.899	
4,500.0	4,337.2	4,293.3	4,293.2	18.2	1.3	102.13	-1,487.9	837.1	1,725.2	1,705.8	19.35	89.155	
4,527.5	4,361.3	4,316.7	4,316.6	18.5	1.3	102.51	-1,488.0	837.1	1,728.5	1,708.9	19.61	88.149	
4,600.0	4,424.5	4,379.1	4,379.0	19.2	1.3	103.50	-1,488.3	836.9	1,737.9	1,717.6	20.28	85.675	
4,626.0	4,447.2	4,400.0	4,399.9	19.5	1.3	103.83	-1,488.4	836.8	1,741.4	1,720.9	20.53	84.831	
4,700.0	4,511.8	4,464.1	4,464.0	20.2	1.3	104.84	-1,488.7	836.7	1,752.0	1,730.8	21.21	82.592	
4,724.4	4,533.1	4,484.8	4,484.7	20.5	1.3	105.16	-1,488.8	836.7	1,755.7	1,734.2	21.44	81.893	
4,796.7	4,596.3	4,548.3	4,548.2	21.2	1.3	106.15	-1,489.2	836.7	1,766.9	1,744.8	22.10	79.950	
4,800.0	4,599.1	4,551.2	4,551.1	21.2	1.3	106.20	-1,489.2	836.7	1,767.5	1,745.3	22.13	79.881	
4,822.8	4,619.1	4,571.6	4,571.5	21.4	1.3	106.58	-1,489.3	836.7	1,771.1	1,748.8	22.28	79.490	
4,900.0	4,687.3	4,644.1	4,644.0	22.0	1.3	107.87	-1,489.7	836.9	1,783.5	1,760.7	22.79	78.254	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,921.2	4,706.2	4,664.8	4,664.7	22.2	1.3	108.23	-1,489.7	836.8	1,786.8	1,763.9	22.92	77.962	
5,000.0	4,777.1	4,737.7	4,737.5	22.8	1.4	109.46	-1,489.7	836.3	1,799.1	1,775.7	23.40	76.894	
5,019.7	4,794.9	4,755.2	4,755.0	22.9	1.4	109.74	-1,489.8	836.2	1,802.2	1,778.7	23.51	76.660	
5,100.0	4,868.3	4,825.2	4,825.0	23.5	1.4	110.84	-1,489.9	835.9	1,814.5	1,790.6	23.96	75.745	
5,118.1	4,885.0	4,840.3	4,840.2	23.6	1.4	111.07	-1,489.9	835.9	1,817.3	1,793.3	24.05	75.574	
5,200.0	4,961.0	4,912.2	4,912.1	24.2	1.4	112.09	-1,490.3	836.1	1,829.8	1,805.3	24.45	74.831	
5,216.5	4,976.4	4,930.5	4,930.4	24.3	1.4	112.33	-1,490.4	836.1	1,832.2	1,807.7	24.52	74.721	
5,300.0	5,054.8	5,021.7	5,021.6	24.8	1.4	113.46	-1,490.4	835.9	1,844.0	1,819.1	24.87	74.143	
5,314.9	5,069.0	5,037.3	5,037.1	24.8	1.4	113.64	-1,490.4	835.8	1,846.0	1,821.0	24.93	74.051	
5,400.0	5,149.9	5,123.2	5,123.1	25.3	1.4	114.60	-1,489.9	835.5	1,856.7	1,831.4	25.26	73.517	
5,413.4	5,162.7	5,135.6	5,135.4	25.4	1.4	114.74	-1,489.8	835.5	1,858.3	1,833.0	25.30	73.446	
5,500.0	5,245.9	5,214.4	5,214.3	25.8	1.4	115.54	-1,489.4	835.1	1,868.3	1,842.7	25.60	72.978	
5,511.8	5,257.3	5,224.4	5,224.2	25.9	1.4	115.64	-1,489.3	835.1	1,869.7	1,844.0	25.64	72.929	
5,600.0	5,342.9	5,300.0	5,299.9	26.3	1.4	116.34	-1,489.3	834.5	1,879.3	1,853.4	25.90	72.556	
5,610.2	5,352.9	5,308.3	5,308.2	26.3	1.4	116.41	-1,489.3	834.4	1,880.4	1,854.4	25.93	72.527	
5,700.0	5,440.7	5,394.0	5,393.8	26.7	1.4	117.06	-1,489.6	834.3	1,889.3	1,863.2	26.14	72.266	
5,708.6	5,449.1	5,402.4	5,402.2	26.7	1.4	117.11	-1,489.7	834.4	1,890.1	1,863.9	26.16	72.248	
5,800.0	5,539.1	5,494.5	5,494.4	27.0	1.4	117.67	-1,490.2	834.9	1,897.9	1,871.6	26.36	72.007	
5,807.1	5,546.1	5,502.0	5,501.9	27.0	1.4	117.71	-1,490.2	835.0	1,898.5	1,872.1	26.37	71.995	
5,900.0	5,638.1	5,613.4	5,613.2	27.3	1.5	118.21	-1,490.1	835.6	1,904.4	1,877.9	26.53	71.782	
5,905.5	5,643.5	5,619.0	5,618.9	27.3	1.5	118.24	-1,490.0	835.6	1,904.7	1,878.1	26.54	71.770	
6,000.0	5,737.5	5,716.0	5,715.9	27.5	1.5	118.57	-1,489.3	836.0	1,908.7	1,882.0	26.69	71.506	
6,003.9	5,741.4	5,719.9	5,719.8	27.5	1.5	118.58	-1,489.3	836.1	1,908.8	1,882.1	26.70	71.497	
6,100.0	5,837.2	5,816.3	5,816.1	27.7	1.5	118.80	-1,488.5	836.3	1,911.3	1,884.5	26.83	71.225	
6,102.3	5,839.6	5,818.7	5,818.5	27.7	1.5	118.81	-1,488.5	836.3	1,911.3	1,884.5	26.84	71.220	
6,200.0	5,937.2	5,917.1	5,917.0	27.9	1.5	118.92	-1,487.6	836.4	1,912.2	1,885.2	26.96	70.937	
6,200.8	5,937.9	5,917.9	5,917.7	27.9	1.5	118.92	-1,487.5	836.4	1,912.2	1,885.2	26.96	70.935	
6,256.6	5,993.8	5,972.8	5,972.7	27.9	1.5	-169.16	-1,487.1	836.5	1,911.9	1,884.9	27.02	70.770	
6,286.6	6,023.8	6,002.5	6,002.4	27.9	1.5	-169.16	-1,486.8	836.6	1,911.7	1,884.6	27.05	70.663	
6,299.2	6,036.4	6,015.7	6,015.5	27.9	1.5	10.84	-1,486.7	836.7	1,911.5	1,884.4	27.05	70.661	
6,300.0	6,037.2	6,016.5	6,016.3	27.9	1.5	10.84	-1,486.7	836.7	1,911.4	1,884.4	27.05	70.661	
6,350.0	6,087.1	6,068.8	6,068.6	28.0	1.5	10.90	-1,486.2	836.9	1,908.3	1,881.3	27.03	70.611	
6,397.6	6,134.3	6,116.7	6,116.5	28.0	1.6	11.03	-1,485.7	837.0	1,902.1	1,875.2	26.98	70.515	
6,400.0	6,136.7	6,118.9	6,118.8	28.0	1.6	11.03	-1,485.7	837.0	1,901.8	1,874.8	26.97	70.510	
6,450.0	6,185.7	6,166.0	6,165.8	28.0	1.6	11.25	-1,485.2	837.1	1,891.8	1,865.0	26.86	70.423	
6,496.0	6,230.2	6,208.3	6,208.2	28.0	1.6	11.51	-1,484.8	837.0	1,879.8	1,853.1	26.70	70.402	
6,500.0	6,234.0	6,211.8	6,211.6	28.0	1.6	11.54	-1,484.8	837.0	1,878.6	1,852.0	26.68	70.406	
6,550.0	6,281.3	6,255.4	6,255.2	28.0	1.6	11.92	-1,484.5	836.9	1,862.3	1,835.9	26.41	70.503	
6,594.5	6,322.2	6,293.2	6,293.0	27.9	1.6	12.34	-1,484.2	836.8	1,845.1	1,819.0	26.10	70.707	
6,600.0	6,327.3	6,300.0	6,299.8	27.9	1.6	12.41	-1,484.2	836.8	1,842.8	1,816.8	26.05	70.742	
6,650.0	6,371.8	6,341.2	6,341.0	27.9	1.6	13.00	-1,484.0	836.7	1,820.3	1,794.7	25.59	71.145	
6,692.9	6,408.6	6,377.2	6,377.1	27.9	1.6	13.62	-1,483.9	836.7	1,798.7	1,773.5	25.11	71.632	
6,700.0	6,414.6	6,383.1	6,382.9	27.8	1.6	13.73	-1,483.8	836.7	1,794.9	1,769.8	25.02	71.728	
6,750.0	6,455.5	6,400.0	6,399.8	27.8	1.6	14.48	-1,483.8	836.7	1,766.8	1,742.4	24.36	72.518	
6,791.3	6,487.7	6,400.0	6,399.8	27.7	1.6	15.11	-1,483.8	836.7	1,742.1	1,718.3	23.75	73.346	
6,800.0	6,494.3	6,400.0	6,399.8	27.7	1.6	15.25	-1,483.8	836.7	1,736.7	1,713.1	23.61	73.546	
6,850.0	6,530.8	6,400.0	6,399.8	27.7	1.6	16.14	-1,483.8	836.7	1,705.0	1,682.2	22.79	74.820	
6,889.7	6,558.1	6,400.0	6,399.8	27.6	1.6	16.95	-1,483.8	836.7	1,678.5	1,656.4	22.09	76.002	
6,900.0	6,564.9	6,400.0	6,399.8	27.6	1.6	17.18	-1,483.8	836.7	1,671.5	1,649.6	21.90	76.340	
6,950.0	6,596.3	6,400.0	6,399.8	27.6	1.6	18.38	-1,483.8	836.7	1,636.4	1,615.5	20.95	78.096	
6,988.2	6,618.4	6,400.0	6,399.8	27.5	1.6	19.44	-1,483.8	836.7	1,608.6	1,588.4	20.22	79.561	
7,000.0	6,624.9	6,400.0	6,399.8	27.5	1.6	19.79	-1,483.8	836.7	1,599.8	1,579.8	19.98	80.052	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,050.0	6,650.6	6,400.0	6,399.8	27.5	1.6	21.46	-1,483.8	836.7	1,561.6	1,542.6	19.01	82.129	
7,086.6	6,667.5	6,400.0	6,399.8	27.5	1.6	22.87	-1,483.8	836.7	1,532.8	1,514.5	18.33	83.607	
7,100.0	6,673.3	6,400.0	6,399.8	27.5	1.6	23.43	-1,483.8	836.7	1,522.1	1,504.0	18.08	84.175	
7,150.0	6,692.7	6,400.0	6,399.8	27.5	1.6	25.80	-1,483.8	836.7	1,481.2	1,463.9	17.24	85.933	
7,185.0	6,704.4	6,400.0	6,399.8	27.5	1.6	27.74	-1,483.8	836.7	1,451.8	1,435.1	16.68	87.043	
7,200.0	6,709.0	6,400.0	6,399.8	27.5	1.6	28.66	-1,483.8	836.7	1,439.1	1,422.5	16.54	87.008	
7,250.0	6,721.8	6,400.0	6,399.8	27.5	1.6	32.14	-1,483.8	836.7	1,395.8	1,379.8	16.06	86.903	
7,283.4	6,728.6	6,400.0	6,399.8	27.5	1.6	34.90	-1,483.8	836.7	1,366.3	1,350.4	15.90	85.940	
7,300.0	6,731.3	6,400.0	6,399.8	27.6	1.6	36.42	-1,483.8	836.7	1,351.6	1,335.7	15.87	85.165	
7,350.0	6,737.3	6,400.0	6,399.8	27.7	1.6	41.70	-1,483.8	836.7	1,306.5	1,290.4	16.00	81.629	
7,381.9	6,739.4	6,400.0	6,399.8	27.7	1.6	45.70	-1,483.8	836.7	1,277.3	1,261.0	16.27	78.526	
7,400.0	6,739.9	6,400.0	6,399.8	27.8	1.6	48.22	-1,483.8	836.7	1,260.6	1,244.1	16.46	76.567	
7,416.5	6,740.0	6,400.0	6,399.8	27.8	1.6	50.68	-1,483.8	836.7	1,245.3	1,228.6	16.68	74.658	
7,480.3	6,739.5	6,400.0	6,399.8	28.0	1.6	50.68	-1,483.8	836.7	1,186.3	1,169.2	17.11	69.343	
7,500.0	6,739.4	6,400.0	6,399.8	28.1	1.6	50.68	-1,483.8	836.7	1,168.2	1,151.0	17.24	67.762	
7,578.7	6,738.9	6,400.0	6,399.8	28.5	1.6	50.68	-1,483.8	836.7	1,096.4	1,078.6	17.87	61.342	
7,600.0	6,738.7	6,400.0	6,399.8	28.6	1.6	50.68	-1,483.8	836.7	1,077.2	1,059.2	18.05	59.695	
7,677.1	6,738.2	6,400.0	6,399.8	29.1	1.6	50.68	-1,483.8	836.7	1,008.1	989.4	18.76	53.736	
7,700.0	6,738.1	6,400.0	6,399.8	29.2	1.6	50.68	-1,483.8	836.7	987.9	969.0	18.97	52.071	
7,775.6	6,737.5	6,400.0	6,399.8	29.7	1.6	50.68	-1,483.8	836.7	921.9	902.2	19.75	46.678	
7,800.0	6,737.4	6,400.0	6,399.8	29.9	1.6	50.68	-1,483.8	836.7	900.9	880.9	20.00	45.043	
7,874.0	6,736.9	6,400.0	6,399.8	30.6	1.6	50.68	-1,483.8	836.7	838.3	817.5	20.82	40.261	
7,900.0	6,736.7	6,400.0	6,399.8	30.8	1.6	50.68	-1,483.8	836.7	816.8	795.7	21.11	38.693	
7,972.4	6,736.2	6,400.0	6,399.8	31.5	1.6	50.68	-1,483.8	836.7	758.4	736.4	21.96	34.528	
8,000.0	6,736.0	6,400.0	6,399.8	31.8	1.6	50.68	-1,483.8	836.7	736.8	714.5	22.29	33.057	
8,070.8	6,735.5	6,400.0	6,399.8	32.5	1.6	50.68	-1,483.8	836.7	683.2	660.1	23.16	29.499	
8,100.0	6,735.3	6,400.0	6,399.8	32.8	1.6	50.68	-1,483.8	836.7	662.1	638.6	23.52	28.153	
8,169.3	6,734.9	6,400.0	6,399.8	33.6	1.6	50.68	-1,483.8	836.7	614.7	590.3	24.40	25.188	
8,200.0	6,734.6	6,400.0	6,399.8	34.0	1.6	50.68	-1,483.8	836.7	595.0	570.2	24.80	23.997	
8,267.7	6,734.2	6,400.0	6,399.8	34.8	1.6	50.68	-1,483.8	836.7	555.2	529.5	25.69	21.616	
8,300.0	6,734.0	6,400.0	6,399.8	35.2	1.6	50.68	-1,483.8	836.7	538.2	512.1	26.11	20.614	
8,366.1	6,733.5	6,400.0	6,399.8	36.1	1.6	50.68	-1,483.8	836.7	508.0	481.0	27.00	18.816	
8,400.0	6,733.3	6,400.0	6,399.8	36.5	1.6	50.68	-1,483.8	836.7	495.2	467.8	27.45	18.040	
8,464.5	6,732.8	6,400.0	6,399.8	37.4	1.6	50.68	-1,483.8	836.7	476.7	448.3	28.34	16.823	
8,500.0	6,732.6	6,400.0	6,399.8	37.9	1.6	50.68	-1,483.8	836.7	470.0	441.1	28.82	16.307	
8,563.0	6,732.2	6,400.0	6,399.8	38.8	1.6	50.68	-1,483.8	836.7	464.5	434.8	29.70	15.642	
8,572.0	6,732.1	6,400.0	6,399.8	38.9	1.6	50.68	-1,483.8	836.7	464.4	434.6	29.82	15.574 CC, ES	
8,600.0	6,731.9	6,400.0	6,399.8	39.3	1.6	50.68	-1,483.8	836.7	465.3	435.1	30.21	15.401	
8,661.4	6,731.5	6,400.0	6,399.8	40.2	1.6	50.68	-1,483.8	836.7	473.0	441.9	31.08	15.219 SF	
8,700.0	6,731.2	6,400.0	6,399.8	40.8	1.6	50.68	-1,483.8	836.7	481.8	450.1	31.62	15.236	
8,759.8	6,730.8	6,400.0	6,399.8	41.7	1.6	50.68	-1,483.8	836.7	501.0	468.5	32.47	15.428	
8,800.0	6,730.6	6,400.0	6,399.8	42.3	1.6	50.68	-1,483.8	836.7	517.4	484.3	33.04	15.658	
8,858.2	6,730.2	6,400.0	6,399.8	43.2	1.6	50.68	-1,483.8	836.7	545.6	511.7	33.88	16.103	
8,900.0	6,729.9	6,400.0	6,399.8	43.8	1.6	50.68	-1,483.8	836.7	568.6	534.1	34.48	16.491	
8,956.7	6,729.5	6,400.0	6,399.8	44.7	1.6	50.68	-1,483.8	836.7	603.1	567.8	35.30	17.084	
9,000.0	6,729.2	6,400.0	6,399.8	45.4	1.6	50.68	-1,483.8	836.7	631.6	595.7	35.93	17.579	
9,055.1	6,728.8	6,400.0	6,399.8	46.3	1.6	50.68	-1,483.8	836.7	670.2	633.4	36.73	18.245	
9,100.0	6,728.5	6,400.0	6,399.8	47.0	1.6	50.68	-1,483.8	836.7	703.2	665.8	37.39	18.809	
9,153.5	6,728.2	6,400.0	6,399.8	47.9	1.6	50.68	-1,483.8	836.7	744.3	706.1	38.17	19.497	
9,200.0	6,727.8	6,400.0	6,399.8	48.6	1.6	50.68	-1,483.8	836.7	781.1	742.3	38.85	20.104	
9,251.9	6,727.5	6,400.0	6,399.8	49.5	1.6	50.68	-1,483.8	836.7	823.5	783.8	39.62	20.784	
9,300.0	6,727.2	6,400.0	6,399.8	50.3	1.6	50.68	-1,483.8	836.7	863.6	823.2	40.33	21.413	

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 EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - ABDN VERT NOFFSINGER #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,350.4	6,726.8	6,400.0	6,399.8	51.1	1.6	50.68	-1,483.8	836.7	906.4	865.4	41.08	22.068	
9,400.0	6,726.5	6,400.0	6,399.8	51.9	1.6	50.68	-1,483.8	836.7	949.4	907.6	41.81	22.707	
9,448.8	6,726.1	6,400.0	6,399.8	52.7	1.6	50.68	-1,483.8	836.7	992.2	949.7	42.54	23.327	
9,500.0	6,725.8	6,400.0	6,399.8	53.6	1.6	50.68	-1,483.8	836.7	1,037.8	994.5	43.30	23.968	
9,547.2	6,725.5	6,400.0	6,399.8	54.4	1.6	50.68	-1,483.8	836.7	1,080.2	1,036.2	44.00	24.549	
9,600.0	6,725.1	6,400.0	6,399.8	55.3	1.6	50.68	-1,483.8	836.7	1,128.1	1,083.3	44.79	25.186	
9,645.6	6,724.8	6,400.0	6,399.8	56.1	1.6	50.68	-1,483.8	836.7	1,169.8	1,124.4	45.47	25.725	
9,700.0	6,724.4	6,400.0	6,399.8	57.0	1.6	50.68	-1,483.8	836.7	1,219.9	1,173.6	46.29	26.355	
9,744.1	6,724.1	6,400.0	6,399.8	57.8	1.6	50.68	-1,483.8	836.7	1,260.8	1,213.8	46.95	26.854	
9,800.0	6,723.8	6,400.0	6,399.8	58.7	1.6	50.68	-1,483.8	836.7	1,312.9	1,265.1	47.79	27.474	
9,842.5	6,723.5	6,400.0	6,399.8	59.5	1.6	50.68	-1,483.8	836.7	1,352.8	1,304.3	48.43	27.933	
9,900.0	6,723.1	6,400.0	6,399.8	60.5	1.6	50.68	-1,483.8	836.7	1,406.9	1,357.6	49.29	28.541	
9,940.9	6,722.8	6,400.0	6,399.8	61.2	1.6	50.68	-1,483.8	836.7	1,445.6	1,395.7	49.91	28.963	
10,000.0	6,722.4	6,400.0	6,399.8	62.2	1.6	50.68	-1,483.8	836.7	1,501.7	1,450.9	50.80	29.559	
10,039.3	6,722.1	6,400.0	6,399.8	62.9	1.6	50.68	-1,483.8	836.7	1,539.1	1,487.7	51.40	29.945	
10,100.0	6,721.7	6,400.0	6,399.8	64.0	1.6	50.68	-1,483.8	836.7	1,597.1	1,544.7	52.32	30.528	
10,137.8	6,721.5	6,400.0	6,399.8	64.7	1.6	50.68	-1,483.8	836.7	1,633.2	1,580.4	52.89	30.881	
10,200.0	6,721.0	6,400.0	6,399.8	65.8	1.6	50.68	-1,483.8	836.7	1,693.0	1,639.2	53.83	31.451	
10,236.2	6,720.8	6,400.0	6,399.8	66.4	1.6	50.68	-1,483.8	836.7	1,727.8	1,673.5	54.38	31.774	
10,300.0	6,720.4	6,400.0	6,399.8	67.5	1.6	50.68	-1,483.8	836.7	1,789.4	1,734.0	55.35	32.330	
10,334.6	6,720.1	6,400.0	6,399.8	68.2	1.6	50.68	-1,483.8	836.7	1,822.8	1,767.0	55.87	32.624	
10,400.0	6,719.7	6,400.0	6,399.8	69.3	1.6	50.68	-1,483.8	836.7	1,886.1	1,829.3	56.87	33.167	
10,433.0	6,719.4	6,400.0	6,399.8	69.9	1.6	50.68	-1,483.8	836.7	1,918.2	1,860.8	57.37	33.435	
10,500.0	6,719.0	6,400.0	6,399.8	71.1	1.6	50.68	-1,483.8	836.7	1,983.2	1,924.8	58.39	33.965	
10,531.5	6,718.8	6,400.0	6,399.8	71.7	1.6	50.68	-1,483.8	836.7	2,013.8	1,954.9	58.87	34.209	
10,600.0	6,718.3	6,400.0	6,399.8	72.9	1.6	50.68	-1,483.8	836.7	2,080.5	2,020.6	59.91	34.726	
10,629.9	6,718.1	6,400.0	6,399.8	73.4	1.6	50.68	-1,483.8	836.7	2,109.7	2,049.3	60.37	34.947	
10,700.0	6,717.6	6,400.0	6,399.8	74.7	1.6	50.68	-1,483.8	836.7	2,178.1	2,116.7	61.44	35.452	
10,728.3	6,717.4	6,400.0	6,399.8	75.2	1.6	50.68	-1,483.8	836.7	2,205.8	2,143.9	61.87	35.652	
10,800.0	6,717.0	6,400.0	6,399.8	76.5	1.6	50.68	-1,483.8	836.7	2,275.9	2,213.0	62.97	36.146	
10,826.7	6,716.8	6,400.0	6,399.8	77.0	1.6	50.68	-1,483.8	836.7	2,302.1	2,238.8	63.37	36.326	
10,900.0	6,716.3	6,400.0	6,399.8	78.3	1.6	50.68	-1,483.8	836.7	2,373.9	2,309.4	64.49	36.808	
10,925.2	6,716.1	6,400.0	6,399.8	78.8	1.6	50.68	-1,483.8	836.7	2,398.6	2,333.7	64.88	36.970	
11,000.0	6,715.6	6,400.0	6,399.8	80.2	1.6	50.68	-1,483.8	836.7	2,472.1	2,406.0	66.02	37.441	
11,023.6	6,715.4	6,400.0	6,399.8	80.6	1.6	50.68	-1,483.8	836.7	2,495.2	2,428.9	66.39	37.587	
11,100.0	6,714.9	6,400.0	6,399.8	82.0	1.6	50.68	-1,483.8	836.7	2,570.4	2,502.8	67.56	38.047	
11,122.0	6,714.8	6,400.0	6,399.8	82.4	1.6	50.68	-1,483.8	836.7	2,592.0	2,524.1	67.89	38.177	
11,200.0	6,714.2	6,400.0	6,399.8	83.8	1.6	50.68	-1,483.8	836.7	2,668.8	2,599.7	69.09	38.628	
11,220.4	6,714.1	6,400.0	6,399.8	84.2	1.6	50.68	-1,483.8	836.7	2,688.9	2,619.5	69.40	38.743	
11,300.0	6,713.5	6,400.0	6,399.8	85.7	1.6	50.68	-1,483.8	836.7	2,767.3	2,696.7	70.62	39.184	
11,318.9	6,713.4	6,400.0	6,399.8	86.0	1.6	50.68	-1,483.8	836.7	2,785.9	2,715.0	70.91	39.286	
11,400.0	6,712.9	6,400.0	6,399.8	87.5	1.6	50.68	-1,483.8	836.7	2,865.9	2,793.8	72.16	39.717	
11,417.3	6,712.7	6,400.0	6,399.8	87.8	1.6	50.68	-1,483.8	836.7	2,883.0	2,810.6	72.42	39.807	
11,500.0	6,712.2	6,400.0	6,399.8	89.3	1.6	50.68	-1,483.8	836.7	2,964.6	2,891.0	73.69	40.229	
11,515.7	6,712.1	6,400.0	6,399.8	89.6	1.6	50.68	-1,483.8	836.7	2,980.2	2,906.2	73.94	40.307	
11,600.0	6,711.5	6,400.0	6,399.8	91.2	1.6	50.68	-1,483.8	836.7	3,063.5	2,988.2	75.23	40.720	
11,614.1	6,711.4	6,400.0	6,399.8	91.4	1.6	50.68	-1,483.8	836.7	3,077.4	3,002.0	75.45	40.788	
11,700.0	6,710.8	6,400.0	6,399.8	93.0	1.6	50.68	-1,483.8	836.7	3,162.3	3,085.6	76.77	41.193	
11,712.6	6,710.7	6,400.0	6,399.8	93.3	1.6	50.68	-1,483.8	836.7	3,174.8	3,097.8	76.96	41.251	
11,800.0	6,710.1	6,400.0	6,399.8	94.9	1.6	50.68	-1,483.8	836.7	3,261.3	3,183.0	78.31	41.647	
11,811.0	6,710.1	6,400.0	6,399.8	95.1	1.6	50.68	-1,483.8	836.7	3,272.2	3,193.7	78.48	41.696	
11,900.0	6,709.5	6,400.0	6,399.8	96.7	1.6	50.68	-1,483.8	836.7	3,360.3	3,280.4	79.85	42.084	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
11,909.4	6,709.4	6,400.0	6,399.8	96.9	1.6	50.68	-1,483.8	836.7	3,369.6	3,289.6	79.99	42.124	
12,000.0	6,708.8	6,400.0	6,399.8	98.6	1.6	50.68	-1,483.8	836.7	3,459.4	3,378.0	81.39	42.505	
12,007.8	6,708.7	6,400.0	6,399.8	98.7	1.6	50.68	-1,483.8	836.7	3,467.1	3,385.6	81.51	42.537	
12,100.0	6,708.1	6,400.0	6,399.8	100.4	1.6	50.68	-1,483.8	836.7	3,558.5	3,475.6	82.93	42.910	
12,106.3	6,708.1	6,400.0	6,399.8	100.6	1.6	50.68	-1,483.8	836.7	3,564.7	3,481.7	83.03	42.935	
12,200.0	6,707.4	6,400.0	6,399.8	102.3	1.6	50.68	-1,483.8	836.7	3,657.6	3,573.2	84.47	43.301	
12,204.7	6,707.4	6,400.0	6,399.8	102.4	1.6	50.68	-1,483.8	836.7	3,662.3	3,577.8	84.54	43.319	
12,300.0	6,706.7	6,400.0	6,399.8	104.2	1.6	50.68	-1,483.8	836.7	3,756.9	3,670.8	86.01	43.678	
12,303.1	6,706.7	6,400.0	6,399.8	104.2	1.6	50.68	-1,483.8	836.7	3,760.0	3,673.9	86.06	43.690	
12,400.0	6,706.1	6,400.0	6,399.8	106.0	1.6	50.68	-1,483.8	836.7	3,856.1	3,768.6	87.56	44.042	
12,401.5	6,706.0	6,400.0	6,399.8	106.1	1.6	50.68	-1,483.8	836.7	3,857.7	3,770.1	87.58	44.048	
12,500.0	6,705.4	6,400.0	6,399.8	107.9	1.6	50.68	-1,483.8	836.7	3,955.4	3,866.3	89.10	44.394	
12,598.4	6,704.7	6,400.0	6,399.8	109.7	1.6	50.68	-1,483.8	836.7	4,053.1	3,962.5	90.62	44.728	
12,600.0	6,704.7	6,400.0	6,399.8	109.8	1.6	50.68	-1,483.8	836.7	4,054.7	3,964.1	90.64	44.733	
12,696.8	6,704.0	6,400.0	6,399.8	111.6	1.6	50.68	-1,483.8	836.7	4,150.9	4,058.8	92.14	45.052	
12,700.0	6,704.0	6,400.0	6,399.8	111.6	1.6	50.68	-1,483.8	836.7	4,154.1	4,061.9	92.19	45.062	
12,795.2	6,703.4	6,400.0	6,399.8	113.4	1.6	50.68	-1,483.8	836.7	4,248.8	4,155.1	93.66	45.365	
12,800.0	6,703.3	6,400.0	6,399.8	113.5	1.6	50.68	-1,483.8	836.7	4,253.5	4,159.7	93.73	45.379	
12,893.7	6,702.7	6,400.0	6,399.8	115.3	1.6	50.68	-1,483.8	836.7	4,346.6	4,251.4	95.18	45.668	
12,900.0	6,702.7	6,400.0	6,399.8	115.4	1.6	50.68	-1,483.8	836.7	4,352.9	4,257.6	95.28	45.687	
12,992.1	6,702.0	6,400.0	6,399.8	117.1	1.6	50.68	-1,483.8	836.7	4,444.5	4,347.8	96.70	45.962	
13,000.0	6,702.0	6,400.0	6,399.8	117.3	1.6	50.68	-1,483.8	836.7	4,452.3	4,355.5	96.82	45.985	
13,090.5	6,701.4	6,400.0	6,399.8	119.0	1.6	50.68	-1,483.8	836.7	4,542.4	4,444.2	98.22	46.246	
13,100.0	6,701.3	6,400.0	6,399.8	119.1	1.6	50.68	-1,483.8	836.7	4,551.8	4,453.4	98.37	46.273	
13,188.9	6,700.7	6,400.0	6,399.8	120.8	1.6	50.68	-1,483.8	836.7	4,640.3	4,540.6	99.74	46.522	
13,200.0	6,700.6	6,400.0	6,399.8	121.0	1.6	50.68	-1,483.8	836.7	4,651.3	4,551.4	99.91	46.553	
13,287.4	6,700.0	6,400.0	6,399.8	122.7	1.6	50.68	-1,483.8	836.7	4,738.2	4,637.0	101.27	46.790	
13,300.0	6,699.9	6,400.0	6,399.8	122.9	1.6	50.68	-1,483.8	836.7	4,750.8	4,649.3	101.46	46.824	
13,385.8	6,699.3	6,400.0	6,399.8	124.5	1.6	50.68	-1,483.8	836.7	4,836.2	4,733.4	102.79	47.050	
13,400.0	6,699.3	6,400.0	6,399.8	124.8	1.6	50.68	-1,483.8	836.7	4,850.3	4,747.3	103.01	47.087	
13,484.2	6,698.7	6,400.0	6,399.8	126.4	1.6	50.68	-1,483.8	836.7	4,934.2	4,829.9	104.31	47.302	
13,500.0	6,698.6	6,400.0	6,399.8	126.7	1.6	50.68	-1,483.8	836.7	4,949.9	4,845.3	104.56	47.342	
13,582.6	6,698.0	6,400.0	6,399.8	128.2	1.6	50.68	-1,483.8	836.7	5,032.2	4,926.3	105.83	47.548	
13,600.0	6,697.9	6,400.0	6,399.8	128.5	1.6	50.68	-1,483.8	836.7	5,049.4	4,943.3	106.10	47.590	
13,681.1	6,697.3	6,400.0	6,399.8	130.1	1.6	50.68	-1,483.8	836.7	5,130.2	5,022.8	107.36	47.786	
13,700.0	6,697.2	6,400.0	6,399.8	130.4	1.6	50.68	-1,483.8	836.7	5,149.0	5,041.4	107.65	47.831	
13,779.5	6,696.7	6,400.0	6,399.8	131.9	1.6	50.68	-1,483.8	836.7	5,228.2	5,119.3	108.88	48.017	
13,800.0	6,696.5	6,400.0	6,399.8	132.3	1.6	50.68	-1,483.8	836.7	5,248.6	5,139.4	109.20	48.065	
13,877.9	6,696.0	6,400.0	6,399.8	133.8	1.6	50.68	-1,483.8	836.7	5,326.3	5,215.9	110.41	48.242	
13,900.0	6,695.8	6,400.0	6,399.8	134.2	1.6	50.68	-1,483.8	836.7	5,348.2	5,237.5	110.75	48.292	
13,976.3	6,695.3	6,400.0	6,399.8	135.6	1.6	50.68	-1,483.8	836.7	5,424.3	5,312.4	111.93	48.462	
14,000.0	6,695.2	6,400.0	6,399.8	136.1	1.6	50.68	-1,483.8	836.7	5,447.9	5,335.6	112.30	48.513	
14,034.1	6,695.0	6,400.0	6,399.8	136.7	1.6	50.67	-1,483.8	836.7	5,481.8	5,369.0	112.82	48.591	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - - ABDN VERT PLUMB #2 - Wellbore #1 - Wellbore #1													Offset Site Error: 0.0 usft	
Survey Program: 100-GYD_CT													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		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	171.92	-5,559.4	789.4	5,615.7					
98.4	98.4	20.6	20.6	0.1	0.0	171.92	-5,559.4	789.4	5,615.2	5,615.1	0.09	N/A		
100.0	100.0	22.0	22.0	0.1	0.0	171.92	-5,559.4	789.4	5,615.2	5,615.1	0.09	N/A		
196.8	196.8	108.9	108.9	0.3	0.0	171.92	-5,559.5	789.7	5,615.3	5,615.0	0.34	N/A		
200.0	200.0	112.4	112.4	0.3	0.0	171.91	-5,559.5	789.8	5,615.3	5,615.0	0.35	N/A		
295.3	295.3	221.6	221.6	0.5	0.2	171.91	-5,559.5	790.6	5,615.5	5,614.7	0.75	7,446.207		
300.0	300.0	227.8	227.8	0.5	0.2	171.91	-5,559.5	790.7	5,615.4	5,614.7	0.77	7,292.450		
393.7	393.7	344.1	344.1	0.7	0.3	171.90	-5,559.1	791.4	5,615.2	5,614.1	1.07	5,233.389		
400.0	400.0	351.4	351.4	0.8	0.3	171.90	-5,559.0	791.5	5,615.2	5,614.1	1.09	5,141.414		
492.1	492.1	439.6	439.5	1.0	0.4	171.89	-5,558.5	792.0	5,614.7	5,613.3	1.36	4,141.700		
500.0	500.0	445.8	445.8	1.0	0.4	171.89	-5,558.5	792.0	5,614.7	5,613.3	1.38	4,077.629		
590.5	590.5	539.8	539.8	1.2	0.4	171.89	-5,558.2	792.4	5,614.4	5,612.8	1.63	3,444.802		
600.0	600.0	556.7	556.7	1.2	0.5	171.89	-5,558.1	792.5	5,614.4	5,612.7	1.66	3,384.603		
689.0	689.0	686.0	686.0	1.4	0.5	171.88	-5,556.8	792.9	5,613.5	5,611.6	1.92	2,928.713		
700.0	700.0	700.0	700.0	1.4	0.5	171.88	-5,556.6	792.9	5,613.4	5,611.4	1.95	2,882.074		
787.4	787.4	760.8	760.8	1.6	0.6	171.88	-5,555.9	793.0	5,612.4	5,610.2	2.17	2,587.704		
800.0	800.0	769.5	769.5	1.7	0.6	171.88	-5,555.8	793.0	5,612.3	5,610.1	2.20	2,550.188		
885.8	885.8	844.4	844.4	1.9	0.6	171.87	-5,555.3	793.1	5,611.7	5,609.3	2.42	2,318.932		
900.0	900.0	859.5	859.4	1.9	0.6	171.87	-5,555.2	793.1	5,611.7	5,609.2	2.46	2,284.357		
984.2	984.2	1,002.2	1,002.1	2.1	0.7	171.88	-5,553.8	792.8	5,610.9	5,608.2	2.69	2,083.838		
1,000.0	1,000.0	1,017.9	1,017.9	2.1	0.7	171.88	-5,553.5	792.8	5,610.6	5,607.9	2.73	2,052.733		
1,082.7	1,082.7	1,100.0	1,099.9	2.3	0.7	171.87	-5,552.2	792.8	5,609.2	5,606.3	2.95	1,903.651		
1,100.0	1,100.0	1,113.4	1,113.4	2.3	0.7	171.87	-5,552.0	792.8	5,609.0	5,606.0	2.99	1,876.231		
1,181.1	1,181.1	1,174.4	1,174.3	2.5	0.7	171.87	-5,551.1	792.7	5,607.8	5,604.6	3.19	1,758.037		
1,200.0	1,200.0	1,200.0	1,199.9	2.6	0.7	171.87	-5,550.8	792.6	5,607.6	5,604.4	3.24	1,730.806		
1,279.5	1,279.5	1,300.0	1,299.9	2.7	0.8	171.88	-5,549.5	792.1	5,606.5	5,603.1	3.45	1,625.967		
1,300.0	1,300.0	1,321.0	1,321.0	2.8	0.8	171.88	-5,549.1	792.0	5,606.2	5,602.7	3.50	1,601.734		
1,377.9	1,377.9	1,396.7	1,396.6	3.0	0.8	171.88	-5,547.9	791.5	5,604.9	5,601.2	3.70	1,516.221		
1,400.0	1,400.0	1,422.6	1,422.5	3.0	0.8	171.88	-5,547.5	791.2	5,604.5	5,600.7	3.75	1,493.155		
1,476.4	1,476.4	1,500.0	1,499.9	3.2	0.8	171.89	-5,546.2	790.5	5,603.1	5,599.1	3.95	1,419.593		
1,500.0	1,500.0	1,525.8	1,525.7	3.2	0.9	171.89	-5,545.7	790.3	5,602.6	5,598.6	4.01	1,398.151		
1,574.8	1,574.8	1,579.7	1,579.6	3.4	0.9	171.89	-5,544.9	789.9	5,601.4	5,597.2	4.19	1,336.824		
1,600.0	1,600.0	1,600.0	1,599.9	3.5	0.9	171.89	-5,544.6	789.7	5,601.1	5,596.8	4.25	1,317.186		
1,673.2	1,673.2	1,699.9	1,699.8	3.6	0.9	171.90	-5,543.2	788.7	5,600.0	5,595.5	4.44	1,260.167		
1,700.0	1,700.0	1,740.7	1,740.5	3.7	0.9	171.91	-5,542.5	788.0	5,599.4	5,594.9	4.52	1,240.100		
1,771.6	1,771.6	1,839.6	1,839.4	3.8	1.0	171.92	-5,540.4	786.5	5,597.7	5,593.0	4.70	1,190.080		
1,800.0	1,800.0	1,874.0	1,873.8	3.9	1.0	171.93	-5,539.6	785.8	5,597.0	5,592.2	4.78	1,171.702		
1,870.1	1,870.1	1,949.7	1,949.4	4.1	1.0	171.94	-5,537.7	784.3	5,595.1	5,590.1	4.96	1,129.106		
1,900.0	1,900.0	1,980.2	1,980.0	4.1	1.0	171.94	-5,536.9	783.6	5,594.3	5,589.2	5.03	1,112.062		
1,968.5	1,968.5	2,101.0	2,100.7	4.3	1.1	171.97	-5,533.5	780.9	5,592.1	5,586.9	5.22	1,071.756		
2,000.0	2,000.0	2,168.2	2,167.8	4.4	1.1	171.98	-5,531.0	779.1	5,590.9	5,585.6	5.31	1,053.460		
2,066.9	2,066.9	2,294.7	2,294.1	4.5	1.1	172.01	-5,525.2	775.6	5,587.6	5,582.1	5.49	1,017.403		
2,100.0	2,100.0	2,326.6	2,325.9	4.6	1.1	172.02	-5,523.6	774.8	5,585.8	5,580.2	5.57	1,002.020		
2,165.3	2,165.3	2,384.2	2,383.5	4.7	1.2	172.02	-5,520.7	773.5	5,582.3	5,576.6	5.74	973.200		
2,200.0	2,200.0	2,400.0	2,399.3	4.8	1.2	172.03	-5,519.9	773.2	5,580.5	5,574.7	5.82	959.195		
2,250.0	2,250.0	2,447.2	2,446.4	4.9	1.2	172.03	-5,517.6	772.4	5,578.0	5,572.1	5.94	938.826		
2,263.8	2,263.8	2,457.0	2,456.2	4.9	1.2	100.14	-5,517.1	772.3	5,577.4	5,571.2	6.14	908.885		
2,300.0	2,300.0	2,482.6	2,481.8	5.0	1.2	100.17	-5,516.0	772.0	5,575.7	5,569.5	6.22	896.002		
2,362.2	2,362.2	2,529.1	2,528.2	5.2	1.2	100.24	-5,513.9	771.6	5,573.3	5,566.9	6.37	875.240		
2,400.0	2,399.9	2,558.4	2,557.5	5.2	1.2	100.28	-5,512.7	771.3	5,572.0	5,565.5	6.46	863.057		
2,460.6	2,460.4	2,607.3	2,606.3	5.4	1.2	100.34	-5,510.8	771.0	5,570.2	5,563.6	6.60	843.715		
2,500.0	2,499.7	2,648.6	2,647.6	5.4	1.3	100.40	-5,509.1	770.7	5,569.2	5,562.5	6.70	831.182		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - ABDN VERT PLUMB #2 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,559.0	2,558.5	2,709.6	2,708.6	5.6	1.3	100.48	-5,506.7	770.2	5,567.8	5,561.0	6.85	812.488		
2,600.0	2,599.1	2,748.9	2,747.9	5.7	1.3	100.55	-5,505.2	769.9	5,567.0	5,560.1	6.96	800.155		
2,657.5	2,656.1	2,800.0	2,798.9	5.8	1.3	100.63	-5,503.1	769.8	5,566.1	5,559.0	7.11	782.759		
2,700.0	2,698.2	2,837.3	2,836.2	5.9	1.3	100.69	-5,501.6	769.8	5,565.6	5,558.4	7.22	770.388		
2,755.9	2,753.3	2,881.9	2,880.7	6.1	1.3	100.77	-5,500.0	769.9	5,565.3	5,557.9	7.38	753.748		
2,783.6	2,780.5	2,900.0	2,898.8	6.1	1.3	100.81	-5,499.3	769.9	5,565.2	5,557.8	7.46	745.907		
2,800.0	2,796.6	2,900.0	2,898.8	6.2	1.3	100.81	-5,499.3	769.9	5,565.2	5,557.7	7.50	741.727		
2,854.3	2,849.9	2,947.0	2,945.8	6.3	1.4	100.89	-5,497.7	770.1	5,565.5	5,557.8	7.67	725.283		
2,900.0	2,894.4	2,975.4	2,974.1	6.5	1.4	100.94	-5,496.8	770.3	5,566.1	5,558.3	7.81	712.357		
2,952.7	2,945.7	3,000.0	2,998.8	6.6	1.4	100.97	-5,496.2	770.5	5,567.1	5,559.1	7.99	696.650		
3,000.0	2,991.5	3,040.1	3,038.9	6.8	1.4	101.05	-5,495.2	770.9	5,568.3	5,560.1	8.16	682.728		
3,051.2	3,040.8	3,074.1	3,072.8	7.0	1.4	101.10	-5,494.4	771.4	5,569.9	5,561.5	8.35	666.753		
3,100.0	3,087.6	3,100.0	3,098.7	7.1	1.4	101.13	-5,493.9	771.8	5,571.8	5,563.2	8.54	652.364		
3,149.6	3,134.9	3,144.1	3,142.8	7.4	1.4	101.21	-5,493.1	772.5	5,574.0	5,565.2	8.76	636.259		
3,200.0	3,182.7	3,181.5	3,180.2	7.6	1.4	101.28	-5,492.5	773.2	5,576.5	5,567.5	8.98	620.834		
3,248.0	3,228.0	3,217.8	3,216.5	7.8	1.4	101.34	-5,492.0	773.9	5,579.2	5,570.0	9.22	605.017		
3,300.0	3,276.6	3,257.9	3,256.5	8.1	1.5	101.41	-5,491.4	774.6	5,582.5	5,573.0	9.48	588.829		
3,346.4	3,319.9	3,300.0	3,298.7	8.3	1.5	101.49	-5,491.0	775.5	5,585.6	5,575.9	9.74	573.214		
3,400.0	3,369.4	3,329.1	3,327.8	8.6	1.5	101.52	-5,490.7	776.0	5,589.6	5,579.6	10.04	556.593		
3,444.9	3,410.5	3,358.1	3,356.8	8.9	1.5	101.56	-5,490.5	776.7	5,593.2	5,582.9	10.33	541.656		
3,500.0	3,460.7	3,400.0	3,398.6	9.2	1.5	101.63	-5,490.3	777.9	5,598.1	5,587.4	10.68	524.357		
3,543.3	3,499.8	3,432.6	3,431.2	9.5	1.5	101.68	-5,490.2	778.8	5,602.2	5,591.2	10.98	510.075		
3,600.0	3,550.6	3,487.9	3,486.5	9.9	1.5	101.80	-5,489.9	780.6	5,607.8	5,596.4	11.39	492.476		
3,641.7	3,587.6	3,532.8	3,531.3	10.3	1.5	101.91	-5,489.7	782.0	5,612.1	5,600.4	11.72	478.864		
3,709.9	3,647.5	3,606.3	3,604.9	10.8	1.5	102.10	-5,489.2	784.4	5,619.4	5,607.1	12.26	458.227		
3,740.1	3,673.9	3,631.5	3,630.0	11.1	1.5	102.21	-5,489.0	785.2	5,622.8	5,610.2	12.52	449.045		
3,800.0	3,726.2	3,681.2	3,679.7	11.6	1.5	102.44	-5,488.6	786.6	5,629.5	5,616.5	13.03	431.965		
3,838.6	3,759.9	3,711.5	3,710.0	11.9	1.5	102.58	-5,488.4	787.4	5,633.9	5,620.5	13.37	421.328		
3,900.0	3,813.5	3,756.0	3,754.5	12.5	1.6	102.79	-5,488.2	788.5	5,641.1	5,627.2	13.91	405.496		
3,937.0	3,845.8	3,782.8	3,781.3	12.8	1.6	102.91	-5,488.0	789.2	5,645.6	5,631.4	14.25	396.307		
4,000.0	3,900.8	3,826.6	3,825.1	13.4	1.6	103.12	-5,487.9	790.2	5,653.4	5,638.6	14.81	381.659		
4,035.4	3,931.7	3,850.7	3,849.1	13.7	1.6	103.23	-5,487.9	790.8	5,657.9	5,642.8	15.14	373.756		
4,100.0	3,988.1	3,900.0	3,898.4	14.3	1.6	103.46	-5,488.0	792.0	5,666.4	5,650.6	15.73	360.212		
4,133.8	4,017.6	3,924.5	3,922.9	14.7	1.6	103.57	-5,488.1	792.5	5,670.9	5,654.8	16.05	353.419		
4,200.0	4,075.4	3,987.6	3,986.0	15.3	1.6	103.86	-5,488.2	793.8	5,679.8	5,663.1	16.66	340.906		
4,232.3	4,103.5	4,014.5	4,012.9	15.6	1.6	103.99	-5,488.3	794.4	5,684.2	5,667.2	16.96	335.062		
4,300.0	4,162.6	4,065.4	4,063.8	16.2	1.6	104.23	-5,488.4	795.3	5,693.6	5,676.0	17.60	323.487		
4,330.7	4,189.4	4,088.4	4,086.8	16.5	1.6	104.33	-5,488.5	795.7	5,697.9	5,680.0	17.89	318.462		
4,400.0	4,249.9	4,142.0	4,140.4	17.2	1.6	104.58	-5,488.8	796.5	5,707.9	5,689.4	18.55	307.739		
4,429.1	4,275.4	4,164.7	4,163.1	17.5	1.6	104.69	-5,488.9	796.8	5,712.2	5,693.4	18.83	303.424		
4,500.0	4,337.2	4,228.3	4,226.6	18.2	1.6	104.98	-5,489.3	797.7	5,722.8	5,703.3	19.50	293.511		
4,527.5	4,361.3	4,258.6	4,257.0	18.5	1.6	105.13	-5,489.5	797.9	5,726.9	5,707.2	19.76	289.850		
4,600.0	4,424.5	4,319.8	4,318.1	19.2	1.6	105.42	-5,489.8	798.1	5,737.8	5,717.4	20.45	280.638		
4,626.0	4,447.2	4,334.6	4,333.0	19.5	1.6	105.49	-5,489.8	798.1	5,741.8	5,721.2	20.70	277.448		
4,700.0	4,511.8	4,376.8	4,375.2	20.2	1.6	105.69	-5,490.2	798.2	5,753.6	5,732.2	21.41	268.790		
4,724.4	4,533.1	4,400.0	4,398.4	20.5	1.6	105.80	-5,490.5	798.2	5,757.5	5,735.9	21.64	266.078		
4,796.7	4,596.3	4,461.2	4,459.5	21.2	1.6	106.08	-5,491.2	798.6	5,769.4	5,747.1	22.33	258.349		
4,800.0	4,599.1	4,464.7	4,463.1	21.2	1.6	106.11	-5,491.3	798.7	5,770.0	5,747.6	22.36	258.056		
4,822.8	4,619.1	4,489.9	4,488.3	21.4	1.6	106.30	-5,491.5	799.0	5,773.7	5,751.2	22.53	256.321		
4,900.0	4,687.3	4,560.2	4,558.6	22.0	1.6	106.84	-5,492.2	800.4	5,786.0	5,762.9	23.09	250.578		
4,921.2	4,706.2	4,579.3	4,577.6	22.2	1.6	106.98	-5,492.4	800.9	5,789.4	5,766.1	23.24	249.139		
5,000.0	4,777.1	4,644.8	4,643.1	22.8	1.6	107.47	-5,493.0	802.7	5,801.4	5,777.6	23.78	243.952		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - ABDN VERT PLUMB #2 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,019.7	4,794.9	4,660.7	4,659.0	22.9	1.6	107.59	-5,493.2	803.1	5,804.3	5,780.4	23.91	242.783	
5,100.0	4,868.3	4,725.3	4,723.5	23.5	1.7	108.05	-5,494.0	804.9	5,816.1	5,791.7	24.42	238.141	
5,118.1	4,885.0	4,739.7	4,737.9	23.6	1.7	108.15	-5,494.2	805.3	5,818.7	5,794.2	24.53	237.206	
5,200.0	4,961.0	4,805.8	4,804.0	24.2	1.7	108.58	-5,495.1	807.0	5,830.2	5,805.2	25.01	233.081	
5,216.5	4,976.4	4,820.7	4,818.9	24.3	1.7	108.67	-5,495.3	807.3	5,832.4	5,807.3	25.10	232.346	
5,300.0	5,054.8	4,896.6	4,894.8	24.8	1.7	109.11	-5,496.5	809.2	5,843.4	5,817.9	25.55	228.706	
5,314.9	5,069.0	4,915.8	4,913.9	24.8	1.7	109.20	-5,496.8	809.7	5,845.3	5,819.7	25.62	228.142	
5,400.0	5,149.9	5,024.8	5,022.9	25.3	1.7	109.68	-5,498.1	812.1	5,855.4	5,829.4	26.03	224.962	
5,413.4	5,162.7	5,037.8	5,036.0	25.4	1.7	109.74	-5,498.2	812.4	5,856.9	5,830.8	26.09	224.521	
5,500.0	5,245.9	5,166.8	5,164.9	25.8	1.7	110.22	-5,499.1	814.4	5,866.0	5,839.6	26.46	221.728	
5,511.8	5,257.3	5,200.2	5,198.4	25.9	1.7	110.32	-5,499.1	814.6	5,867.1	5,840.6	26.50	221.411	
5,600.0	5,342.9	5,287.2	5,285.4	26.3	1.7	110.65	-5,498.9	814.9	5,874.5	5,847.7	26.84	218.851	
5,610.2	5,352.9	5,297.4	5,295.5	26.3	1.7	110.68	-5,498.9	814.9	5,875.3	5,848.5	26.88	218.598	
5,700.0	5,440.7	5,351.4	5,349.5	26.7	1.7	110.91	-5,498.8	814.9	5,882.1	5,854.9	27.18	216.414	
5,708.6	5,449.1	5,356.5	5,354.7	26.7	1.7	110.93	-5,498.9	814.9	5,882.7	5,855.5	27.20	216.239	
5,800.0	5,539.1	5,424.4	5,422.5	27.0	1.7	111.15	-5,499.3	815.2	5,889.1	5,861.6	27.47	214.404	
5,807.1	5,546.1	5,433.8	5,431.9	27.0	1.7	111.18	-5,499.4	815.3	5,889.5	5,862.0	27.48	214.290	
5,900.0	5,638.1	5,543.7	5,541.8	27.3	1.8	111.41	-5,499.9	816.0	5,894.7	5,867.0	27.71	212.746	
5,905.5	5,643.5	5,549.2	5,547.3	27.3	1.8	111.42	-5,500.0	816.0	5,895.0	5,867.3	27.72	212.671	
6,000.0	5,737.5	5,645.0	5,643.1	27.5	1.8	111.58	-5,500.3	816.8	5,899.0	5,871.1	27.91	211.348	
6,003.9	5,741.4	5,649.0	5,647.1	27.5	1.8	111.58	-5,500.4	816.9	5,899.1	5,871.2	27.92	211.305	
6,100.0	5,837.2	5,735.1	5,733.3	27.7	1.8	111.68	-5,500.7	817.5	5,902.0	5,873.9	28.07	210.224	
6,102.3	5,839.6	5,736.9	5,735.0	27.7	1.8	111.69	-5,500.7	817.5	5,902.1	5,874.0	28.08	210.205	
6,200.0	5,937.2	5,822.4	5,820.5	27.9	1.8	111.75	-5,501.3	818.0	5,904.1	5,875.9	28.20	209.374	
6,200.8	5,937.9	5,823.5	5,821.6	27.9	1.8	111.75	-5,501.3	818.0	5,904.1	5,875.9	28.20	209.369	
6,256.6	5,993.8	5,905.2	5,903.3	27.9	1.8	-176.33	-5,501.8	818.5	5,904.5	5,876.3	28.25	208.984	
6,286.6	6,023.8	5,932.5	5,930.6	27.9	1.8	-176.34	-5,501.8	818.7	5,904.6	5,876.3	28.29	208.752	
6,299.2	6,036.4	5,943.9	5,942.0	27.9	1.8	3.66	-5,501.9	818.9	5,904.6	5,876.3	28.29	208.752	
6,300.0	6,037.2	5,944.7	5,942.8	27.9	1.8	3.66	-5,501.9	818.9	5,904.6	5,876.3	28.28	208.752	
6,350.0	6,087.1	5,990.1	5,988.2	28.0	1.8	3.67	-5,502.1	819.3	5,902.1	5,873.8	28.26	208.847	
6,397.6	6,134.3	6,041.3	6,039.4	28.0	1.8	3.70	-5,502.3	819.9	5,896.5	5,868.3	28.21	209.057	
6,400.0	6,136.7	6,044.0	6,042.1	28.0	1.8	3.70	-5,502.3	820.0	5,896.1	5,867.9	28.20	209.073	
6,450.0	6,185.7	6,099.7	6,097.8	28.0	1.8	3.75	-5,502.5	820.7	5,886.7	5,858.6	28.09	209.544	
6,496.0	6,230.2	6,139.8	6,137.9	28.0	1.9	3.82	-5,502.7	821.2	5,875.0	5,847.0	27.93	210.340	
6,500.0	6,234.0	6,143.2	6,141.3	28.0	1.9	3.82	-5,502.7	821.2	5,873.8	5,845.9	27.91	210.427	
6,550.0	6,281.3	6,185.7	6,183.8	28.0	1.9	3.92	-5,502.9	821.6	5,857.7	5,830.0	27.65	211.814	
6,594.5	6,322.2	6,218.0	6,216.1	27.9	1.9	4.03	-5,503.0	821.8	5,840.6	5,813.3	27.35	213.571	
6,600.0	6,327.3	6,221.6	6,219.7	27.9	1.9	4.04	-5,503.0	821.8	5,838.4	5,811.1	27.30	213.828	
6,650.0	6,371.8	6,253.5	6,251.6	27.9	1.9	4.20	-5,503.3	822.0	5,816.0	5,789.1	26.86	216.541	
6,692.9	6,408.6	6,280.0	6,278.1	27.9	1.9	4.36	-5,503.5	822.1	5,794.4	5,768.0	26.40	219.464	
6,700.0	6,414.6	6,284.3	6,282.4	27.8	1.9	4.39	-5,503.5	822.2	5,790.6	5,764.3	26.32	220.007	
6,750.0	6,455.5	6,319.0	6,317.1	27.8	1.9	4.62	-5,503.9	822.3	5,762.4	5,736.7	25.70	224.258	
6,791.3	6,487.7	6,351.1	6,349.1	27.7	1.9	4.85	-5,504.3	822.5	5,736.9	5,711.8	25.12	228.392	
6,800.0	6,494.3	6,357.6	6,355.7	27.7	1.9	4.90	-5,504.4	822.5	5,731.4	5,706.4	24.99	229.346	
6,850.0	6,530.8	6,393.9	6,392.0	27.7	1.9	5.25	-5,504.8	822.7	5,697.7	5,673.5	24.21	235.383	
6,889.7	6,558.1	6,400.0	6,398.1	27.6	1.9	5.57	-5,504.8	822.7	5,669.2	5,645.7	23.51	241.130	
6,900.0	6,564.9	6,400.0	6,398.1	27.6	1.9	5.65	-5,504.8	822.7	5,661.6	5,638.3	23.32	242.756	
6,950.0	6,596.3	6,400.0	6,398.1	27.6	1.9	6.14	-5,504.8	822.7	5,623.4	5,601.1	22.37	251.360	
6,988.2	6,618.4	6,400.0	6,398.1	27.5	1.9	6.59	-5,504.8	822.7	5,592.9	5,571.3	21.62	258.735	
7,000.0	6,624.9	6,400.0	6,398.1	27.5	1.9	6.75	-5,504.8	822.7	5,583.3	5,561.9	21.38	261.189	
7,050.0	6,650.6	6,400.0	6,398.1	27.5	1.9	7.52	-5,504.8	822.7	5,541.3	5,520.9	20.35	272.244	
7,086.6	6,667.5	6,400.0	6,398.1	27.5	1.9	8.22	-5,504.8	822.7	5,509.4	5,489.8	19.60	281.024	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - ABDN VERT PLUMB #2 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,100.0	6,673.3	6,400.0	6,398.1	27.5	1.9	8.52	-5,504.8	822.7	5,497.6	5,478.3	19.33	284.442	
7,150.0	6,692.7	6,400.0	6,398.1	27.5	1.9	9.86	-5,504.8	822.7	5,452.4	5,434.1	18.32	297.560	
7,185.0	6,704.4	6,400.0	6,398.1	27.5	1.9	11.11	-5,504.8	822.7	5,420.0	5,402.4	17.63	307.455	
7,200.0	6,709.0	6,400.0	6,398.1	27.5	1.9	11.75	-5,504.8	822.7	5,406.0	5,388.6	17.37	311.165	
7,250.0	6,721.8	6,400.0	6,398.1	27.5	1.9	14.56	-5,504.8	822.7	5,358.4	5,341.9	16.51	324.520	
7,283.4	6,728.6	6,400.0	6,398.1	27.5	1.9	17.33	-5,504.8	822.7	5,326.1	5,310.1	16.01	332.681	
7,300.0	6,731.3	6,400.0	6,398.1	27.6	1.9	19.13	-5,504.8	822.7	5,310.0	5,294.2	15.80	336.180	
7,350.0	6,737.3	6,400.0	6,398.1	27.7	1.9	27.61	-5,504.8	822.7	5,260.8	5,245.4	15.43	341.041	
7,381.9	6,739.4	6,400.0	6,398.1	27.7	1.9	37.73	-5,504.8	822.7	5,229.2	5,213.5	15.77	331.496	
7,400.0	6,739.9	6,400.0	6,398.1	27.8	1.9	46.75	-5,504.8	822.7	5,211.2	5,194.8	16.43	317.084	
7,416.5	6,740.0	6,400.0	6,398.1	27.8	1.9	58.17	-5,504.8	822.7	5,194.8	5,177.4	17.41	298.316	
7,480.3	6,739.5	6,400.0	6,398.1	28.0	1.9	58.17	-5,504.8	822.7	5,131.2	5,113.4	17.87	287.191	
7,500.0	6,739.4	6,400.0	6,398.1	28.1	1.9	58.17	-5,504.8	822.7	5,111.6	5,093.6	18.01	283.871	
7,578.7	6,738.9	6,400.0	6,398.1	28.5	1.9	58.17	-5,504.8	822.7	5,033.2	5,014.5	18.68	269.466	
7,600.0	6,738.7	6,400.0	6,398.1	28.6	1.9	58.17	-5,504.8	822.7	5,012.0	4,993.1	18.86	265.754	
7,677.1	6,738.2	6,400.0	6,398.1	29.1	1.9	58.17	-5,504.8	822.7	4,935.1	4,915.5	19.62	251.547	
7,700.0	6,738.1	6,400.0	6,398.1	29.2	1.9	58.17	-5,504.8	822.7	4,912.4	4,892.5	19.84	247.555	
7,775.6	6,737.5	6,400.0	6,398.1	29.7	1.9	58.17	-5,504.8	822.7	4,837.1	4,816.4	20.67	234.017	
7,800.0	6,737.4	6,400.0	6,398.1	29.9	1.9	58.17	-5,504.8	822.7	4,812.8	4,791.8	20.94	229.878	
7,874.0	6,736.9	6,400.0	6,398.1	30.6	1.9	58.17	-5,504.8	822.7	4,739.1	4,717.3	21.81	217.275	
7,900.0	6,736.7	6,400.0	6,398.1	30.8	1.9	58.17	-5,504.8	822.7	4,713.2	4,691.1	22.12	213.092	
7,972.4	6,736.2	6,400.0	6,398.1	31.5	1.9	58.17	-5,504.8	822.7	4,641.1	4,618.1	23.03	201.544	
8,000.0	6,736.0	6,400.0	6,398.1	31.8	1.9	58.17	-5,504.8	822.7	4,613.7	4,590.3	23.37	197.392	
8,070.8	6,735.5	6,400.0	6,398.1	32.5	1.9	58.17	-5,504.8	822.7	4,543.1	4,518.8	24.31	186.921	
8,100.0	6,735.3	6,400.0	6,398.1	32.8	1.9	58.17	-5,504.8	822.7	4,514.1	4,489.4	24.69	182.849	
8,169.3	6,734.9	6,400.0	6,398.1	33.6	1.9	58.17	-5,504.8	822.7	4,445.2	4,419.5	25.63	173.416	
8,200.0	6,734.6	6,400.0	6,398.1	34.0	1.9	58.17	-5,504.8	822.7	4,414.6	4,388.5	26.05	169.458	
8,267.7	6,734.2	6,400.0	6,398.1	34.8	1.9	58.17	-5,504.8	822.7	4,347.2	4,320.2	27.00	160.993	
8,300.0	6,734.0	6,400.0	6,398.1	35.2	1.9	58.17	-5,504.8	822.7	4,315.1	4,287.7	27.46	157.167	
8,366.1	6,733.5	6,400.0	6,398.1	36.1	1.9	58.17	-5,504.8	822.7	4,249.3	4,220.9	28.41	149.587	
8,400.0	6,733.3	6,400.0	6,398.1	36.5	1.9	58.17	-5,504.8	822.7	4,215.6	4,186.7	28.89	145.902	
8,464.5	6,732.8	6,400.0	6,398.1	37.4	1.9	58.17	-5,504.8	822.7	4,151.4	4,121.6	29.84	139.120	
8,500.0	6,732.6	6,400.0	6,398.1	37.9	1.9	58.17	-5,504.8	822.7	4,116.2	4,085.8	30.36	135.580	
8,563.0	6,732.2	6,400.0	6,398.1	38.8	1.9	58.17	-5,504.8	822.7	4,053.6	4,022.3	31.30	129.512	
8,600.0	6,731.9	6,400.0	6,398.1	39.3	1.9	58.17	-5,504.8	822.7	4,016.8	3,984.9	31.85	126.115	
8,661.4	6,731.5	6,400.0	6,398.1	40.2	1.9	58.17	-5,504.8	822.7	3,955.8	3,923.0	32.78	120.683	
8,700.0	6,731.2	6,400.0	6,398.1	40.8	1.9	58.17	-5,504.8	822.7	3,917.4	3,884.0	33.36	117.426	
8,759.8	6,730.8	6,400.0	6,398.1	41.7	1.9	58.17	-5,504.8	822.7	3,858.0	3,823.7	34.27	112.559	
8,800.0	6,730.6	6,400.0	6,398.1	42.3	1.9	58.17	-5,504.8	822.7	3,818.0	3,783.2	34.89	109.437	
8,858.2	6,730.2	6,400.0	6,398.1	43.2	1.9	58.17	-5,504.8	822.7	3,760.2	3,724.4	35.79	105.071	
8,900.0	6,729.9	6,400.0	6,398.1	43.8	1.9	58.17	-5,504.8	822.7	3,718.7	3,682.3	36.43	102.077	
8,956.7	6,729.5	6,400.0	6,398.1	44.7	1.9	58.17	-5,504.8	822.7	3,662.5	3,625.1	37.31	98.157	
9,000.0	6,729.2	6,400.0	6,398.1	45.4	1.9	58.17	-5,504.8	822.7	3,619.4	3,581.5	37.99	95.284	
9,055.1	6,728.8	6,400.0	6,398.1	46.3	1.9	58.17	-5,504.8	822.7	3,564.8	3,525.9	38.85	91.759	
9,100.0	6,728.5	6,400.0	6,398.1	47.0	1.9	58.17	-5,504.8	822.7	3,520.2	3,480.7	39.55	89.002	
9,153.5	6,728.2	6,400.0	6,398.1	47.9	1.9	58.17	-5,504.8	822.7	3,467.1	3,426.7	40.40	85.828	
9,200.0	6,727.8	6,400.0	6,398.1	48.6	1.9	58.17	-5,504.8	822.7	3,421.0	3,379.9	41.13	83.179	
9,251.9	6,727.5	6,400.0	6,398.1	49.5	1.9	58.17	-5,504.8	822.7	3,369.5	3,327.5	41.95	80.319	
9,300.0	6,727.2	6,400.0	6,398.1	50.3	1.9	58.17	-5,504.8	822.7	3,321.9	3,279.2	42.71	77.772	
9,350.4	6,726.8	6,400.0	6,398.1	51.1	1.9	58.17	-5,504.8	822.7	3,271.9	3,228.4	43.52	75.191	
9,400.0	6,726.5	6,400.0	6,398.1	51.9	1.9	58.17	-5,504.8	822.7	3,222.8	3,178.5	44.30	72.741	
9,448.8	6,726.1	6,400.0	6,398.1	52.7	1.9	58.17	-5,504.8	822.7	3,174.4	3,129.3	45.09	70.409	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - ABDN VERT PLUMB #2 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,500.0	6,725.8	6,400.0	6,398.1	53.6	1.9	58.17	-5,504.8	822.7	3,123.7	3,077.8	45.90	68.050	
9,547.2	6,725.5	6,400.0	6,398.1	54.4	1.9	58.17	-5,504.8	822.7	3,077.0	3,030.3	46.66	65.942	
9,600.0	6,725.1	6,400.0	6,398.1	55.3	1.9	58.17	-5,504.8	822.7	3,024.8	2,977.3	47.51	63.668	
9,645.6	6,724.8	6,400.0	6,398.1	56.1	1.9	58.17	-5,504.8	822.7	2,979.6	2,931.4	48.24	61.761	
9,700.0	6,724.4	6,400.0	6,398.1	57.0	1.9	58.17	-5,504.8	822.7	2,925.9	2,876.7	49.12	59.567	
9,744.1	6,724.1	6,400.0	6,398.1	57.8	1.9	58.17	-5,504.8	822.7	2,882.3	2,832.5	49.83	57.842	
9,800.0	6,723.8	6,400.0	6,398.1	58.7	1.9	58.17	-5,504.8	822.7	2,827.0	2,776.3	50.73	55.723	
9,842.5	6,723.5	6,400.0	6,398.1	59.5	1.9	58.17	-5,504.8	822.7	2,785.1	2,733.6	51.42	54.161	
9,900.0	6,723.1	6,400.0	6,398.1	60.5	1.9	58.17	-5,504.8	822.7	2,728.3	2,675.9	52.35	52.114	
9,940.9	6,722.8	6,400.0	6,398.1	61.2	1.9	58.17	-5,504.8	822.7	2,687.9	2,634.9	53.02	50.699	
10,000.0	6,722.4	6,400.0	6,398.1	62.2	1.9	58.17	-5,504.8	822.7	2,629.6	2,575.7	53.98	48.719	
10,039.3	6,722.1	6,400.0	6,398.1	62.9	1.9	58.17	-5,504.8	822.7	2,590.9	2,536.2	54.62	47.438	
10,100.0	6,721.7	6,400.0	6,398.1	64.0	1.9	58.17	-5,504.8	822.7	2,531.1	2,475.5	55.60	45.521	
10,137.8	6,721.5	6,400.0	6,398.1	64.7	1.9	58.17	-5,504.8	822.7	2,493.9	2,437.7	56.22	44.361	
10,200.0	6,721.0	6,400.0	6,398.1	65.8	1.9	58.17	-5,504.8	822.7	2,432.7	2,375.5	57.23	42.506	
10,236.2	6,720.8	6,400.0	6,398.1	66.4	1.9	58.17	-5,504.8	822.7	2,397.1	2,339.3	57.82	41.455	
10,300.0	6,720.4	6,400.0	6,398.1	67.5	1.9	58.17	-5,504.8	822.7	2,334.4	2,275.5	58.86	39.657	
10,334.6	6,720.1	6,400.0	6,398.1	68.2	1.9	58.17	-5,504.8	822.7	2,300.4	2,241.0	59.43	38.707	
10,400.0	6,719.7	6,400.0	6,398.1	69.3	1.9	58.17	-5,504.8	822.7	2,236.3	2,175.8	60.50	36.963	
10,433.0	6,719.4	6,400.0	6,398.1	69.9	1.9	58.17	-5,504.8	822.7	2,203.9	2,142.8	61.04	36.104	
10,500.0	6,719.0	6,400.0	6,398.1	71.1	1.9	58.17	-5,504.8	822.7	2,138.3	2,076.2	62.14	34.412	
10,531.5	6,718.8	6,400.0	6,398.1	71.7	1.9	58.17	-5,504.8	822.7	2,107.5	2,044.9	62.65	33.637	
10,600.0	6,718.3	6,400.0	6,398.1	72.9	1.9	58.17	-5,504.8	822.7	2,040.5	1,976.8	63.78	31.995	
10,629.9	6,718.1	6,400.0	6,398.1	73.4	1.9	58.17	-5,504.8	822.7	2,011.4	1,947.1	64.27	31.296	
10,700.0	6,717.6	6,400.0	6,398.1	74.7	1.9	58.17	-5,504.8	822.7	1,943.0	1,877.6	65.42	29.701	
10,728.3	6,717.4	6,400.0	6,398.1	75.2	1.9	58.17	-5,504.8	822.7	1,915.4	1,849.5	65.89	29.072	
10,800.0	6,717.0	6,400.0	6,398.1	76.5	1.9	58.17	-5,504.8	822.7	1,845.7	1,778.7	67.06	27.522	
10,826.7	6,716.8	6,400.0	6,398.1	77.0	1.9	58.17	-5,504.8	822.7	1,819.8	1,752.3	67.50	26.958	
10,900.0	6,716.3	6,400.0	6,398.1	78.3	1.9	58.17	-5,504.8	822.7	1,748.8	1,680.1	68.71	25.452	
10,925.2	6,716.1	6,400.0	6,398.1	78.8	1.9	58.17	-5,504.8	822.7	1,724.4	1,655.3	69.12	24.947	
11,000.0	6,715.6	6,400.0	6,398.1	80.2	1.9	58.17	-5,504.8	822.7	1,652.2	1,581.8	70.36	23.483	
11,023.6	6,715.4	6,400.0	6,398.1	80.6	1.9	58.17	-5,504.8	822.7	1,629.4	1,558.7	70.75	23.032	
11,100.0	6,714.9	6,400.0	6,398.1	82.0	1.9	58.17	-5,504.8	822.7	1,556.0	1,484.0	72.01	21.609	
11,122.0	6,714.8	6,400.0	6,398.1	82.4	1.9	58.17	-5,504.8	822.7	1,534.9	1,462.5	72.37	21.209	
11,200.0	6,714.2	6,400.0	6,398.1	83.8	1.9	58.17	-5,504.8	822.7	1,460.3	1,386.7	73.66	19.827	
11,220.4	6,714.1	6,400.0	6,398.1	84.2	1.9	58.17	-5,504.8	822.7	1,440.9	1,366.9	73.99	19.473	
11,300.0	6,713.5	6,400.0	6,398.1	85.7	1.9	58.17	-5,504.8	822.7	1,365.3	1,290.0	75.31	18.130	
11,318.9	6,713.4	6,400.0	6,398.1	86.0	1.9	58.17	-5,504.8	822.7	1,347.4	1,271.8	75.62	17.819	
11,400.0	6,712.9	6,400.0	6,398.1	87.5	1.9	58.17	-5,504.8	822.7	1,271.0	1,194.1	76.96	16.515	
11,417.3	6,712.7	6,400.0	6,398.1	87.8	1.9	58.17	-5,504.8	822.7	1,254.8	1,177.6	77.25	16.244	
11,500.0	6,712.2	6,400.0	6,398.1	89.3	1.9	58.17	-5,504.8	822.7	1,177.7	1,099.1	78.61	14.981	
11,515.7	6,712.1	6,400.0	6,398.1	89.6	1.9	58.17	-5,504.8	822.7	1,163.1	1,084.3	78.87	14.747	
11,600.0	6,711.5	6,400.0	6,398.1	91.2	1.9	58.17	-5,504.8	822.7	1,085.6	1,005.3	80.27	13.524	
11,614.1	6,711.4	6,400.0	6,398.1	91.4	1.9	58.17	-5,504.8	822.7	1,072.6	992.1	80.50	13.324	
11,700.0	6,710.8	6,400.0	6,398.1	93.0	1.9	58.17	-5,504.8	822.7	994.9	913.0	81.92	12.145	
11,712.6	6,710.7	6,400.0	6,398.1	93.3	1.9	58.17	-5,504.8	822.7	983.7	901.5	82.13	11.977	
11,800.0	6,710.1	6,400.0	6,398.1	94.9	1.9	58.17	-5,504.8	822.7	906.3	822.7	83.58	10.843	
11,811.0	6,710.1	6,400.0	6,398.1	95.1	1.9	58.17	-5,504.8	822.7	896.7	812.9	83.76	10.705	
11,900.0	6,709.5	6,400.0	6,398.1	96.7	1.9	58.17	-5,504.8	822.7	820.3	735.0	85.24	9.623	
11,909.4	6,709.4	6,400.0	6,398.1	96.9	1.9	58.17	-5,504.8	822.7	812.3	726.9	85.40	9.512	
12,000.0	6,708.8	6,400.0	6,398.1	98.6	1.9	58.17	-5,504.8	822.7	737.8	650.9	86.90	8.490	
12,007.8	6,708.7	6,400.0	6,398.1	98.7	1.9	58.17	-5,504.8	822.7	731.5	644.4	87.03	8.405	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - ABDN VERT PLUMB #2 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,100.0	6,708.1	6,400.0	6,398.1	100.4	1.9	58.17	-5,504.8	822.7	660.1	571.6	88.56	7.454	
12,106.3	6,708.1	6,400.0	6,398.1	100.6	1.9	58.17	-5,504.8	822.7	655.5	566.8	88.66	7.393	
12,200.0	6,707.4	6,400.0	6,398.1	102.3	1.9	58.17	-5,504.8	822.7	589.3	499.0	90.22	6.532	
12,204.7	6,707.4	6,400.0	6,398.1	102.4	1.9	58.17	-5,504.8	822.7	586.1	495.8	90.29	6.491	
12,300.0	6,706.7	6,400.0	6,398.1	104.2	1.9	58.17	-5,504.8	822.7	527.9	436.0	91.88	5.746	
12,303.1	6,706.7	6,400.0	6,398.1	104.2	1.9	58.17	-5,504.8	822.7	526.2	434.3	91.93	5.724	
12,400.0	6,706.1	6,400.0	6,398.1	106.0	1.9	58.17	-5,504.8	822.7	479.7	386.2	93.54	5.129	
12,401.5	6,706.0	6,400.0	6,398.1	106.1	1.9	58.17	-5,504.8	822.7	479.1	385.6	93.56	5.121	
12,500.0	6,705.4	6,400.0	6,398.1	107.9	1.9	58.17	-5,504.8	822.7	449.0	353.8	95.20	4.716	
12,592.7	6,704.7	6,400.0	6,398.1	109.6	1.9	58.17	-5,504.8	822.7	439.3	342.6	96.74	4.541 CC	
12,598.4	6,704.7	6,400.0	6,398.1	109.7	1.9	58.17	-5,504.8	822.7	439.4	342.5	96.84	4.537	
12,600.0	6,704.7	6,400.0	6,398.1	109.8	1.9	58.17	-5,504.8	822.7	439.4	342.5	96.86	4.536 ES, SF	
12,696.8	6,704.0	6,400.0	6,398.1	111.6	1.9	58.17	-5,504.8	822.7	451.5	353.0	98.47	4.585	
12,700.0	6,704.0	6,400.0	6,398.1	111.6	1.9	58.17	-5,504.8	822.7	452.3	353.7	98.53	4.590	
12,795.2	6,703.4	6,400.0	6,398.1	113.4	1.9	58.17	-5,504.8	822.7	483.8	383.7	100.11	4.833	
12,800.0	6,703.3	6,400.0	6,398.1	113.5	1.9	58.17	-5,504.8	822.7	485.8	385.6	100.19	4.849	
12,893.7	6,702.7	6,400.0	6,398.1	115.3	1.9	58.17	-5,504.8	822.7	532.6	430.8	101.75	5.234	
12,900.0	6,702.7	6,400.0	6,398.1	115.4	1.9	58.17	-5,504.8	822.7	536.2	434.3	101.85	5.264	
12,992.1	6,702.0	6,400.0	6,398.1	117.1	1.9	58.17	-5,504.8	822.7	593.8	490.4	103.39	5.743	
13,000.0	6,702.0	6,400.0	6,398.1	117.3	1.9	58.17	-5,504.8	822.7	599.1	495.6	103.52	5.787	
13,090.5	6,701.4	6,400.0	6,398.1	119.0	1.9	58.17	-5,504.8	822.7	664.0	559.0	105.03	6.322	
13,100.0	6,701.3	6,400.0	6,398.1	119.1	1.9	58.17	-5,504.8	822.7	671.1	565.9	105.18	6.380	
13,188.9	6,700.7	6,400.0	6,398.1	120.8	1.9	58.17	-5,504.8	822.7	740.6	634.0	106.66	6.944	
13,200.0	6,700.6	6,400.0	6,398.1	121.0	1.9	58.17	-5,504.8	822.7	749.6	642.7	106.85	7.015	
13,287.4	6,700.0	6,400.0	6,398.1	122.7	1.9	58.17	-5,504.8	822.7	822.0	713.7	108.30	7.589	
13,300.0	6,699.9	6,400.0	6,398.1	122.9	1.9	58.17	-5,504.8	822.7	832.7	724.1	108.51	7.673	
13,385.8	6,699.3	6,400.0	6,398.1	124.5	1.9	58.17	-5,504.8	822.7	906.7	796.7	109.94	8.247	
13,400.0	6,699.3	6,400.0	6,398.1	124.8	1.9	58.17	-5,504.8	822.7	919.1	808.9	110.18	8.342	
13,484.2	6,698.7	6,400.0	6,398.1	126.4	1.9	58.17	-5,504.8	822.7	993.9	882.3	111.58	8.907	
13,500.0	6,698.6	6,400.0	6,398.1	126.7	1.9	58.17	-5,504.8	822.7	1,008.1	896.2	111.85	9.013	
13,582.6	6,698.0	6,400.0	6,398.1	128.2	1.9	58.17	-5,504.8	822.7	1,083.1	969.9	113.23	9.566	
13,600.0	6,697.9	6,400.0	6,398.1	128.5	1.9	58.17	-5,504.8	822.7	1,099.0	985.4	113.51	9.681	
13,681.1	6,697.3	6,400.0	6,398.1	130.1	1.9	58.17	-5,504.8	822.7	1,173.7	1,058.9	114.87	10.218	
13,700.0	6,697.2	6,400.0	6,398.1	130.4	1.9	58.17	-5,504.8	822.7	1,191.3	1,076.1	115.18	10.343	
13,779.5	6,696.7	6,400.0	6,398.1	131.9	1.9	58.17	-5,504.8	822.7	1,265.5	1,149.0	116.51	10.862	
13,800.0	6,696.5	6,400.0	6,398.1	132.3	1.9	58.17	-5,504.8	822.7	1,284.8	1,167.9	116.85	10.995	
13,877.9	6,696.0	6,400.0	6,398.1	133.8	1.9	58.17	-5,504.8	822.7	1,358.3	1,240.1	118.15	11.496	
13,900.0	6,695.8	6,400.0	6,398.1	134.2	1.9	58.17	-5,504.8	822.7	1,379.2	1,260.6	118.52	11.637	
13,976.3	6,695.3	6,400.0	6,398.1	135.6	1.9	58.17	-5,504.8	822.7	1,451.7	1,332.0	119.79	12.119	
14,000.0	6,695.2	6,400.0	6,398.1	136.1	1.9	58.17	-5,504.8	822.7	1,474.3	1,354.1	120.19	12.267	
14,034.1	6,695.0	6,400.0	6,398.1	136.7	1.9	58.17	-5,504.8	822.7	1,506.9	1,386.1	120.75	12.480	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	0.61	104.9	1.1	104.9				
98.4	98.4	98.4	98.4	0.1	0.1	0.61	104.9	1.1	104.9	104.8	0.17	617.453	
100.0	100.0	100.0	100.0	0.1	0.1	0.61	104.9	1.1	104.9	104.8	0.17	606.276	
196.8	196.8	196.8	196.8	0.3	0.3	0.61	104.9	1.1	104.9	104.3	0.61	172.454	
200.0	200.0	200.0	200.0	0.3	0.3	0.61	104.9	1.1	104.9	104.3	0.62	168.532	
295.3	295.3	295.3	295.3	0.5	0.5	0.61	104.9	1.1	104.9	103.9	1.05	99.847	
300.0	300.0	300.0	300.0	0.5	0.5	0.61	104.9	1.1	104.9	103.9	1.07	97.869	
393.7	393.7	393.7	393.7	0.7	0.7	0.61	104.9	1.1	104.9	103.4	1.49	70.264	
400.0	400.0	400.0	400.0	0.8	0.8	0.61	104.9	1.1	104.9	103.4	1.52	68.956	
492.1	492.1	492.1	492.1	1.0	1.0	0.61	104.9	1.1	104.9	103.0	1.94	54.204	
500.0	500.0	500.0	500.0	1.0	1.0	0.61	104.9	1.1	104.9	103.0	1.97	53.231	
590.5	590.5	590.5	590.5	1.2	1.2	0.61	104.9	1.1	104.9	102.5	2.38	44.120	
600.0	600.0	600.0	600.0	1.2	1.2	0.61	104.9	1.1	104.9	102.5	2.42	43.346	
689.0	689.0	689.0	689.0	1.4	1.4	0.61	104.9	1.1	104.9	102.1	2.82	37.199	
700.0	700.0	700.0	700.0	1.4	1.4	0.61	104.9	1.1	104.9	102.1	2.87	36.557	
787.4	787.4	787.4	787.4	1.6	1.6	0.61	104.9	1.1	104.9	101.7	3.26	32.155	
800.0	800.0	800.0	800.0	1.7	1.7	0.61	104.9	1.1	104.9	101.6	3.32	31.607	
885.8	885.8	885.8	885.8	1.9	1.9	0.61	104.9	1.1	104.9	101.2	3.71	28.316	
900.0	900.0	900.0	900.0	1.9	1.9	0.61	104.9	1.1	104.9	101.2	3.77	27.837	
984.2	984.2	984.2	984.2	2.1	2.1	0.61	104.9	1.1	104.9	100.8	4.15	25.296	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.61	104.9	1.1	104.9	100.7	4.22	24.871	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	0.61	104.9	1.1	104.9	100.3	4.59	22.858	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	0.61	104.9	1.1	104.9	100.3	4.67	22.476	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	0.61	104.9	1.1	104.9	99.9	5.03	20.848	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.61	104.9	1.1	104.9	99.8	5.12	20.502 CC, ES	
1,279.5	1,279.5	1,278.4	1,278.4	2.7	2.7	0.07	105.3	0.1	105.3	99.9	5.47	19.270	
1,300.0	1,300.0	1,298.6	1,298.6	2.8	2.8	-0.25	105.6	-0.5	105.6	100.0	5.56	19.002	
1,377.9	1,377.9	1,375.3	1,375.2	3.0	2.9	-2.06	107.0	-3.8	107.1	101.2	5.89	18.166	
1,400.0	1,400.0	1,397.0	1,396.9	3.0	3.0	-2.74	107.5	-5.1	107.7	101.7	5.99	17.977	
1,476.4	1,476.4	1,471.9	1,471.4	3.2	3.2	-5.62	109.8	-10.8	110.5	104.1	6.32	17.473	
1,500.0	1,500.0	1,494.9	1,494.4	3.2	3.2	-6.65	110.7	-12.9	111.6	105.2	6.42	17.368	
1,574.8	1,574.8	1,567.7	1,566.7	3.4	3.4	-10.29	113.9	-20.7	116.0	109.3	6.75	17.184	
1,600.0	1,600.0	1,592.2	1,590.9	3.5	3.4	-11.62	115.1	-23.7	117.9	111.0	6.86	17.176	
1,673.2	1,673.2	1,662.8	1,660.8	3.6	3.6	-15.65	119.1	-33.4	124.3	117.1	7.19	17.297	
1,700.0	1,700.0	1,688.5	1,686.1	3.7	3.7	-17.17	120.7	-37.3	127.1	119.8	7.31	17.397	
1,771.6	1,771.6	1,756.9	1,753.4	3.8	3.9	-21.24	125.5	-48.8	135.8	128.2	7.63	17.795	
1,800.0	1,800.0	1,783.7	1,779.7	3.9	4.0	-22.84	127.5	-53.7	139.8	132.0	7.77	18.005	
1,870.1	1,870.1	1,851.7	1,846.2	4.1	4.2	-26.67	132.9	-66.7	150.6	142.5	8.10	18.586	
1,900.0	1,900.0	1,881.0	1,874.8	4.1	4.3	-28.16	135.2	-72.3	155.4	147.1	8.25	18.836	
1,968.5	1,968.5	1,948.0	1,940.4	4.3	4.5	-31.25	140.5	-85.2	166.7	158.1	8.59	19.398	
2,000.0	2,000.0	1,978.8	1,970.5	4.4	4.7	-32.53	142.9	-91.2	172.1	163.3	8.75	19.652	
2,066.9	2,066.9	2,044.3	2,034.5	4.5	4.9	-35.01	148.1	-103.7	183.7	174.6	9.11	20.170	
2,100.0	2,100.0	2,076.6	2,066.2	4.6	5.0	-36.12	150.7	-110.0	189.6	180.3	9.28	20.417	
2,165.3	2,165.3	2,140.5	2,128.7	4.7	5.3	-38.13	155.7	-122.2	201.3	191.7	9.64	20.883	
2,200.0	2,200.0	2,174.4	2,161.9	4.8	5.4	-39.11	158.4	-128.8	207.7	197.8	9.83	21.119	
2,250.0	2,250.0	2,223.3	2,209.7	4.9	5.6	-40.41	162.3	-138.2	216.9	206.8	10.11	21.445	
2,263.8	2,263.8	2,236.8	2,222.9	4.9	5.6	-112.62	163.3	-140.8	219.5	209.4	10.03	21.874	
2,300.0	2,300.0	2,272.2	2,257.5	5.0	5.8	-113.44	166.1	-147.6	226.4	216.2	10.20	22.199	
2,362.2	2,362.2	2,332.7	2,316.7	5.2	6.0	-114.95	170.9	-159.2	238.9	228.4	10.47	22.809	
2,400.0	2,399.9	2,369.4	2,352.6	5.2	6.2	-115.91	173.8	-166.2	246.8	236.2	10.64	23.206	
2,460.6	2,460.4	2,428.0	2,409.8	5.4	6.4	-117.50	178.5	-177.5	260.3	249.4	10.90	23.885	
2,500.0	2,499.7	2,465.8	2,446.9	5.4	6.6	-118.56	181.5	-184.8	269.4	258.4	11.06	24.356	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,558.5	2,522.4	2,502.2	5.6	6.8	-120.16	185.9	-195.7	283.8	272.5	11.31	25.103	
2,600.0	2,599.1	2,561.5	2,540.4	5.7	7.0	-121.28	189.0	-203.2	294.4	282.9	11.47	25.655	
2,657.5	2,656.1	2,616.0	2,593.8	5.8	7.2	-122.83	193.4	-213.7	309.9	298.2	11.71	26.468	
2,700.0	2,698.2	2,656.1	2,633.0	5.9	7.4	-123.97	196.5	-221.4	322.0	310.1	11.88	27.104	
2,755.9	2,753.3	2,708.6	2,684.3	6.1	7.6	-125.45	200.7	-231.5	338.6	326.5	12.10	27.975	
2,800.0	2,796.6	2,749.7	2,724.6	6.2	7.8	-126.59	203.9	-239.4	352.3	340.1	12.28	28.699	
2,854.3	2,849.9	2,800.0	2,773.8	6.3	8.0	-127.96	207.9	-249.0	370.1	357.6	12.49	29.617	
2,900.0	2,894.4	2,842.1	2,814.9	6.5	8.2	-129.08	211.3	-257.1	385.6	373.0	12.67	30.428	
2,952.7	2,945.7	2,890.3	2,862.1	6.6	8.4	-130.33	215.1	-266.4	404.4	391.5	12.89	31.385	
3,000.0	2,991.5	2,933.2	2,904.0	6.8	8.6	-131.40	218.5	-274.6	422.0	408.9	13.07	32.282	
3,051.2	3,040.8	2,979.2	2,949.1	7.0	8.8	-132.53	222.1	-283.5	441.7	428.5	13.28	33.272	
3,100.0	3,087.6	3,022.8	2,991.7	7.1	9.0	-133.55	225.6	-291.9	461.4	447.9	13.47	34.247	
3,149.6	3,134.9	3,066.7	3,034.7	7.4	9.2	-134.55	229.0	-300.3	482.1	468.4	13.68	35.249	
3,200.0	3,182.7	3,111.0	3,077.9	7.6	9.3	-135.52	232.5	-308.8	503.9	490.0	13.88	36.306	
3,248.0	3,228.0	3,152.7	3,118.8	7.8	9.5	-136.40	235.8	-316.8	525.4	511.3	14.08	37.315	
3,300.0	3,276.6	3,197.5	3,162.5	8.1	9.7	-137.30	239.4	-325.5	549.4	535.2	14.29	38.444	
3,346.4	3,319.9	3,237.0	3,201.3	8.3	9.9	-138.07	242.5	-333.1	571.7	557.2	14.49	39.449	
3,400.0	3,369.4	3,282.2	3,245.4	8.6	10.1	-138.91	246.1	-341.7	598.1	583.4	14.72	40.644	
3,444.9	3,410.5	3,319.7	3,282.1	8.9	10.3	-139.57	249.1	-348.9	620.9	606.0	14.91	41.635	
3,500.0	3,460.7	3,365.1	3,326.6	9.2	10.5	-140.34	252.7	-357.7	649.8	634.6	15.15	42.888	
3,543.3	3,499.8	3,400.4	3,361.1	9.5	10.6	-140.90	255.5	-364.5	673.1	657.7	15.35	43.857	
3,600.0	3,550.6	3,446.1	3,405.8	9.9	10.8	-141.60	259.1	-373.3	704.4	688.8	15.60	45.158	
3,641.7	3,587.6	3,479.3	3,438.2	10.3	11.0	-142.08	261.7	-379.6	728.1	712.3	15.80	46.092	
3,709.9	3,647.5	3,532.7	3,490.5	10.8	11.2	-142.80	265.9	-389.9	767.9	751.8	16.11	47.658	
3,740.1	3,673.9	3,556.2	3,513.5	11.1	11.3	-143.37	267.8	-394.4	785.8	769.5	16.28	48.272	
3,800.0	3,726.2	3,602.7	3,559.0	11.6	11.5	-144.41	271.5	-403.4	821.5	804.9	16.61	49.456	
3,838.6	3,759.9	3,632.7	3,588.3	11.9	11.7	-145.04	273.8	-409.1	844.6	827.8	16.83	50.184	
3,900.0	3,813.5	3,680.4	3,634.9	12.5	11.9	-145.98	277.6	-418.3	881.5	864.3	17.18	51.311	
3,937.0	3,845.8	3,709.1	3,663.0	12.8	12.0	-146.51	279.9	-423.8	903.8	886.4	17.39	51.961	
4,000.0	3,900.8	3,758.1	3,710.9	13.4	12.2	-147.36	283.8	-433.2	941.9	924.1	17.76	53.035	
4,035.4	3,931.7	3,785.6	3,737.8	13.7	12.3	-147.81	285.9	-438.5	963.3	945.4	17.97	53.614	
4,100.0	3,988.1	3,835.7	3,786.9	14.3	12.6	-148.58	289.9	-448.2	1,002.6	984.2	18.35	54.640	
4,133.8	4,017.6	3,862.0	3,812.6	14.7	12.7	-148.97	292.0	-453.2	1,023.2	1,004.6	18.55	55.156	
4,200.0	4,075.4	3,913.4	3,862.8	15.3	12.9	-149.67	296.1	-463.1	1,063.5	1,044.6	18.94	56.137	
4,232.3	4,103.5	3,938.5	3,887.4	15.6	13.0	-150.00	298.0	-467.9	1,083.2	1,064.1	19.14	56.597	
4,300.0	4,162.6	3,991.1	3,938.8	16.2	13.3	-150.64	302.2	-478.0	1,124.7	1,105.2	19.55	57.536	
4,330.7	4,189.4	4,014.9	3,962.1	16.5	13.4	-150.92	304.1	-482.6	1,143.5	1,123.8	19.73	57.945	
4,400.0	4,249.9	4,068.7	4,014.8	17.2	13.6	-151.52	308.4	-493.0	1,186.1	1,165.9	20.16	58.845	
4,429.1	4,275.4	4,091.4	4,036.9	17.5	13.7	-151.76	310.1	-497.3	1,204.0	1,183.7	20.33	59.209	
4,500.0	4,337.2	4,146.4	4,090.8	18.2	14.0	-152.31	314.5	-507.9	1,247.6	1,226.8	20.77	60.072	
4,527.5	4,361.3	4,167.8	4,111.7	18.5	14.1	-152.51	316.2	-512.0	1,264.6	1,243.7	20.94	60.395	
4,600.0	4,424.5	4,224.1	4,166.7	19.2	14.3	-153.03	320.7	-522.8	1,309.3	1,287.9	21.39	61.225	
4,626.0	4,447.2	4,244.3	4,186.5	19.5	14.4	-153.20	322.3	-526.7	1,325.3	1,303.8	21.55	61.511	
4,700.0	4,511.8	4,301.8	4,242.7	20.2	14.7	-153.68	326.8	-537.8	1,371.1	1,349.1	22.00	62.309	
4,724.4	4,533.1	4,320.7	4,261.2	20.5	14.8	-153.84	328.3	-541.4	1,386.2	1,364.0	22.16	62.562	
4,796.7	4,596.3	4,376.9	4,316.2	21.2	15.0	-154.27	332.8	-552.2	1,431.0	1,408.4	22.61	63.297	
4,800.0	4,599.1	4,379.4	4,318.7	21.2	15.0	-154.31	333.0	-552.7	1,433.0	1,410.3	22.63	63.320	
4,822.8	4,619.1	4,397.2	4,336.1	21.4	15.1	-154.59	334.4	-556.1	1,447.0	1,424.2	22.79	63.497	
4,900.0	4,687.3	4,476.5	4,413.6	22.0	15.4	-155.58	340.5	-571.1	1,493.5	1,470.2	23.36	63.948	
4,921.2	4,706.2	4,510.3	4,446.9	22.2	15.6	-155.90	343.0	-577.1	1,505.8	1,482.3	23.52	64.016	
5,000.0	4,777.1	4,641.6	4,576.4	22.8	15.9	-157.01	351.0	-596.6	1,548.5	1,524.4	24.14	64.148	
5,019.7	4,794.9	4,675.8	4,610.4	22.9	16.0	-157.27	352.8	-600.8	1,558.5	1,534.2	24.29	64.152	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	4,868.3	4,821.2	4,755.0	23.5	16.4	-158.30	358.4	-614.4	1,596.0	1,571.1	24.93	64.031	
5,118.1	4,885.0	4,855.2	4,788.8	23.6	16.4	-158.52	359.3	-616.6	1,603.7	1,578.6	25.06	63.985	
5,200.0	4,961.0	5,013.9	4,947.5	24.2	16.7	-159.50	361.5	-622.0	1,635.2	1,609.5	25.69	63.656	
5,216.5	4,976.4	5,042.8	4,976.4	24.3	16.7	-159.68	361.5	-622.1	1,640.8	1,615.0	25.80	63.588	
5,300.0	5,054.8	5,121.3	5,054.8	24.8	16.8	-160.21	361.5	-622.1	1,667.8	1,641.5	26.33	63.342	
5,314.9	5,069.0	5,135.4	5,069.0	24.8	16.8	-160.30	361.5	-622.1	1,672.4	1,646.0	26.42	63.296	
5,400.0	5,149.9	5,216.3	5,149.9	25.3	16.9	-160.77	361.5	-622.1	1,697.3	1,670.3	26.94	63.005	
5,413.4	5,162.7	5,229.1	5,162.7	25.4	17.0	-160.84	361.5	-622.1	1,701.0	1,674.0	27.02	62.960	
5,500.0	5,245.9	5,312.4	5,245.9	25.8	17.1	-161.25	361.5	-622.1	1,723.7	1,696.1	27.52	62.641	
5,511.8	5,257.3	5,323.8	5,257.3	25.9	17.1	-161.30	361.5	-622.1	1,726.6	1,699.0	27.58	62.599	
5,600.0	5,342.9	5,409.3	5,342.9	26.3	17.2	-161.65	361.5	-622.1	1,746.9	1,718.8	28.06	62.254	
5,610.2	5,352.9	5,419.3	5,352.9	26.3	17.2	-161.69	361.5	-622.1	1,749.1	1,721.0	28.11	62.215	
5,700.0	5,440.7	5,507.1	5,440.7	26.7	17.4	-162.00	361.5	-622.1	1,766.9	1,738.3	28.57	61.846	
5,708.6	5,449.1	5,515.6	5,449.1	26.7	17.4	-162.02	361.5	-622.1	1,768.5	1,739.9	28.61	61.811	
5,800.0	5,539.1	5,605.5	5,539.1	27.0	17.5	-162.27	361.5	-622.1	1,783.7	1,754.6	29.04	61.416	
5,807.1	5,546.1	5,612.5	5,546.1	27.0	17.5	-162.29	361.5	-622.1	1,784.7	1,755.6	29.07	61.387	
5,900.0	5,638.1	5,704.5	5,638.1	27.3	17.7	-162.49	361.5	-622.1	1,797.2	1,767.7	29.48	60.967	
5,905.5	5,643.5	5,710.0	5,643.5	27.3	17.7	-162.50	361.5	-622.1	1,797.8	1,768.3	29.50	60.943	
6,000.0	5,737.5	5,803.9	5,737.5	27.5	17.8	-162.66	361.5	-622.1	1,807.3	1,777.5	29.88	60.497	
6,003.9	5,741.4	5,807.8	5,741.4	27.5	17.8	-162.66	361.5	-622.1	1,807.7	1,777.8	29.89	60.479	
6,100.0	5,837.2	5,903.7	5,837.2	27.7	18.0	-162.76	361.5	-622.1	1,814.2	1,784.0	30.23	60.005	
6,102.3	5,839.6	5,906.0	5,839.6	27.7	18.0	-162.77	361.5	-622.1	1,814.4	1,784.1	30.24	59.993	
6,200.0	5,937.2	6,003.6	5,937.2	27.9	18.1	-162.82	361.5	-622.1	1,817.8	1,787.2	30.56	59.490	
6,200.8	5,937.9	6,004.4	5,937.9	27.9	18.1	-162.82	361.5	-622.1	1,817.8	1,787.2	30.56	59.486	
6,256.6	5,993.8	6,060.2	5,993.8	27.9	18.2	-90.92	361.5	-622.1	1,818.3	1,787.6	30.72	59.189	
6,286.6	6,023.8	6,090.2	6,023.8	27.9	18.3	-90.92	361.5	-622.1	1,818.3	1,787.5	30.82	58.989	
6,299.2	6,036.4	6,102.8	6,036.4	27.9	18.3	89.08	361.5	-622.1	1,818.3	1,787.5	30.87	58.908	
6,300.0	6,037.2	6,103.6	6,037.2	27.9	18.3	89.08	361.5	-622.1	1,818.3	1,787.4	30.87	58.903	
6,350.0	6,087.1	6,153.5	6,087.1	28.0	18.4	89.17	361.5	-622.1	1,818.3	1,787.3	31.03	58.602	
6,397.6	6,134.3	6,200.0	6,133.6	28.0	18.4	89.35	361.3	-622.1	1,818.2	1,787.0	31.16	58.351	
6,400.0	6,136.7	6,202.6	6,136.2	28.0	18.4	89.36	361.3	-622.1	1,818.2	1,787.0	31.17	58.340	
6,450.0	6,185.7	6,251.0	6,184.5	28.0	18.5	89.57	358.4	-622.1	1,818.1	1,786.9	31.26	58.167	
6,496.0	6,230.2	6,295.9	6,229.1	28.0	18.5	89.76	352.8	-622.1	1,818.1	1,786.8	31.31	58.076	
6,500.0	6,234.0	6,300.0	6,233.1	28.0	18.5	89.78	352.2	-622.1	1,818.1	1,786.8	31.31	58.067	
6,550.0	6,281.3	6,349.1	6,281.2	28.0	18.6	89.99	342.6	-622.1	1,818.1	1,786.8	31.33	58.035	
6,551.4	6,282.6	6,350.5	6,282.6	28.0	18.6	90.00	342.3	-622.1	1,818.1	1,786.8	31.33	58.035	
6,594.5	6,322.2	6,393.3	6,323.9	27.9	18.6	90.18	331.2	-622.1	1,818.1	1,786.8	31.32	58.057	
6,600.0	6,327.3	6,398.9	6,329.2	27.9	18.6	90.21	329.6	-622.1	1,818.1	1,786.8	31.31	58.060	
6,650.0	6,371.8	6,449.1	6,376.7	27.9	18.6	90.42	313.1	-622.1	1,818.1	1,786.9	31.28	58.130	
6,692.9	6,408.6	6,492.6	6,416.7	27.9	18.6	90.61	296.2	-622.1	1,818.2	1,787.0	31.23	58.216	
6,700.0	6,414.6	6,499.8	6,423.3	27.8	18.6	90.64	293.1	-622.1	1,818.2	1,787.0	31.22	58.231	
6,750.0	6,455.5	6,551.1	6,468.8	27.8	18.6	90.85	269.6	-622.1	1,818.3	1,787.1	31.16	58.346	
6,791.3	6,487.7	6,593.8	6,505.4	27.7	18.6	91.02	247.6	-622.1	1,818.4	1,787.3	31.12	58.435	
6,800.0	6,494.3	6,602.8	6,513.0	27.7	18.6	91.06	242.6	-622.1	1,818.4	1,787.3	31.11	58.453	
6,850.0	6,530.8	6,655.1	6,555.5	27.7	18.6	91.26	212.2	-622.1	1,818.5	1,787.5	31.07	58.528	
6,889.7	6,558.1	6,697.0	6,587.9	27.6	18.6	91.42	185.6	-622.1	1,818.7	1,787.6	31.06	58.548	
6,900.0	6,564.9	6,707.9	6,596.0	27.6	18.6	91.46	178.5	-622.1	1,818.7	1,787.6	31.06	58.546	
6,950.0	6,596.3	6,761.2	6,634.4	27.6	18.6	91.65	141.4	-622.1	1,818.9	1,787.8	31.10	58.480	
6,988.2	6,618.4	6,802.3	6,662.0	27.5	18.6	91.79	111.0	-622.1	1,819.0	1,787.8	31.17	58.358	
7,000.0	6,624.9	6,815.1	6,670.2	27.5	18.6	91.84	101.2	-622.1	1,819.0	1,787.8	31.20	58.304	
7,050.0	6,650.6	6,869.4	6,703.1	27.5	18.6	92.01	58.0	-622.1	1,819.2	1,787.9	31.37	57.992	
7,086.6	6,667.5	6,909.5	6,725.3	27.5	18.6	92.14	24.6	-622.1	1,819.4	1,787.8	31.55	57.671	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5E-323 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWMD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,673.3	6,924.3	6,733.0	27.5	18.6	92.18	12.0	-622.1	1,819.4	1,787.8	31.62	57.535	
7,150.0	6,692.7	6,979.6	6,759.5	27.5	18.7	92.34	-36.6	-622.1	1,819.6	1,787.6	31.97	56.910	
7,185.0	6,704.4	7,018.6	6,775.8	27.5	18.8	92.44	-72.0	-622.1	1,819.7	1,787.5	32.29	56.358	
7,200.0	6,709.0	7,035.4	6,782.3	27.5	18.8	92.48	-87.4	-622.1	1,819.8	1,787.4	32.43	56.119	
7,250.0	6,721.8	7,091.6	6,801.2	27.5	19.0	92.61	-140.3	-622.1	1,820.0	1,787.0	32.99	55.170	
7,283.4	6,728.6	7,129.4	6,811.5	27.5	19.1	92.69	-176.7	-622.1	1,820.1	1,786.7	33.43	54.439	
7,300.0	6,731.3	7,148.1	6,816.0	27.6	19.2	92.73	-194.9	-622.1	1,820.2	1,786.5	33.66	54.077	
7,350.0	6,737.3	7,205.1	6,826.4	27.7	19.5	92.83	-250.9	-622.1	1,820.3	1,785.9	34.44	52.856	
7,381.9	6,739.4	7,241.5	6,830.8	27.7	19.7	92.89	-287.1	-622.1	1,820.4	1,785.4	35.00	52.019	
7,400.0	6,739.9	7,262.3	6,832.5	27.8	19.9	92.92	-307.8	-622.1	1,820.5	1,785.1	35.32	51.540	
7,416.5	6,740.0	7,281.3	6,833.5	27.8	20.0	92.94	-326.7	-622.1	1,820.5	1,784.9	35.63	51.089	
7,480.3	6,739.5	7,349.6	6,833.7	28.0	20.6	92.96	-395.0	-622.1	1,820.5	1,783.6	36.88	49.361	
7,500.0	6,739.4	7,369.3	6,833.5	28.1	20.7	92.96	-414.7	-622.1	1,820.5	1,783.3	37.26	48.857	
7,578.7	6,738.9	7,448.0	6,832.8	28.5	21.5	92.96	-493.4	-622.1	1,820.5	1,781.6	38.95	46.744	
7,600.0	6,738.7	7,469.3	6,832.6	28.6	21.8	92.95	-514.7	-622.1	1,820.5	1,781.1	39.41	46.193	
7,677.1	6,738.2	7,546.4	6,831.9	29.1	22.6	92.95	-591.9	-622.1	1,820.5	1,779.3	41.25	44.137	
7,700.0	6,738.1	7,569.3	6,831.7	29.2	22.9	92.95	-614.7	-622.1	1,820.5	1,778.7	41.80	43.553	
7,775.6	6,737.5	7,644.8	6,831.0	29.7	23.9	92.94	-690.3	-622.1	1,820.5	1,776.7	43.75	41.609	
7,800.0	6,737.4	7,669.3	6,830.8	29.9	24.2	92.94	-714.7	-622.1	1,820.5	1,776.1	44.39	41.009	
7,874.0	6,736.9	7,743.3	6,830.1	30.6	25.2	92.94	-788.7	-622.1	1,820.5	1,774.0	46.43	39.208	
7,900.0	6,736.7	7,769.3	6,829.9	30.8	25.5	92.93	-814.7	-622.1	1,820.5	1,773.3	47.16	38.606	
7,972.4	6,736.2	7,841.7	6,829.2	31.5	26.6	92.93	-887.1	-622.1	1,820.5	1,771.2	49.25	36.960	
8,000.0	6,736.0	7,869.3	6,828.9	31.8	27.0	92.93	-914.7	-622.1	1,820.5	1,770.4	50.06	36.365	
8,070.8	6,735.5	7,940.1	6,828.3	32.5	28.0	92.92	-985.5	-622.1	1,820.5	1,768.3	52.20	34.875	
8,100.0	6,735.3	7,969.3	6,828.0	32.8	28.5	92.92	-1,014.7	-622.1	1,820.4	1,767.4	53.08	34.293	
8,169.3	6,734.9	8,038.5	6,827.4	33.6	29.5	92.91	-1,084.0	-622.1	1,820.4	1,765.2	55.25	32.952	
8,200.0	6,734.6	8,069.3	6,827.1	34.0	30.0	92.91	-1,114.7	-622.1	1,820.4	1,764.2	56.21	32.387	
8,267.7	6,734.2	8,137.0	6,826.5	34.8	31.1	92.91	-1,182.4	-622.1	1,820.4	1,762.1	58.38	31.184	
8,300.0	6,734.0	8,169.3	6,826.2	35.2	31.6	92.90	-1,214.7	-622.1	1,820.4	1,761.0	59.42	30.638	
8,366.1	6,733.5	8,235.4	6,825.6	36.1	32.6	92.90	-1,280.8	-622.1	1,820.4	1,758.8	61.58	29.560	
8,400.0	6,733.3	8,269.3	6,825.3	36.5	33.2	92.90	-1,314.7	-622.1	1,820.4	1,757.7	62.70	29.035	
8,464.5	6,732.8	8,333.8	6,824.7	37.4	34.2	92.89	-1,379.2	-622.1	1,820.4	1,755.6	64.85	28.071	
8,500.0	6,732.6	8,369.3	6,824.4	37.9	34.8	92.89	-1,414.7	-622.1	1,820.4	1,754.4	66.04	27.566	
8,563.0	6,732.2	8,432.2	6,823.8	38.8	35.9	92.89	-1,477.6	-622.1	1,820.4	1,752.2	68.17	26.703	
8,600.0	6,731.9	8,469.3	6,823.5	39.3	36.5	92.88	-1,514.7	-622.1	1,820.4	1,751.0	69.43	26.219	
8,661.4	6,731.5	8,530.7	6,822.9	40.2	37.5	92.88	-1,576.1	-622.1	1,820.4	1,748.8	71.54	25.446	
8,700.0	6,731.2	8,569.3	6,822.6	40.8	38.2	92.88	-1,614.7	-622.1	1,820.4	1,747.5	72.87	24.982	
8,759.8	6,730.8	8,629.1	6,822.0	41.7	39.2	92.87	-1,674.5	-622.1	1,820.4	1,745.4	74.94	24.290	
8,800.0	6,730.6	8,669.3	6,821.7	42.3	39.9	92.87	-1,714.7	-622.1	1,820.4	1,744.0	76.34	23.845	
8,858.2	6,730.2	8,727.5	6,821.2	43.2	40.9	92.86	-1,772.9	-622.1	1,820.4	1,742.0	78.39	23.223	
8,900.0	6,729.9	8,769.3	6,820.8	43.8	41.7	92.86	-1,814.6	-622.1	1,820.4	1,740.5	79.85	22.797	
8,956.7	6,729.5	8,825.9	6,820.3	44.7	42.6	92.86	-1,871.3	-622.1	1,820.4	1,738.5	81.86	22.238	
9,000.0	6,729.2	8,869.3	6,819.9	45.4	43.4	92.85	-1,914.6	-622.1	1,820.3	1,737.0	83.39	21.829	
9,055.1	6,728.8	8,924.4	6,819.4	46.3	44.4	92.85	-1,969.7	-622.1	1,820.3	1,735.0	85.35	21.327	
9,100.0	6,728.5	8,969.3	6,819.0	47.0	45.2	92.85	-2,014.6	-622.1	1,820.3	1,733.4	86.96	20.934	
9,153.5	6,728.2	9,022.8	6,818.5	47.9	46.1	92.84	-2,068.2	-622.1	1,820.3	1,731.5	88.87	20.482	
9,200.0	6,727.8	9,069.3	6,818.0	48.6	47.0	92.84	-2,114.6	-622.1	1,820.3	1,729.8	90.54	20.105	
9,251.9	6,727.5	9,121.2	6,817.6	49.5	47.9	92.84	-2,166.6	-622.1	1,820.3	1,727.9	92.41	19.697	
9,300.0	6,727.2	9,169.3	6,817.1	50.3	48.7	92.83	-2,214.6	-622.1	1,820.3	1,726.2	94.15	19.334	
9,350.4	6,726.8	9,219.6	6,816.7	51.1	49.6	92.83	-2,265.0	-622.1	1,820.3	1,724.3	95.97	18.967	
9,400.0	6,726.5	9,269.3	6,816.2	51.9	50.5	92.83	-2,314.6	-622.1	1,820.3	1,722.5	97.77	18.617	
9,448.8	6,726.1	9,318.1	6,815.8	52.7	51.4	92.82	-2,363.4	-622.1	1,820.3	1,720.7	99.55	18.285	

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 EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5E-323 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWMD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	6,725.8	9,369.3	6,815.3	53.6	52.3	92.82	-2,414.6	-622.1	1,820.3	1,718.9	101.42	17.949	
9,547.2	6,725.5	9,416.5	6,814.9	54.4	53.2	92.82	-2,461.8	-622.1	1,820.3	1,717.1	103.14	17.649	
9,600.0	6,725.1	9,469.3	6,814.4	55.3	54.2	92.81	-2,514.6	-622.1	1,820.3	1,715.2	105.07	17.324	
9,645.6	6,724.8	9,514.9	6,814.0	56.1	55.0	92.81	-2,560.3	-622.1	1,820.3	1,713.5	106.74	17.053	
9,700.0	6,724.4	9,569.3	6,813.5	57.0	56.0	92.80	-2,614.6	-622.1	1,820.3	1,711.5	108.74	16.740	
9,744.1	6,724.1	9,613.3	6,813.1	57.8	56.8	92.80	-2,658.7	-622.1	1,820.3	1,709.9	110.36	16.494	
9,800.0	6,723.8	9,669.3	6,812.6	58.7	57.8	92.80	-2,714.6	-622.1	1,820.3	1,707.8	112.42	16.192	
9,842.5	6,723.5	9,711.8	6,812.2	59.5	58.6	92.79	-2,757.1	-622.1	1,820.2	1,706.3	113.99	15.969	
9,900.0	6,723.1	9,769.3	6,811.7	60.5	59.6	92.79	-2,814.6	-622.1	1,820.2	1,704.1	116.11	15.677	
9,940.9	6,722.8	9,810.2	6,811.3	61.2	60.4	92.79	-2,855.5	-622.1	1,820.2	1,702.6	117.62	15.475	
10,000.0	6,722.4	9,869.3	6,810.8	62.2	61.5	92.78	-2,914.6	-622.1	1,820.2	1,700.4	119.81	15.193	
10,039.3	6,722.1	9,908.6	6,810.4	62.9	62.2	92.78	-2,954.0	-622.1	1,820.2	1,699.0	121.27	15.010	
10,100.0	6,721.7	9,969.3	6,809.9	64.0	63.3	92.78	-3,014.6	-622.1	1,820.2	1,696.7	123.52	14.736	
10,137.8	6,721.5	10,007.0	6,809.5	64.7	64.0	92.77	-3,052.4	-622.1	1,820.2	1,695.3	124.92	14.571	
10,200.0	6,721.0	10,069.3	6,809.0	65.8	65.2	92.77	-3,114.6	-622.1	1,820.2	1,693.0	127.24	14.306	
10,236.2	6,720.8	10,105.5	6,808.6	66.4	65.8	92.77	-3,150.8	-622.1	1,820.2	1,691.6	128.58	14.156	
10,300.0	6,720.4	10,169.3	6,808.1	67.5	67.0	92.76	-3,214.6	-622.1	1,820.2	1,689.2	130.96	13.899	
10,334.6	6,720.1	10,203.9	6,807.7	68.2	67.7	92.76	-3,249.2	-622.1	1,820.2	1,687.9	132.25	13.763	
10,400.0	6,719.7	10,269.3	6,807.1	69.3	68.9	92.75	-3,314.6	-622.1	1,820.2	1,685.5	134.69	13.514	
10,433.0	6,719.4	10,302.3	6,806.8	69.9	69.5	92.75	-3,347.6	-622.1	1,820.2	1,684.3	135.92	13.391	
10,500.0	6,719.0	10,369.3	6,806.2	71.1	70.7	92.75	-3,414.6	-622.1	1,820.2	1,681.8	138.43	13.149	
10,531.5	6,718.8	10,400.7	6,805.9	71.7	71.3	92.75	-3,446.1	-622.1	1,820.2	1,680.6	139.60	13.038	
10,600.0	6,718.3	10,469.3	6,805.3	72.9	72.6	92.74	-3,514.6	-622.1	1,820.2	1,678.0	142.17	12.803	
10,629.9	6,718.1	10,499.2	6,805.1	73.4	73.2	92.74	-3,544.5	-622.1	1,820.2	1,676.9	143.29	12.703	
10,700.0	6,717.6	10,569.3	6,804.4	74.7	74.5	92.73	-3,614.6	-622.1	1,820.2	1,674.2	145.92	12.474	
10,728.3	6,717.4	10,597.6	6,804.2	75.2	75.0	92.73	-3,642.9	-622.1	1,820.2	1,673.2	146.98	12.384	
10,800.0	6,717.0	10,669.3	6,803.5	76.5	76.3	92.73	-3,714.6	-622.1	1,820.1	1,670.5	149.67	12.161	
10,826.7	6,716.8	10,696.0	6,803.3	77.0	76.8	92.72	-3,741.3	-622.1	1,820.1	1,669.5	150.67	12.080	
10,900.0	6,716.3	10,769.3	6,802.6	78.3	78.2	92.72	-3,814.6	-622.1	1,820.1	1,666.7	153.43	11.863	
10,925.2	6,716.1	10,794.4	6,802.4	78.8	78.7	92.72	-3,839.7	-622.1	1,820.1	1,665.8	154.37	11.791	
11,000.0	6,715.6	10,869.3	6,801.7	80.2	80.1	92.71	-3,914.6	-622.1	1,820.1	1,662.9	157.19	11.579	
11,023.6	6,715.4	10,892.9	6,801.5	80.6	80.5	92.71	-3,938.2	-622.1	1,820.1	1,662.0	158.07	11.514	
11,100.0	6,714.9	10,969.3	6,800.8	82.0	82.0	92.70	-4,014.6	-622.1	1,820.1	1,659.2	160.95	11.308	
11,122.0	6,714.8	10,991.3	6,800.6	82.4	82.4	92.70	-4,036.6	-622.1	1,820.1	1,658.3	161.78	11.250	
11,200.0	6,714.2	11,069.3	6,799.9	83.8	83.8	92.70	-4,114.6	-622.1	1,820.1	1,655.4	164.72	11.050	
11,220.4	6,714.1	11,089.7	6,799.7	84.2	84.2	92.70	-4,135.0	-622.1	1,820.1	1,654.6	165.49	10.998	
11,300.0	6,713.5	11,169.3	6,799.0	85.7	85.7	92.69	-4,214.5	-622.1	1,820.1	1,651.6	168.49	10.802	
11,318.9	6,713.4	11,188.1	6,798.8	86.0	86.1	92.69	-4,233.4	-622.1	1,820.1	1,650.9	169.20	10.757	
11,400.0	6,712.9	11,269.3	6,798.0	87.5	87.6	92.68	-4,314.5	-622.1	1,820.1	1,647.8	172.27	10.565	
11,417.3	6,712.7	11,286.6	6,797.9	87.8	87.9	92.68	-4,331.8	-622.1	1,820.1	1,647.2	172.92	10.526	
11,500.0	6,712.2	11,369.3	6,797.1	89.3	89.5	92.68	-4,414.5	-622.1	1,820.1	1,644.0	176.04	10.339	
11,515.7	6,712.1	11,385.0	6,797.0	89.6	89.8	92.67	-4,430.3	-622.1	1,820.1	1,643.4	176.64	10.304	
11,600.0	6,711.5	11,469.3	6,796.2	91.2	91.4	92.67	-4,514.5	-622.1	1,820.1	1,640.2	179.83	10.121	
11,614.1	6,711.4	11,483.4	6,796.1	91.4	91.6	92.67	-4,528.7	-622.1	1,820.1	1,639.7	180.36	10.091	
11,700.0	6,710.8	11,569.3	6,795.3	93.0	93.3	92.66	-4,614.5	-622.1	1,820.0	1,636.4	183.61	9.913	
11,712.6	6,710.7	11,581.8	6,795.2	93.3	93.5	92.66	-4,627.1	-622.1	1,820.0	1,636.0	184.08	9.887	
11,800.0	6,710.1	11,669.3	6,794.4	94.9	95.1	92.65	-4,714.5	-622.1	1,820.0	1,632.6	187.39	9.712	
11,811.0	6,710.1	11,680.3	6,794.3	95.1	95.4	92.65	-4,725.5	-622.1	1,820.0	1,632.2	187.81	9.691	
11,900.0	6,709.5	11,769.3	6,793.5	96.7	97.0	92.65	-4,814.5	-622.1	1,820.0	1,628.8	191.18	9.520	
11,909.4	6,709.4	11,778.7	6,793.4	96.9	97.2	92.65	-4,823.9	-622.1	1,820.0	1,628.5	191.54	9.502	
12,000.0	6,708.8	11,869.3	6,792.6	98.6	98.9	92.64	-4,914.5	-622.1	1,820.0	1,625.0	194.97	9.335	
12,007.8	6,708.7	11,877.1	6,792.5	98.7	99.1	92.64	-4,922.4	-622.1	1,820.0	1,624.7	195.27	9.320	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5E-323 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,100.0	6,708.1	11,969.3	6,791.7	100.4	100.8	92.63	-5,014.5	-622.1	1,820.0	1,621.2	198.76	9.157	
12,106.3	6,708.1	11,975.5	6,791.6	100.6	100.9	92.63	-5,020.8	-622.1	1,820.0	1,621.0	199.00	9.146	
12,200.0	6,707.4	12,069.3	6,790.8	102.3	102.7	92.63	-5,114.5	-622.1	1,820.0	1,617.4	202.56	8.985	
12,204.7	6,707.4	12,074.0	6,790.7	102.4	102.8	92.62	-5,119.2	-622.1	1,820.0	1,617.3	202.74	8.977	
12,300.0	6,706.7	12,169.3	6,789.9	104.2	104.6	92.62	-5,214.5	-622.1	1,820.0	1,613.6	206.35	8.820	
12,303.1	6,706.7	12,172.4	6,789.8	104.2	104.7	92.62	-5,217.6	-622.1	1,820.0	1,613.5	206.47	8.815	
12,400.0	6,706.1	12,269.3	6,789.0	106.0	106.5	92.61	-5,314.5	-622.1	1,820.0	1,609.8	210.15	8.660	
12,401.5	6,706.0	12,270.8	6,788.9	106.1	106.5	92.61	-5,316.0	-622.1	1,820.0	1,609.8	210.21	8.658	
12,500.0	6,705.4	12,369.3	6,788.0	107.9	108.4	92.60	-5,414.5	-622.1	1,820.0	1,606.0	213.95	8.506	
12,598.4	6,704.7	12,467.7	6,787.1	109.7	110.3	92.60	-5,512.9	-622.1	1,819.9	1,602.3	217.69	8.360	
12,600.0	6,704.7	12,469.3	6,787.1	109.8	110.3	92.60	-5,514.5	-622.1	1,819.9	1,602.2	217.75	8.358	
12,696.8	6,704.0	12,566.1	6,786.3	111.6	112.1	92.59	-5,611.3	-622.1	1,819.9	1,598.5	221.43	8.219	
12,700.0	6,704.0	12,569.3	6,786.2	111.6	112.2	92.59	-5,614.5	-622.1	1,819.9	1,598.4	221.55	8.214	
12,795.2	6,703.4	12,664.5	6,785.4	113.4	114.0	92.58	-5,709.7	-622.1	1,819.9	1,594.8	225.18	8.082	
12,800.0	6,703.3	12,669.3	6,785.3	113.5	114.1	92.58	-5,714.5	-622.1	1,819.9	1,594.6	225.36	8.076	
12,893.7	6,702.7	12,762.9	6,784.5	115.3	115.9	92.57	-5,808.2	-622.1	1,819.9	1,591.0	228.92	7.950	
12,900.0	6,702.7	12,769.3	6,784.4	115.4	116.0	92.57	-5,814.5	-622.1	1,819.9	1,590.8	229.16	7.942	
12,992.1	6,702.0	12,861.4	6,783.6	117.1	117.7	92.57	-5,906.6	-622.1	1,819.9	1,587.2	232.67	7.822	
13,000.0	6,702.0	12,869.3	6,783.5	117.3	117.9	92.57	-5,914.5	-622.1	1,819.9	1,586.9	232.97	7.812	
13,090.5	6,701.4	12,959.8	6,782.7	119.0	119.6	92.56	-6,005.0	-622.1	1,819.9	1,583.5	236.42	7.698	
13,100.0	6,701.3	12,969.3	6,782.6	119.1	119.8	92.56	-6,014.5	-622.1	1,819.9	1,583.1	236.78	7.686	
13,188.9	6,700.7	13,058.2	6,781.8	120.8	121.5	92.55	-6,103.4	-622.1	1,819.9	1,579.7	240.17	7.578	
13,200.0	6,700.6	13,069.3	6,781.7	121.0	121.7	92.55	-6,114.5	-622.1	1,819.9	1,579.3	240.59	7.564	
13,287.4	6,700.0	13,156.6	6,780.9	122.7	123.4	92.55	-6,201.8	-622.1	1,819.9	1,576.0	243.91	7.461	
13,300.0	6,699.9	13,169.3	6,780.8	122.9	123.6	92.55	-6,214.5	-622.1	1,819.9	1,575.5	244.40	7.446	
13,385.8	6,699.3	13,255.1	6,780.0	124.5	125.2	92.54	-6,300.3	-622.1	1,819.9	1,572.2	247.67	7.348	
13,400.0	6,699.3	13,269.3	6,779.9	124.8	125.5	92.54	-6,314.5	-622.1	1,819.9	1,571.7	248.21	7.332	
13,484.2	6,698.7	13,353.5	6,779.1	126.4	127.1	92.53	-6,398.7	-622.1	1,819.9	1,568.4	251.42	7.238	
13,500.0	6,698.6	13,369.3	6,778.9	126.7	127.4	92.53	-6,414.5	-622.1	1,819.9	1,567.8	252.02	7.221	
13,582.6	6,698.0	13,451.9	6,778.2	128.2	129.0	92.53	-6,497.1	-622.1	1,819.8	1,564.7	255.17	7.132	
13,600.0	6,697.9	13,469.3	6,778.0	128.5	129.3	92.52	-6,514.4	-622.1	1,819.8	1,564.0	255.83	7.113	
13,681.1	6,697.3	13,550.3	6,777.3	130.1	130.8	92.52	-6,595.5	-622.1	1,819.8	1,560.9	258.92	7.028	
13,700.0	6,697.2	13,569.3	6,777.1	130.4	131.2	92.52	-6,614.4	-622.1	1,819.8	1,560.2	259.65	7.009	
13,779.5	6,696.7	13,648.8	6,776.4	131.9	132.7	92.51	-6,693.9	-622.1	1,819.8	1,557.1	262.68	6.928	
13,800.0	6,696.5	13,669.3	6,776.2	132.3	133.1	92.51	-6,714.4	-622.1	1,819.8	1,556.4	263.46	6.907	
13,877.9	6,696.0	13,747.2	6,775.5	133.8	134.6	92.50	-6,792.4	-622.1	1,819.8	1,553.4	266.43	6.830	
13,900.0	6,695.8	13,769.3	6,775.3	134.2	135.0	92.50	-6,814.4	-622.1	1,819.8	1,552.5	267.28	6.809	
13,976.3	6,695.3	13,845.6	6,774.6	135.6	136.5	92.50	-6,890.8	-622.1	1,819.8	1,549.6	270.19	6.735	
14,000.0	6,695.2	13,869.3	6,774.4	136.1	136.9	92.50	-6,914.4	-622.1	1,819.8	1,548.7	271.09	6.713	
14,034.1	6,695.0	13,903.3	6,774.1	136.7	137.6	92.49	-6,948.5	-622.1	1,819.8	1,547.4	272.38	6.681 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	0.67	119.9	1.4	119.9				
98.4	98.4	98.4	98.4	0.1	0.1	0.67	119.9	1.4	119.9	119.7	0.17	705.410	
100.0	100.0	100.0	100.0	0.1	0.1	0.67	119.9	1.4	119.9	119.7	0.17	692.641	
196.8	196.8	196.8	196.8	0.3	0.3	0.67	119.9	1.4	119.9	119.3	0.61	197.020	
200.0	200.0	200.0	200.0	0.3	0.3	0.67	119.9	1.4	119.9	119.3	0.62	192.539	
295.3	295.3	295.3	295.3	0.5	0.5	0.67	119.9	1.4	119.9	118.8	1.05	114.070	
300.0	300.0	300.0	300.0	0.5	0.5	0.67	119.9	1.4	119.9	118.8	1.07	111.810	
393.7	393.7	393.7	393.7	0.7	0.7	0.67	119.9	1.4	119.9	118.4	1.49	80.273	
400.0	400.0	400.0	400.0	0.8	0.8	0.67	119.9	1.4	119.9	118.4	1.52	78.779	
492.1	492.1	492.1	492.1	1.0	1.0	0.67	119.9	1.4	119.9	117.9	1.94	61.926	
500.0	500.0	500.0	500.0	1.0	1.0	0.67	119.9	1.4	119.9	117.9	1.97	60.813	
590.5	590.5	590.5	590.5	1.2	1.2	0.67	119.9	1.4	119.9	117.5	2.38	50.405	
600.0	600.0	600.0	600.0	1.2	1.2	0.67	119.9	1.4	119.9	117.5	2.42	49.520	
689.0	689.0	689.0	689.0	1.4	1.4	0.67	119.9	1.4	119.9	117.1	2.82	42.498	
700.0	700.0	700.0	700.0	1.4	1.4	0.67	119.9	1.4	119.9	117.0	2.87	41.765	
787.4	787.4	787.4	787.4	1.6	1.6	0.67	119.9	1.4	119.9	116.6	3.26	36.736	
800.0	800.0	800.0	800.0	1.7	1.7	0.67	119.9	1.4	119.9	116.6	3.32	36.109	
885.8	885.8	885.8	885.8	1.9	1.9	0.67	119.9	1.4	119.9	116.2	3.71	32.350	
900.0	900.0	900.0	900.0	1.9	1.9	0.67	119.9	1.4	119.9	116.1	3.77	31.803	
984.2	984.2	984.2	984.2	2.1	2.1	0.67	119.9	1.4	119.9	115.7	4.15	28.899	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.67	119.9	1.4	119.9	115.7	4.22	28.414	
1,037.2	1,037.2	1,037.2	1,037.2	2.2	2.2	0.67	119.9	1.4	119.9	115.5	4.39	27.331 CC	
1,082.7	1,082.7	1,082.3	1,082.3	2.3	2.3	0.58	119.9	1.2	119.9	115.3	4.59	26.147	
1,100.0	1,100.0	1,099.5	1,099.5	2.3	2.3	0.47	120.0	1.0	120.0	115.3	4.66	25.736 ES	
1,181.1	1,181.1	1,179.7	1,179.6	2.5	2.5	-0.69	120.6	-1.4	120.6	115.6	5.01	24.075	
1,200.0	1,200.0	1,198.4	1,198.3	2.6	2.5	-1.10	120.8	-2.3	120.9	115.8	5.09	23.740	
1,279.5	1,279.5	1,276.7	1,276.5	2.7	2.7	-3.41	122.1	-7.3	122.4	117.0	5.44	22.511	
1,300.0	1,300.0	1,296.9	1,296.6	2.8	2.7	-4.15	122.6	-8.9	122.9	117.4	5.53	22.246	
1,377.9	1,377.9	1,373.3	1,372.6	3.0	2.9	-7.43	124.5	-16.2	125.7	119.8	5.87	21.417	
1,400.0	1,400.0	1,394.8	1,394.0	3.0	3.0	-8.48	125.1	-18.7	126.7	120.7	5.96	21.238	
1,476.4	1,476.4	1,469.1	1,467.6	3.2	3.2	-12.46	127.6	-28.2	131.0	124.7	6.30	20.795	
1,500.0	1,500.0	1,491.9	1,490.2	3.2	3.2	-13.78	128.5	-31.5	132.7	126.3	6.40	20.718	
1,574.8	1,574.8	1,563.9	1,561.2	3.4	3.4	-18.13	131.5	-43.1	139.1	132.3	6.74	20.641	
1,600.0	1,600.0	1,588.1	1,584.9	3.5	3.5	-19.64	132.7	-47.3	141.7	134.8	6.85	20.676	
1,673.2	1,673.2	1,657.9	1,653.4	3.6	3.7	-24.04	136.2	-60.8	150.4	143.2	7.19	20.923	
1,700.0	1,700.0	1,684.1	1,679.0	3.7	3.8	-25.64	137.6	-66.0	154.0	146.7	7.32	21.052	
1,771.6	1,771.6	1,754.2	1,747.5	3.8	4.1	-29.56	141.3	-80.1	164.2	156.5	7.66	21.427	
1,800.0	1,800.0	1,781.9	1,774.7	3.9	4.2	-30.98	142.7	-85.7	168.4	160.6	7.80	21.583	
1,870.1	1,870.1	1,850.5	1,841.7	4.1	4.4	-34.21	146.3	-99.5	179.2	171.1	8.16	21.970	
1,900.0	1,900.0	1,879.7	1,870.3	4.1	4.5	-35.47	147.9	-105.4	184.0	175.7	8.31	22.135	
1,968.5	1,968.5	1,946.7	1,935.9	4.3	4.8	-38.13	151.4	-118.9	195.2	186.6	8.68	22.504	
2,000.0	2,000.0	1,977.6	1,966.0	4.4	4.9	-39.25	153.0	-125.1	200.5	191.7	8.85	22.669	
2,066.9	2,066.9	2,043.0	2,030.1	4.5	5.2	-41.45	156.5	-138.2	212.0	202.8	9.22	23.008	
2,100.0	2,100.0	2,075.4	2,061.7	4.6	5.3	-42.45	158.2	-144.7	217.8	208.4	9.40	23.170	
2,165.3	2,165.3	2,139.3	2,124.2	4.7	5.6	-44.28	161.6	-157.6	229.4	219.7	9.77	23.475	
2,200.0	2,200.0	2,173.2	2,157.4	4.8	5.7	-45.18	163.4	-164.4	235.7	225.7	9.97	23.631	
2,250.0	2,250.0	2,222.1	2,205.2	4.9	5.9	-46.40	166.0	-174.2	244.8	234.5	10.26	23.846	
2,263.8	2,263.8	2,235.6	2,218.4	4.9	6.0	-118.59	166.7	-177.0	247.3	237.1	10.16	24.346	
2,300.0	2,300.0	2,270.9	2,253.0	5.0	6.1	-119.35	168.5	-184.1	254.2	243.8	10.32	24.619	
2,362.2	2,362.2	2,331.4	2,312.2	5.2	6.4	-120.75	171.7	-196.2	266.6	256.0	10.60	25.157	
2,400.0	2,399.9	2,368.1	2,348.0	5.2	6.5	-121.63	173.7	-203.6	274.6	263.9	10.76	25.520	
2,460.6	2,460.4	2,426.6	2,405.2	5.4	6.8	-123.10	176.7	-215.4	288.2	277.2	11.02	26.154	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5E-423 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,499.7	2,464.4	2,442.2	5.4	6.9	-124.07	178.7	-223.0	297.5	286.3	11.18	26.604	
2,559.0	2,558.5	2,520.9	2,497.5	5.6	7.2	-125.54	181.7	-234.4	312.2	300.8	11.42	27.329	
2,600.0	2,599.1	2,559.9	2,535.6	5.7	7.4	-126.56	183.8	-242.2	323.0	311.4	11.59	27.871	
2,657.5	2,656.1	2,614.3	2,588.8	5.8	7.6	-127.98	186.7	-253.1	338.9	327.1	11.82	28.679	
2,700.0	2,698.2	2,654.3	2,627.9	5.9	7.8	-129.03	188.8	-261.2	351.3	339.3	11.98	29.317	
2,755.9	2,753.3	2,706.6	2,679.1	6.1	8.0	-130.37	191.5	-271.7	368.4	356.2	12.20	30.197	
2,800.0	2,796.6	2,747.6	2,719.2	6.2	8.2	-131.41	193.7	-280.0	382.5	370.2	12.37	30.932	
2,854.3	2,849.9	2,797.7	2,768.3	6.3	8.4	-132.66	196.3	-290.0	400.8	388.2	12.58	31.871	
2,900.0	2,894.4	2,839.6	2,809.2	6.5	8.6	-133.68	198.5	-298.5	416.9	404.1	12.75	32.704	
2,952.7	2,945.7	2,887.6	2,856.2	6.6	8.8	-134.82	201.1	-308.1	436.2	423.3	12.95	33.689	
3,000.0	2,991.5	2,930.3	2,897.9	6.8	9.0	-135.80	203.3	-316.7	454.3	441.2	13.12	34.618	
3,051.2	3,040.8	2,976.1	2,942.7	7.0	9.2	-136.82	205.8	-325.9	474.7	461.4	13.32	35.646	
3,100.0	3,087.6	3,019.5	2,985.2	7.1	9.4	-137.76	208.0	-334.7	494.9	481.4	13.50	36.659	
3,149.6	3,134.9	3,063.1	3,027.9	7.4	9.6	-138.66	210.3	-343.4	516.2	502.5	13.69	37.706	
3,200.0	3,182.7	3,107.1	3,070.9	7.6	9.8	-139.54	212.7	-352.3	538.6	524.7	13.88	38.811	
3,248.0	3,228.0	3,148.6	3,111.4	7.8	10.0	-140.34	214.9	-360.6	560.7	546.7	14.06	39.870	
3,300.0	3,276.6	3,193.0	3,154.9	8.1	10.2	-141.16	217.2	-369.6	585.5	571.2	14.26	41.056	
3,346.4	3,319.9	3,232.3	3,193.4	8.3	10.3	-141.86	219.3	-377.5	608.3	593.9	14.44	42.115	
3,400.0	3,369.4	3,277.2	3,237.2	8.6	10.5	-142.62	221.6	-386.5	635.5	620.8	14.65	43.376	
3,444.9	3,410.5	3,314.3	3,273.5	8.9	10.7	-143.22	223.6	-394.0	658.9	644.1	14.83	44.425	
3,500.0	3,460.7	3,359.4	3,317.6	9.2	10.9	-143.91	226.0	-403.0	688.5	673.4	15.05	45.751	
3,543.3	3,499.8	3,394.4	3,351.9	9.5	11.1	-144.42	227.8	-410.1	712.4	697.1	15.23	46.781	
3,600.0	3,550.6	3,439.7	3,396.1	9.9	11.3	-145.05	230.2	-419.2	744.5	729.0	15.46	48.163	
3,641.7	3,587.6	3,472.5	3,428.3	10.3	11.4	-145.49	232.0	-425.8	768.7	753.1	15.64	49.160	
3,709.9	3,647.5	3,525.4	3,480.0	10.8	11.6	-146.14	234.7	-436.4	809.4	793.5	15.92	50.829	
3,740.1	3,673.9	3,548.7	3,502.8	11.1	11.8	-146.66	236.0	-441.1	827.7	811.7	16.08	51.478	
3,800.0	3,726.2	3,594.7	3,547.8	11.6	12.0	-147.63	238.4	-450.4	864.2	847.8	16.39	52.732	
3,838.6	3,759.9	3,624.3	3,576.8	11.9	12.1	-148.22	240.0	-456.3	887.8	871.2	16.59	53.503	
3,900.0	3,813.5	3,671.5	3,622.9	12.5	12.3	-149.09	242.5	-465.8	925.4	908.5	16.92	54.697	
3,937.0	3,845.8	3,700.0	3,650.8	12.8	12.4	-149.59	244.0	-471.6	948.2	931.1	17.12	55.385	
4,000.0	3,900.8	3,748.4	3,698.1	13.4	12.7	-150.38	246.5	-481.3	987.0	969.5	17.46	56.522	
4,035.4	3,931.7	3,775.6	3,724.8	13.7	12.8	-150.80	248.0	-486.8	1,008.9	991.2	17.66	57.135	
4,100.0	3,988.1	3,825.2	3,773.3	14.3	13.0	-151.52	250.6	-496.8	1,048.9	1,030.9	18.02	58.222	
4,133.8	4,017.6	3,851.3	3,798.7	14.7	13.1	-151.88	251.9	-502.0	1,069.9	1,051.7	18.21	58.768	
4,200.0	4,075.4	3,902.1	3,848.5	15.3	13.4	-152.54	254.6	-512.2	1,111.0	1,092.4	18.58	59.807	
4,232.3	4,103.5	3,926.9	3,872.7	15.6	13.5	-152.84	255.9	-517.2	1,131.1	1,112.3	18.76	60.294	
4,300.0	4,162.6	3,978.9	3,923.6	16.2	13.7	-153.45	258.7	-527.7	1,173.3	1,154.2	19.14	61.288	
4,330.7	4,189.4	4,002.5	3,946.7	16.5	13.8	-153.72	259.9	-532.4	1,192.5	1,173.1	19.32	61.722	
4,400.0	4,249.9	4,055.8	3,998.8	17.2	14.1	-154.28	262.7	-543.1	1,235.8	1,216.1	19.72	62.674	
4,429.1	4,275.4	4,078.2	4,020.7	17.5	14.2	-154.50	263.9	-547.6	1,254.0	1,234.1	19.89	63.060	
4,500.0	4,337.2	4,132.7	4,074.0	18.2	14.4	-155.03	266.8	-558.6	1,298.4	1,278.1	20.30	63.974	
4,527.5	4,361.3	4,153.8	4,094.7	18.5	14.5	-155.22	267.9	-562.9	1,315.7	1,295.2	20.46	64.316	
4,600.0	4,424.5	4,209.5	4,149.2	19.2	14.8	-155.71	270.9	-574.1	1,361.2	1,340.3	20.88	65.194	
4,626.0	4,447.2	4,229.5	4,168.7	19.5	14.8	-155.88	271.9	-578.1	1,377.5	1,356.4	21.03	65.498	
4,700.0	4,511.8	4,286.4	4,224.3	20.2	15.1	-156.33	274.9	-589.5	1,424.0	1,402.6	21.46	66.342	
4,724.4	4,533.1	4,305.1	4,242.7	20.5	15.2	-156.47	275.9	-593.3	1,439.4	1,417.8	21.61	66.611	
4,796.7	4,596.3	4,360.7	4,297.1	21.2	15.4	-156.88	278.8	-604.5	1,484.9	1,462.9	22.04	67.389	
4,800.0	4,599.1	4,363.2	4,299.5	21.2	15.5	-156.92	279.0	-605.0	1,487.0	1,464.9	22.06	67.412	
4,822.8	4,619.1	4,380.8	4,316.8	21.4	15.5	-157.19	279.9	-608.5	1,501.3	1,479.1	22.21	67.586	
4,900.0	4,687.3	4,441.2	4,375.8	22.0	15.8	-158.02	283.1	-620.7	1,548.7	1,525.9	22.75	68.087	
4,921.2	4,706.2	4,458.1	4,392.3	22.2	15.9	-158.23	284.0	-624.1	1,561.5	1,538.6	22.89	68.212	
5,000.0	4,777.1	4,521.4	4,454.2	22.8	16.2	-158.95	287.3	-636.8	1,607.8	1,584.4	23.44	68.598	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,794.9	4,537.4	4,469.8	22.9	16.2	-159.12	288.2	-640.0	1,619.2	1,595.6	23.57	68.686	
5,100.0	4,868.3	4,603.5	4,534.5	23.5	16.5	-159.76	291.7	-653.3	1,664.4	1,640.3	24.13	68.976	
5,118.1	4,885.0	4,618.5	4,549.2	23.6	16.6	-159.89	292.4	-656.3	1,674.4	1,650.1	24.25	69.036	
5,200.0	4,961.0	4,687.5	4,616.7	24.2	16.9	-160.44	296.1	-670.2	1,718.3	1,693.5	24.81	69.247	
5,216.5	4,976.4	4,701.5	4,630.4	24.3	17.0	-160.55	296.8	-673.0	1,726.9	1,702.0	24.92	69.286	
5,300.0	5,054.8	4,773.3	4,700.6	24.8	17.3	-161.03	300.6	-687.5	1,769.4	1,743.9	25.48	69.429	
5,314.9	5,069.0	4,786.3	4,713.3	24.8	17.4	-161.11	301.3	-690.1	1,776.7	1,751.2	25.58	69.453	
5,400.0	5,149.9	4,860.8	4,786.2	25.3	17.7	-161.52	305.2	-705.1	1,817.6	1,791.4	26.14	69.539	
5,413.4	5,162.7	4,872.6	4,797.8	25.4	17.8	-161.58	305.9	-707.5	1,823.8	1,797.6	26.22	69.552	
5,500.0	5,245.9	4,949.9	4,873.4	25.8	18.1	-161.94	309.9	-723.0	1,862.9	1,836.1	26.77	69.590	
5,511.8	5,257.3	4,960.5	4,883.7	25.9	18.2	-161.98	310.5	-725.1	1,868.0	1,841.2	26.84	69.595	
5,600.0	5,342.9	5,040.5	4,962.0	26.3	18.5	-162.28	314.7	-741.2	1,905.2	1,877.8	27.38	69.590	
5,610.2	5,352.9	5,049.8	4,971.1	26.3	18.6	-162.31	315.2	-743.1	1,909.4	1,881.9	27.44	69.589	
5,700.0	5,440.7	5,132.4	5,051.9	26.7	19.0	-162.56	319.6	-759.7	1,944.5	1,916.6	27.96	69.548	
5,708.6	5,449.1	5,140.4	5,059.7	26.7	19.0	-162.58	320.0	-761.3	1,947.8	1,919.8	28.01	69.544	
5,800.0	5,539.1	5,225.6	5,143.1	27.0	19.4	-162.78	324.5	-778.5	1,980.7	1,952.2	28.51	69.470	
5,807.1	5,546.1	5,232.3	5,149.6	27.0	19.4	-162.79	324.8	-779.8	1,983.2	1,954.6	28.55	69.465	
5,900.0	5,638.1	5,320.0	5,235.4	27.3	19.8	-162.94	329.5	-797.5	2,013.8	1,984.8	29.03	69.362	
5,905.5	5,643.5	5,325.2	5,240.5	27.3	19.8	-162.94	329.7	-798.5	2,015.5	1,986.5	29.06	69.356	
6,000.0	5,737.5	5,415.4	5,328.7	27.5	20.3	-163.05	334.5	-816.6	2,043.7	2,014.2	29.52	69.227	
6,003.9	5,741.4	5,419.1	5,332.3	27.5	20.3	-163.05	334.7	-817.4	2,044.8	2,015.3	29.54	69.222	
6,100.0	5,837.2	5,511.7	5,422.8	27.7	20.7	-163.11	339.6	-836.0	2,070.4	2,040.5	29.98	69.068	
6,102.3	5,839.6	5,513.9	5,425.1	27.7	20.7	-163.11	339.7	-836.5	2,071.0	2,041.0	29.99	69.065	
6,200.0	5,937.2	5,763.4	5,670.6	27.9	21.5	-162.96	350.8	-878.6	2,091.5	2,060.8	30.72	68.073	
6,200.8	5,937.9	5,766.0	5,673.2	27.9	21.5	-162.96	350.9	-879.0	2,091.6	2,060.9	30.73	68.063	
6,256.6	5,993.8	5,953.7	5,859.9	27.9	22.0	-90.96	355.6	-896.9	2,097.5	2,066.3	31.17	67.294	
6,286.6	6,023.8	6,055.4	5,961.5	27.9	22.1	-90.93	356.8	-901.7	2,098.9	2,067.5	31.40	66.853	
6,299.2	6,036.4	6,098.0	6,004.1	27.9	22.2	89.07	357.1	-902.7	2,099.2	2,067.7	31.49	66.672	
6,300.0	6,037.2	6,100.7	6,006.8	27.9	22.2	89.07	357.1	-902.7	2,099.2	2,067.7	31.49	66.660	
6,350.0	6,087.1	6,181.0	6,087.1	28.0	22.3	89.16	357.2	-903.0	2,099.2	2,067.5	31.68	66.254	
6,397.6	6,134.3	6,228.2	6,134.3	28.0	22.3	89.33	357.2	-903.0	2,099.2	2,067.3	31.81	65.992	
6,400.0	6,136.7	6,230.6	6,136.7	28.0	22.3	89.34	357.2	-903.0	2,099.2	2,067.3	31.82	65.978	
6,450.0	6,185.7	6,279.6	6,185.7	28.0	22.4	89.60	357.2	-903.0	2,099.1	2,067.1	31.93	65.735	
6,496.0	6,230.2	6,324.0	6,230.1	28.0	22.4	89.90	356.4	-903.0	2,099.0	2,067.0	32.01	65.570	
6,500.0	6,234.0	6,327.8	6,233.9	28.0	22.5	89.92	356.3	-903.0	2,099.0	2,067.0	32.02	65.557	
6,511.8	6,245.3	6,339.2	6,245.3	28.0	22.5	90.00	355.6	-903.0	2,099.0	2,067.0	32.03	65.528	
6,550.0	6,281.3	6,376.5	6,282.4	28.0	22.5	90.25	352.2	-903.0	2,099.0	2,067.0	32.07	65.454	
6,594.5	6,322.2	6,420.5	6,325.9	27.9	22.5	90.54	345.6	-903.0	2,099.1	2,067.0	32.09	65.420	
6,600.0	6,327.3	6,426.0	6,331.3	27.9	22.5	90.58	344.6	-903.0	2,099.1	2,067.0	32.09	65.418	
6,650.0	6,371.8	6,476.4	6,380.5	27.9	22.6	90.90	333.5	-903.0	2,099.3	2,067.2	32.08	65.439	
6,692.9	6,408.6	6,520.4	6,422.6	27.9	22.6	91.18	321.0	-903.0	2,099.5	2,067.4	32.06	65.495	
6,700.0	6,414.6	6,527.8	6,429.6	27.8	22.6	91.23	318.6	-903.0	2,099.5	2,067.5	32.05	65.506	
6,750.0	6,455.5	6,580.1	6,478.5	27.8	22.6	91.55	299.9	-903.0	2,099.8	2,067.8	32.01	65.602	
6,791.3	6,487.7	6,624.1	6,518.4	27.7	22.6	91.82	281.4	-903.0	2,100.1	2,068.2	31.97	65.689	
6,800.0	6,494.3	6,633.5	6,526.7	27.7	22.6	91.87	277.2	-903.0	2,100.2	2,068.2	31.96	65.708	
6,850.0	6,530.8	6,687.9	6,574.1	27.7	22.6	92.18	250.4	-903.0	2,100.6	2,068.7	31.92	65.799	
6,889.7	6,558.1	6,731.9	6,610.8	27.6	22.6	92.43	226.1	-903.0	2,101.0	2,069.1	31.91	65.839	
6,900.0	6,564.9	6,743.4	6,620.1	27.6	22.6	92.49	219.4	-903.0	2,101.1	2,069.2	31.91	65.849	
6,950.0	6,596.3	6,800.0	6,664.5	27.6	22.6	92.79	184.2	-903.0	2,101.6	2,069.7	31.93	65.827	
6,988.2	6,618.4	6,844.0	6,697.0	27.5	22.6	93.01	154.6	-903.0	2,102.0	2,070.1	31.98	65.733	
7,000.0	6,624.9	6,857.8	6,706.7	27.5	22.6	93.07	144.9	-903.0	2,102.2	2,070.2	32.00	65.694	
7,050.0	6,650.6	6,916.7	6,746.4	27.5	22.6	93.35	101.4	-903.0	2,102.7	2,070.6	32.14	65.415	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWDD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,086.6	6,667.5	6,960.5	6,773.5	27.5	22.7	93.54	67.0	-903.0	2,103.1	2,070.9	32.29	65.123	
7,100.0	6,673.3	6,976.7	6,783.0	27.5	22.7	93.60	53.8	-903.0	2,103.3	2,070.9	32.36	64.994	
7,150.0	6,692.7	7,037.8	6,816.1	27.5	22.7	93.84	2.5	-903.0	2,103.9	2,071.2	32.68	64.368	
7,185.0	6,704.4	7,081.2	6,836.8	27.5	22.8	94.00	-35.6	-903.0	2,104.2	2,071.3	32.99	63.788	
7,200.0	6,709.0	7,099.9	6,845.1	27.5	22.8	94.06	-52.5	-903.0	2,104.4	2,071.3	33.11	63.549	
7,250.0	6,721.8	7,163.0	6,869.5	27.5	22.9	94.26	-110.6	-903.0	2,104.9	2,071.2	33.67	62.512	
7,283.4	6,728.6	7,205.7	6,883.1	27.5	23.0	94.37	-151.1	-903.0	2,105.2	2,071.1	34.11	61.710	
7,300.0	6,731.3	7,227.0	6,889.0	27.6	23.1	94.43	-171.5	-903.0	2,105.4	2,071.0	34.35	61.290	
7,350.0	6,737.3	7,291.7	6,903.1	27.7	23.3	94.57	-234.7	-903.0	2,105.7	2,070.6	35.15	59.908	
7,381.9	6,739.4	7,333.4	6,909.2	27.7	23.5	94.64	-275.9	-903.0	2,106.0	2,070.2	35.73	58.943	
7,400.0	6,739.9	7,357.2	6,911.5	27.8	23.7	94.68	-299.6	-903.0	2,106.1	2,070.0	36.07	58.391	
7,416.5	6,740.0	7,378.9	6,913.0	27.8	23.8	94.71	-321.2	-903.0	2,106.1	2,069.7	36.40	57.864	
7,480.3	6,739.5	7,452.6	6,913.8	28.0	24.2	94.75	-394.9	-903.0	2,106.2	2,068.6	37.68	55.900	
7,500.0	6,739.4	7,472.3	6,913.8	28.1	24.4	94.75	-414.6	-903.0	2,106.2	2,068.2	38.05	55.350	
7,578.7	6,738.9	7,551.0	6,913.4	28.5	25.0	94.75	-493.4	-903.0	2,106.3	2,066.5	39.71	53.034	
7,600.0	6,738.7	7,572.3	6,913.3	28.6	25.1	94.75	-514.6	-903.0	2,106.3	2,066.1	40.17	52.430	
7,677.1	6,738.2	7,649.5	6,912.9	29.1	25.9	94.76	-591.8	-903.0	2,106.3	2,064.3	41.98	50.169	
7,700.0	6,738.1	7,672.3	6,912.8	29.2	26.1	94.76	-614.6	-903.0	2,106.3	2,063.7	42.53	49.526	
7,775.6	6,737.5	7,747.9	6,912.5	29.7	26.9	94.76	-690.2	-903.0	2,106.3	2,061.8	44.46	47.377	
7,800.0	6,737.4	7,772.3	6,912.4	29.9	27.2	94.77	-714.6	-903.0	2,106.3	2,061.2	45.09	46.714	
7,874.0	6,736.9	7,846.3	6,912.1	30.6	28.0	94.77	-788.6	-903.0	2,106.3	2,059.2	47.10	44.716	
7,900.0	6,736.7	7,872.3	6,911.9	30.8	28.3	94.77	-814.6	-903.0	2,106.3	2,058.5	47.82	44.047	
7,972.4	6,736.2	7,944.7	6,911.6	31.5	29.2	94.78	-887.1	-903.0	2,106.3	2,056.4	49.90	42.214	
8,000.0	6,736.0	7,972.3	6,911.5	31.8	29.6	94.78	-914.6	-903.0	2,106.3	2,055.6	50.69	41.551	
8,070.8	6,735.5	8,043.2	6,911.2	32.5	30.5	94.78	-985.5	-903.0	2,106.3	2,053.5	52.81	39.885	
8,100.0	6,735.3	8,072.3	6,911.0	32.8	30.9	94.78	-1,014.6	-903.0	2,106.3	2,052.7	53.69	39.234	
8,169.3	6,734.9	8,141.6	6,910.7	33.6	31.9	94.79	-1,083.9	-903.0	2,106.4	2,050.5	55.83	37.730	
8,200.0	6,734.6	8,172.3	6,910.6	34.0	32.3	94.79	-1,114.6	-903.0	2,106.4	2,049.6	56.78	37.096	
8,267.7	6,734.2	8,240.0	6,910.3	34.8	33.3	94.80	-1,182.3	-903.0	2,106.4	2,047.4	58.93	35.743	
8,300.0	6,734.0	8,272.3	6,910.1	35.2	33.8	94.80	-1,214.6	-903.0	2,106.4	2,046.4	59.96	35.128	
8,366.1	6,733.5	8,338.4	6,909.8	36.1	34.8	94.80	-1,280.8	-903.0	2,106.4	2,044.3	62.11	33.914	
8,400.0	6,733.3	8,372.3	6,909.7	36.5	35.3	94.80	-1,314.6	-903.0	2,106.4	2,043.2	63.22	33.321	
8,464.5	6,732.8	8,436.9	6,909.4	37.4	36.3	94.81	-1,379.2	-903.0	2,106.4	2,041.1	65.35	32.231	
8,500.0	6,732.6	8,472.3	6,909.2	37.9	36.9	94.81	-1,414.6	-903.0	2,106.4	2,039.9	66.53	31.661	
8,563.0	6,732.2	8,535.3	6,908.9	38.8	37.9	94.81	-1,477.6	-903.0	2,106.4	2,037.8	68.65	30.684	
8,600.0	6,731.9	8,572.3	6,908.8	39.3	38.5	94.82	-1,514.6	-903.0	2,106.4	2,036.5	69.90	30.135	
8,661.4	6,731.5	8,633.7	6,908.5	40.2	39.5	94.82	-1,576.0	-903.0	2,106.5	2,034.5	71.99	29.259	
8,700.0	6,731.2	8,672.3	6,908.3	40.8	40.1	94.82	-1,614.6	-903.0	2,106.5	2,033.1	73.31	28.732	
8,759.8	6,730.8	8,732.1	6,908.0	41.7	41.1	94.83	-1,674.5	-903.0	2,106.5	2,031.1	75.38	27.946	
8,800.0	6,730.6	8,772.3	6,907.9	42.3	41.7	94.83	-1,714.6	-903.0	2,106.5	2,029.7	76.77	27.440	
8,858.2	6,730.2	8,830.6	6,907.6	43.2	42.7	94.83	-1,772.9	-903.0	2,106.5	2,027.7	78.80	26.733	
8,900.0	6,729.9	8,872.3	6,907.4	43.8	43.4	94.83	-1,814.6	-903.0	2,106.5	2,026.2	80.25	26.248	
8,956.7	6,729.5	8,929.0	6,907.1	44.7	44.4	94.84	-1,871.3	-903.0	2,106.5	2,024.3	82.25	25.612	
9,000.0	6,729.2	8,972.3	6,906.9	45.4	45.1	94.84	-1,914.6	-903.0	2,106.5	2,022.7	83.77	25.146	
9,055.1	6,728.8	9,027.4	6,906.7	46.3	46.0	94.84	-1,969.7	-903.0	2,106.5	2,020.8	85.72	24.573	
9,100.0	6,728.5	9,072.3	6,906.5	47.0	46.8	94.85	-2,014.6	-903.0	2,106.5	2,019.2	87.32	24.125	
9,153.5	6,728.2	9,125.8	6,906.2	47.9	47.7	94.85	-2,068.2	-903.0	2,106.5	2,017.3	89.23	23.609	
9,200.0	6,727.8	9,172.3	6,906.0	48.6	48.5	94.85	-2,114.6	-903.0	2,106.6	2,015.7	90.89	23.178	
9,251.9	6,727.5	9,224.3	6,905.8	49.5	49.4	94.86	-2,166.6	-903.0	2,106.6	2,013.8	92.75	22.713	
9,300.0	6,727.2	9,272.3	6,905.6	50.3	50.3	94.86	-2,214.6	-903.0	2,106.6	2,012.1	94.47	22.298	
9,350.4	6,726.8	9,322.7	6,905.4	51.1	51.2	94.86	-2,265.0	-903.0	2,106.6	2,010.3	96.29	21.877	
9,400.0	6,726.5	9,372.3	6,905.1	51.9	52.0	94.86	-2,314.6	-903.0	2,106.6	2,008.5	98.08	21.478	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWDD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	6,726.1	9,421.1	6,904.9	52.7	52.9	94.87	-2,363.4	-903.0	2,106.6	2,006.8	99.85	21.098	
9,500.0	6,725.8	9,472.3	6,904.7	53.6	53.8	94.87	-2,414.6	-903.0	2,106.6	2,004.9	101.71	20.713	
9,547.2	6,725.5	9,519.5	6,904.5	54.4	54.6	94.87	-2,461.8	-903.0	2,106.6	2,003.2	103.42	20.369	
9,600.0	6,725.1	9,572.3	6,904.2	55.3	55.6	94.88	-2,514.6	-903.0	2,106.6	2,001.3	105.34	19.998	
9,645.6	6,724.8	9,618.0	6,904.0	56.1	56.4	94.88	-2,560.3	-903.0	2,106.6	1,999.6	107.01	19.686	
9,700.0	6,724.4	9,672.3	6,903.8	57.0	57.4	94.88	-2,614.6	-903.0	2,106.7	1,997.7	109.00	19.328	
9,744.1	6,724.1	9,716.4	6,903.6	57.8	58.1	94.89	-2,658.7	-903.0	2,106.7	1,996.1	110.61	19.046	
9,800.0	6,723.8	9,772.3	6,903.3	58.7	59.1	94.89	-2,714.6	-903.0	2,106.7	1,994.0	112.66	18.699	
9,842.5	6,723.5	9,814.8	6,903.1	59.5	59.9	94.89	-2,757.1	-903.0	2,106.7	1,992.5	114.22	18.444	
9,900.0	6,723.1	9,872.3	6,902.9	60.5	60.9	94.90	-2,814.6	-903.0	2,106.7	1,990.4	116.33	18.109	
9,940.9	6,722.8	9,913.2	6,902.7	61.2	61.7	94.90	-2,855.5	-903.0	2,106.7	1,988.9	117.84	17.877	
10,000.0	6,722.4	9,972.3	6,902.4	62.2	62.8	94.90	-2,914.6	-903.0	2,106.7	1,986.7	120.02	17.553	
10,039.3	6,722.1	10,011.7	6,902.2	62.9	63.5	94.90	-2,954.0	-903.0	2,106.7	1,985.2	121.47	17.343	
10,100.0	6,721.7	10,072.3	6,902.0	64.0	64.6	94.91	-3,014.6	-903.0	2,106.7	1,983.0	123.71	17.029	
10,137.8	6,721.5	10,110.1	6,901.8	64.7	65.3	94.91	-3,052.4	-903.0	2,106.7	1,981.6	125.11	16.839	
10,200.0	6,721.0	10,172.3	6,901.5	65.8	66.4	94.91	-3,114.6	-903.0	2,106.8	1,979.3	127.41	16.535	
10,236.2	6,720.8	10,208.5	6,901.3	66.4	67.0	94.92	-3,150.8	-903.0	2,106.8	1,978.0	128.76	16.362	
10,300.0	6,720.4	10,272.3	6,901.0	67.5	68.2	94.92	-3,214.6	-903.0	2,106.8	1,975.6	131.12	16.067	
10,334.6	6,720.1	10,306.9	6,900.9	68.2	68.8	94.92	-3,249.2	-903.0	2,106.8	1,974.4	132.41	15.911	
10,400.0	6,719.7	10,372.3	6,900.6	69.3	70.0	94.93	-3,314.6	-903.0	2,106.8	1,972.0	134.84	15.625	
10,433.0	6,719.4	10,405.4	6,900.4	69.9	70.7	94.93	-3,347.7	-903.0	2,106.8	1,970.7	136.07	15.483	
10,500.0	6,719.0	10,472.3	6,900.1	71.1	71.9	94.93	-3,414.6	-903.0	2,106.8	1,968.2	138.56	15.205	
10,531.5	6,718.8	10,503.8	6,900.0	71.7	72.5	94.93	-3,446.1	-903.0	2,106.8	1,967.1	139.73	15.077	
10,600.0	6,718.3	10,572.3	6,899.7	72.9	73.7	94.94	-3,514.6	-903.0	2,106.8	1,964.5	142.29	14.807	
10,629.9	6,718.1	10,602.2	6,899.5	73.4	74.3	94.94	-3,544.5	-903.0	2,106.8	1,963.4	143.40	14.692	
10,700.0	6,717.6	10,672.3	6,899.2	74.7	75.6	94.94	-3,614.6	-903.0	2,106.8	1,960.8	146.02	14.428	
10,728.3	6,717.4	10,700.6	6,899.1	75.2	76.1	94.95	-3,642.9	-903.0	2,106.9	1,959.8	147.08	14.325	
10,800.0	6,717.0	10,772.3	6,898.8	76.5	77.4	94.95	-3,714.6	-903.0	2,106.9	1,957.1	149.76	14.068	
10,826.7	6,716.8	10,799.1	6,898.7	77.0	77.9	94.95	-3,741.4	-903.0	2,106.9	1,956.1	150.76	13.975	
10,900.0	6,716.3	10,872.3	6,898.3	78.3	79.3	94.96	-3,814.6	-903.0	2,106.9	1,953.4	153.50	13.725	
10,925.2	6,716.1	10,897.5	6,898.2	78.8	79.7	94.96	-3,839.8	-903.0	2,106.9	1,952.4	154.45	13.642	
11,000.0	6,715.6	10,972.3	6,897.9	80.2	81.1	94.96	-3,914.6	-903.0	2,106.9	1,949.7	157.25	13.398	
11,023.6	6,715.4	10,995.9	6,897.8	80.6	81.6	94.96	-3,938.2	-903.0	2,106.9	1,948.8	158.13	13.324	
11,100.0	6,714.9	11,072.3	6,897.4	82.0	83.0	94.97	-4,014.6	-903.0	2,106.9	1,945.9	161.00	13.086	
11,122.0	6,714.8	11,094.3	6,897.3	82.4	83.4	94.97	-4,036.6	-903.0	2,106.9	1,945.1	161.83	13.020	
11,200.0	6,714.2	11,172.3	6,897.0	83.8	84.8	94.98	-4,114.6	-903.0	2,106.9	1,942.2	164.76	12.788	
11,220.4	6,714.1	11,192.8	6,896.9	84.2	85.2	94.98	-4,135.0	-903.0	2,107.0	1,941.4	165.52	12.729	
11,300.0	6,713.5	11,272.3	6,896.5	85.7	86.7	94.98	-4,214.6	-903.0	2,107.0	1,938.5	168.51	12.503	
11,318.9	6,713.4	11,291.2	6,896.4	86.0	87.1	94.98	-4,233.5	-903.0	2,107.0	1,937.7	169.22	12.451	
11,400.0	6,712.9	11,372.3	6,896.1	87.5	88.6	94.99	-4,314.6	-903.0	2,107.0	1,934.7	172.27	12.230	
11,417.3	6,712.7	11,389.6	6,896.0	87.8	88.9	94.99	-4,331.9	-903.0	2,107.0	1,934.1	172.93	12.184	
11,500.0	6,712.2	11,472.3	6,895.6	89.3	90.4	94.99	-4,414.6	-903.0	2,107.0	1,931.0	176.04	11.969	
11,515.7	6,712.1	11,488.0	6,895.5	89.6	90.7	94.99	-4,430.3	-903.0	2,107.0	1,930.4	176.63	11.929	
11,600.0	6,711.5	11,572.3	6,895.1	91.2	92.3	95.00	-4,514.6	-903.0	2,107.0	1,927.2	179.81	11.718	
11,614.1	6,711.4	11,586.5	6,895.1	91.4	92.6	95.00	-4,528.7	-903.0	2,107.0	1,926.7	180.34	11.684	
11,700.0	6,710.8	11,672.3	6,894.7	93.0	94.2	95.01	-4,614.6	-903.0	2,107.0	1,923.5	183.58	11.478	
11,712.6	6,710.7	11,684.9	6,894.6	93.3	94.4	95.01	-4,627.2	-903.0	2,107.0	1,923.0	184.05	11.448	
11,800.0	6,710.1	11,772.3	6,894.2	94.9	96.1	95.01	-4,714.6	-903.0	2,107.1	1,919.7	187.35	11.247	
11,811.0	6,710.1	11,783.3	6,894.2	95.1	96.3	95.01	-4,725.6	-903.0	2,107.1	1,919.3	187.76	11.222	
11,900.0	6,709.5	11,872.3	6,893.8	96.7	97.9	95.02	-4,814.6	-903.0	2,107.1	1,916.0	191.12	11.025	
11,909.4	6,709.4	11,881.7	6,893.7	96.9	98.1	95.02	-4,824.0	-903.0	2,107.1	1,915.6	191.48	11.004	
12,000.0	6,708.8	11,972.3	6,893.3	98.6	99.8	95.02	-4,914.6	-903.0	2,107.1	1,912.2	194.90	10.811	

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 EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5E-423 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,007.8	6,708.7	11,980.2	6,893.3	98.7	100.0	95.03	-4,922.4	-903.0	2,107.1	1,911.9	195.20	10.795	
12,100.0	6,708.1	12,072.3	6,892.9	100.4	101.7	95.03	-5,014.6	-903.0	2,107.1	1,908.4	198.68	10.606	
12,106.3	6,708.1	12,078.6	6,892.8	100.6	101.8	95.03	-5,020.9	-903.0	2,107.1	1,908.2	198.91	10.593	
12,200.0	6,707.4	12,172.3	6,892.4	102.3	103.6	95.04	-5,114.6	-903.0	2,107.1	1,904.7	202.46	10.408	
12,204.7	6,707.4	12,177.0	6,892.4	102.4	103.7	95.04	-5,119.3	-903.0	2,107.1	1,904.5	202.64	10.399	
12,300.0	6,706.7	12,272.3	6,892.0	104.2	105.5	95.04	-5,214.6	-903.0	2,107.2	1,900.9	206.24	10.217	
12,303.1	6,706.7	12,275.4	6,892.0	104.2	105.5	95.04	-5,217.7	-903.0	2,107.2	1,900.8	206.36	10.211	
12,400.0	6,706.1	12,372.3	6,891.5	106.0	107.3	95.05	-5,314.6	-903.0	2,107.2	1,897.2	210.02	10.033	
12,401.5	6,706.0	12,373.9	6,891.5	106.1	107.4	95.05	-5,316.1	-903.0	2,107.2	1,897.1	210.08	10.030	
12,500.0	6,705.4	12,472.3	6,891.1	107.9	109.2	95.06	-5,414.6	-903.0	2,107.2	1,893.4	213.81	9.856	
12,598.4	6,704.7	12,570.7	6,890.6	109.7	111.1	95.06	-5,513.0	-903.0	2,107.2	1,889.7	217.54	9.687	
12,600.0	6,704.7	12,572.3	6,890.6	109.8	111.1	95.06	-5,514.6	-903.0	2,107.2	1,889.6	217.60	9.684	
12,696.8	6,704.0	12,669.1	6,890.2	111.6	112.9	95.07	-5,611.4	-903.0	2,107.2	1,886.0	221.27	9.524	
12,700.0	6,704.0	12,672.3	6,890.2	111.6	113.0	95.07	-5,614.6	-903.0	2,107.2	1,885.9	221.39	9.518	
12,795.2	6,703.4	12,767.5	6,889.7	113.4	114.8	95.07	-5,709.8	-903.0	2,107.3	1,882.3	225.00	9.366	
12,800.0	6,703.3	12,772.3	6,889.7	113.5	114.9	95.07	-5,714.6	-903.0	2,107.3	1,882.1	225.18	9.358	
12,893.7	6,702.7	12,866.0	6,889.3	115.3	116.7	95.08	-5,808.3	-903.0	2,107.3	1,878.6	228.73	9.213	
12,900.0	6,702.7	12,872.3	6,889.2	115.4	116.8	95.08	-5,814.6	-903.0	2,107.3	1,878.3	228.97	9.203	
12,992.1	6,702.0	12,964.4	6,888.8	117.1	118.5	95.09	-5,906.7	-903.0	2,107.3	1,874.8	232.46	9.065	
13,000.0	6,702.0	12,972.3	6,888.8	117.3	118.7	95.09	-5,914.6	-903.0	2,107.3	1,874.5	232.76	9.054	
13,090.5	6,701.4	13,062.8	6,888.4	119.0	120.4	95.09	-6,005.1	-903.0	2,107.3	1,871.1	236.19	8.922	
13,100.0	6,701.3	13,072.3	6,888.3	119.1	120.6	95.09	-6,014.6	-903.0	2,107.3	1,870.8	236.55	8.908	
13,188.9	6,700.7	13,161.2	6,887.9	120.8	122.3	95.10	-6,103.5	-903.0	2,107.3	1,867.4	239.93	8.783	
13,200.0	6,700.6	13,172.3	6,887.9	121.0	122.5	95.10	-6,114.6	-903.0	2,107.3	1,867.0	240.35	8.768	
13,287.4	6,700.0	13,259.7	6,887.5	122.7	124.1	95.10	-6,201.9	-903.0	2,107.4	1,863.7	243.66	8.649	
13,300.0	6,699.9	13,272.3	6,887.4	122.9	124.4	95.10	-6,214.6	-903.0	2,107.4	1,863.2	244.14	8.632	
13,385.8	6,699.3	13,358.1	6,887.0	124.5	126.0	95.11	-6,300.4	-903.0	2,107.4	1,860.0	247.40	8.518	
13,400.0	6,699.3	13,372.3	6,887.0	124.8	126.3	95.11	-6,314.6	-903.0	2,107.4	1,859.4	247.94	8.500	
13,484.2	6,698.7	13,456.5	6,886.6	126.4	127.8	95.12	-6,398.8	-903.0	2,107.4	1,856.3	251.14	8.391	
13,500.0	6,698.6	13,472.3	6,886.5	126.7	128.1	95.12	-6,414.6	-903.0	2,107.4	1,855.7	251.74	8.371	
13,582.6	6,698.0	13,554.9	6,886.2	128.2	129.7	95.12	-6,497.2	-903.0	2,107.4	1,852.5	254.88	8.268	
13,600.0	6,697.9	13,572.3	6,886.1	128.5	130.0	95.12	-6,514.6	-903.0	2,107.4	1,851.9	255.54	8.247	
13,681.1	6,697.3	13,653.4	6,885.7	130.1	131.6	95.13	-6,595.6	-903.0	2,107.4	1,848.8	258.62	8.149	
13,700.0	6,697.2	13,672.3	6,885.6	130.4	131.9	95.13	-6,614.6	-903.0	2,107.4	1,848.1	259.34	8.126	
13,779.5	6,696.7	13,751.8	6,885.3	131.9	133.5	95.13	-6,694.1	-903.0	2,107.5	1,845.1	262.36	8.033	
13,800.0	6,696.5	13,772.3	6,885.2	132.3	133.8	95.14	-6,714.6	-903.0	2,107.5	1,844.3	263.14	8.009	
13,877.9	6,696.0	13,850.2	6,884.8	133.8	135.3	95.14	-6,792.5	-903.0	2,107.5	1,841.4	266.10	7.920	
13,900.0	6,695.8	13,872.3	6,884.7	134.2	135.7	95.14	-6,814.6	-903.0	2,107.5	1,840.5	266.94	7.895	
13,976.3	6,695.3	13,948.6	6,884.4	135.6	137.2	95.15	-6,890.9	-903.0	2,107.5	1,837.7	269.84	7.810	
14,000.0	6,695.2	13,972.3	6,884.3	136.1	137.6	95.15	-6,914.6	-903.0	2,107.5	1,836.8	270.74	7.784	
14,025.4	6,695.0	13,997.7	6,884.1	136.6	138.1	95.15	-6,940.0	-903.0	2,107.5	1,835.8	271.71	7.757	
14,034.1	6,695.0	14,002.4	6,884.1	136.7	138.2	95.15	-6,944.7	-903.0	2,107.5	1,835.5	271.96	7.749 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	0.80	60.1	0.8	60.1				
98.4	98.4	98.4	98.4	0.1	0.1	0.80	60.1	0.8	60.1	59.9	0.17	353.763	
100.0	100.0	100.0	100.0	0.1	0.1	0.80	60.1	0.8	60.1	59.9	0.17	347.360	
196.8	196.8	196.8	196.8	0.3	0.3	0.80	60.1	0.8	60.1	59.5	0.61	98.806	
200.0	200.0	200.0	200.0	0.3	0.3	0.80	60.1	0.8	60.1	59.5	0.62	96.559	
295.3	295.3	295.3	295.3	0.5	0.5	0.80	60.1	0.8	60.1	59.1	1.05	57.206	
300.0	300.0	300.0	300.0	0.5	0.5	0.80	60.1	0.8	60.1	59.0	1.07	56.073	
393.7	393.7	393.7	393.7	0.7	0.7	0.80	60.1	0.8	60.1	58.6	1.49	40.257	
400.0	400.0	400.0	400.0	0.8	0.8	0.80	60.1	0.8	60.1	58.6	1.52	39.508	
492.1	492.1	492.1	492.1	1.0	1.0	0.80	60.1	0.8	60.1	58.2	1.94	31.056	
500.0	500.0	500.0	500.0	1.0	1.0	0.80	60.1	0.8	60.1	58.1	1.97	30.498	
590.5	590.5	590.5	590.5	1.2	1.2	0.80	60.1	0.8	60.1	57.7	2.38	25.278	
600.0	600.0	600.0	600.0	1.2	1.2	0.80	60.1	0.8	60.1	57.7	2.42	24.834	
689.0	689.0	689.0	689.0	1.4	1.4	0.80	60.1	0.8	60.1	57.3	2.82	21.313	
700.0	700.0	700.0	700.0	1.4	1.4	0.80	60.1	0.8	60.1	57.2	2.87	20.945	
787.4	787.4	787.4	787.4	1.6	1.6	0.80	60.1	0.8	60.1	56.9	3.26	18.423	
800.0	800.0	800.0	800.0	1.7	1.7	0.80	60.1	0.8	60.1	56.8	3.32	18.109	
885.8	885.8	885.8	885.8	1.9	1.9	0.80	60.1	0.8	60.1	56.4	3.71	16.223	
900.0	900.0	900.0	900.0	1.9	1.9	0.80	60.1	0.8	60.1	56.3	3.77	15.949	
984.2	984.2	984.2	984.2	2.1	2.1	0.80	60.1	0.8	60.1	56.0	4.15	14.493	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.80	60.1	0.8	60.1	55.9	4.22	14.250	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	0.80	60.1	0.8	60.1	55.5	4.59	13.096	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	0.80	60.1	0.8	60.1	55.4	4.67	12.878	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	0.80	60.1	0.8	60.1	55.1	5.03	11.945	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.80	60.1	0.8	60.1	55.0	5.12	11.746	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	0.80	60.1	0.8	60.1	54.6	5.48	10.980	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	0.80	60.1	0.8	60.1	54.6	5.57	10.798	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	0.80	60.1	0.8	60.1	54.2	5.92	10.159	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	0.80	60.1	0.8	60.1	54.1	6.02	9.991	
1,476.4	1,476.4	1,476.4	1,476.4	3.2	3.2	0.80	60.1	0.8	60.1	53.8	6.36	9.452	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	0.80	60.1	0.8	60.1	53.7	6.47	9.297	
1,574.8	1,574.8	1,574.8	1,574.8	3.4	3.4	0.80	60.1	0.8	60.1	53.3	6.80	8.837	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	0.80	60.1	0.8	60.1	53.2	6.92	8.692	
1,637.5	1,637.5	1,637.5	1,637.5	3.5	3.5	0.80	60.1	0.8	60.1	53.0	7.08	8.486 CC	
1,673.2	1,673.2	1,672.8	1,672.8	3.6	3.6	0.85	60.2	0.9	60.2	52.9	7.24	8.310 ES	
1,700.0	1,700.0	1,699.2	1,699.2	3.7	3.7	1.03	60.4	1.1	60.5	53.1	7.36	8.213	
1,771.6	1,771.6	1,769.6	1,769.5	3.8	3.8	2.17	62.1	2.3	62.2	54.5	7.68	8.099	
1,800.0	1,800.0	1,797.4	1,797.3	3.9	3.9	2.84	63.1	3.1	63.3	55.5	7.80	8.109	
1,870.1	1,870.1	1,866.0	1,865.8	4.1	4.1	4.95	66.6	5.8	67.0	58.9	8.11	8.258	
1,900.0	1,900.0	1,895.3	1,895.0	4.1	4.1	6.00	68.5	7.2	69.0	60.8	8.24	8.374	
1,968.5	1,968.5	1,962.0	1,961.4	4.3	4.3	8.59	73.6	11.1	74.8	66.2	8.55	8.750	
2,000.0	2,000.0	1,992.6	1,991.7	4.4	4.3	9.83	76.4	13.2	78.0	69.3	8.69	8.973	
2,066.9	2,066.9	2,057.2	2,055.9	4.5	4.5	12.46	83.1	18.4	85.8	76.8	8.99	9.540	
2,100.0	2,100.0	2,089.1	2,087.3	4.6	4.6	13.72	86.8	21.2	90.3	81.1	9.15	9.867	
2,165.3	2,165.3	2,151.6	2,149.1	4.7	4.7	16.09	94.9	27.4	100.2	90.7	9.46	10.589	
2,200.0	2,200.0	2,184.6	2,181.5	4.8	4.8	17.27	99.7	31.0	106.0	96.4	9.63	11.013	
2,250.0	2,250.0	2,231.9	2,227.9	4.9	5.0	18.86	107.0	36.5	115.2	105.3	9.87	11.666	
2,263.8	2,263.8	2,244.9	2,240.6	4.9	5.0	-52.60	109.1	38.1	117.8	107.9	9.87	11.930	
2,300.0	2,300.0	2,280.2	2,275.2	5.0	5.1	-51.57	114.9	42.6	124.8	114.7	10.04	12.432	
2,362.2	2,362.2	2,341.3	2,334.9	5.2	5.3	-50.38	125.0	50.3	136.1	125.8	10.31	13.204	
2,400.0	2,399.9	2,378.5	2,371.4	5.2	5.4	-49.95	131.2	55.0	142.6	132.1	10.47	13.617	
2,460.6	2,460.4	2,438.4	2,429.9	5.4	5.6	-49.63	141.0	62.5	152.3	141.6	10.74	14.186	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5J-203 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,499.7	2,477.3	2,468.0	5.4	5.7	-49.63	147.5	67.4	158.2	147.3	10.91	14.499	
2,559.0	2,558.5	2,535.8	2,525.2	5.6	5.9	-49.90	157.2	74.8	166.4	155.2	11.18	14.883	
2,600.0	2,599.1	2,576.4	2,564.9	5.7	6.1	-50.25	163.9	79.9	171.6	160.3	11.37	15.097	
2,657.5	2,656.1	2,633.4	2,620.6	5.8	6.3	-50.96	173.3	87.1	178.4	166.7	11.64	15.322	
2,700.0	2,698.2	2,675.6	2,661.9	5.9	6.4	-51.64	180.3	92.4	182.9	171.1	11.84	15.442	
2,755.9	2,753.3	2,731.1	2,716.2	6.1	6.6	-52.71	189.5	99.4	188.3	176.2	12.13	15.532	
2,800.0	2,796.6	2,774.9	2,759.1	6.2	6.8	-53.70	196.7	105.0	192.2	179.9	12.35	15.562	
2,854.3	2,849.9	2,828.8	2,811.8	6.3	7.0	-55.09	205.6	111.8	196.6	183.9	12.65	15.539	
2,900.0	2,894.4	2,874.1	2,856.1	6.5	7.2	-56.40	213.1	117.5	199.9	187.0	12.91	15.485	
2,952.7	2,945.7	2,926.4	2,907.3	6.6	7.4	-58.07	221.7	124.1	203.4	190.1	13.23	15.371	
3,000.0	2,991.5	2,973.2	2,953.0	6.8	7.6	-59.72	229.5	130.0	206.2	192.7	13.53	15.242	
3,051.2	3,040.8	3,023.8	3,002.5	7.0	7.8	-61.65	237.8	136.3	209.1	195.2	13.89	15.059	
3,100.0	3,087.6	3,071.9	3,049.6	7.1	7.9	-63.65	245.8	142.4	211.7	197.5	14.24	14.868	
3,149.6	3,134.9	3,120.7	3,097.3	7.4	8.1	-65.82	253.9	148.6	214.3	199.6	14.63	14.641	
3,200.0	3,182.7	3,170.2	3,145.7	7.6	8.3	-68.17	262.1	154.8	216.9	201.8	15.05	14.407	
3,248.0	3,228.0	3,217.3	3,191.7	7.8	8.5	-70.55	269.8	160.7	219.4	203.9	15.49	14.163	
3,300.0	3,276.6	3,268.0	3,241.4	8.1	8.7	-73.25	278.2	167.1	222.4	206.4	15.99	13.912	
3,346.4	3,319.9	3,313.2	3,285.6	8.3	8.9	-75.78	285.7	172.8	225.3	208.8	16.47	13.681	
3,400.0	3,369.4	3,365.1	3,336.4	8.6	9.1	-78.81	294.3	179.4	229.0	212.0	17.03	13.444	
3,444.9	3,410.5	3,408.4	3,378.7	8.9	9.3	-81.43	301.4	184.8	232.6	215.0	17.55	13.254	
3,500.0	3,460.7	3,461.4	3,430.6	9.2	9.5	-84.72	310.2	191.5	237.5	219.4	18.18	13.067	
3,543.3	3,499.8	3,502.8	3,471.1	9.5	9.7	-87.35	317.1	196.7	242.0	223.3	18.70	12.940	
3,600.0	3,550.6	3,557.0	3,524.0	9.9	9.9	-90.83	326.0	203.5	248.7	229.4	19.38	12.836	
3,641.7	3,587.6	3,598.2	3,564.4	10.3	10.1	-93.56	332.6	208.5	254.2	234.3	19.88	12.784	
3,709.9	3,647.5	3,664.6	3,629.7	10.8	10.3	-98.20	342.1	215.8	264.1	243.5	20.63	12.802	
3,740.1	3,673.9	3,693.7	3,658.4	11.1	10.4	-100.37	346.0	218.8	269.0	248.0	20.96	12.834	
3,800.0	3,726.2	3,750.7	3,714.8	11.6	10.5	-104.57	352.8	223.9	279.4	257.9	21.55	12.968	
3,838.6	3,759.9	3,787.1	3,750.9	11.9	10.6	-107.21	356.6	226.9	286.8	264.9	21.90	13.094	
3,900.0	3,813.5	3,844.5	3,807.8	12.5	10.8	-111.29	362.0	231.0	299.6	277.2	22.41	13.374	
3,937.0	3,845.8	3,878.7	3,841.9	12.8	10.8	-113.66	364.8	233.1	308.0	285.3	22.68	13.581	
4,000.0	3,900.8	3,936.3	3,899.2	13.4	11.0	-117.56	368.7	236.1	323.4	300.3	23.08	14.009	
4,035.4	3,931.7	3,968.3	3,931.2	13.7	11.0	-119.67	370.5	237.5	332.7	309.4	23.28	14.287	
4,100.0	3,988.1	4,025.9	3,988.7	14.3	11.2	-123.35	373.0	239.4	350.7	327.2	23.59	14.865	
4,133.8	4,017.6	4,055.8	4,018.5	14.7	11.2	-125.19	374.0	240.1	360.8	337.1	23.73	15.203	
4,200.0	4,075.4	4,113.3	4,076.1	15.3	11.3	-128.64	375.1	241.0	381.7	357.8	23.96	15.929	
4,232.3	4,103.5	4,141.1	4,103.8	15.6	11.4	-130.24	375.3	241.1	392.5	368.4	24.06	16.315	
4,300.0	4,162.6	4,199.9	4,162.6	16.2	11.4	-133.47	375.3	241.1	416.1	391.9	24.22	17.179	
4,330.7	4,189.4	4,226.7	4,189.4	16.5	11.5	-134.84	375.3	241.1	427.3	403.0	24.30	17.586	
4,400.0	4,249.9	4,287.2	4,249.9	17.2	11.6	-137.70	375.3	241.1	453.2	428.8	24.45	18.533	
4,429.1	4,275.4	4,312.6	4,275.4	17.5	11.6	-138.82	375.3	241.1	464.4	439.9	24.52	18.940	
4,500.0	4,337.2	4,374.5	4,337.2	18.2	11.7	-141.34	375.3	241.1	492.4	467.7	24.68	19.950	
4,527.5	4,361.3	4,398.5	4,361.3	18.5	11.8	-142.26	375.3	241.1	503.4	478.7	24.74	20.346	
4,600.0	4,424.5	4,461.8	4,424.5	19.2	11.9	-144.49	375.3	241.1	533.1	508.2	24.91	21.397	
4,626.0	4,447.2	4,484.5	4,447.2	19.5	11.9	-145.23	375.3	241.1	543.9	518.9	24.98	21.775	
4,700.0	4,511.8	4,549.1	4,511.8	20.2	12.1	-147.21	375.3	241.1	575.1	549.9	25.16	22.853	
4,724.4	4,533.1	4,570.4	4,533.1	20.5	12.1	-147.82	375.3	241.1	585.5	560.2	25.23	23.207	
4,796.7	4,596.3	4,633.5	4,596.3	21.2	12.2	-149.51	375.3	241.1	616.6	591.2	25.42	24.254	
4,800.0	4,599.1	4,636.4	4,599.1	21.2	12.2	-149.60	375.3	241.1	618.0	592.6	25.43	24.300	
4,822.8	4,619.1	4,656.4	4,619.1	21.4	12.2	-150.20	375.3	241.1	627.9	602.4	25.50	24.625	
4,900.0	4,687.3	4,724.6	4,687.3	22.0	12.4	-152.06	375.3	241.1	660.4	634.6	25.74	25.656	
4,921.2	4,706.2	4,743.5	4,706.2	22.2	12.4	-152.52	375.3	241.1	669.1	643.3	25.81	25.925	
5,000.0	4,777.1	4,814.3	4,777.1	22.8	12.5	-154.10	375.3	241.1	700.4	674.4	26.09	26.849	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,019.7	4,794.9	4,832.2	4,794.9	22.9	12.6	-154.46	375.3	241.1	708.0	681.9	26.16	27.067	
5,100.0	4,868.3	4,905.6	4,868.3	23.5	12.7	-155.80	375.3	241.1	738.1	711.6	26.47	27.886	
5,118.1	4,885.0	4,922.3	4,885.0	23.6	12.7	-156.08	375.3	241.1	744.6	718.0	26.54	28.059	
5,200.0	4,961.0	4,998.2	4,961.0	24.2	12.9	-157.22	375.3	241.1	773.0	746.1	26.86	28.775	
5,216.5	4,976.4	5,013.6	4,976.4	24.3	12.9	-157.44	375.3	241.1	778.5	751.6	26.93	28.910	
5,300.0	5,054.8	5,092.1	5,054.8	24.8	13.0	-158.42	375.3	241.1	805.1	777.9	27.27	29.526	
5,314.9	5,069.0	5,106.2	5,069.0	24.8	13.1	-158.58	375.3	241.1	809.7	782.4	27.33	29.628	
5,400.0	5,149.9	5,187.1	5,149.9	25.3	13.2	-159.41	375.3	241.1	834.4	806.7	27.68	30.147	
5,413.4	5,162.7	5,199.9	5,162.7	25.4	13.2	-159.53	375.3	241.1	838.1	810.3	27.73	30.223	
5,500.0	5,245.9	5,283.2	5,245.9	25.8	13.4	-160.25	375.3	241.1	860.6	832.5	28.08	30.650	
5,511.8	5,257.3	5,294.6	5,257.3	25.9	13.4	-160.33	375.3	241.1	863.5	835.3	28.12	30.703	
5,600.0	5,342.9	5,380.1	5,342.9	26.3	13.6	-160.93	375.3	241.1	883.7	855.2	28.47	31.042	
5,610.2	5,352.9	5,390.1	5,352.9	26.3	13.6	-161.00	375.3	241.1	885.9	857.4	28.51	31.077	
5,700.0	5,440.7	5,477.9	5,440.7	26.7	13.8	-161.50	375.3	241.1	903.6	874.8	28.84	31.330	
5,708.6	5,449.1	5,486.4	5,449.1	26.7	13.8	-161.54	375.3	241.1	905.2	876.3	28.87	31.351	
5,800.0	5,539.1	5,576.3	5,539.1	27.0	13.9	-161.95	375.3	241.1	920.4	891.2	29.20	31.520	
5,807.1	5,546.1	5,583.3	5,546.1	27.0	14.0	-161.98	375.3	241.1	921.4	892.2	29.22	31.531	
5,900.0	5,638.1	5,675.3	5,638.1	27.3	14.1	-162.30	375.3	241.1	933.8	904.3	29.53	31.619	
5,905.5	5,643.5	5,680.8	5,643.5	27.3	14.1	-162.32	375.3	241.1	934.5	904.9	29.55	31.622	
6,000.0	5,737.5	5,774.8	5,737.5	27.5	14.3	-162.56	375.3	241.1	944.0	914.2	29.85	31.630	
6,003.9	5,741.4	5,778.7	5,741.4	27.5	14.3	-162.57	375.3	241.1	944.4	914.5	29.86	31.629	
6,100.0	5,837.2	5,874.5	5,837.2	27.7	14.5	-162.73	375.3	241.1	950.9	920.8	30.13	31.557	
6,102.3	5,839.6	5,876.8	5,839.6	27.7	14.5	-162.74	375.3	241.1	951.0	920.9	30.14	31.554	
6,200.0	5,937.2	5,974.4	5,937.2	27.9	14.7	-162.82	375.3	241.1	954.5	924.1	30.40	31.401	
6,200.8	5,937.9	5,975.2	5,937.9	27.9	14.7	-162.82	375.3	241.1	954.5	924.1	30.40	31.400	
6,256.6	5,993.8	6,031.1	5,993.8	27.9	14.8	-90.92	375.3	241.1	955.0	924.5	30.53	31.279	
6,286.6	6,023.8	6,061.1	6,023.8	27.9	14.9	-90.92	375.3	241.1	955.0	924.4	30.64	31.170	
6,299.2	6,036.4	6,073.6	6,036.3	27.9	14.9	89.08	375.3	241.1	955.0	924.3	30.68	31.126	
6,300.0	6,037.2	6,074.3	6,037.1	27.9	14.9	89.08	375.3	241.1	955.0	924.3	30.68	31.124	
6,350.0	6,087.1	6,123.3	6,086.0	28.0	15.0	89.13	373.4	241.1	955.0	924.2	30.81	30.993	
6,397.6	6,134.3	6,170.0	6,132.4	28.0	15.0	89.17	368.5	241.1	955.0	924.1	30.89	30.912	
6,400.0	6,136.7	6,172.3	6,134.8	28.0	15.0	89.18	368.2	241.1	955.0	924.1	30.90	30.909	
6,450.0	6,185.7	6,221.4	6,183.1	28.0	15.0	89.23	359.6	241.1	955.0	924.0	30.94	30.867	
6,496.0	6,230.2	6,266.7	6,227.0	28.0	15.1	89.28	348.8	241.1	954.9	924.0	30.94	30.863	
6,500.0	6,234.0	6,270.6	6,230.7	28.0	15.1	89.29	347.7	241.1	954.9	924.0	30.94	30.864	
6,550.0	6,281.3	6,319.8	6,277.5	28.0	15.1	89.35	332.6	241.1	954.9	924.0	30.91	30.893	
6,594.5	6,322.2	6,363.6	6,318.3	27.9	15.0	89.40	316.4	241.1	954.9	924.1	30.86	30.943	
6,600.0	6,327.3	6,369.0	6,323.3	27.9	15.0	89.41	314.2	241.1	954.9	924.1	30.85	30.950	
6,650.0	6,371.8	6,418.4	6,367.7	27.9	15.0	89.47	292.7	241.1	954.9	924.1	30.78	31.026	
6,692.9	6,408.6	6,460.8	6,404.6	27.9	15.0	89.53	271.9	241.1	954.9	924.2	30.70	31.100	
6,700.0	6,414.6	6,467.8	6,410.6	27.8	15.0	89.54	268.2	241.1	954.9	924.2	30.69	31.112	
6,750.0	6,455.5	6,517.3	6,451.7	27.8	15.0	89.61	240.7	241.1	954.9	924.3	30.61	31.199	
6,791.3	6,487.7	6,558.3	6,484.3	27.7	14.9	89.67	215.9	241.1	954.9	924.3	30.54	31.262	
6,800.0	6,494.3	6,566.9	6,491.0	27.7	14.9	89.69	210.4	241.1	954.9	924.3	30.53	31.273	
6,850.0	6,530.8	6,616.6	6,528.1	27.7	14.9	89.76	177.4	241.1	954.9	924.4	30.48	31.324	
6,889.7	6,558.1	6,656.1	6,555.9	27.6	14.9	89.82	149.4	241.1	954.9	924.4	30.47	31.337	
6,900.0	6,564.9	6,666.3	6,562.8	27.6	14.9	89.83	141.9	241.1	954.9	924.4	30.47	31.336	
6,950.0	6,596.3	6,716.1	6,595.1	27.6	14.8	89.91	103.9	241.1	954.9	924.4	30.51	31.299	
6,988.2	6,618.4	6,754.3	6,618.0	27.5	14.8	89.97	73.4	241.1	954.9	924.3	30.58	31.228	
7,000.0	6,624.9	6,766.1	6,624.8	27.5	14.8	89.99	63.7	241.1	954.9	924.3	30.61	31.198	
7,008.1	6,629.3	6,774.2	6,629.3	27.5	14.8	90.00	57.0	241.1	954.9	924.2	30.63	31.172	
7,050.0	6,650.6	6,816.1	6,651.5	27.5	14.8	90.06	21.5	241.1	954.9	924.1	30.78	31.026	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5J-203 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWMD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,086.6	6,667.5	6,852.7	6,669.3	27.5	14.9	90.12	-10.6	241.1	954.9	923.9	30.95	30.849	
7,100.0	6,673.3	6,866.2	6,675.4	27.5	14.9	90.14	-22.6	241.1	954.9	923.8	31.03	30.773	
7,150.0	6,692.7	6,916.4	6,696.1	27.5	15.1	90.22	-68.3	241.1	954.9	923.5	31.37	30.438	
7,185.0	6,704.4	6,951.6	6,708.7	27.5	15.3	90.27	-101.1	241.1	954.9	923.2	31.67	30.153	
7,200.0	6,709.0	6,966.7	6,713.6	27.5	15.4	90.29	-115.4	241.1	954.9	923.1	31.81	30.020	
7,250.0	6,721.8	7,017.0	6,727.7	27.5	15.7	90.37	-163.7	241.1	954.9	922.5	32.34	29.525	
7,283.4	6,728.6	7,050.8	6,735.3	27.5	16.0	90.41	-196.6	241.1	954.9	922.1	32.75	29.154	
7,300.0	6,731.3	7,067.5	6,738.5	27.6	16.1	90.44	-213.0	241.1	954.9	921.9	32.97	28.960	
7,350.0	6,737.3	7,118.0	6,745.8	27.7	16.5	90.51	-263.0	241.1	954.9	921.2	33.70	28.337	
7,381.9	6,739.4	7,150.3	6,748.5	27.7	16.8	90.55	-295.2	241.1	954.9	920.7	34.21	27.916	
7,400.0	6,739.9	7,168.7	6,749.5	27.8	17.0	90.57	-313.5	241.1	954.9	920.4	34.51	27.669	
7,416.5	6,740.0	7,185.4	6,749.9	27.8	17.2	90.60	-330.2	241.1	954.9	920.1	34.80	27.441	
7,480.3	6,739.5	7,249.4	6,749.6	28.0	17.8	90.60	-394.2	241.1	954.9	918.9	35.99	26.529	
7,500.0	6,739.4	7,269.1	6,749.4	28.1	18.0	90.60	-413.9	241.1	954.9	918.5	36.37	26.257	
7,578.7	6,738.9	7,347.8	6,748.8	28.5	19.0	90.59	-492.7	241.1	954.9	916.9	38.04	25.104	
7,600.0	6,738.7	7,369.1	6,748.6	28.6	19.2	90.59	-513.9	241.1	954.9	916.4	38.50	24.803	
7,677.1	6,738.2	7,446.3	6,748.0	29.1	20.2	90.59	-591.1	241.1	954.9	914.6	40.33	23.678	
7,700.0	6,738.1	7,469.1	6,747.8	29.2	20.5	90.58	-613.9	241.1	954.9	914.0	40.88	23.358	
7,775.6	6,737.5	7,544.7	6,747.2	29.7	21.5	90.58	-689.5	241.1	954.9	912.1	42.83	22.294	
7,800.0	6,737.4	7,569.1	6,747.0	29.9	21.8	90.58	-713.9	241.1	954.9	911.4	43.47	21.966	
7,874.0	6,736.9	7,643.1	6,746.4	30.6	22.9	90.57	-787.9	241.1	954.9	909.4	45.51	20.982	
7,900.0	6,736.7	7,669.1	6,746.1	30.8	23.3	90.57	-813.9	241.1	954.9	908.7	46.24	20.653	
7,972.4	6,736.2	7,741.5	6,745.5	31.5	24.4	90.56	-886.3	241.1	954.9	906.6	48.34	19.754	
8,000.0	6,736.0	7,769.1	6,745.3	31.8	24.8	90.56	-913.9	241.1	954.9	905.8	49.15	19.430	
8,070.8	6,735.5	7,840.0	6,744.7	32.5	25.9	90.55	-984.8	241.1	954.9	903.6	51.29	18.618	
8,100.0	6,735.3	7,869.1	6,744.5	32.8	26.4	90.55	-1,013.9	241.1	954.9	902.7	52.18	18.301	
8,169.3	6,734.9	7,938.4	6,743.9	33.6	27.5	90.54	-1,083.2	241.1	954.9	900.6	54.34	17.571	
8,200.0	6,734.6	7,969.1	6,743.7	34.0	28.0	90.54	-1,113.9	241.1	954.9	899.6	55.31	17.264	
8,267.7	6,734.2	8,036.8	6,743.1	34.8	29.1	90.54	-1,181.6	241.1	954.9	897.4	57.49	16.611	
8,300.0	6,734.0	8,069.1	6,742.8	35.2	29.6	90.53	-1,213.9	241.1	954.9	896.4	58.53	16.315	
8,366.1	6,733.5	8,135.2	6,742.3	36.1	30.7	90.53	-1,280.0	241.1	954.9	894.2	60.70	15.732	
8,400.0	6,733.3	8,169.1	6,742.0	36.5	31.3	90.52	-1,313.9	241.1	954.9	893.1	61.82	15.447	
8,464.5	6,732.8	8,233.7	6,741.5	37.4	32.4	90.52	-1,378.5	241.1	954.9	890.9	63.98	14.926	
8,500.0	6,732.6	8,269.1	6,741.2	37.9	33.0	90.52	-1,413.9	241.1	954.9	889.7	65.17	14.653	
8,563.0	6,732.2	8,332.1	6,740.7	38.8	34.1	90.51	-1,476.9	241.1	954.9	887.6	67.31	14.187	
8,600.0	6,731.9	8,369.1	6,740.4	39.3	34.7	90.51	-1,513.9	241.1	954.9	886.3	68.57	13.926	
8,661.4	6,731.5	8,430.5	6,739.9	40.2	35.8	90.50	-1,575.3	241.1	954.9	884.2	70.68	13.510	
8,700.0	6,731.2	8,469.1	6,739.5	40.8	36.4	90.50	-1,613.9	241.1	954.9	882.9	72.02	13.260	
8,759.8	6,730.8	8,528.9	6,739.1	41.7	37.5	90.49	-1,673.7	241.1	954.9	880.8	74.10	12.887	
8,800.0	6,730.6	8,569.1	6,738.7	42.3	38.2	90.49	-1,713.9	241.1	954.9	879.4	75.50	12.648	
8,858.2	6,730.2	8,627.4	6,738.2	43.2	39.2	90.48	-1,772.1	241.1	954.9	877.4	77.55	12.314	
8,900.0	6,729.9	8,669.1	6,737.9	43.8	40.0	90.48	-1,813.9	241.1	954.9	875.9	79.02	12.085	
8,956.7	6,729.5	8,725.8	6,737.4	44.7	41.0	90.48	-1,870.6	241.1	954.9	873.9	81.03	11.785	
9,000.0	6,729.2	8,769.1	6,737.1	45.4	41.8	90.47	-1,913.9	241.1	954.9	872.3	82.57	11.565	
9,055.1	6,728.8	8,824.2	6,736.6	46.3	42.7	90.47	-1,969.0	241.1	954.9	870.4	84.53	11.296	
9,100.0	6,728.5	8,869.1	6,736.2	47.0	43.6	90.46	-2,013.9	241.1	954.9	868.8	86.14	11.086	
9,153.5	6,728.2	8,922.6	6,735.8	47.9	44.5	90.46	-2,067.4	241.1	954.9	866.8	88.06	10.844	
9,200.0	6,727.8	8,969.1	6,735.4	48.6	45.4	90.45	-2,113.9	241.1	954.9	865.2	89.73	10.641	
9,251.9	6,727.5	9,021.1	6,735.0	49.5	46.3	90.45	-2,165.8	241.1	954.9	863.3	91.61	10.423	
9,300.0	6,727.2	9,069.1	6,734.6	50.3	47.2	90.45	-2,213.9	241.1	954.9	861.5	93.35	10.229	
9,350.4	6,726.8	9,119.5	6,734.2	51.1	48.1	90.44	-2,264.2	241.1	954.9	859.7	95.18	10.033	
9,400.0	6,726.5	9,169.1	6,733.8	51.9	49.0	90.44	-2,313.9	241.1	954.9	857.9	96.98	9.846	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5J-203 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWDD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	6,726.1	9,217.9	6,733.4	52.7	49.9	90.43	-2,362.7	241.1	954.9	856.1	98.76	9.669	
9,500.0	6,725.8	9,269.1	6,732.9	53.6	50.8	90.43	-2,413.9	241.1	954.9	854.3	100.63	9.489	
9,547.2	6,725.5	9,316.3	6,732.5	54.4	51.7	90.42	-2,461.1	241.1	954.9	852.5	102.36	9.329	
9,600.0	6,725.1	9,369.1	6,732.1	55.3	52.7	90.42	-2,513.9	241.1	954.9	850.6	104.29	9.156	
9,645.6	6,724.8	9,414.8	6,731.7	56.1	53.5	90.42	-2,559.5	241.1	954.9	848.9	105.97	9.011	
9,700.0	6,724.4	9,469.1	6,731.3	57.0	54.5	90.41	-2,613.9	241.1	954.9	846.9	107.97	8.844	
9,744.1	6,724.1	9,513.2	6,730.9	57.8	55.3	90.41	-2,657.9	241.1	954.9	845.3	109.59	8.713	
9,800.0	6,723.8	9,569.1	6,730.5	58.7	56.4	90.40	-2,713.9	241.1	954.9	843.2	111.66	8.552	
9,842.5	6,723.5	9,611.6	6,730.1	59.5	57.2	90.40	-2,756.4	241.1	954.9	841.7	113.23	8.433	
9,900.0	6,723.1	9,669.1	6,729.6	60.5	58.2	90.39	-2,813.9	241.1	954.9	839.5	115.35	8.278	
9,940.9	6,722.8	9,710.0	6,729.3	61.2	59.0	90.39	-2,854.8	241.1	954.9	838.0	116.87	8.171	
10,000.0	6,722.4	9,769.1	6,728.8	62.2	60.1	90.38	-2,913.9	241.1	954.9	835.8	119.06	8.020	
10,039.3	6,722.1	9,808.5	6,728.5	62.9	60.8	90.38	-2,953.2	241.1	954.9	834.4	120.52	7.923	
10,100.0	6,721.7	9,869.1	6,728.0	64.0	62.0	90.38	-3,013.8	241.1	954.9	832.1	122.77	7.778	
10,137.8	6,721.5	9,906.9	6,727.7	64.7	62.7	90.37	-3,051.6	241.1	954.9	830.7	124.18	7.690	
10,200.0	6,721.0	9,969.1	6,727.1	65.8	63.8	90.37	-3,113.8	241.1	954.9	828.4	126.50	7.549	
10,236.2	6,720.8	10,005.3	6,726.8	66.4	64.5	90.36	-3,150.0	241.1	954.9	827.0	127.85	7.469	
10,300.0	6,720.4	10,069.1	6,726.3	67.5	65.7	90.36	-3,213.8	241.1	954.9	824.7	130.23	7.333	
10,334.6	6,720.1	10,103.7	6,726.0	68.2	66.3	90.35	-3,248.5	241.1	954.9	823.4	131.52	7.260	
10,400.0	6,719.7	10,169.1	6,725.5	69.3	67.6	90.35	-3,313.8	241.1	954.9	820.9	133.96	7.128	
10,433.0	6,719.4	10,202.2	6,725.2	69.9	68.2	90.35	-3,346.9	241.1	954.9	819.7	135.20	7.063	
10,500.0	6,719.0	10,269.1	6,724.6	71.1	69.4	90.34	-3,413.8	241.1	954.9	817.2	137.70	6.934	
10,531.5	6,718.8	10,300.6	6,724.4	71.7	70.0	90.34	-3,445.3	241.1	954.9	816.0	138.88	6.875	
10,600.0	6,718.3	10,369.1	6,723.8	72.9	71.3	90.33	-3,513.8	241.1	954.9	813.4	141.45	6.751	
10,629.9	6,718.1	10,399.0	6,723.6	73.4	71.9	90.33	-3,543.7	241.1	954.9	812.3	142.57	6.697	
10,700.0	6,717.6	10,469.1	6,723.0	74.7	73.2	90.32	-3,613.8	241.1	954.9	809.7	145.20	6.576	
10,728.3	6,717.4	10,497.4	6,722.7	75.2	73.7	90.32	-3,642.2	241.1	954.9	808.6	146.27	6.528	
10,800.0	6,717.0	10,569.1	6,722.1	76.5	75.1	90.31	-3,713.8	241.1	954.9	805.9	148.96	6.410	
10,826.7	6,716.8	10,595.9	6,721.9	77.0	75.6	90.31	-3,740.6	241.1	954.9	804.9	149.97	6.367	
10,900.0	6,716.3	10,669.1	6,721.3	78.3	77.0	90.30	-3,813.8	241.1	954.9	802.2	152.72	6.252	
10,925.2	6,716.1	10,694.3	6,721.1	78.8	77.4	90.30	-3,839.0	241.1	954.9	801.2	153.67	6.214	
11,000.0	6,715.6	10,769.1	6,720.5	80.2	78.9	90.29	-3,913.8	241.1	954.9	798.4	156.49	6.102	
11,023.6	6,715.4	10,792.7	6,720.3	80.6	79.3	90.29	-3,937.4	241.1	954.9	797.5	157.38	6.067	
11,100.0	6,714.9	10,869.1	6,719.6	82.0	80.7	90.28	-4,013.8	241.1	954.9	794.6	160.26	5.958	
11,122.0	6,714.8	10,891.1	6,719.5	82.4	81.2	90.28	-4,035.8	241.1	954.9	793.8	161.09	5.928	
11,200.0	6,714.2	10,969.1	6,718.8	83.8	82.6	90.28	-4,113.8	241.1	954.9	790.8	164.03	5.821	
11,220.4	6,714.1	10,989.6	6,718.6	84.2	83.0	90.27	-4,134.3	241.1	954.9	790.1	164.80	5.794	
11,300.0	6,713.5	11,069.1	6,718.0	85.7	84.5	90.27	-4,213.8	241.1	954.9	787.1	167.81	5.690	
11,318.9	6,713.4	11,088.0	6,717.8	86.0	84.9	90.26	-4,232.7	241.1	954.9	786.3	168.52	5.666	
11,400.0	6,712.9	11,169.1	6,717.1	87.5	86.4	90.26	-4,313.8	241.1	954.9	783.3	171.59	5.565	
11,417.3	6,712.7	11,186.4	6,717.0	87.8	86.7	90.26	-4,331.1	241.1	954.9	782.6	172.24	5.544	
11,500.0	6,712.2	11,269.1	6,716.3	89.3	88.3	90.25	-4,413.8	241.1	954.9	779.5	175.37	5.445	
11,515.7	6,712.1	11,284.8	6,716.2	89.6	88.6	90.25	-4,429.5	241.1	954.9	778.9	175.97	5.426	
11,600.0	6,711.5	11,369.1	6,715.5	91.2	90.2	90.24	-4,513.8	241.1	954.9	775.7	179.15	5.330	
11,614.1	6,711.4	11,383.3	6,715.4	91.4	90.5	90.24	-4,527.9	241.1	954.9	775.2	179.69	5.314	
11,700.0	6,710.8	11,469.1	6,714.6	93.0	92.1	90.23	-4,613.8	241.1	954.9	771.9	182.94	5.220	
11,712.6	6,710.7	11,481.7	6,714.5	93.3	92.3	90.23	-4,626.4	241.1	954.9	771.4	183.42	5.206	
11,800.0	6,710.1	11,569.1	6,713.8	94.9	94.0	90.22	-4,713.8	241.1	954.9	768.1	186.73	5.114	
11,811.0	6,710.1	11,580.1	6,713.7	95.1	94.2	90.22	-4,724.8	241.1	954.9	767.7	187.15	5.102	
11,900.0	6,709.5	11,669.1	6,713.0	96.7	95.9	90.21	-4,813.8	241.1	954.9	764.3	190.52	5.012	
11,909.4	6,709.4	11,678.5	6,712.9	96.9	96.1	90.21	-4,823.2	241.1	954.9	764.0	190.88	5.002	
12,000.0	6,708.8	11,769.1	6,712.1	98.6	97.8	90.20	-4,913.8	241.1	954.9	760.5	194.32	4.914	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5J-203 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,007.8	6,708.7	11,777.0	6,712.1	98.7	97.9	90.20	-4,921.6	241.1	954.9	760.3	194.62	4.906	
12,100.0	6,708.1	11,869.1	6,711.3	100.4	99.7	90.19	-5,013.8	241.1	954.9	756.8	198.11	4.820	
12,106.3	6,708.1	11,875.4	6,711.2	100.6	99.8	90.19	-5,020.1	241.1	954.9	756.5	198.35	4.814	
12,200.0	6,707.4	11,969.1	6,710.5	102.3	101.6	90.18	-5,113.8	241.1	954.9	753.0	201.91	4.729	
12,204.7	6,707.4	11,973.8	6,710.4	102.4	101.7	90.18	-5,118.5	241.1	954.9	752.8	202.09	4.725	
12,300.0	6,706.7	12,069.1	6,709.6	104.2	103.5	90.17	-5,213.8	241.1	954.9	749.2	205.71	4.642	
12,303.1	6,706.7	12,072.2	6,709.6	104.2	103.6	90.17	-5,216.9	241.1	954.9	749.0	205.83	4.639	
12,400.0	6,706.1	12,169.1	6,708.8	106.0	105.4	90.16	-5,313.8	241.1	954.9	745.4	209.51	4.558	
12,401.5	6,706.0	12,170.7	6,708.8	106.1	105.4	90.16	-5,315.3	241.1	954.9	745.3	209.57	4.556	
12,500.0	6,705.4	12,269.1	6,707.9	107.9	107.3	90.15	-5,413.8	241.1	954.9	741.5	213.31	4.476	
12,598.4	6,704.7	12,367.5	6,707.1	109.7	109.2	90.14	-5,512.2	241.1	954.9	737.8	217.06	4.399	
12,600.0	6,704.7	12,369.1	6,707.1	109.8	109.2	90.14	-5,513.8	241.1	954.9	737.7	217.12	4.398	
12,696.8	6,704.0	12,465.9	6,706.3	111.6	111.1	90.14	-5,610.6	241.1	954.9	734.1	220.80	4.325	
12,700.0	6,704.0	12,469.1	6,706.3	111.6	111.1	90.14	-5,613.8	241.1	954.9	733.9	220.92	4.322	
12,795.2	6,703.4	12,564.4	6,705.5	113.4	112.9	90.13	-5,709.0	241.1	954.9	730.3	224.55	4.252	
12,800.0	6,703.3	12,569.1	6,705.4	113.5	113.0	90.13	-5,713.8	241.1	954.9	730.1	224.73	4.249	
12,893.7	6,702.7	12,662.8	6,704.6	115.3	114.8	90.12	-5,807.4	241.1	954.9	726.6	228.30	4.183	
12,900.0	6,702.7	12,669.1	6,704.6	115.4	114.9	90.12	-5,813.7	241.1	954.9	726.3	228.54	4.178	
12,992.1	6,702.0	12,761.2	6,703.8	117.1	116.7	90.11	-5,905.8	241.1	954.9	722.8	232.05	4.115	
13,000.0	6,702.0	12,769.1	6,703.7	117.3	116.8	90.11	-5,913.7	241.1	954.9	722.5	232.35	4.110	
13,090.5	6,701.4	12,859.6	6,703.0	119.0	118.6	90.10	-6,004.3	241.1	954.9	719.1	235.80	4.049	
13,100.0	6,701.3	12,869.1	6,702.9	119.1	118.7	90.10	-6,013.7	241.1	954.9	718.7	236.16	4.043	
13,188.9	6,700.7	12,958.1	6,702.2	120.8	120.4	90.09	-6,102.7	241.1	954.9	715.3	239.55	3.986	
13,200.0	6,700.6	12,969.1	6,702.1	121.0	120.6	90.09	-6,113.7	241.1	954.9	714.9	239.97	3.979	
13,287.4	6,700.0	13,056.5	6,701.3	122.7	122.3	90.08	-6,201.1	241.1	954.9	711.6	243.30	3.925	
13,300.0	6,699.9	13,069.1	6,701.2	122.9	122.6	90.08	-6,213.7	241.1	954.9	711.1	243.78	3.917	
13,385.8	6,699.3	13,154.9	6,700.5	124.5	124.2	90.07	-6,299.5	241.1	954.9	707.8	247.05	3.865	
13,400.0	6,699.3	13,169.1	6,700.4	124.8	124.5	90.07	-6,313.7	241.1	954.9	707.3	247.60	3.857	
13,484.2	6,698.7	13,253.3	6,699.7	126.4	126.1	90.06	-6,398.0	241.1	954.9	704.0	250.81	3.807	
13,500.0	6,698.6	13,269.1	6,699.5	126.7	126.4	90.06	-6,413.7	241.1	954.9	703.4	251.41	3.798	
13,582.6	6,698.0	13,351.8	6,698.8	128.2	127.9	90.05	-6,496.4	241.1	954.9	700.3	254.56	3.751	
13,600.0	6,697.9	13,369.1	6,698.7	128.5	128.3	90.05	-6,513.7	241.1	954.9	699.6	255.22	3.741	
13,681.1	6,697.3	13,450.2	6,698.0	130.1	129.8	90.04	-6,594.8	241.1	954.9	696.5	258.32	3.696	
13,700.0	6,697.2	13,469.1	6,697.9	130.4	130.2	90.04	-6,613.7	241.1	954.9	695.8	259.04	3.686	
13,779.5	6,696.7	13,548.6	6,697.2	131.9	131.7	90.03	-6,693.2	241.1	954.9	692.8	262.08	3.643	
13,800.0	6,696.5	13,569.1	6,697.0	132.3	132.1	90.03	-6,713.7	241.1	954.9	692.0	262.86	3.633	
13,877.9	6,696.0	13,647.0	6,696.4	133.8	133.6	90.02	-6,791.6	241.1	954.9	689.0	265.83	3.592	
13,900.0	6,695.8	13,669.1	6,696.2	134.2	134.0	90.02	-6,813.7	241.1	954.9	688.2	266.68	3.581	
13,976.3	6,695.3	13,745.5	6,695.5	135.6	135.5	90.01	-6,890.1	241.1	954.9	685.3	269.59	3.542	
14,000.0	6,695.2	13,769.1	6,695.3	136.1	135.9	90.01	-6,913.7	241.1	954.9	684.4	270.49	3.530	
14,034.1	6,695.0	13,803.2	6,695.0	136.7	136.6	90.00	-6,947.8	241.1	954.8	683.0	271.79	3.513 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5J-223 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	1.07	29.9	0.6	29.9				
98.4	98.4	98.4	98.4	0.1	0.1	1.07	29.9	0.6	29.9	29.7	0.17	175.823	
100.0	100.0	100.0	100.0	0.1	0.1	1.07	29.9	0.6	29.9	29.7	0.17	172.640	
196.8	196.8	196.8	196.8	0.3	0.3	1.07	29.9	0.6	29.9	29.3	0.61	49.107	
200.0	200.0	200.0	200.0	0.3	0.3	1.07	29.9	0.6	29.9	29.3	0.62	47.990	
295.3	295.3	295.3	295.3	0.5	0.5	1.07	29.9	0.6	29.9	28.8	1.05	28.432	
300.0	300.0	300.0	300.0	0.5	0.5	1.07	29.9	0.6	29.9	28.8	1.07	27.869	
393.7	393.7	393.7	393.7	0.7	0.7	1.07	29.9	0.6	29.9	28.4	1.49	20.008	
400.0	400.0	400.0	400.0	0.8	0.8	1.07	29.9	0.6	29.9	28.4	1.52	19.636	
492.1	492.1	492.1	492.1	1.0	1.0	1.07	29.9	0.6	29.9	27.9	1.94	15.435	
500.0	500.0	500.0	500.0	1.0	1.0	1.07	29.9	0.6	29.9	27.9	1.97	15.158	
590.5	590.5	590.5	590.5	1.2	1.2	1.07	29.9	0.6	29.9	27.5	2.38	12.563	
600.0	600.0	600.0	600.0	1.2	1.2	1.07	29.9	0.6	29.9	27.5	2.42	12.343	
689.0	689.0	689.0	689.0	1.4	1.4	1.07	29.9	0.6	29.9	27.1	2.82	10.593	
700.0	700.0	700.0	700.0	1.4	1.4	1.07	29.9	0.6	29.9	27.0	2.87	10.410	
787.4	787.4	787.4	787.4	1.6	1.6	1.07	29.9	0.6	29.9	26.6	3.26	9.156	
800.0	800.0	800.0	800.0	1.7	1.7	1.07	29.9	0.6	29.9	26.6	3.32	9.000	
885.8	885.8	885.8	885.8	1.9	1.9	1.07	29.9	0.6	29.9	26.2	3.71	8.063	
900.0	900.0	900.0	900.0	1.9	1.9	1.07	29.9	0.6	29.9	26.1	3.77	7.927	
984.2	984.2	984.2	984.2	2.1	2.1	1.07	29.9	0.6	29.9	25.7	4.15	7.203	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	1.07	29.9	0.6	29.9	25.7	4.22	7.082	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	1.07	29.9	0.6	29.9	25.3	4.59	6.509	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	1.07	29.9	0.6	29.9	25.2	4.67	6.400	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	1.07	29.9	0.6	29.9	24.8	5.03	5.937	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	1.07	29.9	0.6	29.9	24.8	5.12	5.838	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	1.07	29.9	0.6	29.9	24.4	5.48	5.457	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	1.07	29.9	0.6	29.9	24.3	5.57	5.367	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	1.07	29.9	0.6	29.9	24.0	5.92	5.049	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	1.07	29.9	0.6	29.9	23.9	6.02	4.966	
1,476.4	1,476.4	1,476.4	1,476.4	3.2	3.2	1.07	29.9	0.6	29.9	23.5	6.36	4.698	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	1.07	29.9	0.6	29.9	23.4	6.47	4.621	
1,574.8	1,574.8	1,574.8	1,574.8	3.4	3.4	1.07	29.9	0.6	29.9	23.1	6.80	4.392	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	1.07	29.9	0.6	29.9	23.0	6.92	4.320	
1,673.2	1,673.2	1,673.2	1,673.2	3.6	3.6	1.07	29.9	0.6	29.9	22.6	7.25	4.124	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	1.07	29.9	0.6	29.9	22.5	7.37	4.057	
1,771.6	1,771.6	1,771.6	1,771.6	3.8	3.8	1.07	29.9	0.6	29.9	22.2	7.69	3.887	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	1.07	29.9	0.6	29.9	22.1	7.82	3.823	
1,870.1	1,870.1	1,870.1	1,870.1	4.1	4.1	1.07	29.9	0.6	29.9	21.7	8.13	3.675	
1,900.0	1,900.0	1,900.0	1,900.0	4.1	4.1	1.07	29.9	0.6	29.9	21.6	8.26	3.615	
1,937.2	1,937.2	1,937.2	1,937.2	4.2	4.2	1.07	29.9	0.6	29.9	21.4	8.43	3.543 CC	
1,968.5	1,968.5	1,968.4	1,968.4	4.3	4.3	1.17	29.9	0.6	29.9	21.3	8.57	3.489 ES	
2,000.0	2,000.0	1,999.8	1,999.7	4.4	4.4	1.79	30.1	0.9	30.1	21.4	8.71	3.454	
2,066.9	2,066.9	2,066.3	2,066.3	4.5	4.5	4.91	30.9	2.7	31.1	22.1	9.00	3.452	
2,100.0	2,100.0	2,099.1	2,099.1	4.6	4.6	7.23	31.6	4.0	31.9	22.8	9.14	3.490	
2,165.3	2,165.3	2,163.9	2,163.7	4.7	4.7	12.89	33.5	7.7	34.4	25.0	9.43	3.649	
2,200.0	2,200.0	2,198.2	2,197.8	4.8	4.8	16.24	34.8	10.1	36.3	26.7	9.58	3.786	
2,250.0	2,250.0	2,247.5	2,246.9	4.9	4.9	21.19	36.9	14.3	39.7	29.9	9.80	4.049	
2,263.8	2,263.8	2,261.0	2,260.4	4.9	4.9	-49.39	37.5	15.6	40.8	30.9	9.87	4.131	
2,300.0	2,300.0	2,296.6	2,295.8	5.0	5.0	-46.26	39.4	19.2	43.7	33.7	10.02	4.364	
2,362.2	2,362.2	2,357.7	2,356.3	5.2	5.1	-41.94	43.0	26.4	49.2	38.9	10.29	4.780	
2,400.0	2,399.9	2,394.7	2,392.9	5.2	5.2	-39.86	45.5	31.2	52.6	42.2	10.44	5.040	
2,460.6	2,460.4	2,454.0	2,451.4	5.4	5.4	-37.17	50.0	39.9	58.4	47.7	10.70	5.455	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,500.0	2,499.7	2,492.5	2,489.2	5.4	5.5	-35.78	53.1	46.2	62.2	51.3	10.86	5.726	
2,559.0	2,558.5	2,550.0	2,545.6	5.6	5.7	-34.10	58.3	56.3	68.0	56.9	11.11	6.123	
2,600.0	2,599.1	2,589.9	2,584.6	5.7	5.8	-33.18	62.2	63.9	72.2	60.9	11.28	6.396	
2,657.5	2,656.1	2,647.0	2,640.3	5.8	6.0	-32.27	68.0	75.3	77.6	66.0	11.53	6.727	
2,700.0	2,698.2	2,689.4	2,681.6	5.9	6.1	-31.96	72.3	83.7	81.0	69.2	11.71	6.912	
2,755.9	2,753.3	2,745.2	2,736.0	6.1	6.3	-31.93	77.9	94.7	84.6	72.6	11.96	7.073	
2,800.0	2,796.6	2,789.2	2,778.9	6.2	6.4	-32.18	82.4	103.5	86.8	74.6	12.16	7.141	
2,854.3	2,849.9	2,843.5	2,831.8	6.3	6.6	-32.81	87.9	114.3	88.8	76.3	12.41	7.151	
2,900.0	2,894.4	2,889.1	2,876.3	6.5	6.8	-33.60	92.5	123.3	89.7	77.1	12.63	7.105	
2,952.7	2,945.7	2,941.8	2,927.7	6.6	7.0	-34.82	97.8	133.8	90.1	77.2	12.90	6.986	
3,000.0	2,991.5	2,989.0	2,973.7	6.8	7.2	-36.22	102.6	143.1	89.9	76.7	13.16	6.832	
3,051.2	3,040.8	3,040.1	3,023.5	7.0	7.4	-38.10	107.8	153.3	89.0	75.5	13.46	6.609	
3,100.0	3,087.6	3,088.8	3,071.0	7.1	7.5	-40.29	112.7	162.9	87.5	73.8	13.77	6.355	
3,149.6	3,134.9	3,138.2	3,119.1	7.4	7.7	-42.97	117.7	172.7	85.6	71.4	14.14	6.054	
3,200.0	3,182.7	3,188.3	3,168.0	7.6	7.9	-46.25	122.8	182.7	83.2	68.6	14.54	5.720	
3,248.0	3,228.0	3,236.0	3,214.4	7.8	8.1	-49.99	127.6	192.1	80.6	65.6	15.00	5.375	
3,300.0	3,276.6	3,287.5	3,264.6	8.1	8.3	-54.81	132.8	202.3	77.7	62.2	15.55	4.998	
3,346.4	3,319.9	3,333.3	3,309.4	8.3	8.5	-59.90	137.5	211.4	75.3	59.1	16.13	4.665	
3,400.0	3,369.4	3,386.1	3,360.8	8.6	8.7	-66.76	142.8	221.9	72.8	56.0	16.86	4.319	
3,444.9	3,410.5	3,430.1	3,403.7	8.9	8.9	-73.33	147.3	230.6	71.4	53.9	17.52	4.075	
3,489.9	3,451.6	3,474.2	3,446.7	9.2	9.1	-80.60	151.7	239.4	70.9	52.7	18.16	3.901	
3,500.0	3,460.7	3,484.1	3,456.3	9.2	9.2	-82.30	152.7	241.3	70.9	52.6	18.30	3.874	
3,543.3	3,499.8	3,526.3	3,497.5	9.5	9.3	-89.81	157.0	249.7	71.8	52.9	18.85	3.806	
3,600.0	3,550.6	3,581.3	3,551.1	9.9	9.6	-99.81	162.6	260.6	74.9	55.6	19.38	3.866	
3,641.7	3,587.6	3,621.7	3,590.5	10.3	9.7	-106.94	166.7	268.6	78.9	59.3	19.64	4.017	
3,709.9	3,647.5	3,687.2	3,654.4	10.8	10.0	-117.61	173.3	281.6	88.4	68.6	19.80	4.467	
3,740.1	3,673.9	3,716.2	3,682.6	11.1	10.1	-121.85	176.2	287.4	93.8	73.9	19.82	4.731	
3,800.0	3,726.2	3,773.6	3,738.5	11.6	10.4	-128.95	182.0	298.8	105.6	85.7	19.81	5.328	
3,838.6	3,759.9	3,810.6	3,774.6	11.9	10.6	-132.75	185.8	306.1	113.9	94.1	19.82	5.746	
3,900.0	3,813.5	3,869.4	3,832.0	12.5	10.8	-137.76	191.7	317.8	128.0	108.1	19.85	6.447	
3,937.0	3,845.8	3,904.9	3,866.5	12.8	11.0	-140.29	195.3	324.8	136.9	117.0	19.89	6.879	
4,000.0	3,900.8	3,965.3	3,925.4	13.4	11.2	-143.91	201.4	336.8	152.5	132.5	20.00	7.622	
4,035.4	3,931.7	3,999.2	3,958.5	13.7	11.4	-145.65	204.9	343.5	161.5	141.4	20.09	8.038	
4,100.0	3,988.1	4,061.1	4,018.8	14.3	11.7	-148.36	211.1	355.8	178.2	157.9	20.27	8.790	
4,133.8	4,017.6	4,093.5	4,050.5	14.7	11.8	-149.59	214.4	362.2	187.1	166.7	20.38	9.179	
4,200.0	4,075.4	4,156.9	4,112.3	15.3	12.1	-151.68	220.8	374.8	204.6	184.0	20.62	9.924	
4,232.3	4,103.5	4,187.8	4,142.4	15.6	12.2	-152.58	224.0	381.0	213.3	192.5	20.75	10.280	
4,300.0	4,162.6	4,252.8	4,205.7	16.2	12.5	-154.24	230.5	393.8	231.6	210.6	21.04	11.009	
4,330.7	4,189.4	4,282.2	4,234.4	16.5	12.7	-154.92	233.5	399.7	239.9	218.8	21.17	11.332	
4,400.0	4,249.9	4,348.6	4,299.1	17.2	13.0	-156.27	240.2	412.8	258.9	237.4	21.50	12.042	
4,429.1	4,275.4	4,376.5	4,326.3	17.5	13.1	-156.79	243.1	418.4	266.9	245.3	21.64	12.332	
4,500.0	4,337.2	4,444.4	4,392.5	18.2	13.4	-157.92	250.0	431.9	286.5	264.5	22.00	13.021	
4,527.5	4,361.3	4,470.8	4,418.3	18.5	13.5	-158.32	252.6	437.1	294.1	271.9	22.14	13.281	
4,600.0	4,424.5	4,540.3	4,486.0	19.2	13.8	-159.27	259.7	450.9	314.2	291.7	22.53	13.947	
4,626.0	4,447.2	4,565.1	4,510.2	19.5	13.9	-159.59	262.2	455.8	321.4	298.7	22.67	14.179	
4,700.0	4,511.8	4,636.1	4,579.4	20.2	14.3	-160.41	269.4	469.9	342.1	319.0	23.08	14.822	
4,724.4	4,533.1	4,659.5	4,602.2	20.5	14.4	-160.66	271.7	474.5	348.9	325.7	23.21	15.028	
4,796.7	4,596.3	4,728.8	4,669.8	21.2	14.7	-161.34	278.7	488.3	369.1	345.5	23.63	15.624	
4,800.0	4,599.1	4,731.9	4,672.8	21.2	14.7	-161.38	279.1	488.9	370.0	346.4	23.65	15.647	
4,822.8	4,619.1	4,753.8	4,694.2	21.4	14.8	-161.62	281.3	493.2	376.3	352.5	23.80	15.809	
4,900.0	4,687.3	4,828.3	4,766.7	22.0	15.1	-162.30	288.8	508.0	396.4	372.0	24.34	16.283	
4,921.2	4,706.2	4,848.9	4,786.8	22.2	15.2	-162.45	290.9	512.1	401.6	377.1	24.49	16.396	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,000.0	4,777.1	4,925.5	4,861.5	22.8	15.6	-162.95	298.6	527.3	419.6	394.5	25.05	16.746	
5,019.7	4,794.9	4,944.7	4,880.2	22.9	15.7	-163.05	300.6	531.1	423.7	398.5	25.19	16.819	
5,100.0	4,868.3	5,023.4	4,957.0	23.5	16.0	-163.39	308.6	546.7	439.5	413.7	25.77	17.054	
5,118.1	4,885.0	5,041.2	4,974.4	23.6	16.1	-163.45	310.4	550.2	442.8	416.9	25.90	17.095	
5,200.0	4,961.0	5,122.0	5,053.1	24.2	16.5	-163.65	318.5	566.3	456.2	429.7	26.49	17.222	
5,216.5	4,976.4	5,138.4	5,069.0	24.3	16.6	-163.68	320.2	569.5	458.6	432.0	26.60	17.239	
5,300.0	5,054.8	5,221.1	5,149.7	24.8	17.0	-163.76	328.6	585.9	469.5	442.3	27.19	17.265	
5,314.9	5,069.0	5,236.0	5,164.2	24.8	17.0	-163.77	330.1	588.9	471.2	443.9	27.30	17.262	
5,400.0	5,149.9	5,320.6	5,246.7	25.3	17.4	-163.74	338.6	605.7	479.5	451.6	27.89	17.192	
5,413.4	5,162.7	5,333.9	5,259.7	25.4	17.5	-163.72	340.0	608.3	480.6	452.6	27.99	17.174	
5,500.0	5,245.9	5,420.4	5,344.0	25.8	17.9	-163.58	348.7	625.5	486.2	457.6	28.58	17.011	
5,511.8	5,257.3	5,432.1	5,355.5	25.9	17.9	-163.55	349.9	627.8	486.8	458.1	28.66	16.984	
5,600.0	5,342.9	5,508.5	5,430.1	26.3	18.2	-163.38	357.2	642.1	490.6	461.4	29.18	16.814	
5,610.2	5,352.9	5,517.4	5,438.8	26.3	18.3	-163.37	358.0	643.6	491.0	461.8	29.23	16.797	
5,700.0	5,440.7	5,600.0	5,520.1	26.7	18.5	-163.21	364.7	656.8	494.4	464.7	29.71	16.643	
5,708.6	5,449.1	5,600.0	5,520.1	26.7	18.5	-163.21	364.7	656.8	494.7	465.0	29.73	16.641	
5,800.0	5,539.1	5,681.4	5,600.6	27.0	18.8	-163.09	370.4	667.8	497.6	467.4	30.15	16.506	
5,807.1	5,546.1	5,687.6	5,606.7	27.0	18.8	-163.08	370.7	668.5	497.8	467.6	30.17	16.496	
5,900.0	5,638.1	5,767.9	5,686.4	27.3	19.0	-162.98	375.2	677.2	500.1	469.6	30.54	16.378	
5,905.5	5,643.5	5,772.6	5,691.1	27.3	19.0	-162.98	375.4	677.7	500.2	469.7	30.55	16.372	
6,000.0	5,737.5	5,854.3	5,772.4	27.5	19.2	-162.91	378.8	684.3	502.0	471.2	30.86	16.266	
6,003.9	5,741.4	5,857.6	5,775.8	27.5	19.2	-162.90	378.9	684.6	502.1	471.2	30.87	16.263	
6,100.0	5,837.2	5,940.6	5,858.6	27.7	19.3	-162.85	381.2	689.1	503.3	472.2	31.13	16.169	
6,102.3	5,839.6	5,942.7	5,860.6	27.7	19.3	-162.85	381.3	689.2	503.4	472.2	31.13	16.167	
6,200.0	5,937.2	6,027.0	5,944.9	27.9	19.5	-162.83	382.5	691.6	504.0	472.7	31.34	16.084	
6,200.8	5,937.9	6,027.7	5,945.6	27.9	19.5	-162.83	382.5	691.6	504.0	472.7	31.34	16.084	
6,256.6	5,993.8	6,075.9	5,993.8	27.9	19.5	-90.91	382.7	692.0	504.1	472.7	31.42	16.042	
6,276.6	6,013.8	6,095.9	6,013.8	27.9	19.6	-90.91	382.7	692.0	504.1	472.6	31.49	16.009	
6,286.6	6,023.8	6,105.9	6,023.8	27.9	19.6	-90.91	382.7	692.0	504.1	472.6	31.52	15.993	
6,299.2	6,036.4	6,118.3	6,036.2	27.9	19.6	89.09	382.6	692.0	504.1	472.5	31.56	15.974	
6,300.0	6,037.2	6,119.1	6,037.0	27.9	19.6	89.09	382.6	692.0	504.1	472.5	31.56	15.973	
6,350.0	6,087.1	6,168.6	6,086.4	28.0	19.7	89.09	379.9	692.0	504.1	472.4	31.67	15.916	
6,397.6	6,134.3	6,215.7	6,133.1	28.0	19.7	89.10	374.3	692.0	504.1	472.4	31.74	15.884	
6,400.0	6,136.7	6,218.0	6,135.5	28.0	19.7	89.10	373.9	692.0	504.1	472.4	31.74	15.882	
6,450.0	6,185.7	6,267.5	6,184.0	28.0	19.7	89.11	364.5	692.0	504.1	472.3	31.76	15.870	
6,496.0	6,230.2	6,313.0	6,228.0	28.0	19.7	89.13	352.9	692.0	504.1	472.3	31.75	15.876	
6,500.0	6,234.0	6,316.9	6,231.8	28.0	19.7	89.13	351.8	692.0	504.1	472.4	31.75	15.877	
6,550.0	6,281.3	6,366.4	6,278.6	28.0	19.7	89.15	335.8	692.0	504.1	472.4	31.70	15.901	
6,594.5	6,322.2	6,410.4	6,319.2	27.9	19.7	89.17	318.9	692.0	504.1	472.5	31.64	15.933	
6,600.0	6,327.3	6,415.9	6,324.2	27.9	19.7	89.17	316.6	692.0	504.1	472.5	31.63	15.938	
6,650.0	6,371.8	6,465.4	6,368.4	27.9	19.6	89.20	294.3	692.0	504.1	472.6	31.54	15.985	
6,692.9	6,408.6	6,507.9	6,405.0	27.9	19.6	89.23	272.8	692.0	504.1	472.6	31.45	16.029	
6,700.0	6,414.6	6,514.9	6,410.9	27.8	19.6	89.23	269.0	692.0	504.1	472.7	31.43	16.037	
6,750.0	6,455.5	6,564.5	6,451.7	27.8	19.5	89.27	240.8	692.0	504.1	472.8	31.33	16.089	
6,791.3	6,487.7	6,605.4	6,483.8	27.7	19.5	89.30	215.4	692.0	504.1	472.8	31.25	16.128	
6,800.0	6,494.3	6,614.0	6,490.4	27.7	19.5	89.31	209.9	692.0	504.1	472.8	31.24	16.135	
6,850.0	6,530.8	6,663.6	6,526.8	27.7	19.4	89.35	176.3	692.0	504.1	472.9	31.17	16.170	
6,889.7	6,558.1	6,703.1	6,554.1	27.6	19.4	89.39	147.8	692.0	504.1	472.9	31.14	16.186	
6,900.0	6,564.9	6,713.2	6,560.9	27.6	19.4	89.40	140.2	692.0	504.1	472.9	31.14	16.187	
6,950.0	6,596.3	6,762.9	6,592.4	27.6	19.3	89.45	101.9	692.0	504.1	472.9	31.16	16.179	
6,988.2	6,618.4	6,800.8	6,614.7	27.5	19.3	89.49	71.2	692.0	504.1	472.9	31.20	16.153	
7,000.0	6,624.9	6,812.6	6,621.3	27.5	19.3	89.50	61.4	692.0	504.1	472.8	31.23	16.141	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5J-223 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWDD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,050.0	6,650.6	6,862.3	6,647.2	27.5	19.3	89.55	19.0	692.0	504.1	472.7	31.37	16.067	
7,086.6	6,667.5	6,898.7	6,664.3	27.5	19.3	89.60	-13.1	692.0	504.1	472.5	31.53	15.989	
7,100.0	6,673.3	6,912.0	6,670.2	27.5	19.3	89.61	-25.1	692.0	504.1	472.5	31.59	15.955	
7,150.0	6,692.7	6,961.8	6,690.0	27.5	19.3	89.67	-70.7	692.0	504.1	472.2	31.90	15.801	
7,185.0	6,704.4	6,996.7	6,702.0	27.5	19.4	89.71	-103.5	692.0	504.0	471.9	32.17	15.668	
7,200.0	6,709.0	7,011.6	6,706.7	27.5	19.4	89.73	-117.6	692.0	504.0	471.7	32.30	15.606	
7,250.0	6,721.8	7,061.5	6,720.0	27.5	19.5	89.79	-165.7	692.0	504.0	471.3	32.79	15.371	
7,283.4	6,728.6	7,094.8	6,727.1	27.5	19.6	89.83	-198.3	692.0	504.0	470.9	33.18	15.193	
7,300.0	6,731.3	7,111.3	6,730.0	27.6	19.7	89.85	-214.5	692.0	504.0	470.7	33.38	15.101	
7,350.0	6,737.3	7,161.3	6,736.6	27.7	19.9	89.92	-264.0	692.0	504.0	470.0	34.06	14.800	
7,381.9	6,739.4	7,193.1	6,739.0	27.7	20.0	89.96	-295.8	692.0	504.0	469.5	34.54	14.594	
7,400.0	6,739.9	7,211.2	6,739.7	27.8	20.1	89.98	-313.9	692.0	504.0	469.2	34.82	14.476	
7,415.7	6,740.0	7,227.0	6,740.0	27.8	20.2	90.00	-329.6	692.0	504.0	469.0	35.08	14.370	
7,416.5	6,740.0	7,227.7	6,740.0	27.8	20.2	90.00	-330.4	692.0	504.0	469.0	35.09	14.364	
7,480.3	6,739.5	7,291.5	6,739.6	28.0	20.7	90.01	-394.2	692.0	504.0	467.8	36.22	13.915	
7,500.0	6,739.4	7,311.2	6,739.5	28.1	20.8	90.01	-413.9	692.0	504.0	467.5	36.59	13.776	
7,578.7	6,738.9	7,390.0	6,738.9	28.5	21.5	90.01	-492.6	692.0	504.0	465.8	38.20	13.195	
7,600.0	6,738.7	7,411.2	6,738.8	28.6	21.7	90.01	-513.9	692.0	504.0	465.4	38.65	13.041	
7,677.1	6,738.2	7,488.4	6,738.3	29.1	22.5	90.01	-591.0	692.0	504.0	463.6	40.43	12.467	
7,700.0	6,738.1	7,511.2	6,738.1	29.2	22.8	90.01	-613.9	692.0	504.0	463.1	40.97	12.303	
7,775.6	6,737.5	7,586.8	6,737.6	29.7	23.7	90.01	-689.4	692.0	504.0	461.2	42.88	11.755	
7,800.0	6,737.4	7,611.2	6,737.4	29.9	23.9	90.01	-713.8	692.0	504.0	460.5	43.51	11.586	
7,874.0	6,736.9	7,685.2	6,736.9	30.6	24.9	90.01	-787.8	692.0	504.0	458.5	45.51	11.075	
7,900.0	6,736.7	7,711.2	6,736.7	30.8	25.2	90.01	-813.8	692.0	504.0	457.8	46.22	10.905	
7,972.4	6,736.2	7,783.7	6,736.3	31.5	26.2	90.01	-886.3	692.0	504.0	455.7	48.30	10.437	
8,000.0	6,736.0	7,811.2	6,736.1	31.8	26.6	90.01	-913.8	692.0	504.0	455.0	49.09	10.267	
8,070.8	6,735.5	7,882.1	6,735.6	32.5	27.6	90.01	-984.7	692.0	504.0	452.8	51.21	9.843	
8,100.0	6,735.3	7,911.2	6,735.4	32.8	28.0	90.01	-1,013.8	692.0	504.0	452.0	52.09	9.677	
8,169.3	6,734.9	7,980.5	6,734.9	33.6	29.0	90.01	-1,083.1	692.0	504.0	449.8	54.23	9.295	
8,200.0	6,734.6	8,011.2	6,734.7	34.0	29.5	90.01	-1,113.8	692.0	504.0	448.9	55.18	9.134	
8,267.7	6,734.2	8,078.9	6,734.2	34.8	30.5	90.01	-1,181.5	692.0	504.0	446.7	57.34	8.790	
8,300.0	6,734.0	8,111.2	6,734.0	35.2	31.0	90.01	-1,213.8	692.0	504.0	445.7	58.37	8.635	
8,366.1	6,733.5	8,177.4	6,733.6	36.1	32.1	90.01	-1,280.0	692.0	504.0	443.5	60.53	8.327	
8,400.0	6,733.3	8,211.2	6,733.3	36.5	32.6	90.01	-1,313.8	692.0	504.0	442.4	61.64	8.178	
8,464.5	6,732.8	8,275.8	6,732.9	37.4	33.6	90.01	-1,378.4	692.0	504.0	440.3	63.78	7.903	
8,500.0	6,732.6	8,311.2	6,732.7	37.9	34.2	90.01	-1,413.8	692.0	504.0	439.1	64.96	7.759	
8,563.0	6,732.2	8,374.2	6,732.2	38.8	35.2	90.01	-1,476.8	692.0	504.0	437.0	67.09	7.513	
8,600.0	6,731.9	8,411.2	6,732.0	39.3	35.9	90.01	-1,513.8	692.0	504.0	435.7	68.35	7.375	
8,661.4	6,731.5	8,472.6	6,731.6	40.2	36.9	90.01	-1,575.2	692.0	504.0	433.6	70.45	7.155	
8,700.0	6,731.2	8,511.2	6,731.3	40.8	37.5	90.01	-1,613.8	692.0	504.0	432.3	71.77	7.023	
8,759.8	6,730.8	8,571.1	6,730.9	41.7	38.5	90.01	-1,673.7	692.0	504.0	430.2	73.85	6.825	
8,800.0	6,730.6	8,611.2	6,730.6	42.3	39.2	90.01	-1,713.8	692.0	504.0	428.8	75.24	6.699	
8,858.2	6,730.2	8,669.5	6,730.2	43.2	40.2	90.01	-1,772.1	692.0	504.0	426.8	77.28	6.522	
8,900.0	6,729.9	8,711.2	6,729.9	43.8	40.9	90.01	-1,813.8	692.0	504.0	425.3	78.75	6.401	
8,956.7	6,729.5	8,767.9	6,729.6	44.7	41.9	90.01	-1,870.5	692.0	504.0	423.3	80.75	6.242	
9,000.0	6,729.2	8,811.2	6,729.3	45.4	42.6	90.01	-1,913.8	692.0	504.0	421.8	82.28	6.126	
9,055.1	6,728.8	8,866.3	6,728.9	46.3	43.6	90.01	-1,968.9	692.0	504.0	419.8	84.24	5.983	
9,100.0	6,728.5	8,911.2	6,728.6	47.0	44.4	90.01	-2,013.8	692.0	504.0	418.2	85.84	5.872	
9,153.5	6,728.2	8,964.8	6,728.2	47.9	45.3	90.01	-2,067.3	692.0	504.0	416.3	87.76	5.744	
9,200.0	6,727.8	9,011.2	6,727.9	48.6	46.2	90.01	-2,113.8	692.0	504.0	414.6	89.42	5.637	
9,251.9	6,727.5	9,063.2	6,727.5	49.5	47.1	90.01	-2,165.8	692.0	504.0	412.7	91.30	5.521	
9,300.0	6,727.2	9,111.2	6,727.2	50.3	47.9	90.01	-2,213.8	692.0	504.0	411.0	93.03	5.418	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MW/D												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,350.4	6,726.8	9,161.6	6,726.9	51.1	48.8	90.01	-2,264.2	692.0	504.0	409.2	94.85	5.314	
9,400.0	6,726.5	9,211.2	6,726.5	51.9	49.7	90.01	-2,313.8	692.0	504.0	407.4	96.65	5.215	
9,448.8	6,726.1	9,260.0	6,726.2	52.7	50.6	90.01	-2,362.6	692.0	504.0	405.6	98.43	5.121	
9,500.0	6,725.8	9,311.2	6,725.9	53.6	51.5	90.01	-2,413.8	692.0	504.0	403.7	100.29	5.026	
9,547.2	6,725.5	9,358.5	6,725.5	54.4	52.3	90.01	-2,461.0	692.0	504.0	402.0	102.02	4.941	
9,600.0	6,725.1	9,411.2	6,725.2	55.3	53.3	90.01	-2,513.8	692.0	504.0	400.1	103.95	4.849	
9,645.6	6,724.8	9,456.9	6,724.9	56.1	54.1	90.01	-2,559.5	692.0	504.0	398.4	105.62	4.772	
9,700.0	6,724.4	9,511.2	6,724.5	57.0	55.1	90.01	-2,613.8	692.0	504.0	396.4	107.62	4.684	
9,744.1	6,724.1	9,555.3	6,724.2	57.8	55.9	90.01	-2,657.9	692.0	504.0	394.8	109.24	4.614	
9,800.0	6,723.8	9,611.2	6,723.8	58.7	56.9	90.01	-2,713.8	692.0	504.0	392.7	111.30	4.529	
9,842.5	6,723.5	9,653.7	6,723.5	59.5	57.7	90.01	-2,756.3	692.0	504.0	391.2	112.87	4.466	
9,900.0	6,723.1	9,711.2	6,723.1	60.5	58.7	90.01	-2,813.8	692.0	504.0	389.1	114.99	4.383	
9,940.9	6,722.8	9,752.2	6,722.9	61.2	59.5	90.01	-2,854.7	692.0	504.0	387.5	116.50	4.326	
10,000.0	6,722.4	9,811.2	6,722.5	62.2	60.6	90.01	-2,913.8	692.0	504.0	385.4	118.69	4.247	
10,039.3	6,722.1	9,850.6	6,722.2	62.9	61.3	90.01	-2,953.1	692.0	504.0	383.9	120.15	4.195	
10,100.0	6,721.7	9,911.2	6,721.8	64.0	62.4	90.01	-3,013.8	692.0	504.0	381.6	122.40	4.118	
10,137.8	6,721.5	9,949.0	6,721.5	64.7	63.1	90.01	-3,051.6	692.0	504.0	380.2	123.80	4.071	
10,200.0	6,721.0	10,011.2	6,721.1	65.8	64.2	90.01	-3,113.8	692.0	504.0	377.9	126.12	3.997	
10,236.2	6,720.8	10,047.4	6,720.8	66.4	64.9	90.01	-3,150.0	692.0	504.0	376.6	127.46	3.954	
10,300.0	6,720.4	10,111.2	6,720.4	67.5	66.1	90.01	-3,213.8	692.0	504.0	374.2	129.84	3.882	
10,334.6	6,720.1	10,145.9	6,720.2	68.2	66.7	90.01	-3,248.4	692.0	504.0	372.9	131.13	3.844	
10,400.0	6,719.7	10,211.2	6,719.7	69.3	67.9	90.01	-3,313.8	692.0	504.0	370.5	133.57	3.774	
10,433.0	6,719.4	10,244.3	6,719.5	69.9	68.5	90.01	-3,346.8	692.0	504.0	369.2	134.81	3.739	
10,500.0	6,719.0	10,311.2	6,719.0	71.1	69.8	90.01	-3,413.8	692.0	504.0	366.7	137.31	3.671	
10,531.5	6,718.8	10,342.7	6,718.8	71.7	70.4	90.01	-3,445.3	692.0	504.0	365.6	138.49	3.640	
10,600.0	6,718.3	10,411.2	6,718.4	72.9	71.6	90.01	-3,513.8	692.0	504.0	363.0	141.06	3.573	
10,629.9	6,718.1	10,441.1	6,718.2	73.4	72.2	90.01	-3,543.7	692.0	504.0	361.9	142.18	3.545	
10,700.0	6,717.6	10,511.2	6,717.7	74.7	73.5	90.01	-3,613.8	692.0	504.0	359.2	144.80	3.481	
10,728.3	6,717.4	10,539.6	6,717.5	75.2	74.0	90.01	-3,642.1	692.0	504.0	358.2	145.87	3.455	
10,800.0	6,717.0	10,611.2	6,717.0	76.5	75.4	90.01	-3,713.8	692.0	504.0	355.5	148.56	3.393	
10,826.7	6,716.8	10,638.0	6,716.8	77.0	75.9	90.01	-3,740.5	692.0	504.0	354.5	149.56	3.370	
10,900.0	6,716.3	10,711.2	6,716.3	78.3	77.2	90.01	-3,813.8	692.0	504.0	351.7	152.32	3.309	
10,925.2	6,716.1	10,736.4	6,716.2	78.8	77.7	90.01	-3,839.0	692.0	504.0	350.8	153.26	3.289	
11,000.0	6,715.6	10,811.2	6,715.6	80.2	79.1	90.01	-3,913.8	692.0	504.0	348.0	156.08	3.229	
11,023.6	6,715.4	10,834.8	6,715.5	80.6	79.5	90.01	-3,937.4	692.0	504.0	347.1	156.97	3.211	
11,100.0	6,714.9	10,911.2	6,715.0	82.0	81.0	90.01	-4,013.8	692.0	504.0	344.2	159.85	3.153	
11,122.0	6,714.8	10,933.3	6,714.8	82.4	81.4	90.01	-4,035.8	692.0	504.0	343.4	160.68	3.137	
11,200.0	6,714.2	11,011.2	6,714.3	83.8	82.8	90.01	-4,113.8	692.0	504.0	340.4	163.62	3.081	
11,220.4	6,714.1	11,031.7	6,714.1	84.2	83.2	90.01	-4,134.2	692.0	504.0	339.7	164.39	3.066	
11,300.0	6,713.5	11,111.2	6,713.6	85.7	84.7	90.01	-4,213.8	692.0	504.0	336.7	167.39	3.011	
11,318.9	6,713.4	11,130.1	6,713.5	86.0	85.1	90.01	-4,232.6	692.0	504.0	335.9	168.10	2.998	
11,400.0	6,712.9	11,211.2	6,712.9	87.5	86.6	90.01	-4,313.8	692.0	504.0	332.9	171.17	2.945	
11,417.3	6,712.7	11,228.5	6,712.8	87.8	86.9	90.01	-4,331.1	692.0	504.0	332.2	171.82	2.934	
11,500.0	6,712.2	11,311.2	6,712.2	89.3	88.5	90.01	-4,413.8	692.0	504.0	329.1	174.95	2.881	
11,515.7	6,712.1	11,327.0	6,712.1	89.6	88.8	90.01	-4,429.5	692.0	504.0	328.5	175.54	2.871	
11,600.0	6,711.5	11,411.2	6,711.6	91.2	90.4	90.01	-4,513.8	692.0	504.0	325.3	178.73	2.820	
11,614.1	6,711.4	11,425.4	6,711.5	91.4	90.6	90.01	-4,527.9	692.0	504.0	324.8	179.27	2.812	
11,700.0	6,710.8	11,511.2	6,710.9	93.0	92.2	90.01	-4,613.8	692.0	504.0	321.5	182.52	2.762	
11,712.6	6,710.7	11,523.8	6,710.8	93.3	92.5	90.01	-4,626.3	692.0	504.0	321.1	182.99	2.754	
11,800.0	6,710.1	11,611.2	6,710.2	94.9	94.1	90.01	-4,713.8	692.0	504.0	317.7	186.30	2.705	
11,811.0	6,710.1	11,622.2	6,710.1	95.1	94.3	90.01	-4,724.8	692.0	504.0	317.3	186.72	2.699	
11,900.0	6,709.5	11,711.2	6,709.5	96.7	96.0	90.01	-4,813.8	692.0	504.0	313.9	190.09	2.652	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5J-223 - 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	
11,909.4	6,709.4	11,720.7	6,709.5	96.9	96.2	90.01	-4,823.2	692.0	504.0	313.6	190.45	2.647	
12,000.0	6,708.8	11,811.2	6,708.8	98.6	97.9	90.01	-4,913.8	692.0	504.0	310.2	193.89	2.600	
12,007.8	6,708.7	11,819.1	6,708.8	98.7	98.0	90.01	-4,921.6	692.0	504.0	309.9	194.18	2.596	
12,100.0	6,708.1	11,911.2	6,708.2	100.4	99.8	90.01	-5,013.7	692.0	504.0	306.4	197.68	2.550	
12,106.3	6,708.1	11,917.5	6,708.1	100.6	99.9	90.01	-5,020.0	692.0	504.0	306.1	197.92	2.547	
12,200.0	6,707.4	12,011.2	6,707.5	102.3	101.7	90.01	-5,113.7	692.0	504.0	302.6	201.48	2.502	
12,204.7	6,707.4	12,015.9	6,707.4	102.4	101.8	90.01	-5,118.4	692.0	504.0	302.4	201.66	2.500	
12,300.0	6,706.7	12,111.2	6,706.8	104.2	103.6	90.01	-5,213.7	692.0	504.0	298.8	205.28	2.455	
12,303.1	6,706.7	12,114.4	6,706.8	104.2	103.6	90.01	-5,216.9	692.0	504.0	298.6	205.39	2.454	
12,400.0	6,706.1	12,211.2	6,706.1	106.0	105.5	90.01	-5,313.7	692.0	504.0	295.0	209.07	2.411	
12,401.5	6,706.0	12,212.8	6,706.1	106.1	105.5	90.01	-5,315.3	692.0	504.0	294.9	209.13	2.410	
12,500.0	6,705.4	12,311.2	6,705.4	107.9	107.3	90.01	-5,413.7	692.0	504.0	291.2	212.88	2.368	
12,598.4	6,704.7	12,409.6	6,704.8	109.7	109.2	90.01	-5,512.1	692.0	504.0	287.4	216.62	2.327	
12,600.0	6,704.7	12,411.2	6,704.8	109.8	109.2	90.01	-5,513.7	692.0	504.0	287.4	216.68	2.326	
12,696.8	6,704.0	12,508.1	6,704.1	111.6	111.1	90.01	-5,610.6	692.0	504.0	283.7	220.36	2.287	
12,700.0	6,704.0	12,511.2	6,704.1	111.6	111.1	90.01	-5,613.7	692.0	504.0	283.6	220.48	2.286	
12,795.2	6,703.4	12,606.5	6,703.4	113.4	112.9	90.01	-5,709.0	692.0	504.0	279.9	224.11	2.249	
12,800.0	6,703.3	12,611.2	6,703.4	113.5	113.0	90.01	-5,713.7	692.0	504.0	279.8	224.29	2.247	
12,893.7	6,702.7	12,704.9	6,702.8	115.3	114.8	90.01	-5,807.4	692.0	504.0	276.2	227.86	2.212	
12,900.0	6,702.7	12,711.2	6,702.7	115.4	114.9	90.01	-5,813.7	692.0	504.0	275.9	228.10	2.210	
12,992.1	6,702.0	12,803.3	6,702.1	117.1	116.7	90.01	-5,905.8	692.0	504.0	272.4	231.60	2.176	
13,000.0	6,702.0	12,811.2	6,702.0	117.3	116.8	90.01	-5,913.7	692.0	504.0	272.1	231.90	2.173	
13,090.5	6,701.4	12,901.8	6,701.4	119.0	118.5	90.01	-6,004.3	692.0	504.0	268.7	235.35	2.142	
13,100.0	6,701.3	12,911.2	6,701.3	119.1	118.7	90.01	-6,013.7	692.0	504.0	268.3	235.71	2.138	
13,188.9	6,700.7	13,000.2	6,700.7	120.8	120.4	90.01	-6,102.7	692.0	504.0	264.9	239.10	2.108	
13,200.0	6,700.6	13,011.2	6,700.7	121.0	120.6	90.01	-6,113.7	692.0	504.0	264.5	239.53	2.104	
13,287.4	6,700.0	13,098.6	6,700.1	122.7	122.3	90.01	-6,201.1	692.0	504.0	261.2	242.86	2.075	
13,300.0	6,699.9	13,111.2	6,700.0	122.9	122.5	90.01	-6,213.7	692.0	504.0	260.7	243.34	2.071	
13,385.8	6,699.3	13,197.0	6,699.4	124.5	124.2	90.01	-6,299.5	692.0	504.0	257.4	246.61	2.044	
13,400.0	6,699.3	13,211.2	6,699.3	124.8	124.4	90.01	-6,313.7	692.0	504.0	256.9	247.15	2.039	
13,484.2	6,698.7	13,295.5	6,698.7	126.4	126.0	90.01	-6,397.9	692.0	504.0	253.7	250.36	2.013	
13,500.0	6,698.6	13,311.2	6,698.6	126.7	126.3	90.01	-6,413.7	692.0	504.0	253.1	250.96	2.008	
13,582.6	6,698.0	13,393.9	6,698.1	128.2	127.9	90.01	-6,496.4	692.0	504.0	249.9	254.12	1.984	
13,600.0	6,697.9	13,411.2	6,697.9	128.5	128.2	90.01	-6,513.7	692.0	504.0	249.3	254.78	1.978	
13,681.1	6,697.3	13,492.3	6,697.4	130.1	129.8	90.01	-6,594.8	692.0	504.0	246.2	257.87	1.955	
13,700.0	6,697.2	13,511.2	6,697.3	130.4	130.1	90.01	-6,613.7	692.0	504.0	245.4	258.59	1.949	
13,779.5	6,696.7	13,590.7	6,696.7	131.9	131.6	90.01	-6,693.2	692.0	504.0	242.4	261.63	1.927	
13,800.0	6,696.5	13,611.2	6,696.6	132.3	132.0	90.01	-6,713.7	692.0	504.0	241.6	262.41	1.921	
13,877.9	6,696.0	13,689.2	6,696.1	133.8	133.5	90.01	-6,791.6	692.0	504.0	238.7	265.38	1.899	
13,900.0	6,695.8	13,711.2	6,695.9	134.2	133.9	90.01	-6,813.7	692.0	504.0	237.8	266.23	1.893	
13,976.3	6,695.3	13,787.6	6,695.4	135.6	135.4	90.01	-6,890.1	692.0	504.0	234.9	269.14	1.873	
14,000.0	6,695.2	13,811.4	6,695.2	136.1	135.8	90.01	-6,913.9	692.0	504.0	234.0	270.05	1.866	
14,034.1	6,695.0	13,845.4	6,695.0	136.7	136.5	90.00	-6,947.9	692.0	504.0	232.7	271.35	1.857 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	0.71	90.0	1.1	90.0				
98.4	98.4	98.4	98.4	0.1	0.1	0.71	90.0	1.1	90.0	89.8	0.17	529.563	
100.0	100.0	100.0	100.0	0.1	0.1	0.71	90.0	1.1	90.0	89.8	0.17	519.976	
196.8	196.8	196.8	196.8	0.3	0.3	0.71	90.0	1.1	90.0	89.4	0.61	147.906	
200.0	200.0	200.0	200.0	0.3	0.3	0.71	90.0	1.1	90.0	89.4	0.62	144.542	
295.3	295.3	295.3	295.3	0.5	0.5	0.71	90.0	1.1	90.0	88.9	1.05	85.634	
300.0	300.0	300.0	300.0	0.5	0.5	0.71	90.0	1.1	90.0	88.9	1.07	83.938	
393.7	393.7	393.7	393.7	0.7	0.7	0.71	90.0	1.1	90.0	88.5	1.49	60.262	
400.0	400.0	400.0	400.0	0.8	0.8	0.71	90.0	1.1	90.0	88.5	1.52	59.141	
492.1	492.1	492.1	492.1	1.0	1.0	0.71	90.0	1.1	90.0	88.1	1.94	46.489	
500.0	500.0	500.0	500.0	1.0	1.0	0.71	90.0	1.1	90.0	88.0	1.97	45.654	
590.5	590.5	590.5	590.5	1.2	1.2	0.71	90.0	1.1	90.0	87.6	2.38	37.840	
600.0	600.0	600.0	600.0	1.2	1.2	0.71	90.0	1.1	90.0	87.6	2.42	37.176	
689.0	689.0	689.0	689.0	1.4	1.4	0.71	90.0	1.1	90.0	87.2	2.82	31.904	
700.0	700.0	700.0	700.0	1.4	1.4	0.71	90.0	1.1	90.0	87.1	2.87	31.353	
787.4	787.4	787.4	787.4	1.6	1.6	0.71	90.0	1.1	90.0	86.7	3.26	27.578	
800.0	800.0	800.0	800.0	1.7	1.7	0.71	90.0	1.1	90.0	86.7	3.32	27.108	
885.8	885.8	885.8	885.8	1.9	1.9	0.71	90.0	1.1	90.0	86.3	3.71	24.285	
900.0	900.0	900.0	900.0	1.9	1.9	0.71	90.0	1.1	90.0	86.2	3.77	23.875	
984.2	984.2	984.2	984.2	2.1	2.1	0.71	90.0	1.1	90.0	85.8	4.15	21.695	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.71	90.0	1.1	90.0	85.8	4.22	21.331	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	0.71	90.0	1.1	90.0	85.4	4.59	19.604	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	0.71	90.0	1.1	90.0	85.3	4.67	19.277	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	0.71	90.0	1.1	90.0	85.0	5.03	17.881	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.71	90.0	1.1	90.0	84.9	5.12	17.584	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	0.71	90.0	1.1	90.0	84.5	5.48	16.436	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	0.71	90.0	1.1	90.0	84.4	5.57	16.164	
1,337.5	1,337.5	1,337.5	1,337.5	2.9	2.9	0.71	90.0	1.1	90.0	84.3	5.74	15.690 CC	
1,377.9	1,377.9	1,377.3	1,377.3	3.0	3.0	0.65	90.1	1.0	90.1	84.2	5.92	15.230 ES	
1,400.0	1,400.0	1,398.9	1,398.9	3.0	3.0	0.53	90.3	0.8	90.3	84.3	6.01	15.019	
1,476.4	1,476.4	1,473.5	1,473.5	3.2	3.2	-0.44	91.9	-0.7	92.0	85.6	6.35	14.493	
1,500.0	1,500.0	1,496.5	1,496.5	3.2	3.2	-0.89	92.7	-1.4	92.8	86.4	6.45	14.388	
1,574.8	1,574.8	1,569.4	1,569.2	3.4	3.4	-2.75	96.1	-4.6	96.4	89.6	6.78	14.221	
1,600.0	1,600.0	1,593.9	1,593.6	3.5	3.4	-3.50	97.6	-6.0	98.0	91.1	6.89	14.220	
1,673.2	1,673.2	1,664.8	1,664.1	3.6	3.6	-5.94	102.6	-10.7	103.6	96.4	7.21	14.360	
1,700.0	1,700.0	1,690.6	1,689.8	3.7	3.7	-6.91	104.8	-12.7	106.0	98.7	7.33	14.464	
1,771.6	1,771.6	1,759.5	1,758.1	3.8	3.8	-9.60	111.3	-18.8	113.7	106.1	7.65	14.865	
1,800.0	1,800.0	1,786.6	1,784.9	3.9	3.9	-10.68	114.3	-21.5	117.2	109.5	7.78	15.074	
1,870.1	1,870.1	1,853.3	1,850.7	4.1	4.1	-13.34	122.2	-29.0	127.1	119.0	8.10	15.690	
1,900.0	1,900.0	1,881.6	1,878.6	4.1	4.2	-14.45	125.9	-32.5	131.8	123.6	8.24	15.998	
1,968.5	1,968.5	1,946.0	1,941.7	4.3	4.4	-16.90	135.1	-41.0	143.8	135.2	8.56	16.785	
2,000.0	2,000.0	1,976.7	1,971.7	4.4	4.5	-17.99	139.8	-45.4	149.7	141.0	8.72	17.163	
2,066.9	2,066.9	2,042.1	2,035.7	4.5	4.7	-20.06	149.7	-54.7	162.4	153.4	9.06	17.925	
2,100.0	2,100.0	2,074.5	2,067.4	4.6	4.8	-20.97	154.7	-59.3	168.8	159.6	9.23	18.284	
2,165.3	2,165.3	2,138.4	2,129.9	4.7	5.0	-22.58	164.4	-68.3	181.5	171.9	9.58	18.952	
2,200.0	2,200.0	2,172.3	2,163.1	4.8	5.1	-23.34	169.5	-73.1	188.3	178.5	9.76	19.286	
2,250.0	2,250.0	2,221.2	2,210.9	4.9	5.3	-24.35	177.0	-80.1	198.1	188.1	10.03	19.744	
2,263.8	2,263.8	2,234.7	2,224.1	4.9	5.3	-96.48	179.0	-82.0	200.9	190.9	9.92	20.238	
2,300.0	2,300.0	2,270.1	2,258.7	5.0	5.5	-97.09	184.4	-87.0	208.1	198.0	10.09	20.626	
2,362.2	2,362.2	2,330.7	2,318.0	5.2	5.7	-98.31	193.6	-95.6	220.7	210.3	10.36	21.299	
2,400.0	2,399.9	2,367.5	2,354.0	5.2	5.8	-99.13	199.2	-100.8	228.6	218.0	10.53	21.710	
2,460.6	2,460.4	2,426.4	2,411.6	5.4	6.1	-100.56	208.1	-109.2	241.4	230.6	10.79	22.370	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5J-243 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,499.7	2,464.5	2,448.9	5.4	6.2	-101.54	213.9	-114.6	250.0	239.1	10.96	22.807	
2,559.0	2,558.5	2,521.4	2,504.6	5.6	6.4	-103.07	222.6	-122.7	263.4	252.1	11.22	23.469	
2,600.0	2,599.1	2,560.8	2,543.1	5.7	6.6	-104.18	228.6	-128.3	272.9	261.5	11.40	23.941	
2,657.5	2,656.1	2,615.9	2,597.0	5.8	6.8	-105.76	236.9	-136.1	286.7	275.1	11.65	24.612	
2,700.0	2,698.2	2,656.5	2,636.7	5.9	7.0	-106.95	243.1	-141.8	297.4	285.5	11.84	25.125	
2,755.9	2,753.3	2,709.6	2,688.6	6.1	7.2	-108.52	251.2	-149.4	311.9	299.8	12.08	25.808	
2,800.0	2,796.6	2,751.3	2,729.4	6.2	7.4	-109.76	257.5	-155.3	323.8	311.5	12.28	26.367	
2,854.3	2,849.9	2,802.4	2,779.4	6.3	7.6	-111.28	265.3	-162.5	339.0	326.5	12.53	27.061	
2,900.0	2,894.4	2,845.1	2,821.2	6.5	7.8	-112.55	271.8	-168.6	352.4	339.7	12.74	27.668	
2,952.7	2,945.7	2,894.2	2,869.2	6.6	8.0	-113.99	279.2	-175.6	368.4	355.5	12.99	28.370	
3,000.0	2,991.5	2,937.9	2,911.9	6.8	8.2	-115.26	285.9	-181.8	383.4	370.2	13.21	29.026	
3,051.2	3,040.8	2,984.9	2,957.9	7.0	8.4	-116.61	293.0	-188.4	400.3	386.8	13.46	29.735	
3,100.0	3,087.6	3,029.5	3,001.5	7.1	8.5	-117.86	299.8	-194.8	417.0	403.3	13.70	30.437	
3,149.6	3,134.9	3,074.5	3,045.5	7.4	8.7	-119.09	306.6	-201.1	434.7	420.8	13.96	31.144	
3,200.0	3,182.7	3,119.8	3,089.9	7.6	8.9	-120.31	313.5	-207.6	453.4	439.2	14.22	31.893	
3,248.0	3,228.0	3,162.7	3,131.8	7.8	9.1	-121.43	320.0	-213.7	471.8	457.4	14.48	32.595	
3,300.0	3,276.6	3,215.9	3,183.9	8.1	9.3	-122.84	327.9	-221.0	492.3	477.5	14.75	33.378	
3,346.4	3,319.9	3,265.4	3,232.6	8.3	9.5	-124.16	334.6	-227.2	510.5	495.5	15.00	34.036	
3,400.0	3,369.4	3,322.9	3,289.3	8.6	9.6	-125.68	341.6	-233.8	531.5	516.2	15.28	34.782	
3,444.9	3,410.5	3,371.2	3,337.1	8.9	9.8	-126.95	346.8	-238.7	549.1	533.5	15.53	35.359	
3,500.0	3,460.7	3,430.8	3,396.2	9.2	9.9	-128.52	352.4	-243.9	570.7	554.8	15.82	36.069	
3,543.3	3,499.8	3,477.8	3,442.9	9.5	10.0	-129.75	356.3	-247.5	587.6	571.6	16.06	36.587	
3,600.0	3,550.6	3,539.5	3,504.2	9.9	10.2	-131.36	360.4	-251.4	610.0	593.6	16.36	37.281	
3,641.7	3,587.6	3,584.9	3,549.6	10.3	10.3	-132.55	362.9	-253.7	626.5	609.9	16.59	37.760	
3,709.9	3,647.5	3,659.3	3,623.8	10.8	10.4	-134.49	365.7	-256.3	653.6	636.7	16.94	38.584	
3,740.1	3,673.9	3,692.4	3,656.9	11.1	10.5	-135.53	366.6	-257.1	665.7	648.6	17.12	38.874	
3,800.0	3,726.2	3,758.5	3,723.0	11.6	10.6	-137.53	367.4	-257.9	689.1	671.6	17.48	39.429	
3,838.6	3,759.9	3,795.3	3,759.9	11.9	10.6	-138.60	367.4	-257.9	703.9	686.2	17.71	39.756	
3,900.0	3,813.5	3,849.0	3,813.5	12.5	10.7	-140.08	367.4	-257.9	727.9	709.8	18.08	40.260	
3,937.0	3,845.8	3,881.3	3,845.8	12.8	10.8	-140.93	367.4	-257.9	742.5	724.2	18.31	40.563	
4,000.0	3,900.8	3,936.2	3,900.8	13.4	10.9	-142.31	367.4	-257.9	767.8	749.1	18.68	41.093	
4,035.4	3,931.7	3,967.2	3,931.7	13.7	10.9	-143.05	367.4	-257.9	782.2	763.3	18.90	41.390	
4,100.0	3,988.1	4,023.5	3,988.1	14.3	11.0	-144.34	367.4	-257.9	808.7	789.4	19.28	41.944	
4,133.8	4,017.6	4,053.1	4,017.6	14.7	11.1	-144.98	367.4	-257.9	822.8	803.3	19.48	42.234	
4,200.0	4,075.4	4,110.8	4,075.4	15.3	11.2	-146.18	367.4	-257.9	850.5	830.6	19.87	42.807	
4,232.3	4,103.5	4,139.0	4,103.5	15.6	11.2	-146.74	367.4	-257.9	864.1	844.0	20.06	43.085	
4,300.0	4,162.6	4,198.1	4,162.6	16.2	11.3	-147.87	367.4	-257.9	892.9	872.5	20.44	43.675	
4,330.7	4,189.4	4,224.9	4,189.4	16.5	11.4	-148.35	367.4	-257.9	906.1	885.4	20.62	43.939	
4,400.0	4,249.9	4,285.4	4,249.9	17.2	11.5	-149.40	367.4	-257.9	936.0	915.0	21.01	44.541	
4,429.1	4,275.4	4,310.8	4,275.4	17.5	11.5	-149.83	367.4	-257.9	948.6	927.4	21.18	44.791	
4,500.0	4,337.2	4,372.7	4,337.2	18.2	11.6	-150.81	367.4	-257.9	979.6	958.0	21.58	45.400	
4,527.5	4,361.3	4,396.8	4,361.3	18.5	11.7	-151.18	367.4	-257.9	991.7	969.9	21.73	45.635	
4,600.0	4,424.5	4,460.0	4,424.5	19.2	11.8	-152.11	367.4	-257.9	1,023.6	1,001.5	22.13	46.251	
4,626.0	4,447.2	4,482.7	4,447.2	19.5	11.8	-152.43	367.4	-257.9	1,035.2	1,012.9	22.28	46.469	
4,700.0	4,511.8	4,547.3	4,511.8	20.2	11.9	-153.31	367.4	-257.9	1,068.1	1,045.4	22.68	47.088	
4,724.4	4,533.1	4,568.6	4,533.1	20.5	12.0	-153.58	367.4	-257.9	1,079.0	1,056.2	22.82	47.289	
4,796.7	4,596.3	4,631.8	4,596.3	21.2	12.1	-154.37	367.4	-257.9	1,111.5	1,088.3	23.21	47.883	
4,800.0	4,599.1	4,634.6	4,599.1	21.2	12.1	-154.42	367.4	-257.9	1,113.0	1,089.7	23.23	47.901	
4,822.8	4,619.1	4,654.6	4,619.1	21.4	12.1	-154.76	367.4	-257.9	1,123.2	1,099.8	23.38	48.040	
4,900.0	4,687.3	4,722.8	4,687.3	22.0	12.3	-155.81	367.4	-257.9	1,156.6	1,132.7	23.87	48.446	
4,921.2	4,706.2	4,741.7	4,706.2	22.2	12.3	-156.08	367.4	-257.9	1,165.6	1,141.5	24.01	48.549	
5,000.0	4,777.1	4,812.6	4,777.1	22.8	12.4	-157.02	367.4	-257.9	1,197.6	1,173.1	24.50	48.873	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,019.7	4,794.9	4,830.4	4,794.9	22.9	12.5	-157.23	367.4	-257.9	1,205.4	1,180.7	24.63	48.947	
5,100.0	4,868.3	4,903.8	4,868.3	23.5	12.6	-158.06	367.4	-257.9	1,235.9	1,210.8	25.12	49.195	
5,118.1	4,885.0	4,920.5	4,885.0	23.6	12.6	-158.23	367.4	-257.9	1,242.5	1,217.3	25.23	49.246	
5,200.0	4,961.0	4,996.4	4,961.0	24.2	12.8	-158.96	367.4	-257.9	1,271.3	1,245.5	25.72	49.425	
5,216.5	4,976.4	5,011.9	4,976.4	24.3	12.8	-159.10	367.4	-257.9	1,276.8	1,251.0	25.82	49.457	
5,300.0	5,054.8	5,090.3	5,054.8	24.8	12.9	-159.74	367.4	-257.9	1,303.7	1,277.4	26.30	49.572	
5,314.9	5,069.0	5,104.5	5,069.0	24.8	13.0	-159.85	367.4	-257.9	1,308.3	1,281.9	26.38	49.590	
5,400.0	5,149.9	5,185.3	5,149.9	25.3	13.1	-160.41	367.4	-257.9	1,333.1	1,306.3	26.85	49.645	
5,413.4	5,162.7	5,198.1	5,162.7	25.4	13.1	-160.49	367.4	-257.9	1,336.8	1,309.9	26.92	49.652	
5,500.0	5,245.9	5,281.4	5,245.9	25.8	13.3	-160.98	367.4	-257.9	1,359.5	1,332.1	27.38	49.650	
5,511.8	5,257.3	5,292.8	5,257.3	25.9	13.3	-161.04	367.4	-257.9	1,362.4	1,334.9	27.44	49.648	
5,600.0	5,342.9	5,378.4	5,342.9	26.3	13.5	-161.46	367.4	-257.9	1,382.7	1,354.8	27.88	49.593	
5,610.2	5,352.9	5,388.3	5,352.9	26.3	13.5	-161.50	367.4	-257.9	1,384.9	1,356.9	27.93	49.585	
5,700.0	5,440.7	5,476.1	5,440.7	26.7	13.7	-161.86	367.4	-257.9	1,402.7	1,374.3	28.35	49.477	
5,708.6	5,449.1	5,484.6	5,449.1	26.7	13.7	-161.89	367.4	-257.9	1,404.2	1,375.8	28.39	49.466	
5,800.0	5,539.1	5,574.6	5,539.1	27.0	13.9	-162.18	367.4	-257.9	1,419.4	1,390.6	28.79	49.308	
5,807.1	5,546.1	5,581.6	5,546.1	27.0	13.9	-162.20	367.4	-257.9	1,420.5	1,391.7	28.82	49.295	
5,900.0	5,638.1	5,673.6	5,638.1	27.3	14.1	-162.44	367.4	-257.9	1,432.9	1,403.7	29.19	49.086	
5,905.5	5,643.5	5,679.0	5,643.5	27.3	14.1	-162.45	367.4	-257.9	1,433.6	1,404.3	29.21	49.073	
6,000.0	5,737.5	5,773.0	5,737.5	27.5	14.2	-162.63	367.4	-257.9	1,443.1	1,413.5	29.56	48.814	
6,003.9	5,741.4	5,776.9	5,741.4	27.5	14.3	-162.63	367.4	-257.9	1,443.4	1,413.9	29.58	48.803	
6,100.0	5,837.2	5,872.7	5,837.2	27.7	14.4	-162.75	367.4	-257.9	1,450.0	1,420.1	29.90	48.493	
6,102.3	5,839.6	5,875.1	5,839.6	27.7	14.4	-162.76	367.4	-257.9	1,450.1	1,420.2	29.91	48.485	
6,200.0	5,937.2	5,972.6	5,937.2	27.9	14.6	-162.82	367.4	-257.9	1,453.5	1,423.3	30.20	48.123	
6,200.8	5,937.9	5,973.4	5,937.9	27.9	14.6	-162.82	367.4	-257.9	1,453.6	1,423.3	30.21	48.120	
6,256.6	5,993.8	6,029.3	5,993.8	27.9	14.7	-90.92	367.4	-257.9	1,454.1	1,423.7	30.36	47.894	
6,286.6	6,023.8	6,059.3	6,023.8	27.9	14.8	-90.92	367.4	-257.9	1,454.1	1,423.6	30.47	47.725	
6,299.2	6,036.4	6,071.8	6,036.4	27.9	14.8	89.09	367.4	-257.9	1,454.1	1,423.6	30.51	47.656	
6,300.0	6,037.2	6,072.6	6,037.2	27.9	14.8	89.09	367.4	-257.9	1,454.1	1,423.6	30.51	47.651	
6,350.0	6,087.1	6,121.1	6,085.6	28.0	14.9	89.13	365.8	-257.9	1,454.1	1,423.4	30.64	47.449	
6,397.6	6,134.3	6,167.3	6,131.6	28.0	15.0	89.17	361.2	-257.9	1,454.0	1,423.3	30.73	47.322	
6,400.0	6,136.7	6,169.6	6,133.9	28.0	15.0	89.17	360.9	-257.9	1,454.0	1,423.3	30.73	47.317	
6,450.0	6,185.7	6,218.2	6,181.8	28.0	15.0	89.22	352.8	-257.9	1,454.0	1,423.2	30.77	47.247	
6,496.0	6,230.2	6,263.1	6,225.4	28.0	15.0	89.27	342.4	-257.9	1,454.0	1,423.2	30.78	47.234	
6,500.0	6,234.0	6,266.9	6,229.1	28.0	15.0	89.27	341.4	-257.9	1,454.0	1,423.2	30.78	47.234	
6,550.0	6,281.3	6,315.7	6,275.6	28.0	15.0	89.33	326.8	-257.9	1,454.0	1,423.2	30.76	47.268	
6,594.5	6,322.2	6,359.2	6,316.1	27.9	15.0	89.38	311.1	-257.9	1,454.0	1,423.3	30.72	47.332	
6,600.0	6,327.3	6,364.6	6,321.1	27.9	15.0	89.39	309.0	-257.9	1,454.0	1,423.3	30.71	47.341	
6,650.0	6,371.8	6,413.5	6,365.4	27.9	15.0	89.45	288.1	-257.9	1,454.0	1,423.3	30.65	47.441	
6,692.9	6,408.6	6,455.6	6,402.2	27.9	15.0	89.51	267.7	-257.9	1,453.9	1,423.4	30.59	47.537	
6,700.0	6,414.6	6,462.6	6,408.2	27.8	15.0	89.52	264.2	-257.9	1,453.9	1,423.4	30.58	47.553	
6,750.0	6,455.5	6,511.8	6,449.4	27.8	15.0	89.58	237.3	-257.9	1,453.9	1,423.4	30.51	47.661	
6,791.3	6,487.7	6,552.5	6,482.1	27.7	15.0	89.64	212.9	-257.9	1,453.9	1,423.5	30.46	47.736	
6,800.0	6,494.3	6,561.1	6,488.7	27.7	15.0	89.65	207.6	-257.9	1,453.9	1,423.5	30.45	47.748	
6,850.0	6,530.8	6,610.5	6,526.0	27.7	15.0	89.72	175.2	-257.9	1,453.9	1,423.5	30.42	47.794	
6,889.7	6,558.1	6,650.0	6,554.2	27.6	15.0	89.78	147.5	-257.9	1,453.9	1,423.5	30.42	47.789	
6,900.0	6,564.9	6,660.0	6,561.1	27.6	15.0	89.80	140.2	-257.9	1,453.9	1,423.5	30.43	47.780	
6,950.0	6,596.3	6,709.7	6,593.7	27.6	14.9	89.87	102.7	-257.9	1,453.9	1,423.4	30.49	47.686	
6,988.2	6,618.4	6,747.7	6,616.9	27.5	15.0	89.93	72.6	-257.9	1,453.9	1,423.3	30.58	47.549	
7,000.0	6,624.9	6,759.5	6,623.7	27.5	14.9	89.94	63.0	-257.9	1,453.9	1,423.3	30.61	47.495	
7,038.0	6,644.7	6,797.4	6,644.7	27.5	15.0	90.00	31.4	-257.9	1,453.9	1,423.1	30.75	47.275	
7,050.0	6,650.6	6,809.4	6,651.0	27.5	15.0	90.02	21.2	-257.9	1,453.9	1,423.1	30.81	47.194	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5J-243 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWMD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,086.6	6,667.5	6,846.1	6,669.1	27.5	15.0	90.07	-10.6	-257.9	1,453.9	1,422.9	31.00	46.894	
7,100.0	6,673.3	6,859.5	6,675.4	27.5	15.0	90.09	-22.5	-257.9	1,453.9	1,422.8	31.09	46.771	
7,150.0	6,692.7	6,909.7	6,696.6	27.5	15.2	90.17	-68.0	-257.9	1,453.9	1,422.4	31.45	46.224	
7,185.0	6,704.4	6,944.9	6,709.7	27.5	15.4	90.22	-100.7	-257.9	1,453.9	1,422.1	31.77	45.763	
7,200.0	6,709.0	6,960.0	6,714.7	27.5	15.5	90.24	-114.9	-257.9	1,453.9	1,422.0	31.92	45.555	
7,250.0	6,721.8	7,010.5	6,729.5	27.5	15.9	90.31	-163.2	-257.9	1,453.9	1,421.4	32.47	44.771	
7,283.4	6,728.6	7,044.3	6,737.5	27.5	16.2	90.36	-196.0	-257.9	1,453.9	1,421.0	32.91	44.185	
7,300.0	6,731.3	7,061.1	6,740.9	27.6	16.3	90.38	-212.5	-257.9	1,453.9	1,420.8	33.13	43.887	
7,350.0	6,737.3	7,111.8	6,748.8	27.7	16.7	90.45	-262.5	-257.9	1,453.9	1,420.1	33.88	42.919	
7,381.9	6,739.4	7,144.2	6,752.0	27.7	17.1	90.50	-294.8	-257.9	1,453.9	1,419.5	34.40	42.264	
7,400.0	6,739.9	7,162.7	6,753.1	27.8	17.2	90.52	-313.2	-257.9	1,453.9	1,419.2	34.71	41.888	
7,416.5	6,740.0	7,179.5	6,753.8	27.8	17.4	90.54	-330.0	-257.9	1,454.0	1,418.9	35.01	41.535	
7,480.3	6,739.5	7,243.7	6,753.7	28.0	18.1	90.56	-394.3	-257.9	1,454.0	1,417.7	36.23	40.135	
7,500.0	6,739.4	7,263.4	6,753.5	28.1	18.3	90.56	-414.0	-257.9	1,454.0	1,417.3	36.61	39.715	
7,578.7	6,738.9	7,342.2	6,752.9	28.5	19.3	90.55	-492.7	-257.9	1,454.0	1,415.7	38.30	37.959	
7,600.0	6,738.7	7,363.4	6,752.8	28.6	19.5	90.55	-514.0	-257.9	1,454.0	1,415.2	38.77	37.499	
7,677.1	6,738.2	7,440.6	6,752.2	29.1	20.5	90.55	-591.1	-257.9	1,454.0	1,413.3	40.62	35.792	
7,700.0	6,738.1	7,463.4	6,752.0	29.2	20.8	90.55	-614.0	-257.9	1,454.0	1,412.8	41.18	35.306	
7,775.6	6,737.5	7,539.0	6,751.5	29.7	21.9	90.55	-689.5	-257.9	1,454.0	1,410.8	43.15	33.697	
7,800.0	6,737.4	7,563.4	6,751.3	29.9	22.2	90.55	-714.0	-257.9	1,454.0	1,410.2	43.79	33.200	
7,874.0	6,736.9	7,637.4	6,750.7	30.6	23.3	90.55	-788.0	-257.9	1,454.0	1,408.1	45.85	31.713	
7,900.0	6,736.7	7,663.4	6,750.5	30.8	23.7	90.55	-814.0	-257.9	1,454.0	1,407.4	46.58	31.215	
7,972.4	6,736.2	7,735.9	6,750.0	31.5	24.8	90.54	-886.4	-257.9	1,454.0	1,405.3	48.69	29.861	
8,000.0	6,736.0	7,763.4	6,749.8	31.8	25.2	90.54	-913.9	-257.9	1,454.0	1,404.4	49.50	29.371	
8,070.8	6,735.5	7,834.3	6,749.2	32.5	26.3	90.54	-984.8	-257.9	1,454.0	1,402.3	51.66	28.147	
8,100.0	6,735.3	7,863.4	6,749.0	32.8	26.8	90.54	-1,013.9	-257.9	1,454.0	1,401.4	52.55	27.669	
8,169.3	6,734.9	7,932.7	6,748.5	33.6	27.9	90.54	-1,083.2	-257.9	1,454.0	1,399.2	54.72	26.570	
8,200.0	6,734.6	7,963.4	6,748.3	34.0	28.4	90.54	-1,113.9	-257.9	1,453.9	1,398.3	55.69	26.107	
8,267.7	6,734.2	8,031.1	6,747.8	34.8	29.5	90.53	-1,181.6	-257.9	1,453.9	1,396.1	57.87	25.123	
8,300.0	6,734.0	8,063.4	6,747.5	35.2	30.0	90.53	-1,213.9	-257.9	1,453.9	1,395.0	58.92	24.677	
8,366.1	6,733.5	8,129.6	6,747.0	36.1	31.1	90.53	-1,280.1	-257.9	1,453.9	1,392.9	61.10	23.798	
8,400.0	6,733.3	8,163.4	6,746.8	36.5	31.7	90.53	-1,313.9	-257.9	1,453.9	1,391.7	62.22	23.370	
8,464.5	6,732.8	8,228.0	6,746.3	37.4	32.8	90.53	-1,378.5	-257.9	1,453.9	1,389.6	64.38	22.584	
8,500.0	6,732.6	8,263.4	6,746.0	37.9	33.4	90.53	-1,413.9	-257.9	1,453.9	1,388.4	65.57	22.173	
8,563.0	6,732.2	8,326.4	6,745.5	38.8	34.5	90.53	-1,476.9	-257.9	1,453.9	1,386.2	67.72	21.471	
8,600.0	6,731.9	8,363.4	6,745.3	39.3	35.1	90.53	-1,513.9	-257.9	1,453.9	1,385.0	68.98	21.078	
8,661.4	6,731.5	8,424.8	6,744.8	40.2	36.2	90.52	-1,575.3	-257.9	1,453.9	1,382.8	71.10	20.450	
8,700.0	6,731.2	8,463.4	6,744.5	40.8	36.9	90.52	-1,613.9	-257.9	1,453.9	1,381.5	72.43	20.073	
8,759.8	6,730.8	8,523.3	6,744.1	41.7	37.9	90.52	-1,673.8	-257.9	1,453.9	1,379.4	74.52	19.512	
8,800.0	6,730.6	8,563.4	6,743.8	42.3	38.6	90.52	-1,713.9	-257.9	1,453.9	1,378.0	75.92	19.151	
8,858.2	6,730.2	8,621.7	6,743.3	43.2	39.7	90.52	-1,772.2	-257.9	1,453.9	1,376.0	77.97	18.647	
8,900.0	6,729.9	8,663.4	6,743.0	43.8	40.4	90.52	-1,813.9	-257.9	1,453.9	1,374.5	79.44	18.302	
8,956.7	6,729.5	8,720.1	6,742.6	44.7	41.4	90.52	-1,870.6	-257.9	1,453.9	1,372.5	81.45	17.850	
9,000.0	6,729.2	8,763.4	6,742.2	45.4	42.2	90.51	-1,913.9	-257.9	1,453.9	1,370.9	83.00	17.518	
9,055.1	6,728.8	8,818.5	6,741.8	46.3	43.2	90.51	-1,969.0	-257.9	1,453.9	1,369.0	84.96	17.112	
9,100.0	6,728.5	8,863.4	6,741.5	47.0	44.0	90.51	-2,013.9	-257.9	1,453.9	1,367.4	86.57	16.795	
9,153.5	6,728.2	8,917.0	6,741.1	47.9	45.0	90.51	-2,067.4	-257.9	1,453.9	1,365.4	88.50	16.430	
9,200.0	6,727.8	8,963.4	6,740.7	48.6	45.8	90.51	-2,113.9	-257.9	1,453.9	1,363.8	90.17	16.125	
9,251.9	6,727.5	9,015.4	6,740.3	49.5	46.8	90.51	-2,165.9	-257.9	1,453.9	1,361.9	92.05	15.795	
9,300.0	6,727.2	9,063.4	6,740.0	50.3	47.6	90.51	-2,213.9	-257.9	1,453.9	1,360.2	93.79	15.502	
9,350.4	6,726.8	9,113.8	6,739.6	51.1	48.6	90.50	-2,264.3	-257.9	1,453.9	1,358.3	95.62	15.206	
9,400.0	6,726.5	9,163.4	6,739.2	51.9	49.5	90.50	-2,313.9	-257.9	1,453.9	1,356.5	97.42	14.924	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5J-243 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWMD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	6,726.1	9,212.2	6,738.9	52.7	50.4	90.50	-2,362.7	-257.9	1,453.9	1,354.7	99.20	14.656	
9,500.0	6,725.8	9,263.4	6,738.5	53.6	51.3	90.50	-2,413.9	-257.9	1,453.9	1,352.9	101.07	14.385	
9,547.2	6,725.5	9,310.7	6,738.1	54.4	52.2	90.50	-2,461.1	-257.9	1,453.9	1,351.1	102.80	14.143	
9,600.0	6,725.1	9,363.4	6,737.7	55.3	53.2	90.50	-2,513.9	-257.9	1,453.9	1,349.2	104.74	13.882	
9,645.6	6,724.8	9,409.1	6,737.4	56.1	54.0	90.50	-2,559.6	-257.9	1,453.9	1,347.5	106.42	13.663	
9,700.0	6,724.4	9,463.4	6,737.0	57.0	55.0	90.49	-2,613.9	-257.9	1,453.9	1,345.5	108.42	13.411	
9,744.1	6,724.1	9,507.5	6,736.6	57.8	55.8	90.49	-2,658.0	-257.9	1,453.9	1,343.9	110.04	13.213	
9,800.0	6,723.8	9,563.4	6,736.2	58.7	56.8	90.49	-2,713.9	-257.9	1,453.9	1,341.8	112.10	12.969	
9,842.5	6,723.5	9,605.9	6,735.9	59.5	57.6	90.49	-2,756.4	-257.9	1,453.9	1,340.3	113.68	12.790	
9,900.0	6,723.1	9,663.4	6,735.5	60.5	58.7	90.49	-2,813.9	-257.9	1,453.9	1,338.1	115.80	12.555	
9,940.9	6,722.8	9,704.4	6,735.1	61.2	59.5	90.49	-2,854.8	-257.9	1,453.9	1,336.6	117.32	12.393	
10,000.0	6,722.4	9,763.4	6,734.7	62.2	60.6	90.48	-2,913.9	-257.9	1,453.9	1,334.4	119.51	12.166	
10,039.3	6,722.1	9,802.8	6,734.4	62.9	61.3	90.48	-2,953.2	-257.9	1,453.9	1,333.0	120.97	12.019	
10,100.0	6,721.7	9,863.4	6,733.9	64.0	62.4	90.48	-3,013.9	-257.9	1,453.9	1,330.7	123.23	11.799	
10,137.8	6,721.5	9,901.2	6,733.7	64.7	63.1	90.48	-3,051.7	-257.9	1,453.9	1,329.3	124.63	11.666	
10,200.0	6,721.0	9,963.4	6,733.2	65.8	64.3	90.48	-3,113.9	-257.9	1,453.9	1,327.0	126.95	11.453	
10,236.2	6,720.8	9,999.6	6,732.9	66.4	65.0	90.48	-3,150.1	-257.9	1,453.9	1,325.6	128.30	11.332	
10,300.0	6,720.4	10,063.4	6,732.4	67.5	66.2	90.48	-3,213.9	-257.9	1,453.9	1,323.2	130.68	11.126	
10,334.6	6,720.1	10,098.1	6,732.2	68.2	66.8	90.48	-3,248.5	-257.9	1,453.9	1,322.0	131.98	11.017	
10,400.0	6,719.7	10,163.4	6,731.7	69.3	68.0	90.47	-3,313.9	-257.9	1,453.9	1,319.5	134.42	10.816	
10,433.0	6,719.4	10,196.5	6,731.4	69.9	68.7	90.47	-3,346.9	-257.9	1,453.9	1,318.3	135.66	10.718	
10,500.0	6,719.0	10,263.4	6,730.9	71.1	69.9	90.47	-3,413.9	-257.9	1,453.9	1,315.8	138.16	10.523	
10,531.5	6,718.8	10,294.9	6,730.7	71.7	70.5	90.47	-3,445.4	-257.9	1,453.9	1,314.6	139.34	10.434	
10,600.0	6,718.3	10,363.4	6,730.2	72.9	71.8	90.47	-3,513.9	-257.9	1,453.9	1,312.0	141.91	10.245	
10,629.9	6,718.1	10,393.3	6,729.9	73.4	72.4	90.47	-3,543.8	-257.9	1,453.9	1,310.9	143.03	10.165	
10,700.0	6,717.6	10,463.4	6,729.4	74.7	73.7	90.46	-3,613.9	-257.9	1,453.9	1,308.3	145.67	9.981	
10,728.3	6,717.4	10,491.8	6,729.2	75.2	74.2	90.46	-3,642.2	-257.9	1,453.9	1,307.2	146.73	9.909	
10,800.0	6,717.0	10,563.4	6,728.6	76.5	75.6	90.46	-3,713.9	-257.9	1,453.9	1,304.5	149.43	9.730	
10,826.7	6,716.8	10,590.2	6,728.4	77.0	76.1	90.46	-3,740.6	-257.9	1,453.9	1,303.5	150.43	9.665	
10,900.0	6,716.3	10,663.4	6,727.9	78.3	77.4	90.46	-3,813.9	-257.9	1,453.9	1,300.7	153.19	9.491	
10,925.2	6,716.1	10,688.6	6,727.7	78.8	77.9	90.46	-3,839.0	-257.9	1,453.9	1,299.8	154.14	9.433	
11,000.0	6,715.6	10,763.4	6,727.1	80.2	79.3	90.46	-3,913.9	-257.9	1,453.9	1,297.0	156.95	9.263	
11,023.6	6,715.4	10,787.0	6,727.0	80.6	79.8	90.45	-3,937.5	-257.9	1,453.9	1,296.1	157.84	9.211	
11,100.0	6,714.9	10,863.4	6,726.4	82.0	81.2	90.45	-4,013.9	-257.9	1,453.9	1,293.2	160.73	9.046	
11,122.0	6,714.8	10,885.5	6,726.2	82.4	81.6	90.45	-4,035.9	-257.9	1,453.9	1,292.4	161.56	8.999	
11,200.0	6,714.2	10,963.4	6,725.6	83.8	83.1	90.45	-4,113.9	-257.9	1,453.9	1,289.4	164.50	8.838	
11,220.4	6,714.1	10,983.9	6,725.5	84.2	83.5	90.45	-4,134.3	-257.9	1,453.9	1,288.6	165.27	8.797	
11,300.0	6,713.5	11,063.4	6,724.9	85.7	85.0	90.45	-4,213.9	-257.9	1,453.9	1,285.6	168.28	8.640	
11,318.9	6,713.4	11,082.3	6,724.7	86.0	85.4	90.45	-4,232.7	-257.9	1,453.9	1,284.9	168.99	8.604	
11,400.0	6,712.9	11,163.4	6,724.1	87.5	86.9	90.44	-4,313.9	-257.9	1,453.9	1,281.9	172.06	8.450	
11,417.3	6,712.7	11,180.7	6,724.0	87.8	87.2	90.44	-4,331.2	-257.9	1,453.9	1,281.2	172.71	8.418	
11,500.0	6,712.2	11,263.4	6,723.3	89.3	88.8	90.44	-4,413.9	-257.9	1,453.9	1,278.1	175.84	8.268	
11,515.7	6,712.1	11,279.2	6,723.2	89.6	89.1	90.44	-4,429.6	-257.9	1,453.9	1,277.5	176.43	8.241	
11,600.0	6,711.5	11,363.4	6,722.6	91.2	90.7	90.44	-4,513.9	-257.9	1,453.9	1,274.3	179.63	8.094	
11,614.1	6,711.4	11,377.6	6,722.5	91.4	91.0	90.44	-4,528.0	-257.9	1,453.9	1,273.8	180.16	8.070	
11,700.0	6,710.8	11,463.4	6,721.8	93.0	92.6	90.43	-4,613.9	-257.9	1,453.9	1,270.5	183.41	7.927	
11,712.6	6,710.7	11,476.0	6,721.7	93.3	92.8	90.43	-4,626.4	-257.9	1,453.9	1,270.0	183.89	7.906	
11,800.0	6,710.1	11,563.4	6,721.1	94.9	94.5	90.43	-4,713.8	-257.9	1,453.9	1,266.7	187.20	7.766	
11,811.0	6,710.1	11,574.4	6,721.0	95.1	94.7	90.43	-4,724.8	-257.9	1,453.9	1,266.3	187.62	7.749	
11,900.0	6,709.5	11,663.4	6,720.3	96.7	96.4	90.43	-4,813.8	-257.9	1,453.9	1,262.9	191.00	7.612	
11,909.4	6,709.4	11,672.9	6,720.2	96.9	96.6	90.43	-4,823.3	-257.9	1,453.9	1,262.6	191.35	7.598	
12,000.0	6,708.8	11,763.4	6,719.5	98.6	98.3	90.42	-4,913.8	-257.9	1,453.9	1,259.1	194.79	7.464	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5J-243 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,007.8	6,708.7	11,771.3	6,719.5	98.7	98.4	90.42	-4,921.7	-257.9	1,453.9	1,258.8	195.09	7.453	
12,100.0	6,708.1	11,863.4	6,718.8	100.4	100.2	90.42	-5,013.8	-257.9	1,453.9	1,255.3	198.59	7.321	
12,106.3	6,708.1	11,869.7	6,718.7	100.6	100.3	90.42	-5,020.1	-257.9	1,453.9	1,255.1	198.83	7.312	
12,200.0	6,707.4	11,963.4	6,718.0	102.3	102.1	90.42	-5,113.8	-257.9	1,453.9	1,251.5	202.39	7.184	
12,204.7	6,707.4	11,968.1	6,718.0	102.4	102.2	90.42	-5,118.5	-257.9	1,453.9	1,251.3	202.56	7.178	
12,300.0	6,706.7	12,063.4	6,717.3	104.2	104.0	90.41	-5,213.8	-257.9	1,453.9	1,247.7	206.19	7.051	
12,303.1	6,706.7	12,066.6	6,717.2	104.2	104.0	90.41	-5,217.0	-257.9	1,453.9	1,247.6	206.30	7.047	
12,400.0	6,706.1	12,163.4	6,716.5	106.0	105.9	90.41	-5,313.8	-257.9	1,453.9	1,243.9	209.99	6.924	
12,401.5	6,706.0	12,165.0	6,716.5	106.1	105.9	90.41	-5,315.4	-257.9	1,453.9	1,243.9	210.05	6.922	
12,500.0	6,705.4	12,263.4	6,715.7	107.9	107.8	90.41	-5,413.8	-257.9	1,453.9	1,240.1	213.79	6.801	
12,598.4	6,704.7	12,361.8	6,715.0	109.7	109.7	90.41	-5,512.2	-257.9	1,453.9	1,236.4	217.53	6.684	
12,600.0	6,704.7	12,363.4	6,715.0	109.8	109.7	90.41	-5,513.8	-257.9	1,453.9	1,236.3	217.60	6.682	
12,696.8	6,704.0	12,460.3	6,714.2	111.6	111.5	90.40	-5,610.6	-257.9	1,453.9	1,232.6	221.28	6.570	
12,700.0	6,704.0	12,463.4	6,714.2	111.6	111.6	90.40	-5,613.8	-257.9	1,453.9	1,232.5	221.40	6.567	
12,795.2	6,703.4	12,558.7	6,713.5	113.4	113.4	90.40	-5,709.1	-257.9	1,453.9	1,228.9	225.03	6.461	
12,800.0	6,703.3	12,563.4	6,713.5	113.5	113.5	90.40	-5,713.8	-257.9	1,453.9	1,228.7	225.21	6.456	
12,893.7	6,702.7	12,657.1	6,712.8	115.3	115.3	90.40	-5,807.5	-257.9	1,453.9	1,225.1	228.78	6.355	
12,900.0	6,702.7	12,663.4	6,712.7	115.4	115.4	90.40	-5,813.8	-257.9	1,453.9	1,224.9	229.02	6.348	
12,992.1	6,702.0	12,755.5	6,712.0	117.1	117.2	90.39	-5,905.9	-257.9	1,453.9	1,221.4	232.53	6.253	
13,000.0	6,702.0	12,763.4	6,711.9	117.3	117.3	90.39	-5,913.8	-257.9	1,453.9	1,221.1	232.83	6.245	
13,090.5	6,701.4	12,854.0	6,711.3	119.0	119.0	90.39	-6,004.3	-257.9	1,453.9	1,217.6	236.28	6.153	
13,100.0	6,701.3	12,863.4	6,711.2	119.1	119.2	90.39	-6,013.8	-257.9	1,453.9	1,217.3	236.64	6.144	
13,188.9	6,700.7	12,952.4	6,710.5	120.8	120.9	90.39	-6,102.8	-257.9	1,453.9	1,213.9	240.03	6.057	
13,200.0	6,700.6	12,963.4	6,710.4	121.0	121.1	90.39	-6,113.8	-257.9	1,453.9	1,213.4	240.45	6.047	
13,287.4	6,700.0	13,050.8	6,709.8	122.7	122.8	90.38	-6,201.2	-257.9	1,453.9	1,210.1	243.78	5.964	
13,300.0	6,699.9	13,063.4	6,709.7	122.9	123.0	90.38	-6,213.8	-257.9	1,453.9	1,209.6	244.26	5.952	
13,385.8	6,699.3	13,149.2	6,709.0	124.5	124.7	90.38	-6,299.6	-257.9	1,453.9	1,206.4	247.54	5.873	
13,400.0	6,699.3	13,163.4	6,708.9	124.8	124.9	90.38	-6,313.8	-257.9	1,453.9	1,205.8	248.08	5.861	
13,484.2	6,698.7	13,247.7	6,708.3	126.4	126.5	90.38	-6,398.0	-257.9	1,453.9	1,202.6	251.29	5.786	
13,500.0	6,698.6	13,263.4	6,708.1	126.7	126.8	90.38	-6,413.8	-257.9	1,453.9	1,202.0	251.89	5.772	
13,582.6	6,698.0	13,346.1	6,707.5	128.2	128.4	90.37	-6,496.5	-257.9	1,453.9	1,198.8	255.05	5.700	
13,600.0	6,697.9	13,363.4	6,707.4	128.5	128.8	90.37	-6,513.8	-257.9	1,453.9	1,198.2	255.71	5.686	
13,681.1	6,697.3	13,444.5	6,706.7	130.1	130.3	90.37	-6,594.9	-257.9	1,453.9	1,195.1	258.80	5.618	
13,700.0	6,697.2	13,463.4	6,706.6	130.4	130.7	90.37	-6,613.8	-257.9	1,453.9	1,194.4	259.53	5.602	
13,779.5	6,696.7	13,542.9	6,706.0	131.9	132.2	90.37	-6,693.3	-257.9	1,453.9	1,191.3	262.56	5.537	
13,800.0	6,696.5	13,563.4	6,705.8	132.3	132.6	90.37	-6,713.8	-257.9	1,453.9	1,190.5	263.34	5.521	
13,877.9	6,696.0	13,641.4	6,705.2	133.8	134.1	90.36	-6,791.7	-257.9	1,453.9	1,187.6	266.32	5.459	
13,900.0	6,695.8	13,663.4	6,705.1	134.2	134.5	90.36	-6,813.8	-257.9	1,453.9	1,186.7	267.16	5.442	
13,976.3	6,695.3	13,739.8	6,704.5	135.6	135.9	90.36	-6,890.1	-257.9	1,453.9	1,183.8	270.08	5.383	
14,000.0	6,695.2	13,763.4	6,704.3	136.1	136.4	90.36	-6,913.8	-257.9	1,453.9	1,182.9	270.98	5.365	
14,034.1	6,695.0	13,797.5	6,704.1	136.7	137.0	90.36	-6,947.9	-257.9	1,453.9	1,181.6	272.28	5.340 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	0.64	75.0	0.8	75.1				
98.4	98.4	98.4	98.4	0.1	0.1	0.64	75.0	0.8	75.1	74.9	0.17	441.653	
100.0	100.0	100.0	100.0	0.1	0.1	0.64	75.0	0.8	75.1	74.9	0.17	433.658	
196.8	196.8	196.8	196.8	0.3	0.3	0.64	75.0	0.8	75.1	74.4	0.61	123.353	
200.0	200.0	200.0	200.0	0.3	0.3	0.64	75.0	0.8	75.1	74.4	0.62	120.548	
295.3	295.3	295.3	295.3	0.5	0.5	0.64	75.0	0.8	75.1	74.0	1.05	71.418	
300.0	300.0	300.0	300.0	0.5	0.5	0.64	75.0	0.8	75.1	74.0	1.07	70.004	
393.7	393.7	393.7	393.7	0.7	0.7	0.64	75.0	0.8	75.1	73.6	1.49	50.258	
400.0	400.0	400.0	400.0	0.8	0.8	0.64	75.0	0.8	75.1	73.5	1.52	49.323	
492.1	492.1	492.1	492.1	1.0	1.0	0.64	75.0	0.8	75.1	73.1	1.94	38.771	
500.0	500.0	500.0	500.0	1.0	1.0	0.64	75.0	0.8	75.1	73.1	1.97	38.075	
590.5	590.5	590.5	590.5	1.2	1.2	0.64	75.0	0.8	75.1	72.7	2.38	31.558	
600.0	600.0	600.0	600.0	1.2	1.2	0.64	75.0	0.8	75.1	72.6	2.42	31.004	
689.0	689.0	689.0	689.0	1.4	1.4	0.64	75.0	0.8	75.1	72.2	2.82	26.608	
700.0	700.0	700.0	700.0	1.4	1.4	0.64	75.0	0.8	75.1	72.2	2.87	26.149	
787.4	787.4	787.4	787.4	1.6	1.6	0.64	75.0	0.8	75.1	71.8	3.26	23.000	
800.0	800.0	800.0	800.0	1.7	1.7	0.64	75.0	0.8	75.1	71.7	3.32	22.608	
885.8	885.8	885.8	885.8	1.9	1.9	0.64	75.0	0.8	75.1	71.3	3.71	20.254	
900.0	900.0	900.0	900.0	1.9	1.9	0.64	75.0	0.8	75.1	71.3	3.77	19.912	
984.2	984.2	984.2	984.2	2.1	2.1	0.64	75.0	0.8	75.1	70.9	4.15	18.094	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.64	75.0	0.8	75.1	70.8	4.22	17.790	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	0.64	75.0	0.8	75.1	70.5	4.59	16.350	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	0.64	75.0	0.8	75.1	70.4	4.67	16.077	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	0.64	75.0	0.8	75.1	70.0	5.03	14.912	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.64	75.0	0.8	75.1	69.9	5.12	14.665	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	0.64	75.0	0.8	75.1	69.6	5.48	13.707	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	0.64	75.0	0.8	75.1	69.5	5.57	13.481	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	0.64	75.0	0.8	75.1	69.1	5.92	12.682	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	0.64	75.0	0.8	75.1	69.0	6.02	12.474	
1,476.4	1,476.4	1,476.4	1,476.4	3.2	3.2	0.64	75.0	0.8	75.1	68.7	6.36	11.800	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	0.64	75.0	0.8	75.1	68.6	6.47	11.606 CC, ES	
1,574.8	1,574.8	1,572.9	1,572.9	3.4	3.4	0.59	76.0	0.8	76.0	69.2	6.80	11.181	
1,600.0	1,600.0	1,597.4	1,597.4	3.5	3.5	0.56	76.7	0.7	76.8	69.8	6.91	11.108	
1,673.2	1,673.2	1,668.6	1,668.5	3.6	3.6	0.41	80.0	0.6	80.1	72.9	7.23	11.080	
1,700.0	1,700.0	1,694.6	1,694.5	3.7	3.7	0.34	81.6	0.5	81.8	74.5	7.35	11.133	
1,771.6	1,771.6	1,764.0	1,763.6	3.8	3.8	0.12	87.2	0.2	87.6	79.9	7.67	11.417	
1,800.0	1,800.0	1,791.3	1,790.8	3.9	3.9	0.03	89.8	0.0	90.3	82.5	7.79	11.584	
1,870.1	1,870.1	1,858.8	1,857.8	4.1	4.0	-0.22	97.5	-0.4	98.2	90.1	8.11	12.110	
1,900.0	1,900.0	1,887.4	1,886.2	4.1	4.1	-0.32	101.2	-0.6	102.1	93.9	8.25	12.383	
1,968.5	1,968.5	1,952.8	1,950.9	4.3	4.3	-0.56	110.7	-1.1	112.1	103.5	8.56	13.093	
2,000.0	2,000.0	1,982.6	1,980.4	4.4	4.4	-0.66	115.6	-1.3	117.2	108.5	8.71	13.461	
2,066.9	2,066.9	2,045.8	2,042.5	4.5	4.5	-0.88	126.8	-1.9	129.2	120.1	9.03	14.305	
2,100.0	2,100.0	2,076.8	2,072.9	4.6	4.6	-0.98	132.8	-2.3	135.6	126.4	9.19	14.756	
2,165.3	2,165.3	2,139.6	2,134.4	4.7	4.8	-1.16	145.8	-3.0	149.1	139.5	9.52	15.660	
2,200.0	2,200.0	2,173.5	2,167.5	4.8	4.9	-1.25	152.8	-3.3	156.3	146.6	9.70	16.112	
2,250.0	2,250.0	2,222.4	2,215.4	4.9	5.1	-1.36	163.0	-3.9	166.7	156.7	9.96	16.729	
2,263.8	2,263.8	2,235.9	2,228.6	4.9	5.1	-73.26	165.8	-4.0	169.5	159.6	9.88	17.163	
2,300.0	2,300.0	2,271.3	2,263.2	5.0	5.2	-73.31	173.1	-4.4	176.9	166.9	10.04	17.627	
2,362.2	2,362.2	2,332.3	2,322.8	5.2	5.4	-73.69	185.8	-5.1	189.4	179.1	10.31	18.369	
2,400.0	2,399.9	2,369.3	2,359.0	5.2	5.6	-74.07	193.5	-5.5	196.8	186.3	10.48	18.784	
2,460.6	2,460.4	2,428.7	2,417.1	5.4	5.8	-74.89	205.8	-6.2	208.4	197.6	10.75	19.394	
2,500.0	2,499.7	2,467.2	2,454.8	5.4	5.9	-75.54	213.8	-6.6	215.8	204.9	10.92	19.760	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,559.0	2,558.5	2,525.0	2,511.4	5.6	6.1	-76.68	225.8	-7.3	226.8	215.6	11.19	20.263	
2,600.0	2,599.1	2,565.1	2,550.5	5.7	6.3	-77.56	234.1	-7.7	234.3	222.9	11.38	20.588	
2,657.5	2,656.1	2,621.2	2,605.4	5.8	6.5	-78.92	245.8	-8.3	244.8	233.1	11.65	21.005	
2,700.0	2,698.2	2,662.7	2,646.0	5.9	6.6	-80.01	254.4	-8.8	252.5	240.6	11.86	21.296	
2,755.9	2,753.3	2,717.1	2,699.2	6.1	6.8	-81.53	265.7	-9.4	262.7	250.6	12.14	21.644	
2,800.0	2,796.6	2,759.9	2,741.1	6.2	7.0	-82.79	274.6	-9.9	270.8	258.5	12.36	21.908	
2,854.3	2,849.9	2,812.6	2,792.6	6.3	7.2	-84.42	285.5	-10.5	280.9	268.3	12.65	22.200	
2,900.0	2,894.4	2,856.7	2,835.8	6.5	7.4	-85.83	294.6	-10.9	289.6	276.7	12.90	22.442	
2,952.7	2,945.7	2,907.6	2,885.5	6.6	7.6	-87.52	305.2	-11.5	299.8	286.6	13.21	22.691	
3,000.0	2,991.5	2,956.1	2,933.1	6.8	7.8	-89.19	315.1	-12.0	309.1	295.6	13.49	22.909	
3,051.2	3,040.8	3,011.0	2,986.9	7.0	7.9	-91.19	325.4	-12.6	318.6	304.8	13.81	23.064	
3,100.0	3,087.6	3,063.2	3,038.5	7.1	8.1	-93.20	334.3	-13.1	327.3	313.2	14.11	23.191	
3,149.6	3,134.9	3,116.3	3,090.9	7.4	8.2	-95.33	342.3	-13.5	335.7	321.3	14.44	23.249	
3,200.0	3,182.7	3,170.0	3,144.2	7.6	8.4	-97.61	349.4	-13.9	344.1	329.3	14.77	23.290	
3,248.0	3,228.0	3,221.0	3,194.8	7.8	8.5	-99.86	355.3	-14.2	351.8	336.7	15.11	23.282	
3,300.0	3,276.6	3,276.0	3,249.5	8.1	8.6	-102.38	360.5	-14.5	360.2	344.8	15.47	23.283	
3,346.4	3,319.9	3,324.7	3,298.1	8.3	8.8	-104.71	364.4	-14.7	367.8	352.0	15.81	23.263	
3,400.0	3,369.4	3,380.5	3,353.8	8.6	8.9	-107.47	367.7	-14.9	376.8	360.6	16.19	23.277	
3,444.9	3,410.5	3,426.8	3,400.0	8.9	9.0	-109.82	369.7	-15.0	384.6	368.1	16.51	23.291	
3,500.0	3,460.7	3,483.1	3,456.3	9.2	9.1	-112.76	371.0	-15.0	394.7	377.8	16.89	23.374	
3,543.3	3,499.8	3,526.6	3,499.8	9.5	9.1	-115.08	371.3	-15.1	403.1	386.0	17.18	23.463	
3,600.0	3,550.6	3,577.4	3,550.6	9.9	9.2	-117.76	371.3	-15.1	415.4	397.8	17.55	23.672	
3,641.7	3,587.6	3,614.4	3,587.6	10.3	9.3	-119.67	371.3	-15.1	425.5	407.7	17.83	23.869	
3,709.9	3,647.5	3,674.3	3,647.5	10.8	9.4	-122.70	371.3	-15.1	444.0	425.7	18.25	24.328	
3,740.1	3,673.9	3,700.7	3,673.9	11.1	9.4	-124.13	371.3	-15.1	452.9	434.4	18.45	24.543	
3,800.0	3,726.2	3,753.0	3,726.2	11.6	9.5	-126.84	371.3	-15.1	471.3	452.5	18.84	25.024	
3,838.6	3,759.9	3,786.6	3,759.9	11.9	9.6	-128.49	371.3	-15.1	483.8	464.7	19.08	25.360	
3,900.0	3,813.5	3,840.3	3,813.5	12.5	9.7	-130.97	371.3	-15.1	504.5	485.0	19.44	25.944	
3,937.0	3,845.8	3,872.6	3,845.8	12.8	9.7	-132.37	371.3	-15.1	517.4	497.7	19.66	26.314	
4,000.0	3,900.8	3,927.5	3,900.8	13.4	9.8	-134.63	371.3	-15.1	540.0	520.0	20.02	26.978	
4,035.4	3,931.7	3,958.5	3,931.7	13.7	9.9	-135.83	371.3	-15.1	553.0	532.8	20.21	27.363	
4,100.0	3,988.1	4,014.8	3,988.1	14.3	10.0	-137.89	371.3	-15.1	577.4	556.9	20.56	28.091	
4,133.8	4,017.6	4,044.4	4,017.6	14.7	10.1	-138.91	371.3	-15.1	590.5	569.7	20.73	28.478	
4,200.0	4,075.4	4,102.1	4,075.4	15.3	10.2	-140.78	371.3	-15.1	616.5	595.4	21.07	29.253	
4,232.3	4,103.5	4,130.3	4,103.5	15.6	10.2	-141.65	371.3	-15.1	629.4	608.1	21.24	29.635	
4,300.0	4,162.6	4,189.4	4,162.6	16.2	10.3	-143.36	371.3	-15.1	656.8	635.2	21.57	30.445	
4,330.7	4,189.4	4,216.2	4,189.4	16.5	10.4	-144.09	371.3	-15.1	669.4	647.7	21.73	30.813	
4,400.0	4,249.9	4,276.7	4,249.9	17.2	10.5	-145.66	371.3	-15.1	698.2	676.2	22.06	31.649	
4,429.1	4,275.4	4,302.1	4,275.4	17.5	10.6	-146.28	371.3	-15.1	710.5	688.3	22.20	31.999	
4,500.0	4,337.2	4,364.0	4,337.2	18.2	10.7	-147.71	371.3	-15.1	740.5	718.0	22.54	32.852	
4,527.5	4,361.3	4,388.1	4,361.3	18.5	10.7	-148.24	371.3	-15.1	752.3	729.7	22.67	33.182	
4,600.0	4,424.5	4,451.3	4,424.5	19.2	10.8	-149.56	371.3	-15.1	783.6	760.6	23.02	34.045	
4,626.0	4,447.2	4,474.0	4,447.2	19.5	10.9	-150.01	371.3	-15.1	794.9	771.8	23.14	34.352	
4,700.0	4,511.8	4,538.6	4,511.8	20.2	11.0	-151.22	371.3	-15.1	827.3	803.8	23.49	35.221	
4,724.4	4,533.1	4,559.9	4,533.1	20.5	11.1	-151.60	371.3	-15.1	838.1	814.5	23.60	35.504	
4,796.7	4,596.3	4,623.0	4,596.3	21.2	11.2	-152.68	371.3	-15.1	870.1	846.2	23.95	36.337	
4,800.0	4,599.1	4,625.9	4,599.1	21.2	11.2	-152.74	371.3	-15.1	871.6	847.6	23.96	36.370	
4,822.8	4,619.1	4,645.9	4,619.1	21.4	11.2	-153.16	371.3	-15.1	881.6	857.6	24.08	36.608	
4,900.0	4,687.3	4,714.1	4,687.3	22.0	11.4	-154.48	371.3	-15.1	914.8	890.3	24.50	37.344	
4,921.2	4,706.2	4,733.0	4,706.2	22.2	11.4	-154.82	371.3	-15.1	923.6	899.0	24.61	37.534	
5,000.0	4,777.1	4,803.9	4,777.1	22.8	11.5	-155.97	371.3	-15.1	955.5	930.4	25.03	38.170	
5,019.7	4,794.9	4,821.7	4,794.9	22.9	11.6	-156.23	371.3	-15.1	963.2	938.0	25.14	38.318	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	4,868.3	4,895.1	4,868.3	23.5	11.7	-157.24	371.3	-15.1	993.5	967.9	25.57	38.859	
5,118.1	4,885.0	4,911.8	4,885.0	23.6	11.7	-157.44	371.3	-15.1	1,000.1	974.4	25.66	38.973	
5,200.0	4,961.0	4,987.7	4,961.0	24.2	11.9	-158.32	371.3	-15.1	1,028.7	1,002.6	26.09	39.425	
5,216.5	4,976.4	5,003.2	4,976.4	24.3	11.9	-158.48	371.3	-15.1	1,034.3	1,008.1	26.18	39.510	
5,300.0	5,054.8	5,081.6	5,054.8	24.8	12.1	-159.24	371.3	-15.1	1,061.1	1,034.5	26.61	39.878	
5,314.9	5,069.0	5,095.8	5,069.0	24.8	12.1	-159.37	371.3	-15.1	1,065.6	1,039.0	26.68	39.938	
5,400.0	5,149.9	5,176.6	5,149.9	25.3	12.3	-160.03	371.3	-15.1	1,090.4	1,063.3	27.11	40.227	
5,413.4	5,162.7	5,189.4	5,162.7	25.4	12.3	-160.13	371.3	-15.1	1,094.1	1,066.9	27.17	40.268	
5,500.0	5,245.9	5,272.7	5,245.9	25.8	12.5	-160.70	371.3	-15.1	1,116.7	1,089.1	27.59	40.482	
5,511.8	5,257.3	5,284.1	5,257.3	25.9	12.5	-160.77	371.3	-15.1	1,119.6	1,092.0	27.64	40.507	
5,600.0	5,342.9	5,369.7	5,342.9	26.3	12.7	-161.26	371.3	-15.1	1,139.8	1,111.8	28.04	40.648	
5,610.2	5,352.9	5,379.6	5,352.9	26.3	12.7	-161.31	371.3	-15.1	1,142.0	1,114.0	28.09	40.662	
5,700.0	5,440.7	5,467.4	5,440.7	26.7	12.9	-161.72	371.3	-15.1	1,159.8	1,131.4	28.47	40.733	
5,708.6	5,449.1	5,475.9	5,449.1	26.7	12.9	-161.75	371.3	-15.1	1,161.4	1,132.9	28.51	40.738	
5,800.0	5,539.1	5,565.9	5,539.1	27.0	13.1	-162.09	371.3	-15.1	1,176.6	1,147.7	28.88	40.742	
5,807.1	5,546.1	5,572.9	5,546.1	27.0	13.1	-162.11	371.3	-15.1	1,177.6	1,148.7	28.91	40.741	
5,900.0	5,638.1	5,664.9	5,638.1	27.3	13.3	-162.38	371.3	-15.1	1,190.1	1,160.8	29.26	40.678	
5,905.5	5,643.5	5,670.3	5,643.5	27.3	13.3	-162.40	371.3	-15.1	1,190.7	1,161.4	29.27	40.673	
6,000.0	5,737.5	5,764.3	5,737.5	27.5	13.5	-162.60	371.3	-15.1	1,200.2	1,170.6	29.60	40.545	
6,003.9	5,741.4	5,768.2	5,741.4	27.5	13.5	-162.60	371.3	-15.1	1,200.6	1,171.0	29.62	40.539	
6,100.0	5,837.2	5,864.0	5,837.2	27.7	13.7	-162.74	371.3	-15.1	1,207.1	1,177.2	29.92	40.345	
6,102.3	5,839.6	5,866.4	5,839.6	27.7	13.7	-162.74	371.3	-15.1	1,207.3	1,177.3	29.93	40.340	
6,200.0	5,937.2	5,963.9	5,937.2	27.9	13.9	-162.81	371.3	-15.1	1,210.7	1,180.5	30.21	40.079	
6,200.8	5,937.9	5,964.7	5,937.9	27.9	13.9	-162.81	371.3	-15.1	1,210.7	1,180.5	30.21	40.077	
6,256.6	5,993.8	6,020.6	5,993.8	27.9	14.0	-90.92	371.3	-15.1	1,211.2	1,180.9	30.35	39.902	
6,286.6	6,023.8	6,050.6	6,023.8	27.9	14.1	-90.92	371.3	-15.1	1,211.2	1,180.8	30.46	39.760	
6,299.2	6,036.4	6,063.1	6,036.4	27.9	14.1	89.09	371.3	-15.1	1,211.2	1,180.7	30.51	39.702	
6,300.0	6,037.2	6,063.9	6,037.2	27.9	14.1	89.09	371.3	-15.1	1,211.2	1,180.7	30.51	39.699	
6,350.0	6,087.1	6,113.9	6,087.1	28.0	14.2	89.22	371.3	-15.1	1,211.2	1,180.5	30.69	39.471	
6,397.6	6,134.3	6,160.8	6,134.0	28.0	14.3	89.48	371.1	-15.1	1,211.1	1,180.3	30.84	39.269	
6,400.0	6,136.7	6,163.1	6,136.3	28.0	14.3	89.50	371.0	-15.1	1,211.1	1,180.3	30.85	39.260	
6,450.0	6,185.7	6,212.2	6,185.3	28.0	14.3	89.79	367.8	-15.1	1,211.1	1,180.1	30.96	39.113	
6,484.4	6,219.0	6,246.2	6,219.0	28.0	14.4	90.00	363.6	-15.1	1,211.1	1,180.0	31.02	39.045	
6,496.0	6,230.2	6,257.8	6,230.5	28.0	14.4	90.07	361.8	-15.1	1,211.1	1,180.0	31.03	39.026	
6,500.0	6,234.0	6,261.7	6,234.4	28.0	14.4	90.09	361.1	-15.1	1,211.1	1,180.0	31.04	39.020	
6,550.0	6,281.3	6,311.7	6,283.3	28.0	14.4	90.40	351.0	-15.1	1,211.1	1,180.0	31.07	38.979	
6,594.5	6,322.2	6,356.5	6,326.4	27.9	14.4	90.66	339.1	-15.1	1,211.1	1,180.1	31.07	38.981	
6,600.0	6,327.3	6,362.1	6,331.8	27.9	14.4	90.70	337.4	-15.1	1,211.2	1,180.1	31.07	38.983	
6,650.0	6,371.8	6,412.9	6,379.6	27.9	14.4	91.00	320.2	-15.1	1,211.3	1,180.2	31.04	39.026	
6,692.9	6,408.6	6,457.0	6,420.0	27.9	14.4	91.25	302.6	-15.1	1,211.4	1,180.4	30.99	39.087	
6,700.0	6,414.6	6,464.3	6,426.6	27.8	14.4	91.29	299.4	-15.1	1,211.4	1,180.4	30.98	39.098	
6,750.0	6,455.5	6,516.1	6,472.4	27.8	14.4	91.58	275.1	-15.1	1,211.5	1,180.6	30.92	39.188	
6,791.3	6,487.7	6,559.3	6,509.1	27.7	14.4	91.82	252.4	-15.1	1,211.7	1,180.8	30.86	39.265	
6,800.0	6,494.3	6,568.4	6,516.7	27.7	14.4	91.87	247.3	-15.1	1,211.7	1,180.9	30.85	39.281	
6,850.0	6,530.8	6,621.2	6,559.2	27.7	14.4	92.14	216.0	-15.1	1,211.9	1,181.1	30.79	39.359	
6,889.7	6,558.1	6,663.6	6,591.5	27.6	14.4	92.35	188.7	-15.1	1,212.1	1,181.3	30.77	39.398	
6,900.0	6,564.9	6,674.5	6,599.6	27.6	14.4	92.41	181.4	-15.1	1,212.1	1,181.4	30.76	39.405	
6,950.0	6,596.3	6,728.3	6,637.7	27.6	14.4	92.66	143.4	-15.1	1,212.4	1,181.6	30.77	39.397	
6,988.2	6,618.4	6,769.6	6,665.0	27.5	14.4	92.85	112.4	-15.1	1,212.6	1,181.8	30.82	39.339	
7,000.0	6,624.9	6,782.5	6,673.2	27.5	14.5	92.91	102.4	-15.1	1,212.6	1,181.8	30.84	39.316	
7,050.0	6,650.6	6,837.2	6,705.6	27.5	14.6	93.13	58.5	-15.1	1,212.9	1,181.9	30.99	39.143	
7,086.6	6,667.5	6,877.5	6,727.4	27.5	14.7	93.29	24.6	-15.1	1,213.1	1,181.9	31.15	38.942	

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 EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5J-303 - 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	
7,100.0	6,673.3	6,892.3	6,734.9	27.5	14.7	93.35	11.8	-15.1	1,213.1	1,181.9	31.22	38.862	
7,150.0	6,692.7	6,947.8	6,760.6	27.5	15.0	93.54	-37.4	-15.1	1,213.4	1,181.8	31.55	38.464	
7,185.0	6,704.4	6,986.9	6,776.4	27.5	15.1	93.67	-73.1	-15.1	1,213.6	1,181.7	31.86	38.094	
7,200.0	6,709.0	7,003.6	6,782.6	27.5	15.2	93.72	-88.7	-15.1	1,213.6	1,181.6	31.99	37.940	
7,250.0	6,721.8	7,059.9	6,800.7	27.5	15.6	93.87	-141.9	-15.1	1,213.9	1,181.3	32.55	37.295	
7,283.4	6,728.6	7,097.6	6,810.4	27.5	15.8	93.97	-178.4	-15.1	1,214.0	1,181.0	32.99	36.801	
7,300.0	6,731.3	7,116.4	6,814.5	27.6	16.0	94.01	-196.7	-15.1	1,214.0	1,180.8	33.22	36.544	
7,350.0	6,737.3	7,173.2	6,824.0	27.7	16.4	94.13	-252.7	-15.1	1,214.2	1,180.2	34.01	35.702	
7,381.9	6,739.4	7,209.5	6,827.8	27.7	16.8	94.19	-288.8	-15.1	1,214.3	1,179.7	34.57	35.126	
7,400.0	6,739.9	7,230.2	6,829.1	27.8	17.0	94.22	-309.4	-15.1	1,214.4	1,179.5	34.90	34.792	
7,416.5	6,740.0	7,249.0	6,829.8	27.8	17.1	94.24	-328.3	-15.1	1,214.4	1,179.2	35.22	34.483	
7,480.3	6,739.5	7,315.7	6,829.6	28.0	17.8	94.25	-395.0	-15.1	1,214.4	1,178.0	36.45	33.317	
7,500.0	6,739.4	7,335.4	6,829.4	28.1	18.1	94.25	-414.7	-15.1	1,214.4	1,177.6	36.84	32.967	
7,578.7	6,738.9	7,414.1	6,828.7	28.5	19.0	94.24	-493.4	-15.1	1,214.4	1,175.9	38.51	31.534	
7,600.0	6,738.7	7,435.4	6,828.5	28.6	19.2	94.24	-514.7	-15.1	1,214.4	1,175.4	38.98	31.151	
7,677.1	6,738.2	7,512.6	6,827.8	29.1	20.2	94.23	-591.8	-15.1	1,214.4	1,173.6	40.81	29.754	
7,700.0	6,738.1	7,535.4	6,827.6	29.2	20.5	94.23	-614.7	-15.1	1,214.4	1,173.0	41.37	29.351	
7,775.6	6,737.5	7,611.0	6,826.9	29.7	21.6	94.22	-690.2	-15.1	1,214.4	1,171.0	43.32	28.030	
7,800.0	6,737.4	7,635.4	6,826.7	29.9	21.9	94.22	-714.7	-15.1	1,214.4	1,170.4	43.97	27.618	
7,874.0	6,736.9	7,709.4	6,826.0	30.6	23.0	94.21	-788.7	-15.1	1,214.3	1,168.3	46.01	26.395	
7,900.0	6,736.7	7,735.4	6,825.8	30.8	23.4	94.21	-814.7	-15.1	1,214.3	1,167.6	46.74	25.983	
7,972.4	6,736.2	7,807.8	6,825.1	31.5	24.4	94.20	-887.1	-15.1	1,214.3	1,165.5	48.83	24.867	
8,000.0	6,736.0	7,835.4	6,824.9	31.8	24.9	94.20	-914.7	-15.1	1,214.3	1,164.7	49.64	24.460	
8,070.8	6,735.5	7,906.3	6,824.2	32.5	26.0	94.19	-985.5	-15.1	1,214.3	1,162.5	51.78	23.451	
8,100.0	6,735.3	7,935.4	6,823.9	32.8	26.4	94.19	-1,014.6	-15.1	1,214.3	1,161.6	52.67	23.054	
8,169.3	6,734.9	8,004.7	6,823.3	33.6	27.6	94.18	-1,083.9	-15.1	1,214.3	1,159.5	54.83	22.146	
8,200.0	6,734.6	8,035.4	6,823.0	34.0	28.1	94.17	-1,114.6	-15.1	1,214.3	1,158.5	55.80	21.762	
8,267.7	6,734.2	8,103.1	6,822.4	34.8	29.2	94.17	-1,182.3	-15.1	1,214.3	1,156.3	57.97	20.948	
8,300.0	6,734.0	8,135.4	6,822.1	35.2	29.7	94.16	-1,214.6	-15.1	1,214.3	1,155.3	59.01	20.578	
8,366.1	6,733.5	8,201.5	6,821.5	36.1	30.8	94.16	-1,280.8	-15.1	1,214.3	1,153.1	61.17	19.849	
8,400.0	6,733.3	8,235.4	6,821.2	36.5	31.4	94.15	-1,314.6	-15.1	1,214.3	1,152.0	62.29	19.493	
8,464.5	6,732.8	8,300.0	6,820.6	37.4	32.5	94.15	-1,379.2	-15.1	1,214.2	1,149.8	64.44	18.842	
8,500.0	6,732.6	8,335.4	6,820.3	37.9	33.1	94.14	-1,414.6	-15.1	1,214.2	1,148.6	65.63	18.500	
8,563.0	6,732.2	8,398.4	6,819.7	38.8	34.2	94.14	-1,477.6	-15.1	1,214.2	1,146.5	67.77	17.918	
8,600.0	6,731.9	8,435.4	6,819.4	39.3	34.8	94.13	-1,514.6	-15.1	1,214.2	1,145.2	69.03	17.591	
8,661.4	6,731.5	8,496.8	6,818.9	40.2	35.9	94.13	-1,576.0	-15.1	1,214.2	1,143.1	71.13	17.070	
8,700.0	6,731.2	8,535.4	6,818.5	40.8	36.6	94.12	-1,614.6	-15.1	1,214.2	1,141.7	72.46	16.756	
8,759.8	6,730.8	8,595.2	6,818.0	41.7	37.6	94.11	-1,674.4	-15.1	1,214.2	1,139.7	74.54	16.289	
8,800.0	6,730.6	8,635.4	6,817.6	42.3	38.4	94.11	-1,714.6	-15.1	1,214.2	1,138.2	75.94	15.989	
8,858.2	6,730.2	8,693.7	6,817.1	43.2	39.4	94.10	-1,772.9	-15.1	1,214.2	1,136.2	77.98	15.570	
8,900.0	6,729.9	8,735.4	6,816.7	43.8	40.1	94.10	-1,814.6	-15.1	1,214.2	1,134.7	79.45	15.282	
8,956.7	6,729.5	8,792.1	6,816.2	44.7	41.2	94.09	-1,871.3	-15.1	1,214.2	1,132.7	81.45	14.906	
9,000.0	6,729.2	8,835.4	6,815.8	45.4	41.9	94.09	-1,914.6	-15.1	1,214.2	1,131.2	82.99	14.631	
9,055.1	6,728.8	8,890.5	6,815.3	46.3	42.9	94.08	-1,969.7	-15.1	1,214.1	1,129.2	84.95	14.293	
9,100.0	6,728.5	8,935.4	6,814.9	47.0	43.7	94.08	-2,014.6	-15.1	1,214.1	1,127.6	86.55	14.028	
9,153.5	6,728.2	8,988.9	6,814.4	47.9	44.7	94.07	-2,068.1	-15.1	1,214.1	1,125.7	88.47	13.724	
9,200.0	6,727.8	9,035.4	6,814.0	48.6	45.6	94.07	-2,114.6	-15.1	1,214.1	1,124.0	90.14	13.470	
9,251.9	6,727.5	9,087.4	6,813.5	49.5	46.5	94.06	-2,166.5	-15.1	1,214.1	1,122.1	92.01	13.195	
9,300.0	6,727.2	9,135.4	6,813.1	50.3	47.4	94.06	-2,214.6	-15.1	1,214.1	1,120.4	93.74	12.951	
9,350.4	6,726.8	9,185.8	6,812.6	51.1	48.3	94.05	-2,265.0	-15.1	1,214.1	1,118.5	95.57	12.704	
9,400.0	6,726.5	9,235.4	6,812.1	51.9	49.2	94.05	-2,314.6	-15.1	1,214.1	1,116.7	97.37	12.469	
9,448.8	6,726.1	9,284.2	6,811.7	52.7	50.1	94.04	-2,363.4	-15.1	1,214.1	1,114.9	99.14	12.246	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWMD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	6,725.8	9,335.4	6,811.2	53.6	51.0	94.04	-2,414.6	-15.1	1,214.1	1,113.1	101.01	12.019	
9,547.2	6,725.5	9,382.6	6,810.8	54.4	51.9	94.03	-2,461.8	-15.1	1,214.1	1,111.3	102.73	11.818	
9,600.0	6,725.1	9,435.4	6,810.3	55.3	52.9	94.03	-2,514.6	-15.1	1,214.1	1,109.4	104.66	11.600	
9,645.6	6,724.8	9,481.0	6,809.9	56.1	53.7	94.02	-2,560.2	-15.1	1,214.1	1,107.7	106.34	11.417	
9,700.0	6,724.4	9,535.4	6,809.4	57.0	54.7	94.01	-2,614.6	-15.1	1,214.0	1,105.7	108.33	11.207	
9,744.1	6,724.1	9,579.5	6,809.0	57.8	55.6	94.01	-2,658.6	-15.1	1,214.0	1,104.1	109.95	11.042	
9,800.0	6,723.8	9,635.4	6,808.5	58.7	56.6	94.00	-2,714.6	-15.1	1,214.0	1,102.0	112.01	10.839	
9,842.5	6,723.5	9,677.9	6,808.1	59.5	57.4	94.00	-2,757.1	-15.1	1,214.0	1,100.4	113.58	10.689	
9,900.0	6,723.1	9,735.4	6,807.6	60.5	58.4	93.99	-2,814.6	-15.1	1,214.0	1,098.3	115.70	10.493	
9,940.9	6,722.8	9,776.3	6,807.2	61.2	59.2	93.99	-2,855.5	-15.1	1,214.0	1,096.8	117.21	10.357	
10,000.0	6,722.4	9,835.4	6,806.7	62.2	60.3	93.98	-2,914.6	-15.1	1,214.0	1,094.6	119.40	10.168	
10,039.3	6,722.1	9,874.7	6,806.3	62.9	61.0	93.98	-2,953.9	-15.1	1,214.0	1,093.1	120.85	10.045	
10,100.0	6,721.7	9,935.4	6,805.8	64.0	62.2	93.97	-3,014.6	-15.1	1,214.0	1,090.9	123.10	9.861	
10,137.8	6,721.5	9,973.2	6,805.5	64.7	62.9	93.97	-3,052.3	-15.1	1,214.0	1,089.5	124.51	9.750	
10,200.0	6,721.0	10,035.4	6,804.9	65.8	64.0	93.96	-3,114.6	-15.1	1,214.0	1,087.1	126.82	9.572	
10,236.2	6,720.8	10,071.6	6,804.6	66.4	64.7	93.96	-3,150.8	-15.1	1,214.0	1,085.8	128.17	9.472	
10,300.0	6,720.4	10,135.4	6,804.0	67.5	65.9	93.95	-3,214.5	-15.1	1,213.9	1,083.4	130.54	9.299	
10,334.6	6,720.1	10,170.0	6,803.7	68.2	66.6	93.95	-3,249.2	-15.1	1,213.9	1,082.1	131.83	9.208	
10,400.0	6,719.7	10,235.4	6,803.1	69.3	67.8	93.94	-3,314.5	-15.1	1,213.9	1,079.7	134.27	9.041	
10,433.0	6,719.4	10,268.4	6,802.8	69.9	68.4	93.94	-3,347.6	-15.1	1,213.9	1,078.4	135.50	8.959	
10,500.0	6,719.0	10,335.4	6,802.2	71.1	69.7	93.93	-3,414.5	-15.1	1,213.9	1,075.9	138.00	8.796	
10,531.5	6,718.8	10,366.9	6,801.9	71.7	70.3	93.93	-3,446.0	-15.1	1,213.9	1,074.7	139.18	8.722	
10,600.0	6,718.3	10,435.4	6,801.3	72.9	71.6	93.92	-3,514.5	-15.1	1,213.9	1,072.2	141.74	8.564	
10,629.9	6,718.1	10,465.3	6,801.0	73.4	72.1	93.92	-3,544.4	-15.1	1,213.9	1,071.0	142.86	8.497	
10,700.0	6,717.6	10,535.4	6,800.4	74.7	73.4	93.91	-3,614.5	-15.1	1,213.9	1,068.4	145.49	8.343	
10,728.3	6,717.4	10,563.7	6,800.1	75.2	74.0	93.90	-3,642.9	-15.1	1,213.9	1,067.3	146.55	8.283	
10,800.0	6,717.0	10,635.4	6,799.4	76.5	75.3	93.90	-3,714.5	-15.1	1,213.9	1,064.6	149.24	8.134	
10,826.7	6,716.8	10,662.1	6,799.2	77.0	75.8	93.89	-3,741.3	-15.1	1,213.9	1,063.6	150.24	8.079	
10,900.0	6,716.3	10,735.4	6,798.5	78.3	77.2	93.89	-3,814.5	-15.1	1,213.9	1,060.9	153.00	7.934	
10,925.2	6,716.1	10,760.6	6,798.3	78.8	77.7	93.88	-3,839.7	-15.1	1,213.9	1,059.9	153.94	7.885	
11,000.0	6,715.6	10,835.4	6,797.6	80.2	79.1	93.88	-3,914.5	-15.1	1,213.8	1,057.1	156.75	7.744	
11,023.6	6,715.4	10,859.0	6,797.4	80.6	79.5	93.87	-3,938.1	-15.1	1,213.8	1,056.2	157.64	7.700	
11,100.0	6,714.9	10,935.4	6,796.7	82.0	81.0	93.86	-4,014.5	-15.1	1,213.8	1,053.3	160.52	7.562	
11,122.0	6,714.8	10,957.4	6,796.5	82.4	81.4	93.86	-4,036.5	-15.1	1,213.8	1,052.5	161.35	7.523	
11,200.0	6,714.2	11,035.4	6,795.8	83.8	82.9	93.85	-4,114.5	-15.1	1,213.8	1,049.5	164.28	7.389	
11,220.4	6,714.1	11,055.8	6,795.6	84.2	83.3	93.85	-4,135.0	-15.1	1,213.8	1,048.8	165.05	7.354	
11,300.0	6,713.5	11,135.4	6,794.9	85.7	84.8	93.84	-4,214.5	-15.1	1,213.8	1,045.7	168.05	7.223	
11,318.9	6,713.4	11,154.3	6,794.7	86.0	85.1	93.84	-4,233.4	-15.1	1,213.8	1,045.0	168.77	7.192	
11,400.0	6,712.9	11,235.4	6,794.0	87.5	86.7	93.83	-4,314.5	-15.1	1,213.8	1,042.0	171.83	7.064	
11,417.3	6,712.7	11,252.7	6,793.8	87.8	87.0	93.83	-4,331.8	-15.1	1,213.8	1,041.3	172.48	7.037	
11,500.0	6,712.2	11,335.4	6,793.1	89.3	88.6	93.82	-4,414.5	-15.1	1,213.8	1,038.2	175.60	6.912	
11,515.7	6,712.1	11,351.1	6,792.9	89.6	88.9	93.82	-4,430.2	-15.1	1,213.8	1,037.6	176.20	6.889	
11,600.0	6,711.5	11,435.4	6,792.2	91.2	90.4	93.81	-4,514.5	-15.1	1,213.7	1,034.4	179.38	6.766	
11,614.1	6,711.4	11,449.5	6,792.1	91.4	90.7	93.81	-4,528.6	-15.1	1,213.7	1,033.8	179.92	6.746	
11,700.0	6,710.8	11,535.4	6,791.3	93.0	92.3	93.80	-4,614.5	-15.1	1,213.7	1,030.6	183.16	6.627	
11,712.6	6,710.7	11,548.0	6,791.2	93.3	92.6	93.80	-4,627.1	-15.1	1,213.7	1,030.1	183.64	6.609	
11,800.0	6,710.1	11,635.4	6,790.4	94.9	94.2	93.79	-4,714.5	-15.1	1,213.7	1,026.8	186.95	6.492	
11,811.0	6,710.1	11,646.4	6,790.3	95.1	94.5	93.79	-4,725.5	-15.1	1,213.7	1,026.4	187.36	6.478	
11,900.0	6,709.5	11,735.4	6,789.5	96.7	96.1	93.78	-4,814.5	-15.1	1,213.7	1,023.0	190.73	6.363	
11,909.4	6,709.4	11,744.8	6,789.4	96.9	96.3	93.78	-4,823.9	-15.1	1,213.7	1,022.6	191.09	6.352	
12,000.0	6,708.8	11,835.4	6,788.6	98.6	98.0	93.77	-4,914.5	-15.1	1,213.7	1,019.2	194.52	6.239	
12,007.8	6,708.7	11,843.2	6,788.5	98.7	98.2	93.77	-4,922.3	-15.1	1,213.7	1,018.9	194.82	6.230	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5J-303 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,100.0	6,708.1	11,935.4	6,787.6	100.4	99.9	93.76	-5,014.5	-15.1	1,213.7	1,015.4	198.31	6.120	
12,106.3	6,708.1	11,941.7	6,787.6	100.6	100.1	93.76	-5,020.7	-15.1	1,213.7	1,015.1	198.55	6.113	
12,200.0	6,707.4	12,035.4	6,786.7	102.3	101.8	93.75	-5,114.5	-15.1	1,213.7	1,011.6	202.10	6.005	
12,204.7	6,707.4	12,040.1	6,786.7	102.4	101.9	93.75	-5,119.2	-15.1	1,213.7	1,011.4	202.28	6.000	
12,300.0	6,706.7	12,135.4	6,785.8	104.2	103.8	93.74	-5,214.5	-15.1	1,213.6	1,007.7	205.90	5.894	
12,303.1	6,706.7	12,138.5	6,785.8	104.2	103.8	93.74	-5,217.6	-15.1	1,213.6	1,007.6	206.01	5.891	
12,400.0	6,706.1	12,235.4	6,784.9	106.0	105.7	93.73	-5,314.5	-15.1	1,213.6	1,003.9	209.69	5.788	
12,401.5	6,706.0	12,236.9	6,784.9	106.1	105.7	93.73	-5,316.0	-15.1	1,213.6	1,003.9	209.75	5.786	
12,500.0	6,705.4	12,335.4	6,784.0	107.9	107.6	93.72	-5,414.5	-15.1	1,213.6	1,000.1	213.49	5.685	
12,598.4	6,704.7	12,433.8	6,783.1	109.7	109.4	93.70	-5,512.8	-15.1	1,213.6	996.4	217.23	5.587	
12,600.0	6,704.7	12,435.4	6,783.1	109.8	109.5	93.70	-5,514.4	-15.1	1,213.6	996.3	217.29	5.585	
12,696.8	6,704.0	12,532.2	6,782.2	111.6	111.3	93.69	-5,611.3	-15.1	1,213.6	992.6	220.97	5.492	
12,700.0	6,704.0	12,535.4	6,782.2	111.6	111.4	93.69	-5,614.4	-15.1	1,213.6	992.5	221.09	5.489	
12,795.2	6,703.4	12,630.6	6,781.3	113.4	113.2	93.68	-5,709.7	-15.1	1,213.6	988.9	224.71	5.401	
12,800.0	6,703.3	12,635.4	6,781.3	113.5	113.3	93.68	-5,714.4	-15.1	1,213.6	988.7	224.89	5.396	
12,893.7	6,702.7	12,729.1	6,780.4	115.3	115.1	93.67	-5,808.1	-15.1	1,213.6	985.1	228.45	5.312	
12,900.0	6,702.7	12,735.4	6,780.4	115.4	115.2	93.67	-5,814.4	-15.1	1,213.6	984.9	228.69	5.306	
12,992.1	6,702.0	12,827.5	6,779.5	117.1	116.9	93.66	-5,906.5	-15.1	1,213.5	981.3	232.20	5.226	
13,000.0	6,702.0	12,835.4	6,779.5	117.3	117.1	93.66	-5,914.4	-15.1	1,213.5	981.0	232.50	5.220	
13,090.5	6,701.4	12,925.9	6,778.7	119.0	118.8	93.65	-6,005.0	-15.1	1,213.5	977.6	235.94	5.143	
13,100.0	6,701.3	12,935.4	6,778.6	119.1	119.0	93.65	-6,014.4	-15.1	1,213.5	977.2	236.30	5.135	
13,188.9	6,700.7	13,024.3	6,777.8	120.8	120.7	93.64	-6,103.4	-15.1	1,213.5	973.8	239.69	5.063	
13,200.0	6,700.6	13,035.4	6,777.7	121.0	120.9	93.64	-6,114.4	-15.1	1,213.5	973.4	240.11	5.054	
13,287.4	6,700.0	13,122.8	6,776.9	122.7	122.6	93.63	-6,201.8	-15.1	1,213.5	970.1	243.44	4.985	
13,300.0	6,699.9	13,135.4	6,776.8	122.9	122.8	93.63	-6,214.4	-15.1	1,213.5	969.6	243.92	4.975	
13,385.8	6,699.3	13,221.2	6,776.0	124.5	124.4	93.62	-6,300.2	-15.1	1,213.5	966.3	247.19	4.909	
13,400.0	6,699.3	13,235.4	6,775.8	124.8	124.7	93.62	-6,314.4	-15.1	1,213.5	965.8	247.73	4.898	
13,484.2	6,698.7	13,319.6	6,775.1	126.4	126.3	93.61	-6,398.6	-15.1	1,213.5	962.5	250.94	4.836	
13,500.0	6,698.6	13,335.4	6,774.9	126.7	126.6	93.61	-6,414.4	-15.1	1,213.5	961.9	251.54	4.824	
13,582.6	6,698.0	13,418.0	6,774.2	128.2	128.2	93.60	-6,497.1	-15.1	1,213.5	958.8	254.69	4.765	
13,600.0	6,697.9	13,435.4	6,774.0	128.5	128.5	93.60	-6,514.4	-15.1	1,213.5	958.1	255.35	4.752	
13,681.1	6,697.3	13,516.5	6,773.3	130.1	130.1	93.59	-6,595.5	-15.1	1,213.4	955.0	258.44	4.695	
13,700.0	6,697.2	13,535.4	6,773.1	130.4	130.4	93.59	-6,614.4	-15.1	1,213.4	954.3	259.16	4.682	
13,779.5	6,696.7	13,614.9	6,772.4	131.9	132.0	93.58	-6,693.9	-15.1	1,213.4	951.2	262.19	4.628	
13,800.0	6,696.5	13,635.4	6,772.2	132.3	132.4	93.58	-6,714.4	-15.1	1,213.4	950.5	262.97	4.614	
13,877.9	6,696.0	13,713.3	6,771.5	133.8	133.8	93.57	-6,792.3	-15.1	1,213.4	947.5	265.94	4.563	
13,900.0	6,695.8	13,735.4	6,771.3	134.2	134.3	93.57	-6,814.4	-15.1	1,213.4	946.6	266.79	4.548	
13,976.3	6,695.3	13,812.2	6,770.6	135.6	135.7	93.56	-6,891.2	-15.1	1,213.4	943.7	269.71	4.499	
14,000.0	6,695.2	13,835.9	6,770.4	136.1	136.2	93.55	-6,914.9	-15.1	1,213.4	942.8	270.61	4.484	
14,034.1	6,695.0	13,869.9	6,770.0	136.7	136.8	93.55	-6,948.9	-15.0	1,213.3	941.4	271.91	4.462 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	0.71	45.2	0.6	45.2				
98.4	98.4	98.4	98.4	0.1	0.1	0.71	45.2	0.6	45.2	45.0	0.17	265.853	
100.0	100.0	100.0	100.0	0.1	0.1	0.71	45.2	0.6	45.2	45.0	0.17	261.041	
196.8	196.8	196.8	196.8	0.3	0.3	0.71	45.2	0.6	45.2	44.6	0.61	74.252	
200.0	200.0	200.0	200.0	0.3	0.3	0.71	45.2	0.6	45.2	44.6	0.62	72.564	
295.3	295.3	295.3	295.3	0.5	0.5	0.71	45.2	0.6	45.2	44.1	1.05	42.990	
300.0	300.0	300.0	300.0	0.5	0.5	0.71	45.2	0.6	45.2	44.1	1.07	42.139	
393.7	393.7	393.7	393.7	0.7	0.7	0.71	45.2	0.6	45.2	43.7	1.49	30.253	
400.0	400.0	400.0	400.0	0.8	0.8	0.71	45.2	0.6	45.2	43.7	1.52	29.690	
492.1	492.1	492.1	492.1	1.0	1.0	0.71	45.2	0.6	45.2	43.2	1.94	23.338	
500.0	500.0	500.0	500.0	1.0	1.0	0.71	45.2	0.6	45.2	43.2	1.97	22.919	
590.5	590.5	590.5	590.5	1.2	1.2	0.71	45.2	0.6	45.2	42.8	2.38	18.996	
600.0	600.0	600.0	600.0	1.2	1.2	0.71	45.2	0.6	45.2	42.8	2.42	18.663	
689.0	689.0	689.0	689.0	1.4	1.4	0.71	45.2	0.6	45.2	42.4	2.82	16.017	
700.0	700.0	700.0	700.0	1.4	1.4	0.71	45.2	0.6	45.2	42.3	2.87	15.740	
787.4	787.4	787.4	787.4	1.6	1.6	0.71	45.2	0.6	45.2	41.9	3.26	13.845	
800.0	800.0	800.0	800.0	1.7	1.7	0.71	45.2	0.6	45.2	41.9	3.32	13.609	
885.8	885.8	885.8	885.8	1.9	1.9	0.71	45.2	0.6	45.2	41.5	3.71	12.192	
900.0	900.0	900.0	900.0	1.9	1.9	0.71	45.2	0.6	45.2	41.4	3.77	11.986	
984.2	984.2	984.2	984.2	2.1	2.1	0.71	45.2	0.6	45.2	41.0	4.15	10.891	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.71	45.2	0.6	45.2	41.0	4.22	10.709	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	0.71	45.2	0.6	45.2	40.6	4.59	9.842	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	0.71	45.2	0.6	45.2	40.5	4.67	9.677	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	0.71	45.2	0.6	45.2	40.1	5.03	8.976	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.71	45.2	0.6	45.2	40.1	5.12	8.827	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	0.71	45.2	0.6	45.2	39.7	5.48	8.251	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	0.71	45.2	0.6	45.2	39.6	5.57	8.115	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	0.71	45.2	0.6	45.2	39.3	5.92	7.634	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	0.71	45.2	0.6	45.2	39.2	6.02	7.508	
1,476.4	1,476.4	1,476.4	1,476.4	3.2	3.2	0.71	45.2	0.6	45.2	38.8	6.36	7.103	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	0.71	45.2	0.6	45.2	38.7	6.47	6.986	
1,574.8	1,574.8	1,574.8	1,574.8	3.4	3.4	0.71	45.2	0.6	45.2	38.4	6.80	6.641	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	0.71	45.2	0.6	45.2	38.3	6.92	6.532	
1,673.2	1,673.2	1,673.2	1,673.2	3.6	3.6	0.71	45.2	0.6	45.2	37.9	7.25	6.236	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	0.71	45.2	0.6	45.2	37.8	7.37	6.134	
1,771.6	1,771.6	1,771.6	1,771.6	3.8	3.8	0.71	45.2	0.6	45.2	37.5	7.69	5.877	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	0.71	45.2	0.6	45.2	37.4	7.82	5.781 CC, ES	
1,870.1	1,870.1	1,869.5	1,869.5	4.1	4.1	1.60	45.6	1.3	45.6	37.5	8.12	5.618	
1,900.0	1,900.0	1,899.1	1,899.1	4.1	4.1	2.50	46.1	2.0	46.1	37.9	8.26	5.588	
1,968.5	1,968.5	1,966.9	1,966.8	4.3	4.3	5.61	47.7	4.7	48.0	39.4	8.55	5.611	
2,000.0	2,000.0	1,998.0	1,997.8	4.4	4.3	7.44	48.8	6.4	49.2	40.5	8.69	5.665	
2,066.9	2,066.9	2,063.9	2,063.6	4.5	4.5	11.92	51.6	10.9	52.8	43.8	8.99	5.878	
2,100.0	2,100.0	2,096.4	2,095.9	4.6	4.6	14.31	53.2	13.6	55.1	46.0	9.13	6.035	
2,165.3	2,165.3	2,160.4	2,159.4	4.7	4.7	19.12	57.1	19.8	60.7	51.3	9.42	6.443	
2,200.0	2,200.0	2,194.1	2,192.9	4.8	4.8	21.63	59.4	23.6	64.3	54.7	9.58	6.714	
2,250.0	2,250.0	2,242.7	2,240.9	4.9	4.9	25.09	63.2	29.6	70.3	60.5	9.81	7.166	
2,263.8	2,263.8	2,256.0	2,254.1	4.9	4.9	-45.90	64.2	31.3	72.1	62.2	9.87	7.308	
2,300.0	2,300.0	2,291.0	2,288.6	5.0	5.0	-43.73	67.3	36.2	77.0	66.9	10.03	7.676	
2,362.2	2,362.2	2,351.0	2,347.6	5.2	5.2	-40.73	73.0	45.5	85.6	75.3	10.29	8.315	
2,400.0	2,399.9	2,387.3	2,383.2	5.2	5.3	-39.26	76.8	51.6	91.0	80.5	10.45	8.704	
2,460.6	2,460.4	2,446.9	2,441.5	5.4	5.5	-37.41	83.3	62.1	99.5	88.7	10.71	9.284	
2,500.0	2,499.7	2,485.9	2,479.7	5.4	5.6	-36.59	87.6	69.0	104.5	93.6	10.88	9.603	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,558.5	2,544.6	2,537.0	5.6	5.8	-35.80	94.0	79.3	111.2	100.1	11.14	9.987	
2,600.0	2,599.1	2,585.3	2,576.9	5.7	5.9	-35.51	98.4	86.5	115.4	104.0	11.32	10.195	
2,657.5	2,656.1	2,642.6	2,632.9	5.8	6.1	-35.42	104.7	96.6	120.3	108.8	11.57	10.398	
2,700.0	2,698.2	2,685.0	2,674.4	5.9	6.3	-35.56	109.4	104.1	123.4	111.7	11.76	10.492	
2,755.9	2,753.3	2,740.8	2,729.0	6.1	6.5	-35.99	115.5	114.0	126.7	114.7	12.02	10.537	
2,800.0	2,796.6	2,784.8	2,772.0	6.2	6.6	-36.52	120.3	121.8	128.7	116.4	12.23	10.520	
2,854.3	2,849.9	2,839.1	2,825.1	6.3	6.8	-37.42	126.2	131.4	130.4	117.9	12.50	10.429	
2,900.0	2,894.4	2,884.7	2,869.7	6.5	7.0	-38.37	131.2	139.4	131.2	118.5	12.73	10.305	
2,952.7	2,945.7	2,937.3	2,921.2	6.6	7.2	-39.71	137.0	148.7	131.5	118.5	13.02	10.100	
3,000.0	2,991.5	2,984.5	2,967.3	6.8	7.3	-41.15	142.1	157.1	131.2	117.9	13.29	9.875	
3,051.2	3,040.8	3,035.5	3,017.2	7.0	7.5	-42.98	147.7	166.1	130.4	116.8	13.61	9.580	
3,100.0	3,087.6	3,084.1	3,064.7	7.1	7.7	-45.02	153.1	174.7	129.1	115.1	13.93	9.263	
3,149.6	3,134.9	3,133.3	3,112.9	7.4	7.9	-47.41	158.4	183.4	127.3	113.0	14.30	8.902	
3,200.0	3,182.7	3,183.3	3,161.8	7.6	8.1	-50.20	163.9	192.2	125.2	110.5	14.71	8.514	
3,248.0	3,228.0	3,230.9	3,208.3	7.8	8.3	-53.25	169.1	200.6	123.0	107.9	15.16	8.119	
3,300.0	3,276.6	3,282.1	3,258.5	8.1	8.5	-57.00	174.7	209.7	120.6	104.9	15.68	7.690	
3,346.4	3,319.9	3,327.9	3,303.2	8.3	8.7	-60.79	179.7	217.7	118.4	102.2	16.21	7.305	
3,400.0	3,369.4	3,380.4	3,354.6	8.6	8.9	-65.69	185.5	227.0	116.2	99.3	16.86	6.891	
3,444.9	3,410.5	3,424.3	3,397.5	8.9	9.1	-70.24	190.3	234.8	114.8	97.3	17.47	6.571	
3,500.0	3,460.7	3,478.0	3,450.0	9.2	9.3	-76.33	196.2	244.3	113.9	95.6	18.22	6.248	
3,516.1	3,475.3	3,493.6	3,465.4	9.3	9.4	-78.21	197.9	247.0	113.8	95.4	18.45	6.167	
3,543.3	3,499.8	3,520.0	3,491.1	9.5	9.5	-81.46	200.8	251.7	114.0	95.1	18.84	6.051	
3,600.0	3,550.6	3,574.7	3,544.7	9.9	9.7	-88.49	206.8	261.4	115.5	96.0	19.57	5.903	
3,641.7	3,587.6	3,614.8	3,583.9	10.3	9.9	-93.77	211.2	268.5	117.9	97.8	20.08	5.871	
3,709.9	3,647.5	3,680.0	3,647.7	10.8	10.1	-102.32	218.3	280.0	124.3	103.5	20.74	5.991	
3,740.1	3,673.9	3,708.8	3,675.9	11.1	10.3	-106.00	221.5	285.1	128.1	107.1	20.98	6.106	
3,800.0	3,726.2	3,765.8	3,731.6	11.6	10.5	-112.67	227.7	295.1	137.2	115.8	21.35	6.425	
3,838.6	3,759.9	3,802.6	3,767.5	11.9	10.7	-116.52	231.7	301.6	144.0	122.4	21.54	6.683	
3,900.0	3,813.5	3,861.1	3,824.8	12.5	10.9	-121.96	238.1	312.0	156.0	134.2	21.79	7.160	
3,937.0	3,845.8	3,896.3	3,859.2	12.8	11.0	-124.86	242.0	318.2	163.8	141.9	21.92	7.475	
4,000.0	3,900.8	3,956.3	3,917.9	13.4	11.3	-129.20	248.6	328.8	178.1	155.9	22.12	8.049	
4,035.4	3,931.7	3,990.0	3,950.9	13.7	11.4	-131.36	252.3	334.8	186.4	164.2	22.24	8.385	
4,100.0	3,988.1	4,051.5	4,011.1	14.3	11.7	-134.84	259.0	345.6	202.3	179.9	22.45	9.014	
4,133.8	4,017.6	4,083.8	4,042.6	14.7	11.8	-136.46	262.5	351.3	210.9	188.3	22.56	9.348	
4,200.0	4,075.4	4,146.8	4,104.2	15.3	12.1	-139.28	269.4	362.5	228.1	205.3	22.79	10.006	
4,232.3	4,103.5	4,177.5	4,134.3	15.6	12.2	-140.50	272.8	367.9	236.6	213.7	22.92	10.326	
4,300.0	4,162.6	4,242.0	4,197.4	16.2	12.5	-142.82	279.8	379.3	254.9	231.7	23.18	10.995	
4,330.7	4,189.4	4,271.3	4,226.0	16.5	12.7	-143.76	283.1	384.5	263.3	240.0	23.31	11.295	
4,400.0	4,249.9	4,337.3	4,290.6	17.2	12.9	-145.69	290.3	396.1	282.4	258.8	23.61	11.964	
4,429.1	4,275.4	4,365.0	4,317.7	17.5	13.1	-146.42	293.3	401.0	290.6	266.8	23.74	12.241	
4,500.0	4,337.2	4,432.5	4,383.7	18.2	13.3	-148.05	300.7	413.0	310.5	286.5	24.07	12.903	
4,527.5	4,361.3	4,458.7	4,409.4	18.5	13.5	-148.63	303.6	417.6	318.4	294.2	24.20	13.155	
4,600.0	4,424.5	4,527.7	4,476.9	19.2	13.8	-150.02	311.1	429.8	339.1	314.5	24.56	13.806	
4,626.0	4,447.2	4,552.5	4,501.1	19.5	13.9	-150.48	313.8	434.2	346.5	321.8	24.69	14.035	
4,700.0	4,511.8	4,623.0	4,570.0	20.2	14.2	-151.69	321.6	446.6	367.9	342.8	25.07	14.672	
4,724.4	4,533.1	4,646.2	4,592.8	20.5	14.3	-152.06	324.1	450.7	375.0	349.8	25.20	14.877	
4,796.7	4,596.3	4,715.1	4,660.2	21.2	14.6	-153.08	331.7	462.9	396.0	370.4	25.59	15.473	
4,800.0	4,599.1	4,718.2	4,663.2	21.2	14.6	-153.13	332.0	463.5	397.0	371.4	25.61	15.498	
4,822.8	4,619.1	4,740.0	4,684.5	21.4	14.7	-153.48	334.4	467.3	403.5	377.8	25.75	15.672	
4,900.0	4,687.3	4,814.0	4,756.9	22.0	15.0	-154.51	342.5	480.4	424.6	398.4	26.23	16.189	
4,921.2	4,706.2	4,834.5	4,776.9	22.2	15.1	-154.75	344.7	484.0	430.1	403.8	26.37	16.314	
5,000.0	4,777.1	4,900.0	4,841.1	22.8	15.4	-155.47	351.7	495.3	449.8	422.9	26.85	16.749	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,019.7	4,794.9	4,921.6	4,862.3	22.9	15.4	-155.69	353.9	498.8	454.6	427.6	26.97	16.856	
5,100.0	4,868.3	4,990.4	4,930.1	23.5	15.6	-156.39	360.2	508.9	473.9	446.5	27.41	17.292	
5,118.1	4,885.0	5,000.0	4,939.5	23.6	15.7	-156.50	361.0	510.2	478.3	450.8	27.50	17.393	
5,200.0	4,961.0	5,075.7	5,014.4	24.2	15.9	-157.23	366.8	519.6	497.4	469.5	27.91	17.823	
5,216.5	4,976.4	5,089.8	5,028.4	24.3	15.9	-157.36	367.7	521.2	501.3	473.3	27.99	17.910	
5,300.0	5,054.8	5,160.6	5,098.7	24.8	16.1	-158.03	372.0	528.1	520.2	491.9	28.36	18.343	
5,314.9	5,069.0	5,173.3	5,111.3	24.8	16.1	-158.15	372.7	529.2	523.6	495.1	28.42	18.421	
5,400.0	5,149.9	5,245.1	5,182.8	25.3	16.3	-158.80	376.0	534.4	542.3	513.5	28.76	18.856	
5,413.4	5,162.7	5,256.3	5,194.1	25.4	16.3	-158.90	376.4	535.1	545.2	516.4	28.81	18.925	
5,500.0	5,245.9	5,329.1	5,266.7	25.8	16.4	-159.54	378.6	538.7	563.6	534.5	29.11	19.364	
5,511.8	5,257.3	5,339.0	5,276.6	25.9	16.5	-159.63	378.8	539.0	566.1	536.9	29.14	19.425	
5,600.0	5,342.9	5,412.7	5,350.3	26.3	16.6	-160.26	379.9	540.8	584.2	554.8	29.40	19.869	
5,610.2	5,352.9	5,421.3	5,358.9	26.3	16.6	-160.34	380.0	540.9	586.2	556.8	29.43	19.922	
5,700.0	5,440.7	5,503.1	5,440.7	26.7	16.7	-161.00	380.1	541.1	603.7	574.1	29.65	20.359	
5,708.6	5,449.1	5,511.6	5,449.1	26.7	16.7	-161.06	380.1	541.1	605.3	575.6	29.68	20.396	
5,800.0	5,539.1	5,601.5	5,539.1	27.0	16.9	-161.63	380.1	541.1	620.4	590.5	29.92	20.738	
5,807.1	5,546.1	5,608.5	5,546.1	27.0	16.9	-161.67	380.1	541.1	621.5	591.5	29.94	20.761	
5,900.0	5,638.1	5,700.5	5,638.1	27.3	17.0	-162.12	380.1	541.1	633.9	603.7	30.18	21.006	
5,905.5	5,643.5	5,706.0	5,643.5	27.3	17.0	-162.14	380.1	541.1	634.5	604.3	30.19	21.019	
6,000.0	5,737.5	5,799.9	5,737.5	27.5	17.2	-162.47	380.1	541.1	644.1	613.6	30.42	21.170	
6,003.9	5,741.4	5,803.8	5,741.4	27.5	17.2	-162.48	380.1	541.1	644.4	614.0	30.43	21.174	
6,100.0	5,837.2	5,899.7	5,837.2	27.7	17.3	-162.70	380.1	541.1	650.9	620.3	30.66	21.231	
6,102.3	5,839.6	5,902.0	5,839.6	27.7	17.3	-162.71	380.1	541.1	651.1	620.4	30.66	21.232	
6,200.0	5,937.2	5,999.6	5,937.2	27.9	17.5	-162.82	380.1	541.1	654.5	623.6	30.88	21.194	
6,200.8	5,937.9	6,000.4	5,937.9	27.9	17.5	-162.82	380.1	541.1	654.5	623.6	30.88	21.194	
6,256.6	5,993.8	6,056.2	5,993.8	27.9	17.6	-90.93	380.1	541.1	655.0	624.0	31.00	21.131	
6,286.6	6,023.8	6,086.2	6,023.8	27.9	17.6	-90.93	380.1	541.1	655.0	623.9	31.10	21.061	
6,299.2	6,036.4	6,098.8	6,036.4	27.9	17.7	89.08	380.1	541.1	655.0	623.9	31.14	21.032	
6,300.0	6,037.2	6,099.6	6,037.2	27.9	17.7	89.08	380.1	541.1	655.0	623.9	31.15	21.030	
6,350.0	6,087.1	6,149.5	6,087.1	28.0	17.7	89.32	380.1	541.1	655.0	623.6	31.35	20.895	
6,397.6	6,134.3	6,196.7	6,134.2	28.0	17.8	89.77	379.4	541.1	654.9	623.4	31.56	20.753	
6,400.0	6,136.7	6,199.0	6,136.6	28.0	17.8	89.79	379.3	541.1	654.9	623.4	31.57	20.747	
6,421.6	6,157.9	6,220.4	6,157.9	28.0	17.8	90.00	378.0	541.1	654.9	623.3	31.64	20.697	
6,450.0	6,185.7	6,248.7	6,186.1	28.0	17.9	90.28	375.3	541.1	655.0	623.2	31.74	20.634	
6,496.0	6,230.2	6,294.8	6,231.7	28.0	17.9	90.73	368.6	541.1	655.0	623.1	31.86	20.560	
6,500.0	6,234.0	6,298.8	6,235.6	28.0	17.9	90.77	367.8	541.1	655.0	623.1	31.87	20.554	
6,550.0	6,281.3	6,349.3	6,284.9	28.0	17.9	91.26	356.8	541.1	655.1	623.2	31.95	20.505	
6,594.5	6,322.2	6,394.6	6,328.3	27.9	17.9	91.69	344.0	541.1	655.2	623.3	31.98	20.489	
6,600.0	6,327.3	6,400.2	6,333.7	27.9	17.9	91.74	342.2	541.1	655.2	623.3	31.98	20.487	
6,650.0	6,371.8	6,451.6	6,381.7	27.9	17.9	92.22	324.0	541.1	655.4	623.5	31.98	20.497	
6,692.9	6,408.6	6,495.9	6,422.0	27.9	17.9	92.62	305.5	541.1	655.6	623.7	31.94	20.524	
6,700.0	6,414.6	6,503.3	6,428.6	27.8	17.8	92.68	302.2	541.1	655.7	623.7	31.94	20.530	
6,750.0	6,455.5	6,555.5	6,474.2	27.8	17.8	93.14	276.9	541.1	655.9	624.1	31.87	20.580	
6,791.3	6,487.7	6,598.9	6,510.6	27.7	17.8	93.50	253.3	541.1	656.2	624.4	31.81	20.630	
6,800.0	6,494.3	6,608.1	6,518.1	27.7	17.8	93.58	248.1	541.1	656.2	624.4	31.79	20.641	
6,850.0	6,530.8	6,661.1	6,560.2	27.7	17.7	94.01	215.8	541.1	656.6	624.8	31.71	20.704	
6,889.7	6,558.1	6,703.5	6,592.1	27.6	17.7	94.33	187.8	541.1	656.8	625.2	31.66	20.749	
6,900.0	6,564.9	6,714.4	6,600.0	27.6	17.7	94.41	180.3	541.1	656.9	625.3	31.65	20.758	
6,950.0	6,596.3	6,768.2	6,637.4	27.6	17.6	94.79	141.6	541.1	657.3	625.6	31.61	20.792	
6,988.2	6,618.4	6,809.5	6,664.0	27.5	17.6	95.07	110.1	541.1	657.5	625.9	31.62	20.796	
7,000.0	6,624.9	6,822.4	6,671.9	27.5	17.6	95.16	99.9	541.1	657.6	626.0	31.63	20.793	
7,050.0	6,650.6	6,876.9	6,703.5	27.5	17.6	95.49	55.5	541.1	658.0	626.3	31.71	20.748	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5J-323 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MW/D												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,086.6	6,667.5	6,917.0	6,724.4	27.5	17.6	95.72	21.3	541.1	658.2	626.4	31.83	20.682	
7,100.0	6,673.3	6,931.7	6,731.7	27.5	17.6	95.80	8.5	541.1	658.3	626.4	31.88	20.650	
7,150.0	6,692.7	6,986.9	6,756.3	27.5	17.6	96.07	-40.9	541.1	658.6	626.5	32.16	20.479	
7,185.0	6,704.4	7,025.7	6,771.3	27.5	17.7	96.24	-76.6	541.1	658.9	626.4	32.44	20.313	
7,200.0	6,709.0	7,042.3	6,777.2	27.5	17.7	96.31	-92.2	541.1	659.0	626.4	32.55	20.245	
7,250.0	6,721.8	7,098.0	6,794.1	27.5	17.8	96.52	-145.2	541.1	659.2	626.2	33.06	19.940	
7,283.4	6,728.6	7,135.4	6,803.1	27.5	17.9	96.64	-181.5	541.1	659.4	625.9	33.48	19.692	
7,300.0	6,731.3	7,153.9	6,806.9	27.6	18.0	96.70	-199.6	541.1	659.5	625.7	33.70	19.567	
7,350.0	6,737.3	7,210.0	6,815.4	27.7	18.3	96.84	-255.0	541.1	659.6	625.2	34.47	19.136	
7,381.9	6,739.4	7,245.8	6,818.6	27.7	18.6	96.91	-290.7	541.1	659.7	624.7	35.03	18.836	
7,400.0	6,739.9	7,266.2	6,819.6	27.8	18.7	96.94	-311.1	541.1	659.8	624.4	35.36	18.660	
7,416.5	6,740.0	7,284.7	6,820.0	27.8	18.9	96.96	-329.6	541.1	659.8	624.1	35.67	18.496	
7,480.3	6,739.5	7,349.9	6,819.6	28.0	19.4	96.97	-394.8	541.1	659.8	623.0	36.86	17.901	
7,500.0	6,739.4	7,369.6	6,819.4	28.1	19.6	96.97	-414.5	541.1	659.8	622.6	37.23	17.725	
7,578.7	6,738.9	7,448.3	6,818.8	28.5	20.4	96.96	-493.2	541.1	659.8	620.9	38.86	16.979	
7,600.0	6,738.7	7,469.6	6,818.7	28.6	20.6	96.96	-514.5	541.1	659.8	620.5	39.31	16.783	
7,677.1	6,738.2	7,546.7	6,818.1	29.1	21.5	96.96	-591.6	541.1	659.8	618.7	41.11	16.051	
7,700.0	6,738.1	7,569.6	6,817.9	29.2	21.8	96.95	-614.5	541.1	659.8	618.1	41.65	15.842	
7,775.6	6,737.5	7,645.1	6,817.4	29.7	22.7	96.95	-690.0	541.1	659.8	616.2	43.56	15.146	
7,800.0	6,737.4	7,669.6	6,817.2	29.9	23.1	96.95	-714.4	541.1	659.8	615.6	44.19	14.930	
7,874.0	6,736.9	7,743.6	6,816.6	30.6	24.1	96.94	-788.4	541.1	659.8	613.6	46.19	14.283	
7,900.0	6,736.7	7,769.6	6,816.4	30.8	24.4	96.94	-814.4	541.1	659.8	612.9	46.91	14.066	
7,972.4	6,736.2	7,842.0	6,815.9	31.5	25.4	96.94	-886.9	541.1	659.8	610.8	48.97	13.472	
8,000.0	6,736.0	7,869.6	6,815.7	31.8	25.8	96.94	-914.4	541.1	659.8	610.0	49.77	13.257	
8,070.8	6,735.5	7,940.4	6,815.1	32.5	26.9	96.93	-985.3	541.1	659.8	607.9	51.88	12.718	
8,100.0	6,735.3	7,969.6	6,814.9	32.8	27.3	96.93	-1,014.4	541.1	659.8	607.0	52.75	12.507	
8,169.3	6,734.9	8,038.8	6,814.4	33.6	28.4	96.93	-1,083.7	541.1	659.8	604.9	54.88	12.021	
8,200.0	6,734.6	8,069.6	6,814.2	34.0	28.9	96.92	-1,114.4	541.1	659.8	603.9	55.84	11.816	
8,267.7	6,734.2	8,137.3	6,813.7	34.8	29.9	96.92	-1,182.1	541.1	659.7	601.8	57.98	11.379	
8,300.0	6,734.0	8,169.6	6,813.4	35.2	30.5	96.92	-1,214.4	541.1	659.7	600.7	59.01	11.181	
8,366.1	6,733.5	8,235.7	6,812.9	36.1	31.5	96.91	-1,280.6	541.1	659.7	598.6	61.15	10.789	
8,400.0	6,733.3	8,269.6	6,812.7	36.5	32.1	96.91	-1,314.4	541.1	659.7	597.5	62.25	10.598	
8,464.5	6,732.8	8,334.1	6,812.2	37.4	33.1	96.91	-1,379.0	541.1	659.7	595.3	64.38	10.247	
8,500.0	6,732.6	8,369.6	6,811.9	37.9	33.7	96.90	-1,414.4	541.1	659.7	594.2	65.56	10.063	
8,563.0	6,732.2	8,432.5	6,811.4	38.8	34.8	96.90	-1,477.4	541.1	659.7	592.1	67.67	9.749	
8,600.0	6,731.9	8,469.6	6,811.2	39.3	35.4	96.90	-1,514.4	541.1	659.7	590.8	68.92	9.572	
8,661.4	6,731.5	8,531.0	6,810.7	40.2	36.4	96.89	-1,575.8	541.1	659.7	588.7	71.01	9.291	
8,700.0	6,731.2	8,569.6	6,810.4	40.8	37.1	96.89	-1,614.4	541.1	659.7	587.4	72.32	9.122	
8,759.8	6,730.8	8,629.4	6,810.0	41.7	38.1	96.89	-1,674.2	541.1	659.7	585.3	74.38	8.869	
8,800.0	6,730.6	8,669.6	6,809.7	42.3	38.8	96.89	-1,714.4	541.1	659.7	583.9	75.77	8.707	
8,858.2	6,730.2	8,727.8	6,809.2	43.2	39.8	96.88	-1,772.7	541.1	659.7	581.9	77.80	8.480	
8,900.0	6,729.9	8,769.6	6,808.9	43.8	40.6	96.88	-1,814.4	541.1	659.7	580.4	79.25	8.324	
8,956.7	6,729.5	8,826.2	6,808.5	44.7	41.6	96.88	-1,871.1	541.1	659.7	578.5	81.24	8.120	
9,000.0	6,729.2	8,869.6	6,808.2	45.4	42.3	96.87	-1,914.4	541.1	659.7	576.9	82.76	7.971	
9,055.1	6,728.8	8,924.7	6,807.7	46.3	43.3	96.87	-1,969.5	541.1	659.7	575.0	84.71	7.788	
9,100.0	6,728.5	8,969.6	6,807.4	47.0	44.1	96.87	-2,014.4	541.1	659.7	573.4	86.30	7.644	
9,153.5	6,728.2	9,023.1	6,807.0	47.9	45.0	96.86	-2,067.9	541.1	659.7	571.5	88.20	7.479	
9,200.0	6,727.8	9,069.6	6,806.6	48.6	45.9	96.86	-2,114.4	541.1	659.7	569.8	89.86	7.341	
9,251.9	6,727.5	9,121.5	6,806.3	49.5	46.8	96.86	-2,166.4	541.1	659.7	567.9	91.72	7.192	
9,300.0	6,727.2	9,169.6	6,805.9	50.3	47.7	96.85	-2,214.4	541.1	659.7	566.2	93.44	7.060	
9,350.4	6,726.8	9,219.9	6,805.5	51.1	48.6	96.85	-2,264.8	541.1	659.7	564.4	95.25	6.925	
9,400.0	6,726.5	9,269.6	6,805.1	51.9	49.5	96.85	-2,314.4	541.1	659.7	562.6	97.04	6.798	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWDD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	6,726.1	9,318.4	6,804.8	52.7	50.3	96.85	-2,363.2	541.1	659.6	560.8	98.80	6.676	
9,500.0	6,725.8	9,369.6	6,804.4	53.6	51.3	96.84	-2,414.4	541.1	659.6	559.0	100.66	6.553	
9,547.2	6,725.5	9,416.8	6,804.0	54.4	52.1	96.84	-2,461.6	541.1	659.6	557.3	102.37	6.444	
9,600.0	6,725.1	9,469.6	6,803.6	55.3	53.1	96.84	-2,514.4	541.1	659.6	555.3	104.29	6.325	
9,645.6	6,724.8	9,515.2	6,803.3	56.1	53.9	96.83	-2,560.0	541.1	659.6	553.7	105.95	6.226	
9,700.0	6,724.4	9,569.6	6,802.9	57.0	54.9	96.83	-2,614.4	541.1	659.6	551.7	107.93	6.111	
9,744.1	6,724.1	9,613.6	6,802.5	57.8	55.7	96.83	-2,658.5	541.1	659.6	550.1	109.54	6.022	
9,800.0	6,723.8	9,669.6	6,802.1	58.7	56.7	96.82	-2,714.4	541.1	659.6	548.0	111.59	5.911	
9,842.5	6,723.5	9,712.1	6,801.8	59.5	57.5	96.82	-2,756.9	541.1	659.6	546.5	113.15	5.830	
9,900.0	6,723.1	9,769.6	6,801.4	60.5	58.6	96.82	-2,814.4	541.1	659.6	544.4	115.26	5.723	
9,940.9	6,722.8	9,810.5	6,801.1	61.2	59.3	96.81	-2,855.3	541.1	659.6	542.8	116.76	5.649	
10,000.0	6,722.4	9,869.6	6,800.6	62.2	60.4	96.81	-2,914.4	541.1	659.6	540.7	118.93	5.546	
10,039.3	6,722.1	9,908.9	6,800.3	62.9	61.1	96.81	-2,953.7	541.1	659.6	539.2	120.38	5.479	
10,100.0	6,721.7	9,969.6	6,799.9	64.0	62.3	96.80	-3,014.4	541.1	659.6	537.0	122.62	5.379	
10,137.8	6,721.5	10,007.3	6,799.6	64.7	63.0	96.80	-3,052.2	541.1	659.6	535.6	124.01	5.319	
10,200.0	6,721.0	10,069.6	6,799.1	65.8	64.1	96.80	-3,114.4	541.1	659.6	533.3	126.31	5.222	
10,236.2	6,720.8	10,105.8	6,798.8	66.4	64.8	96.80	-3,150.6	541.1	659.6	531.9	127.65	5.167	
10,300.0	6,720.4	10,169.6	6,798.3	67.5	66.0	96.79	-3,214.4	541.1	659.6	529.6	130.02	5.073	
10,334.6	6,720.1	10,204.2	6,798.1	68.2	66.6	96.79	-3,249.0	541.1	659.6	528.3	131.30	5.023	
10,400.0	6,719.7	10,269.6	6,797.6	69.3	67.8	96.78	-3,314.4	541.1	659.6	525.8	133.72	4.932	
10,433.0	6,719.4	10,302.6	6,797.3	69.9	68.4	96.78	-3,347.4	541.1	659.6	524.6	134.95	4.887	
10,500.0	6,719.0	10,369.6	6,796.8	71.1	69.7	96.78	-3,414.4	541.1	659.6	522.1	137.44	4.799	
10,531.5	6,718.8	10,401.0	6,796.6	71.7	70.3	96.78	-3,445.8	541.1	659.6	520.9	138.61	4.758	
10,600.0	6,718.3	10,469.6	6,796.1	72.9	71.5	96.77	-3,514.4	541.1	659.5	518.4	141.16	4.672	
10,629.9	6,718.1	10,499.5	6,795.9	73.4	72.1	96.77	-3,544.3	541.1	659.5	517.3	142.27	4.636	
10,700.0	6,717.6	10,569.6	6,795.3	74.7	73.4	96.77	-3,614.4	541.1	659.5	514.7	144.89	4.552	
10,728.3	6,717.4	10,597.9	6,795.1	75.2	73.9	96.76	-3,642.7	541.1	659.5	513.6	145.94	4.519	
10,800.0	6,717.0	10,669.6	6,794.6	76.5	75.3	96.76	-3,714.4	541.1	659.5	510.9	148.62	4.438	
10,826.7	6,716.8	10,696.3	6,794.4	77.0	75.8	96.76	-3,741.1	541.1	659.5	509.9	149.62	4.408	
10,900.0	6,716.3	10,769.6	6,793.8	78.3	77.2	96.75	-3,814.4	541.1	659.5	507.2	152.35	4.329	
10,925.2	6,716.1	10,794.7	6,793.6	78.8	77.6	96.75	-3,839.5	541.1	659.5	506.2	153.30	4.302	
11,000.0	6,715.6	10,869.6	6,793.1	80.2	79.0	96.75	-3,914.4	541.1	659.5	503.4	156.09	4.225	
11,023.6	6,715.4	10,893.2	6,792.9	80.6	79.5	96.74	-3,938.0	541.1	659.5	502.5	156.98	4.201	
11,100.0	6,714.9	10,969.6	6,792.3	82.0	80.9	96.74	-4,014.4	541.1	659.5	499.7	159.84	4.126	
11,122.0	6,714.8	10,991.6	6,792.1	82.4	81.3	96.74	-4,036.4	541.1	659.5	498.8	160.66	4.105	
11,200.0	6,714.2	11,069.6	6,791.5	83.8	82.8	96.73	-4,114.4	541.1	659.5	495.9	163.59	4.031	
11,220.4	6,714.1	11,090.0	6,791.4	84.2	83.2	96.73	-4,134.8	541.1	659.5	495.1	164.35	4.013	
11,300.0	6,713.5	11,169.6	6,790.8	85.7	84.7	96.73	-4,214.4	541.1	659.5	492.1	167.34	3.941	
11,318.9	6,713.4	11,188.4	6,790.6	86.0	85.0	96.72	-4,233.2	541.1	659.5	491.4	168.05	3.924	
11,400.0	6,712.9	11,269.6	6,790.0	87.5	86.6	96.72	-4,314.3	541.1	659.5	488.4	171.09	3.854	
11,417.3	6,712.7	11,286.9	6,789.9	87.8	86.9	96.72	-4,331.6	541.1	659.5	487.7	171.74	3.840	
11,500.0	6,712.2	11,369.6	6,789.3	89.3	88.4	96.71	-4,414.3	541.1	659.5	484.6	174.85	3.772	
11,515.7	6,712.1	11,385.3	6,789.1	89.6	88.7	96.71	-4,430.1	541.1	659.5	484.0	175.44	3.759	
11,600.0	6,711.5	11,469.6	6,788.5	91.2	90.3	96.71	-4,514.3	541.1	659.5	480.8	178.61	3.692	
11,614.1	6,711.4	11,483.7	6,788.4	91.4	90.6	96.71	-4,528.5	541.1	659.5	480.3	179.15	3.681	
11,700.0	6,710.8	11,569.6	6,787.8	93.0	92.2	96.70	-4,614.3	541.1	659.5	477.1	182.38	3.616	
11,712.6	6,710.7	11,582.1	6,787.7	93.3	92.5	96.70	-4,626.9	541.1	659.4	476.6	182.85	3.606	
11,800.0	6,710.1	11,669.6	6,787.0	94.9	94.1	96.69	-4,714.3	541.1	659.4	473.3	186.14	3.543	
11,811.0	6,710.1	11,680.6	6,786.9	95.1	94.3	96.69	-4,725.3	541.1	659.4	472.9	186.56	3.535	
11,900.0	6,709.5	11,769.6	6,786.2	96.7	96.0	96.69	-4,814.3	541.1	659.4	469.5	189.91	3.472	
11,909.4	6,709.4	11,779.0	6,786.2	96.9	96.2	96.69	-4,823.8	541.1	659.4	469.2	190.27	3.466	
12,000.0	6,708.8	11,869.6	6,785.5	98.6	97.9	96.68	-4,914.3	541.1	659.4	465.7	193.68	3.405	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5J-323 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,708.7	11,877.4	6,785.4	98.7	98.0	96.68	-4,922.2	541.1	659.4	465.4	193.98	3.399	
12,100.0	6,708.1	11,969.6	6,784.7	100.4	99.8	96.67	-5,014.3	541.1	659.4	462.0	197.46	3.340	
12,106.3	6,708.1	11,975.8	6,784.7	100.6	99.9	96.67	-5,020.6	541.1	659.4	461.7	197.69	3.336	
12,200.0	6,707.4	12,069.6	6,784.0	102.3	101.7	96.67	-5,114.3	541.1	659.4	458.2	201.23	3.277	
12,204.7	6,707.4	12,074.3	6,783.9	102.4	101.8	96.67	-5,119.0	541.1	659.4	458.0	201.41	3.274	
12,300.0	6,706.7	12,169.6	6,783.2	104.2	103.6	96.66	-5,214.3	541.1	659.4	454.4	205.01	3.216	
12,303.1	6,706.7	12,172.7	6,783.2	104.2	103.6	96.66	-5,217.4	541.1	659.4	454.3	205.13	3.215	
12,400.0	6,706.1	12,269.6	6,782.4	106.0	105.5	96.65	-5,314.3	541.1	659.4	450.6	208.79	3.158	
12,401.5	6,706.0	12,271.1	6,782.4	106.1	105.5	96.65	-5,315.9	541.1	659.4	450.5	208.85	3.157	
12,500.0	6,705.4	12,369.6	6,781.7	107.9	107.4	96.65	-5,414.3	541.1	659.4	446.8	212.57	3.102	
12,598.4	6,704.7	12,468.0	6,780.9	109.7	109.2	96.64	-5,512.7	541.1	659.4	443.1	216.29	3.049	
12,600.0	6,704.7	12,469.6	6,780.9	109.8	109.3	96.64	-5,514.3	541.1	659.4	443.0	216.35	3.048	
12,696.8	6,704.0	12,566.4	6,780.2	111.6	111.1	96.63	-5,611.1	541.0	659.4	439.3	220.01	2.997	
12,700.0	6,704.0	12,569.6	6,780.2	111.6	111.2	96.63	-5,614.3	541.0	659.4	439.2	220.13	2.995	
12,795.2	6,703.4	12,664.8	6,779.4	113.4	113.0	96.63	-5,709.6	541.0	659.4	435.6	223.74	2.947	
12,800.0	6,703.3	12,669.6	6,779.4	113.5	113.1	96.63	-5,714.3	541.0	659.4	435.4	223.92	2.945	
12,893.7	6,702.7	12,763.2	6,778.7	115.3	114.8	96.62	-5,808.0	541.0	659.3	431.9	227.47	2.899	
12,900.0	6,702.7	12,769.6	6,778.6	115.4	115.0	96.62	-5,814.3	541.0	659.3	431.6	227.71	2.896	
12,992.1	6,702.0	12,861.7	6,777.9	117.1	116.7	96.61	-5,906.4	541.0	659.3	428.1	231.19	2.852	
13,000.0	6,702.0	12,869.6	6,777.9	117.3	116.9	96.61	-5,914.3	541.0	659.3	427.8	231.49	2.848	
13,090.5	6,701.4	12,960.1	6,777.2	119.0	118.6	96.61	-6,004.8	541.0	659.3	424.4	234.92	2.807	
13,100.0	6,701.3	12,969.6	6,777.1	119.1	118.8	96.60	-6,014.3	541.0	659.3	424.0	235.28	2.802	
13,188.9	6,700.7	13,058.5	6,776.5	120.8	120.5	96.60	-6,103.2	541.0	659.3	420.7	238.66	2.763	
13,200.0	6,700.6	13,069.6	6,776.4	121.0	120.7	96.60	-6,114.3	541.0	659.3	420.2	239.07	2.758	
13,287.4	6,700.0	13,156.9	6,775.7	122.7	122.3	96.59	-6,201.7	541.0	659.3	416.9	242.39	2.720	
13,300.0	6,699.9	13,169.6	6,775.6	122.9	122.6	96.59	-6,214.3	541.0	659.3	416.4	242.87	2.715	
13,385.8	6,699.3	13,255.4	6,775.0	124.5	124.2	96.59	-6,300.1	541.0	659.3	413.2	246.12	2.679	
13,400.0	6,699.3	13,269.6	6,774.8	124.8	124.5	96.58	-6,314.3	541.0	659.3	412.6	246.66	2.673	
13,484.2	6,698.7	13,353.8	6,774.2	126.4	126.1	96.58	-6,398.5	541.0	659.3	409.4	249.85	2.639	
13,500.0	6,698.6	13,369.6	6,774.1	126.7	126.4	96.58	-6,414.3	541.0	659.3	408.8	250.45	2.632	
13,582.6	6,698.0	13,452.2	6,773.5	128.2	128.0	96.57	-6,496.9	541.0	659.3	405.7	253.59	2.600	
13,600.0	6,697.9	13,469.6	6,773.3	128.5	128.3	96.57	-6,514.3	541.0	659.3	405.0	254.25	2.593	
13,681.1	6,697.3	13,550.6	6,772.7	130.1	129.8	96.56	-6,595.4	541.0	659.3	401.9	257.33	2.562	
13,700.0	6,697.2	13,569.6	6,772.6	130.4	130.2	96.56	-6,614.3	541.0	659.3	401.2	258.04	2.555	
13,779.5	6,696.7	13,649.1	6,772.0	131.9	131.7	96.56	-6,693.8	541.0	659.3	398.2	261.06	2.525	
13,800.0	6,696.5	13,669.6	6,771.8	132.3	132.1	96.56	-6,714.3	541.0	659.3	397.4	261.84	2.518	
13,877.9	6,696.0	13,747.5	6,771.2	133.8	133.6	96.55	-6,792.2	541.0	659.3	394.5	264.80	2.490	
13,900.0	6,695.8	13,769.6	6,771.0	134.2	134.0	96.55	-6,814.3	541.0	659.3	393.6	265.64	2.482	
13,976.3	6,695.3	13,845.9	6,770.5	135.6	135.5	96.54	-6,890.6	541.0	659.2	390.7	268.54	2.455	
14,000.0	6,695.2	13,869.6	6,770.3	136.1	135.9	96.54	-6,914.3	541.0	659.2	389.8	269.44	2.447	
14,034.1	6,695.0	13,903.6	6,770.0	136.7	136.6	96.53	-6,948.3	541.0	659.2	388.5	270.73	2.435 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	1.07	14.9	0.3	14.9				
98.4	98.4	98.4	98.4	0.1	0.1	1.07	14.9	0.3	14.9	14.8	0.17	87.912	
100.0	100.0	100.0	100.0	0.1	0.1	1.07	14.9	0.3	14.9	14.8	0.17	86.320	
196.8	196.8	196.8	196.8	0.3	0.3	1.07	14.9	0.3	14.9	14.3	0.61	24.554	
200.0	200.0	200.0	200.0	0.3	0.3	1.07	14.9	0.3	14.9	14.3	0.62	23.995	
295.3	295.3	295.3	295.3	0.5	0.5	1.07	14.9	0.3	14.9	13.9	1.05	14.216	
300.0	300.0	300.0	300.0	0.5	0.5	1.07	14.9	0.3	14.9	13.9	1.07	13.934	
393.7	393.7	393.7	393.7	0.7	0.7	1.07	14.9	0.3	14.9	13.4	1.49	10.004	
400.0	400.0	400.0	400.0	0.8	0.8	1.07	14.9	0.3	14.9	13.4	1.52	9.818	
492.1	492.1	492.1	492.1	1.0	1.0	1.07	14.9	0.3	14.9	13.0	1.94	7.717	
500.0	500.0	500.0	500.0	1.0	1.0	1.07	14.9	0.3	14.9	13.0	1.97	7.579	
590.5	590.5	590.5	590.5	1.2	1.2	1.07	14.9	0.3	14.9	12.6	2.38	6.282	
600.0	600.0	600.0	600.0	1.2	1.2	1.07	14.9	0.3	14.9	12.5	2.42	6.171	
689.0	689.0	689.0	689.0	1.4	1.4	1.07	14.9	0.3	14.9	12.1	2.82	5.296	
700.0	700.0	700.0	700.0	1.4	1.4	1.07	14.9	0.3	14.9	12.1	2.87	5.205	
787.4	787.4	787.4	787.4	1.6	1.6	1.07	14.9	0.3	14.9	11.7	3.26	4.578	
800.0	800.0	800.0	800.0	1.7	1.7	1.07	14.9	0.3	14.9	11.6	3.32	4.500	
885.8	885.8	885.8	885.8	1.9	1.9	1.07	14.9	0.3	14.9	11.2	3.71	4.032	
900.0	900.0	900.0	900.0	1.9	1.9	1.07	14.9	0.3	14.9	11.2	3.77	3.963	
984.2	984.2	984.2	984.2	2.1	2.1	1.07	14.9	0.3	14.9	10.8	4.15	3.602	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	1.07	14.9	0.3	14.9	10.7	4.22	3.541	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	1.07	14.9	0.3	14.9	10.3	4.59	3.254	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	1.07	14.9	0.3	14.9	10.3	4.67	3.200	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	1.07	14.9	0.3	14.9	9.9	5.03	2.968	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	1.07	14.9	0.3	14.9	9.8	5.12	2.919	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	1.07	14.9	0.3	14.9	9.5	5.48	2.728	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	1.07	14.9	0.3	14.9	9.4	5.57	2.683	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	1.07	14.9	0.3	14.9	9.0	5.92	2.524	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	1.07	14.9	0.3	14.9	8.9	6.02	2.483	
1,476.4	1,476.4	1,476.4	1,476.4	3.2	3.2	1.07	14.9	0.3	14.9	8.6	6.36	2.349	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	1.07	14.9	0.3	14.9	8.5	6.47	2.310	
1,574.8	1,574.8	1,574.8	1,574.8	3.4	3.4	1.07	14.9	0.3	14.9	8.1	6.80	2.196	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	1.07	14.9	0.3	14.9	8.0	6.92	2.160	
1,673.2	1,673.2	1,673.2	1,673.2	3.6	3.6	1.07	14.9	0.3	14.9	7.7	7.25	2.062	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	1.07	14.9	0.3	14.9	7.6	7.37	2.028	
1,771.6	1,771.6	1,771.6	1,771.6	3.8	3.8	1.07	14.9	0.3	14.9	7.3	7.69	1.943	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	1.07	14.9	0.3	14.9	7.1	7.82	1.912	
1,870.1	1,870.1	1,870.1	1,870.1	4.1	4.1	1.07	14.9	0.3	14.9	6.8	8.13	1.838	
1,900.0	1,900.0	1,900.0	1,900.0	4.1	4.1	1.07	14.9	0.3	14.9	6.7	8.26	1.808	
1,968.5	1,968.5	1,968.5	1,968.5	4.3	4.3	1.07	14.9	0.3	14.9	6.4	8.57	1.743	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	1.07	14.9	0.3	14.9	6.2	8.71	1.714	
2,066.9	2,066.9	2,066.9	2,066.9	4.5	4.5	1.07	14.9	0.3	14.9	5.9	9.02	1.657	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	1.07	14.9	0.3	14.9	5.8	9.16	1.630 CC	
2,165.3	2,165.3	2,165.2	2,165.2	4.7	4.7	3.64	15.2	1.0	15.2	5.8	9.45	1.613	
2,200.0	2,200.0	2,199.8	2,199.7	4.8	4.8	6.93	15.6	1.9	15.7	6.1	9.60	1.634	
2,250.0	2,250.0	2,249.6	2,249.5	4.9	4.9	13.43	16.4	3.9	16.8	7.0	9.82	1.715	
2,263.8	2,263.8	2,263.3	2,263.2	4.9	4.9	-56.53	16.6	4.6	17.3	7.4	9.88	1.747	
2,300.0	2,300.0	2,299.3	2,299.1	5.0	5.0	-51.90	17.5	6.7	18.5	8.4	10.03	1.842	
2,362.2	2,362.2	2,361.1	2,360.8	5.2	5.1	-45.42	19.3	11.3	20.8	10.6	10.29	2.025	
2,400.0	2,399.9	2,398.7	2,398.1	5.2	5.2	-42.26	20.7	14.7	22.4	12.0	10.45	2.145	
2,460.6	2,460.4	2,458.8	2,457.9	5.4	5.4	-38.16	23.2	21.1	25.1	14.4	10.70	2.343	
2,500.0	2,499.7	2,497.8	2,496.5	5.4	5.5	-36.02	25.1	25.9	26.9	16.0	10.86	2.475	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5M-343 - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,559.0	2,558.5	2,556.3	2,554.4	5.6	5.6	-33.41	28.3	34.0	29.7	18.6	11.11	2.672		
2,600.0	2,599.1	2,596.8	2,594.3	5.7	5.7	-31.94	30.7	40.2	31.7	20.4	11.27	2.809		
2,657.5	2,656.1	2,653.6	2,650.2	5.8	5.9	-30.26	34.6	49.9	34.5	23.0	11.51	2.996		
2,700.0	2,698.2	2,695.6	2,691.3	5.9	6.0	-29.26	37.6	57.7	36.6	24.9	11.68	3.134		
2,755.9	2,753.3	2,750.8	2,745.2	6.1	6.1	-28.18	42.0	68.7	39.4	27.5	11.91	3.309		
2,800.0	2,796.6	2,794.3	2,787.5	6.2	6.3	-27.49	45.7	78.1	41.7	29.6	12.09	3.446		
2,854.3	2,849.9	2,847.8	2,839.3	6.3	6.5	-26.81	50.6	90.5	44.4	32.1	12.32	3.607		
2,900.0	2,894.4	2,892.7	2,882.7	6.5	6.6	-26.35	55.0	101.6	46.8	34.3	12.51	3.740		
2,952.7	2,945.7	2,944.6	2,932.4	6.6	6.8	-25.94	60.4	115.2	49.5	36.8	12.74	3.886		
3,000.0	2,991.5	2,991.0	2,976.7	6.8	7.0	-25.66	65.5	128.1	52.0	39.0	12.95	4.014		
3,051.2	3,040.8	3,041.7	3,024.9	7.0	7.2	-25.48	71.3	142.8	54.5	41.4	13.18	4.138		
3,100.0	3,087.6	3,090.5	3,071.2	7.1	7.4	-25.66	77.0	157.1	56.3	42.9	13.41	4.199		
3,149.6	3,134.9	3,140.1	3,118.3	7.4	7.7	-26.20	82.7	171.6	57.4	43.7	13.67	4.197		
3,200.0	3,182.7	3,190.5	3,166.1	7.6	7.9	-27.13	88.5	186.4	57.7	43.7	13.94	4.135		
3,248.0	3,228.0	3,238.5	3,211.7	7.8	8.2	-28.40	94.1	200.4	57.2	43.0	14.24	4.018		
3,300.0	3,276.6	3,290.4	3,260.9	8.1	8.4	-30.27	100.1	215.6	56.0	41.4	14.59	3.836		
3,346.4	3,319.9	3,336.8	3,305.0	8.3	8.7	-32.46	105.5	229.2	54.3	39.3	14.97	3.624		
3,400.0	3,369.4	3,390.2	3,355.6	8.6	8.9	-35.76	111.6	244.8	51.6	36.1	15.48	3.333		
3,444.9	3,410.5	3,434.9	3,398.1	8.9	9.2	-39.35	116.8	257.9	48.9	32.9	16.02	3.054		
3,500.0	3,460.7	3,489.7	3,450.1	9.2	9.5	-45.15	123.2	273.9	45.3	28.4	16.85	2.687		
3,543.3	3,499.8	3,532.6	3,490.9	9.5	9.7	-51.13	128.1	286.5	42.3	24.6	17.68	2.391		
3,600.0	3,550.6	3,588.7	3,544.1	9.9	10.0	-61.40	134.6	302.9	38.7	19.7	18.99	2.037		
3,641.7	3,587.6	3,629.9	3,583.2	10.3	10.3	-71.01	139.4	314.9	36.7	16.7	20.07	1.830		
3,689.6	3,629.8	3,677.1	3,628.0	10.7	10.5	-83.99	144.8	328.7	35.8	14.7	21.14	1.693		
3,709.9	3,647.5	3,697.0	3,646.9	10.8	10.6	-89.92	147.1	334.6	36.0	14.5	21.46	1.677		
3,740.1	3,673.9	3,726.7	3,675.1	11.1	10.8	-98.65	150.6	343.2	37.0	15.3	21.75	1.702		
3,800.0	3,726.2	3,785.5	3,730.9	11.6	11.2	-113.86	157.4	360.4	41.4	19.7	21.73	1.905		
3,838.6	3,759.9	3,823.3	3,766.8	11.9	11.4	-121.81	161.8	371.5	45.5	24.0	21.49	2.117		
3,900.0	3,813.5	3,883.7	3,824.1	12.5	11.7	-131.67	168.7	389.2	53.5	32.4	21.07	2.538		
3,937.0	3,845.8	3,920.0	3,858.5	12.8	11.9	-136.26	172.9	399.8	58.9	38.0	20.87	2.822		
4,000.0	3,900.8	3,981.8	3,917.3	13.4	12.3	-142.37	180.1	417.9	68.8	48.1	20.64	3.332		
4,035.4	3,931.7	4,016.6	3,950.3	13.7	12.5	-145.09	184.1	428.1	74.6	54.0	20.58	3.625		
4,100.0	3,988.1	4,080.0	4,010.5	14.3	12.9	-149.07	191.5	446.6	85.6	65.0	20.56	4.161		
4,133.8	4,017.6	4,113.3	4,042.0	14.7	13.1	-150.78	195.3	456.3	91.4	70.8	20.60	4.440		
4,200.0	4,075.4	4,178.2	4,103.6	15.3	13.5	-153.55	202.8	475.3	103.1	82.4	20.73	4.975		
4,232.3	4,103.5	4,209.9	4,133.7	15.6	13.7	-154.69	206.5	484.6	108.9	88.1	20.82	5.230		
4,300.0	4,162.6	4,276.4	4,196.8	16.2	14.1	-156.72	214.2	504.1	121.1	100.1	21.05	5.754		
4,330.7	4,189.4	4,306.5	4,225.5	16.5	14.3	-157.51	217.7	512.9	126.7	105.5	21.17	5.985		
4,400.0	4,249.9	4,374.6	4,290.0	17.2	14.7	-159.06	225.6	532.8	139.4	117.9	21.46	6.493		
4,429.1	4,275.4	4,403.2	4,317.2	17.5	14.9	-159.63	228.9	541.2	144.7	123.1	21.60	6.700		
4,500.0	4,337.2	4,472.7	4,383.2	18.2	15.3	-160.86	236.9	561.5	157.8	135.8	21.95	7.189		
4,527.5	4,361.3	4,499.8	4,408.9	18.5	15.5	-161.29	240.0	569.4	162.9	140.8	22.09	7.374		
4,600.0	4,424.5	4,570.9	4,476.4	19.2	15.9	-162.29	248.3	590.2	176.3	153.9	22.47	7.846		
4,626.0	4,447.2	4,596.4	4,500.6	19.5	16.1	-162.61	251.2	597.7	181.2	158.5	22.62	8.010		
4,700.0	4,511.8	4,669.1	4,569.6	20.2	16.5	-163.44	259.6	619.0	195.0	171.9	23.04	8.463		
4,724.4	4,533.1	4,693.1	4,592.4	20.5	16.7	-163.69	262.4	626.0	199.5	176.3	23.18	8.608		
4,796.7	4,596.3	4,764.1	4,659.8	21.2	17.1	-164.36	270.6	646.8	213.0	189.4	23.60	9.026		
4,800.0	4,599.1	4,767.3	4,662.8	21.2	17.2	-164.39	271.0	647.7	213.6	190.0	23.63	9.042		
4,822.8	4,619.1	4,789.7	4,684.1	21.4	17.3	-164.60	273.6	654.3	217.8	194.0	23.79	9.155		
4,900.0	4,687.3	4,865.8	4,756.3	22.0	17.8	-165.16	282.4	676.5	230.6	206.3	24.37	9.464		
4,921.2	4,706.2	4,886.8	4,776.3	22.2	17.9	-165.28	284.8	682.7	233.8	209.3	24.53	9.532		
5,000.0	4,777.1	4,964.8	4,850.3	22.8	18.4	-165.61	293.9	705.5	244.3	219.1	25.13	9.719		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,794.9	4,984.4	4,868.9	22.9	18.5	-165.67	296.1	711.2	246.6	221.3	25.28	9.752	
5,100.0	4,868.3	5,064.3	4,944.7	23.5	19.0	-165.81	305.4	734.6	254.6	228.7	25.91	9.825	
5,118.1	4,885.0	5,082.3	4,961.9	23.6	19.1	-165.83	307.5	739.9	256.1	230.0	26.05	9.830	
5,200.0	4,961.0	5,164.1	5,039.4	24.2	19.7	-165.80	316.9	763.8	261.5	234.8	26.70	9.797	
5,216.5	4,976.4	5,180.6	5,055.1	24.3	19.8	-165.78	318.8	768.6	262.3	235.5	26.82	9.780	
5,300.0	5,054.8	5,264.0	5,134.3	24.8	20.3	-165.58	328.5	793.0	265.1	237.6	27.48	9.645	
5,314.9	5,069.0	5,278.9	5,148.5	24.8	20.4	-165.53	330.2	797.4	265.3	237.7	27.60	9.612	
5,400.0	5,149.9	5,359.1	5,224.7	25.3	20.9	-165.23	339.3	820.4	265.8	237.6	28.24	9.413	
5,413.4	5,162.7	5,371.4	5,236.5	25.4	20.9	-165.18	340.6	823.8	265.9	237.5	28.33	9.384	
5,500.0	5,245.9	5,451.0	5,312.9	25.8	21.3	-164.89	348.8	844.4	266.0	237.1	28.91	9.200	
5,511.8	5,257.3	5,461.8	5,323.4	25.9	21.4	-164.85	349.8	847.1	266.0	237.0	28.99	9.176	
5,600.0	5,342.9	5,542.9	5,401.9	26.3	21.7	-164.57	357.2	865.8	265.8	236.3	29.52	9.004	
5,610.2	5,352.9	5,552.3	5,411.0	26.3	21.7	-164.53	358.1	867.8	265.8	236.2	29.58	8.985	
5,700.0	5,440.7	5,634.8	5,491.6	26.7	22.0	-164.26	364.6	884.5	265.4	235.3	30.08	8.823	
5,708.6	5,449.1	5,642.8	5,499.4	26.7	22.1	-164.24	365.2	886.0	265.3	235.2	30.12	8.808	
5,800.0	5,539.1	5,726.8	5,581.9	27.0	22.3	-163.98	371.0	900.5	264.6	234.0	30.57	8.654	
5,807.1	5,546.1	5,733.3	5,588.3	27.0	22.4	-163.96	371.4	901.5	264.5	233.9	30.61	8.643	
5,900.0	5,638.1	5,818.8	5,672.8	27.3	22.6	-163.71	376.3	913.9	263.5	232.5	31.01	8.497	
5,905.5	5,643.5	5,823.8	5,677.8	27.3	22.6	-163.70	376.5	914.5	263.4	232.4	31.03	8.489	
6,000.0	5,737.5	5,910.8	5,764.1	27.5	22.9	-163.46	380.5	924.5	262.1	230.7	31.38	8.350	
6,003.9	5,741.4	5,914.4	5,767.7	27.5	22.9	-163.45	380.6	924.8	262.0	230.6	31.40	8.344	
6,100.0	5,837.2	6,000.0	5,852.9	27.7	23.1	-163.23	383.5	932.1	260.3	228.6	31.69	8.214	
6,102.3	5,839.6	6,005.1	5,858.0	27.7	23.1	-163.22	383.6	932.5	260.3	228.6	31.71	8.209	
6,200.0	5,937.2	6,095.1	5,947.8	27.9	23.2	-163.01	385.6	937.5	258.2	226.3	31.95	8.082	
6,200.8	5,937.9	6,095.8	5,948.5	27.9	23.2	-163.01	385.6	937.5	258.2	226.3	31.95	8.081	
6,256.6	5,993.8	6,147.3	6,000.0	27.9	23.3	-90.98	386.3	939.2	256.9	224.9	32.07	8.012	
6,286.6	6,023.8	6,175.0	6,027.7	27.9	23.3	-90.94	386.5	939.7	256.3	224.2	32.17	7.968	
6,299.2	6,036.4	6,186.6	6,039.2	27.9	23.4	89.11	386.6	939.9	256.2	223.9	32.22	7.950	
6,300.0	6,037.2	6,187.3	6,040.0	27.9	23.4	89.11	386.6	939.9	256.2	223.9	32.22	7.949	
6,350.0	6,087.1	6,234.4	6,087.1	28.0	23.4	89.72	386.6	940.1	255.9	223.4	32.52	7.869	
6,363.0	6,100.0	6,247.3	6,100.0	28.0	23.4	90.00	386.6	940.1	255.9	223.3	32.63	7.842	
6,397.6	6,134.3	6,281.8	6,134.5	28.0	23.5	90.86	386.0	940.1	256.0	223.0	32.96	7.766	
6,400.0	6,136.7	6,284.2	6,136.9	28.0	23.5	90.92	385.9	940.1	256.0	223.0	32.98	7.760	
6,450.0	6,185.7	6,334.4	6,186.9	28.0	23.5	92.16	381.8	940.1	256.1	222.7	33.41	7.665	
6,496.0	6,230.2	6,380.9	6,232.9	28.0	23.5	93.30	374.9	940.1	256.4	222.6	33.76	7.593	
6,500.0	6,234.0	6,384.9	6,236.9	28.0	23.5	93.40	374.2	940.1	256.4	222.6	33.79	7.587	
6,550.0	6,281.3	6,435.9	6,286.6	28.0	23.5	94.62	362.9	940.1	256.8	222.7	34.10	7.530	
6,594.5	6,322.2	6,481.6	6,330.3	27.9	23.5	95.68	349.9	940.1	257.2	222.9	34.31	7.497	
6,600.0	6,327.3	6,487.3	6,335.7	27.9	23.5	95.82	348.0	940.1	257.3	222.9	34.33	7.493	
6,650.0	6,371.8	6,539.1	6,384.1	27.9	23.5	96.99	329.5	940.1	257.9	223.4	34.48	7.478	
6,692.9	6,408.6	6,583.9	6,424.7	27.9	23.4	97.96	310.7	940.1	258.4	223.9	34.54	7.482	
6,700.0	6,414.6	6,591.3	6,431.4	27.8	23.4	98.12	307.3	940.1	258.5	224.0	34.55	7.483	
6,750.0	6,455.5	6,644.0	6,477.3	27.8	23.4	99.21	281.6	940.1	259.3	224.8	34.53	7.509	
6,791.3	6,487.7	6,687.8	6,513.9	27.7	23.4	100.08	257.6	940.1	260.0	225.5	34.47	7.543	
6,800.0	6,494.3	6,697.0	6,521.4	27.7	23.3	100.26	252.3	940.1	260.1	225.7	34.45	7.551	
6,850.0	6,530.8	6,750.4	6,563.7	27.7	23.3	101.25	219.5	940.1	261.0	226.7	34.30	7.608	
6,889.7	6,558.1	6,793.2	6,595.6	27.6	23.2	102.00	191.1	940.1	261.7	227.5	34.16	7.661	
6,900.0	6,564.9	6,804.3	6,603.6	27.6	23.2	102.18	183.4	940.1	261.9	227.7	34.12	7.675	
6,950.0	6,596.3	6,858.5	6,640.9	27.6	23.2	103.05	144.2	940.1	262.7	228.8	33.92	7.745	
6,988.2	6,618.4	6,900.1	6,667.5	27.5	23.1	103.67	112.2	940.1	263.4	229.6	33.78	7.797	
7,000.0	6,624.9	6,913.0	6,675.4	27.5	23.1	103.85	102.0	940.1	263.6	229.9	33.74	7.812	
7,050.0	6,650.6	6,967.8	6,706.7	27.5	23.1	104.57	57.0	940.1	264.5	230.9	33.61	7.868	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWDD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,086.6	6,667.5	7,008.2	6,727.6	27.5	23.1	105.05	22.4	940.1	265.0	231.5	33.57	7.896	
7,100.0	6,673.3	7,023.0	6,734.7	27.5	23.1	105.22	9.4	940.1	265.3	231.7	33.56	7.903	
7,150.0	6,692.7	7,078.4	6,759.0	27.5	23.1	105.79	-40.4	940.1	266.0	232.4	33.63	7.910	
7,185.0	6,704.4	7,117.4	6,773.8	27.5	23.1	106.14	-76.5	940.1	266.4	232.6	33.80	7.883	
7,200.0	6,709.0	7,134.1	6,779.5	27.5	23.1	106.27	-92.1	940.1	266.6	232.8	33.85	7.876	
7,250.0	6,721.8	7,190.0	6,795.9	27.5	23.1	106.67	-145.5	940.1	267.2	232.9	34.22	7.807	
7,283.4	6,728.6	7,227.5	6,804.6	27.5	23.2	106.89	-182.0	940.1	267.5	232.9	34.58	7.734	
7,300.0	6,731.3	7,246.0	6,808.2	27.6	23.2	106.98	-200.2	940.1	267.6	232.8	34.78	7.695	
7,350.0	6,737.3	7,302.2	6,816.2	27.7	23.4	107.21	-255.8	940.1	267.9	232.4	35.52	7.544	
7,381.9	6,739.4	7,338.0	6,819.0	27.7	23.5	107.30	-291.5	940.1	268.1	232.0	36.09	7.428	
7,400.0	6,739.9	7,358.4	6,819.8	27.8	23.6	107.34	-311.9	940.1	268.1	231.7	36.43	7.359	
7,416.5	6,740.0	7,377.0	6,820.0	27.8	23.7	107.36	-330.5	940.1	268.1	231.4	36.77	7.292	
7,480.3	6,739.5	7,441.4	6,819.5	28.0	24.0	107.35	-394.8	940.1	268.1	230.2	37.90	7.075	
7,500.0	6,739.4	7,461.1	6,819.3	28.1	24.1	107.34	-414.5	940.1	268.1	229.9	38.25	7.010	
7,578.7	6,738.9	7,539.8	6,818.7	28.5	24.6	107.32	-493.2	940.1	268.1	228.3	39.80	6.736	
7,600.0	6,738.7	7,561.1	6,818.5	28.6	24.7	107.31	-514.5	940.1	268.1	227.8	40.23	6.664	
7,677.1	6,738.2	7,638.2	6,817.9	29.1	25.3	107.29	-591.7	940.1	268.0	226.1	41.93	6.393	
7,700.0	6,738.1	7,661.1	6,817.7	29.2	25.5	107.28	-614.5	940.1	268.0	225.6	42.44	6.315	
7,775.6	6,737.5	7,736.6	6,817.1	29.7	26.2	107.26	-690.1	940.1	268.0	223.7	44.25	6.056	
7,800.0	6,737.4	7,761.1	6,816.9	29.9	26.5	107.26	-714.5	940.1	268.0	223.1	44.85	5.975	
7,874.0	6,736.9	7,835.1	6,816.3	30.6	27.3	107.23	-788.5	940.1	268.0	221.2	46.75	5.732	
7,900.0	6,736.7	7,861.1	6,816.0	30.8	27.6	107.23	-814.5	940.1	267.9	220.5	47.43	5.650	
7,972.4	6,736.2	7,933.5	6,815.4	31.5	28.4	107.21	-886.9	940.1	267.9	218.5	49.39	5.425	
8,000.0	6,736.0	7,961.1	6,815.2	31.8	28.7	107.20	-914.5	940.1	267.9	217.8	50.14	5.343	
8,070.8	6,735.5	8,031.9	6,814.6	32.5	29.6	107.18	-985.3	940.1	267.9	215.7	52.15	5.137	
8,100.0	6,735.3	8,061.1	6,814.4	32.8	30.0	107.17	-1,014.5	940.1	267.9	214.9	52.98	5.056	
8,169.3	6,734.9	8,130.3	6,813.8	33.6	30.9	107.15	-1,083.8	940.1	267.8	212.8	55.01	4.869	
8,200.0	6,734.6	8,161.1	6,813.6	34.0	31.3	107.14	-1,114.5	940.1	267.8	211.9	55.92	4.789	
8,267.7	6,734.2	8,228.8	6,813.0	34.8	32.3	107.12	-1,182.2	940.1	267.8	209.8	57.96	4.620	
8,300.0	6,734.0	8,261.1	6,812.7	35.2	32.8	107.11	-1,214.5	940.1	267.8	208.8	58.95	4.543	
8,366.1	6,733.5	8,327.2	6,812.2	36.1	33.7	107.09	-1,280.6	940.1	267.7	206.8	60.99	4.390	
8,400.0	6,733.3	8,361.1	6,811.9	36.5	34.2	107.08	-1,314.5	940.1	267.7	205.7	62.05	4.315	
8,464.5	6,732.8	8,425.6	6,811.4	37.4	35.2	107.06	-1,379.0	940.1	267.7	203.6	64.08	4.177	
8,500.0	6,732.6	8,461.1	6,811.1	37.9	35.7	107.05	-1,414.5	940.1	267.7	202.5	65.21	4.105	
8,563.0	6,732.2	8,524.0	6,810.6	38.8	36.7	107.03	-1,477.5	940.1	267.7	200.4	67.23	3.981	
8,600.0	6,731.9	8,561.1	6,810.3	39.3	37.3	107.02	-1,514.5	940.1	267.6	199.2	68.43	3.911	
8,661.4	6,731.5	8,622.5	6,809.8	40.2	38.2	107.01	-1,575.9	940.1	267.6	197.2	70.43	3.800	
8,700.0	6,731.2	8,661.1	6,809.5	40.8	38.9	106.99	-1,614.5	940.1	267.6	195.9	71.70	3.732	
8,759.8	6,730.8	8,720.9	6,809.0	41.7	39.8	106.98	-1,674.3	940.1	267.6	193.9	73.67	3.632	
8,800.0	6,730.6	8,761.1	6,808.6	42.3	40.5	106.96	-1,714.5	940.1	267.6	192.6	75.01	3.567	
8,858.2	6,730.2	8,819.3	6,808.1	43.2	41.4	106.95	-1,772.7	940.1	267.5	190.6	76.95	3.477	
8,900.0	6,729.9	8,861.1	6,807.8	43.8	42.1	106.93	-1,814.5	940.1	267.5	189.2	78.35	3.414	
8,956.7	6,729.5	8,917.7	6,807.3	44.7	43.1	106.92	-1,871.1	940.1	267.5	187.2	80.26	3.333	
9,000.0	6,729.2	8,961.1	6,807.0	45.4	43.8	106.90	-1,914.5	940.1	267.5	185.8	81.73	3.273	
9,055.1	6,728.8	9,016.2	6,806.5	46.3	44.7	106.89	-1,969.6	940.1	267.5	183.9	83.60	3.199	
9,100.0	6,728.5	9,061.1	6,806.2	47.0	45.5	106.88	-2,014.5	940.1	267.4	182.3	85.14	3.141	
9,153.5	6,728.2	9,114.6	6,805.7	47.9	46.4	106.86	-2,068.0	940.1	267.4	180.4	86.97	3.075	
9,200.0	6,727.8	9,161.1	6,805.3	48.6	47.2	106.85	-2,114.5	940.1	267.4	178.8	88.57	3.019	
9,251.9	6,727.5	9,213.0	6,804.9	49.5	48.1	106.83	-2,166.4	940.1	267.4	177.0	90.36	2.959	
9,300.0	6,727.2	9,261.1	6,804.5	50.3	48.9	106.82	-2,214.5	940.1	267.4	175.3	92.02	2.905	
9,350.4	6,726.8	9,311.4	6,804.1	51.1	49.8	106.80	-2,264.8	940.1	267.3	173.6	93.77	2.851	
9,400.0	6,726.5	9,361.1	6,803.7	51.9	50.6	106.79	-2,314.4	940.1	267.3	171.8	95.50	2.799	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWDD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	6,726.1	9,409.9	6,803.3	52.7	51.5	106.77	-2,363.2	940.1	267.3	170.1	97.20	2.750	
9,500.0	6,725.8	9,461.1	6,802.8	53.6	52.4	106.76	-2,414.4	940.1	267.3	168.3	98.99	2.700	
9,547.2	6,725.5	9,508.3	6,802.5	54.4	53.2	106.74	-2,461.7	940.1	267.2	166.6	100.64	2.655	
9,600.0	6,725.1	9,561.1	6,802.0	55.3	54.1	106.73	-2,514.4	940.1	267.2	164.7	102.50	2.607	
9,645.6	6,724.8	9,606.7	6,801.6	56.1	54.9	106.71	-2,560.1	940.1	267.2	163.1	104.11	2.567	
9,700.0	6,724.4	9,661.1	6,801.2	57.0	55.9	106.70	-2,614.4	940.1	267.2	161.2	106.02	2.520	
9,744.1	6,724.1	9,705.1	6,800.8	57.8	56.7	106.68	-2,658.5	940.1	267.2	159.6	107.58	2.483	
9,800.0	6,723.8	9,761.1	6,800.4	58.7	57.7	106.67	-2,714.4	940.1	267.1	157.6	109.56	2.438	
9,842.5	6,723.5	9,803.6	6,800.0	59.5	58.4	106.65	-2,756.9	940.1	267.1	156.1	111.07	2.405	
9,900.0	6,723.1	9,861.1	6,799.5	60.5	59.5	106.63	-2,814.4	940.1	267.1	154.0	113.11	2.361	
9,940.9	6,722.8	9,902.0	6,799.2	61.2	60.2	106.62	-2,855.4	940.1	267.1	152.5	114.57	2.331	
10,000.0	6,722.4	9,961.1	6,798.7	62.2	61.3	106.60	-2,914.4	940.1	267.1	150.4	116.67	2.289	
10,039.3	6,722.1	10,000.4	6,798.4	62.9	62.0	106.59	-2,953.8	940.1	267.0	149.0	118.08	2.262	
10,100.0	6,721.7	10,061.1	6,797.9	64.0	63.1	106.57	-3,014.4	940.1	267.0	146.8	120.25	2.221	
10,137.8	6,721.5	10,098.8	6,797.6	64.7	63.7	106.56	-3,052.2	940.1	267.0	145.4	121.60	2.196	
10,200.0	6,721.0	10,161.1	6,797.0	65.8	64.9	106.54	-3,114.4	940.1	267.0	143.1	123.83	2.156	
10,236.2	6,720.8	10,197.3	6,796.7	66.4	65.5	106.53	-3,150.6	940.1	267.0	141.8	125.13	2.133	
10,300.0	6,720.4	10,261.1	6,796.2	67.5	66.7	106.51	-3,214.4	940.1	266.9	139.5	127.42	2.095	
10,334.6	6,720.1	10,295.7	6,795.9	68.2	67.3	106.50	-3,249.0	940.1	266.9	138.3	128.66	2.075	
10,400.0	6,719.7	10,361.1	6,795.4	69.3	68.5	106.48	-3,314.4	940.1	266.9	135.9	131.02	2.037	
10,433.0	6,719.4	10,394.1	6,795.1	69.9	69.1	106.47	-3,347.5	940.1	266.9	134.7	132.21	2.019	
10,500.0	6,719.0	10,461.1	6,794.6	71.1	70.3	106.45	-3,414.4	940.1	266.8	132.2	134.63	1.982	
10,531.5	6,718.8	10,492.5	6,794.3	71.7	70.9	106.44	-3,445.9	940.1	266.8	131.1	135.76	1.965	
10,600.0	6,718.3	10,561.1	6,793.7	72.9	72.2	106.42	-3,514.4	940.1	266.8	128.6	138.24	1.930	
10,629.9	6,718.1	10,591.0	6,793.5	73.4	72.7	106.41	-3,544.3	940.1	266.8	127.5	139.32	1.915	
10,700.0	6,717.6	10,661.1	6,792.9	74.7	74.0	106.39	-3,614.4	940.1	266.8	124.9	141.86	1.880	
10,728.3	6,717.4	10,689.4	6,792.7	75.2	74.5	106.38	-3,642.7	940.1	266.7	123.9	142.89	1.867	
10,800.0	6,717.0	10,761.1	6,792.1	76.5	75.8	106.36	-3,714.4	940.1	266.7	121.2	145.49	1.833	
10,826.7	6,716.8	10,787.8	6,791.8	77.0	76.3	106.35	-3,741.2	940.1	266.7	120.2	146.46	1.821	
10,900.0	6,716.3	10,861.1	6,791.2	78.3	77.7	106.33	-3,814.4	940.1	266.7	117.6	149.12	1.788	
10,925.2	6,716.1	10,886.2	6,791.0	78.8	78.2	106.32	-3,839.6	940.1	266.7	116.6	150.04	1.777	
11,000.0	6,715.6	10,961.1	6,790.4	80.2	79.5	106.30	-3,914.4	940.1	266.6	113.9	152.76	1.745	
11,023.6	6,715.4	10,984.7	6,790.2	80.6	80.0	106.29	-3,938.0	940.1	266.6	113.0	153.62	1.736	
11,100.0	6,714.9	11,061.1	6,789.6	82.0	81.4	106.26	-4,014.4	940.1	266.6	110.2	156.40	1.705	
11,122.0	6,714.8	11,083.1	6,789.4	82.4	81.8	106.26	-4,036.4	940.1	266.6	109.4	157.21	1.696	
11,200.0	6,714.2	11,161.1	6,788.7	83.8	83.2	106.23	-4,114.4	940.1	266.5	106.5	160.05	1.665	
11,220.4	6,714.1	11,181.5	6,788.6	84.2	83.6	106.23	-4,134.8	940.1	266.5	105.7	160.80	1.658	
11,300.0	6,713.5	11,261.1	6,787.9	85.7	85.1	106.20	-4,214.4	940.1	266.5	102.8	163.71	1.628	
11,318.9	6,713.4	11,279.9	6,787.7	86.0	85.5	106.20	-4,233.3	940.1	266.5	102.1	164.40	1.621	
11,400.0	6,712.9	11,361.1	6,787.1	87.5	87.0	106.17	-4,314.4	940.1	266.5	99.1	167.36	1.592	
11,417.3	6,712.7	11,378.4	6,786.9	87.8	87.3	106.16	-4,331.7	940.1	266.5	98.5	168.00	1.586	
11,500.0	6,712.2	11,461.1	6,786.2	89.3	88.8	106.14	-4,414.4	940.1	266.4	95.4	171.03	1.558	
11,515.7	6,712.1	11,476.8	6,786.1	89.6	89.1	106.13	-4,430.1	940.1	266.4	94.8	171.60	1.553	
11,600.0	6,711.5	11,561.1	6,785.4	91.2	90.7	106.11	-4,514.4	940.1	266.4	91.7	174.69	1.525	
11,614.1	6,711.4	11,575.2	6,785.3	91.4	91.0	106.10	-4,528.5	940.1	266.4	91.2	175.21	1.520	
11,700.0	6,710.8	11,661.1	6,784.6	93.0	92.6	106.08	-4,614.4	940.1	266.3	88.0	178.36	1.493 Level 3	
11,712.6	6,710.7	11,673.6	6,784.5	93.3	92.8	106.07	-4,626.9	940.1	266.3	87.5	178.82	1.489 Level 3	
11,800.0	6,710.1	11,761.1	6,783.7	94.9	94.4	106.04	-4,714.4	940.1	266.3	84.3	182.04	1.463 Level 3	
11,811.0	6,710.1	11,772.1	6,783.6	95.1	94.6	106.04	-4,725.4	940.1	266.3	83.8	182.44	1.460 Level 3	
11,900.0	6,709.5	11,861.1	6,782.9	96.7	96.3	106.01	-4,814.4	940.1	266.3	80.5	185.71	1.434 Level 3	
11,909.4	6,709.4	11,870.5	6,782.8	96.9	96.5	106.01	-4,823.8	940.1	266.2	80.2	186.06	1.431 Level 3	
12,000.0	6,708.8	11,961.1	6,782.1	98.6	98.2	105.98	-4,914.4	940.1	266.2	76.8	189.40	1.406 Level 3	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EHRLICH 5M-343 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,708.7	11,968.9	6,782.0	98.7	98.3	105.98	-4,922.2	940.1	266.2	76.5	189.68	1.403	Level 3
12,100.0	6,708.1	12,061.1	6,781.2	100.4	100.1	105.95	-5,014.4	940.1	266.2	73.1	193.08	1.379	Level 3
12,106.3	6,708.1	12,067.4	6,781.2	100.6	100.2	105.95	-5,020.6	940.1	266.2	72.9	193.31	1.377	Level 3
12,200.0	6,707.4	12,161.1	6,780.4	102.3	101.9	105.92	-5,114.4	940.1	266.1	69.4	196.77	1.352	Level 3
12,204.7	6,707.4	12,165.8	6,780.4	102.4	102.0	105.91	-5,119.1	940.1	266.1	69.2	196.94	1.351	Level 3
12,300.0	6,706.7	12,261.1	6,779.6	104.2	103.8	105.88	-5,214.4	940.1	266.1	65.6	200.46	1.327	Level 3
12,303.1	6,706.7	12,264.2	6,779.5	104.2	103.9	105.88	-5,217.5	940.1	266.1	65.5	200.57	1.327	Level 3
12,400.0	6,706.1	12,361.1	6,778.7	106.0	105.7	105.85	-5,314.3	940.1	266.0	61.9	204.15	1.303	Level 3
12,401.5	6,706.0	12,362.6	6,778.7	106.1	105.7	105.85	-5,315.9	940.1	266.0	61.8	204.21	1.303	Level 3
12,500.0	6,705.4	12,461.1	6,777.9	107.9	107.6	105.82	-5,414.3	940.1	266.0	58.1	207.85	1.280	Level 3
12,598.4	6,704.7	12,559.5	6,777.1	109.7	109.4	105.79	-5,512.7	940.1	266.0	54.5	211.48	1.258	Level 3
12,600.0	6,704.7	12,561.1	6,777.0	109.8	109.5	105.79	-5,514.3	940.1	266.0	54.4	211.54	1.257	Level 3
12,696.8	6,704.0	12,657.9	6,776.2	111.6	111.3	105.75	-5,611.2	940.1	265.9	50.8	215.13	1.236	Level 2
12,700.0	6,704.0	12,661.1	6,776.2	111.6	111.3	105.75	-5,614.3	940.1	265.9	50.7	215.24	1.235	Level 2
12,795.2	6,703.4	12,756.3	6,775.4	113.4	113.1	105.72	-5,709.6	940.1	265.9	47.1	218.77	1.215	Level 2
12,800.0	6,703.3	12,761.1	6,775.4	113.5	113.2	105.72	-5,714.3	940.1	265.9	46.9	218.95	1.214	Level 2
12,893.7	6,702.7	12,854.8	6,774.6	115.3	115.0	105.69	-5,808.0	940.1	265.8	43.4	222.42	1.195	Level 2
12,900.0	6,702.7	12,861.1	6,774.5	115.4	115.1	105.69	-5,814.3	940.1	265.8	43.2	222.65	1.194	Level 2
12,992.1	6,702.0	12,953.2	6,773.8	117.1	116.9	105.66	-5,906.4	940.1	265.8	39.7	226.07	1.176	Level 2
13,000.0	6,702.0	12,961.1	6,773.7	117.3	117.0	105.66	-5,914.3	940.1	265.8	39.4	226.36	1.174	Level 2
13,090.5	6,701.4	13,051.6	6,772.9	119.0	118.7	105.63	-6,004.9	940.1	265.7	36.0	229.72	1.157	Level 2
13,100.0	6,701.3	13,061.1	6,772.9	119.1	118.9	105.62	-6,014.3	940.1	265.7	35.7	230.07	1.155	Level 2
13,188.9	6,700.7	13,150.0	6,772.1	120.8	120.6	105.59	-6,103.3	940.1	265.7	32.3	233.38	1.139	Level 2
13,200.0	6,700.6	13,161.1	6,772.0	121.0	120.8	105.59	-6,114.3	940.1	265.7	31.9	233.79	1.136	Level 2
13,287.4	6,700.0	13,248.5	6,771.3	122.7	122.4	105.56	-6,201.7	940.1	265.7	28.6	237.03	1.121	Level 2
13,300.0	6,699.9	13,261.1	6,771.2	122.9	122.7	105.56	-6,214.3	940.1	265.7	28.2	237.50	1.119	Level 2
13,385.8	6,699.3	13,346.9	6,770.5	124.5	124.3	105.53	-6,300.1	940.1	265.6	24.9	240.69	1.104	Level 2
13,400.0	6,699.3	13,361.1	6,770.3	124.8	124.6	105.52	-6,314.3	940.1	265.6	24.4	241.22	1.101	Level 2
13,484.2	6,698.7	13,445.3	6,769.6	126.4	126.2	105.50	-6,398.5	940.1	265.6	21.2	244.35	1.087	Level 2
13,500.0	6,698.6	13,461.1	6,769.5	126.7	126.5	105.49	-6,414.3	940.1	265.6	20.6	244.94	1.084	Level 2
13,582.6	6,698.0	13,543.7	6,768.8	128.2	128.0	105.46	-6,497.0	940.1	265.5	17.5	248.02	1.071	Level 2
13,600.0	6,697.9	13,561.1	6,768.7	128.5	128.4	105.46	-6,514.3	940.1	265.5	16.9	248.66	1.068	Level 2
13,681.1	6,697.3	13,642.2	6,768.0	130.1	129.9	105.43	-6,595.4	940.1	265.5	13.8	251.68	1.055	Level 2
13,700.0	6,697.2	13,661.1	6,767.8	130.4	130.2	105.42	-6,614.3	940.1	265.5	13.1	252.39	1.052	Level 2
13,779.5	6,696.7	13,740.6	6,767.1	131.9	131.8	105.40	-6,693.8	940.1	265.4	10.1	255.35	1.040	Level 2
13,800.0	6,696.5	13,761.1	6,767.0	132.3	132.1	105.39	-6,714.3	940.1	265.4	9.3	256.11	1.036	Level 2
13,877.9	6,696.0	13,839.0	6,766.3	133.8	133.6	105.36	-6,792.2	940.1	265.4	6.4	259.02	1.025	Level 2
13,900.0	6,695.8	13,861.1	6,766.1	134.2	134.0	105.36	-6,814.3	940.1	265.4	5.6	259.84	1.021	Level 2
13,976.3	6,695.3	13,937.4	6,765.5	135.6	135.5	105.33	-6,890.6	940.1	265.4	2.7	262.69	1.010	Level 2
14,000.0	6,695.2	13,961.1	6,765.3	136.1	135.9	105.32	-6,914.3	940.1	265.4	1.8	263.57	1.007	Level 2
14,034.1	6,695.0	13,995.1	6,765.0	136.7	136.6	105.30	-6,948.4	940.1	265.3	0.5	264.85	1.002	Level 2, ES, SF

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST DD PJ #8I - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 510-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-175.73	-6,904.1	-515.7	6,923.7				
98.4	98.4	31.4	31.4	0.1	0.0	-175.73	-6,904.1	-515.7	6,923.3	6,923.2	0.11	N/A	
100.0	100.0	33.1	33.1	0.1	0.0	-175.73	-6,904.1	-515.7	6,923.3	6,923.2	0.11	N/A	
196.8	196.8	140.1	140.1	0.3	0.1	-175.73	-6,904.0	-515.7	6,923.2	6,922.8	0.42	N/A	
200.0	200.0	143.6	143.6	0.3	0.1	-175.73	-6,903.9	-515.7	6,923.2	6,922.8	0.43	N/A	
295.3	295.3	248.8	248.8	0.5	0.2	-175.73	-6,903.7	-515.7	6,922.9	6,922.2	0.74	9,375.332	
300.0	300.0	254.0	254.0	0.5	0.2	-175.73	-6,903.6	-515.7	6,922.9	6,922.2	0.75	9,187.593	
393.7	393.7	357.5	357.5	0.7	0.3	-175.73	-6,903.2	-515.7	6,922.5	6,921.5	1.05	6,576.003	
400.0	400.0	364.5	364.5	0.8	0.3	-175.73	-6,903.2	-515.7	6,922.5	6,921.4	1.07	6,452.669	
492.1	492.1	466.3	466.3	1.0	0.4	-175.73	-6,902.6	-515.7	6,922.0	6,920.6	1.37	5,063.738	
500.0	500.0	475.0	475.0	1.0	0.4	-175.73	-6,902.5	-515.7	6,921.9	6,920.5	1.39	4,972.238	
590.5	590.5	595.3	595.3	1.2	0.5	-175.73	-6,901.6	-515.6	6,921.2	6,919.5	1.68	4,109.234	
600.0	600.0	609.0	609.0	1.2	0.5	-175.73	-6,901.4	-515.5	6,921.1	6,919.4	1.71	4,035.721	
689.0	689.0	701.5	701.4	1.4	0.6	-175.73	-6,900.2	-515.2	6,919.9	6,918.0	1.97	3,515.363	
700.0	700.0	709.7	709.6	1.4	0.6	-175.73	-6,900.2	-515.2	6,919.8	6,917.8	2.00	3,465.521	
787.4	787.4	774.6	774.6	1.6	0.6	-175.74	-6,899.6	-514.4	6,919.0	6,916.7	2.22	3,115.653	
800.0	800.0	784.0	784.0	1.7	0.6	-175.74	-6,899.5	-514.2	6,918.9	6,916.6	2.25	3,070.998	
885.8	885.8	820.0	820.0	1.9	0.6	-175.74	-6,899.3	-513.6	6,918.4	6,915.9	2.46	2,811.273	
900.0	900.0	852.8	852.7	1.9	0.6	-175.75	-6,899.2	-512.9	6,918.3	6,915.8	2.51	2,755.908	
962.3	962.3	892.4	892.3	2.0	0.7	-175.76	-6,899.2	-511.8	6,918.2	6,915.5	2.67	2,589.493	
984.2	984.2	906.3	906.3	2.1	0.7	-175.76	-6,899.3	-511.4	6,918.2	6,915.5	2.73	2,535.695	
1,000.0	1,000.0	916.3	916.3	2.1	0.7	-175.76	-6,899.3	-511.1	6,918.2	6,915.4	2.77	2,498.394	
1,082.7	1,082.7	977.0	976.9	2.3	0.7	-175.78	-6,899.7	-508.9	6,918.6	6,915.6	2.99	2,316.018	
1,100.0	1,100.0	984.2	984.1	2.3	0.7	-175.78	-6,899.8	-508.6	6,918.7	6,915.6	3.03	2,283.495	
1,181.1	1,181.1	1,114.8	1,114.6	2.5	0.8	-175.83	-6,900.6	-503.3	6,918.9	6,915.6	3.28	2,110.351	
1,200.0	1,200.0	1,133.0	1,132.8	2.6	0.8	-175.84	-6,900.6	-502.5	6,918.9	6,915.6	3.33	2,077.562	
1,212.3	1,212.3	1,133.0	1,132.8	2.6	0.8	-175.84	-6,900.6	-502.5	6,918.9	6,915.6	3.36	2,060.495	
1,279.5	1,279.5	1,188.0	1,187.7	2.7	0.8	-175.86	-6,900.9	-499.9	6,919.0	6,915.4	3.54	1,956.865	
1,300.0	1,300.0	1,201.0	1,200.7	2.8	0.8	-175.86	-6,901.0	-499.3	6,919.1	6,915.5	3.59	1,928.365	
1,377.9	1,377.9	1,250.2	1,249.8	3.0	0.8	-175.88	-6,901.5	-496.7	6,919.6	6,915.8	3.79	1,827.124	
1,400.0	1,400.0	1,290.0	1,289.5	3.0	0.9	-175.90	-6,902.0	-494.4	6,919.8	6,916.0	3.86	1,794.556	
1,476.4	1,476.4	1,318.7	1,318.2	3.2	0.9	-175.92	-6,902.5	-492.7	6,920.6	6,916.6	4.04	1,712.319	
1,500.0	1,500.0	1,337.8	1,337.3	3.2	0.9	-175.93	-6,902.8	-491.6	6,920.9	6,916.8	4.10	1,686.337	
1,574.8	1,574.8	1,398.5	1,397.8	3.4	0.9	-175.96	-6,904.0	-487.8	6,922.0	6,917.7	4.30	1,609.080	
1,600.0	1,600.0	1,418.9	1,418.2	3.5	0.9	-175.97	-6,904.4	-486.5	6,922.4	6,918.0	4.37	1,584.636	
1,673.2	1,673.2	1,495.4	1,494.5	3.6	1.0	-176.01	-6,906.0	-481.4	6,923.6	6,919.1	4.56	1,517.740	
1,700.0	1,700.0	1,529.3	1,528.3	3.7	1.0	-176.03	-6,906.7	-479.2	6,924.0	6,919.4	4.63	1,494.687	
1,771.6	1,771.6	1,596.8	1,595.7	3.8	1.0	-176.07	-6,908.0	-474.7	6,925.1	6,920.3	4.81	1,438.324	
1,800.0	1,800.0	1,622.2	1,621.0	3.9	1.0	-176.08	-6,908.5	-472.8	6,925.5	6,920.6	4.89	1,417.303	
1,870.1	1,870.1	1,706.9	1,705.5	4.1	1.0	-176.14	-6,910.2	-466.5	6,926.6	6,921.5	5.07	1,365.798	
1,900.0	1,900.0	1,729.0	1,727.4	4.1	1.0	-176.15	-6,910.6	-464.8	6,927.0	6,921.8	5.15	1,346.112	
1,968.5	1,968.5	1,760.7	1,759.1	4.3	1.0	-176.17	-6,911.3	-462.2	6,928.1	6,922.8	5.31	1,304.443	
2,000.0	2,000.0	1,773.0	1,771.3	4.4	1.0	-176.18	-6,911.6	-461.2	6,928.8	6,923.4	5.39	1,286.366	
2,066.9	2,066.9	1,822.0	1,820.1	4.5	1.1	-176.22	-6,913.3	-457.0	6,930.7	6,925.1	5.55	1,247.832	
2,100.0	2,100.0	1,822.0	1,820.1	4.6	1.1	-176.22	-6,913.3	-457.0	6,931.6	6,925.9	5.63	1,231.515	
2,165.3	2,165.3	1,847.6	1,845.6	4.7	1.1	-176.24	-6,914.4	-454.7	6,933.8	6,928.0	5.78	1,198.694	
2,200.0	2,200.0	1,870.2	1,868.0	4.8	1.1	-176.25	-6,915.3	-452.8	6,935.1	6,929.2	5.87	1,181.390	
2,250.0	2,250.0	1,915.0	1,912.6	4.9	1.1	-176.29	-6,917.3	-449.0	6,937.0	6,931.0	6.00	1,156.516	
2,263.8	2,263.8	1,915.0	1,912.6	4.9	1.1	111.79	-6,917.3	-449.0	6,937.6	6,931.6	5.97	1,162.452	
2,300.0	2,300.0	1,915.0	1,912.6	5.0	1.1	111.76	-6,917.3	-449.0	6,939.3	6,933.3	6.05	1,147.571	
2,362.2	2,362.2	1,947.3	1,944.8	5.2	1.1	111.68	-6,919.0	-446.1	6,942.9	6,936.7	6.19	1,122.234	
2,400.0	2,399.9	1,960.4	1,957.8	5.2	1.1	111.62	-6,919.7	-445.0	6,945.5	6,939.2	6.27	1,107.723	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST DD PJ #8I - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 510-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,460.6	2,460.4	2,009.0	2,006.1	5.4	1.1	111.52	-6,923.0	-440.2	6,950.4	6,944.0	6.42	1,083.367	
2,500.0	2,499.7	2,009.0	2,006.1	5.4	1.1	111.45	-6,923.0	-440.2	6,953.9	6,947.4	6.50	1,069.663	
2,559.0	2,558.5	2,009.0	2,006.1	5.6	1.1	111.34	-6,923.0	-440.2	6,959.9	6,953.2	6.63	1,049.075	
2,600.0	2,599.1	2,048.2	2,044.9	5.7	1.1	111.26	-6,925.9	-436.2	6,964.4	6,957.6	6.74	1,033.376	
2,657.5	2,656.1	2,086.0	2,082.4	5.8	1.2	111.13	-6,928.8	-432.1	6,971.2	6,964.3	6.89	1,011.855	
2,700.0	2,698.2	2,104.0	2,100.2	5.9	1.2	111.03	-6,930.3	-430.1	6,976.7	6,969.7	7.00	997.037	
2,755.9	2,753.3	2,135.4	2,131.3	6.1	1.2	110.90	-6,932.9	-426.6	6,984.4	6,977.2	7.15	976.512	
2,800.0	2,796.6	2,154.8	2,150.5	6.2	1.2	110.78	-6,934.6	-424.5	6,990.9	6,983.6	7.27	961.223	
2,854.3	2,849.9	2,198.0	2,193.3	6.3	1.2	110.65	-6,938.6	-419.8	6,999.5	6,992.1	7.44	940.531	
2,900.0	2,894.4	2,198.0	2,193.3	6.5	1.2	110.50	-6,938.6	-419.8	7,007.1	6,999.5	7.57	925.261	
2,952.7	2,945.7	2,198.0	2,193.3	6.6	1.2	110.32	-6,938.6	-419.8	7,016.5	7,008.8	7.74	906.260	
3,000.0	2,991.5	2,237.7	2,232.6	6.8	1.2	110.19	-6,942.6	-415.4	7,025.3	7,017.4	7.91	888.197	
3,051.2	3,040.8	2,257.6	2,252.3	7.0	1.2	110.02	-6,944.8	-413.2	7,035.4	7,027.3	8.10	868.185	
3,100.0	3,087.6	2,292.0	2,286.2	7.1	1.2	109.87	-6,948.7	-409.4	7,045.6	7,037.3	8.30	849.355	
3,149.6	3,134.9	2,312.6	2,306.5	7.4	1.2	109.69	-6,951.1	-407.1	7,056.3	7,047.8	8.51	829.465	
3,200.0	3,182.7	2,385.0	2,377.9	7.6	1.3	109.58	-6,959.3	-398.1	7,067.4	7,058.6	8.74	808.784	
3,248.0	3,228.0	2,418.6	2,410.9	7.8	1.3	109.42	-6,963.1	-393.6	7,078.2	7,069.2	8.98	788.654	
3,300.0	3,276.6	2,445.4	2,437.3	8.1	1.3	109.23	-6,966.3	-389.9	7,090.4	7,081.1	9.23	768.261	
3,346.4	3,319.9	2,479.0	2,470.3	8.3	1.3	109.07	-6,970.3	-385.1	7,101.7	7,092.2	9.49	748.408	
3,400.0	3,369.4	2,479.0	2,470.3	8.6	1.3	108.80	-6,970.3	-385.1	7,115.2	7,105.4	9.78	727.618	
3,444.9	3,410.5	2,479.0	2,470.3	8.9	1.3	108.57	-6,970.3	-385.1	7,127.0	7,117.0	10.05	708.913	
3,500.0	3,460.7	2,526.7	2,517.1	9.2	1.3	108.37	-6,976.5	-378.0	7,141.8	7,131.4	10.41	685.829	
3,543.3	3,499.8	2,541.9	2,531.9	9.5	1.3	108.16	-6,978.6	-375.7	7,154.0	7,143.2	10.72	667.393	
3,600.0	3,550.6	2,573.0	2,562.3	9.9	1.4	107.91	-6,983.0	-370.8	7,170.4	7,159.3	11.13	644.465	
3,641.7	3,587.6	2,573.0	2,562.3	10.3	1.4	107.66	-6,983.0	-370.8	7,182.9	7,171.4	11.45	627.292	
3,709.9	3,647.5	2,613.5	2,601.8	10.8	1.4	107.34	-6,989.0	-364.2	7,203.8	7,191.8	12.00	600.262	
3,740.1	3,673.9	2,629.3	2,617.2	11.1	1.4	107.38	-6,991.4	-361.5	7,213.3	7,201.1	12.26	588.463	
3,800.0	3,726.2	2,668.0	2,654.9	11.6	1.4	107.47	-6,997.4	-355.0	7,232.3	7,219.5	12.77	566.387	
3,838.6	3,759.9	2,708.7	2,694.5	11.9	1.4	107.57	-7,003.7	-348.0	7,244.6	7,231.5	13.11	552.625	
3,900.0	3,813.5	2,780.7	2,764.6	12.5	1.5	107.75	-7,014.6	-336.1	7,264.0	7,250.3	13.65	532.093	
3,937.0	3,845.8	2,805.7	2,789.1	12.8	1.5	107.82	-7,018.4	-332.0	7,275.7	7,261.7	13.98	520.371	
4,000.0	3,900.8	2,853.0	2,835.1	13.4	1.5	107.94	-7,025.6	-324.3	7,295.8	7,281.3	14.54	501.622	
4,035.4	3,931.7	2,885.2	2,866.5	13.7	1.5	108.02	-7,030.6	-319.0	7,307.1	7,292.3	14.87	491.399	
4,100.0	3,988.1	2,969.4	2,948.4	14.3	1.5	108.22	-7,043.4	-304.5	7,327.7	7,312.3	15.47	473.727	
4,133.8	4,017.6	3,045.5	3,022.6	14.7	1.6	108.41	-7,054.7	-291.7	7,338.4	7,322.6	15.79	464.732	
4,200.0	4,075.4	3,253.0	3,225.6	15.3	1.6	108.92	-7,082.1	-258.4	7,358.2	7,341.8	16.42	448.138	
4,232.3	4,103.5	3,269.3	3,241.5	15.6	1.6	108.96	-7,084.1	-255.8	7,367.8	7,351.1	16.72	440.648	
4,300.0	4,162.6	3,303.5	3,275.0	16.2	1.7	109.05	-7,088.5	-250.2	7,388.0	7,370.7	17.35	425.796	
4,330.7	4,189.4	3,326.0	3,297.0	16.5	1.7	109.10	-7,091.4	-246.4	7,397.3	7,379.6	17.64	419.307	
4,400.0	4,249.9	3,416.0	3,385.0	17.2	1.7	109.32	-7,102.9	-231.7	7,418.1	7,399.8	18.31	405.213	
4,429.1	4,275.4	3,416.0	3,385.0	17.5	1.7	109.32	-7,102.9	-231.7	7,426.8	7,408.3	18.58	399.716	
4,500.0	4,337.2	3,464.9	3,433.0	18.2	1.7	109.44	-7,109.2	-224.0	7,448.2	7,429.0	19.26	386.771	
4,527.5	4,361.3	3,476.3	3,444.0	18.5	1.7	109.47	-7,110.7	-222.2	7,456.7	7,437.2	19.52	381.983	
4,600.0	4,424.5	3,509.0	3,476.1	19.2	1.7	109.54	-7,115.1	-217.0	7,479.1	7,458.9	20.21	369.994	
4,626.0	4,447.2	3,509.0	3,476.1	19.5	1.7	109.54	-7,115.1	-217.0	7,487.3	7,466.8	20.46	365.915	
4,700.0	4,511.8	3,541.5	3,507.8	20.2	1.8	109.62	-7,119.8	-211.7	7,510.8	7,489.6	21.18	354.614	
4,724.4	4,533.1	3,550.0	3,516.1	20.5	1.8	109.64	-7,121.0	-210.3	7,518.6	7,497.2	21.42	351.051	
4,796.7	4,596.3	3,603.0	3,567.6	21.2	1.8	109.76	-7,129.2	-200.9	7,542.2	7,520.1	22.13	340.795	
4,800.0	4,599.1	3,603.0	3,567.6	21.2	1.8	109.78	-7,129.2	-200.9	7,543.3	7,521.1	22.16	340.437	
4,822.8	4,619.1	3,603.0	3,567.6	21.4	1.8	109.93	-7,129.2	-200.9	7,550.7	7,528.4	22.32	338.336	
4,900.0	4,687.3	3,622.3	3,586.3	22.0	1.8	110.46	-7,132.3	-197.4	7,575.7	7,552.9	22.86	331.401	
4,921.2	4,706.2	3,638.8	3,602.3	22.2	1.8	110.63	-7,135.0	-194.4	7,582.6	7,559.6	23.00	329.623	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST DD PJ #8I - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 510-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,777.1	3,701.3	3,662.9	22.8	1.9	111.23	-7,145.2	-182.9	7,607.5	7,584.0	23.53	323.249	
5,019.7	4,794.9	3,721.4	3,682.3	22.9	1.9	111.38	-7,148.5	-179.1	7,613.7	7,590.0	23.66	321.826	
5,100.0	4,868.3	3,810.6	3,768.8	23.5	1.9	111.98	-7,163.0	-162.6	7,638.2	7,614.0	24.16	316.157	
5,118.1	4,885.0	3,839.2	3,796.5	23.6	1.9	112.12	-7,167.6	-157.2	7,643.5	7,619.3	24.27	314.999	
5,200.0	4,961.0	3,977.0	3,930.2	24.2	2.0	112.74	-7,189.1	-131.8	7,667.0	7,642.3	24.74	309.859	
5,216.5	4,976.4	3,994.3	3,947.0	24.3	2.0	112.84	-7,191.7	-128.6	7,671.6	7,646.8	24.83	308.966	
5,300.0	5,054.8	4,070.0	4,020.6	24.8	2.0	113.34	-7,203.2	-115.0	7,694.2	7,668.9	25.26	304.578	
5,314.9	5,069.0	4,083.5	4,033.7	24.8	2.0	113.43	-7,205.3	-112.5	7,698.1	7,672.8	25.33	303.891	
5,400.0	5,149.9	4,186.1	4,133.5	25.3	2.1	113.91	-7,220.7	-94.2	7,719.9	7,694.2	25.74	299.948	
5,413.4	5,162.7	4,200.6	4,147.6	25.4	2.1	113.98	-7,222.9	-91.7	7,723.2	7,697.5	25.79	299.420	
5,500.0	5,245.9	4,283.8	4,228.7	25.8	2.1	114.42	-7,235.1	-77.7	7,744.1	7,718.0	26.16	296.064	
5,511.8	5,257.3	4,292.8	4,237.5	25.9	2.1	114.47	-7,236.4	-76.3	7,746.9	7,720.7	26.20	295.684	
5,600.0	5,342.9	4,448.0	4,389.1	26.3	2.2	114.89	-7,258.9	-51.8	7,767.0	7,740.4	26.55	292.577	
5,610.2	5,352.9	4,461.5	4,402.3	26.3	2.2	114.94	-7,260.7	-49.7	7,769.1	7,742.6	26.58	292.287	
5,700.0	5,440.7	4,539.0	4,478.1	26.7	2.2	115.29	-7,271.4	-37.5	7,787.6	7,760.7	26.87	289.869	
5,708.6	5,449.1	4,624.0	4,561.2	26.7	2.3	115.32	-7,282.8	-24.1	7,789.3	7,762.4	26.91	289.410	
5,800.0	5,539.1	4,917.0	4,848.5	27.0	2.4	115.56	-7,315.8	22.9	7,803.7	7,776.5	27.23	286.599	
5,807.1	5,546.1	4,917.0	4,848.5	27.0	2.4	115.58	-7,315.8	22.9	7,804.8	7,777.5	27.24	286.484	
5,900.0	5,638.1	4,965.2	4,895.8	27.3	2.4	115.81	-7,321.0	30.7	7,818.3	7,790.8	27.45	284.771	
5,905.5	5,643.5	4,969.2	4,899.7	27.3	2.4	115.82	-7,321.5	31.3	7,819.1	7,791.6	27.47	284.690	
6,000.0	5,737.5	5,197.0	5,124.1	27.5	2.5	115.93	-7,344.2	63.3	7,831.2	7,803.5	27.70	282.744	
6,003.9	5,741.4	5,197.0	5,124.1	27.5	2.5	115.94	-7,344.2	63.3	7,831.6	7,803.9	27.70	282.709	
6,100.0	5,837.2	5,266.3	5,192.6	27.7	2.6	116.09	-7,350.4	71.6	7,841.5	7,813.7	27.84	281.613	
6,102.3	5,839.6	5,267.9	5,194.2	27.7	2.6	116.09	-7,350.5	71.8	7,841.7	7,813.9	27.85	281.596	
6,200.0	5,937.2	5,359.8	5,285.1	27.9	2.6	116.18	-7,358.9	82.3	7,850.6	7,822.6	27.96	280.734	
6,200.8	5,937.9	5,360.6	5,285.9	27.9	2.6	116.19	-7,359.0	82.4	7,850.6	7,822.7	27.97	280.729	
6,256.6	5,993.8	5,411.1	5,335.8	27.9	2.6	-171.87	-7,363.6	88.3	7,855.0	7,827.0	28.02	280.385	
6,286.6	6,023.8	5,434.7	5,359.2	27.9	2.6	-171.89	-7,365.7	91.0	7,857.3	7,829.2	28.05	280.073	
6,299.2	6,036.4	5,444.7	5,369.0	27.9	2.6	8.09	-7,366.7	92.2	7,858.1	7,830.1	28.04	280.262	
6,300.0	6,037.2	5,445.3	5,369.7	27.9	2.6	8.09	-7,366.7	92.3	7,858.2	7,830.1	28.04	280.275	
6,350.0	6,087.1	5,495.4	5,419.2	28.0	2.7	8.03	-7,371.4	98.0	7,859.3	7,831.4	27.93	281.421	
6,397.6	6,134.3	5,615.3	5,538.1	28.0	2.7	7.98	-7,381.6	109.8	7,857.0	7,829.2	27.79	282.762	
6,400.0	6,136.7	5,617.6	5,540.4	28.0	2.7	7.98	-7,381.8	110.0	7,856.8	7,829.0	27.78	282.858	
6,450.0	6,185.7	6,013.8	5,935.3	28.0	2.9	7.95	-7,402.9	132.1	7,849.6	7,821.9	27.65	283.864	
6,496.0	6,230.2	6,063.6	5,985.0	28.0	2.9	8.08	-7,404.2	133.4	7,838.9	7,811.5	27.40	286.135	
6,500.0	6,234.0	6,067.9	5,989.3	28.0	2.9	8.09	-7,404.3	133.5	7,837.8	7,810.4	27.37	286.355	
6,550.0	6,281.3	6,128.8	6,050.2	28.0	2.9	8.28	-7,405.9	134.8	7,822.7	7,795.6	27.03	289.432	
6,594.5	6,322.2	6,208.5	6,129.9	27.9	2.9	8.51	-7,407.5	136.2	7,806.3	7,779.6	26.68	292.618	
6,600.0	6,327.3	6,218.2	6,139.6	27.9	2.9	8.55	-7,407.7	136.3	7,804.1	7,777.5	26.63	293.059	
6,650.0	6,371.8	6,297.7	6,219.1	27.9	2.9	8.88	-7,408.8	137.4	7,782.1	7,756.0	26.16	297.523	
6,692.9	6,408.6	6,356.4	6,277.8	27.9	3.0	9.22	-7,409.5	138.0	7,760.7	7,735.0	25.69	302.134	
6,700.0	6,414.6	6,365.9	6,287.2	27.8	3.0	9.29	-7,409.6	138.0	7,756.9	7,731.3	25.60	302.978	
6,750.0	6,455.5	6,428.4	6,349.7	27.8	3.0	9.79	-7,410.0	138.4	7,728.7	7,703.8	24.97	309.543	
6,791.3	6,487.7	6,461.0	6,382.3	27.7	3.0	10.27	-7,410.1	138.6	7,703.3	7,678.9	24.37	316.056	
6,800.0	6,494.3	6,467.6	6,388.9	27.7	3.0	10.38	-7,410.2	138.6	7,697.7	7,673.5	24.24	317.553	
6,850.0	6,530.8	6,504.6	6,425.9	27.7	3.0	11.11	-7,410.4	138.8	7,664.1	7,640.6	23.44	326.967	
6,889.7	6,558.1	6,532.2	6,453.5	27.6	3.0	11.80	-7,410.5	138.9	7,635.6	7,612.8	22.76	335.523	
6,900.0	6,564.9	6,539.1	6,460.4	27.6	3.0	12.00	-7,410.6	138.9	7,628.0	7,605.4	22.57	337.922	
6,950.0	6,596.3	6,570.9	6,492.2	27.6	3.0	13.10	-7,410.7	139.1	7,589.6	7,567.9	21.65	350.540	
6,988.2	6,618.4	6,607.8	6,529.1	27.5	3.0	14.16	-7,410.9	139.2	7,558.9	7,537.9	20.94	361.026	
7,000.0	6,624.9	6,622.0	6,543.4	27.5	3.0	14.54	-7,410.9	139.3	7,549.1	7,528.4	20.71	364.469	
7,050.0	6,650.6	6,677.9	6,599.2	27.5	3.0	16.45	-7,410.9	139.5	7,506.6	7,486.9	19.76	379.823	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST DD PJ #8I - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 510-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
7,086.6	6,667.5	6,714.1	6,635.5	27.5	3.1	18.22	-7,410.8	139.6	7,474.4	7,455.4	19.08	391.798		
7,100.0	6,673.3	6,726.4	6,647.7	27.5	3.1	18.97	-7,410.7	139.6	7,462.4	7,443.6	18.82	396.482		
7,150.0	6,692.7	6,739.0	6,660.3	27.5	3.1	22.21	-7,410.7	139.7	7,416.7	7,398.8	17.91	414.122		
7,185.0	6,704.4	6,739.0	6,660.3	27.5	3.1	25.16	-7,410.7	139.7	7,384.0	7,366.7	17.31	426.690		
7,200.0	6,709.0	6,739.0	6,660.3	27.5	3.1	26.66	-7,410.7	139.7	7,369.9	7,352.7	17.15	429.715		
7,250.0	6,721.8	6,768.6	6,689.9	27.5	3.1	33.69	-7,410.5	139.7	7,322.0	7,305.2	16.80	435.754		
7,283.4	6,728.6	6,773.2	6,694.6	27.5	3.1	40.23	-7,410.5	139.8	7,289.5	7,272.6	16.93	430.686		
7,300.0	6,731.3	6,775.1	6,696.5	27.6	3.1	44.30	-7,410.5	139.8	7,273.3	7,256.2	17.14	424.344		
7,350.0	6,737.3	6,779.3	6,700.6	27.7	3.1	61.18	-7,410.4	139.8	7,224.2	7,205.8	18.45	391.474		
7,381.9	6,739.4	6,780.6	6,702.0	27.7	3.1	76.02	-7,410.4	139.8	7,192.7	7,173.2	19.59	367.242		
7,400.0	6,739.9	6,780.9	6,702.3	27.8	3.1	85.51	-7,410.4	139.8	7,174.8	7,154.6	20.23	354.627		
7,416.5	6,740.0	6,781.0	6,702.3	27.8	3.1	94.36	-7,410.4	139.8	7,158.5	7,137.6	20.89	342.731		
7,480.3	6,739.5	6,780.5	6,701.8	28.0	3.1	94.33	-7,410.4	139.8	7,095.4	7,074.0	21.42	331.234		
7,500.0	6,739.4	6,780.3	6,701.6	28.1	3.1	94.32	-7,410.4	139.8	7,075.9	7,054.4	21.59	327.798		
7,578.7	6,738.9	6,779.7	6,701.0	28.5	3.1	94.29	-7,410.4	139.8	6,998.1	6,975.8	22.35	313.048		
7,600.0	6,738.7	6,779.5	6,700.9	28.6	3.1	94.28	-7,410.4	139.8	6,977.1	6,954.5	22.56	309.234		
7,677.1	6,738.2	6,778.9	6,700.2	29.1	3.1	94.25	-7,410.4	139.8	6,900.8	6,877.4	23.42	294.702		
7,700.0	6,738.1	6,778.7	6,700.1	29.2	3.1	94.24	-7,410.4	139.8	6,878.3	6,854.6	23.67	290.599		
7,775.6	6,737.5	6,778.1	6,699.5	29.7	3.1	94.21	-7,410.5	139.8	6,803.6	6,779.0	24.59	276.687		
7,800.0	6,737.4	6,777.9	6,699.3	29.9	3.1	94.20	-7,410.5	139.8	6,779.5	6,754.6	24.89	272.411		
7,874.0	6,736.9	6,777.3	6,698.7	30.6	3.1	94.16	-7,410.5	139.8	6,706.4	6,680.5	25.86	259.361		
7,900.0	6,736.7	6,777.1	6,698.5	30.8	3.1	94.15	-7,410.5	139.8	6,680.7	6,654.5	26.20	255.005		
7,972.4	6,736.2	6,776.5	6,697.9	31.5	3.1	94.12	-7,410.5	139.8	6,609.2	6,582.0	27.21	242.939		
8,000.0	6,736.0	6,776.3	6,697.6	31.8	3.1	94.11	-7,410.5	139.8	6,582.0	6,554.4	27.59	238.575		
8,070.8	6,735.5	6,775.7	6,697.1	32.5	3.1	94.08	-7,410.5	139.8	6,512.1	6,483.5	28.62	227.530		
8,100.0	6,735.3	6,775.5	6,696.8	32.8	3.1	94.06	-7,410.5	139.8	6,483.3	6,454.3	29.05	223.212		
8,169.3	6,734.9	6,774.9	6,696.3	33.6	3.1	94.03	-7,410.5	139.8	6,415.0	6,384.9	30.09	213.169		
8,200.0	6,734.6	6,774.7	6,696.0	34.0	3.1	94.02	-7,410.5	139.8	6,384.7	6,354.1	30.56	208.935		
8,267.7	6,734.2	6,774.1	6,695.4	34.8	3.1	93.99	-7,410.5	139.8	6,317.9	6,286.3	31.61	199.843		
8,300.0	6,734.0	6,773.8	6,695.2	35.2	3.1	93.97	-7,410.5	139.8	6,286.1	6,254.0	32.12	195.716		
8,366.1	6,733.5	6,773.3	6,694.6	36.1	3.1	93.94	-7,410.5	139.8	6,220.9	6,187.7	33.18	187.509		
8,400.0	6,733.3	6,773.0	6,694.3	36.5	3.1	93.93	-7,410.5	139.8	6,187.5	6,153.8	33.72	183.504		
8,464.5	6,732.8	6,772.4	6,693.8	37.4	3.1	93.90	-7,410.5	139.8	6,124.0	6,089.2	34.77	176.107		
8,500.0	6,732.6	6,772.1	6,693.5	37.9	3.1	93.88	-7,410.5	139.7	6,089.0	6,053.7	35.35	172.233		
8,563.0	6,732.2	6,771.6	6,692.9	38.8	3.1	93.85	-7,410.5	139.7	6,027.0	5,990.6	36.40	165.571		
8,600.0	6,731.9	6,771.3	6,692.6	39.3	3.1	93.84	-7,410.5	139.7	5,990.6	5,953.6	37.02	161.830		
8,661.4	6,731.5	6,770.8	6,692.1	40.2	3.1	93.81	-7,410.5	139.7	5,930.2	5,892.1	38.06	155.831		
8,700.0	6,731.2	6,770.4	6,691.8	40.8	3.1	93.79	-7,410.5	139.7	5,892.2	5,853.5	38.71	152.224		
8,759.8	6,730.8	6,769.9	6,691.2	41.7	3.1	93.76	-7,410.5	139.7	5,833.3	5,793.6	39.73	146.820		
8,800.0	6,730.6	6,769.5	6,690.9	42.3	3.1	93.74	-7,410.5	139.7	5,793.8	5,753.4	40.42	143.345		
8,858.2	6,730.2	6,769.0	6,690.4	43.2	3.1	93.71	-7,410.5	139.7	5,736.6	5,695.2	41.43	138.474		
8,900.0	6,729.9	6,768.7	6,690.0	43.8	3.1	93.69	-7,410.5	139.7	5,695.6	5,653.4	42.15	135.127		
8,956.7	6,729.5	6,768.2	6,689.5	44.7	3.1	93.67	-7,410.5	139.7	5,639.9	5,596.7	43.14	130.734		
9,000.0	6,729.2	6,767.8	6,689.1	45.4	3.1	93.65	-7,410.5	139.7	5,597.3	5,553.4	43.90	127.510		
9,055.1	6,728.8	6,767.3	6,688.6	46.3	3.1	93.62	-7,410.5	139.7	5,543.2	5,498.4	44.87	123.545		
9,100.0	6,728.5	6,766.9	6,688.2	47.0	3.1	93.60	-7,410.5	139.7	5,499.2	5,453.5	45.66	120.439		
9,153.5	6,728.2	6,766.4	6,687.7	47.9	3.1	93.57	-7,410.5	139.7	5,446.6	5,400.0	46.61	116.857		
9,200.0	6,727.8	6,766.0	6,687.3	48.6	3.1	93.55	-7,410.5	139.7	5,401.1	5,353.6	47.43	113.864		
9,251.9	6,727.5	6,765.5	6,686.8	49.5	3.1	93.52	-7,410.5	139.7	5,350.1	5,301.8	48.36	110.625		
9,300.0	6,727.2	6,765.1	6,686.4	50.3	3.1	93.50	-7,410.5	139.7	5,303.0	5,253.8	49.22	107.739		
9,350.4	6,726.8	6,764.6	6,685.9	51.1	3.1	93.47	-7,410.5	139.7	5,253.7	5,203.6	50.13	104.809		
9,400.0	6,726.5	6,764.1	6,685.5	51.9	3.1	93.45	-7,410.5	139.7	5,205.1	5,154.1	51.02	102.024		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST DD PJ #8I - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 510-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,448.8	6,726.1	6,763.7	6,685.0	52.7	3.1	93.43	-7,410.5	139.7	5,157.3	5,105.4	51.90	99.371	
9,500.0	6,725.8	6,763.2	6,684.5	53.6	3.1	93.40	-7,410.5	139.7	5,107.2	5,054.4	52.82	96.683	
9,547.2	6,725.5	6,762.8	6,684.1	54.4	3.1	93.38	-7,410.5	139.7	5,061.0	5,007.3	53.68	94.279	
9,600.0	6,725.1	6,762.3	6,683.6	55.3	3.1	93.35	-7,410.5	139.7	5,009.4	4,954.8	54.64	91.683	
9,645.6	6,724.8	6,761.8	6,683.2	56.1	3.1	93.33	-7,410.5	139.7	4,964.8	4,909.4	55.47	89.504	
9,700.0	6,724.4	6,761.3	6,682.6	57.0	3.1	93.30	-7,410.5	139.7	4,911.7	4,855.3	56.46	86.994	
9,744.1	6,724.1	6,760.9	6,682.2	57.8	3.1	93.27	-7,410.5	139.7	4,868.7	4,811.4	57.27	85.019	
9,800.0	6,723.8	6,760.4	6,681.7	58.7	3.1	93.25	-7,410.5	139.7	4,814.1	4,755.8	58.29	82.591	
9,842.5	6,723.5	6,759.9	6,681.3	59.5	3.1	93.22	-7,410.5	139.7	4,772.7	4,713.6	59.07	80.799	
9,900.0	6,723.1	6,759.4	6,680.7	60.5	3.1	93.19	-7,410.5	139.7	4,716.6	4,656.5	60.12	78.449	
9,940.9	6,722.8	6,759.0	6,680.3	61.2	3.1	93.17	-7,410.5	139.7	4,676.8	4,615.9	60.88	76.824	
10,000.0	6,722.4	6,758.4	6,679.7	62.2	3.1	93.14	-7,410.5	139.7	4,619.2	4,557.3	61.96	74.547	
10,039.3	6,722.1	6,758.0	6,679.4	62.9	3.1	93.12	-7,410.5	139.7	4,580.9	4,518.2	62.69	73.073	
10,100.0	6,721.7	6,757.4	6,678.8	64.0	3.1	93.09	-7,410.6	139.7	4,521.9	4,458.1	63.81	70.867	
10,137.8	6,721.5	6,757.0	6,678.4	64.7	3.1	93.07	-7,410.6	139.7	4,485.2	4,420.7	64.51	69.531	
10,200.0	6,721.0	6,756.4	6,677.8	65.8	3.1	93.03	-7,410.6	139.7	4,424.8	4,359.1	65.66	67.391	
10,236.2	6,720.8	6,756.1	6,677.4	66.4	3.1	93.01	-7,410.6	139.7	4,389.6	4,323.3	66.33	66.179	
10,300.0	6,720.4	6,755.4	6,676.7	67.5	3.1	92.98	-7,410.6	139.7	4,327.7	4,260.2	67.51	64.103	
10,334.6	6,720.1	6,755.1	6,676.4	68.2	3.1	92.96	-7,410.6	139.7	4,294.2	4,226.0	68.16	63.006	
10,400.0	6,719.7	6,754.4	6,675.7	69.3	3.1	92.92	-7,410.6	139.7	4,230.8	4,161.5	69.37	60.990	
10,433.0	6,719.4	6,754.1	6,675.4	69.9	3.1	92.91	-7,410.6	139.7	4,198.9	4,128.9	69.98	59.997	
10,500.0	6,719.0	6,753.4	6,674.7	71.1	3.1	92.87	-7,410.6	139.7	4,134.1	4,062.9	71.23	58.038	
10,531.5	6,718.8	6,753.0	6,674.4	71.7	3.1	92.85	-7,410.6	139.7	4,103.7	4,031.9	71.82	57.140	
10,600.0	6,718.3	6,752.3	6,673.7	72.9	3.1	92.81	-7,410.6	139.7	4,037.5	3,964.4	73.10	55.236	
10,629.9	6,718.1	6,739.0	6,660.3	73.4	3.1	92.09	-7,410.7	139.7	4,008.7	3,935.0	73.64	54.436	
10,700.0	6,717.6	6,739.0	6,660.3	74.7	3.1	92.09	-7,410.7	139.7	3,941.1	3,866.2	74.95	52.583	
10,728.3	6,717.4	6,739.0	6,660.3	75.2	3.1	92.09	-7,410.7	139.7	3,913.8	3,838.3	75.48	51.852	
10,800.0	6,717.0	6,739.0	6,660.3	76.5	3.1	92.09	-7,410.7	139.7	3,844.9	3,768.0	76.82	50.048	
10,826.7	6,716.8	6,739.0	6,660.3	77.0	3.1	92.09	-7,410.7	139.7	3,819.2	3,741.8	77.32	49.391	
10,900.0	6,716.3	6,739.0	6,660.3	78.3	3.1	92.09	-7,410.7	139.7	3,748.8	3,670.1	78.70	47.636	
10,925.2	6,716.1	6,739.0	6,660.3	78.8	3.1	92.09	-7,410.7	139.7	3,724.7	3,645.5	79.17	47.047	
11,000.0	6,715.6	6,739.0	6,660.3	80.2	3.1	92.09	-7,410.7	139.7	3,653.0	3,572.4	80.57	45.337	
11,023.6	6,715.4	6,739.0	6,660.3	80.6	3.1	92.09	-7,410.7	139.7	3,630.4	3,549.4	81.02	44.810	
11,100.0	6,714.9	6,739.0	6,660.3	82.0	3.1	92.09	-7,410.7	139.7	3,557.4	3,474.9	82.45	43.144	
11,122.0	6,714.8	6,739.0	6,660.3	82.4	3.1	92.09	-7,410.7	139.7	3,536.4	3,453.5	82.87	42.675	
11,200.0	6,714.2	6,739.0	6,660.3	83.8	3.1	92.09	-7,410.7	139.7	3,462.0	3,377.7	84.33	41.051	
11,220.4	6,714.1	6,739.0	6,660.3	84.2	3.1	92.09	-7,410.7	139.7	3,442.6	3,357.8	84.72	40.635	
11,300.0	6,713.5	6,739.0	6,660.3	85.7	3.1	92.09	-7,410.7	139.7	3,366.9	3,280.7	86.22	39.052	
11,318.9	6,713.4	6,739.0	6,660.3	86.0	3.1	92.09	-7,410.7	139.7	3,349.0	3,262.5	86.57	38.684	
11,400.0	6,712.9	6,739.0	6,660.3	87.5	3.1	92.09	-7,410.7	139.7	3,272.1	3,184.0	88.10	37.140	
11,417.3	6,712.7	6,739.0	6,660.3	87.8	3.1	92.09	-7,410.7	139.7	3,255.8	3,167.4	88.43	36.818	
11,500.0	6,712.2	6,739.0	6,660.3	89.3	3.1	92.09	-7,410.7	139.7	3,177.7	3,087.7	89.99	35.312	
11,515.7	6,712.1	6,739.0	6,660.3	89.6	3.1	92.09	-7,410.7	139.7	3,162.8	3,072.6	90.28	35.032	
11,600.0	6,711.5	6,739.0	6,660.3	91.2	3.1	92.09	-7,410.7	139.7	3,083.5	2,991.7	91.88	33.562	
11,614.1	6,711.4	6,739.0	6,660.3	91.4	3.1	92.09	-7,410.7	139.7	3,070.3	2,978.1	92.14	33.321	
11,700.0	6,710.8	6,739.0	6,660.3	93.0	3.1	92.09	-7,410.7	139.7	2,989.8	2,896.0	93.76	31.886	
11,712.6	6,710.7	6,739.0	6,660.3	93.3	3.1	92.09	-7,410.7	139.7	2,978.0	2,884.0	94.00	31.680	
11,800.0	6,710.1	6,739.0	6,660.3	94.9	3.1	92.09	-7,410.7	139.7	2,896.5	2,800.8	95.66	30.280	
11,811.0	6,710.1	6,738.8	6,660.2	95.1	3.1	92.08	-7,410.7	139.7	2,886.2	2,790.4	95.86	30.108	
11,900.0	6,709.5	6,737.4	6,658.7	96.7	3.1	92.00	-7,410.7	139.7	2,803.6	2,706.1	97.55	28.741	
11,909.4	6,709.4	6,737.2	6,658.6	96.9	3.1	91.99	-7,410.7	139.7	2,794.9	2,697.2	97.72	28.600	
12,000.0	6,708.8	6,735.8	6,657.1	98.6	3.1	91.92	-7,410.7	139.7	2,711.3	2,611.8	99.44	27.266	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST DD PJ #8I - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 510-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,708.7	6,735.7	6,657.0	98.7	3.1	91.91	-7,410.7	139.7	2,704.0	2,604.4	99.59	27.152	
12,100.0	6,708.1	6,734.2	6,655.5	100.4	3.1	91.83	-7,410.7	139.6	2,619.5	2,518.1	101.33	25.850	
12,106.3	6,708.1	6,734.1	6,655.4	100.6	3.1	91.82	-7,410.7	139.6	2,613.7	2,512.3	101.45	25.763	
12,200.0	6,707.4	6,732.7	6,654.0	102.3	3.1	91.75	-7,410.7	139.6	2,528.3	2,425.0	103.23	24.493	
12,204.7	6,707.4	6,732.6	6,653.9	102.4	3.1	91.74	-7,410.7	139.6	2,524.0	2,420.7	103.32	24.430	
12,300.0	6,706.7	6,731.1	6,652.5	104.2	3.1	91.66	-7,410.7	139.6	2,437.8	2,332.7	105.12	23.190	
12,303.1	6,706.7	6,731.1	6,652.4	104.2	3.1	91.66	-7,410.7	139.6	2,435.0	2,329.8	105.18	23.150	
12,400.0	6,706.1	6,729.6	6,651.0	106.0	3.1	91.58	-7,410.7	139.6	2,348.1	2,241.1	107.02	21.941	
12,401.5	6,706.0	6,729.6	6,651.0	106.1	3.1	91.58	-7,410.7	139.6	2,346.7	2,239.6	107.05	21.922	
12,500.0	6,705.4	6,728.2	6,649.5	107.9	3.1	91.50	-7,410.7	139.6	2,259.2	2,150.3	108.92	20.743	
12,598.4	6,704.7	6,726.8	6,648.1	109.7	3.1	91.43	-7,410.7	139.6	2,172.7	2,062.0	110.78	19.612	
12,600.0	6,704.7	6,726.7	6,648.1	109.8	3.1	91.43	-7,410.7	139.6	2,171.3	2,060.5	110.81	19.594	
12,696.8	6,704.0	6,725.4	6,646.7	111.6	3.1	91.35	-7,410.7	139.6	2,087.3	1,974.6	112.65	18.528	
12,700.0	6,704.0	6,725.3	6,646.7	111.6	3.1	91.35	-7,410.7	139.6	2,084.5	1,971.8	112.71	18.494	
12,795.2	6,703.4	6,724.0	6,645.3	113.4	3.1	91.28	-7,410.8	139.6	2,003.0	1,888.5	114.52	17.490	
12,800.0	6,703.3	6,723.9	6,645.3	113.5	3.1	91.27	-7,410.8	139.6	1,999.0	1,884.4	114.61	17.441	
12,893.7	6,702.7	6,722.6	6,644.0	115.3	3.1	91.20	-7,410.8	139.6	1,920.1	1,803.7	116.39	16.497	
12,900.0	6,702.7	6,722.6	6,643.9	115.4	3.1	91.20	-7,410.8	139.6	1,914.8	1,798.3	116.51	16.434	
12,992.1	6,702.0	6,721.3	6,642.6	117.1	3.1	91.13	-7,410.8	139.6	1,838.7	1,720.5	118.26	15.548	
13,000.0	6,702.0	6,721.2	6,642.5	117.3	3.1	91.13	-7,410.8	139.6	1,832.3	1,713.8	118.41	15.473	
13,090.5	6,701.4	6,720.0	6,641.3	119.0	3.1	91.06	-7,410.8	139.6	1,759.1	1,638.9	120.14	14.642	
13,100.0	6,701.3	6,719.9	6,641.2	119.1	3.1	91.05	-7,410.8	139.6	1,751.5	1,631.2	120.32	14.558	
13,188.9	6,700.7	6,718.7	6,640.1	120.8	3.1	90.99	-7,410.8	139.6	1,681.4	1,559.4	122.01	13.781	
13,200.0	6,700.6	6,718.6	6,639.9	121.0	3.1	90.98	-7,410.8	139.6	1,672.8	1,550.6	122.22	13.687	
13,287.4	6,700.0	6,717.5	6,638.8	122.7	3.1	90.92	-7,410.8	139.6	1,606.1	1,482.2	123.88	12.964	
13,300.0	6,699.9	6,717.3	6,638.6	122.9	3.1	90.91	-7,410.8	139.6	1,596.6	1,472.4	124.12	12.863	
13,385.8	6,699.3	6,716.2	6,637.5	124.5	3.1	90.85	-7,410.8	139.6	1,533.3	1,407.5	125.76	12.193	
13,400.0	6,699.3	6,716.0	6,637.4	124.8	3.1	90.85	-7,410.8	139.6	1,523.0	1,397.0	126.03	12.085	
13,484.2	6,698.7	6,715.0	6,636.3	126.4	3.1	90.79	-7,410.8	139.6	1,463.5	1,335.9	127.63	11.467	
13,500.0	6,698.6	6,714.8	6,636.1	126.7	3.1	90.78	-7,410.8	139.6	1,452.7	1,324.7	127.93	11.355	
13,582.6	6,698.0	6,713.8	6,635.1	128.2	3.1	90.72	-7,410.8	139.6	1,397.2	1,267.7	129.50	10.789	
13,600.0	6,697.9	6,713.6	6,634.9	128.5	3.1	90.71	-7,410.8	139.6	1,385.9	1,256.1	129.83	10.675	
13,681.1	6,697.3	6,712.6	6,633.9	130.1	3.0	90.66	-7,410.8	139.6	1,334.9	1,203.5	131.38	10.161	
13,700.0	6,697.2	6,712.4	6,633.7	130.4	3.0	90.65	-7,410.8	139.6	1,323.4	1,191.7	131.74	10.046	
13,779.5	6,696.7	6,711.4	6,632.8	131.9	3.0	90.59	-7,410.8	139.6	1,277.1	1,143.9	133.25	9.584	
13,800.0	6,696.5	6,711.2	6,632.5	132.3	3.0	90.58	-7,410.8	139.6	1,265.7	1,132.1	133.64	9.471	
13,877.9	6,696.0	6,710.3	6,631.6	133.8	3.0	90.53	-7,410.8	139.6	1,224.5	1,089.4	135.13	9.062	
13,900.0	6,695.8	6,710.0	6,631.3	134.2	3.0	90.52	-7,410.8	139.6	1,213.5	1,078.0	135.55	8.952	
13,976.3	6,695.3	6,709.1	6,630.5	135.6	3.0	90.47	-7,410.8	139.6	1,177.8	1,040.8	137.01	8.597	
14,000.0	6,695.2	6,708.9	6,630.2	136.1	3.0	90.46	-7,410.8	139.6	1,167.5	1,030.1	137.46	8.494	
14,034.1	6,695.0	6,708.5	6,629.9	136.7	3.0	90.44	-7,410.8	139.6	1,153.4	1,015.3	138.11	8.352 CC, ES, SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-122.59	-254.3	-397.8	472.7				
98.4	98.4	73.9	73.9	0.1	0.0	-122.56	-254.2	-398.0	472.3	472.1	0.13	3,577.116 CC	
100.0	100.0	75.4	75.4	0.1	0.0	-122.56	-254.2	-398.0	472.3	472.1	0.13	3,503.989	
196.8	196.8	171.6	171.6	0.3	0.2	-122.48	-253.9	-398.7	472.7	472.2	0.47	1,001.288	
200.0	200.0	174.7	174.7	0.3	0.2	-122.48	-253.9	-398.8	472.7	472.2	0.48	977.202	
295.3	295.3	270.1	270.1	0.5	0.3	-122.45	-253.9	-399.3	473.2	472.4	0.80	595.023	
300.0	300.0	274.9	274.9	0.5	0.3	-122.45	-253.9	-399.3	473.2	472.4	0.81	584.241	
393.7	393.7	368.9	368.9	0.7	0.3	-122.44	-254.0	-399.7	473.6	472.5	1.06	445.109	
400.0	400.0	375.2	375.2	0.8	0.3	-122.44	-254.0	-399.7	473.6	472.5	1.08	438.462	
492.1	492.1	469.3	469.2	1.0	0.4	-122.49	-254.5	-399.7	473.8	472.5	1.32	358.380	
500.0	500.0	477.3	477.3	1.0	0.4	-122.49	-254.5	-399.6	473.8	472.5	1.34	352.814	
590.5	590.5	568.1	568.1	1.2	0.4	-122.51	-254.5	-399.5	473.7	472.1	1.57	301.910	
600.0	600.0	577.5	577.5	1.2	0.4	-122.50	-254.5	-399.5	473.7	472.1	1.59	297.520	
662.1	662.1	639.1	639.1	1.3	0.4	-122.49	-254.4	-399.5	473.6	471.9	1.75	270.168	
689.0	689.0	665.7	665.7	1.4	0.4	-122.49	-254.4	-399.5	473.6	471.8	1.82	259.528	
700.0	700.0	676.7	676.6	1.4	0.4	-122.49	-254.4	-399.5	473.6	471.8	1.85	255.399	
787.4	787.4	762.9	762.9	1.6	0.5	-122.47	-254.4	-399.7	473.8	471.7	2.08	228.252 ES	
800.0	800.0	775.3	775.3	1.7	0.5	-122.47	-254.4	-399.8	473.8	471.7	2.11	224.893	
885.8	885.8	859.7	859.6	1.9	0.5	-122.49	-254.8	-400.0	474.3	471.9	2.33	203.360	
900.0	900.0	873.6	873.6	1.9	0.5	-122.50	-254.9	-400.1	474.4	472.0	2.37	200.144	
984.2	984.2	958.0	958.0	2.1	0.5	-122.51	-255.3	-400.6	475.0	472.4	2.59	183.070	
1,000.0	1,000.0	973.9	973.9	2.1	0.5	-122.52	-255.4	-400.6	475.1	472.5	2.64	180.199	
1,082.7	1,082.7	1,055.7	1,055.6	2.3	0.6	-122.54	-255.9	-401.0	475.7	472.8	2.85	166.765	
1,100.0	1,100.0	1,072.6	1,072.6	2.3	0.6	-122.54	-256.0	-401.1	475.9	473.0	2.90	164.239	
1,181.1	1,181.1	1,154.7	1,154.7	2.5	0.6	-122.52	-256.2	-401.9	476.6	473.5	3.11	153.333	
1,200.0	1,200.0	1,174.2	1,174.2	2.6	0.6	-122.51	-256.2	-402.0	476.7	473.6	3.16	150.978	
1,279.5	1,279.5	1,255.0	1,254.9	2.7	0.7	-122.48	-256.2	-402.4	477.1	473.7	3.36	141.800	
1,300.0	1,300.0	1,275.6	1,275.6	2.8	0.7	-122.48	-256.2	-402.5	477.1	473.7	3.42	139.614	
1,377.9	1,377.9	1,353.7	1,353.7	3.0	0.7	-122.46	-256.2	-402.7	477.3	473.7	3.62	131.898	
1,400.0	1,400.0	1,375.8	1,375.7	3.0	0.7	-122.46	-256.2	-402.8	477.4	473.7	3.68	129.873	
1,476.4	1,476.4	1,452.1	1,452.1	3.2	0.7	-122.45	-256.3	-403.0	477.6	473.7	3.87	123.418	
1,500.0	1,500.0	1,475.7	1,475.7	3.2	0.8	-122.45	-256.3	-403.1	477.7	473.7	3.93	121.565	
1,574.8	1,574.8	1,548.2	1,548.1	3.4	0.8	-122.45	-256.5	-403.3	478.0	473.9	4.12	116.093	
1,600.0	1,600.0	1,572.2	1,572.2	3.5	0.8	-122.45	-256.5	-403.5	478.2	474.0	4.18	114.389	
1,673.2	1,673.2	1,645.7	1,645.7	3.6	0.8	-122.42	-256.8	-404.4	479.0	474.7	4.37	109.720	
1,700.0	1,700.0	1,673.5	1,673.5	3.7	0.8	-122.41	-256.9	-404.6	479.3	474.8	4.43	108.084	
1,771.6	1,771.6	1,744.8	1,744.7	3.8	0.9	-122.41	-257.1	-405.0	479.7	475.1	4.62	103.944	
1,800.0	1,800.0	1,772.3	1,772.3	3.9	0.9	-122.40	-257.2	-405.3	480.0	475.3	4.69	102.415	
1,870.1	1,870.1	1,840.9	1,840.8	4.1	0.9	-122.38	-257.4	-406.0	480.8	475.9	4.86	98.866	
1,900.0	1,900.0	1,870.3	1,870.2	4.1	0.9	-122.37	-257.6	-406.4	481.2	476.3	4.94	97.440	
1,968.5	1,968.5	1,938.3	1,938.2	4.3	0.9	-122.35	-258.0	-407.3	482.2	477.1	5.11	94.356	
2,000.0	2,000.0	1,969.8	1,969.8	4.4	0.9	-122.34	-258.2	-407.8	482.7	477.5	5.19	93.008	
2,066.9	2,066.9	2,036.6	2,036.5	4.5	1.0	-122.31	-258.5	-408.8	483.7	478.4	5.36	90.294	
2,100.0	2,100.0	2,069.5	2,069.5	4.6	1.0	-122.32	-258.8	-409.2	484.2	478.8	5.44	89.023	
2,165.3	2,165.3	2,134.8	2,134.7	4.7	1.0	-122.35	-259.6	-409.9	485.3	479.7	5.60	86.609	
2,200.0	2,200.0	2,169.5	2,169.4	4.8	1.0	-122.37	-260.1	-410.2	485.8	480.1	5.69	85.379	
2,250.0	2,250.0	2,218.8	2,218.7	4.9	1.0	-122.40	-260.7	-410.8	486.6	480.8	5.82	83.676	
2,263.8	2,263.8	2,232.1	2,232.0	4.9	1.0	165.69	-260.8	-411.0	486.9	480.9	5.99	81.340	
2,300.0	2,300.0	2,267.1	2,267.0	5.0	1.1	165.68	-261.3	-411.5	488.0	481.9	6.08	80.284	
2,362.2	2,362.2	2,330.6	2,330.5	5.2	1.1	165.71	-262.1	-412.6	491.0	484.7	6.23	78.810	
2,400.0	2,399.9	2,371.8	2,371.7	5.2	1.1	165.72	-262.6	-412.9	493.2	486.9	6.32	78.029	
2,460.6	2,460.4	2,435.6	2,435.4	5.4	1.1	165.75	-263.3	-413.0	497.3	490.8	6.46	76.933	

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 EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT EHRLICH #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,499.7	2,475.9	2,475.7	5.4	1.1	165.79	-263.6	-412.9	500.4	493.9	6.56	76.343	
2,559.0	2,558.5	2,535.4	2,535.3	5.6	1.1	165.88	-264.0	-412.7	506.1	499.4	6.69	75.602	
2,600.0	2,599.1	2,576.2	2,576.1	5.7	1.1	165.96	-264.2	-412.6	510.6	503.8	6.79	75.215	
2,657.5	2,656.1	2,633.8	2,633.7	5.8	1.1	166.09	-264.5	-412.4	518.0	511.0	6.92	74.872	
2,700.0	2,698.2	2,676.6	2,676.5	5.9	1.1	166.23	-264.5	-412.3	524.0	517.0	7.01	74.766	
2,755.9	2,753.3	2,732.4	2,732.3	6.1	1.1	166.43	-264.3	-412.2	532.9	525.8	7.13	74.699	
2,800.0	2,796.6	2,776.2	2,776.1	6.2	1.1	166.60	-264.2	-412.0	540.6	533.3	7.23	74.745	
2,854.3	2,849.9	2,829.1	2,829.0	6.3	1.1	166.81	-264.1	-411.8	550.9	543.6	7.36	74.873	
2,900.0	2,894.4	2,872.8	2,872.6	6.5	1.1	166.99	-264.0	-411.7	560.5	553.0	7.46	75.094	
2,952.7	2,945.7	2,922.7	2,922.6	6.6	1.1	167.23	-263.8	-411.8	572.5	564.9	7.59	75.394	
3,000.0	2,991.5	2,967.1	2,966.9	6.8	1.1	167.43	-263.9	-411.8	584.1	576.4	7.71	75.790	
3,051.2	3,040.8	3,016.2	3,016.0	7.0	1.1	167.63	-264.2	-411.8	597.7	589.8	7.84	76.277	
3,100.0	3,087.6	3,065.7	3,065.5	7.1	1.1	167.85	-264.3	-411.8	611.3	603.3	7.96	76.819	
3,149.6	3,134.9	3,114.8	3,114.7	7.4	1.1	168.09	-264.1	-411.7	625.7	617.6	8.08	77.393	
3,200.0	3,182.7	3,162.3	3,162.2	7.6	1.1	168.30	-264.2	-411.4	641.2	633.0	8.21	78.063	
3,248.0	3,228.0	3,207.3	3,207.1	7.8	1.1	168.46	-264.6	-411.0	656.8	648.4	8.34	78.730	
3,300.0	3,276.6	3,254.9	3,254.7	8.1	1.1	168.64	-265.0	-410.7	674.5	666.0	8.49	79.461	
3,346.4	3,319.9	3,297.0	3,296.9	8.3	1.2	168.83	-265.2	-410.5	691.2	682.6	8.63	80.130	
3,400.0	3,369.4	3,346.8	3,346.6	8.6	1.2	169.06	-265.2	-410.5	711.3	702.5	8.78	81.002	
3,444.9	3,410.5	3,388.2	3,388.1	8.9	1.2	169.25	-265.3	-410.4	728.9	720.0	8.92	81.744	
3,500.0	3,460.7	3,436.6	3,436.5	9.2	1.2	169.46	-265.4	-410.4	751.4	742.3	9.08	82.736	
3,543.3	3,499.8	3,473.7	3,473.6	9.5	1.2	169.61	-265.6	-410.4	769.8	760.6	9.22	83.505	
3,600.0	3,550.6	3,522.2	3,522.1	9.9	1.2	169.79	-266.2	-410.4	795.0	785.6	9.40	84.588	
3,641.7	3,587.6	3,557.9	3,557.7	10.3	1.2	169.92	-266.6	-410.5	814.3	804.7	9.54	85.344	
3,709.9	3,647.5	3,618.1	3,617.9	10.8	1.2	170.15	-267.2	-410.8	847.0	837.2	9.77	86.722	
3,740.1	3,673.9	3,648.0	3,647.9	11.1	1.2	170.31	-267.6	-410.8	861.8	851.9	9.87	87.272	
3,800.0	3,726.2	3,707.0	3,706.8	11.6	1.2	170.58	-268.7	-410.3	890.6	880.5	10.09	88.288	
3,838.6	3,759.9	3,741.7	3,741.6	11.9	1.2	170.72	-269.2	-409.8	909.1	898.8	10.23	88.899	
3,900.0	3,813.5	3,797.2	3,797.0	12.5	1.2	170.97	-269.8	-409.2	938.4	928.0	10.44	89.869	
3,937.0	3,845.8	3,827.9	3,827.7	12.8	1.3	171.11	-270.0	-408.8	956.1	945.5	10.58	90.374	
4,000.0	3,900.8	3,879.7	3,879.5	13.4	1.3	171.32	-270.6	-408.3	986.4	975.6	10.81	91.223	
4,035.4	3,931.7	3,908.9	3,908.7	13.7	1.3	171.42	-271.1	-408.1	1,003.5	992.5	10.95	91.657	
4,100.0	3,988.1	3,962.5	3,962.3	14.3	1.3	171.61	-272.0	-407.7	1,034.8	1,023.6	11.20	92.415	
4,133.8	4,017.6	3,990.5	3,990.3	14.7	1.3	171.71	-272.4	-407.6	1,051.3	1,039.9	11.33	92.787	
4,200.0	4,075.4	4,041.0	4,040.8	15.3	1.3	171.88	-273.3	-407.6	1,083.7	1,072.1	11.59	93.496	
4,232.3	4,103.5	4,065.0	4,064.8	15.6	1.3	171.95	-273.8	-407.7	1,099.7	1,087.9	11.72	93.839	
4,300.0	4,162.6	4,117.1	4,116.8	16.2	1.3	172.08	-275.3	-408.0	1,133.5	1,121.5	11.99	94.529	
4,330.7	4,189.4	4,142.5	4,142.3	16.5	1.3	172.15	-276.1	-408.2	1,148.9	1,136.8	12.12	94.816	
4,400.0	4,249.9	4,200.0	4,199.7	17.2	1.4	172.29	-277.9	-408.8	1,183.8	1,171.4	12.40	95.451	
4,429.1	4,275.4	4,223.0	4,222.7	17.5	1.4	172.34	-278.6	-409.1	1,198.6	1,186.0	12.52	95.712	
4,500.0	4,337.2	4,279.1	4,278.7	18.2	1.4	172.42	-281.2	-409.5	1,234.5	1,221.7	12.82	96.329	
4,527.5	4,361.3	4,300.9	4,300.5	18.5	1.4	172.43	-282.5	-409.6	1,248.6	1,235.7	12.93	96.549	
4,600.0	4,424.5	4,363.0	4,362.4	19.2	1.4	172.47	-286.3	-410.0	1,285.6	1,272.4	13.24	97.103	
4,626.0	4,447.2	4,385.2	4,384.6	19.5	1.4	172.49	-287.6	-410.1	1,298.9	1,285.5	13.35	97.288	
4,700.0	4,511.8	4,460.9	4,460.2	20.2	1.4	172.52	-292.1	-410.3	1,336.5	1,322.8	13.67	97.796	
4,724.4	4,533.1	4,487.2	4,486.5	20.5	1.4	172.53	-293.8	-410.1	1,348.8	1,335.0	13.77	97.919	
4,796.7	4,596.3	4,542.1	4,541.3	21.2	1.5	172.52	-297.6	-409.5	1,385.0	1,370.9	14.08	98.337	
4,800.0	4,599.1	4,544.4	4,543.5	21.2	1.5	172.52	-297.7	-409.5	1,386.6	1,372.6	14.10	98.366	
4,822.8	4,619.1	4,560.2	4,559.3	21.4	1.5	172.55	-298.9	-409.4	1,398.1	1,383.9	14.18	98.609	
4,900.0	4,687.3	4,618.6	4,617.5	22.0	1.5	172.63	-303.5	-409.3	1,436.1	1,421.6	14.45	99.367	
4,921.2	4,706.2	4,638.5	4,637.3	22.2	1.5	172.65	-305.1	-409.2	1,446.2	1,431.7	14.53	99.549	
5,000.0	4,777.1	4,716.2	4,714.8	22.8	1.5	172.69	-311.2	-409.0	1,482.5	1,467.7	14.80	100.168	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,794.9	4,739.7	4,738.2	22.9	1.5	172.70	-312.9	-408.9	1,491.2	1,476.4	14.86	100.323	
5,100.0	4,868.3	4,825.9	4,824.3	23.5	1.5	172.81	-317.1	-408.5	1,524.8	1,509.7	15.11	100.913	
5,118.1	4,885.0	4,841.3	4,839.7	23.6	1.6	172.84	-317.6	-408.4	1,532.0	1,516.8	15.16	101.056	
5,200.0	4,961.0	4,914.8	4,913.2	24.2	1.6	172.98	-320.1	-408.6	1,563.6	1,548.3	15.38	101.662	
5,216.5	4,976.4	4,932.9	4,931.3	24.3	1.6	173.01	-320.6	-408.7	1,569.7	1,554.3	15.42	101.774	
5,300.0	5,054.8	5,027.9	5,026.2	24.8	1.6	173.12	-323.7	-408.2	1,598.8	1,583.2	15.64	102.253	
5,314.9	5,069.0	5,046.2	5,044.5	24.8	1.6	173.13	-324.3	-408.0	1,603.7	1,588.0	15.67	102.343	
5,400.0	5,149.9	5,134.0	5,132.3	25.3	1.6	173.24	-325.9	-406.9	1,629.4	1,613.6	15.85	102.813	
5,413.4	5,162.7	5,144.9	5,143.2	25.4	1.6	173.26	-326.1	-406.8	1,633.3	1,617.4	15.87	102.891	
5,500.0	5,245.9	5,214.4	5,212.7	25.8	1.6	173.37	-326.9	-406.5	1,657.1	1,641.1	16.03	103.347	
5,511.8	5,257.3	5,223.2	5,221.5	25.9	1.7	173.38	-327.0	-406.5	1,660.3	1,644.2	16.06	103.407	
5,600.0	5,342.9	5,300.0	5,298.3	26.3	1.7	173.46	-328.7	-407.0	1,682.7	1,666.5	16.21	103.825	
5,610.2	5,352.9	5,300.0	5,298.3	26.3	1.7	173.47	-328.7	-407.0	1,685.1	1,668.9	16.22	103.899	
5,700.0	5,440.7	5,402.7	5,400.9	26.7	1.7	173.54	-330.9	-407.8	1,705.1	1,688.8	16.36	104.245	
5,708.6	5,449.1	5,412.0	5,410.2	26.7	1.7	173.55	-331.0	-407.8	1,706.9	1,690.5	16.37	104.287	
5,800.0	5,539.1	5,500.0	5,498.2	27.0	1.7	173.64	-331.4	-408.3	1,723.3	1,706.9	16.47	104.664	
5,807.1	5,546.1	5,513.8	5,512.0	27.0	1.7	173.65	-331.4	-408.4	1,724.5	1,708.0	16.47	104.679	
5,900.0	5,638.1	5,588.4	5,586.6	27.3	1.7	173.71	-332.1	-409.0	1,738.5	1,721.9	16.56	104.983	
5,905.5	5,643.5	5,600.0	5,598.2	27.3	1.7	173.71	-332.3	-409.1	1,739.2	1,722.7	16.57	104.992	
6,000.0	5,737.5	5,673.9	5,672.0	27.5	1.8	173.73	-333.8	-410.2	1,751.1	1,734.5	16.65	105.201	
6,003.9	5,741.4	5,677.2	5,675.4	27.5	1.8	173.74	-333.8	-410.3	1,751.6	1,734.9	16.65	105.209	
6,100.0	5,837.2	5,761.6	5,759.7	27.7	1.8	173.74	-335.7	-412.0	1,761.0	1,744.3	16.72	105.333	
6,102.3	5,839.6	5,763.7	5,761.8	27.7	1.8	173.74	-335.8	-412.0	1,761.2	1,744.5	16.72	105.335	
6,200.0	5,937.2	5,860.3	5,858.4	27.9	1.8	173.67	-340.0	-413.6	1,768.0	1,751.2	16.79	105.319	
6,200.8	5,937.9	5,861.1	5,859.2	27.9	1.8	173.67	-340.0	-413.6	1,768.0	1,751.2	16.79	105.318	
6,256.6	5,993.8	5,923.1	5,921.0	27.9	1.8	-114.54	-344.1	-413.8	1,770.3	1,753.4	16.83	105.209	
6,286.6	6,023.8	5,958.8	5,956.6	27.9	1.9	-114.61	-346.6	-413.7	1,771.0	1,754.2	16.89	104.866	
6,299.2	6,036.4	5,973.8	5,971.6	27.9	1.9	65.35	-347.6	-413.6	1,771.3	1,754.4	16.89	104.878	
6,300.0	6,037.2	5,974.7	5,972.5	27.9	1.9	65.34	-347.6	-413.6	1,771.3	1,754.4	16.89	104.879	
6,350.0	6,087.1	6,027.4	6,025.0	28.0	1.9	65.32	-351.2	-413.3	1,771.3	1,754.4	16.87	104.988	
6,397.6	6,134.3	6,072.5	6,070.1	28.0	1.9	65.49	-354.1	-413.1	1,770.0	1,753.1	16.84	105.099	
6,400.0	6,136.7	6,074.8	6,072.3	28.0	1.9	65.50	-354.2	-413.1	1,769.9	1,753.0	16.84	105.105	
6,450.0	6,185.7	6,125.8	6,123.3	28.0	1.9	65.90	-357.4	-412.9	1,767.0	1,750.2	16.80	105.196	
6,496.0	6,230.2	6,176.4	6,173.8	28.0	1.9	66.50	-360.3	-412.8	1,763.1	1,746.3	16.76	105.226	
6,500.0	6,234.0	6,180.7	6,178.1	28.0	1.9	66.56	-360.5	-412.7	1,762.7	1,745.9	16.75	105.226	
6,550.0	6,281.3	6,233.7	6,231.0	28.0	1.9	67.43	-363.3	-412.5	1,756.9	1,740.2	16.71	105.147	
6,594.5	6,322.2	6,279.4	6,276.6	27.9	2.0	68.37	-365.5	-412.3	1,750.6	1,733.9	16.68	104.946	
6,600.0	6,327.3	6,284.9	6,282.2	27.9	2.0	68.50	-365.7	-412.2	1,749.7	1,733.1	16.68	104.916	
6,650.0	6,371.8	6,331.1	6,328.3	27.9	2.0	69.72	-367.8	-412.0	1,741.4	1,724.8	16.66	104.502	
6,692.9	6,408.6	6,368.1	6,365.2	27.9	2.0	70.88	-369.4	-411.8	1,733.5	1,716.9	16.67	103.984	
6,700.0	6,414.6	6,374.1	6,371.2	27.8	2.0	71.08	-369.6	-411.8	1,732.2	1,715.5	16.67	103.892	
6,750.0	6,455.5	6,415.8	6,413.0	27.8	2.0	72.58	-371.3	-411.6	1,722.2	1,705.5	16.71	103.079	
6,791.3	6,487.7	6,449.7	6,446.8	27.7	2.0	73.93	-372.6	-411.5	1,713.4	1,696.6	16.76	102.247	
6,800.0	6,494.3	6,456.6	6,453.7	27.7	2.0	74.22	-372.9	-411.5	1,711.5	1,694.8	16.77	102.071	
6,850.0	6,530.8	6,495.1	6,492.2	27.7	2.0	75.93	-374.4	-411.3	1,700.5	1,683.6	16.85	100.897	
6,889.7	6,558.1	6,525.8	6,522.9	27.6	2.0	77.37	-375.6	-411.2	1,691.5	1,674.5	16.94	99.840	
6,900.0	6,564.9	6,533.6	6,530.6	27.6	2.0	77.75	-375.9	-411.2	1,689.1	1,672.2	16.96	99.578	
6,950.0	6,596.3	6,569.5	6,566.5	27.6	2.0	79.59	-377.2	-411.0	1,677.7	1,660.6	17.09	98.168	
6,988.2	6,618.4	6,594.8	6,591.8	27.5	2.1	80.99	-378.2	-410.8	1,669.1	1,651.9	17.20	97.025	
7,000.0	6,624.9	6,602.2	6,599.2	27.5	2.1	81.41	-378.4	-410.7	1,666.5	1,649.2	17.23	96.696	
7,050.0	6,650.6	6,631.2	6,628.2	27.5	2.1	83.14	-379.4	-410.5	1,655.6	1,638.2	17.39	95.184	
7,086.6	6,667.5	6,650.4	6,647.3	27.5	2.1	84.35	-380.1	-410.3	1,648.0	1,630.5	17.53	94.017	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT EHRLICH #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,100.0	6,673.3	6,657.0	6,653.9	27.5	2.1	84.77	-380.3	-410.2	1,645.4	1,627.8	17.57	93.622	
7,150.0	6,692.7	6,679.3	6,676.3	27.5	2.1	86.25	-381.1	-410.0	1,635.9	1,618.1	17.78	92.002	
7,185.0	6,704.4	6,692.9	6,689.9	27.5	2.1	87.19	-381.5	-409.9	1,629.9	1,612.0	17.95	90.823	
7,200.0	6,709.0	6,698.2	6,695.1	27.5	2.1	87.56	-381.7	-409.8	1,627.5	1,609.5	18.02	90.314	
7,250.0	6,721.8	6,711.9	6,708.8	27.5	2.1	88.62	-382.2	-409.6	1,620.3	1,602.0	18.29	88.575	
7,283.4	6,728.6	6,719.1	6,716.0	27.5	2.1	89.20	-382.4	-409.6	1,616.2	1,597.7	18.50	87.356	
7,300.0	6,731.3	6,722.2	6,719.1	27.6	2.1	89.45	-382.5	-409.5	1,614.4	1,595.8	18.60	86.781	
7,350.0	6,737.3	6,729.2	6,726.1	27.7	2.1	90.05	-382.7	-409.5	1,609.9	1,590.9	18.95	84.958	
7,381.9	6,739.4	6,732.0	6,728.9	27.7	2.1	90.32	-382.8	-409.4	1,607.8	1,588.7	19.19	83.777	
7,400.0	6,739.9	6,733.0	6,729.9	27.8	2.1	90.42	-382.8	-409.4	1,607.0	1,587.6	19.33	83.143	
7,416.5	6,740.0	6,733.5	6,730.4	27.8	2.1	90.49	-382.8	-409.4	1,606.3	1,586.9	19.46	82.552	
7,468.9	6,739.6	6,734.7	6,731.6	28.0	2.1	90.53	-382.9	-409.4	1,605.5	1,585.6	19.90	80.679	
7,480.3	6,739.5	6,734.9	6,731.8	28.0	2.1	90.54	-382.9	-409.4	1,605.5	1,585.5	20.00	80.294	
7,500.0	6,739.4	6,735.4	6,732.3	28.1	2.1	90.56	-382.9	-409.4	1,605.8	1,585.6	20.16	79.647	
7,578.7	6,738.9	6,737.1	6,734.0	28.5	2.1	90.62	-383.0	-409.4	1,609.2	1,588.3	20.94	76.866	
7,600.0	6,738.7	6,737.6	6,734.5	28.6	2.1	90.64	-383.0	-409.4	1,610.8	1,589.7	21.14	76.180	
7,677.1	6,738.2	6,739.2	6,736.1	29.1	2.1	90.70	-383.0	-409.4	1,618.9	1,596.9	22.01	73.565	
7,700.0	6,738.1	6,739.7	6,736.6	29.2	2.1	90.71	-383.0	-409.4	1,622.0	1,599.8	22.26	72.860	
7,775.6	6,737.5	6,741.3	6,738.2	29.7	2.1	90.77	-383.1	-409.4	1,634.5	1,611.3	23.19	70.478	
7,800.0	6,737.4	6,741.8	6,738.7	29.9	2.1	90.79	-383.1	-409.4	1,639.3	1,615.8	23.49	69.779	
7,874.0	6,736.9	6,743.4	6,740.3	30.6	2.1	90.85	-383.1	-409.3	1,655.8	1,631.3	24.47	67.658	
7,900.0	6,736.7	6,744.0	6,740.9	30.8	2.1	90.86	-383.2	-409.3	1,662.3	1,637.5	24.82	66.983	
7,972.4	6,736.2	6,745.5	6,742.4	31.5	2.1	90.92	-383.2	-409.3	1,682.5	1,656.7	25.83	65.128	
8,000.0	6,736.0	6,746.0	6,742.9	31.8	2.1	90.94	-383.2	-409.3	1,691.0	1,664.8	26.22	64.488	
8,070.8	6,735.5	6,747.5	6,744.4	32.5	2.1	90.99	-383.3	-409.3	1,714.6	1,687.3	27.26	62.886	
8,100.0	6,735.3	6,748.1	6,745.0	32.8	2.1	91.01	-383.3	-409.3	1,725.0	1,697.3	27.69	62.290	
8,169.3	6,734.9	6,749.5	6,746.4	33.6	2.1	91.06	-383.3	-409.3	1,751.5	1,722.8	28.75	60.919	
8,200.0	6,734.6	6,750.1	6,747.0	34.0	2.1	91.09	-383.3	-409.3	1,764.0	1,734.8	29.22	60.369	
8,267.7	6,734.2	6,751.5	6,748.4	34.8	2.1	91.13	-383.4	-409.3	1,793.1	1,762.8	30.29	59.205	
8,300.0	6,734.0	6,752.2	6,749.1	35.2	2.1	91.16	-383.4	-409.3	1,807.7	1,776.9	30.80	58.701	
8,366.1	6,733.5	6,753.5	6,750.4	36.1	2.1	91.20	-383.4	-409.3	1,839.1	1,807.2	31.86	57.718	
8,400.0	6,733.3	6,754.1	6,751.0	36.5	2.1	91.23	-383.5	-409.2	1,855.8	1,823.4	32.41	57.260	
8,464.5	6,732.8	6,755.4	6,752.3	37.4	2.1	91.27	-383.5	-409.2	1,889.0	1,855.5	33.47	56.432	
8,500.0	6,732.6	6,756.1	6,753.0	37.9	2.1	91.30	-383.5	-409.2	1,907.9	1,873.9	34.06	56.019	
8,563.0	6,732.2	6,757.3	6,754.2	38.8	2.1	91.34	-383.6	-409.2	1,942.7	1,907.6	35.12	55.323	
8,600.0	6,731.9	6,758.1	6,755.0	39.3	2.1	91.37	-383.6	-409.2	1,963.7	1,928.0	35.74	54.951	
8,661.4	6,731.5	6,759.3	6,756.1	40.2	2.1	91.41	-383.6	-409.2	1,999.7	1,962.9	36.78	54.367	
8,700.0	6,731.2	6,760.0	6,756.9	40.8	2.1	91.44	-383.6	-409.2	2,023.0	1,985.5	37.44	54.034	
8,759.8	6,730.8	6,761.1	6,758.0	41.7	2.1	91.48	-383.7	-409.2	2,059.9	2,021.4	38.47	53.545	
8,800.0	6,730.6	6,761.9	6,758.8	42.3	2.1	91.51	-383.7	-409.2	2,085.3	2,046.1	39.16	53.247	
8,858.2	6,730.2	6,763.0	6,759.9	43.2	2.1	91.54	-383.7	-409.2	2,122.9	2,082.8	40.18	52.838	
8,900.0	6,729.9	6,763.8	6,760.7	43.8	2.1	91.57	-383.7	-409.2	2,150.5	2,109.6	40.91	52.572	
8,956.7	6,729.5	6,764.8	6,761.7	44.7	2.1	91.61	-383.8	-409.2	2,188.6	2,146.7	41.90	52.231	
9,000.0	6,729.2	6,765.7	6,762.5	45.4	2.1	91.64	-383.8	-409.2	2,218.3	2,175.6	42.66	51.993	
9,055.1	6,728.8	6,766.7	6,763.6	46.3	2.1	91.68	-383.8	-409.1	2,256.6	2,213.0	43.64	51.708	
9,100.0	6,728.5	6,767.5	6,764.4	47.0	2.1	91.70	-383.9	-409.1	2,288.4	2,244.0	44.44	51.497	
9,153.5	6,728.2	6,768.5	6,765.4	47.9	2.1	91.74	-383.9	-409.1	2,326.8	2,281.4	45.39	51.259	
9,200.0	6,727.8	6,769.3	6,766.2	48.6	2.1	91.77	-383.9	-409.1	2,360.7	2,314.5	46.22	51.071	
9,251.9	6,727.5	6,770.3	6,767.2	49.5	2.1	91.80	-383.9	-409.1	2,399.0	2,351.9	47.16	50.873	
9,300.0	6,727.2	6,771.1	6,768.0	50.3	2.1	91.83	-384.0	-409.1	2,434.9	2,386.9	48.02	50.706	
9,350.4	6,726.8	6,772.0	6,768.9	51.1	2.1	91.87	-384.0	-409.1	2,473.0	2,424.1	48.93	50.542	
9,400.0	6,726.5	6,772.9	6,769.8	51.9	2.1	91.90	-384.0	-409.1	2,511.0	2,461.1	49.83	50.394	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT EHRLICH #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,448.8	6,726.1	6,773.8	6,770.7	52.7	2.1	91.93	-384.0	-409.1	2,548.7	2,497.9	50.71	50.257	
9,500.0	6,725.8	6,774.7	6,771.6	53.6	2.1	91.96	-384.1	-409.1	2,588.6	2,537.0	51.64	50.126	
9,547.2	6,725.5	6,775.5	6,772.4	54.4	2.1	91.99	-384.1	-409.1	2,625.8	2,573.3	52.50	50.013	
9,600.0	6,725.1	6,776.4	6,773.3	55.3	2.1	92.02	-384.1	-409.1	2,667.8	2,614.3	53.46	49.898	
9,645.6	6,724.8	6,777.2	6,774.1	56.1	2.1	92.05	-384.1	-409.1	2,704.4	2,650.1	54.30	49.804	
9,700.0	6,724.4	6,778.2	6,775.0	57.0	2.1	92.08	-384.2	-409.1	2,748.3	2,693.0	55.29	49.702	
9,744.1	6,724.1	6,778.9	6,775.8	57.8	2.1	92.11	-384.2	-409.1	2,784.2	2,728.0	56.10	49.625	
9,800.0	6,723.8	6,779.9	6,776.8	58.7	2.1	92.15	-384.2	-409.1	2,830.0	2,772.9	57.13	49.536	
9,842.5	6,723.5	6,780.6	6,777.5	59.5	2.1	92.17	-384.2	-409.0	2,865.1	2,807.2	57.91	49.472	
9,900.0	6,723.1	6,781.6	6,778.5	60.5	2.1	92.21	-384.3	-409.0	2,912.9	2,853.9	58.97	49.394	
9,940.9	6,722.8	6,782.3	6,779.1	61.2	2.1	92.23	-384.3	-409.0	2,947.1	2,887.4	59.73	49.342	
10,000.0	6,722.4	6,783.3	6,780.1	62.2	2.1	92.27	-384.3	-409.0	2,996.8	2,936.0	60.82	49.274	
10,039.3	6,722.1	6,783.9	6,780.8	62.9	2.1	92.29	-384.3	-409.0	3,030.1	2,968.6	61.55	49.232	
10,100.0	6,721.7	6,784.9	6,781.8	64.0	2.1	92.33	-384.3	-409.0	3,081.7	3,019.1	62.67	49.173	
10,137.8	6,721.5	6,785.5	6,782.4	64.7	2.1	92.35	-384.4	-409.0	3,114.0	3,050.6	63.37	49.139	
10,200.0	6,721.0	6,786.6	6,783.4	65.8	2.1	92.38	-384.4	-409.0	3,167.5	3,103.0	64.53	49.088	
10,236.2	6,720.8	6,787.1	6,784.0	66.4	2.1	92.41	-384.4	-409.0	3,198.7	3,133.5	65.20	49.061	
10,300.0	6,720.4	6,788.2	6,785.1	67.5	2.1	92.44	-384.4	-409.0	3,254.1	3,187.7	66.39	49.018	
10,334.6	6,720.1	6,788.7	6,785.6	68.2	2.1	92.46	-384.4	-409.0	3,284.2	3,217.2	67.03	48.996	
10,400.0	6,719.7	6,800.0	6,796.9	69.3	2.1	92.86	-384.8	-408.9	3,341.4	3,273.1	68.27	48.945	
10,433.0	6,719.4	6,800.0	6,796.9	69.9	2.1	92.86	-384.8	-408.9	3,370.4	3,301.5	68.88	48.929	
10,500.0	6,719.0	6,800.0	6,796.9	71.1	2.1	92.86	-384.8	-408.9	3,429.4	3,359.3	70.13	48.900	
10,531.5	6,718.8	6,800.0	6,796.9	71.7	2.1	92.86	-384.8	-408.9	3,457.3	3,386.6	70.72	48.888	
10,600.0	6,718.3	6,800.0	6,796.9	72.9	2.1	92.86	-384.8	-408.9	3,518.1	3,446.1	72.00	48.864	
10,629.9	6,718.1	6,800.0	6,796.9	73.4	2.1	92.86	-384.8	-408.9	3,544.7	3,472.2	72.56	48.855	
10,700.0	6,717.6	6,800.0	6,796.9	74.7	2.1	92.86	-384.8	-408.9	3,607.3	3,533.5	73.87	48.837	
10,728.3	6,717.4	6,800.0	6,796.9	75.2	2.1	92.86	-384.8	-408.9	3,632.7	3,558.3	74.40	48.830	
10,800.0	6,717.0	6,800.0	6,796.9	76.5	2.1	92.86	-384.8	-408.9	3,697.1	3,621.4	75.74	48.816	
10,826.7	6,716.8	6,800.0	6,796.9	77.0	2.1	92.86	-384.8	-408.9	3,721.2	3,645.0	76.24	48.811	
10,900.0	6,716.3	6,800.0	6,796.9	78.3	2.1	92.86	-384.8	-408.9	3,787.4	3,709.8	77.61	48.801	
10,925.2	6,716.1	6,800.0	6,796.9	78.8	2.1	92.86	-384.8	-408.9	3,810.3	3,732.2	78.08	48.798	
11,000.0	6,715.6	6,800.0	6,796.9	80.2	2.1	92.86	-384.8	-408.9	3,878.2	3,798.7	79.49	48.792	
11,023.6	6,715.4	6,800.0	6,796.9	80.6	2.1	92.86	-384.8	-408.9	3,899.7	3,819.8	79.93	48.790	
11,100.0	6,714.9	6,801.0	6,797.9	82.0	2.1	92.90	-384.8	-408.9	3,969.5	3,888.1	81.36	48.786	
11,122.0	6,714.8	6,801.5	6,798.4	82.4	2.1	92.92	-384.8	-408.9	3,989.6	3,907.8	81.78	48.785	
11,200.0	6,714.2	6,803.4	6,800.2	83.8	2.1	92.98	-384.8	-408.9	4,061.1	3,977.8	83.25	48.783	
11,220.4	6,714.1	6,803.8	6,800.7	84.2	2.1	93.00	-384.9	-408.9	4,079.9	3,996.3	83.63	48.783 SF	
11,300.0	6,713.5	6,805.8	6,802.6	85.7	2.1	93.07	-384.9	-408.9	4,153.1	4,068.0	85.13	48.784	
11,318.9	6,713.4	6,806.2	6,803.1	86.0	2.1	93.08	-384.9	-408.9	4,170.5	4,085.0	85.49	48.785	
11,400.0	6,712.9	6,808.2	6,805.1	87.5	2.1	93.15	-385.0	-408.9	4,245.5	4,158.5	87.02	48.788	
11,417.3	6,712.7	6,808.6	6,805.5	87.8	2.1	93.17	-385.0	-408.9	4,261.5	4,174.2	87.35	48.789	
11,500.0	6,712.2	6,810.6	6,807.5	89.3	2.1	93.24	-385.0	-408.9	4,338.2	4,249.3	88.91	48.796	
11,515.7	6,712.1	6,811.0	6,807.9	89.6	2.1	93.26	-385.0	-408.9	4,352.8	4,263.6	89.20	48.797	
11,600.0	6,711.5	6,813.1	6,810.0	91.2	2.1	93.33	-385.1	-408.9	4,431.3	4,340.5	90.79	48.805	
11,614.1	6,711.4	6,813.5	6,810.3	91.4	2.1	93.34	-385.1	-408.8	4,444.5	4,353.4	91.06	48.807	
11,700.0	6,710.8	6,815.6	6,812.5	93.0	2.1	93.42	-385.2	-408.8	4,524.6	4,431.9	92.68	48.817	
11,712.6	6,710.7	6,815.9	6,812.8	93.3	2.1	93.43	-385.2	-408.8	4,536.4	4,443.4	92.92	48.819	
11,800.0	6,710.1	6,818.1	6,815.0	94.9	2.1	93.51	-385.2	-408.8	4,618.2	4,523.6	94.57	48.831	
11,811.0	6,710.1	6,818.4	6,815.3	95.1	2.1	93.52	-385.2	-408.8	4,628.5	4,533.7	94.78	48.833	
11,900.0	6,709.5	6,820.7	6,817.6	96.7	2.1	93.60	-385.3	-408.8	4,712.1	4,615.6	96.47	48.847	
11,909.4	6,709.4	6,820.9	6,817.8	96.9	2.1	93.61	-385.3	-408.8	4,720.9	4,624.3	96.64	48.848	
12,000.0	6,708.8	6,823.3	6,820.2	98.6	2.1	93.69	-385.4	-408.8	4,806.2	4,707.8	98.36	48.864	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT EHRLICH #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,708.7	6,823.5	6,820.4	98.7	2.1	93.70	-385.4	-408.8	4,813.6	4,715.1	98.51	48.866	
12,100.0	6,708.1	6,825.9	6,822.8	100.4	2.1	93.78	-385.5	-408.8	4,900.5	4,800.3	100.25	48.883	
12,106.3	6,708.1	6,826.1	6,822.9	100.6	2.1	93.79	-385.5	-408.8	4,906.5	4,806.1	100.37	48.884	
12,200.0	6,707.4	6,828.6	6,825.4	102.3	2.1	93.88	-385.5	-408.8	4,995.1	4,893.0	102.14	48.903	
12,204.7	6,707.4	6,828.7	6,825.5	102.4	2.1	93.88	-385.5	-408.8	4,999.6	4,897.3	102.23	48.904	
12,300.0	6,706.7	6,831.2	6,828.1	104.2	2.1	93.97	-385.6	-408.7	5,089.9	4,985.9	104.04	48.923	
12,303.1	6,706.7	6,831.3	6,828.2	104.2	2.1	93.98	-385.6	-408.7	5,092.9	4,988.8	104.10	48.924	
12,400.0	6,706.1	6,833.9	6,830.8	106.0	2.1	94.07	-385.7	-408.7	5,184.9	5,078.9	105.93	48.945	
12,401.5	6,706.0	6,834.0	6,830.8	106.1	2.1	94.07	-385.7	-408.7	5,186.3	5,080.4	105.96	48.946	
12,500.0	6,705.4	6,836.7	6,833.5	107.9	2.1	94.17	-385.8	-408.7	5,280.0	5,172.2	107.83	48.968	
12,598.4	6,704.7	6,839.4	6,836.3	109.7	2.1	94.26	-385.8	-408.7	5,373.8	5,264.1	109.69	48.991	
12,600.0	6,704.7	6,839.5	6,836.3	109.8	2.1	94.27	-385.8	-408.7	5,375.3	5,265.6	109.72	48.991	
12,696.8	6,704.0	6,842.2	6,839.0	111.6	2.1	94.36	-385.9	-408.7	5,467.8	5,356.3	111.56	49.014	
12,700.0	6,704.0	6,842.3	6,839.1	111.6	2.1	94.37	-385.9	-408.7	5,470.8	5,359.2	111.62	49.015	
12,795.2	6,703.4	6,845.0	6,841.8	113.4	2.1	94.46	-386.0	-408.7	5,561.9	5,448.5	113.42	49.038	
12,800.0	6,703.3	6,845.1	6,842.0	113.5	2.1	94.47	-386.0	-408.7	5,566.5	5,453.0	113.51	49.039	
12,893.7	6,702.7	6,847.8	6,844.6	115.3	2.1	94.56	-386.1	-408.7	5,656.2	5,540.9	115.29	49.063	
12,900.0	6,702.7	6,848.0	6,844.8	115.4	2.1	94.57	-386.1	-408.7	5,662.3	5,546.9	115.41	49.064	
12,992.1	6,702.0	6,850.6	6,847.5	117.1	2.1	94.66	-386.2	-408.6	5,750.7	5,633.5	117.15	49.087	
13,000.0	6,702.0	6,850.9	6,847.7	117.3	2.1	94.67	-386.2	-408.6	5,758.2	5,640.9	117.30	49.089	
13,090.5	6,701.4	6,853.5	6,850.4	119.0	2.1	94.77	-386.2	-408.6	5,845.2	5,726.2	119.02	49.113	
13,100.0	6,701.3	6,853.8	6,850.7	119.1	2.1	94.78	-386.2	-408.6	5,854.3	5,735.1	119.20	49.115	
13,188.9	6,700.7	6,856.5	6,853.3	120.8	2.1	94.87	-386.3	-408.6	5,939.9	5,819.0	120.88	49.138	
13,200.0	6,700.6	6,856.8	6,853.7	121.0	2.1	94.88	-386.3	-408.6	5,950.5	5,829.4	121.09	49.141	
13,287.4	6,700.0	6,859.4	6,856.3	122.7	2.1	94.98	-386.4	-408.6	6,034.7	5,911.9	122.75	49.164	
13,300.0	6,699.9	6,859.8	6,856.7	122.9	2.1	94.99	-386.4	-408.6	6,046.9	5,923.9	122.99	49.167	
13,385.8	6,699.3	6,862.4	6,859.3	124.5	2.1	95.08	-386.5	-408.6	6,129.6	6,005.0	124.61	49.190	
13,400.0	6,699.3	6,862.9	6,859.7	124.8	2.1	95.10	-386.5	-408.6	6,143.3	6,018.4	124.88	49.194	
13,484.2	6,698.7	6,865.5	6,862.3	126.4	2.1	95.19	-386.6	-408.6	6,224.6	6,098.1	126.47	49.216	
13,500.0	6,698.6	6,866.0	6,862.8	126.7	2.1	95.21	-386.6	-408.6	6,239.8	6,113.1	126.77	49.220	
13,582.6	6,698.0	6,868.5	6,865.4	128.2	2.1	95.30	-386.7	-408.5	6,319.7	6,191.4	128.34	49.243	
13,600.0	6,697.9	6,869.1	6,865.9	128.5	2.1	95.32	-386.7	-408.5	6,336.5	6,207.8	128.67	49.247	
13,681.1	6,697.3	6,871.6	6,868.5	130.1	2.1	95.41	-386.8	-408.5	6,415.0	6,284.8	130.20	49.269	
13,700.0	6,697.2	6,872.2	6,869.1	130.4	2.1	95.43	-386.8	-408.5	6,433.3	6,302.7	130.56	49.274	
13,779.5	6,696.7	6,874.8	6,871.6	131.9	2.1	95.52	-386.9	-408.5	6,510.3	6,378.2	132.06	49.296	
13,800.0	6,696.5	6,875.4	6,872.3	132.3	2.1	95.54	-386.9	-408.5	6,530.1	6,397.7	132.45	49.302	
13,877.9	6,696.0	6,878.0	6,874.8	133.8	2.1	95.63	-387.0	-408.5	6,605.7	6,471.7	133.93	49.323	
13,900.0	6,695.8	6,878.7	6,875.5	134.2	2.1	95.66	-387.0	-408.5	6,627.1	6,492.7	134.34	49.329	
13,976.3	6,695.3	6,881.2	6,878.0	135.6	2.1	95.75	-387.1	-408.5	6,701.2	6,565.4	135.79	49.350	
14,000.0	6,695.2	6,882.0	6,878.8	136.1	2.1	95.77	-387.1	-408.5	6,724.1	6,587.9	136.24	49.356	
14,034.1	6,695.0	6,883.2	6,880.0	136.7	2.1	95.81	-387.1	-408.5	6,757.2	6,620.3	136.88	49.366	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT EHRLICH #2 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-164.23	-1,521.0	-429.6	1,580.7				
98.4	98.4	72.2	72.2	0.1	0.0	-164.22	-1,520.9	-429.7	1,580.5	1,580.3	0.13	N/A	
100.0	100.0	73.8	73.8	0.1	0.1	-164.22	-1,520.9	-429.7	1,580.5	1,580.3	0.14	N/A	
196.8	196.8	171.7	171.7	0.3	0.2	-164.20	-1,520.7	-430.2	1,580.4	1,579.9	0.48	3,265.621	
200.0	200.0	174.8	174.8	0.3	0.2	-164.20	-1,520.7	-430.2	1,580.4	1,579.9	0.50	3,186.360	
295.3	295.3	270.3	270.2	0.5	0.3	-164.18	-1,520.4	-430.8	1,580.3	1,579.5	0.81	1,946.500	
300.0	300.0	275.0	275.0	0.5	0.3	-164.18	-1,520.4	-430.8	1,580.3	1,579.4	0.83	1,911.591	
393.7	393.7	367.7	367.7	0.7	0.4	-164.16	-1,520.2	-431.3	1,580.2	1,579.1	1.11	1,426.440	
400.0	400.0	373.9	373.9	0.8	0.4	-164.16	-1,520.2	-431.3	1,580.2	1,579.0	1.13	1,402.897	
492.1	492.1	466.5	466.5	1.0	0.4	-164.15	-1,520.0	-431.7	1,580.1	1,578.7	1.39	1,134.112	
500.0	500.0	474.5	474.5	1.0	0.4	-164.14	-1,520.0	-431.7	1,580.1	1,578.7	1.42	1,115.964	
590.5	590.5	565.6	565.6	1.2	0.5	-164.13	-1,519.8	-432.1	1,580.0	1,578.3	1.67	944.537	
600.0	600.0	575.1	575.1	1.2	0.5	-164.13	-1,519.8	-432.1	1,580.0	1,578.3	1.70	929.706	
689.0	689.0	663.2	663.2	1.4	0.5	-164.11	-1,519.5	-432.6	1,579.9	1,577.9	1.95	811.402	
700.0	700.0	674.1	674.1	1.4	0.5	-164.11	-1,519.5	-432.6	1,579.9	1,577.9	1.98	798.874	
741.6	741.6	714.7	714.6	1.5	0.6	-164.10	-1,519.4	-432.9	1,579.9	1,577.8	2.09	755.204	
787.4	787.4	758.3	758.3	1.6	0.6	-164.09	-1,519.3	-433.2	1,579.9	1,577.7	2.22	713.028	
800.0	800.0	770.3	770.3	1.7	0.6	-164.08	-1,519.3	-433.3	1,579.9	1,577.7	2.25	702.234	
885.8	885.8	854.2	854.2	1.9	0.6	-164.06	-1,519.3	-434.0	1,580.1	1,577.6	2.48	636.726	
900.0	900.0	868.2	868.2	1.9	0.6	-164.05	-1,519.4	-434.1	1,580.2	1,577.7	2.52	627.077	
984.2	984.2	952.4	952.4	2.1	0.7	-164.03	-1,519.4	-434.9	1,580.4	1,577.7	2.75	575.452	
1,000.0	1,000.0	968.2	968.2	2.1	0.7	-164.02	-1,519.4	-435.0	1,580.5	1,577.7	2.79	566.750	
1,082.7	1,082.7	1,051.4	1,051.4	2.3	0.7	-164.00	-1,519.5	-435.7	1,580.7	1,577.7	3.01	525.192	
1,100.0	1,100.0	1,068.9	1,068.9	2.3	0.7	-163.99	-1,519.5	-435.9	1,580.8	1,577.7	3.06	517.259	
1,181.1	1,181.1	1,149.9	1,149.9	2.5	0.8	-163.97	-1,519.5	-436.5	1,581.0	1,577.7	3.27	483.230	
1,200.0	1,200.0	1,168.7	1,168.7	2.6	0.8	-163.97	-1,519.5	-436.7	1,581.0	1,577.7	3.32	475.952	
1,279.5	1,279.5	1,250.1	1,250.1	2.7	0.8	-163.94	-1,519.5	-437.5	1,581.2	1,577.7	3.53	447.499	
1,300.0	1,300.0	1,271.5	1,271.5	2.8	0.8	-163.93	-1,519.5	-437.7	1,581.3	1,577.7	3.59	440.695	
1,377.9	1,377.9	1,351.3	1,351.3	3.0	0.8	-163.90	-1,519.2	-438.6	1,581.3	1,577.5	3.80	416.584	
1,400.0	1,400.0	1,373.7	1,373.7	3.0	0.9	-163.89	-1,519.1	-438.8	1,581.3	1,577.4	3.85	410.235	
1,476.4	1,476.4	1,451.2	1,451.2	3.2	0.9	-163.85	-1,518.8	-439.8	1,581.2	1,577.1	4.06	389.679	
1,500.0	1,500.0	1,475.2	1,475.1	3.2	0.9	-163.84	-1,518.7	-440.1	1,581.2	1,577.1	4.12	383.732	
1,574.8	1,574.8	1,550.9	1,550.9	3.4	0.9	-163.80	-1,518.3	-441.1	1,581.0	1,576.7	4.32	366.066	
1,600.0	1,600.0	1,576.4	1,576.3	3.5	0.9	-163.79	-1,518.1	-441.4	1,581.0	1,576.6	4.39	360.477	
1,673.2	1,673.2	1,651.1	1,651.0	3.6	1.0	-163.75	-1,517.7	-442.3	1,580.8	1,576.2	4.58	345.153	
1,700.0	1,700.0	1,678.5	1,678.4	3.7	1.0	-163.74	-1,517.5	-442.7	1,580.7	1,576.1	4.65	339.863	
1,771.6	1,771.6	1,751.9	1,751.9	3.8	1.0	-163.70	-1,516.9	-443.6	1,580.4	1,575.6	4.84	326.469	
1,800.0	1,800.0	1,781.0	1,781.0	3.9	1.0	-163.68	-1,516.6	-444.0	1,580.3	1,575.4	4.92	321.451	
1,870.1	1,870.1	1,852.2	1,852.1	4.1	1.0	-163.64	-1,515.9	-445.0	1,579.9	1,574.8	5.10	309.707	
1,900.0	1,900.0	1,882.5	1,882.4	4.1	1.1	-163.62	-1,515.6	-445.4	1,579.8	1,574.6	5.18	304.949	
1,968.5	1,968.5	1,952.2	1,952.1	4.3	1.1	-163.59	-1,514.9	-446.2	1,579.3	1,574.0	5.36	294.591	
2,000.0	2,000.0	1,984.3	1,984.2	4.4	1.1	-163.57	-1,514.6	-446.6	1,579.1	1,573.7	5.44	290.055	
2,066.9	2,066.9	2,052.7	2,052.6	4.5	1.1	-163.54	-1,513.8	-447.4	1,578.6	1,573.0	5.62	280.875	
2,100.0	2,100.0	2,086.6	2,086.5	4.6	1.1	-163.52	-1,513.4	-447.7	1,578.3	1,572.6	5.71	276.545	
2,165.3	2,165.3	2,154.7	2,154.6	4.7	1.2	-163.49	-1,512.6	-448.3	1,577.7	1,571.8	5.88	268.369	
2,200.0	2,200.0	2,191.0	2,190.9	4.8	1.2	-163.47	-1,512.1	-448.6	1,577.3	1,571.4	5.97	264.216	
2,250.0	2,250.0	2,243.4	2,243.3	4.9	1.2	-163.45	-1,511.3	-449.0	1,576.7	1,570.6	6.10	258.469	
2,263.8	2,263.8	2,257.8	2,257.7	4.9	1.2	124.65	-1,511.1	-449.1	1,576.6	1,570.6	5.93	266.042	
2,300.0	2,300.0	2,295.8	2,295.6	5.0	1.2	124.68	-1,510.5	-449.3	1,576.3	1,570.3	6.01	262.156	
2,322.3	2,322.3	2,318.0	2,317.9	5.1	1.2	124.70	-1,510.1	-449.4	1,576.2	1,570.2	6.06	259.918 CC, ES	
2,362.2	2,362.2	2,357.5	2,357.4	5.2	1.2	124.75	-1,509.5	-449.6	1,576.4	1,570.3	6.16	256.043	
2,400.0	2,399.9	2,394.9	2,394.7	5.2	1.2	124.81	-1,508.9	-449.8	1,576.9	1,570.6	6.24	252.530	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT EHRLICH #2 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,460.6	2,460.4	2,453.1	2,453.0	5.4	1.3	124.91	-1,508.0	-450.1	1,578.3	1,571.9	6.39	247.079	
2,500.0	2,499.7	2,490.8	2,490.7	5.4	1.3	124.99	-1,507.5	-450.2	1,579.6	1,573.1	6.48	243.737	
2,559.0	2,558.5	2,548.1	2,548.0	5.6	1.3	125.12	-1,506.8	-450.2	1,582.3	1,575.7	6.63	238.805	
2,600.0	2,599.1	2,587.9	2,587.8	5.7	1.3	125.22	-1,506.4	-450.3	1,584.6	1,577.9	6.73	235.574	
2,657.5	2,656.1	2,645.5	2,645.3	5.8	1.3	125.39	-1,505.8	-450.3	1,588.4	1,581.5	6.88	231.038	
2,700.0	2,698.2	2,688.3	2,688.2	5.9	1.3	125.53	-1,505.3	-450.3	1,591.7	1,584.7	6.98	227.882	
2,755.9	2,753.3	2,744.8	2,744.6	6.1	1.3	125.73	-1,504.7	-450.2	1,596.5	1,589.4	7.14	223.655	
2,800.0	2,796.6	2,789.2	2,789.0	6.2	1.3	125.90	-1,504.1	-450.2	1,600.8	1,593.5	7.26	220.532	
2,854.3	2,849.9	2,841.0	2,840.8	6.3	1.4	126.12	-1,503.5	-450.2	1,606.6	1,599.2	7.42	216.557	
2,900.0	2,894.4	2,883.9	2,883.7	6.5	1.4	126.30	-1,503.0	-450.2	1,612.1	1,604.5	7.55	213.430	
2,952.7	2,945.7	2,933.4	2,933.2	6.6	1.4	126.53	-1,502.5	-450.1	1,619.0	1,611.3	7.72	209.628	
3,000.0	2,991.5	2,977.6	2,977.4	6.8	1.4	126.74	-1,502.2	-450.1	1,625.8	1,618.0	7.87	206.462	
3,051.2	3,040.8	3,024.4	3,024.2	7.0	1.4	126.96	-1,501.9	-449.9	1,633.9	1,625.8	8.05	202.846	
3,100.0	3,087.6	3,068.2	3,068.0	7.1	1.4	127.17	-1,501.7	-449.7	1,642.2	1,634.0	8.22	199.657	
3,149.6	3,134.9	3,112.8	3,112.6	7.4	1.4	127.39	-1,501.6	-449.3	1,651.3	1,642.9	8.42	196.170	
3,200.0	3,182.7	3,158.8	3,158.6	7.6	1.4	127.62	-1,501.7	-448.8	1,661.2	1,652.6	8.61	192.875	
3,248.0	3,228.0	3,200.0	3,199.8	7.8	1.4	127.82	-1,501.9	-448.3	1,671.3	1,662.5	8.82	189.497	
3,300.0	3,276.6	3,248.6	3,248.4	8.1	1.4	128.08	-1,502.2	-447.5	1,683.0	1,673.9	9.04	186.137	
3,346.4	3,319.9	3,289.7	3,289.5	8.3	1.4	128.28	-1,502.5	-446.8	1,694.0	1,684.7	9.27	182.839	
3,400.0	3,369.4	3,337.0	3,336.8	8.6	1.4	128.52	-1,503.1	-445.8	1,707.5	1,698.0	9.52	179.346	
3,444.9	3,410.5	3,376.4	3,376.2	8.9	1.4	128.72	-1,503.6	-444.9	1,719.4	1,709.6	9.76	176.180	
3,500.0	3,460.7	3,425.7	3,425.4	9.2	1.4	128.98	-1,504.3	-443.8	1,734.8	1,724.7	10.05	172.608	
3,543.3	3,499.8	3,465.0	3,464.7	9.5	1.4	129.19	-1,505.0	-442.9	1,747.4	1,737.1	10.30	169.587	
3,600.0	3,550.6	3,515.5	3,515.2	9.9	1.4	129.46	-1,505.7	-441.7	1,764.7	1,754.1	10.63	165.953	
3,641.7	3,587.6	3,551.5	3,551.2	10.3	1.4	129.64	-1,506.3	-440.9	1,778.0	1,767.1	10.90	163.068	
3,709.9	3,647.5	3,609.9	3,609.6	10.8	1.4	129.95	-1,507.3	-439.6	1,800.8	1,789.5	11.34	158.783	
3,740.1	3,673.9	3,636.0	3,635.7	11.1	1.4	130.25	-1,507.8	-439.0	1,811.2	1,799.7	11.54	156.945	
3,800.0	3,726.2	3,687.6	3,687.2	11.6	1.4	130.85	-1,508.8	-437.8	1,832.0	1,820.1	11.93	153.566	
3,838.6	3,759.9	3,721.3	3,720.9	11.9	1.4	131.23	-1,509.4	-437.1	1,845.6	1,833.4	12.19	151.431	
3,900.0	3,813.5	3,775.3	3,774.9	12.5	1.4	131.84	-1,510.4	-435.9	1,867.3	1,854.7	12.59	148.295	
3,937.0	3,845.8	3,807.6	3,807.1	12.8	1.4	132.19	-1,510.9	-435.3	1,880.5	1,867.7	12.84	146.448	
4,000.0	3,900.8	3,861.1	3,860.7	13.4	1.4	132.78	-1,511.9	-434.2	1,903.2	1,889.9	13.26	143.528	
4,035.4	3,931.7	3,891.2	3,890.7	13.7	1.4	133.10	-1,512.4	-433.7	1,916.0	1,902.5	13.50	141.936	
4,100.0	3,988.1	3,947.9	3,947.4	14.3	1.4	133.70	-1,513.5	-432.7	1,939.6	1,925.7	13.93	139.247	
4,133.8	4,017.6	3,977.8	3,977.3	14.7	1.4	134.01	-1,514.0	-432.2	1,952.1	1,937.9	14.16	137.886	
4,200.0	4,075.4	4,035.6	4,035.1	15.3	1.4	134.61	-1,515.0	-431.2	1,976.6	1,962.0	14.60	135.408	
4,232.3	4,103.5	4,063.6	4,063.1	15.6	1.4	134.89	-1,515.5	-430.8	1,988.6	1,973.8	14.81	134.243	
4,300.0	4,162.6	4,123.5	4,123.0	16.2	1.4	135.49	-1,516.5	-429.9	2,014.0	1,998.8	15.26	131.970	
4,330.7	4,189.4	4,151.5	4,151.0	16.5	1.4	135.77	-1,516.9	-429.5	2,025.6	2,010.1	15.46	130.984	
4,400.0	4,249.9	4,214.5	4,214.0	17.2	1.4	136.38	-1,517.8	-428.7	2,051.8	2,035.9	15.92	128.902	
4,429.1	4,275.4	4,240.7	4,240.2	17.5	1.4	136.63	-1,518.1	-428.4	2,062.9	2,046.8	16.11	128.059	
4,500.0	4,337.2	4,304.4	4,303.9	18.2	1.4	137.24	-1,518.9	-427.6	2,089.9	2,073.4	16.57	126.139	
4,527.5	4,361.3	4,329.4	4,328.8	18.5	1.4	137.47	-1,519.2	-427.3	2,100.5	2,083.7	16.75	125.421	
4,600.0	4,424.5	4,395.1	4,394.5	19.2	1.4	138.07	-1,519.9	-426.5	2,128.3	2,111.1	17.21	123.651	
4,626.0	4,447.2	4,417.6	4,417.0	19.5	1.4	138.28	-1,520.1	-426.2	2,138.3	2,121.0	17.38	123.033	
4,700.0	4,511.8	4,480.7	4,480.2	20.2	1.4	138.84	-1,520.7	-425.5	2,167.1	2,149.2	17.85	121.374	
4,724.4	4,533.1	4,501.8	4,501.2	20.5	1.4	139.02	-1,521.0	-425.2	2,176.6	2,158.6	18.01	120.853	
4,796.7	4,596.3	4,573.3	4,572.7	21.2	1.4	139.64	-1,521.5	-424.5	2,204.9	2,186.4	18.46	119.450	
4,800.0	4,599.1	4,576.5	4,575.9	21.2	1.4	139.69	-1,521.5	-424.5	2,206.1	2,187.7	18.47	119.428	
4,822.8	4,619.1	4,599.2	4,598.6	21.4	1.4	140.00	-1,521.6	-424.2	2,214.9	2,196.4	18.55	119.383	
4,900.0	4,687.3	4,668.7	4,668.1	22.0	1.4	140.96	-1,521.9	-423.5	2,243.9	2,225.1	18.83	119.166	
4,921.2	4,706.2	4,688.0	4,687.4	22.2	1.4	141.21	-1,521.9	-423.3	2,251.6	2,232.7	18.90	119.133	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT EHRLICH #2 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,777.1	4,758.6	4,758.0	22.8	1.5	142.07	-1,522.1	-422.6	2,279.4	2,260.2	19.16	118.966	
5,019.7	4,794.9	4,776.3	4,775.7	22.9	1.5	142.28	-1,522.2	-422.4	2,286.1	2,266.9	19.22	118.950	
5,100.0	4,868.3	4,846.5	4,845.9	23.5	1.5	143.06	-1,522.5	-421.7	2,312.6	2,293.2	19.46	118.830	
5,118.1	4,885.0	4,862.1	4,861.5	23.6	1.5	143.22	-1,522.6	-421.5	2,318.4	2,298.9	19.51	118.826	
5,200.0	4,961.0	4,936.3	4,935.7	24.2	1.5	143.94	-1,523.0	-420.8	2,343.6	2,323.9	19.73	118.774	
5,216.5	4,976.4	4,952.0	4,951.4	24.3	1.5	144.08	-1,523.1	-420.7	2,348.5	2,328.7	19.77	118.786	
5,300.0	5,054.8	5,033.7	5,033.1	24.8	1.5	144.75	-1,523.6	-419.9	2,372.0	2,352.1	19.97	118.799	
5,314.9	5,069.0	5,048.8	5,048.2	24.8	1.5	144.87	-1,523.7	-419.7	2,376.0	2,356.0	20.00	118.819	
5,400.0	5,149.9	5,135.3	5,134.7	25.3	1.5	145.48	-1,524.0	-418.8	2,397.6	2,377.5	20.17	118.866	
5,413.4	5,162.7	5,148.9	5,148.3	25.4	1.5	145.57	-1,524.1	-418.6	2,400.8	2,380.6	20.19	118.886	
5,500.0	5,245.9	5,238.5	5,237.8	25.8	1.5	146.10	-1,524.3	-417.4	2,420.3	2,399.9	20.35	118.937	
5,511.8	5,257.3	5,250.8	5,250.2	25.9	1.5	146.17	-1,524.3	-417.3	2,422.7	2,402.4	20.37	118.954	
5,600.0	5,342.9	5,339.3	5,338.7	26.3	1.5	146.63	-1,524.3	-416.0	2,439.9	2,419.4	20.51	118.986	
5,610.2	5,352.9	5,349.1	5,348.4	26.3	1.5	146.67	-1,524.3	-415.8	2,441.7	2,421.2	20.52	118.997	
5,700.0	5,440.7	5,437.2	5,436.6	26.7	1.5	147.05	-1,524.3	-414.5	2,456.7	2,436.1	20.64	119.007	
5,708.6	5,449.1	5,446.1	5,445.4	26.7	1.5	147.09	-1,524.3	-414.4	2,458.0	2,437.4	20.65	119.015	
5,800.0	5,539.1	5,540.8	5,540.2	27.0	1.6	147.41	-1,524.2	-413.0	2,470.5	2,449.8	20.76	118.998	
5,807.1	5,546.1	5,548.3	5,547.6	27.0	1.6	147.43	-1,524.2	-412.8	2,471.4	2,450.6	20.77	119.001	
5,900.0	5,638.1	5,643.7	5,643.0	27.3	1.6	147.68	-1,523.9	-411.3	2,481.3	2,460.4	20.86	118.926	
5,905.5	5,643.5	5,649.1	5,648.5	27.3	1.6	147.69	-1,523.9	-411.2	2,481.8	2,460.9	20.87	118.924	
6,000.0	5,737.5	5,739.1	5,738.5	27.5	1.6	147.87	-1,523.6	-409.8	2,489.1	2,468.1	20.96	118.772	
6,003.9	5,741.4	5,742.7	5,742.0	27.5	1.6	147.88	-1,523.6	-409.8	2,489.3	2,468.4	20.96	118.768	
6,100.0	5,837.2	5,830.7	5,830.1	27.7	1.6	147.99	-1,523.5	-408.7	2,494.3	2,473.2	21.04	118.544	
6,102.3	5,839.6	5,833.0	5,832.3	27.7	1.6	147.99	-1,523.5	-408.6	2,494.3	2,473.3	21.04	118.539	
6,200.0	5,937.2	5,929.4	5,928.7	27.9	1.6	148.04	-1,523.4	-407.7	2,496.7	2,475.6	21.12	118.218	
6,200.8	5,937.9	5,930.2	5,929.5	27.9	1.6	148.04	-1,523.4	-407.7	2,496.7	2,475.6	21.12	118.216	
6,256.6	5,993.8	5,991.9	5,991.2	27.9	1.6	-140.05	-1,523.2	-407.1	2,496.7	2,475.5	21.16	117.972	
6,286.6	6,023.8	6,019.4	6,018.7	27.9	1.6	-140.05	-1,523.0	-406.9	2,496.4	2,475.2	21.21	117.714	
6,299.2	6,036.4	6,030.2	6,029.5	27.9	1.6	39.96	-1,523.0	-406.8	2,496.2	2,475.0	21.19	117.787	
6,300.0	6,037.2	6,030.9	6,030.2	27.9	1.6	39.96	-1,523.0	-406.8	2,496.2	2,475.0	21.19	117.792	
6,350.0	6,087.1	6,073.6	6,072.9	28.0	1.6	40.11	-1,522.9	-406.4	2,493.8	2,472.7	21.10	118.184	
6,397.6	6,134.3	6,115.3	6,114.6	28.0	1.6	40.42	-1,523.0	-406.1	2,489.2	2,468.2	20.97	118.680	
6,400.0	6,136.7	6,117.5	6,116.8	28.0	1.6	40.44	-1,523.0	-406.1	2,488.9	2,467.9	20.97	118.711	
6,450.0	6,185.7	6,163.1	6,162.4	28.0	1.7	40.96	-1,523.1	-405.8	2,481.5	2,460.7	20.78	119.424	
6,496.0	6,230.2	6,205.4	6,204.7	28.0	1.7	41.62	-1,523.1	-405.8	2,472.4	2,451.8	20.56	120.281	
6,500.0	6,234.0	6,209.5	6,208.8	28.0	1.7	41.68	-1,523.1	-405.8	2,471.5	2,451.0	20.53	120.370	
6,550.0	6,281.3	6,261.6	6,260.9	28.0	1.7	42.65	-1,523.0	-405.7	2,459.0	2,438.8	20.22	121.592	
6,594.5	6,322.2	6,306.0	6,305.3	27.9	1.7	43.70	-1,522.9	-405.6	2,445.8	2,425.9	19.90	122.891	
6,600.0	6,327.3	6,311.0	6,310.3	27.9	1.7	43.84	-1,522.9	-405.5	2,444.0	2,424.2	19.86	123.071	
6,650.0	6,371.8	6,354.9	6,354.2	27.9	1.7	45.22	-1,522.8	-405.4	2,426.7	2,407.3	19.45	124.752	
6,692.9	6,408.6	6,391.2	6,390.5	27.9	1.7	46.60	-1,522.7	-405.3	2,410.1	2,391.0	19.08	126.310	
6,700.0	6,414.6	6,397.1	6,396.4	27.8	1.7	46.84	-1,522.7	-405.2	2,407.2	2,388.2	19.02	126.589	
6,750.0	6,455.5	6,437.3	6,436.6	27.8	1.7	48.70	-1,522.7	-405.1	2,385.7	2,367.1	18.57	128.456	
6,791.3	6,487.7	6,468.9	6,468.2	27.7	1.7	50.43	-1,522.6	-405.0	2,366.5	2,348.3	18.22	129.875	
6,800.0	6,494.3	6,475.4	6,474.7	27.7	1.7	50.82	-1,522.6	-405.0	2,362.3	2,344.2	18.15	130.173	
6,850.0	6,530.8	6,500.0	6,499.3	27.7	1.7	53.01	-1,522.6	-404.9	2,337.3	2,319.5	17.78	131.444	
6,889.7	6,558.1	6,500.0	6,499.3	27.6	1.7	54.58	-1,522.6	-404.9	2,316.5	2,298.9	17.56	131.950	
6,900.0	6,564.9	6,500.0	6,499.3	27.6	1.7	55.00	-1,522.6	-404.9	2,311.0	2,293.5	17.50	132.066	
6,950.0	6,596.3	6,500.0	6,499.3	27.6	1.7	57.15	-1,522.6	-404.9	2,283.9	2,266.6	17.29	132.082	
6,988.2	6,618.4	6,500.0	6,499.3	27.5	1.7	58.89	-1,522.6	-404.9	2,262.6	2,245.4	17.20	131.575	
7,000.0	6,624.9	6,500.0	6,499.3	27.5	1.7	59.44	-1,522.6	-404.9	2,256.0	2,238.8	17.17	131.397	
7,050.0	6,650.6	6,500.0	6,499.3	27.5	1.7	61.88	-1,522.6	-404.9	2,227.3	2,210.2	17.13	129.988	

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 EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT EHRLICH #2 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,086.6	6,667.5	6,500.0	6,499.3	27.5	1.7	63.75	-1,522.6	-404.9	2,205.9	2,188.8	17.17	128.448	
7,100.0	6,673.3	6,500.0	6,499.3	27.5	1.7	64.46	-1,522.6	-404.9	2,198.0	2,180.9	17.18	127.905	
7,150.0	6,692.7	6,500.0	6,499.3	27.5	1.7	67.15	-1,522.6	-404.9	2,168.3	2,151.0	17.31	125.254	
7,185.0	6,704.4	6,500.0	6,499.3	27.5	1.7	69.11	-1,522.6	-404.9	2,147.3	2,129.9	17.41	123.317	
7,200.0	6,709.0	6,500.0	6,499.3	27.5	1.7	69.96	-1,522.6	-404.9	2,138.2	2,120.7	17.50	122.164	
7,250.0	6,721.8	6,500.0	6,499.3	27.5	1.7	72.84	-1,522.6	-404.9	2,108.0	2,090.2	17.75	118.748	
7,283.4	6,728.6	6,500.0	6,499.3	27.5	1.7	74.80	-1,522.6	-404.9	2,087.7	2,069.7	17.95	116.295	
7,300.0	6,731.3	6,500.0	6,499.3	27.6	1.7	75.78	-1,522.6	-404.9	2,077.6	2,059.6	18.05	115.084	
7,350.0	6,737.3	6,500.0	6,499.3	27.7	1.7	78.75	-1,522.6	-404.9	2,047.3	2,028.9	18.41	111.203	
7,381.9	6,739.4	6,500.0	6,499.3	27.7	1.7	80.64	-1,522.6	-404.9	2,028.2	2,009.5	18.68	108.587	
7,400.0	6,739.9	6,500.0	6,499.3	27.8	1.7	81.71	-1,522.6	-404.9	2,017.3	1,998.5	18.84	107.102	
7,416.5	6,740.0	6,500.0	6,499.3	27.8	1.7	82.68	-1,522.6	-404.9	2,007.5	1,988.5	18.99	105.694	
7,480.3	6,739.5	6,500.0	6,499.3	28.0	1.7	82.68	-1,522.6	-404.9	1,970.2	1,950.7	19.51	100.968	
7,500.0	6,739.4	6,500.0	6,499.3	28.1	1.7	82.68	-1,522.6	-404.9	1,959.0	1,939.3	19.67	99.573	
7,578.7	6,738.9	6,500.0	6,499.3	28.5	1.7	82.68	-1,522.6	-404.9	1,915.5	1,895.0	20.43	93.752	
7,600.0	6,738.7	6,500.0	6,499.3	28.6	1.7	82.68	-1,522.6	-404.9	1,904.1	1,883.4	20.64	92.271	
7,677.1	6,738.2	6,500.0	6,499.3	29.1	1.7	82.68	-1,522.6	-404.9	1,864.3	1,842.8	21.48	86.775	
7,700.0	6,738.1	6,500.0	6,499.3	29.2	1.7	82.68	-1,522.6	-404.9	1,853.0	1,831.2	21.74	85.251	
7,775.6	6,737.5	6,500.0	6,499.3	29.7	1.7	82.68	-1,522.6	-404.9	1,817.0	1,794.4	22.65	80.207	
7,800.0	6,737.4	6,500.0	6,499.3	29.9	1.7	82.68	-1,522.6	-404.9	1,806.0	1,783.0	22.95	78.687	
7,874.0	6,736.9	6,500.0	6,499.3	30.6	1.7	82.68	-1,522.6	-404.9	1,774.0	1,750.1	23.92	74.155	
7,900.0	6,736.7	6,500.0	6,499.3	30.8	1.7	82.68	-1,522.6	-404.9	1,763.4	1,739.1	24.26	72.674	
7,972.4	6,736.2	6,500.0	6,499.3	31.5	1.7	82.68	-1,522.6	-404.9	1,735.5	1,710.2	25.27	68.666	
8,000.0	6,736.0	6,500.0	6,499.3	31.8	1.7	82.68	-1,522.6	-404.9	1,725.5	1,699.9	25.66	67.250	
8,070.8	6,735.5	6,500.0	6,499.3	32.5	1.7	82.68	-1,522.6	-404.9	1,701.8	1,675.1	26.69	63.751	
8,100.0	6,735.3	6,500.0	6,499.3	32.8	1.7	82.68	-1,522.6	-404.9	1,692.7	1,665.6	27.12	62.417	
8,169.3	6,734.9	6,500.0	6,499.3	33.6	1.7	82.68	-1,522.6	-404.9	1,673.2	1,645.0	28.17	59.392	
8,200.0	6,734.6	6,500.0	6,499.3	34.0	1.7	82.68	-1,522.6	-404.9	1,665.3	1,636.7	28.64	58.152	
8,267.7	6,734.2	6,500.0	6,499.3	34.8	1.7	82.68	-1,522.6	-404.9	1,650.0	1,620.3	29.70	55.559	
8,300.0	6,734.0	6,500.0	6,499.3	35.2	1.7	82.68	-1,522.6	-404.9	1,643.6	1,613.4	30.20	54.417	
8,366.1	6,733.5	6,500.0	6,499.3	36.1	1.7	82.68	-1,522.6	-404.9	1,632.4	1,601.1	31.27	52.211	
8,400.0	6,733.3	6,500.0	6,499.3	36.5	1.7	82.68	-1,522.6	-404.9	1,627.7	1,595.9	31.81	51.170	
8,464.5	6,732.8	6,500.0	6,499.3	37.4	1.7	82.68	-1,522.6	-404.9	1,620.6	1,587.7	32.87	49.308	
8,500.0	6,732.6	6,500.0	6,499.3	37.9	1.7	82.68	-1,522.6	-404.9	1,617.8	1,584.4	33.45	48.367	
8,563.0	6,732.2	6,500.0	6,499.3	38.8	1.7	82.68	-1,522.6	-404.9	1,614.7	1,580.2	34.50	46.805	
8,600.0	6,731.9	6,500.0	6,499.3	39.3	1.7	82.68	-1,522.6	-404.9	1,614.1	1,579.0	35.12	45.964	
8,610.1	6,731.9	6,500.0	6,499.3	39.5	1.7	82.68	-1,522.6	-404.9	1,614.1	1,578.8	35.29	45.739	
8,661.4	6,731.5	6,500.0	6,499.3	40.2	1.7	82.68	-1,522.6	-404.9	1,614.9	1,578.7	36.16	44.664	
8,700.0	6,731.2	6,500.0	6,499.3	40.8	1.7	82.68	-1,522.6	-404.9	1,616.5	1,579.7	36.81	43.917	
8,759.8	6,730.8	6,500.0	6,499.3	41.7	1.7	82.68	-1,522.6	-404.9	1,621.0	1,583.1	37.83	42.843	
8,800.0	6,730.6	6,500.0	6,499.3	42.3	1.7	82.68	-1,522.6	-404.9	1,625.2	1,586.7	38.52	42.187	
8,858.2	6,730.2	6,500.0	6,499.3	43.2	1.7	82.68	-1,522.6	-404.9	1,633.0	1,593.5	39.53	41.308	
8,900.0	6,729.9	6,500.0	6,499.3	43.8	1.7	82.68	-1,522.6	-404.9	1,639.9	1,599.6	40.26	40.736	
8,956.7	6,729.5	6,500.0	6,499.3	44.7	1.7	82.68	-1,522.6	-404.9	1,650.8	1,609.6	41.25	40.023	
9,000.0	6,729.2	6,500.0	6,499.3	45.4	1.7	82.68	-1,522.6	-404.9	1,660.5	1,618.5	42.00	39.531	
9,055.1	6,728.8	6,500.0	6,499.3	46.3	1.7	82.68	-1,522.6	-404.9	1,674.3	1,631.3	42.98	38.958	
9,100.0	6,728.5	6,500.0	6,499.3	47.0	1.7	82.68	-1,522.6	-404.9	1,686.7	1,643.0	43.77	38.539	
9,153.5	6,728.2	6,500.0	6,499.3	47.9	1.7	82.68	-1,522.6	-404.9	1,703.1	1,658.3	44.72	38.085	
9,200.0	6,727.8	6,500.0	6,499.3	48.6	1.7	82.68	-1,522.6	-404.9	1,718.5	1,672.9	45.54	37.733	
9,251.9	6,727.5	6,500.0	6,499.3	49.5	1.7	82.68	-1,522.6	-404.9	1,737.0	1,690.5	46.47	37.378	
9,300.0	6,727.2	6,500.0	6,499.3	50.3	1.7	82.68	-1,522.6	-404.9	1,755.3	1,708.0	47.33	37.088	
9,350.4	6,726.8	6,500.0	6,499.3	51.1	1.7	82.68	-1,522.6	-404.9	1,775.7	1,727.5	48.23	36.815	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT EHRLICH #2 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,400.0	6,726.5	6,500.0	6,499.3	51.9	1.7	82.68	-1,522.6	-404.9	1,797.0	1,747.8	49.12	36.580	
9,448.8	6,726.1	6,500.0	6,499.3	52.7	1.7	82.68	-1,522.6	-404.9	1,818.9	1,768.9	50.00	36.376	
9,500.0	6,725.8	6,500.0	6,499.3	53.6	1.7	82.68	-1,522.6	-404.9	1,843.1	1,792.2	50.93	36.191	
9,547.2	6,725.5	6,500.0	6,499.3	54.4	1.7	82.68	-1,522.6	-404.9	1,866.4	1,814.6	51.78	36.042	
9,600.0	6,725.1	6,500.0	6,499.3	55.3	1.7	82.68	-1,522.6	-404.9	1,893.4	1,840.7	52.74	35.901	
9,645.6	6,724.8	6,500.0	6,499.3	56.1	1.7	82.68	-1,522.6	-404.9	1,917.7	1,864.1	53.57	35.798	
9,700.0	6,724.4	6,500.0	6,499.3	57.0	1.7	82.68	-1,522.6	-404.9	1,947.6	1,893.0	54.56	35.697	
9,744.1	6,724.1	6,500.0	6,499.3	57.8	1.7	82.68	-1,522.6	-404.9	1,972.6	1,917.2	55.36	35.630	
9,800.0	6,723.8	6,500.0	6,499.3	58.7	1.7	82.68	-1,522.6	-404.9	2,005.2	1,948.8	56.38	35.565	
9,842.5	6,723.5	6,500.0	6,499.3	59.5	1.7	82.68	-1,522.6	-404.9	2,030.7	1,973.6	57.16	35.527	
9,900.0	6,723.1	6,500.0	6,499.3	60.5	1.7	82.68	-1,522.6	-404.9	2,066.1	2,007.9	58.21	35.493	
9,940.9	6,722.8	6,500.0	6,499.3	61.2	1.7	82.68	-1,522.6	-404.9	2,091.9	2,033.0	58.96	35.478	
10,000.0	6,722.4	6,500.0	6,499.3	62.2	1.7	82.68	-1,522.6	-404.9	2,130.0	2,069.9	60.05	35.471 SF	
10,039.3	6,722.1	6,500.0	6,499.3	62.9	1.7	82.68	-1,522.6	-404.9	2,155.9	2,095.1	60.77	35.474	
10,100.0	6,721.7	6,500.0	6,499.3	64.0	1.7	82.68	-1,522.6	-404.9	2,196.6	2,134.7	61.89	35.492	
10,137.8	6,721.5	6,500.0	6,499.3	64.7	1.7	82.68	-1,522.6	-404.9	2,222.3	2,159.8	62.59	35.509	
10,200.0	6,721.0	6,500.0	6,499.3	65.8	1.7	82.68	-1,522.6	-404.9	2,265.6	2,201.8	63.73	35.548	
10,236.2	6,720.8	6,500.0	6,499.3	66.4	1.7	82.68	-1,522.6	-404.9	2,291.1	2,226.7	64.40	35.575	
10,300.0	6,720.4	6,500.0	6,499.3	67.5	1.7	82.68	-1,522.6	-404.9	2,336.8	2,271.3	65.58	35.633	
10,334.6	6,720.1	6,500.0	6,499.3	68.2	1.7	82.68	-1,522.6	-404.9	2,362.0	2,295.8	66.22	35.668	
10,400.0	6,719.7	6,500.0	6,499.3	69.3	1.7	82.68	-1,522.6	-404.9	2,410.1	2,342.7	67.43	35.742	
10,433.0	6,719.4	6,500.0	6,499.3	69.9	1.7	82.68	-1,522.6	-404.9	2,434.8	2,366.7	68.05	35.782	
10,500.0	6,719.0	6,500.0	6,499.3	71.1	1.7	82.68	-1,522.6	-404.9	2,485.3	2,416.0	69.29	35.870	
10,531.5	6,718.8	6,500.0	6,499.3	71.7	1.7	82.68	-1,522.6	-404.9	2,509.3	2,439.4	69.87	35.913	
10,600.0	6,718.3	6,500.0	6,499.3	72.9	1.7	82.68	-1,522.6	-404.9	2,562.2	2,491.0	71.14	36.013	
10,629.9	6,718.1	6,500.0	6,499.3	73.4	1.7	82.68	-1,522.6	-404.9	2,585.5	2,513.8	71.70	36.059	
10,700.0	6,717.6	6,500.0	6,499.3	74.7	1.7	82.68	-1,522.6	-404.9	2,640.6	2,567.6	73.01	36.170	
10,728.3	6,717.4	6,500.0	6,499.3	75.2	1.7	82.68	-1,522.6	-404.9	2,663.1	2,589.5	73.53	36.216	
10,800.0	6,717.0	6,500.0	6,499.3	76.5	1.7	82.68	-1,522.6	-404.9	2,720.4	2,645.5	74.87	36.336	
10,826.7	6,716.8	6,500.0	6,499.3	77.0	1.7	82.68	-1,522.6	-404.9	2,742.0	2,666.6	75.37	36.382	
10,900.0	6,716.3	6,500.0	6,499.3	78.3	1.7	82.68	-1,522.6	-404.9	2,801.5	2,724.8	76.73	36.510	
10,925.2	6,716.1	6,500.0	6,499.3	78.8	1.7	82.68	-1,522.6	-404.9	2,822.2	2,744.9	77.20	36.555	
11,000.0	6,715.6	6,500.0	6,499.3	80.2	1.7	82.68	-1,522.6	-404.9	2,883.8	2,805.2	78.60	36.690	
11,023.6	6,715.4	6,500.0	6,499.3	80.6	1.7	82.68	-1,522.6	-404.9	2,903.4	2,824.4	79.04	36.733	
11,100.0	6,714.9	6,500.0	6,499.3	82.0	1.7	82.68	-1,522.6	-404.9	2,967.2	2,886.8	80.47	36.874	
11,122.0	6,714.8	6,500.0	6,499.3	82.4	1.7	82.68	-1,522.6	-404.9	2,985.8	2,904.9	80.88	36.915	
11,200.0	6,714.2	6,500.0	6,499.3	83.8	1.7	82.68	-1,522.6	-404.9	3,051.6	2,969.3	82.34	37.061	
11,220.4	6,714.1	6,500.0	6,499.3	84.2	1.7	82.68	-1,522.6	-404.9	3,069.0	2,986.3	82.72	37.099	
11,300.0	6,713.5	6,500.0	6,499.3	85.7	1.7	82.68	-1,522.6	-404.9	3,137.0	3,052.7	84.21	37.250	
11,318.9	6,713.4	6,500.0	6,499.3	86.0	1.7	82.68	-1,522.6	-404.9	3,153.2	3,068.6	84.57	37.285	
11,400.0	6,712.9	6,500.0	6,499.3	87.5	1.7	82.68	-1,522.6	-404.9	3,223.1	3,137.0	86.09	37.439	
11,417.3	6,712.7	6,500.0	6,499.3	87.8	1.7	82.68	-1,522.6	-404.9	3,238.1	3,151.7	86.41	37.472	
11,500.0	6,712.2	6,500.0	6,499.3	89.3	1.7	82.68	-1,522.6	-404.9	3,310.1	3,222.1	87.97	37.629	
11,515.7	6,712.1	6,500.0	6,499.3	89.6	1.7	82.68	-1,522.6	-404.9	3,323.8	3,235.5	88.26	37.659	
11,600.0	6,711.5	6,500.0	6,499.3	91.2	1.7	82.68	-1,522.6	-404.9	3,397.7	3,307.9	89.84	37.818	
11,614.1	6,711.4	6,500.0	6,499.3	91.4	1.7	82.68	-1,522.6	-404.9	3,410.2	3,320.1	90.11	37.845	
11,700.0	6,710.8	6,500.0	6,499.3	93.0	1.7	82.68	-1,522.6	-404.9	3,486.0	3,394.3	91.72	38.007	
11,712.6	6,710.7	6,500.0	6,499.3	93.3	1.7	82.68	-1,522.6	-404.9	3,497.2	3,405.2	91.96	38.030	
11,800.0	6,710.1	6,500.0	6,499.3	94.9	1.7	82.68	-1,522.6	-404.9	3,575.0	3,481.4	93.60	38.193	
11,811.0	6,710.1	6,500.0	6,499.3	95.1	1.7	82.68	-1,522.6	-404.9	3,584.8	3,491.0	93.81	38.214	
11,900.0	6,709.5	6,500.0	6,499.3	96.7	1.7	82.68	-1,522.6	-404.9	3,664.5	3,569.0	95.48	38.378	
11,909.4	6,709.4	6,500.0	6,499.3	96.9	1.7	82.68	-1,522.6	-404.9	3,672.9	3,577.3	95.66	38.396	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT EHRLICH #2 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,000.0	6,708.8	6,500.0	6,499.3	98.6	1.7	82.68	-1,522.6	-404.9	3,754.5	3,657.1	97.37	38.561	
12,007.8	6,708.7	6,500.0	6,499.3	98.7	1.7	82.68	-1,522.6	-404.9	3,761.6	3,664.1	97.51	38.575	
12,100.0	6,708.1	6,500.0	6,499.3	100.4	1.7	82.68	-1,522.6	-404.9	3,845.0	3,745.8	99.25	38.741	
12,106.3	6,708.1	6,500.0	6,499.3	100.6	1.7	82.68	-1,522.6	-404.9	3,850.7	3,751.4	99.37	38.753	
12,200.0	6,707.4	6,500.0	6,499.3	102.3	1.7	82.68	-1,522.6	-404.9	3,936.0	3,834.9	101.13	38.919	
12,204.7	6,707.4	6,500.0	6,499.3	102.4	1.7	82.68	-1,522.6	-404.9	3,940.3	3,839.1	101.22	38.927	
12,300.0	6,706.7	6,500.0	6,499.3	104.2	1.7	82.68	-1,522.6	-404.9	4,027.4	3,924.4	103.02	39.094	
12,303.1	6,706.7	6,500.0	6,499.3	104.2	1.7	82.68	-1,522.6	-404.9	4,030.3	3,927.2	103.08	39.100	
12,400.0	6,706.1	6,500.0	6,499.3	106.0	1.7	82.68	-1,522.6	-404.9	4,119.2	4,014.3	104.90	39.267	
12,401.5	6,706.0	6,500.0	6,499.3	106.1	1.7	82.68	-1,522.6	-404.9	4,120.7	4,015.7	104.93	39.269	
12,500.0	6,705.4	6,500.0	6,499.3	107.9	1.7	82.68	-1,522.6	-404.9	4,211.4	4,104.6	106.79	39.436	
12,598.4	6,704.7	6,500.0	6,499.3	109.7	1.7	82.68	-1,522.6	-404.9	4,302.5	4,193.8	108.65	39.600	
12,600.0	6,704.7	6,500.0	6,499.3	109.8	1.7	82.68	-1,522.6	-404.9	4,304.0	4,195.3	108.68	39.602	
12,696.8	6,704.0	6,500.0	6,499.3	111.6	1.7	82.68	-1,522.6	-404.9	4,393.9	4,283.4	110.51	39.761	
12,700.0	6,704.0	6,500.0	6,499.3	111.6	1.7	82.68	-1,522.6	-404.9	4,396.8	4,286.3	110.57	39.766	
12,795.2	6,703.4	6,500.0	6,499.3	113.4	1.7	82.68	-1,522.6	-404.9	4,485.6	4,373.2	112.37	39.919	
12,800.0	6,703.3	6,500.0	6,499.3	113.5	1.7	82.68	-1,522.6	-404.9	4,490.0	4,377.5	112.46	39.926	
12,893.7	6,702.7	6,500.0	6,499.3	115.3	1.7	82.68	-1,522.6	-404.9	4,577.5	4,463.3	114.23	40.074	
12,900.0	6,702.7	6,500.0	6,499.3	115.4	1.7	82.68	-1,522.6	-404.9	4,583.5	4,469.1	114.35	40.084	
12,992.1	6,702.0	6,500.0	6,499.3	117.1	1.7	82.68	-1,522.6	-404.9	4,669.8	4,553.7	116.09	40.226	
13,000.0	6,702.0	6,500.0	6,499.3	117.3	1.7	82.68	-1,522.6	-404.9	4,677.2	4,560.9	116.24	40.238	
13,090.5	6,701.4	6,500.0	6,499.3	119.0	1.7	82.68	-1,522.6	-404.9	4,762.2	4,644.3	117.95	40.375	
13,100.0	6,701.3	6,500.0	6,499.3	119.1	1.7	82.68	-1,522.6	-404.9	4,771.2	4,653.0	118.13	40.389	
13,188.9	6,700.7	6,500.0	6,499.3	120.8	1.7	82.68	-1,522.6	-404.9	4,855.0	4,735.2	119.81	40.522	
13,200.0	6,700.6	6,500.0	6,499.3	121.0	1.7	82.68	-1,522.6	-404.9	4,865.4	4,745.4	120.02	40.538	
13,287.4	6,700.0	6,500.0	6,499.3	122.7	1.7	82.68	-1,522.6	-404.9	4,947.9	4,826.2	121.67	40.665	
13,300.0	6,699.9	6,500.0	6,499.3	122.9	1.7	82.68	-1,522.6	-404.9	4,959.8	4,837.9	121.91	40.683	
13,385.8	6,699.3	6,500.0	6,499.3	124.5	1.7	82.68	-1,522.6	-404.9	5,041.0	4,917.5	123.54	40.806	
13,400.0	6,699.3	6,500.0	6,499.3	124.8	1.7	82.68	-1,522.6	-404.9	5,054.5	4,930.7	123.81	40.826	
13,484.2	6,698.7	6,500.0	6,499.3	126.4	1.7	82.68	-1,522.6	-404.9	5,134.4	5,009.0	125.40	40.944	
13,500.0	6,698.6	6,500.0	6,499.3	126.7	1.7	82.68	-1,522.6	-404.9	5,149.4	5,023.7	125.70	40.966	
13,582.6	6,698.0	6,500.0	6,499.3	128.2	1.7	82.68	-1,522.6	-404.9	5,227.9	5,100.6	127.26	41.079	
13,600.0	6,697.9	6,500.0	6,499.3	128.5	1.7	82.68	-1,522.6	-404.9	5,244.4	5,116.8	127.59	41.103	
13,681.1	6,697.3	6,500.0	6,499.3	130.1	1.7	82.68	-1,522.6	-404.9	5,321.6	5,192.5	129.13	41.212	
13,700.0	6,697.2	6,500.0	6,499.3	130.4	1.7	82.68	-1,522.6	-404.9	5,339.6	5,210.2	129.49	41.237	
13,779.5	6,696.7	6,500.0	6,499.3	131.9	1.7	82.68	-1,522.6	-404.9	5,415.5	5,284.5	130.99	41.342	
13,800.0	6,696.5	6,500.0	6,499.3	132.3	1.7	82.68	-1,522.6	-404.9	5,435.1	5,303.7	131.38	41.368	
13,877.9	6,696.0	6,500.0	6,499.3	133.8	1.7	82.68	-1,522.6	-404.9	5,509.5	5,376.7	132.86	41.469	
13,900.0	6,695.8	6,500.0	6,499.3	134.2	1.7	82.68	-1,522.6	-404.9	5,530.6	5,397.3	133.28	41.497	
13,976.3	6,695.3	6,500.0	6,499.3	135.6	1.7	82.68	-1,522.6	-404.9	5,603.7	5,469.0	134.72	41.594	
14,000.0	6,695.2	6,500.0	6,499.3	136.1	1.7	82.68	-1,522.6	-404.9	5,626.3	5,491.2	135.17	41.624	
14,034.1	6,695.0	6,500.0	6,499.3	136.7	1.7	82.68	-1,522.6	-404.9	5,659.0	5,523.2	135.82	41.666	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	161.78	-6,745.2	2,220.4	7,101.6				
98.4	98.4	17.0	17.0	0.1	0.0	161.78	-6,745.2	2,220.4	7,101.2	7,101.1	0.09	N/A	
100.0	100.0	18.1	18.1	0.1	0.0	161.78	-6,745.2	2,220.4	7,101.2	7,101.1	0.09	N/A	
196.8	196.8	100.0	100.0	0.3	0.0	161.78	-6,745.5	2,220.2	7,101.5	7,101.2	0.32	N/A	
200.0	200.0	100.0	100.0	0.3	0.0	161.78	-6,745.5	2,220.2	7,101.5	7,101.2	0.33	N/A	
295.3	295.3	180.7	180.7	0.5	0.2	161.79	-6,746.1	2,219.9	7,102.0	7,101.3	0.69	N/A	
300.0	300.0	185.4	185.4	0.5	0.2	161.79	-6,746.1	2,219.9	7,102.1	7,101.4	0.71	9,972.474	
393.7	393.7	255.2	255.2	0.7	0.2	161.79	-6,746.6	2,220.0	7,102.7	7,101.7	0.99	7,174.694	
400.0	400.0	259.7	259.6	0.8	0.2	161.79	-6,746.6	2,220.0	7,102.8	7,101.8	1.01	7,051.195	
492.1	492.1	323.2	323.2	1.0	0.3	161.78	-6,747.1	2,220.7	7,103.8	7,102.5	1.26	5,634.786	
500.0	500.0	328.5	328.5	1.0	0.3	161.78	-6,747.2	2,220.8	7,103.9	7,102.6	1.28	5,539.862	
590.5	590.5	400.0	400.0	1.2	0.4	161.77	-6,747.9	2,222.3	7,105.3	7,103.8	1.54	4,617.132	
600.0	600.0	400.0	400.0	1.2	0.4	161.77	-6,747.9	2,222.3	7,105.5	7,103.9	1.56	4,554.375	
689.0	689.0	462.9	462.9	1.4	0.4	161.76	-6,748.5	2,224.3	7,107.3	7,105.5	1.80	3,943.317	
700.0	700.0	471.3	471.3	1.4	0.4	161.76	-6,748.6	2,224.6	7,107.5	7,105.7	1.83	3,877.973	
787.4	787.4	548.8	548.7	1.6	0.5	161.74	-6,749.5	2,227.5	7,109.5	7,107.4	2.08	3,423.758	
800.0	800.0	561.1	561.0	1.7	0.5	161.73	-6,749.7	2,228.0	7,109.8	7,107.7	2.11	3,366.495	
885.8	885.8	646.3	646.1	1.9	0.5	161.71	-6,750.6	2,231.4	7,111.8	7,109.4	2.35	3,025.028	
900.0	900.0	660.6	660.3	1.9	0.5	161.71	-6,750.8	2,231.9	7,112.1	7,109.7	2.39	2,975.579	
984.2	984.2	736.6	736.3	2.1	0.6	161.68	-6,751.7	2,235.0	7,114.1	7,111.4	2.62	2,718.035	
1,000.0	1,000.0	749.4	749.1	2.1	0.6	161.68	-6,751.8	2,235.5	7,114.4	7,111.8	2.66	2,675.703	
1,082.7	1,082.7	825.5	825.2	2.3	0.6	161.66	-6,752.9	2,238.5	7,116.6	7,113.7	2.88	2,470.155	
1,100.0	1,100.0	847.3	846.9	2.3	0.6	161.65	-6,753.2	2,239.4	7,117.0	7,114.1	2.93	2,428.899	
1,181.1	1,181.1	934.2	933.7	2.5	0.6	161.63	-6,754.1	2,243.1	7,119.0	7,115.8	3.15	2,258.258	
1,200.0	1,200.0	950.7	950.2	2.6	0.7	161.62	-6,754.3	2,243.8	7,119.4	7,116.2	3.20	2,223.215	
1,279.5	1,279.5	1,018.6	1,018.1	2.7	0.7	161.60	-6,755.2	2,246.7	7,121.4	7,118.0	3.41	2,087.649	
1,300.0	1,300.0	1,035.2	1,034.6	2.8	0.7	161.60	-6,755.4	2,247.3	7,122.0	7,118.5	3.46	2,055.786	
1,377.9	1,377.9	1,100.0	1,099.4	3.0	0.7	161.58	-6,756.4	2,250.1	7,124.1	7,120.5	3.67	1,942.541	
1,400.0	1,400.0	1,133.1	1,132.4	3.0	0.7	161.57	-6,756.9	2,251.5	7,124.8	7,121.0	3.73	1,909.687	
1,476.4	1,476.4	1,243.3	1,242.5	3.2	0.8	161.54	-6,758.2	2,256.0	7,126.6	7,122.6	3.95	1,805.051	
1,500.0	1,500.0	1,271.3	1,270.5	3.2	0.8	161.53	-6,758.5	2,257.1	7,127.1	7,123.1	4.01	1,776.154	
1,574.8	1,574.8	1,341.7	1,340.8	3.4	0.8	161.51	-6,759.2	2,259.7	7,128.7	7,124.5	4.21	1,693.839	
1,600.0	1,600.0	1,362.4	1,361.6	3.5	0.8	161.51	-6,759.5	2,260.4	7,129.3	7,125.0	4.27	1,668.336	
1,673.2	1,673.2	1,437.3	1,436.3	3.6	0.9	161.49	-6,760.6	2,262.7	7,131.0	7,126.5	4.47	1,596.575	
1,700.0	1,700.0	1,473.4	1,472.5	3.7	0.9	161.49	-6,761.1	2,263.7	7,131.6	7,127.1	4.54	1,570.759	
1,771.6	1,771.6	1,549.2	1,548.2	3.8	0.9	161.48	-6,762.1	2,265.6	7,133.1	7,128.4	4.73	1,508.255	
1,800.0	1,800.0	1,576.0	1,575.1	3.9	0.9	161.47	-6,762.5	2,266.2	7,133.7	7,128.9	4.80	1,485.268	
1,870.1	1,870.1	1,640.1	1,639.1	4.1	0.9	161.47	-6,763.5	2,267.5	7,135.2	7,130.2	4.98	1,431.911	
1,900.0	1,900.0	1,666.8	1,665.9	4.1	1.0	161.46	-6,763.9	2,268.0	7,135.8	7,130.8	5.06	1,410.413	
1,968.5	1,968.5	1,723.9	1,722.9	4.3	1.0	161.46	-6,765.0	2,269.0	7,137.4	7,132.2	5.23	1,364.121	
2,000.0	2,000.0	1,747.8	1,746.8	4.4	1.0	161.46	-6,765.5	2,269.4	7,138.2	7,132.9	5.31	1,344.139	
2,066.9	2,066.9	1,800.0	1,799.0	4.5	1.0	161.45	-6,766.7	2,270.1	7,139.9	7,134.4	5.48	1,303.499	
2,100.0	2,100.0	1,840.6	1,839.5	4.6	1.0	161.45	-6,767.6	2,270.7	7,140.8	7,135.2	5.56	1,283.503	
2,165.3	2,165.3	1,932.0	1,930.9	4.7	1.1	161.45	-6,769.7	2,271.5	7,142.4	7,136.7	5.74	1,245.209	
2,200.0	2,200.0	1,988.6	1,987.5	4.8	1.1	161.45	-6,770.8	2,271.9	7,143.1	7,137.3	5.83	1,225.525	
2,250.0	2,250.0	2,040.9	2,039.8	4.9	1.1	161.45	-6,771.8	2,272.1	7,144.1	7,138.1	5.95	1,199.824	
2,263.8	2,263.8	2,054.0	2,052.9	4.9	1.1	89.54	-6,772.0	2,272.2	7,144.3	7,138.3	5.99	1,193.509	
2,300.0	2,300.0	2,088.5	2,087.3	5.0	1.1	89.53	-6,772.6	2,272.4	7,145.0	7,138.9	6.08	1,175.875	
2,362.2	2,362.2	2,170.4	2,169.3	5.2	1.1	89.52	-6,774.1	2,272.7	7,146.1	7,139.9	6.23	1,146.170	
2,400.0	2,399.9	2,220.3	2,219.2	5.2	1.1	89.53	-6,774.9	2,272.9	7,146.7	7,140.4	6.33	1,128.850	
2,460.6	2,460.4	2,293.6	2,292.5	5.4	1.2	89.55	-6,775.9	2,273.0	7,147.5	7,141.0	6.49	1,102.010	
2,500.0	2,499.7	2,342.1	2,341.0	5.4	1.2	89.58	-6,776.5	2,273.1	7,148.0	7,141.4	6.59	1,085.255	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,559.0	2,558.5	2,413.9	2,412.8	5.6	1.2	89.62	-6,777.3	2,273.0	7,148.6	7,141.8	6.74	1,060.298	
2,600.0	2,599.1	2,460.7	2,459.6	5.7	1.2	89.66	-6,777.8	2,273.0	7,148.9	7,142.1	6.85	1,043.823	
2,657.5	2,656.1	2,517.6	2,516.5	5.8	1.2	89.71	-6,778.3	2,273.0	7,149.4	7,142.4	7.00	1,020.818	
2,700.0	2,698.2	2,550.1	2,548.9	5.9	1.2	89.75	-6,778.7	2,273.0	7,149.8	7,142.7	7.12	1,004.841	
2,755.9	2,753.3	2,600.0	2,598.8	6.1	1.3	89.80	-6,779.3	2,272.9	7,150.4	7,143.1	7.28	982.762	
2,800.0	2,796.6	2,634.1	2,632.9	6.2	1.3	89.84	-6,779.7	2,272.9	7,150.9	7,143.5	7.40	966.186	
2,854.3	2,849.9	2,687.9	2,686.7	6.3	1.3	89.92	-6,780.4	2,272.9	7,151.6	7,144.0	7.57	944.164	
2,900.0	2,894.4	2,730.0	2,728.8	6.5	1.3	89.98	-6,781.0	2,272.9	7,152.2	7,144.4	7.72	926.465	
2,952.7	2,945.7	2,777.1	2,775.9	6.6	1.3	90.06	-6,781.6	2,272.9	7,152.9	7,145.0	7.91	904.759	
3,000.0	2,991.5	2,820.1	2,818.9	6.8	1.3	90.13	-6,782.2	2,272.9	7,153.5	7,145.5	8.07	886.048	
3,051.2	3,040.8	2,867.8	2,866.6	7.0	1.3	90.22	-6,782.9	2,272.9	7,154.3	7,146.0	8.28	864.276	
3,100.0	3,087.6	2,912.1	2,910.9	7.1	1.4	90.31	-6,783.6	2,272.8	7,155.1	7,146.6	8.47	844.422	
3,149.6	3,134.9	2,954.3	2,953.1	7.4	1.4	90.39	-6,784.3	2,272.8	7,155.9	7,147.3	8.70	822.821	
3,200.0	3,182.7	3,000.0	2,998.8	7.6	1.4	90.49	-6,785.0	2,272.8	7,156.9	7,148.0	8.93	801.793	
3,248.0	3,228.0	3,050.3	3,049.1	7.8	1.4	90.61	-6,785.8	2,272.9	7,157.8	7,148.6	9.18	780.090	
3,300.0	3,276.6	3,112.8	3,111.6	8.1	1.4	90.77	-6,786.6	2,273.0	7,158.8	7,149.4	9.45	757.570	
3,346.4	3,319.9	3,188.7	3,187.5	8.3	1.4	90.97	-6,787.4	2,273.1	7,159.6	7,149.9	9.73	735.676	
3,400.0	3,369.4	3,375.2	3,373.9	8.6	1.5	91.53	-6,786.7	2,273.4	7,159.7	7,149.6	10.03	713.591	
3,444.9	3,410.5	3,441.4	3,440.1	8.9	1.5	91.74	-6,785.6	2,273.9	7,159.6	7,149.3	10.32	694.087	
3,500.0	3,460.7	3,518.3	3,517.1	9.2	1.5	91.99	-6,784.1	2,274.5	7,159.4	7,148.7	10.66	671.429	
3,543.3	3,499.8	3,567.1	3,565.8	9.5	1.5	92.16	-6,783.0	2,274.9	7,159.2	7,148.3	10.97	652.668	
3,600.0	3,550.6	3,622.5	3,621.2	9.9	1.5	92.35	-6,781.8	2,275.2	7,159.1	7,147.7	11.37	629.559	
3,637.2	3,583.7	3,653.1	3,651.8	10.2	1.5	92.46	-6,781.1	2,275.4	7,159.0	7,147.4	11.67	613.587	
3,641.7	3,587.6	3,656.8	3,655.5	10.3	1.5	92.48	-6,781.0	2,275.4	7,159.0	7,147.3	11.70	611.714	
3,709.9	3,647.5	3,711.3	3,710.0	10.8	1.5	92.67	-6,779.7	2,275.9	7,159.2	7,146.9	12.25	584.579	
3,740.1	3,673.9	3,733.7	3,732.4	11.1	1.5	92.76	-6,779.3	2,276.1	7,159.3	7,146.8	12.51	572.452	
3,800.0	3,726.2	3,777.9	3,776.6	11.6	1.5	92.93	-6,778.3	2,276.4	7,159.7	7,146.7	13.02	549.856	
3,838.6	3,759.9	3,807.5	3,806.1	11.9	1.5	93.04	-6,777.8	2,276.5	7,160.1	7,146.7	13.36	535.786	
3,900.0	3,813.5	3,860.4	3,859.1	12.5	1.5	93.24	-6,776.8	2,276.8	7,160.8	7,146.9	13.91	514.792	
3,937.0	3,845.8	3,892.4	3,891.0	12.8	1.5	93.37	-6,776.2	2,276.9	7,161.3	7,147.0	14.25	502.616	
4,000.0	3,900.8	3,933.4	3,932.1	13.4	1.5	93.52	-6,775.5	2,277.1	7,162.2	7,147.4	14.82	483.160	
4,035.4	3,931.7	3,955.3	3,953.9	13.7	1.5	93.61	-6,775.1	2,277.2	7,162.9	7,147.7	15.15	472.663	
4,100.0	3,988.1	4,000.0	3,998.6	14.3	1.5	93.78	-6,774.5	2,277.2	7,164.3	7,148.5	15.76	454.665	
4,133.8	4,017.6	4,017.2	4,015.8	14.7	1.5	93.85	-6,774.4	2,277.2	7,165.1	7,149.1	16.08	445.634	
4,200.0	4,075.4	4,061.2	4,059.9	15.3	1.5	94.02	-6,774.0	2,276.9	7,167.0	7,150.3	16.71	429.001	
4,232.3	4,103.5	4,082.6	4,081.2	15.6	1.5	94.11	-6,773.9	2,276.7	7,168.0	7,150.9	17.02	421.233	
4,300.0	4,162.6	4,135.7	4,134.4	16.2	1.5	94.32	-6,773.7	2,275.8	7,170.2	7,152.5	17.67	405.741	
4,330.7	4,189.4	4,162.2	4,160.8	16.5	1.5	94.42	-6,773.7	2,275.3	7,171.3	7,153.3	17.97	399.002	
4,400.0	4,249.9	4,216.8	4,215.4	17.2	1.5	94.65	-6,773.7	2,273.9	7,173.9	7,155.2	18.65	384.600	
4,429.1	4,275.4	4,236.1	4,234.7	17.5	1.5	94.73	-6,773.7	2,273.3	7,175.0	7,156.1	18.94	378.805	
4,500.0	4,337.2	4,282.8	4,281.4	18.2	1.5	94.92	-6,773.9	2,271.6	7,178.0	7,158.4	19.64	365.424	
4,527.5	4,361.3	4,301.1	4,299.6	18.5	1.5	94.99	-6,774.0	2,270.9	7,179.3	7,159.4	19.92	360.443	
4,600.0	4,424.5	4,361.3	4,359.8	19.2	1.5	95.25	-6,774.5	2,268.3	7,182.8	7,162.1	20.64	347.958	
4,626.0	4,447.2	4,382.9	4,381.3	19.5	1.5	95.34	-6,774.7	2,267.3	7,184.1	7,163.2	20.90	343.669	
4,700.0	4,511.8	4,431.4	4,429.8	20.2	1.5	95.54	-6,775.1	2,264.9	7,188.0	7,166.3	21.65	332.038	
4,724.4	4,533.1	4,445.7	4,444.1	20.5	1.5	95.60	-6,775.3	2,264.1	7,189.3	7,167.4	21.89	328.364	
4,796.7	4,596.3	4,500.0	4,498.3	21.2	1.5	95.84	-6,776.2	2,261.0	7,193.6	7,171.0	22.63	317.939	
4,800.0	4,599.1	4,500.0	4,498.3	21.2	1.5	95.84	-6,776.2	2,261.0	7,193.8	7,171.2	22.66	317.531	
4,822.8	4,619.1	4,504.4	4,502.7	21.4	1.5	95.89	-6,776.2	2,260.7	7,195.2	7,172.4	22.84	315.061	
4,900.0	4,687.3	4,567.3	4,565.5	22.0	1.5	96.24	-6,777.4	2,256.9	7,200.1	7,176.6	23.46	306.943	
4,921.2	4,706.2	4,584.8	4,583.0	22.2	1.5	96.34	-6,777.7	2,255.8	7,201.4	7,177.8	23.62	304.903	
5,000.0	4,777.1	4,657.4	4,655.4	22.8	1.5	96.72	-6,779.0	2,251.7	7,206.3	7,182.1	24.22	297.587	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,794.9	4,676.4	4,674.4	22.9	1.5	96.82	-6,779.3	2,250.7	7,207.5	7,183.2	24.36	295.929	
5,100.0	4,868.3	4,792.4	4,790.2	23.5	1.5	97.32	-6,780.7	2,245.5	7,212.3	7,187.4	24.93	289.339	
5,118.1	4,885.0	4,811.8	4,809.7	23.6	1.5	97.40	-6,780.8	2,244.7	7,213.3	7,188.2	25.05	288.005	
5,200.0	4,961.0	4,884.3	4,882.1	24.2	1.5	97.73	-6,781.4	2,241.6	7,217.6	7,192.0	25.58	282.137	
5,216.5	4,976.4	4,900.0	4,897.7	24.3	1.5	97.79	-6,781.5	2,241.0	7,218.5	7,192.8	25.68	281.076	
5,300.0	5,054.8	4,974.9	4,972.6	24.8	1.6	98.10	-6,782.1	2,238.0	7,222.8	7,196.6	26.18	275.842	
5,314.9	5,069.0	4,988.6	4,986.3	24.8	1.6	98.16	-6,782.2	2,237.5	7,223.5	7,197.2	26.27	275.009	
5,400.0	5,149.9	5,078.9	5,076.5	25.3	1.6	98.48	-6,782.7	2,234.4	7,227.5	7,200.8	26.73	270.360	
5,413.4	5,162.7	5,093.6	5,091.2	25.4	1.6	98.53	-6,782.8	2,233.9	7,228.1	7,201.3	26.80	269.715	
5,500.0	5,245.9	5,184.4	5,182.0	25.8	1.6	98.82	-6,783.1	2,231.3	7,231.8	7,204.6	27.23	265.613	
5,511.8	5,257.3	5,196.8	5,194.4	25.9	1.6	98.85	-6,783.2	2,230.9	7,232.2	7,205.0	27.28	265.124	
5,600.0	5,342.9	5,287.9	5,285.5	26.3	1.6	99.11	-6,783.4	2,228.6	7,235.5	7,207.8	27.67	261.527	
5,610.2	5,352.9	5,298.5	5,296.1	26.3	1.6	99.14	-6,783.4	2,228.3	7,235.8	7,208.1	27.71	261.167	
5,700.0	5,440.7	5,500.0	5,497.5	26.7	1.6	99.53	-6,781.4	2,224.3	7,237.5	7,209.5	28.05	258.063	
5,708.6	5,449.1	5,511.1	5,508.6	26.7	1.6	99.55	-6,781.2	2,224.1	7,237.6	7,209.6	28.07	257.807	
5,800.0	5,539.1	5,618.2	5,615.7	27.0	1.6	99.73	-6,779.3	2,222.4	7,238.5	7,210.1	28.37	255.112	
5,807.1	5,546.1	5,624.0	5,621.5	27.0	1.6	99.74	-6,779.1	2,222.3	7,238.5	7,210.1	28.39	254.936	
5,900.0	5,638.1	5,700.1	5,697.5	27.3	1.6	99.83	-6,777.8	2,221.3	7,238.9	7,210.2	28.65	252.640	
5,905.5	5,643.5	5,706.0	5,703.5	27.3	1.6	99.84	-6,777.7	2,221.2	7,238.9	7,210.2	28.67	252.529	
6,000.0	5,737.5	5,807.0	5,804.4	27.5	1.6	99.93	-6,775.9	2,219.8	7,238.8	7,209.9	28.88	250.612	
6,003.9	5,741.4	5,810.3	5,807.7	27.5	1.6	99.93	-6,775.9	2,219.8	7,238.8	7,209.9	28.89	250.549	
6,100.0	5,837.2	5,893.0	5,890.4	27.7	1.6	99.98	-6,774.5	2,218.6	7,238.2	7,209.1	29.07	248.992	
6,102.3	5,839.6	5,900.0	5,897.4	27.7	1.6	99.98	-6,774.4	2,218.5	7,238.2	7,209.1	29.07	248.962	
6,200.0	5,937.2	5,976.2	5,973.5	27.9	1.6	99.99	-6,773.3	2,217.1	7,237.2	7,208.0	29.21	247.748	
6,200.8	5,937.9	5,976.8	5,974.2	27.9	1.6	99.99	-6,773.3	2,217.1	7,237.2	7,207.9	29.21	247.741	
6,256.6	5,993.8	6,042.3	6,039.6	27.9	1.6	171.90	-6,772.5	2,215.7	7,236.4	7,207.1	29.27	247.206	
6,286.6	6,023.8	6,087.8	6,085.1	27.9	1.6	171.90	-6,771.8	2,214.8	7,235.9	7,206.6	29.30	246.922	
6,299.2	6,036.4	6,100.0	6,097.3	27.9	1.6	-8.10	-6,771.6	2,214.6	7,235.5	7,206.2	29.31	246.856	
6,300.0	6,037.2	6,100.0	6,097.3	27.9	1.6	-8.10	-6,771.6	2,214.6	7,235.5	7,206.2	29.31	246.852	
6,350.0	6,087.1	6,146.7	6,144.0	28.0	1.7	-8.14	-6,770.8	2,213.8	7,231.9	7,202.6	29.32	246.663	
6,397.6	6,134.3	6,186.6	6,183.9	28.0	1.7	-8.21	-6,770.2	2,213.1	7,225.3	7,196.0	29.30	246.616	
6,400.0	6,136.7	6,188.6	6,185.9	28.0	1.7	-8.22	-6,770.1	2,213.1	7,224.9	7,195.6	29.30	246.618	
6,450.0	6,185.7	6,232.0	6,229.2	28.0	1.7	-8.34	-6,769.5	2,212.4	7,214.6	7,185.4	29.22	246.871	
6,496.0	6,230.2	6,271.9	6,269.2	28.0	1.7	-8.50	-6,769.0	2,211.7	7,202.2	7,173.1	29.10	247.511	
6,500.0	6,234.0	6,275.3	6,272.6	28.0	1.7	-8.52	-6,768.9	2,211.6	7,201.0	7,171.9	29.08	247.585	
6,550.0	6,281.3	6,318.9	6,316.1	28.0	1.7	-8.75	-6,768.4	2,210.7	7,184.1	7,155.2	28.87	248.877	
6,594.5	6,322.2	6,358.1	6,355.4	27.9	1.7	-9.00	-6,767.9	2,210.0	7,166.3	7,137.8	28.60	250.586	
6,600.0	6,327.3	6,362.9	6,360.2	27.9	1.7	-9.03	-6,767.8	2,209.9	7,164.0	7,135.4	28.56	250.835	
6,650.0	6,371.8	6,409.8	6,407.0	27.9	1.7	-9.39	-6,767.2	2,209.1	7,140.8	7,112.6	28.17	253.504	
6,692.9	6,408.6	6,471.8	6,469.0	27.9	1.7	-9.78	-6,766.3	2,208.0	7,118.4	7,090.6	27.78	256.217	
6,700.0	6,414.6	6,481.8	6,479.1	27.8	1.7	-9.86	-6,766.1	2,207.8	7,114.5	7,086.8	27.71	256.716	
6,750.0	6,455.5	6,500.0	6,497.2	27.8	1.7	-10.38	-6,765.8	2,207.4	7,085.3	7,058.2	27.13	261.203	
6,791.3	6,487.7	6,538.6	6,535.8	27.7	1.7	-10.91	-6,765.2	2,206.7	7,059.1	7,032.5	26.60	265.342	
6,800.0	6,494.3	6,542.7	6,539.9	27.7	1.7	-11.03	-6,765.1	2,206.6	7,053.4	7,026.9	26.48	266.324	
6,850.0	6,530.8	6,565.3	6,562.5	27.7	1.7	-11.81	-6,764.8	2,206.2	7,019.0	6,993.3	25.75	272.537	
6,889.7	6,558.1	6,600.0	6,597.2	27.6	1.7	-12.59	-6,764.4	2,205.7	6,990.1	6,964.9	25.16	277.857	
6,900.0	6,564.9	6,600.0	6,597.2	27.6	1.7	-12.80	-6,764.4	2,205.7	6,982.3	6,957.4	24.99	279.423	
6,950.0	6,596.3	6,609.4	6,606.6	27.6	1.7	-13.97	-6,764.3	2,205.6	6,943.4	6,919.3	24.16	287.393	
6,988.2	6,618.4	6,630.8	6,628.0	27.5	1.7	-15.10	-6,764.1	2,205.3	6,912.4	6,888.9	23.55	293.582	
7,000.0	6,624.9	6,637.1	6,634.2	27.5	1.7	-15.49	-6,764.0	2,205.2	6,902.6	6,879.2	23.36	295.505	
7,050.0	6,650.6	6,661.8	6,658.9	27.5	1.7	-17.45	-6,763.7	2,205.1	6,859.8	6,837.2	22.60	303.545	
7,086.6	6,667.5	6,677.9	6,675.1	27.5	1.7	-19.27	-6,763.5	2,205.0	6,827.5	6,805.4	22.10	308.935	

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 EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,673.3	6,683.4	6,680.6	27.5	1.7	-20.04	-6,763.5	2,205.0	6,815.5	6,793.5	21.94	310.623	
7,150.0	6,692.7	6,700.0	6,697.2	27.5	1.7	-23.53	-6,763.3	2,204.9	6,769.7	6,748.3	21.46	315.428	
7,185.0	6,704.4	6,700.0	6,697.2	27.5	1.7	-26.68	-6,763.3	2,204.9	6,737.0	6,715.7	21.30	316.224	
7,200.0	6,709.0	6,700.0	6,697.2	27.5	1.7	-28.28	-6,763.3	2,204.9	6,722.8	6,701.6	21.23	316.642	
7,250.0	6,721.8	6,700.0	6,697.2	27.5	1.7	-35.25	-6,763.3	2,204.9	6,674.9	6,653.6	21.35	312.665	
7,283.4	6,728.6	6,700.0	6,697.2	27.5	1.7	-41.86	-6,763.3	2,204.9	6,642.5	6,620.9	21.59	307.649	
7,300.0	6,731.3	6,700.0	6,697.2	27.6	1.7	-45.94	-6,763.3	2,204.9	6,626.4	6,604.6	21.71	305.254	
7,350.0	6,737.3	6,700.0	6,697.2	27.7	1.7	-62.55	-6,763.3	2,204.9	6,577.3	6,555.7	21.60	304.513	
7,381.9	6,739.4	6,700.0	6,697.2	27.7	1.7	-76.84	-6,763.3	2,204.9	6,545.8	6,525.2	20.61	317.607	
7,400.0	6,739.9	6,700.0	6,697.2	27.8	1.7	-85.89	-6,763.3	2,204.9	6,527.9	6,508.2	19.75	330.518	
7,416.5	6,740.0	6,700.0	6,697.2	27.8	1.7	-94.31	-6,763.3	2,204.9	6,511.6	6,492.5	19.14	340.273	
7,480.3	6,739.5	6,700.0	6,697.2	28.0	1.7	-94.31	-6,763.3	2,204.9	6,448.6	6,429.0	19.66	327.975	
7,500.0	6,739.4	6,700.0	6,697.2	28.1	1.7	-94.31	-6,763.3	2,204.9	6,429.2	6,409.3	19.82	324.309	
7,578.7	6,738.9	6,700.0	6,697.2	28.5	1.7	-94.31	-6,763.3	2,204.9	6,351.4	6,330.8	20.59	308.518	
7,600.0	6,738.7	6,700.0	6,697.2	28.6	1.7	-94.31	-6,763.3	2,204.9	6,330.4	6,309.6	20.79	304.450	
7,677.1	6,738.2	6,700.0	6,697.2	29.1	1.7	-94.31	-6,763.3	2,204.9	6,254.3	6,232.6	21.65	288.939	
7,700.0	6,738.1	6,700.0	6,697.2	29.2	1.7	-94.31	-6,763.3	2,204.9	6,231.7	6,209.8	21.90	284.578	
7,775.6	6,737.5	6,700.0	6,697.2	29.7	1.7	-94.31	-6,763.3	2,204.9	6,157.2	6,134.4	22.82	269.808	
7,800.0	6,737.4	6,700.0	6,697.2	29.9	1.7	-94.31	-6,763.3	2,204.9	6,133.1	6,110.0	23.12	265.287	
7,874.0	6,736.9	6,700.0	6,697.2	30.6	1.7	-94.31	-6,763.3	2,204.9	6,060.1	6,036.0	24.09	251.526	
7,900.0	6,736.7	6,700.0	6,697.2	30.8	1.7	-94.31	-6,763.3	2,204.9	6,034.5	6,010.0	24.44	246.952	
7,972.4	6,736.2	6,700.0	6,697.2	31.5	1.7	-94.31	-6,763.3	2,204.9	5,963.1	5,937.6	25.45	234.322	
8,000.0	6,736.0	6,700.0	6,697.2	31.8	1.7	-94.31	-6,763.3	2,204.9	5,935.9	5,910.1	25.83	229.774	
8,070.8	6,735.5	6,700.0	6,697.2	32.5	1.7	-94.31	-6,763.3	2,204.9	5,866.1	5,839.2	26.87	218.298	
8,100.0	6,735.3	6,700.0	6,697.2	32.8	1.7	-94.31	-6,763.3	2,204.9	5,837.4	5,810.1	27.30	213.831	
8,169.3	6,734.9	6,700.0	6,697.2	33.6	1.7	-94.31	-6,763.3	2,204.9	5,769.2	5,740.8	28.35	203.472	
8,200.0	6,734.6	6,700.0	6,697.2	34.0	1.7	-94.31	-6,763.3	2,204.9	5,738.9	5,710.1	28.82	199.122	
8,267.7	6,734.2	6,700.0	6,697.2	34.8	1.7	-94.31	-6,763.3	2,204.9	5,672.3	5,642.4	29.88	189.811	
8,300.0	6,734.0	6,700.0	6,697.2	35.2	1.7	-94.31	-6,763.3	2,204.9	5,640.5	5,610.1	30.39	185.600	
8,366.1	6,733.5	6,700.0	6,697.2	36.1	1.7	-94.31	-6,763.3	2,204.9	5,575.5	5,544.0	31.46	177.251	
8,400.0	6,733.3	6,700.0	6,697.2	36.5	1.7	-94.31	-6,763.3	2,204.9	5,542.2	5,510.2	32.00	173.190	
8,464.5	6,732.8	6,700.0	6,697.2	37.4	1.7	-94.31	-6,763.3	2,204.9	5,478.7	5,445.7	33.06	165.711	
8,500.0	6,732.6	6,700.0	6,697.2	37.9	1.7	-94.31	-6,763.3	2,204.9	5,443.9	5,410.3	33.64	161.806	
8,563.0	6,732.2	6,700.0	6,697.2	38.8	1.7	-94.31	-6,763.3	2,204.9	5,382.0	5,347.3	34.70	155.110	
8,600.0	6,731.9	6,700.0	6,697.2	39.3	1.7	-94.31	-6,763.3	2,204.9	5,345.7	5,310.4	35.32	151.360	
8,661.4	6,731.5	6,700.0	6,697.2	40.2	1.7	-94.31	-6,763.3	2,204.9	5,285.4	5,249.0	36.36	145.363	
8,700.0	6,731.2	6,700.0	6,697.2	40.8	1.7	-94.31	-6,763.3	2,204.9	5,247.5	5,210.5	37.02	141.766	
8,759.8	6,730.8	6,700.0	6,697.2	41.7	1.7	-94.31	-6,763.3	2,204.9	5,188.8	5,150.8	38.04	136.390	
8,800.0	6,730.6	6,700.0	6,697.2	42.3	1.7	-94.31	-6,763.3	2,204.9	5,149.4	5,110.7	38.73	132.941	
8,858.2	6,730.2	6,700.0	6,697.2	43.2	1.7	-94.31	-6,763.3	2,204.9	5,092.3	5,052.6	39.75	128.118	
8,900.0	6,729.9	6,700.0	6,697.2	43.8	1.7	-94.31	-6,763.3	2,204.9	5,051.4	5,010.9	40.47	124.810	
8,956.7	6,729.5	6,700.0	6,697.2	44.7	1.7	-94.31	-6,763.3	2,204.9	4,995.9	4,954.4	41.47	120.479	
9,000.0	6,729.2	6,700.0	6,697.2	45.4	1.7	-94.31	-6,763.3	2,204.9	4,953.5	4,911.3	42.23	117.306	
9,055.1	6,728.8	6,700.0	6,697.2	46.3	1.7	-94.31	-6,763.3	2,204.9	4,899.6	4,856.4	43.20	113.412	
9,100.0	6,728.5	6,700.0	6,697.2	47.0	1.7	-94.31	-6,763.3	2,204.9	4,855.6	4,811.6	44.00	110.366	
9,153.5	6,728.2	6,700.0	6,697.2	47.9	1.7	-94.31	-6,763.3	2,204.9	4,803.3	4,758.4	44.95	106.861	
9,200.0	6,727.8	6,700.0	6,697.2	48.6	1.7	-94.31	-6,763.3	2,204.9	4,757.9	4,712.1	45.78	103.937	
9,251.9	6,727.5	6,700.0	6,697.2	49.5	1.7	-94.31	-6,763.3	2,204.9	4,707.1	4,660.4	46.71	100.779	
9,300.0	6,727.2	6,700.0	6,697.2	50.3	1.7	-94.31	-6,763.3	2,204.9	4,660.2	4,612.6	47.57	97.968	
9,350.4	6,726.8	6,700.0	6,697.2	51.1	1.7	-94.31	-6,763.3	2,204.9	4,611.1	4,562.6	48.48	95.120	
9,400.0	6,726.5	6,700.0	6,697.2	51.9	1.7	-94.31	-6,763.3	2,204.9	4,562.7	4,513.3	49.37	92.417	
9,448.8	6,726.1	6,700.0	6,697.2	52.7	1.7	-94.31	-6,763.3	2,204.9	4,515.1	4,464.8	50.25	89.845	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	6,725.8	6,700.0	6,697.2	53.6	1.7	-94.31	-6,763.3	2,204.9	4,465.2	4,414.0	51.18	87.243	
9,547.2	6,725.5	6,700.0	6,697.2	54.4	1.7	-94.31	-6,763.3	2,204.9	4,419.2	4,367.2	52.04	84.920	
9,600.0	6,725.1	6,700.0	6,697.2	55.3	1.7	-94.31	-6,763.3	2,204.9	4,367.9	4,314.9	53.00	82.413	
9,645.6	6,724.8	6,700.0	6,697.2	56.1	1.7	-94.31	-6,763.3	2,204.9	4,323.5	4,269.6	53.83	80.313	
9,700.0	6,724.4	6,700.0	6,697.2	57.0	1.7	-94.31	-6,763.3	2,204.9	4,270.6	4,215.8	54.82	77.896	
9,744.1	6,724.1	6,700.0	6,697.2	57.8	1.7	-94.31	-6,763.3	2,204.9	4,227.8	4,172.2	55.63	75.996	
9,800.0	6,723.8	6,700.0	6,697.2	58.7	1.7	-94.31	-6,763.3	2,204.9	4,173.6	4,116.9	56.66	73.664	
9,842.5	6,723.5	6,700.0	6,697.2	59.5	1.7	-94.31	-6,763.3	2,204.9	4,132.3	4,074.9	57.44	71.945	
9,900.0	6,723.1	6,700.0	6,697.2	60.5	1.7	-94.31	-6,763.3	2,204.9	4,076.6	4,018.1	58.49	69.693	
9,940.9	6,722.8	6,700.0	6,697.2	61.2	1.7	-94.31	-6,763.3	2,204.9	4,037.0	3,977.7	59.25	68.137	
10,000.0	6,722.4	6,700.0	6,697.2	62.2	1.7	-94.31	-6,763.3	2,204.9	3,979.8	3,919.5	60.34	65.961	
10,039.3	6,722.1	6,700.0	6,697.2	62.9	1.7	-94.31	-6,763.3	2,204.9	3,941.8	3,880.7	61.06	64.552	
10,100.0	6,721.7	6,696.0	6,693.2	64.0	1.7	-94.08	-6,763.3	2,204.9	3,883.2	3,821.0	62.21	62.425	
10,137.8	6,721.5	6,695.4	6,692.5	64.7	1.7	-94.04	-6,763.3	2,204.9	3,846.7	3,783.8	62.91	61.147	
10,200.0	6,721.0	6,694.3	6,691.4	65.8	1.7	-93.98	-6,763.3	2,204.9	3,786.7	3,722.7	64.07	59.105	
10,236.2	6,720.8	6,693.6	6,690.8	66.4	1.7	-93.95	-6,763.4	2,204.9	3,751.8	3,687.1	64.74	57.950	
10,300.0	6,720.4	6,692.5	6,689.7	67.5	1.7	-93.88	-6,763.4	2,204.9	3,690.4	3,624.5	65.93	55.972	
10,334.6	6,720.1	6,691.9	6,689.1	68.2	1.7	-93.85	-6,763.4	2,204.9	3,657.2	3,590.6	66.58	54.928	
10,400.0	6,719.7	6,690.8	6,688.0	69.3	1.7	-93.79	-6,763.4	2,204.9	3,594.4	3,526.6	67.80	53.012	
10,433.0	6,719.4	6,690.2	6,687.4	69.9	1.7	-93.75	-6,763.4	2,204.9	3,562.7	3,494.3	68.42	52.069	
10,500.0	6,719.0	6,689.1	6,686.2	71.1	1.7	-93.69	-6,763.4	2,204.9	3,498.5	3,428.9	69.68	50.211	
10,531.5	6,718.8	6,688.5	6,685.7	71.7	1.7	-93.66	-6,763.4	2,204.9	3,468.4	3,398.1	70.27	49.361	
10,600.0	6,718.3	6,687.3	6,684.5	72.9	1.7	-93.59	-6,763.4	2,204.9	3,402.9	3,331.4	71.55	47.558	
10,629.9	6,718.1	6,686.8	6,684.0	73.4	1.7	-93.56	-6,763.4	2,204.9	3,374.4	3,302.3	72.11	46.792	
10,700.0	6,717.6	6,685.6	6,682.8	74.7	1.7	-93.49	-6,763.5	2,204.9	3,307.6	3,234.1	73.43	45.043	
10,728.3	6,717.4	6,685.1	6,682.3	75.2	1.7	-93.47	-6,763.5	2,204.9	3,280.6	3,206.6	73.96	44.354	
10,800.0	6,717.0	6,683.9	6,681.1	76.5	1.7	-93.40	-6,763.5	2,205.0	3,212.5	3,137.2	75.31	42.655	
10,826.7	6,716.8	6,683.4	6,680.6	77.0	1.7	-93.37	-6,763.5	2,205.0	3,187.1	3,111.3	75.82	42.036	
10,900.0	6,716.3	6,682.2	6,679.4	78.3	1.7	-93.30	-6,763.5	2,205.0	3,117.7	3,040.5	77.20	40.386	
10,925.2	6,716.1	6,681.7	6,678.9	78.8	1.7	-93.27	-6,763.5	2,205.0	3,093.9	3,016.3	77.67	39.833	
11,000.0	6,715.6	6,680.5	6,677.6	80.2	1.7	-93.20	-6,763.5	2,205.0	3,023.3	2,944.2	79.09	38.228	
11,023.6	6,715.4	6,680.1	6,677.2	80.6	1.7	-93.18	-6,763.5	2,205.0	3,001.1	2,921.5	79.53	37.735	
11,100.0	6,714.9	6,678.8	6,675.9	82.0	1.7	-93.11	-6,763.5	2,205.0	2,929.2	2,848.3	80.97	36.175	
11,122.0	6,714.8	6,678.4	6,675.6	82.4	1.7	-93.08	-6,763.5	2,205.0	2,908.6	2,827.2	81.39	35.736	
11,200.0	6,714.2	6,677.1	6,674.2	83.8	1.7	-93.01	-6,763.6	2,205.0	2,835.6	2,752.7	82.87	34.219	
11,220.4	6,714.1	6,676.7	6,673.9	84.2	1.7	-92.99	-6,763.6	2,205.0	2,816.5	2,733.2	83.25	33.831	
11,300.0	6,713.5	6,675.4	6,672.6	85.7	1.7	-92.91	-6,763.6	2,205.0	2,742.4	2,657.6	84.76	32.355	
11,318.9	6,713.4	6,675.1	6,672.2	86.0	1.7	-92.90	-6,763.6	2,205.0	2,724.9	2,639.7	85.12	32.013	
11,400.0	6,712.9	6,673.7	6,670.9	87.5	1.7	-92.82	-6,763.6	2,205.0	2,649.7	2,563.0	86.65	30.578	
11,417.3	6,712.7	6,673.4	6,670.6	87.8	1.7	-92.80	-6,763.6	2,205.0	2,633.7	2,546.7	86.98	30.279	
11,500.0	6,712.2	6,672.0	6,669.2	89.3	1.7	-92.72	-6,763.6	2,205.0	2,557.5	2,469.0	88.55	28.882	
11,515.7	6,712.1	6,671.7	6,668.9	89.6	1.7	-92.71	-6,763.6	2,205.0	2,543.1	2,454.2	88.85	28.623	
11,600.0	6,711.5	6,670.3	6,667.5	91.2	1.7	-92.63	-6,763.6	2,205.0	2,466.0	2,375.5	90.45	27.264	
11,614.1	6,711.4	6,670.1	6,667.3	91.4	1.7	-92.61	-6,763.6	2,205.0	2,453.1	2,362.3	90.72	27.041	
11,700.0	6,710.8	6,668.7	6,665.8	93.0	1.7	-92.53	-6,763.6	2,205.0	2,375.1	2,282.7	92.35	25.719	
11,712.6	6,710.7	6,668.4	6,665.6	93.3	1.7	-92.52	-6,763.7	2,205.0	2,363.7	2,271.1	92.59	25.530	
11,800.0	6,710.1	6,667.0	6,664.2	94.9	1.7	-92.44	-6,763.7	2,205.0	2,285.0	2,190.7	94.25	24.244	
11,811.0	6,710.1	6,666.8	6,664.0	95.1	1.7	-92.43	-6,763.7	2,205.0	2,275.1	2,180.7	94.46	24.086	
11,900.0	6,709.5	6,665.3	6,662.5	96.7	1.7	-92.34	-6,763.7	2,205.0	2,195.7	2,099.6	96.15	22.836	
11,909.4	6,709.4	6,665.2	6,662.3	96.9	1.7	-92.34	-6,763.7	2,205.0	2,187.4	2,091.0	96.33	22.707	
12,000.0	6,708.8	6,663.7	6,660.8	98.6	1.7	-92.25	-6,763.7	2,205.0	2,107.4	2,009.4	98.05	21.493	
12,007.8	6,708.7	6,663.5	6,660.7	98.7	1.7	-92.24	-6,763.7	2,205.0	2,100.5	2,002.3	98.20	21.390	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,100.0	6,708.1	6,662.0	6,659.2	100.4	1.7	-92.16	-6,763.7	2,205.1	2,020.2	1,920.3	99.96	20.211	
12,106.3	6,708.1	6,661.9	6,659.1	100.6	1.7	-92.15	-6,763.7	2,205.1	2,014.8	1,914.7	100.08	20.132	
12,200.0	6,707.4	6,660.4	6,657.5	102.3	1.7	-92.06	-6,763.7	2,205.1	1,934.3	1,832.4	101.86	18.989	
12,204.7	6,707.4	6,660.3	6,657.5	102.4	1.7	-92.06	-6,763.7	2,205.1	1,930.2	1,828.3	101.95	18.933	
12,300.0	6,706.7	6,658.7	6,655.9	104.2	1.7	-91.97	-6,763.8	2,205.1	1,849.7	1,745.9	103.77	17.825	
12,303.1	6,706.7	6,658.7	6,655.8	104.2	1.7	-91.97	-6,763.8	2,205.1	1,847.1	1,743.2	103.83	17.790	
12,400.0	6,706.1	6,657.1	6,654.3	106.0	1.7	-91.88	-6,763.8	2,205.1	1,766.8	1,661.1	105.68	16.718	
12,401.5	6,706.0	6,657.1	6,654.2	106.1	1.7	-91.88	-6,763.8	2,205.1	1,765.5	1,659.8	105.71	16.702	
12,500.0	6,705.4	6,655.4	6,652.6	107.9	1.7	-91.78	-6,763.8	2,205.1	1,685.7	1,578.1	107.58	15.668	
12,598.4	6,704.7	6,653.8	6,651.0	109.7	1.7	-91.69	-6,763.8	2,205.1	1,607.9	1,498.5	109.46	14.689	
12,600.0	6,704.7	6,653.8	6,651.0	109.8	1.7	-91.69	-6,763.8	2,205.1	1,606.7	1,497.2	109.49	14.674	
12,696.8	6,704.0	6,652.2	6,649.4	111.6	1.7	-91.60	-6,763.8	2,205.1	1,532.6	1,421.2	111.34	13.764	
12,700.0	6,704.0	6,652.2	6,649.4	111.6	1.7	-91.60	-6,763.8	2,205.1	1,530.2	1,418.8	111.40	13.736	
12,795.2	6,703.4	6,650.6	6,647.8	113.4	1.7	-91.51	-6,763.9	2,205.1	1,460.0	1,346.7	113.22	12.895	
12,800.0	6,703.3	6,650.6	6,647.7	113.5	1.7	-91.51	-6,763.9	2,205.1	1,456.5	1,343.2	113.31	12.854	
12,893.7	6,702.7	6,649.1	6,646.2	115.3	1.7	-91.42	-6,763.9	2,205.1	1,390.5	1,275.4	115.10	12.081	
12,900.0	6,702.7	6,649.0	6,646.1	115.4	1.7	-91.42	-6,763.9	2,205.1	1,386.2	1,271.0	115.22	12.030	
12,992.1	6,702.0	6,647.5	6,644.6	117.1	1.7	-91.33	-6,763.9	2,205.2	1,324.8	1,207.8	116.98	11.324	
13,000.0	6,702.0	6,647.3	6,644.5	117.3	1.7	-91.32	-6,763.9	2,205.2	1,319.7	1,202.5	117.14	11.266	
13,090.5	6,701.4	6,645.9	6,643.1	119.0	1.7	-91.24	-6,763.9	2,205.2	1,263.2	1,144.4	118.87	10.627	
13,100.0	6,701.3	6,645.7	6,642.9	119.1	1.7	-91.23	-6,763.9	2,205.2	1,257.6	1,138.5	119.05	10.564	
13,188.9	6,700.7	6,644.3	6,641.5	120.8	1.7	-91.15	-6,763.9	2,205.2	1,206.6	1,085.9	120.75	9.993	
13,200.0	6,700.6	6,644.1	6,641.3	121.0	1.7	-91.14	-6,763.9	2,205.2	1,200.6	1,079.6	120.96	9.926	
13,287.4	6,700.0	6,642.7	6,639.9	122.7	1.7	-91.06	-6,763.9	2,205.2	1,155.6	1,033.0	122.63	9.424	
13,300.0	6,699.9	6,642.5	6,639.7	122.9	1.7	-91.05	-6,763.9	2,205.2	1,149.5	1,026.7	122.87	9.356	
13,385.8	6,699.3	6,641.2	6,638.3	124.5	1.7	-90.97	-6,764.0	2,205.2	1,111.0	986.5	124.51	8.923	
13,400.0	6,699.3	6,640.9	6,638.1	124.8	1.7	-90.96	-6,764.0	2,205.2	1,105.2	980.4	124.79	8.857	
13,484.2	6,698.7	6,639.6	6,636.8	126.4	1.7	-90.89	-6,764.0	2,205.2	1,073.6	947.2	126.40	8.494	
13,500.0	6,698.6	6,639.4	6,636.5	126.7	1.7	-90.87	-6,764.0	2,205.2	1,068.4	941.7	126.70	8.432	
13,582.6	6,698.0	6,638.0	6,635.2	128.2	1.7	-90.80	-6,764.0	2,205.2	1,044.2	915.9	128.28	8.140	
13,600.0	6,697.9	6,637.8	6,634.9	128.5	1.7	-90.78	-6,764.0	2,205.2	1,039.9	911.3	128.61	8.085	
13,681.1	6,697.3	6,636.5	6,633.7	130.1	1.7	-90.71	-6,764.0	2,205.3	1,023.4	893.2	130.17	7.862	
13,700.0	6,697.2	6,636.2	6,633.4	130.4	1.7	-90.69	-6,764.0	2,205.3	1,020.4	889.9	130.53	7.818	
13,779.5	6,696.7	6,634.9	6,632.1	131.9	1.7	-90.62	-6,764.0	2,205.3	1,011.8	879.8	132.05	7.662	
13,800.0	6,696.5	6,634.6	6,631.8	132.3	1.7	-90.60	-6,764.0	2,205.3	1,010.6	878.1	132.44	7.630	
13,850.3	6,696.2	6,633.8	6,631.0	133.3	1.7	-90.56	-6,764.0	2,205.3	1,009.3	875.9	133.41	7.566 CC	
13,877.9	6,696.0	6,633.4	6,630.6	133.8	1.7	-90.53	-6,764.0	2,205.3	1,009.7	875.8	133.94	7.539 ES	
13,900.0	6,695.8	6,633.0	6,630.2	134.2	1.7	-90.51	-6,764.0	2,205.3	1,010.6	876.2	134.36	7.521	
13,976.3	6,695.3	6,631.9	6,629.0	135.6	1.7	-90.45	-6,764.1	2,205.3	1,017.2	881.3	135.82	7.489	
14,000.0	6,695.2	6,631.5	6,628.7	136.1	1.7	-90.42	-6,764.1	2,205.3	1,020.4	884.1	136.27	7.488 SF	
14,034.1	6,695.0	6,631.0	6,628.2	136.7	1.7	-90.39	-6,764.1	2,205.3	1,025.9	889.0	136.93	7.493	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT LDS #5-25 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	174.61	-3,476.6	328.0	3,492.5				
98.4	98.4	54.3	54.3	0.1	0.1	174.61	-3,476.5	328.0	3,492.0	3,491.9	0.14	N/A	
100.0	100.0	56.4	56.4	0.1	0.1	174.61	-3,476.5	328.0	3,492.0	3,491.9	0.14	N/A	
196.8	196.8	162.9	162.9	0.3	0.2	174.61	-3,475.9	328.1	3,491.4	3,490.9	0.49	7,187.311	
200.0	200.0	166.1	166.1	0.3	0.2	174.61	-3,475.8	328.1	3,491.4	3,490.9	0.50	7,024.632	
295.3	295.3	294.4	294.4	0.5	0.3	174.60	-3,474.5	328.7	3,490.5	3,489.6	0.83	4,201.650	
300.0	300.0	301.2	301.2	0.5	0.3	174.59	-3,474.4	328.8	3,490.4	3,489.5	0.85	4,123.158	
393.7	393.7	403.3	403.2	0.7	0.4	174.57	-3,472.4	330.4	3,488.7	3,487.6	1.12	3,104.492	
400.0	400.0	409.5	409.4	0.8	0.4	174.56	-3,472.3	330.5	3,488.6	3,487.4	1.14	3,056.237	
492.1	492.1	500.0	499.9	1.0	0.5	174.53	-3,470.4	332.4	3,486.8	3,485.4	1.40	2,490.502	
500.0	500.0	507.4	507.3	1.0	0.5	174.53	-3,470.2	332.5	3,486.7	3,485.3	1.42	2,452.859	
590.5	590.5	588.2	588.1	1.2	0.5	174.50	-3,468.7	334.3	3,485.1	3,483.5	1.67	2,092.162	
600.0	600.0	600.0	599.9	1.2	0.5	174.49	-3,468.4	334.5	3,485.0	3,483.3	1.69	2,058.464	
689.0	689.0	704.5	704.3	1.4	0.6	174.46	-3,466.4	336.3	3,483.4	3,481.5	1.94	1,796.873	
700.0	700.0	716.1	716.0	1.4	0.6	174.46	-3,466.1	336.5	3,483.2	3,481.2	1.97	1,769.760	
787.4	787.4	807.6	807.4	1.6	0.6	174.44	-3,464.0	337.5	3,481.3	3,479.1	2.20	1,581.018	
800.0	800.0	819.2	819.0	1.7	0.6	174.43	-3,463.8	337.6	3,481.0	3,478.8	2.23	1,557.677	
885.8	885.8	900.0	899.8	1.9	0.7	174.41	-3,461.9	338.8	3,479.2	3,476.7	2.46	1,414.993	
900.0	900.0	913.7	913.4	1.9	0.7	174.41	-3,461.6	339.1	3,478.9	3,476.4	2.50	1,393.951	
984.2	984.2	1,004.4	1,004.2	2.1	0.7	174.38	-3,459.6	340.4	3,477.1	3,474.4	2.72	1,279.058	
1,000.0	1,000.0	1,019.1	1,018.8	2.1	0.7	174.38	-3,459.2	340.6	3,476.8	3,474.0	2.76	1,260.149	
1,082.7	1,082.7	1,095.8	1,095.5	2.3	0.7	174.36	-3,457.5	341.7	3,475.1	3,472.1	2.97	1,169.384	
1,100.0	1,100.0	1,113.1	1,112.8	2.3	0.8	174.35	-3,457.1	342.0	3,474.7	3,471.7	3.02	1,151.863	
1,181.1	1,181.1	1,196.5	1,196.2	2.5	0.8	174.33	-3,455.3	343.2	3,473.0	3,469.8	3.23	1,076.142	
1,200.0	1,200.0	1,215.4	1,215.0	2.6	0.8	174.32	-3,454.9	343.5	3,472.7	3,469.4	3.28	1,060.122	
1,279.5	1,279.5	1,294.1	1,293.7	2.7	0.8	174.31	-3,453.2	344.2	3,471.0	3,467.5	3.48	997.791	
1,300.0	1,300.0	1,314.2	1,313.8	2.8	0.8	174.30	-3,452.7	344.3	3,470.6	3,467.1	3.53	982.969	
1,377.9	1,377.9	1,390.2	1,389.8	3.0	0.9	174.29	-3,451.2	344.8	3,469.0	3,465.3	3.73	930.426	
1,400.0	1,400.0	1,411.6	1,411.2	3.0	0.9	174.29	-3,450.7	345.0	3,468.6	3,464.8	3.78	916.606	
1,476.4	1,476.4	1,485.6	1,485.2	3.2	0.9	174.28	-3,449.2	345.4	3,467.1	3,463.1	3.98	871.858	
1,500.0	1,500.0	1,510.1	1,509.7	3.2	0.9	174.28	-3,448.8	345.4	3,466.7	3,462.6	4.04	858.860	
1,574.8	1,574.8	1,596.6	1,596.1	3.4	1.0	174.28	-3,447.0	345.3	3,465.1	3,460.9	4.23	819.975	
1,600.0	1,600.0	1,600.0	1,599.6	3.5	1.0	174.28	-3,446.9	345.3	3,464.6	3,460.3	4.28	808.852	
1,673.2	1,673.2	1,665.6	1,665.2	3.6	1.0	174.29	-3,445.7	344.8	3,463.3	3,458.8	4.46	776.279	
1,700.0	1,700.0	1,684.1	1,683.6	3.7	1.0	174.29	-3,445.5	344.6	3,462.9	3,458.4	4.53	765.233	
1,771.6	1,771.6	1,748.0	1,747.6	3.8	1.0	174.30	-3,444.9	343.8	3,462.2	3,457.5	4.70	736.568	
1,800.0	1,800.0	1,776.2	1,775.7	3.9	1.0	174.31	-3,444.7	343.5	3,462.0	3,457.2	4.77	725.697	
1,870.1	1,870.1	1,846.7	1,846.2	4.1	1.0	174.32	-3,444.1	342.6	3,461.3	3,456.3	4.94	700.082	
1,900.0	1,900.0	1,877.0	1,876.5	4.1	1.0	174.33	-3,443.9	342.2	3,461.0	3,456.0	5.02	689.672	
1,968.5	1,968.5	1,944.7	1,944.2	4.3	1.0	174.34	-3,443.3	341.1	3,460.3	3,455.2	5.19	666.965	
2,000.0	2,000.0	1,975.4	1,974.9	4.4	1.0	174.35	-3,443.1	340.4	3,460.0	3,454.8	5.27	657.022	
2,066.9	2,066.9	2,047.9	2,047.4	4.5	1.1	174.38	-3,442.6	338.7	3,459.4	3,454.0	5.43	636.553	
2,100.0	2,100.0	2,086.0	2,085.5	4.6	1.1	174.40	-3,442.2	337.6	3,459.0	3,453.5	5.52	626.812	
2,165.3	2,165.3	2,154.0	2,153.5	4.7	1.1	174.43	-3,441.6	335.6	3,458.2	3,452.5	5.68	608.586	
2,200.0	2,200.0	2,189.2	2,188.7	4.8	1.1	174.45	-3,441.2	334.6	3,457.7	3,452.0	5.77	599.376	
2,250.0	2,250.0	2,234.5	2,233.9	4.9	1.1	174.47	-3,440.7	333.4	3,457.1	3,451.2	5.89	586.684	
2,263.8	2,263.8	2,246.5	2,245.9	4.9	1.1	102.57	-3,440.6	333.0	3,456.9	3,450.9	6.06	570.665	
2,300.0	2,300.0	2,278.1	2,277.5	5.0	1.1	102.59	-3,440.4	332.2	3,456.6	3,450.5	6.14	562.627	
2,352.9	2,352.8	2,323.6	2,323.0	5.1	1.1	102.63	-3,440.1	330.9	3,456.5	3,450.2	6.26	551.722	
2,362.2	2,362.2	2,331.5	2,330.9	5.2	1.1	102.64	-3,440.0	330.6	3,456.5	3,450.2	6.29	549.859	
2,400.0	2,399.9	2,363.6	2,362.9	5.2	1.1	102.68	-3,439.9	329.7	3,456.6	3,450.2	6.37	542.485	
2,460.6	2,460.4	2,429.1	2,428.4	5.4	1.2	102.77	-3,439.8	327.9	3,457.1	3,450.6	6.52	530.553	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT LDS #5-25 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,499.7	2,494.0	2,493.3	5.4	1.2	102.87	-3,439.2	326.2	3,457.4	3,450.8	6.62	522.626	
2,559.0	2,558.5	2,561.2	2,560.5	5.6	1.2	103.00	-3,438.3	324.5	3,457.8	3,451.0	6.77	511.109	
2,600.0	2,599.1	2,605.6	2,604.8	5.7	1.2	103.09	-3,437.6	323.5	3,458.1	3,451.2	6.87	503.470	
2,657.5	2,656.1	2,661.3	2,660.5	5.8	1.2	103.21	-3,436.7	322.2	3,458.8	3,451.8	7.02	492.704	
2,700.0	2,698.2	2,700.0	2,699.2	5.9	1.2	103.31	-3,436.1	321.3	3,459.5	3,452.4	7.13	485.100	
2,755.9	2,753.3	2,746.4	2,745.6	6.1	1.2	103.42	-3,435.4	320.2	3,460.8	3,453.5	7.29	474.920	
2,800.0	2,796.6	2,781.3	2,780.5	6.2	1.3	103.51	-3,435.0	319.3	3,462.1	3,454.7	7.41	467.252	
2,854.3	2,849.9	2,821.1	2,820.3	6.3	1.3	103.62	-3,434.7	318.3	3,464.2	3,456.6	7.57	457.413	
2,900.0	2,894.4	2,852.5	2,851.7	6.5	1.3	103.70	-3,434.6	317.5	3,466.3	3,458.6	7.71	449.562	
2,952.7	2,945.7	2,900.0	2,899.1	6.6	1.3	103.84	-3,434.6	316.3	3,469.2	3,461.3	7.89	439.739	
3,000.0	2,991.5	2,925.1	2,924.2	6.8	1.3	103.90	-3,434.7	315.6	3,472.2	3,464.1	8.05	431.582	
3,051.2	3,040.8	2,967.1	2,966.2	7.0	1.3	104.02	-3,434.9	314.7	3,475.8	3,467.6	8.24	421.928	
3,100.0	3,087.6	3,007.5	3,006.6	7.1	1.3	104.14	-3,435.2	314.0	3,479.6	3,471.2	8.42	413.159	
3,149.6	3,134.9	3,050.7	3,049.8	7.4	1.3	104.28	-3,435.6	313.4	3,483.9	3,475.2	8.63	403.590	
3,200.0	3,182.7	3,094.3	3,093.4	7.6	1.3	104.42	-3,436.0	313.0	3,488.5	3,479.6	8.85	394.355	
3,248.0	3,228.0	3,137.0	3,136.1	7.8	1.3	104.56	-3,436.4	312.7	3,493.2	3,484.1	9.08	384.880	
3,300.0	3,276.6	3,183.2	3,182.3	8.1	1.3	104.71	-3,436.9	312.6	3,498.6	3,489.3	9.32	375.191	
3,346.4	3,319.9	3,229.2	3,228.3	8.3	1.3	104.88	-3,437.4	312.6	3,503.8	3,494.2	9.58	365.853	
3,400.0	3,369.4	3,286.1	3,285.2	8.6	1.3	105.10	-3,437.9	312.8	3,510.0	3,500.1	9.87	355.716	
3,444.9	3,410.5	3,323.8	3,322.9	8.9	1.3	105.23	-3,438.1	313.1	3,515.4	3,505.3	10.14	346.560	
3,500.0	3,460.7	3,364.9	3,364.0	9.2	1.3	105.35	-3,438.6	313.4	3,522.6	3,512.1	10.48	335.989	
3,543.3	3,499.8	3,400.0	3,399.1	9.5	1.3	105.47	-3,439.0	313.7	3,528.6	3,517.8	10.78	327.193	
3,600.0	3,550.6	3,448.2	3,447.3	9.9	1.3	105.64	-3,439.6	314.1	3,536.9	3,525.7	11.18	316.412	
3,641.7	3,587.6	3,486.3	3,485.4	10.3	1.3	105.79	-3,440.1	314.5	3,543.3	3,531.8	11.50	308.047	
3,709.9	3,647.5	3,554.8	3,553.9	10.8	1.3	106.08	-3,440.9	315.2	3,554.3	3,542.2	12.03	295.413	
3,740.1	3,673.9	3,585.9	3,585.0	11.1	1.3	106.31	-3,441.2	315.6	3,559.3	3,547.0	12.28	289.805	
3,800.0	3,726.2	3,639.3	3,638.3	11.6	1.3	106.71	-3,441.7	316.1	3,569.2	3,556.4	12.78	279.372	
3,838.6	3,759.9	3,672.1	3,671.1	11.9	1.3	106.96	-3,442.0	316.5	3,575.8	3,562.7	13.10	272.861	
3,900.0	3,813.5	3,725.6	3,724.7	12.5	1.3	107.35	-3,442.5	317.1	3,586.4	3,572.7	13.63	263.176	
3,937.0	3,845.8	3,758.9	3,757.9	12.8	1.3	107.60	-3,442.8	317.4	3,592.8	3,578.9	13.95	257.547	
4,000.0	3,900.8	3,813.6	3,812.6	13.4	1.3	108.00	-3,443.3	318.1	3,604.0	3,589.5	14.50	248.578	
4,035.4	3,931.7	3,841.4	3,840.4	13.7	1.3	108.20	-3,443.5	318.5	3,610.5	3,595.6	14.81	243.732	
4,100.0	3,988.1	3,892.0	3,891.0	14.3	1.3	108.57	-3,444.1	319.0	3,622.4	3,607.0	15.38	235.451	
4,133.8	4,017.6	3,919.1	3,918.1	14.7	1.3	108.77	-3,444.4	319.2	3,628.8	3,613.1	15.69	231.291	
4,200.0	4,075.4	3,972.7	3,971.7	15.3	1.3	109.16	-3,445.1	319.6	3,641.5	3,625.2	16.28	223.649	
4,232.3	4,103.5	4,000.0	3,999.0	15.6	1.4	109.36	-3,445.5	319.8	3,647.8	3,631.3	16.57	220.083	
4,300.0	4,162.6	4,052.7	4,051.7	16.2	1.4	109.74	-3,446.2	320.1	3,661.3	3,644.1	17.19	213.026	
4,330.7	4,189.4	4,077.0	4,076.0	16.5	1.4	109.92	-3,446.6	320.2	3,667.6	3,650.1	17.47	209.967	
4,400.0	4,249.9	4,141.2	4,140.2	17.2	1.4	110.38	-3,447.6	320.4	3,681.8	3,663.7	18.09	203.479	
4,429.1	4,275.4	4,171.0	4,170.0	17.5	1.4	110.60	-3,448.0	320.3	3,687.9	3,669.5	18.36	200.879	
4,500.0	4,337.2	4,235.6	4,234.6	18.2	1.4	111.07	-3,448.8	320.1	3,702.6	3,683.6	19.00	194.862	
4,527.5	4,361.3	4,258.8	4,257.7	18.5	1.4	111.24	-3,449.1	320.1	3,708.5	3,689.2	19.25	192.617	
4,600.0	4,424.5	4,325.2	4,324.2	19.2	1.4	111.71	-3,449.9	320.0	3,724.0	3,704.1	19.91	187.032	
4,626.0	4,447.2	4,353.2	4,352.1	19.5	1.4	111.91	-3,450.2	320.0	3,729.6	3,709.4	20.15	185.124	
4,700.0	4,511.8	4,421.5	4,420.4	20.2	1.4	112.40	-3,450.8	319.7	3,745.6	3,724.7	20.82	179.918	
4,724.4	4,533.1	4,438.7	4,437.7	20.5	1.4	112.52	-3,451.0	319.7	3,750.9	3,729.9	21.04	178.255	
4,796.7	4,596.3	4,489.8	4,488.8	21.2	1.4	112.88	-3,451.6	319.6	3,767.1	3,745.4	21.71	173.559	
4,800.0	4,599.1	4,500.0	4,499.0	21.2	1.4	112.96	-3,451.7	319.6	3,767.8	3,746.1	21.73	173.415	
4,822.8	4,619.1	4,510.2	4,509.2	21.4	1.4	113.13	-3,451.9	319.6	3,773.0	3,751.1	21.88	172.421	
4,900.0	4,687.3	4,578.6	4,577.6	22.0	1.4	113.90	-3,452.9	319.8	3,790.1	3,767.7	22.39	169.269	
4,921.2	4,706.2	4,597.7	4,596.6	22.2	1.4	114.11	-3,453.1	319.9	3,794.7	3,772.2	22.52	168.491	
5,000.0	4,777.1	4,680.4	4,679.4	22.8	1.4	114.92	-3,454.2	320.3	3,811.3	3,788.3	23.00	165.736	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT LDS #5-25 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,794.9	4,701.3	4,700.2	22.9	1.4	115.11	-3,454.5	320.4	3,815.4	3,792.2	23.11	165.126	
5,100.0	4,868.3	4,781.2	4,780.2	23.5	1.4	115.85	-3,455.2	320.4	3,831.2	3,807.6	23.55	162.682	
5,118.1	4,885.0	4,799.3	4,798.3	23.6	1.4	116.01	-3,455.3	320.4	3,834.6	3,811.0	23.64	162.199	
5,200.0	4,961.0	4,888.1	4,887.0	24.2	1.4	116.73	-3,455.9	320.6	3,849.6	3,825.5	24.05	160.071	
5,216.5	4,976.4	4,905.0	4,903.9	24.3	1.4	116.86	-3,456.0	320.7	3,852.5	3,828.3	24.12	159.692	
5,300.0	5,054.8	4,979.3	4,978.3	24.8	1.4	117.45	-3,456.4	321.0	3,866.5	3,842.0	24.51	157.762	
5,314.9	5,069.0	4,992.7	4,991.6	24.8	1.4	117.55	-3,456.5	321.0	3,868.9	3,844.4	24.57	157.466	
5,400.0	5,149.9	5,100.0	5,098.9	25.3	1.5	118.21	-3,456.7	321.4	3,881.9	3,857.0	24.90	155.872	
5,413.4	5,162.7	5,112.9	5,111.8	25.4	1.5	118.30	-3,456.7	321.5	3,883.7	3,858.8	24.95	155.648	
5,500.0	5,245.9	5,179.7	5,178.6	25.8	1.5	118.74	-3,456.8	321.7	3,895.5	3,870.3	25.27	154.164	
5,511.8	5,257.3	5,188.8	5,187.7	25.9	1.5	118.80	-3,456.8	321.7	3,897.1	3,871.8	25.31	153.996	
5,600.0	5,342.9	5,267.8	5,266.7	26.3	1.5	119.24	-3,457.2	321.9	3,908.1	3,882.5	25.59	152.715	
5,610.2	5,352.9	5,277.2	5,276.1	26.3	1.5	119.29	-3,457.3	322.0	3,909.3	3,883.7	25.62	152.593	
5,700.0	5,440.7	5,371.7	5,370.7	26.7	1.5	119.70	-3,457.8	322.5	3,919.1	3,893.2	25.87	151.502	
5,708.6	5,449.1	5,381.3	5,380.2	26.7	1.5	119.74	-3,457.9	322.5	3,919.9	3,894.0	25.89	151.417	
5,800.0	5,539.1	5,480.4	5,479.4	27.0	1.5	120.09	-3,458.3	323.5	3,928.1	3,902.0	26.11	150.465	
5,807.1	5,546.1	5,488.1	5,487.0	27.0	1.5	120.11	-3,458.3	323.6	3,928.7	3,902.6	26.12	150.406	
5,900.0	5,638.1	5,568.1	5,567.0	27.3	1.5	120.35	-3,458.7	324.6	3,935.5	3,909.2	26.31	149.562	
5,905.5	5,643.5	5,572.7	5,571.6	27.3	1.5	120.36	-3,458.7	324.7	3,935.8	3,909.5	26.32	149.523	
6,000.0	5,737.5	5,645.6	5,644.5	27.5	1.5	120.55	-3,459.3	325.4	3,941.5	3,915.0	26.49	148.816	
6,003.9	5,741.4	5,648.5	5,647.4	27.5	1.5	120.56	-3,459.3	325.4	3,941.7	3,915.2	26.49	148.795	
6,100.0	5,837.2	5,732.8	5,731.7	27.7	1.5	120.70	-3,460.5	325.6	3,946.4	3,919.8	26.63	148.218	
6,102.3	5,839.6	5,735.7	5,734.6	27.7	1.5	120.70	-3,460.5	325.6	3,946.5	3,919.9	26.63	148.207	
6,200.0	5,937.2	5,837.3	5,836.2	27.9	1.6	120.80	-3,461.6	325.8	3,949.3	3,922.6	26.74	147.694	
6,200.8	5,937.9	5,838.0	5,836.9	27.9	1.6	120.80	-3,461.6	325.8	3,949.3	3,922.6	26.74	147.691	
6,256.6	5,993.8	5,883.3	5,882.2	27.9	1.6	-167.27	-3,462.2	325.7	3,950.3	3,923.5	26.79	147.451	
6,286.6	6,023.8	5,908.1	5,907.0	27.9	1.6	-167.27	-3,462.5	325.6	3,950.8	3,923.9	26.83	147.277	
6,299.2	6,036.4	5,919.0	5,917.9	27.9	1.6	12.73	-3,462.7	325.6	3,950.8	3,924.0	26.82	147.316	
6,300.0	6,037.2	5,919.7	5,918.6	27.9	1.6	12.73	-3,462.7	325.6	3,950.8	3,924.0	26.82	147.319	
6,350.0	6,087.1	5,963.0	5,961.9	28.0	1.6	12.77	-3,463.4	325.4	3,949.0	3,922.3	26.77	147.520	
6,397.6	6,134.3	6,000.0	5,998.9	28.0	1.6	12.87	-3,464.0	325.1	3,944.3	3,917.6	26.69	147.779	
6,400.0	6,136.7	6,000.0	5,998.9	28.0	1.6	12.87	-3,464.0	325.1	3,944.0	3,917.3	26.68	147.797	
6,450.0	6,185.7	6,046.0	6,044.9	28.0	1.6	13.06	-3,464.9	324.7	3,935.6	3,909.0	26.55	148.235	
6,496.0	6,230.2	6,082.6	6,081.4	28.0	1.6	13.29	-3,465.6	324.4	3,925.0	3,898.7	26.36	148.882	
6,500.0	6,234.0	6,085.7	6,084.6	28.0	1.6	13.31	-3,465.7	324.3	3,924.0	3,897.6	26.34	148.952	
6,550.0	6,281.3	6,139.0	6,137.9	28.0	1.6	13.67	-3,466.8	323.8	3,909.2	3,883.1	26.06	150.005	
6,594.5	6,322.2	6,192.4	6,191.3	27.9	1.6	14.09	-3,467.8	323.1	3,893.2	3,867.5	25.74	151.276	
6,600.0	6,327.3	6,199.0	6,197.8	27.9	1.6	14.14	-3,467.9	323.0	3,891.0	3,865.3	25.69	151.462	
6,650.0	6,371.8	6,243.0	6,241.9	27.9	1.6	14.70	-3,468.6	322.4	3,869.7	3,844.5	25.22	153.420	
6,692.9	6,408.6	6,279.4	6,278.2	27.9	1.6	15.28	-3,469.2	322.0	3,849.0	3,824.3	24.75	155.528	
6,700.0	6,414.6	6,285.3	6,284.1	27.8	1.6	15.38	-3,469.3	321.9	3,845.4	3,820.7	24.66	155.924	
6,750.0	6,455.5	6,321.8	6,320.6	27.8	1.6	16.19	-3,470.0	321.7	3,818.2	3,794.2	24.01	159.045	
6,791.3	6,487.7	6,348.8	6,347.6	27.7	1.6	16.97	-3,470.6	321.6	3,793.8	3,770.4	23.40	162.122	
6,800.0	6,494.3	6,354.4	6,353.2	27.7	1.6	17.15	-3,470.7	321.6	3,788.4	3,765.1	23.26	162.840	
6,850.0	6,530.8	6,385.2	6,384.0	27.7	1.7	18.31	-3,471.4	321.6	3,756.1	3,733.6	22.44	167.361	
6,889.7	6,558.1	6,400.0	6,398.8	27.6	1.7	19.36	-3,471.8	321.6	3,728.6	3,706.9	21.74	171.511	
6,900.0	6,564.9	6,400.0	6,398.8	27.6	1.7	19.63	-3,471.8	321.6	3,721.4	3,699.8	21.55	172.695	
6,950.0	6,596.3	6,435.0	6,433.7	27.6	1.7	21.38	-3,472.8	321.6	3,684.4	3,663.8	20.61	178.748	
6,988.2	6,618.4	6,451.2	6,450.0	27.5	1.7	22.90	-3,473.2	321.6	3,654.9	3,635.0	19.88	183.845	
7,000.0	6,624.9	6,456.0	6,454.8	27.5	1.7	23.43	-3,473.4	321.5	3,645.5	3,625.8	19.65	185.545	
7,050.0	6,650.6	6,475.2	6,474.0	27.5	1.7	25.97	-3,474.0	321.5	3,604.7	3,586.0	18.70	192.801	
7,086.6	6,667.5	6,500.0	6,498.7	27.5	1.7	28.38	-3,474.9	321.3	3,573.8	3,555.8	18.06	197.937	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT LDS #5-25 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,100.0	6,673.3	6,500.0	6,498.7	27.5	1.7	29.26	-3,474.9	321.3	3,562.3	3,544.5	17.82	199.896	
7,150.0	6,692.7	6,515.2	6,513.9	27.5	1.7	33.33	-3,475.4	321.2	3,518.4	3,501.3	17.10	205.723	
7,185.0	6,704.4	6,533.8	6,532.6	27.5	1.7	37.05	-3,476.0	321.0	3,486.9	3,470.2	16.71	208.647	
7,200.0	6,709.0	6,541.0	6,539.8	27.5	1.7	38.87	-3,476.2	321.0	3,473.2	3,456.5	16.68	208.255	
7,250.0	6,721.8	6,561.8	6,560.5	27.5	1.7	46.08	-3,476.8	320.8	3,426.9	3,410.2	16.66	205.658	
7,283.4	6,728.6	6,572.7	6,571.4	27.5	1.7	52.06	-3,477.1	320.6	3,395.5	3,378.5	16.91	200.799	
7,300.0	6,731.3	6,577.3	6,576.0	27.6	1.7	55.41	-3,477.3	320.6	3,379.8	3,362.7	17.10	197.690	
7,350.0	6,737.3	6,587.8	6,586.5	27.7	1.7	67.10	-3,477.5	320.5	3,332.1	3,314.2	17.84	186.761	
7,381.9	6,739.4	6,591.8	6,590.5	27.7	1.7	75.65	-3,477.6	320.4	3,301.5	3,283.1	18.39	179.543	
7,400.0	6,739.9	6,593.2	6,591.9	27.8	1.7	80.76	-3,477.7	320.4	3,284.0	3,265.3	18.73	175.371	
7,416.5	6,740.0	6,593.9	6,592.6	27.8	1.7	85.50	-3,477.7	320.4	3,268.1	3,249.0	19.10	171.068	
7,480.3	6,739.5	6,595.5	6,594.2	28.0	1.7	85.60	-3,477.7	320.4	3,206.7	3,187.1	19.64	163.302	
7,500.0	6,739.4	6,596.0	6,594.7	28.1	1.7	85.63	-3,477.7	320.4	3,187.8	3,168.0	19.80	160.989	
7,578.7	6,738.9	6,597.9	6,596.6	28.5	1.7	85.76	-3,477.8	320.3	3,112.2	3,091.6	20.57	151.275	
7,600.0	6,738.7	6,598.5	6,597.2	28.6	1.7	85.79	-3,477.8	320.3	3,091.8	3,071.0	20.78	148.774	
7,677.1	6,738.2	6,600.0	6,598.7	29.1	1.7	85.89	-3,477.8	320.3	3,017.9	2,996.2	21.64	139.446	
7,700.0	6,738.1	6,600.0	6,598.7	29.2	1.7	85.89	-3,477.8	320.3	2,996.0	2,974.1	21.89	136.840	
7,775.6	6,737.5	6,600.0	6,598.7	29.7	1.7	85.89	-3,477.8	320.3	2,923.8	2,901.0	22.82	128.143	
7,800.0	6,737.4	6,600.0	6,598.7	29.9	1.7	85.89	-3,477.8	320.3	2,900.6	2,877.4	23.12	125.483	
7,874.0	6,736.9	6,600.0	6,598.7	30.6	1.7	85.89	-3,477.8	320.3	2,830.1	2,806.0	24.09	117.481	
7,900.0	6,736.7	6,600.0	6,598.7	30.8	1.7	85.89	-3,477.8	320.3	2,805.4	2,781.0	24.43	114.823	
7,972.4	6,736.2	6,600.0	6,598.7	31.5	1.7	85.89	-3,477.8	320.3	2,736.7	2,711.3	25.45	107.554	
8,000.0	6,736.0	6,600.0	6,598.7	31.8	1.7	85.89	-3,477.8	320.3	2,710.6	2,684.8	25.83	104.939	
8,070.8	6,735.5	6,600.0	6,598.7	32.5	1.7	85.89	-3,477.8	320.3	2,643.7	2,616.8	26.87	98.392	
8,100.0	6,735.3	6,600.0	6,598.7	32.8	1.7	85.89	-3,477.8	320.3	2,616.2	2,588.9	27.30	95.845	
8,169.3	6,734.9	6,600.0	6,598.7	33.6	1.7	85.89	-3,477.8	320.3	2,551.1	2,522.7	28.35	89.982	
8,200.0	6,734.6	6,600.0	6,598.7	34.0	1.7	85.89	-3,477.8	320.3	2,522.2	2,493.4	28.82	87.522	
8,267.7	6,734.2	6,600.0	6,598.7	34.8	1.7	85.89	-3,477.8	320.3	2,458.9	2,429.0	29.88	82.288	
8,300.0	6,734.0	6,600.0	6,598.7	35.2	1.7	85.89	-3,477.8	320.3	2,428.7	2,398.3	30.39	79.924	
8,366.1	6,733.5	6,600.0	6,598.7	36.1	1.7	85.89	-3,477.8	320.3	2,367.2	2,335.7	31.45	75.262	
8,400.0	6,733.3	6,600.0	6,598.7	36.5	1.7	85.89	-3,477.8	320.3	2,335.8	2,303.8	32.00	72.997	
8,464.5	6,732.8	6,600.0	6,598.7	37.4	1.7	85.89	-3,477.8	320.3	2,276.1	2,243.0	33.06	68.848	
8,500.0	6,732.6	6,600.0	6,598.7	37.9	1.7	85.89	-3,477.8	320.3	2,243.4	2,209.8	33.64	66.685	
8,563.0	6,732.2	6,600.0	6,598.7	38.8	1.7	85.89	-3,477.8	320.3	2,185.6	2,150.9	34.70	62.993	
8,600.0	6,731.9	6,600.0	6,598.7	39.3	1.7	85.89	-3,477.8	320.3	2,151.8	2,116.4	35.32	60.930	
8,661.4	6,731.5	6,613.1	6,611.8	40.2	1.7	86.75	-3,478.2	320.1	2,095.8	2,059.4	36.43	57.532	
8,700.0	6,731.2	6,613.7	6,612.4	40.8	1.7	86.79	-3,478.2	320.1	2,060.8	2,023.7	37.09	55.566	
8,759.8	6,730.8	6,614.6	6,613.2	41.7	1.7	86.84	-3,478.2	320.1	2,006.8	1,968.7	38.12	52.643	
8,800.0	6,730.6	6,615.2	6,613.8	42.3	1.7	86.88	-3,478.2	320.1	1,970.8	1,932.0	38.82	50.773	
8,858.2	6,730.2	6,616.0	6,614.7	43.2	1.7	86.94	-3,478.3	320.1	1,918.8	1,878.9	39.83	48.170	
8,900.0	6,729.9	6,616.7	6,615.4	43.8	1.7	86.98	-3,478.3	320.1	1,881.7	1,841.2	40.56	46.391	
8,956.7	6,729.5	6,617.6	6,616.2	44.7	1.7	87.04	-3,478.3	320.1	1,831.8	1,790.2	41.56	44.073	
9,000.0	6,729.2	6,618.2	6,616.9	45.4	1.7	87.08	-3,478.3	320.0	1,793.9	1,751.6	42.33	42.381	
9,055.1	6,728.8	6,619.1	6,617.8	46.3	1.7	87.14	-3,478.3	320.0	1,746.0	1,702.7	43.31	40.317	
9,100.0	6,728.5	6,619.8	6,618.5	47.0	1.7	87.19	-3,478.4	320.0	1,707.3	1,663.2	44.11	38.710	
9,153.5	6,728.2	6,620.7	6,619.4	47.9	1.7	87.24	-3,478.4	320.0	1,661.7	1,616.6	45.06	36.873	
9,200.0	6,727.8	6,621.5	6,620.1	48.6	1.7	87.29	-3,478.4	320.0	1,622.4	1,576.5	45.90	35.348	
9,251.9	6,727.5	6,622.3	6,621.0	49.5	1.7	87.35	-3,478.4	320.0	1,578.9	1,532.1	46.83	33.713	
9,300.0	6,727.2	6,623.1	6,621.8	50.3	1.7	87.40	-3,478.5	320.0	1,539.2	1,491.5	47.70	32.268	
9,350.4	6,726.8	6,624.0	6,622.7	51.1	1.7	87.46	-3,478.5	320.0	1,498.1	1,449.4	48.61	30.816	
9,400.0	6,726.5	6,624.8	6,623.5	51.9	1.7	87.51	-3,478.5	319.9	1,458.1	1,408.6	49.51	29.449	
9,448.8	6,726.1	6,625.7	6,624.4	52.7	1.7	87.57	-3,478.5	319.9	1,419.4	1,369.0	50.40	28.162	

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 EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT LDS #5-25 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,500.0	6,725.8	6,626.6	6,625.3	53.6	1.7	87.63	-3,478.5	319.9	1,379.5	1,328.2	51.34	26.873	
9,547.2	6,725.5	6,627.4	6,626.1	54.4	1.7	87.68	-3,478.6	319.9	1,343.4	1,291.2	52.20	25.736	
9,600.0	6,725.1	6,628.4	6,627.1	55.3	1.7	87.75	-3,478.6	319.9	1,303.9	1,250.7	53.17	24.525	
9,645.6	6,724.8	6,629.2	6,627.9	56.1	1.7	87.80	-3,478.6	319.9	1,270.5	1,216.4	54.00	23.525	
9,700.0	6,724.4	6,630.2	6,628.9	57.0	1.7	87.87	-3,478.7	319.9	1,231.7	1,176.7	55.00	22.393	
9,744.1	6,724.1	6,631.1	6,629.7	57.8	1.7	87.92	-3,478.7	319.9	1,201.1	1,145.3	55.82	21.519	
9,800.0	6,723.8	6,632.1	6,630.8	58.7	1.7	87.99	-3,478.7	319.8	1,163.6	1,106.8	56.85	20.469	
9,842.5	6,723.5	6,632.9	6,631.6	59.5	1.7	88.04	-3,478.7	319.8	1,136.1	1,078.5	57.63	19.713	
9,900.0	6,723.1	6,634.1	6,632.7	60.5	1.7	88.12	-3,478.8	319.8	1,100.5	1,041.8	58.70	18.747	
9,940.9	6,722.8	6,634.9	6,633.5	61.2	1.7	88.17	-3,478.8	319.8	1,076.2	1,016.8	59.46	18.100	
10,000.0	6,722.4	6,636.0	6,634.7	62.2	1.7	88.25	-3,478.8	319.8	1,043.1	982.5	60.56	17.225	
10,039.3	6,722.1	6,636.8	6,635.5	62.9	1.7	88.30	-3,478.8	319.8	1,022.3	961.0	61.29	16.680	
10,100.0	6,721.7	6,638.1	6,636.7	64.0	1.7	88.38	-3,478.9	319.7	992.4	930.0	62.42	15.900	
10,137.8	6,721.5	6,638.9	6,637.5	64.7	1.7	88.43	-3,478.9	319.7	975.3	912.2	63.12	15.451	
10,200.0	6,721.0	6,640.2	6,638.8	65.8	1.7	88.52	-3,478.9	319.7	949.7	885.4	64.28	14.773	
10,236.2	6,720.8	6,640.9	6,639.6	66.4	1.7	88.57	-3,479.0	319.7	936.3	871.4	64.96	14.414	
10,300.0	6,720.4	6,642.3	6,641.0	67.5	1.7	88.66	-3,479.0	319.7	915.9	849.7	66.15	13.845	
10,334.6	6,720.1	6,643.1	6,641.7	68.2	1.7	88.71	-3,479.0	319.7	906.4	839.6	66.80	13.569	
10,400.0	6,719.7	6,644.5	6,643.2	69.3	1.7	88.80	-3,479.1	319.6	892.0	824.0	68.03	13.113	
10,433.0	6,719.4	6,645.3	6,643.9	69.9	1.7	88.85	-3,479.1	319.6	886.5	817.8	68.65	12.914	
10,500.0	6,719.0	6,646.8	6,645.5	71.1	1.7	88.95	-3,479.2	319.6	879.0	809.1	69.90	12.574	
10,531.5	6,718.8	6,647.5	6,646.2	71.7	1.7	89.00	-3,479.2	319.6	877.2	806.7	70.50	12.443	
10,565.5	6,718.5	6,648.3	6,647.0	72.3	1.7	89.05	-3,479.2	319.6	876.5	805.4	71.14	12.322 CC, ES	
10,600.0	6,718.3	6,649.1	6,647.8	72.9	1.7	89.10	-3,479.2	319.6	877.2	805.4	71.79	12.220	
10,629.9	6,718.1	6,649.8	6,648.5	73.4	1.7	89.15	-3,479.2	319.5	878.9	806.6	72.35	12.148	
10,700.0	6,717.6	6,651.5	6,650.2	74.7	1.7	89.26	-3,479.3	319.5	886.8	813.1	73.67	12.038	
10,728.3	6,717.4	6,652.2	6,650.9	75.2	1.7	89.30	-3,479.3	319.5	891.5	817.3	74.20	12.015	
10,800.0	6,717.0	6,654.0	6,652.7	76.5	1.7	89.42	-3,479.4	319.5	907.3	831.8	75.56	12.009 SF	
10,826.7	6,716.8	6,654.7	6,653.3	77.0	1.7	89.46	-3,479.4	319.5	914.6	838.6	76.06	12.025	
10,900.0	6,716.3	6,656.5	6,655.2	78.3	1.7	89.58	-3,479.5	319.4	938.2	860.7	77.45	12.114	
10,925.2	6,716.1	6,657.2	6,655.8	78.8	1.7	89.63	-3,479.5	319.4	947.4	869.5	77.92	12.159	
11,000.0	6,715.6	6,659.2	6,657.8	80.2	1.7	89.76	-3,479.6	319.4	978.3	898.9	79.34	12.330	
11,023.6	6,715.4	6,659.8	6,658.4	80.6	1.7	89.80	-3,479.6	319.4	989.0	909.2	79.78	12.396	
11,100.0	6,714.9	6,661.9	6,660.5	82.0	1.7	89.93	-3,479.6	319.3	1,026.6	945.3	81.23	12.638	
11,122.0	6,714.8	6,662.5	6,661.1	82.4	1.7	89.97	-3,479.7	319.3	1,038.2	956.5	81.65	12.715	
11,200.0	6,714.2	6,664.6	6,663.3	83.8	1.7	90.11	-3,479.7	319.3	1,082.0	998.8	83.13	13.016	
11,220.4	6,714.1	6,665.2	6,663.9	84.2	1.7	90.15	-3,479.8	319.3	1,094.1	1,010.6	83.51	13.100	
11,300.0	6,713.5	6,667.5	6,666.2	85.7	1.7	90.30	-3,479.8	319.2	1,143.4	1,058.4	85.02	13.448	
11,318.9	6,713.4	6,668.1	6,666.7	86.0	1.7	90.34	-3,479.9	319.2	1,155.6	1,070.3	85.38	13.535	
11,400.0	6,712.9	6,670.5	6,669.1	87.5	1.7	90.49	-3,479.9	319.2	1,210.1	1,123.1	86.92	13.921	
11,417.3	6,712.7	6,671.0	6,669.6	87.8	1.7	90.53	-3,480.0	319.2	1,222.0	1,134.8	87.25	14.006	
11,500.0	6,712.2	6,673.5	6,672.2	89.3	1.7	90.69	-3,480.0	319.1	1,281.0	1,192.2	88.82	14.422	
11,515.7	6,712.1	6,674.0	6,672.6	89.6	1.7	90.73	-3,480.1	319.1	1,292.5	1,203.4	89.12	14.503	
11,600.0	6,711.5	6,676.7	6,675.3	91.2	1.7	90.90	-3,480.2	319.1	1,355.6	1,264.9	90.72	14.942	
11,614.1	6,711.4	6,677.1	6,675.8	91.4	1.7	90.93	-3,480.2	319.1	1,366.5	1,275.5	90.99	15.017	
11,700.0	6,710.8	6,679.9	6,678.6	93.0	1.7	91.11	-3,480.3	319.0	1,433.4	1,340.7	92.63	15.474	
11,712.6	6,710.7	6,680.3	6,679.0	93.3	1.7	91.14	-3,480.3	319.0	1,443.3	1,350.5	92.87	15.542	
11,800.0	6,710.1	6,683.3	6,681.9	94.9	1.7	91.33	-3,480.4	319.0	1,513.7	1,419.1	94.53	16.013	
11,811.0	6,710.1	6,683.7	6,682.3	95.1	1.7	91.36	-3,480.4	318.9	1,522.7	1,427.9	94.74	16.072	
11,900.0	6,709.5	6,686.8	6,685.4	96.7	1.7	91.56	-3,480.5	318.9	1,596.2	1,499.8	96.43	16.552	
11,909.4	6,709.4	6,687.1	6,685.8	96.9	1.7	91.58	-3,480.5	318.9	1,604.1	1,507.5	96.61	16.603	
12,000.0	6,708.8	6,690.4	6,689.0	98.6	1.7	91.80	-3,480.7	318.8	1,680.6	1,582.3	98.34	17.090	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT LDS #5-25 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,007.8	6,708.7	6,690.7	6,689.3	98.7	1.7	91.81	-3,480.7	318.8	1,687.3	1,588.9	98.49	17.132	
12,100.0	6,708.1	6,694.1	6,692.8	100.4	1.7	92.04	-3,480.8	318.7	1,766.7	1,666.5	100.24	17.624	
12,106.3	6,708.1	6,694.4	6,693.0	100.6	1.7	92.05	-3,480.8	318.7	1,772.1	1,671.8	100.36	17.657	
12,200.0	6,707.4	6,698.0	6,696.6	102.3	1.7	92.29	-3,481.0	318.7	1,854.1	1,752.0	102.15	18.152	
12,204.7	6,707.4	6,698.2	6,696.8	102.4	1.7	92.30	-3,481.0	318.7	1,858.3	1,756.0	102.24	18.176	
12,300.0	6,706.7	6,702.0	6,700.6	104.2	1.7	92.55	-3,481.1	318.6	1,942.8	1,838.7	104.05	18.672	
12,303.1	6,706.7	6,702.1	6,700.7	104.2	1.7	92.56	-3,481.1	318.6	1,945.6	1,841.5	104.11	18.688	
12,400.0	6,706.1	6,706.1	6,704.7	106.0	1.7	92.82	-3,481.3	318.5	2,032.5	1,926.5	105.95	19.183	
12,401.5	6,706.0	6,706.2	6,704.8	106.1	1.7	92.82	-3,481.3	318.5	2,033.9	1,927.9	105.98	19.191	
12,500.0	6,705.4	6,710.4	6,709.0	107.9	1.7	93.09	-3,481.4	318.4	2,123.1	2,015.2	107.86	19.685	
12,598.4	6,704.7	6,714.7	6,713.3	109.7	1.7	93.38	-3,481.6	318.3	2,213.0	2,103.3	109.73	20.169	
12,600.0	6,704.7	6,714.8	6,713.4	109.8	1.7	93.38	-3,481.6	318.3	2,214.5	2,104.8	109.76	20.177	
12,696.8	6,704.0	6,719.2	6,717.8	111.6	1.7	93.67	-3,481.8	318.2	2,303.7	2,192.1	111.59	20.644	
12,700.0	6,704.0	6,719.4	6,718.0	111.6	1.7	93.68	-3,481.8	318.2	2,306.6	2,195.0	111.65	20.659	
12,795.2	6,703.4	6,723.9	6,722.5	113.4	1.7	93.97	-3,482.0	318.1	2,395.0	2,281.5	113.46	21.108	
12,800.0	6,703.3	6,724.2	6,722.7	113.5	1.7	93.99	-3,482.0	318.1	2,399.4	2,285.8	113.55	21.130	
12,893.7	6,702.7	6,728.8	6,727.4	115.3	1.7	94.29	-3,482.2	318.0	2,486.8	2,371.4	115.33	21.563	
12,900.0	6,702.7	6,729.1	6,727.7	115.4	1.7	94.31	-3,482.2	318.0	2,492.7	2,377.2	115.45	21.592	
12,992.1	6,702.0	6,733.9	6,732.5	117.1	1.7	94.62	-3,482.5	317.9	2,579.0	2,461.9	117.19	22.008	
13,000.0	6,702.0	6,734.3	6,732.9	117.3	1.7	94.65	-3,482.5	317.9	2,586.5	2,469.1	117.34	22.043	
13,090.5	6,701.4	6,739.2	6,737.8	119.0	1.7	94.96	-3,482.7	317.8	2,671.8	2,552.7	119.04	22.443	
13,100.0	6,701.3	6,739.7	6,738.3	119.1	1.7	95.00	-3,482.7	317.8	2,680.7	2,561.5	119.22	22.485	
13,188.9	6,700.7	6,744.7	6,743.3	120.8	1.7	95.32	-3,482.9	317.6	2,764.9	2,644.0	120.90	22.869	
13,200.0	6,700.6	6,745.4	6,743.9	121.0	1.7	95.36	-3,483.0	317.6	2,775.3	2,654.2	121.11	22.917	
13,287.4	6,700.0	6,750.5	6,749.1	122.7	1.7	95.69	-3,483.2	317.5	2,858.3	2,735.6	122.75	23.286	
13,300.0	6,699.9	6,751.3	6,749.8	122.9	1.7	95.74	-3,483.2	317.5	2,870.3	2,747.3	122.98	23.339	
13,385.8	6,699.3	6,756.6	6,755.1	124.5	1.7	96.08	-3,483.5	317.4	2,952.1	2,827.5	124.59	23.694	
13,400.0	6,699.3	6,757.4	6,756.0	124.8	1.7	96.14	-3,483.5	317.3	2,965.6	2,840.8	124.85	23.753	
13,484.2	6,698.7	13,484.2	6,747.7	126.4	4.1	95.60	-3,483.2	317.5	3,046.1	2,917.3	128.83	23.644	
13,500.0	6,698.6	13,500.0	6,748.3	126.7	4.1	95.64	-3,483.2	317.5	3,061.2	2,932.1	129.15	23.703	
13,582.6	6,698.0	6,750.0	6,748.6	128.2	1.7	95.66	-3,483.2	317.5	3,140.5	3,012.1	128.35	24.468	
13,600.0	6,697.9	6,750.0	6,748.6	128.5	1.7	95.66	-3,483.2	317.5	3,157.1	3,028.4	128.68	24.535	
13,681.1	6,697.3	6,750.0	6,748.6	130.1	1.7	95.66	-3,483.2	317.5	3,235.0	3,104.8	130.22	24.843	
13,700.0	6,697.2	6,750.0	6,748.6	130.4	1.7	95.66	-3,483.2	317.5	3,253.3	3,122.7	130.58	24.914	
13,779.5	6,696.7	6,750.0	6,748.6	131.9	1.7	95.66	-3,483.2	317.5	3,329.8	3,197.8	132.09	25.209	
13,800.0	6,696.5	6,750.0	6,748.6	132.3	1.7	95.66	-3,483.2	317.5	3,349.6	3,217.1	132.48	25.285	
13,877.9	6,696.0	6,750.0	6,748.6	133.8	1.7	95.66	-3,483.2	317.5	3,424.8	3,290.9	133.96	25.567	
13,900.0	6,695.8	6,750.0	6,748.6	134.2	1.7	95.66	-3,483.2	317.5	3,446.2	3,311.8	134.38	25.646	
13,976.3	6,695.3	6,750.0	6,748.6	135.6	1.7	95.66	-3,483.2	317.5	3,520.0	3,384.2	135.83	25.916	
14,000.0	6,695.2	6,750.0	6,748.6	136.1	1.7	95.66	-3,483.2	317.5	3,542.9	3,406.7	136.28	25.998	
14,034.1	6,695.0	6,750.0	6,748.6	136.7	1.7	95.65	-3,483.2	317.5	3,575.9	3,439.0	136.92	26.116	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT NOFFSINGER #21-5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	105.62	-242.3	866.3	899.9				
98.4	98.4	75.9	75.9	0.1	0.1	105.63	-242.4	866.2	899.5	899.3	0.13	6,675.666	
100.0	100.0	77.5	77.5	0.1	0.1	105.63	-242.4	866.2	899.5	899.3	0.14	6,537.736	
196.8	196.8	172.9	172.9	0.3	0.2	105.65	-242.6	865.9	899.2	898.7	0.48	1,860.775	
200.0	200.0	176.0	176.0	0.3	0.2	105.65	-242.6	865.9	899.2	898.7	0.50	1,816.305	
295.3	295.3	271.1	271.0	0.5	0.2	105.66	-242.6	865.8	899.1	898.4	0.77	1,173.078	
300.0	300.0	275.8	275.8	0.5	0.2	105.66	-242.6	865.8	899.1	898.4	0.78	1,155.050	
393.7	393.7	369.7	369.7	0.7	0.3	105.65	-242.5	865.7	899.0	898.0	1.05	860.153	
400.0	400.0	376.0	376.0	0.8	0.3	105.65	-242.5	865.7	899.0	898.0	1.06	844.915	
492.1	492.1	469.3	469.3	1.0	0.4	105.63	-242.2	865.6	898.9	897.6	1.33	676.178	
500.0	500.0	477.3	477.3	1.0	0.4	105.63	-242.2	865.6	898.9	897.5	1.35	665.005	
590.5	590.5	568.6	568.6	1.2	0.4	105.62	-241.9	865.4	898.6	897.0	1.60	559.886	
600.0	600.0	578.1	578.1	1.2	0.4	105.61	-241.9	865.4	898.6	896.9	1.63	550.836	
689.0	689.0	667.4	667.4	1.4	0.5	105.60	-241.6	865.1	898.2	896.3	1.88	478.971	
700.0	700.0	678.5	678.5	1.4	0.5	105.60	-241.5	865.1	898.2	896.3	1.91	471.387	
787.4	787.4	767.8	767.8	1.6	0.5	105.59	-241.2	864.7	897.8	895.6	2.14	419.232	
800.0	800.0	780.7	780.7	1.7	0.5	105.59	-241.2	864.7	897.7	895.5	2.18	412.662	
885.8	885.8	869.8	869.8	1.9	0.6	105.58	-240.8	864.0	897.0	894.6	2.40	373.077	
900.0	900.0	884.6	884.6	1.9	0.6	105.57	-240.8	863.9	896.9	894.4	2.44	367.256	
984.2	984.2	969.4	969.4	2.1	0.6	105.57	-240.5	863.0	895.9	893.2	2.66	336.331	
1,000.0	1,000.0	985.2	985.2	2.1	0.6	105.57	-240.4	862.8	895.7	893.0	2.71	331.124	
1,082.7	1,082.7	1,068.2	1,068.1	2.3	0.7	105.57	-240.1	861.9	894.8	891.9	2.92	306.363	
1,100.0	1,100.0	1,085.6	1,085.6	2.3	0.7	105.57	-240.1	861.7	894.6	891.6	2.97	301.637	
1,181.1	1,181.1	1,165.8	1,165.8	2.5	0.7	105.56	-239.6	860.9	893.6	890.5	3.18	281.443	
1,200.0	1,200.0	1,184.4	1,184.4	2.6	0.7	105.55	-239.5	860.7	893.4	890.2	3.22	277.126	
1,279.5	1,279.5	1,262.7	1,262.6	2.7	0.8	105.54	-239.1	860.0	892.7	889.2	3.43	260.408	
1,300.0	1,300.0	1,282.8	1,282.8	2.8	0.8	105.53	-239.0	859.8	892.5	889.0	3.48	256.432	
1,377.9	1,377.9	1,359.9	1,359.8	3.0	0.8	105.52	-238.6	859.3	891.8	888.2	3.68	242.392	
1,400.0	1,400.0	1,381.7	1,381.7	3.0	0.8	105.51	-238.5	859.2	891.7	887.9	3.74	238.700	
1,476.4	1,476.4	1,457.8	1,457.8	3.2	0.8	105.50	-238.1	858.7	891.1	887.2	3.93	226.762	
1,500.0	1,500.0	1,481.4	1,481.4	3.2	0.9	105.49	-237.9	858.6	891.0	887.0	3.99	223.309	
1,574.8	1,574.8	1,556.5	1,556.5	3.4	0.9	105.47	-237.6	858.1	890.4	886.2	4.18	213.051	
1,600.0	1,600.0	1,581.9	1,581.8	3.5	0.9	105.47	-237.4	857.9	890.2	886.0	4.24	209.803	
1,673.2	1,673.2	1,656.5	1,656.5	3.6	0.9	105.45	-237.0	857.4	889.6	885.2	4.43	200.906	
1,700.0	1,700.0	1,684.0	1,683.9	3.7	0.9	105.45	-236.8	857.2	889.3	884.9	4.50	197.831	
1,771.6	1,771.6	1,756.3	1,756.3	3.8	1.0	105.44	-236.5	856.5	888.6	883.9	4.68	190.045	
1,800.0	1,800.0	1,784.9	1,784.8	3.9	1.0	105.44	-236.4	856.2	888.3	883.5	4.75	187.127	
1,870.1	1,870.1	1,855.4	1,855.3	4.1	1.0	105.43	-236.2	855.4	887.5	882.6	4.92	180.285	
1,900.0	1,900.0	1,885.5	1,885.4	4.1	1.0	105.43	-236.1	855.1	887.1	882.1	5.00	177.508	
1,968.5	1,968.5	1,955.9	1,955.8	4.3	1.0	105.44	-235.9	854.2	886.3	881.1	5.17	171.458	
2,000.0	2,000.0	1,988.5	1,988.4	4.4	1.1	105.44	-235.9	853.7	885.8	880.6	5.25	168.799	
2,066.9	2,066.9	2,057.2	2,057.2	4.5	1.1	105.47	-235.9	852.6	884.7	879.3	5.42	163.367	
2,100.0	2,100.0	2,091.2	2,091.1	4.6	1.1	105.48	-236.0	851.9	884.1	878.6	5.50	160.795	
2,165.3	2,165.3	2,155.8	2,155.7	4.7	1.1	105.50	-235.9	850.7	883.0	877.3	5.66	155.975	
2,200.0	2,200.0	2,189.9	2,189.8	4.8	1.1	105.50	-235.8	850.2	882.4	876.6	5.75	153.539	
2,250.0	2,250.0	2,238.8	2,238.7	4.9	1.1	105.50	-235.6	849.4	881.6	875.7	5.87	150.158	
2,263.8	2,263.8	2,252.3	2,252.2	4.9	1.1	33.60	-235.5	849.2	881.3	875.2	6.09	144.758	
2,300.0	2,300.0	2,287.7	2,287.6	5.0	1.2	33.62	-235.4	848.7	880.5	874.3	6.18	142.467	
2,362.2	2,362.2	2,349.3	2,349.1	5.2	1.2	33.71	-235.2	847.9	878.1	871.8	6.33	138.676	
2,400.0	2,399.9	2,386.8	2,386.7	5.2	1.2	33.80	-235.1	847.4	876.2	869.8	6.42	136.381	
2,460.6	2,460.4	2,447.3	2,447.1	5.4	1.2	33.99	-235.0	846.6	872.2	865.6	6.57	132.675	
2,500.0	2,499.7	2,486.6	2,486.4	5.4	1.2	34.15	-235.0	846.0	869.1	862.4	6.67	130.278	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,558.5	2,546.3	2,546.2	5.6	1.3	34.45	-235.0	845.1	863.5	856.7	6.82	126.647	
2,600.0	2,599.1	2,587.8	2,587.7	5.7	1.3	34.70	-235.1	844.4	859.0	852.1	6.92	124.133	
2,657.5	2,656.1	2,644.8	2,644.7	5.8	1.3	35.11	-235.3	843.4	851.8	844.8	7.06	120.575	
2,700.0	2,698.2	2,686.7	2,686.5	5.9	1.3	35.45	-235.5	842.7	846.0	838.8	7.17	117.953	
2,755.9	2,753.3	2,742.1	2,741.9	6.1	1.3	35.95	-235.7	841.7	837.5	830.2	7.32	114.456	
2,800.0	2,796.6	2,785.8	2,785.6	6.2	1.3	36.39	-235.9	840.9	830.2	822.8	7.43	111.703	
2,854.3	2,849.9	2,839.1	2,838.9	6.3	1.4	36.99	-236.0	839.9	820.5	812.9	7.58	108.241	
2,900.0	2,894.4	2,883.6	2,883.4	6.5	1.4	37.55	-236.1	839.0	811.8	804.1	7.71	105.349	
2,952.7	2,945.7	2,934.8	2,934.6	6.6	1.4	38.25	-236.3	838.0	801.0	793.2	7.86	101.919	
3,000.0	2,991.5	2,980.6	2,980.4	6.8	1.4	38.94	-236.4	837.2	790.8	782.8	8.00	98.880	
3,051.2	3,040.8	3,027.4	3,027.2	7.0	1.4	39.71	-236.5	836.3	779.2	771.1	8.15	95.561	
3,100.0	3,087.6	3,070.5	3,070.2	7.1	1.4	40.50	-236.8	835.6	767.8	759.5	8.31	92.413	
3,149.6	3,134.9	3,114.5	3,114.3	7.4	1.4	41.37	-237.2	835.1	756.0	747.5	8.48	89.183	
3,200.0	3,182.7	3,160.2	3,160.0	7.6	1.4	42.35	-237.6	834.7	743.6	734.9	8.65	85.954	
3,248.0	3,228.0	3,203.7	3,203.5	7.8	1.5	43.36	-238.1	834.4	731.4	722.6	8.83	82.788	
3,300.0	3,276.6	3,252.3	3,252.1	8.1	1.5	44.57	-238.7	834.1	717.9	708.9	9.04	79.378	
3,346.4	3,319.9	3,295.4	3,295.2	8.3	1.5	45.74	-239.2	833.8	705.5	696.2	9.25	76.233	
3,400.0	3,369.4	3,344.1	3,343.9	8.6	1.5	47.16	-239.8	833.6	690.8	681.3	9.51	72.659	
3,444.9	3,410.5	3,384.6	3,384.3	8.9	1.5	48.43	-240.3	833.4	678.3	668.6	9.75	69.586	
3,500.0	3,460.7	3,433.6	3,433.4	9.2	1.5	50.10	-240.8	833.2	662.8	652.7	10.06	65.911	
3,543.3	3,499.8	3,471.8	3,471.6	9.5	1.5	51.48	-241.2	833.2	650.5	640.2	10.33	62.978	
3,600.0	3,550.6	3,521.6	3,521.4	9.9	1.5	53.41	-241.7	833.2	634.4	623.7	10.70	59.262	
3,641.7	3,587.6	3,558.1	3,557.8	10.3	1.5	54.93	-242.0	833.3	622.6	611.6	11.02	56.504	
3,709.9	3,647.5	3,617.4	3,617.1	10.8	1.5	57.58	-242.6	833.6	603.5	591.9	11.56	52.207	
3,740.1	3,673.9	3,643.8	3,643.5	11.1	1.5	58.68	-242.8	833.7	595.2	583.4	11.82	50.365	
3,800.0	3,726.2	3,696.0	3,695.8	11.6	1.5	60.93	-243.3	833.9	579.6	567.2	12.35	46.947	
3,838.6	3,759.9	3,729.6	3,729.3	11.9	1.5	62.43	-243.7	834.0	570.1	557.4	12.70	44.877	
3,900.0	3,813.5	3,783.0	3,782.7	12.5	1.5	64.90	-244.2	834.2	556.0	542.7	13.29	41.835	
3,937.0	3,845.8	3,815.3	3,815.0	12.8	1.5	66.44	-244.6	834.4	548.1	534.4	13.66	40.130	
4,000.0	3,900.8	3,870.4	3,870.1	13.4	1.5	69.14	-245.1	834.6	535.8	521.5	14.30	37.477	
4,035.4	3,931.7	3,901.4	3,901.1	13.7	1.5	70.70	-245.4	834.7	529.5	514.9	14.67	36.104	
4,100.0	3,988.1	3,957.4	3,957.1	14.3	1.5	73.60	-246.0	835.0	519.4	504.1	15.35	33.846	
4,133.8	4,017.6	3,986.7	3,986.4	14.7	1.5	75.15	-246.4	835.1	514.8	499.1	15.71	32.768	
4,200.0	4,075.4	4,043.6	4,043.4	15.3	1.5	78.22	-247.1	835.3	507.3	490.9	16.42	30.895	
4,232.3	4,103.5	4,071.4	4,071.1	15.6	1.5	79.74	-247.5	835.4	504.4	487.7	16.77	30.080	
4,300.0	4,162.6	4,129.5	4,129.2	16.2	1.5	82.97	-248.4	835.6	500.0	482.5	17.49	28.579	
4,330.7	4,189.4	4,155.9	4,155.6	16.5	1.6	84.45	-248.9	835.7	498.7	480.9	17.82	27.982	
4,398.3	4,248.5	4,214.2	4,213.9	17.2	1.6	87.73	-250.0	836.0	497.6	479.1	18.53	26.851	
4,400.0	4,249.9	4,215.7	4,215.3	17.2	1.6	87.82	-250.0	836.0	497.6	479.0	18.55	26.826	
4,429.1	4,275.4	4,241.0	4,240.6	17.5	1.6	89.24	-250.5	836.1	497.8	479.0	18.85	26.410	
4,500.0	4,337.2	4,302.6	4,302.3	18.2	1.6	92.70	-251.7	836.4	500.1	480.5	19.56	25.568	
4,527.5	4,361.3	4,327.1	4,326.8	18.5	1.6	94.07	-252.1	836.5	501.6	481.8	19.83	25.297	
4,600.0	4,424.5	4,391.8	4,391.5	19.2	1.6	97.63	-253.2	836.8	507.2	486.7	20.51	24.731	
4,626.0	4,447.2	4,415.1	4,414.7	19.5	1.6	98.90	-253.5	837.0	509.7	489.0	20.74	24.574	
4,700.0	4,511.8	4,481.5	4,481.1	20.2	1.6	102.43	-254.4	837.5	518.4	497.0	21.38	24.253	
4,724.4	4,533.1	4,503.4	4,503.0	20.5	1.6	103.58	-254.6	837.6	521.7	500.2	21.57	24.184	
4,796.7	4,596.3	4,568.7	4,568.4	21.2	1.6	106.90	-255.1	838.2	532.9	510.8	22.13	24.081	
4,800.0	4,599.1	4,571.7	4,571.3	21.2	1.6	107.06	-255.1	838.2	533.4	511.3	22.15	24.084	
4,822.8	4,619.1	4,592.4	4,592.0	21.4	1.6	108.15	-255.2	838.4	537.3	515.0	22.26	24.138	
4,900.0	4,687.3	4,664.2	4,663.8	22.0	1.6	111.71	-255.3	839.3	551.1	528.5	22.59	24.389	
4,921.2	4,706.2	4,684.3	4,683.9	22.2	1.6	112.64	-255.3	839.7	555.0	532.3	22.67	24.481	
5,000.0	4,777.1	4,756.8	4,756.4	22.8	1.6	115.79	-255.0	841.0	569.8	546.9	22.93	24.853	

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 EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,794.9	4,774.8	4,774.5	22.9	1.6	116.53	-254.9	841.3	573.6	550.6	22.98	24.962	
5,100.0	4,868.3	4,849.3	4,848.9	23.5	1.6	119.38	-254.5	842.6	589.3	566.1	23.17	25.432	
5,118.1	4,885.0	4,866.3	4,865.8	23.6	1.6	119.99	-254.4	842.9	592.8	569.6	23.20	25.549	
5,200.0	4,961.0	4,943.2	4,942.8	24.2	1.6	122.54	-253.9	844.3	608.7	585.3	23.34	26.079	
5,216.5	4,976.4	4,958.8	4,958.4	24.3	1.6	123.02	-253.8	844.6	611.8	588.5	23.36	26.194	
5,300.0	5,054.8	5,037.5	5,037.1	24.8	1.6	125.26	-253.3	846.1	627.5	604.0	23.45	26.753	
5,314.9	5,069.0	5,051.6	5,051.1	24.8	1.6	125.63	-253.3	846.4	630.2	606.8	23.47	26.857	
5,400.0	5,149.9	5,132.0	5,131.5	25.3	1.6	127.59	-252.9	847.8	645.5	621.9	23.54	27.426	
5,413.4	5,162.7	5,144.6	5,144.2	25.4	1.6	127.88	-252.8	848.0	647.8	624.3	23.54	27.517	
5,500.0	5,245.9	5,228.0	5,227.5	25.8	1.6	129.60	-252.4	849.3	662.3	638.7	23.58	28.080	
5,511.8	5,257.3	5,239.6	5,239.1	25.9	1.6	129.82	-252.4	849.5	664.1	640.5	23.59	28.157	
5,600.0	5,342.9	5,326.7	5,326.3	26.3	1.6	131.31	-251.9	850.9	677.3	653.6	23.61	28.682	
5,610.2	5,352.9	5,336.9	5,336.4	26.3	1.6	131.47	-251.9	851.1	678.7	655.1	23.61	28.741	
5,700.0	5,440.7	5,426.2	5,425.7	26.7	1.6	132.68	-251.4	853.0	690.1	666.5	23.64	29.192	
5,708.6	5,449.1	5,434.8	5,434.3	26.7	1.6	132.78	-251.4	853.2	691.2	667.5	23.64	29.233	
5,800.0	5,539.1	5,525.7	5,525.2	27.0	1.6	133.70	-251.0	855.7	700.7	677.1	23.68	29.590	
5,807.1	5,546.1	5,532.7	5,532.1	27.0	1.6	133.76	-251.0	855.9	701.4	677.7	23.68	29.615	
5,900.0	5,638.1	5,622.7	5,622.1	27.3	1.6	134.39	-251.0	859.0	709.1	685.4	23.75	29.863	
5,905.5	5,643.5	5,627.7	5,627.1	27.3	1.6	134.42	-251.0	859.2	709.5	685.8	23.75	29.876	
6,000.0	5,737.5	5,714.6	5,714.0	27.5	1.6	134.89	-251.3	861.1	715.9	692.1	23.81	30.069	
6,003.9	5,741.4	5,718.4	5,717.8	27.5	1.6	134.91	-251.3	861.1	716.2	692.4	23.81	30.077	
6,100.0	5,837.2	5,810.5	5,809.9	27.7	1.6	135.28	-251.8	861.9	721.1	697.3	23.86	30.219	
6,102.3	5,839.6	5,812.8	5,812.2	27.7	1.6	135.29	-251.8	861.9	721.2	697.4	23.86	30.222	
6,200.0	5,937.2	5,909.3	5,908.6	27.9	1.6	135.50	-252.3	862.0	724.2	700.3	23.92	30.269	
6,200.8	5,937.9	5,910.0	5,909.4	27.9	1.6	135.50	-252.3	862.0	724.2	700.3	23.93	30.269	
6,256.6	5,993.8	5,965.3	5,964.7	27.9	1.6	-152.56	-252.6	861.9	724.9	700.9	23.97	30.243	
6,286.6	6,023.8	5,995.0	5,994.4	27.9	1.6	-152.56	-252.8	861.9	725.1	701.0	24.01	30.199	
6,299.2	6,036.4	6,007.7	6,007.1	27.9	1.6	27.44	-252.8	861.9	725.0	701.0	24.00	30.213	
6,300.0	6,037.2	6,008.5	6,007.9	27.9	1.6	27.44	-252.8	861.9	725.0	701.0	24.00	30.213	
6,350.0	6,087.1	6,059.5	6,058.9	28.0	1.7	27.62	-253.1	861.8	722.9	699.0	23.91	30.240	
6,397.6	6,134.3	6,107.8	6,107.1	28.0	1.7	28.01	-253.3	861.8	718.0	694.2	23.76	30.221	
6,400.0	6,136.7	6,110.2	6,109.5	28.0	1.7	28.04	-253.3	861.8	717.6	693.9	23.75	30.220	
6,450.0	6,185.7	6,160.4	6,159.8	28.0	1.7	28.72	-253.5	861.9	709.3	685.8	23.51	30.173	
6,496.0	6,230.2	6,205.7	6,205.1	28.0	1.7	29.61	-253.6	862.0	698.9	675.7	23.20	30.121	
6,500.0	6,234.0	6,209.4	6,208.8	28.0	1.7	29.69	-253.6	862.0	697.9	674.7	23.17	30.117	
6,550.0	6,281.3	6,255.8	6,255.1	28.0	1.7	30.95	-253.7	862.0	683.6	660.9	22.73	30.070	
6,594.5	6,322.2	6,296.0	6,295.4	27.9	1.7	32.34	-253.8	862.0	668.7	646.4	22.25	30.048	
6,600.0	6,327.3	6,300.9	6,300.3	27.9	1.7	32.54	-253.8	862.0	666.7	644.5	22.19	30.049	
6,650.0	6,371.8	6,345.2	6,344.5	27.9	1.7	34.52	-253.9	862.0	647.3	625.7	21.54	30.056	
6,692.9	6,408.6	6,381.8	6,381.2	27.9	1.7	36.56	-254.1	862.0	628.7	607.8	20.90	30.076	
6,700.0	6,414.6	6,387.8	6,387.1	27.8	1.7	36.93	-254.1	862.0	625.5	604.7	20.79	30.083	
6,750.0	6,455.5	6,428.4	6,427.7	27.8	1.7	39.81	-254.3	861.9	601.5	581.6	19.99	30.099	
6,791.3	6,487.7	6,460.4	6,459.7	27.7	1.7	42.59	-254.4	861.9	580.4	561.1	19.31	30.058	
6,800.0	6,494.3	6,466.9	6,466.3	27.7	1.7	43.22	-254.5	861.9	575.8	556.6	19.16	30.045	
6,850.0	6,530.8	6,503.3	6,502.7	27.7	1.7	47.19	-254.7	861.9	548.6	530.2	18.40	29.820	
6,889.7	6,558.1	6,531.0	6,530.4	27.6	1.7	50.79	-254.9	861.9	526.1	508.2	17.88	29.427	
6,900.0	6,564.9	6,537.9	6,537.3	27.6	1.7	51.78	-254.9	861.9	520.2	502.4	17.76	29.294	
6,950.0	6,596.3	6,569.8	6,569.2	27.6	1.7	56.88	-255.1	861.8	491.2	473.8	17.33	28.343	
6,988.2	6,618.4	6,592.2	6,591.6	27.5	1.7	61.05	-255.2	861.8	468.9	451.8	17.17	27.306	
7,000.0	6,624.9	6,598.8	6,598.2	27.5	1.7	62.37	-255.3	861.8	462.1	444.9	17.14	26.953	
7,050.0	6,650.6	6,624.7	6,624.1	27.5	1.7	68.00	-255.4	861.8	433.7	416.5	17.17	25.256	
7,086.6	6,667.5	6,641.8	6,641.1	27.5	1.8	72.06	-255.5	861.8	413.8	396.5	17.29	23.928	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT NOFFSINGER #21-5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,100.0	6,673.3	6,647.6	6,647.0	27.5	1.8	73.51	-255.5	861.8	406.8	389.4	17.34	23.460	
7,150.0	6,692.7	6,667.3	6,666.7	27.5	1.8	78.59	-255.6	861.8	382.5	364.9	17.59	21.741	
7,185.0	6,704.4	6,679.2	6,678.6	27.5	1.8	81.75	-255.7	861.8	367.6	349.8	17.79	20.656	
7,200.0	6,709.0	6,683.8	6,683.2	27.5	1.8	82.98	-255.7	861.8	361.9	344.0	17.90	20.215	
7,250.0	6,721.8	6,697.0	6,696.3	27.5	1.8	86.45	-255.8	861.8	346.2	328.0	18.26	18.962	
7,283.4	6,728.6	6,703.9	6,703.3	27.5	1.8	88.19	-255.9	861.8	339.2	320.6	18.53	18.307	
7,300.0	6,731.3	6,706.8	6,706.1	27.6	1.8	88.86	-255.9	861.8	336.8	318.1	18.65	18.055	
7,341.9	6,736.6	6,712.3	6,711.7	27.6	1.8	90.01	-255.9	861.8	334.2	315.2	18.98	17.603 CC, ES	
7,350.0	6,737.3	6,713.1	6,712.5	27.7	1.8	90.14	-255.9	861.8	334.3	315.2	19.04	17.553	
7,381.9	6,739.4	6,715.3	6,714.7	27.7	1.8	90.34	-255.9	861.8	336.5	317.3	19.28	17.455 SF	
7,400.0	6,739.9	6,716.0	6,715.3	27.8	1.8	90.24	-255.9	861.8	339.2	319.8	19.40	17.483	
7,416.5	6,740.0	6,716.2	6,715.5	27.8	1.8	90.00	-255.9	861.8	342.4	322.9	19.50	17.553	
7,480.3	6,739.5	6,716.1	6,715.5	28.0	1.8	90.00	-255.9	861.8	361.6	341.6	20.04	18.050	
7,500.0	6,739.4	6,716.1	6,715.4	28.1	1.8	89.99	-255.9	861.8	369.6	349.4	20.20	18.298	
7,578.7	6,738.9	6,716.0	6,715.4	28.5	1.8	89.98	-255.9	861.8	409.5	388.5	20.97	19.530	
7,600.0	6,738.7	6,716.0	6,715.4	28.6	1.8	89.98	-255.9	861.8	422.1	401.0	21.17	19.937	
7,677.1	6,738.2	6,716.0	6,715.3	29.1	1.8	89.97	-255.9	861.8	473.2	451.2	22.03	21.482	
7,700.0	6,738.1	6,715.9	6,715.3	29.2	1.8	89.97	-255.9	861.8	489.7	467.4	22.28	21.976	
7,775.6	6,737.5	6,715.9	6,715.2	29.7	1.8	89.96	-255.9	861.8	547.4	524.1	23.21	23.587	
7,800.0	6,737.4	6,715.9	6,715.2	29.9	1.8	89.96	-255.9	861.8	566.9	543.4	23.50	24.119	
7,874.0	6,736.9	6,715.8	6,715.2	30.6	1.8	89.95	-255.9	861.8	628.2	603.7	24.48	25.662	
7,900.0	6,736.7	6,715.8	6,715.2	30.8	1.8	89.94	-255.9	861.8	650.3	625.5	24.82	26.201	
7,972.4	6,736.2	6,715.7	6,715.1	31.5	1.8	89.93	-255.9	861.8	713.5	687.6	25.83	27.617	
8,000.0	6,736.0	6,715.7	6,715.1	31.8	1.8	89.93	-255.9	861.8	737.9	711.7	26.22	28.145	
8,070.8	6,735.5	6,715.7	6,715.0	32.5	1.8	89.92	-255.9	861.8	801.7	774.5	27.26	29.415	
8,100.0	6,735.3	6,715.7	6,715.0	32.8	1.8	89.92	-255.9	861.8	828.3	800.6	27.68	29.922	
8,169.3	6,734.9	6,715.6	6,715.0	33.6	1.8	89.91	-255.9	861.8	892.2	863.4	28.74	31.046	
8,200.0	6,734.6	6,715.6	6,714.9	34.0	1.8	89.90	-255.9	861.8	920.7	891.5	29.20	31.527	
8,267.7	6,734.2	6,715.5	6,714.9	34.8	1.8	89.90	-255.9	861.8	984.1	953.8	30.27	32.515	
8,300.0	6,734.0	6,715.5	6,714.9	35.2	1.8	89.89	-255.9	861.8	1,014.5	983.8	30.77	32.969	
8,366.1	6,733.5	6,715.5	6,714.8	36.1	1.8	89.88	-255.9	861.8	1,077.2	1,045.4	31.84	33.835	
8,400.0	6,733.3	6,715.4	6,714.8	36.5	1.8	89.88	-255.9	861.8	1,109.5	1,077.1	32.38	34.262	
8,464.5	6,732.8	6,715.4	6,714.7	37.4	1.8	89.87	-255.9	861.8	1,171.2	1,137.7	33.44	35.021	
8,500.0	6,732.6	6,715.4	6,714.7	37.9	1.8	89.87	-255.9	861.8	1,205.2	1,171.2	34.02	35.421	
8,563.0	6,732.2	6,715.3	6,714.7	38.8	1.8	89.86	-255.9	861.8	1,265.8	1,230.7	35.08	36.086	
8,600.0	6,731.9	6,715.3	6,714.6	39.3	1.8	89.85	-255.9	861.8	1,301.6	1,265.9	35.70	36.462	
8,661.4	6,731.5	6,715.2	6,714.6	40.2	1.8	89.84	-255.9	861.8	1,361.0	1,324.3	36.74	37.045	
8,700.0	6,731.2	6,715.2	6,714.6	40.8	1.8	89.84	-255.9	861.8	1,398.4	1,361.0	37.39	37.398	
8,759.8	6,730.8	6,715.2	6,714.5	41.7	1.8	89.83	-255.9	861.8	1,456.6	1,418.2	38.42	37.911	
8,800.0	6,730.6	6,715.1	6,714.5	42.3	1.8	89.83	-255.9	861.8	1,495.7	1,456.6	39.11	38.242	
8,858.2	6,730.2	6,715.1	6,714.4	43.2	1.8	89.82	-255.9	861.8	1,552.6	1,512.4	40.13	38.693	
8,900.0	6,729.9	6,715.0	6,714.4	43.8	1.8	89.81	-255.9	861.8	1,593.4	1,552.5	40.85	39.005	
8,956.7	6,729.5	6,715.0	6,714.4	44.7	1.8	89.81	-255.9	861.8	1,648.8	1,607.0	41.84	39.403	
9,000.0	6,729.2	6,715.0	6,714.3	45.4	1.8	89.80	-255.9	861.8	1,691.3	1,648.7	42.60	39.697	
9,055.1	6,728.8	6,714.9	6,714.3	46.3	1.8	89.79	-255.9	861.8	1,745.3	1,701.7	43.58	40.049	
9,100.0	6,728.5	6,714.9	6,714.2	47.0	1.8	89.79	-255.9	861.8	1,789.4	1,745.0	44.37	40.326	
9,153.5	6,728.2	6,714.9	6,714.2	47.9	1.8	89.78	-255.9	861.8	1,842.0	1,796.7	45.33	40.638	
9,200.0	6,727.8	6,714.8	6,714.2	48.6	1.8	89.77	-255.9	861.8	1,887.7	1,841.6	46.16	40.900	
9,251.9	6,727.5	6,714.8	6,714.1	49.5	1.8	89.77	-255.9	861.8	1,938.9	1,891.8	47.09	41.177	
9,300.0	6,727.2	6,714.7	6,714.1	50.3	1.8	89.76	-255.9	861.8	1,986.2	1,938.3	47.95	41.425	
9,350.4	6,726.8	6,714.7	6,714.1	51.1	1.8	89.75	-255.9	861.8	2,035.9	1,987.1	48.86	41.672	
9,400.0	6,726.5	6,714.7	6,714.0	51.9	1.8	89.75	-255.9	861.8	2,084.9	2,035.1	49.75	41.907	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	6,726.1	6,714.6	6,714.0	52.7	1.8	89.74	-255.9	861.8	2,133.1	2,082.4	50.63	42.127	
9,500.0	6,725.8	6,714.6	6,713.9	53.6	1.8	89.74	-255.9	861.8	2,183.6	2,132.1	51.56	42.350	
9,547.2	6,725.5	6,714.6	6,713.9	54.4	1.8	89.73	-255.9	861.8	2,230.3	2,177.9	52.42	42.546	
9,600.0	6,725.1	6,714.5	6,713.9	55.3	1.8	89.72	-255.9	861.8	2,282.5	2,229.1	53.38	42.758	
9,645.6	6,724.8	6,714.5	6,713.8	56.1	1.8	89.72	-255.9	861.8	2,327.7	2,273.5	54.22	42.934	
9,700.0	6,724.4	6,714.4	6,713.8	57.0	1.8	89.71	-255.9	861.8	2,381.5	2,326.3	55.21	43.136	
9,744.1	6,724.1	6,714.4	6,713.8	57.8	1.8	89.70	-255.9	861.8	2,425.1	2,369.1	56.02	43.293	
9,800.0	6,723.8	6,714.4	6,713.7	58.7	1.8	89.70	-255.9	861.8	2,480.5	2,423.5	57.04	43.486	
9,842.5	6,723.5	6,714.3	6,713.7	59.5	1.8	89.69	-255.9	861.8	2,522.7	2,464.8	57.82	43.627	
9,900.0	6,723.1	6,714.3	6,713.6	60.5	1.8	89.68	-255.9	861.8	2,579.7	2,520.8	58.88	43.812	
9,940.9	6,722.8	6,714.3	6,713.6	61.2	1.8	89.68	-255.9	861.8	2,620.2	2,560.6	59.64	43.938	
10,000.0	6,722.4	6,714.2	6,713.6	62.2	1.8	89.67	-255.9	861.8	2,678.9	2,618.1	60.72	44.115	
10,039.3	6,722.1	6,714.2	6,713.5	62.9	1.8	89.66	-255.9	861.8	2,717.9	2,656.4	61.45	44.228	
10,100.0	6,721.7	6,714.1	6,713.5	64.0	1.8	89.66	-255.9	861.8	2,778.1	2,715.5	62.57	44.397	
10,137.8	6,721.5	6,714.1	6,713.5	64.7	1.8	89.65	-255.9	861.8	2,815.6	2,752.3	63.27	44.499	
10,200.0	6,721.0	6,714.1	6,713.4	65.8	1.8	89.64	-255.9	861.8	2,877.4	2,813.0	64.43	44.661	
10,236.2	6,720.8	6,714.0	6,713.4	66.4	1.8	89.64	-255.9	861.8	2,913.4	2,848.3	65.10	44.752	
10,300.0	6,720.4	6,714.0	6,713.3	67.5	1.8	89.63	-255.9	861.8	2,976.7	2,910.5	66.28	44.909	
10,334.6	6,720.1	6,713.9	6,713.3	68.2	1.8	89.62	-255.9	861.8	3,011.2	2,944.2	66.93	44.990	
10,400.0	6,719.7	6,713.9	6,713.2	69.3	1.8	89.62	-255.9	861.8	3,076.1	3,008.0	68.15	45.141	
10,433.0	6,719.4	6,713.9	6,713.2	69.9	1.8	89.61	-255.9	861.8	3,109.0	3,040.2	68.76	45.214	
10,500.0	6,719.0	6,713.8	6,713.2	71.1	1.8	89.60	-255.9	861.8	3,175.6	3,105.5	70.01	45.359	
10,531.5	6,718.8	6,713.8	6,713.1	71.7	1.8	89.60	-255.9	861.8	3,206.9	3,136.3	70.60	45.424	
10,600.0	6,718.3	6,713.7	6,713.1	72.9	1.8	89.59	-255.9	861.8	3,275.0	3,203.1	71.88	45.564	
10,629.9	6,718.1	6,713.7	6,713.1	73.4	1.8	89.59	-255.9	861.8	3,304.8	3,232.3	72.44	45.623	
10,700.0	6,717.6	6,713.7	6,713.0	74.7	1.8	89.58	-255.9	861.8	3,374.5	3,300.8	73.75	45.758	
10,728.3	6,717.4	6,713.6	6,713.0	75.2	1.8	89.57	-255.9	861.8	3,402.7	3,328.4	74.28	45.810	
10,800.0	6,717.0	6,713.6	6,712.9	76.5	1.8	89.56	-255.9	861.8	3,474.0	3,398.4	75.62	45.940	
10,826.7	6,716.8	6,713.6	6,712.9	77.0	1.8	89.56	-255.9	861.8	3,500.7	3,424.5	76.12	45.987	
10,900.0	6,716.3	6,713.5	6,712.9	78.3	1.8	89.55	-255.9	861.8	3,573.6	3,496.1	77.50	46.113	
10,925.2	6,716.1	6,713.5	6,712.8	78.8	1.8	89.55	-255.9	861.8	3,598.6	3,520.7	77.97	46.155	
11,000.0	6,715.6	6,713.4	6,712.8	80.2	1.8	89.54	-255.9	861.8	3,673.2	3,593.8	79.37	46.277	
11,023.6	6,715.4	6,713.4	6,712.8	80.6	1.8	89.53	-255.9	861.8	3,696.7	3,616.8	79.82	46.314	
11,100.0	6,714.9	6,713.3	6,712.7	82.0	1.8	89.52	-255.9	861.8	3,772.8	3,691.5	81.25	46.432	
11,122.0	6,714.8	6,713.3	6,712.7	82.4	1.8	89.52	-255.9	861.8	3,794.7	3,713.0	81.67	46.465	
11,200.0	6,714.2	6,713.3	6,712.6	83.8	1.8	89.51	-255.9	861.8	3,872.4	3,789.2	83.13	46.579	
11,220.4	6,714.1	6,713.3	6,712.6	84.2	1.8	89.51	-255.9	861.8	3,892.7	3,809.2	83.52	46.609	
11,300.0	6,713.5	6,713.2	6,712.5	85.7	1.8	89.49	-255.9	861.8	3,972.0	3,887.0	85.02	46.719	
11,318.9	6,713.4	6,713.2	6,712.5	86.0	1.8	89.49	-255.9	861.8	3,990.8	3,905.4	85.37	46.745	
11,400.0	6,712.9	6,713.1	6,712.5	87.5	1.8	89.48	-255.9	861.8	4,071.7	3,984.8	86.90	46.853	
11,417.3	6,712.7	6,713.1	6,712.4	87.8	1.8	89.48	-255.9	861.8	4,088.9	4,001.7	87.23	46.875	
11,500.0	6,712.2	6,713.0	6,712.4	89.3	1.8	89.47	-255.9	861.8	4,171.3	4,082.5	88.79	46.980	
11,515.7	6,712.1	6,713.0	6,712.4	89.6	1.8	89.47	-255.9	861.8	4,187.0	4,097.9	89.09	46.999	
11,600.0	6,711.5	6,713.0	6,712.3	91.2	1.8	89.45	-255.9	861.8	4,271.0	4,180.3	90.68	47.101	
11,614.1	6,711.4	6,712.9	6,712.3	91.4	1.8	89.45	-255.9	861.8	4,285.1	4,194.2	90.95	47.117	
11,700.0	6,710.8	6,712.9	6,712.2	93.0	1.8	89.44	-255.9	861.8	4,370.7	4,278.2	92.57	47.216	
11,712.6	6,710.7	6,712.9	6,712.2	93.3	1.8	89.44	-255.9	861.8	4,383.3	4,290.5	92.81	47.230	
11,800.0	6,710.1	6,712.8	6,712.1	94.9	1.8	89.43	-255.9	861.8	4,470.4	4,376.0	94.46	47.327	
11,811.0	6,710.1	6,712.8	6,712.1	95.1	1.8	89.43	-255.9	861.8	4,481.4	4,386.7	94.67	47.339	
11,900.0	6,709.5	6,712.7	6,712.1	96.7	1.8	89.41	-255.9	861.8	4,570.2	4,473.8	96.35	47.432	
11,909.4	6,709.4	6,712.7	6,712.1	96.9	1.8	89.41	-255.9	861.8	4,579.6	4,483.0	96.53	47.442	
12,000.0	6,708.8	6,712.6	6,712.0	98.6	1.8	89.40	-255.9	861.8	4,669.9	4,571.7	98.24	47.533	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT NOFFSINGER #21-5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,708.7	6,712.6	6,712.0	98.7	1.8	89.40	-255.9	861.8	4,677.7	4,579.3	98.39	47.541	
12,100.0	6,708.1	6,712.6	6,711.9	100.4	1.8	89.39	-255.9	861.8	4,769.6	4,669.5	100.14	47.630	
12,106.3	6,708.1	6,712.5	6,711.9	100.6	1.8	89.38	-255.9	861.8	4,775.9	4,675.6	100.26	47.636	
12,200.0	6,707.4	6,712.5	6,711.8	102.3	1.8	89.37	-255.9	861.8	4,869.4	4,767.4	102.03	47.723	
12,204.7	6,707.4	6,712.5	6,711.8	102.4	1.8	89.37	-255.9	861.8	4,874.1	4,772.0	102.12	47.728	
12,300.0	6,706.7	6,712.4	6,711.7	104.2	1.8	89.36	-255.9	861.8	4,969.2	4,865.2	103.93	47.812	
12,303.1	6,706.7	6,712.4	6,711.7	104.2	1.8	89.36	-255.9	861.8	4,972.3	4,868.3	103.99	47.815	
12,400.0	6,706.1	6,712.3	6,711.7	106.0	1.8	89.34	-255.9	861.8	5,069.0	4,963.1	105.83	47.898	
12,401.5	6,706.0	6,712.3	6,711.7	106.1	1.8	89.34	-255.9	861.8	5,070.5	4,964.6	105.86	47.899	
12,500.0	6,705.4	6,712.2	6,711.6	107.9	1.8	89.33	-255.9	861.8	5,168.7	5,061.0	107.73	47.980	
12,598.4	6,704.7	6,712.2	6,711.5	109.7	1.8	89.32	-255.9	861.8	5,266.9	5,157.3	109.59	48.058	
12,600.0	6,704.7	6,712.2	6,711.5	109.8	1.8	89.32	-255.9	861.8	5,268.5	5,158.9	109.62	48.060	
12,696.8	6,704.0	6,712.1	6,711.4	111.6	1.8	89.30	-255.9	861.8	5,365.2	5,253.7	111.46	48.134	
12,700.0	6,704.0	6,712.1	6,711.4	111.6	1.8	89.30	-255.9	861.8	5,368.3	5,256.8	111.52	48.136	
12,795.2	6,703.4	6,712.0	6,711.3	113.4	1.8	89.29	-255.9	861.8	5,463.4	5,350.1	113.33	48.206	
12,800.0	6,703.3	6,712.0	6,711.3	113.5	1.8	89.29	-255.9	861.8	5,468.1	5,354.7	113.42	48.209	
12,893.7	6,702.7	6,711.9	6,711.3	115.3	1.8	89.28	-255.9	861.8	5,561.6	5,446.4	115.21	48.276	
12,900.0	6,702.7	6,711.9	6,711.3	115.4	1.8	89.28	-255.9	861.8	5,568.0	5,452.6	115.33	48.280	
12,992.1	6,702.0	6,711.8	6,711.2	117.1	1.8	89.26	-255.9	861.8	5,659.9	5,542.8	117.08	48.343	
13,000.0	6,702.0	6,711.8	6,711.2	117.3	1.8	89.26	-255.9	861.8	5,667.8	5,550.6	117.23	48.348	
13,090.5	6,701.4	6,711.8	6,711.1	119.0	1.8	89.25	-255.9	861.8	5,758.2	5,639.2	118.95	48.408	
13,100.0	6,701.3	6,711.7	6,711.1	119.1	1.8	89.25	-255.9	861.8	5,767.6	5,648.5	119.13	48.414	
13,188.9	6,700.7	6,711.7	6,711.0	120.8	1.8	89.23	-255.9	861.8	5,856.4	5,735.6	120.82	48.471	
13,200.0	6,700.6	6,711.7	6,711.0	121.0	1.8	89.23	-255.9	861.8	5,867.4	5,746.4	121.03	48.478	
13,287.4	6,700.0	6,711.6	6,710.9	122.7	1.8	89.22	-255.9	861.8	5,954.7	5,832.0	122.70	48.532	
13,300.0	6,699.9	6,711.6	6,710.9	122.9	1.8	89.22	-255.9	861.8	5,967.3	5,844.4	122.94	48.540	
13,385.8	6,699.3	6,711.5	6,710.9	124.5	1.8	89.21	-255.9	861.8	6,053.0	5,928.4	124.57	48.591	
13,400.0	6,699.3	6,711.5	6,710.9	124.8	1.8	89.20	-255.9	861.8	6,067.1	5,942.3	124.84	48.599	
13,484.2	6,698.7	6,711.4	6,710.8	126.4	1.8	89.19	-255.9	861.8	6,151.2	6,024.8	126.44	48.648	
13,500.0	6,698.6	6,711.4	6,710.8	126.7	1.8	89.19	-255.9	861.8	6,167.0	6,040.2	126.75	48.657	
13,582.6	6,698.0	6,711.3	6,710.7	128.2	1.8	89.18	-255.9	861.8	6,249.5	6,121.2	128.32	48.703	
13,600.0	6,697.9	6,711.3	6,710.7	128.5	1.8	89.18	-255.9	861.8	6,266.8	6,138.2	128.65	48.712	
13,681.1	6,697.3	6,711.3	6,710.6	130.1	1.8	89.17	-255.9	861.8	6,347.8	6,217.6	130.20	48.756	
13,700.0	6,697.2	6,711.3	6,710.6	130.4	1.8	89.16	-255.9	861.8	6,366.7	6,236.1	130.56	48.766	
13,779.5	6,696.7	6,711.2	6,710.5	131.9	1.8	89.15	-255.9	861.8	6,446.1	6,314.0	132.07	48.808	
13,800.0	6,696.5	6,711.2	6,710.5	132.3	1.8	89.15	-255.9	861.8	6,466.6	6,334.1	132.46	48.818	
13,877.9	6,696.0	6,711.1	6,710.5	133.8	1.8	89.14	-255.9	861.8	6,544.4	6,410.4	133.95	48.858	
13,900.0	6,695.8	6,711.1	6,710.4	134.2	1.8	89.13	-255.9	861.8	6,566.4	6,432.1	134.37	48.869	
13,976.3	6,695.3	6,711.0	6,710.4	135.6	1.8	89.12	-255.9	861.8	6,642.7	6,506.9	135.82	48.907	
14,000.0	6,695.2	6,711.0	6,710.4	136.1	1.8	89.12	-255.9	861.8	6,666.3	6,530.0	136.28	48.918	
14,034.1	6,695.0	6,711.0	6,710.4	136.7	1.8	89.12	-255.9	861.8	6,700.3	6,563.4	136.92	48.934	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	91.58	-58.9	2,134.9	2,135.9				
98.4	98.4	82.1	82.1	0.1	0.1	91.58	-58.7	2,134.7	2,135.5	2,135.4	0.14	N/A	
100.0	100.0	83.9	83.9	0.1	0.1	91.58	-58.7	2,134.7	2,135.5	2,135.4	0.14	N/A	
196.8	196.8	183.6	183.6	0.3	0.2	91.57	-58.3	2,134.0	2,134.8	2,134.3	0.49	4,314.240	
200.0	200.0	186.8	186.8	0.3	0.2	91.57	-58.3	2,133.9	2,134.8	2,134.3	0.51	4,214.614	
295.3	295.3	276.3	276.3	0.5	0.3	91.56	-58.2	2,133.4	2,134.2	2,133.4	0.80	2,659.923	
300.0	300.0	280.7	280.7	0.5	0.3	91.56	-58.3	2,133.4	2,134.2	2,133.4	0.82	2,613.605	
393.7	393.7	370.8	370.8	0.7	0.4	91.57	-58.3	2,133.0	2,133.8	2,132.7	1.09	1,957.079	
400.0	400.0	376.9	376.9	0.8	0.4	91.57	-58.4	2,133.0	2,133.8	2,132.7	1.11	1,924.861	
492.1	492.1	468.8	468.8	1.0	0.4	91.57	-58.4	2,132.8	2,133.6	2,132.2	1.37	1,557.555	
500.0	500.0	476.7	476.7	1.0	0.4	91.57	-58.5	2,132.8	2,133.6	2,132.2	1.39	1,532.778	
590.5	590.5	569.6	569.6	1.2	0.5	91.57	-58.4	2,132.5	2,133.3	2,131.6	1.64	1,301.132	
600.0	600.0	579.4	579.3	1.2	0.5	91.57	-58.4	2,132.4	2,133.2	2,131.6	1.67	1,281.151	
689.0	689.0	670.5	670.4	1.4	0.5	91.56	-58.2	2,132.0	2,132.8	2,130.9	1.90	1,119.811	
700.0	700.0	681.7	681.7	1.4	0.5	91.56	-58.2	2,132.0	2,132.8	2,130.9	1.93	1,102.632	
787.4	787.4	764.6	764.6	1.6	0.6	91.56	-58.2	2,131.6	2,132.4	2,130.3	2.16	985.566	
800.0	800.0	776.3	776.3	1.7	0.6	91.56	-58.2	2,131.6	2,132.4	2,130.2	2.20	970.808	
885.8	885.8	858.4	858.4	1.9	0.6	91.57	-58.3	2,131.5	2,132.3	2,129.8	2.42	881.073	
900.0	900.0	872.2	872.1	1.9	0.6	91.57	-58.3	2,131.5	2,132.3	2,129.8	2.46	867.802	
984.2	984.2	955.5	955.5	2.1	0.6	91.57	-58.3	2,131.4	2,132.2	2,129.6	2.66	802.118	
1,000.0	1,000.0	971.2	971.2	2.1	0.6	91.57	-58.3	2,131.4	2,132.2	2,129.5	2.69	791.516	
1,048.3	1,048.3	1,019.3	1,019.3	2.2	0.6	91.57	-58.2	2,131.4	2,132.2	2,129.4	2.80	760.607	
1,082.7	1,082.7	1,053.3	1,053.3	2.3	0.6	91.56	-58.2	2,131.4	2,132.2	2,129.4	2.88	739.932	
1,100.0	1,100.0	1,070.5	1,070.5	2.3	0.6	91.56	-58.2	2,131.4	2,132.2	2,129.3	2.92	729.937	
1,181.1	1,181.1	1,151.7	1,151.7	2.5	0.6	91.57	-58.3	2,131.5	2,132.3	2,129.1	3.12	682.939	
1,200.0	1,200.0	1,170.7	1,170.7	2.6	0.6	91.57	-58.3	2,131.5	2,132.3	2,129.1	3.17	672.350	
1,279.5	1,279.5	1,249.1	1,249.1	2.7	0.7	91.57	-58.5	2,131.5	2,132.3	2,128.9	3.38	630.864	
1,300.0	1,300.0	1,269.0	1,269.0	2.8	0.7	91.57	-58.6	2,131.5	2,132.3	2,128.9	3.43	620.956	
1,377.9	1,377.9	1,344.6	1,344.6	3.0	0.7	91.59	-59.0	2,131.6	2,132.4	2,128.8	3.64	586.237	
1,400.0	1,400.0	1,366.0	1,366.0	3.0	0.7	91.59	-59.1	2,131.6	2,132.5	2,128.8	3.69	577.173	
1,476.4	1,476.4	1,441.5	1,441.5	3.2	0.7	91.59	-59.4	2,131.8	2,132.7	2,128.8	3.89	547.947	
1,500.0	1,500.0	1,465.3	1,465.3	3.2	0.7	91.60	-59.4	2,131.9	2,132.7	2,128.8	3.95	539.525	
1,574.8	1,574.8	1,542.0	1,542.0	3.4	0.8	91.60	-59.5	2,132.1	2,132.9	2,128.8	4.15	514.529	
1,600.0	1,600.0	1,568.3	1,568.3	3.5	0.8	91.60	-59.6	2,132.1	2,133.0	2,128.7	4.21	506.630	
1,673.2	1,673.2	1,643.8	1,643.8	3.6	0.8	91.60	-59.7	2,132.2	2,133.0	2,128.6	4.40	484.897	
1,700.0	1,700.0	1,671.3	1,671.3	3.7	0.8	91.61	-59.8	2,132.2	2,133.0	2,128.5	4.47	477.384	
1,771.6	1,771.6	1,743.0	1,743.0	3.8	0.8	91.61	-59.9	2,132.1	2,133.0	2,128.3	4.65	458.301	
1,795.1	1,795.1	1,766.1	1,766.1	3.9	0.8	91.61	-60.0	2,132.1	2,133.0	2,128.3	4.72	452.367	
1,800.0	1,800.0	1,770.9	1,770.9	3.9	0.8	91.61	-60.0	2,132.1	2,133.0	2,128.3	4.73	451.148	
1,870.1	1,870.1	1,838.1	1,838.1	4.1	0.8	91.62	-60.4	2,132.2	2,133.0	2,128.1	4.91	434.624	
1,900.0	1,900.0	1,866.2	1,866.2	4.1	0.9	91.62	-60.5	2,132.2	2,133.1	2,128.1	4.98	428.006	
1,968.5	1,968.5	1,932.6	1,932.6	4.3	0.9	91.63	-60.7	2,132.4	2,133.3	2,128.1	5.16	413.733	
2,000.0	2,000.0	1,964.3	1,964.3	4.4	0.9	91.63	-60.8	2,132.5	2,133.4	2,128.1	5.23	407.547	
2,066.9	2,066.9	2,033.2	2,033.2	4.5	0.9	91.63	-60.9	2,132.7	2,133.6	2,128.2	5.40	395.386	
2,100.0	2,100.0	2,068.3	2,068.3	4.6	0.9	91.63	-60.9	2,132.8	2,133.6	2,128.2	5.47	389.845	
2,165.3	2,165.3	2,136.1	2,136.1	4.7	0.9	91.63	-60.7	2,132.8	2,133.7	2,128.0	5.63	379.176	
2,200.0	2,200.0	2,171.4	2,171.4	4.8	0.9	91.63	-60.7	2,132.8	2,133.7	2,128.0	5.71	373.683	
2,250.0	2,250.0	2,222.8	2,222.8	4.9	0.9	91.63	-60.6	2,132.8	2,133.6	2,127.8	5.83	366.063	
2,263.8	2,263.8	2,237.0	2,237.0	4.9	0.9	19.72	-60.6	2,132.8	2,133.6	2,127.8	5.83	365.660	
2,300.0	2,300.0	2,274.6	2,274.6	5.0	0.9	19.73	-60.7	2,132.7	2,133.2	2,127.3	5.92	360.440	
2,362.2	2,362.2	2,340.1	2,340.1	5.2	0.9	19.76	-60.7	2,132.6	2,131.4	2,125.3	6.06	351.550	
2,400.0	2,399.9	2,380.3	2,380.3	5.2	0.9	19.79	-60.8	2,132.4	2,129.6	2,123.4	6.15	346.088	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT NOFFSINGER #31-5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,460.6	2,460.4	2,458.9	2,458.9	5.4	1.0	19.87	-61.0	2,131.8	2,125.5	2,119.2	6.31	337.049	
2,500.0	2,499.7	2,512.0	2,511.9	5.4	1.0	19.94	-61.3	2,130.9	2,121.9	2,115.5	6.41	331.142	
2,559.0	2,558.5	2,583.1	2,583.0	5.6	1.0	20.06	-61.6	2,129.3	2,115.2	2,108.6	6.56	322.378	
2,600.0	2,599.1	2,627.3	2,627.3	5.7	1.0	20.16	-61.9	2,128.1	2,109.7	2,103.0	6.67	316.511	
2,657.5	2,656.1	2,685.8	2,685.7	5.8	1.0	20.30	-62.1	2,126.5	2,101.0	2,094.2	6.81	308.425	
2,700.0	2,698.2	2,725.6	2,725.5	5.9	1.1	20.41	-62.3	2,125.4	2,093.9	2,087.0	6.92	302.661	
2,755.9	2,753.3	2,775.8	2,775.6	6.1	1.1	20.57	-62.3	2,124.1	2,083.8	2,076.7	7.06	295.193	
2,800.0	2,796.6	2,813.8	2,813.7	6.2	1.1	20.70	-62.3	2,123.2	2,075.2	2,068.0	7.17	289.477	
2,854.3	2,849.9	2,858.0	2,857.9	6.3	1.1	20.87	-62.3	2,122.3	2,063.9	2,056.6	7.31	282.528	
2,900.0	2,894.4	2,900.0	2,899.9	6.5	1.1	21.03	-62.2	2,121.6	2,053.9	2,046.5	7.42	276.786	
2,952.7	2,945.7	2,941.5	2,941.3	6.6	1.1	21.22	-62.0	2,121.1	2,041.7	2,034.1	7.56	270.174	
3,000.0	2,991.5	2,983.3	2,983.2	6.8	1.1	21.41	-61.8	2,120.7	2,030.1	2,022.4	7.68	264.381	
3,051.2	3,040.8	3,026.6	3,026.5	7.0	1.1	21.63	-61.5	2,120.3	2,016.8	2,009.0	7.81	258.162	
3,100.0	3,087.6	3,066.8	3,066.6	7.1	1.1	21.85	-61.2	2,120.1	2,003.6	1,995.6	7.94	252.189	
3,149.6	3,134.9	3,107.9	3,107.7	7.4	1.1	22.09	-60.9	2,120.0	1,989.6	1,981.5	8.08	246.153	
3,200.0	3,182.7	3,151.6	3,151.4	7.6	1.1	22.35	-60.5	2,120.0	1,974.7	1,966.4	8.22	240.135	
3,248.0	3,228.0	3,193.0	3,192.8	7.8	1.2	22.63	-60.3	2,120.1	1,959.8	1,951.5	8.37	234.281	
3,300.0	3,276.6	3,239.3	3,239.1	8.1	1.2	22.95	-60.0	2,120.3	1,943.1	1,934.6	8.52	227.995	
3,346.4	3,319.9	3,280.7	3,280.5	8.3	1.2	23.26	-59.7	2,120.5	1,927.5	1,918.9	8.67	222.250	
3,400.0	3,369.4	3,326.8	3,326.7	8.6	1.2	23.63	-59.5	2,120.8	1,908.8	1,900.0	8.85	215.747	
3,444.9	3,410.5	3,364.5	3,364.3	8.9	1.2	23.96	-59.3	2,121.1	1,892.6	1,883.6	9.01	210.173	
3,500.0	3,460.7	3,410.9	3,410.8	9.2	1.2	24.39	-59.1	2,121.6	1,872.0	1,862.8	9.20	203.412	
3,543.3	3,499.8	3,448.3	3,448.1	9.5	1.2	24.76	-59.0	2,122.1	1,855.3	1,846.0	9.37	197.958	
3,600.0	3,550.6	3,496.8	3,496.6	9.9	1.2	25.28	-59.0	2,122.7	1,832.7	1,823.1	9.60	190.907	
3,641.7	3,587.6	3,531.3	3,531.1	10.3	1.2	25.67	-59.0	2,123.2	1,815.6	1,805.8	9.78	185.583	
3,709.9	3,647.5	3,586.9	3,586.8	10.8	1.2	26.36	-59.1	2,124.1	1,786.7	1,776.6	10.09	177.015	
3,740.1	3,673.9	3,611.9	3,611.7	11.1	1.2	26.56	-59.2	2,124.6	1,773.7	1,763.4	10.24	173.227	
3,800.0	3,726.2	3,662.0	3,661.8	11.6	1.2	26.96	-59.4	2,125.5	1,748.0	1,737.5	10.53	165.945	
3,838.6	3,759.9	3,694.4	3,694.2	11.9	1.2	27.23	-59.7	2,126.2	1,731.6	1,720.9	10.73	161.355	
3,900.0	3,813.5	3,743.9	3,743.7	12.5	1.2	27.65	-60.1	2,127.2	1,705.6	1,694.5	11.05	154.312	
3,937.0	3,845.8	3,773.6	3,773.4	12.8	1.2	27.91	-60.5	2,127.9	1,690.0	1,678.8	11.25	150.177	
4,000.0	3,900.8	3,824.8	3,824.5	13.4	1.2	28.37	-61.1	2,129.3	1,663.8	1,652.2	11.60	143.388	
4,035.4	3,931.7	3,853.8	3,853.6	13.7	1.2	28.64	-61.6	2,130.1	1,649.1	1,637.3	11.81	139.668	
4,100.0	3,988.1	3,907.0	3,906.7	14.3	1.2	29.15	-62.5	2,131.6	1,622.6	1,610.4	12.19	133.137	
4,133.8	4,017.6	3,935.3	3,935.0	14.7	1.2	29.43	-63.1	2,132.4	1,608.8	1,596.4	12.39	129.798	
4,200.0	4,075.4	3,990.7	3,990.4	15.3	1.3	29.99	-64.3	2,134.2	1,582.0	1,569.2	12.81	123.518	
4,232.3	4,103.5	4,017.5	4,017.2	15.6	1.3	30.27	-64.9	2,135.1	1,569.1	1,556.1	13.02	120.547	
4,300.0	4,162.6	4,073.7	4,073.2	16.2	1.3	30.86	-66.3	2,137.0	1,542.1	1,528.7	13.46	114.550	
4,330.7	4,189.4	4,100.0	4,099.5	16.5	1.3	31.15	-66.9	2,137.9	1,530.0	1,516.3	13.67	111.909	
4,400.0	4,249.9	4,159.8	4,159.3	17.2	1.3	31.83	-68.5	2,140.1	1,502.9	1,488.7	14.16	106.154	
4,429.1	4,275.4	4,185.3	4,184.7	17.5	1.3	32.12	-69.3	2,141.0	1,491.5	1,477.1	14.37	103.809	
4,500.0	4,337.2	4,246.5	4,245.9	18.2	1.3	32.85	-71.1	2,143.3	1,464.1	1,449.2	14.89	98.318	
4,527.5	4,361.3	4,270.2	4,269.5	18.5	1.3	33.14	-71.8	2,144.1	1,453.5	1,438.4	15.10	96.257	
4,600.0	4,424.5	4,333.1	4,332.4	19.2	1.3	33.93	-73.8	2,146.5	1,426.0	1,410.3	15.66	91.032	
4,626.0	4,447.2	4,355.9	4,355.2	19.5	1.3	34.22	-74.5	2,147.4	1,416.1	1,400.3	15.87	89.220	
4,700.0	4,511.8	4,422.0	4,421.1	20.2	1.3	35.08	-76.5	2,150.0	1,388.4	1,371.9	16.48	84.238	
4,724.4	4,533.1	4,444.4	4,443.6	20.5	1.3	35.39	-77.2	2,150.8	1,379.3	1,362.6	16.69	82.643	
4,796.7	4,596.3	4,511.7	4,510.8	21.2	1.4	36.31	-79.2	2,153.3	1,352.4	1,335.1	17.32	78.070	
4,800.0	4,599.1	4,514.9	4,514.0	21.2	1.4	36.34	-79.3	2,153.4	1,351.2	1,333.9	17.35	77.888	
4,822.8	4,619.1	4,537.5	4,536.5	21.4	1.4	36.55	-79.9	2,154.1	1,342.9	1,325.3	17.51	76.687	
4,900.0	4,687.3	4,613.6	4,612.6	22.0	1.4	37.25	-82.1	2,156.5	1,315.5	1,297.5	18.06	72.834	
4,921.2	4,706.2	4,634.2	4,633.2	22.2	1.4	37.44	-82.7	2,157.0	1,308.3	1,290.1	18.21	71.852	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT NOFFSINGER #31-5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,777.1	4,711.4	4,710.3	22.8	1.4	38.15	-85.0	2,158.9	1,282.5	1,263.7	18.75	68.388	
5,019.7	4,794.9	4,731.5	4,730.4	22.9	1.4	38.33	-85.7	2,159.3	1,276.3	1,257.4	18.89	67.578	
5,100.0	4,868.3	4,813.8	4,812.6	23.5	1.4	39.10	-88.3	2,160.5	1,251.9	1,232.5	19.43	64.427	
5,118.1	4,885.0	4,832.2	4,831.0	23.6	1.4	39.27	-88.8	2,160.7	1,246.7	1,227.1	19.55	63.771	
5,200.0	4,961.0	4,914.6	4,913.4	24.2	1.4	40.03	-91.5	2,161.3	1,223.8	1,203.7	20.08	60.955	
5,216.5	4,976.4	4,930.5	4,929.2	24.3	1.5	40.17	-92.0	2,161.4	1,219.4	1,199.2	20.17	60.440	
5,300.0	5,054.8	5,010.7	5,009.5	24.8	1.5	40.86	-94.4	2,161.7	1,198.3	1,177.6	20.67	57.975	
5,314.9	5,069.0	5,024.9	5,023.7	24.8	1.5	40.98	-94.8	2,161.7	1,194.8	1,174.0	20.75	57.573	
5,400.0	5,149.9	5,106.4	5,105.1	25.3	1.5	41.64	-97.1	2,162.0	1,175.8	1,154.5	21.22	55.409	
5,413.4	5,162.7	5,119.3	5,118.0	25.4	1.5	41.74	-97.4	2,162.0	1,173.0	1,151.7	21.29	55.099	
5,500.0	5,245.9	5,203.4	5,202.1	25.8	1.5	42.39	-99.7	2,162.3	1,156.1	1,134.3	21.73	53.202	
5,511.8	5,257.3	5,215.7	5,214.4	25.9	1.5	42.48	-100.0	2,162.3	1,153.9	1,132.1	21.79	52.964	
5,600.0	5,342.9	5,307.3	5,305.9	26.3	1.5	43.12	-101.9	2,162.4	1,138.8	1,116.6	22.20	51.288	
5,610.2	5,352.9	5,317.3	5,315.9	26.3	1.5	43.18	-102.0	2,162.4	1,137.2	1,115.0	22.25	51.117	
5,700.0	5,440.7	5,406.0	5,404.7	26.7	1.6	43.71	-103.2	2,162.5	1,124.1	1,101.5	22.61	49.708	
5,708.6	5,449.1	5,415.4	5,414.0	26.7	1.6	43.76	-103.3	2,162.5	1,122.9	1,100.3	22.65	49.586	
5,800.0	5,539.1	5,515.3	5,513.9	27.0	1.6	44.26	-104.0	2,162.3	1,111.5	1,088.5	22.98	48.370	
5,807.1	5,546.1	5,523.5	5,522.2	27.0	1.6	44.30	-104.1	2,162.3	1,110.7	1,087.7	23.00	48.286	
5,900.0	5,638.1	5,622.7	5,621.4	27.3	1.6	44.68	-103.9	2,161.2	1,100.4	1,077.1	23.28	47.275	
5,905.5	5,643.5	5,627.3	5,626.0	27.3	1.6	44.69	-103.9	2,161.2	1,099.8	1,076.5	23.29	47.227	
6,000.0	5,737.5	5,706.9	5,705.6	27.5	1.6	44.94	-104.4	2,160.6	1,092.4	1,068.9	23.50	46.487	
6,003.9	5,741.4	5,710.6	5,709.2	27.5	1.6	44.95	-104.5	2,160.6	1,092.1	1,068.6	23.51	46.461	
6,100.0	5,837.2	5,801.1	5,799.7	27.7	1.6	45.21	-106.0	2,160.3	1,087.8	1,064.1	23.70	45.893	
6,102.3	5,839.6	5,803.4	5,802.0	27.7	1.6	45.21	-106.1	2,160.3	1,087.7	1,064.0	23.71	45.882	
6,200.0	5,937.2	5,900.5	5,899.1	27.9	1.7	45.42	-108.0	2,160.2	1,086.0	1,062.1	23.87	45.494	
6,200.8	5,937.9	5,901.3	5,899.9	27.9	1.7	45.42	-108.0	2,160.2	1,086.0	1,062.1	23.87	45.492	
6,226.6	5,963.7	5,928.1	5,926.7	27.9	1.7	45.46	-108.5	2,160.2	1,085.9	1,062.0	23.91	45.424	
6,256.6	5,993.8	5,959.5	5,958.1	27.9	1.7	117.40	-109.1	2,160.2	1,086.0	1,062.1	23.94	45.356	
6,286.6	6,023.8	5,990.7	5,989.3	27.9	1.7	117.42	-109.5	2,160.1	1,086.2	1,062.2	23.99	45.279	
6,299.2	6,036.4	6,003.4	6,002.0	27.9	1.7	-62.57	-109.7	2,160.1	1,086.2	1,062.2	24.02	45.229	
6,300.0	6,037.2	6,004.2	6,002.8	27.9	1.7	-62.57	-109.7	2,160.1	1,086.2	1,062.2	24.02	45.226	
6,350.0	6,087.1	6,051.3	6,049.9	28.0	1.7	-62.73	-110.4	2,160.1	1,085.3	1,061.2	24.04	45.136 SF	
6,397.6	6,134.3	6,096.0	6,094.6	28.0	1.7	-63.12	-111.0	2,160.2	1,083.0	1,059.1	23.96	45.193	
6,400.0	6,136.7	6,100.0	6,098.6	28.0	1.7	-63.15	-111.0	2,160.2	1,082.9	1,058.9	23.96	45.202	
6,450.0	6,185.7	6,146.9	6,145.4	28.0	1.7	-63.84	-111.6	2,160.5	1,079.1	1,055.3	23.76	45.415	
6,496.0	6,230.2	6,191.0	6,189.6	28.0	1.7	-64.72	-112.0	2,160.8	1,074.3	1,050.8	23.48	45.756	
6,500.0	6,234.0	6,194.8	6,193.3	28.0	1.7	-64.81	-112.0	2,160.9	1,073.8	1,050.4	23.45	45.789	
6,550.0	6,281.3	6,241.7	6,240.3	28.0	1.7	-66.04	-112.2	2,161.3	1,067.3	1,044.2	23.04	46.313	
6,594.5	6,322.2	6,282.5	6,281.0	27.9	1.8	-67.34	-112.4	2,161.7	1,060.5	1,037.9	22.61	46.905	
6,600.0	6,327.3	6,287.5	6,286.0	27.9	1.8	-67.51	-112.5	2,161.8	1,059.6	1,037.0	22.55	46.983	
6,650.0	6,371.8	6,332.0	6,330.6	27.9	1.8	-69.20	-112.6	2,162.3	1,051.0	1,029.0	21.99	47.789	
6,692.9	6,408.6	6,369.1	6,367.6	27.9	1.8	-70.81	-112.8	2,162.7	1,042.9	1,021.5	21.47	48.570	
6,700.0	6,414.6	6,375.1	6,373.6	27.8	1.8	-71.09	-112.8	2,162.7	1,041.6	1,020.2	21.39	48.702	
6,750.0	6,455.5	6,416.4	6,415.0	27.8	1.8	-73.13	-112.9	2,163.2	1,031.7	1,010.9	20.76	49.686	
6,791.3	6,487.7	6,449.3	6,447.9	27.7	1.8	-74.91	-113.0	2,163.6	1,023.4	1,003.1	20.26	50.519	
6,800.0	6,494.3	6,456.1	6,454.6	27.7	1.8	-75.30	-113.0	2,163.6	1,021.6	1,001.4	20.15	50.689	
6,850.0	6,530.8	6,493.3	6,491.9	27.7	1.8	-77.52	-113.1	2,164.0	1,011.5	992.0	19.59	51.643	
6,889.7	6,558.1	6,500.0	6,498.5	27.6	1.8	-78.39	-113.1	2,164.1	1,004.0	984.7	19.32	51.976	
6,900.0	6,564.9	6,500.0	6,498.5	27.6	1.8	-78.53	-113.1	2,164.1	1,002.2	983.0	19.26	52.027	
6,950.0	6,596.3	6,500.0	6,498.5	27.6	1.8	-79.13	-113.1	2,164.1	994.7	975.6	19.04	52.228	
6,988.2	6,618.4	6,500.0	6,498.5	27.5	1.8	-79.49	-113.1	2,164.1	990.1	971.2	18.92	52.321	
7,000.0	6,624.9	6,500.0	6,498.5	27.5	1.8	-79.58	-113.1	2,164.1	988.9	970.0	18.89	52.343	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,050.0	6,650.6	6,500.0	6,498.5	27.5	1.8	-79.89	-113.1	2,164.1	985.0	966.2	18.81	52.361	
7,086.6	6,667.5	6,500.0	6,498.5	27.5	1.8	-80.02	-113.1	2,164.1	983.4	964.6	18.80	52.303	
7,100.0	6,673.3	6,500.0	6,498.5	27.5	1.8	-80.05	-113.1	2,164.1	983.0	964.2	18.81	52.272	
7,125.9	6,683.7	6,500.0	6,498.5	27.4	1.8	-80.07	-113.1	2,164.1	982.8	964.0	18.83	52.188 CC, ES	
7,150.0	6,692.7	6,500.0	6,498.5	27.5	1.8	-80.05	-113.1	2,164.1	983.0	964.1	18.88	52.072	
7,185.0	6,704.4	6,500.0	6,498.5	27.5	1.8	-79.96	-113.1	2,164.1	984.1	965.2	18.99	51.813	
7,200.0	6,709.0	6,500.0	6,498.5	27.5	1.8	-79.90	-113.1	2,164.1	984.9	965.9	19.03	51.757	
7,250.0	6,721.8	6,500.0	6,498.5	27.5	1.8	-79.60	-113.1	2,164.1	988.7	969.5	19.26	51.328	
7,283.4	6,728.6	6,500.0	6,498.5	27.5	1.8	-79.31	-113.1	2,164.1	992.3	972.9	19.47	50.963	
7,300.0	6,731.3	6,500.0	6,498.5	27.6	1.8	-79.15	-113.1	2,164.1	994.4	974.9	19.58	50.787	
7,350.0	6,737.3	6,500.0	6,498.5	27.7	1.8	-78.55	-113.1	2,164.1	1,001.9	982.0	19.98	50.140	
7,381.9	6,739.4	6,500.0	6,498.5	27.7	1.8	-78.10	-113.1	2,164.1	1,007.7	987.4	20.29	49.666	
7,400.0	6,739.9	6,500.0	6,498.5	27.8	1.8	-77.81	-113.1	2,164.1	1,011.2	990.7	20.47	49.398	
7,416.5	6,740.0	6,500.0	6,498.5	27.8	1.8	-77.54	-113.1	2,164.1	1,014.6	994.0	20.65	49.133	
7,480.3	6,739.5	6,500.0	6,498.5	28.0	1.8	-77.54	-113.1	2,164.1	1,030.1	1,008.9	21.19	48.610	
7,500.0	6,739.4	6,500.0	6,498.5	28.1	1.8	-77.54	-113.1	2,164.1	1,035.6	1,014.2	21.36	48.489	
7,578.7	6,738.9	6,500.0	6,498.5	28.5	1.8	-77.54	-113.1	2,164.1	1,061.0	1,038.9	22.13	47.954	
7,600.0	6,738.7	6,500.0	6,498.5	28.6	1.8	-77.54	-113.1	2,164.1	1,068.8	1,046.5	22.33	47.856	
7,677.1	6,738.2	6,500.0	6,498.5	29.1	1.8	-77.54	-113.1	2,164.1	1,100.0	1,076.8	23.18	47.451	
7,700.0	6,738.1	6,500.0	6,498.5	29.2	1.8	-77.54	-113.1	2,164.1	1,110.0	1,086.6	23.43	47.373	
7,775.6	6,737.5	6,500.0	6,498.5	29.7	1.8	-77.54	-113.1	2,164.1	1,146.0	1,121.7	24.34	47.083	
7,800.0	6,737.4	6,500.0	6,498.5	29.9	1.8	-77.54	-113.1	2,164.1	1,158.5	1,133.8	24.63	47.027	
7,874.0	6,736.9	6,500.0	6,498.5	30.6	1.8	-77.54	-113.1	2,164.1	1,198.4	1,172.8	25.59	46.833	
7,900.0	6,736.7	6,500.0	6,498.5	30.8	1.8	-77.54	-113.1	2,164.1	1,213.2	1,187.3	25.93	46.797	
7,972.4	6,736.2	6,500.0	6,498.5	31.5	1.8	-77.54	-113.1	2,164.1	1,256.4	1,229.4	26.91	46.680	
8,000.0	6,736.0	6,500.0	6,498.5	31.8	1.8	-77.54	-113.1	2,164.1	1,273.5	1,246.2	27.29	46.662	
8,070.8	6,735.5	6,500.0	6,498.5	32.5	1.8	-77.54	-113.1	2,164.1	1,319.1	1,290.8	28.30	46.605	
8,100.0	6,735.3	6,500.0	6,498.5	32.8	1.8	-77.54	-113.1	2,164.1	1,338.5	1,309.8	28.72	46.604	
8,169.3	6,734.9	6,500.0	6,498.5	33.6	1.8	-77.54	-113.1	2,164.1	1,386.0	1,356.3	29.75	46.591	
8,200.0	6,734.6	6,500.0	6,498.5	34.0	1.8	-77.54	-113.1	2,164.1	1,407.7	1,377.4	30.20	46.605	
8,267.7	6,734.2	6,500.0	6,498.5	34.8	1.8	-77.54	-113.1	2,164.1	1,456.5	1,425.3	31.24	46.624	
8,300.0	6,734.0	6,500.0	6,498.5	35.2	1.8	-77.54	-113.1	2,164.1	1,480.3	1,448.6	31.73	46.649	
8,366.1	6,733.5	6,500.0	6,498.5	36.1	1.8	-77.54	-113.1	2,164.1	1,530.1	1,497.3	32.77	46.692	
8,400.0	6,733.3	6,500.0	6,498.5	36.5	1.8	-77.54	-113.1	2,164.1	1,556.0	1,522.7	33.30	46.726	
8,464.5	6,732.8	6,500.0	6,498.5	37.4	1.8	-77.54	-113.1	2,164.1	1,606.3	1,572.0	34.33	46.785	
8,500.0	6,732.6	6,500.0	6,498.5	37.9	1.8	-77.54	-113.1	2,164.1	1,634.3	1,599.4	34.90	46.827	
8,563.0	6,732.2	6,500.0	6,498.5	38.8	1.8	-77.54	-113.1	2,164.1	1,684.8	1,648.9	35.93	46.895	
8,600.0	6,731.9	6,500.0	6,498.5	39.3	1.8	-77.54	-113.1	2,164.1	1,714.9	1,678.4	36.53	46.943	
8,661.4	6,731.5	6,500.0	6,498.5	40.2	1.8	-77.54	-113.1	2,164.1	1,765.4	1,727.8	37.55	47.017	
8,700.0	6,731.2	6,500.0	6,498.5	40.8	1.8	-77.54	-113.1	2,164.1	1,797.4	1,759.2	38.19	47.070	
8,759.8	6,730.8	6,500.0	6,498.5	41.7	1.8	-77.54	-113.1	2,164.1	1,847.6	1,808.4	39.19	47.147	
8,800.0	6,730.6	6,500.0	6,498.5	42.3	1.8	-77.54	-113.1	2,164.1	1,881.7	1,841.8	39.86	47.204	
8,858.2	6,730.2	6,500.0	6,498.5	43.2	1.8	-77.54	-113.1	2,164.1	1,931.4	1,890.6	40.85	47.281	
8,900.0	6,729.9	6,500.0	6,498.5	43.8	1.8	-77.54	-113.1	2,164.1	1,967.4	1,925.8	41.56	47.341	
8,956.7	6,729.5	6,500.0	6,498.5	44.7	1.8	-77.54	-113.1	2,164.1	2,016.5	1,974.0	42.53	47.417	
9,000.0	6,729.2	6,500.0	6,498.5	45.4	1.8	-77.54	-113.1	2,164.1	2,054.3	2,011.1	43.27	47.479	
9,055.1	6,728.8	6,500.0	6,498.5	46.3	1.8	-77.54	-113.1	2,164.1	2,102.8	2,058.6	44.22	47.553	
9,100.0	6,728.5	6,500.0	6,498.5	47.0	1.8	-77.54	-113.1	2,164.1	2,142.5	2,097.5	44.99	47.617	
9,153.5	6,728.2	6,500.0	6,498.5	47.9	1.8	-77.54	-113.1	2,164.1	2,190.1	2,144.1	45.92	47.688	
9,200.0	6,727.8	6,500.0	6,498.5	48.6	1.8	-77.54	-113.1	2,164.1	2,231.6	2,184.9	46.73	47.752	
9,251.9	6,727.5	6,500.0	6,498.5	49.5	1.8	-77.54	-113.1	2,164.1	2,278.3	2,230.6	47.64	47.820	
9,300.0	6,727.2	6,500.0	6,498.5	50.3	1.8	-77.54	-113.1	2,164.1	2,321.6	2,273.1	48.48	47.885	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT NOFFSINGER #31-5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,350.4	6,726.8	6,500.0	6,498.5	51.1	1.8	-77.54	-113.1	2,164.1	2,367.3	2,317.9	49.37	47.950	
9,400.0	6,726.5	6,500.0	6,498.5	51.9	1.8	-77.54	-113.1	2,164.1	2,412.4	2,362.2	50.24	48.015	
9,448.8	6,726.1	6,500.0	6,498.5	52.7	1.8	-77.54	-113.1	2,164.1	2,457.0	2,405.9	51.11	48.076	
9,500.0	6,725.8	6,500.0	6,498.5	53.6	1.8	-77.54	-113.1	2,164.1	2,503.9	2,451.9	52.01	48.141	
9,547.2	6,725.5	6,500.0	6,498.5	54.4	1.8	-77.54	-113.1	2,164.1	2,547.4	2,494.5	52.85	48.198	
9,600.0	6,725.1	6,500.0	6,498.5	55.3	1.8	-77.54	-113.1	2,164.1	2,596.1	2,542.3	53.79	48.263	
9,645.6	6,724.8	6,500.0	6,498.5	56.1	1.8	-77.54	-113.1	2,164.1	2,638.3	2,583.7	54.60	48.317	
9,700.0	6,724.4	6,500.0	6,498.5	57.0	1.8	-77.54	-113.1	2,164.1	2,688.7	2,633.2	55.57	48.381	
9,744.1	6,724.1	6,500.0	6,498.5	57.8	1.8	-77.54	-113.1	2,164.1	2,729.8	2,673.4	56.36	48.431	
9,800.0	6,723.8	6,500.0	6,498.5	58.7	1.8	-77.54	-113.1	2,164.1	2,781.9	2,724.6	57.37	48.495	
9,842.5	6,723.5	6,500.0	6,498.5	59.5	1.8	-77.54	-113.1	2,164.1	2,821.7	2,763.6	58.13	48.541	
9,900.0	6,723.1	6,500.0	6,498.5	60.5	1.8	-77.54	-113.1	2,164.1	2,875.6	2,816.4	59.16	48.605	
9,940.9	6,722.8	6,500.0	6,498.5	61.2	1.8	-77.54	-113.1	2,164.1	2,914.1	2,854.1	59.90	48.648	
10,000.0	6,722.4	6,500.0	6,498.5	62.2	1.8	-77.54	-113.1	2,164.1	2,969.7	2,908.7	60.97	48.710	
10,039.3	6,722.1	6,500.0	6,498.5	62.9	1.8	-77.54	-113.1	2,164.1	3,006.8	2,945.1	61.68	48.751	
10,100.0	6,721.7	6,500.0	6,498.5	64.0	1.8	-77.54	-113.1	2,164.1	3,064.1	3,001.3	62.77	48.812	
10,137.8	6,721.5	6,500.0	6,498.5	64.7	1.8	-77.54	-113.1	2,164.1	3,099.9	3,036.4	63.46	48.849	
10,200.0	6,721.0	6,500.0	6,498.5	65.8	1.8	-77.54	-113.1	2,164.1	3,158.9	3,094.3	64.59	48.910	
10,236.2	6,720.8	6,500.0	6,498.5	66.4	1.8	-77.54	-113.1	2,164.1	3,193.3	3,128.0	65.24	48.945	
10,300.0	6,720.4	6,500.0	6,498.5	67.5	1.8	-77.54	-113.1	2,164.1	3,254.0	3,187.6	66.40	49.005	
10,334.6	6,720.1	6,500.0	6,498.5	68.2	1.8	-77.54	-113.1	2,164.1	3,287.0	3,220.0	67.03	49.036	
10,400.0	6,719.7	6,500.0	6,498.5	69.3	1.8	-77.54	-113.1	2,164.1	3,349.4	3,281.2	68.22	49.095	
10,433.0	6,719.4	6,500.0	6,498.5	69.9	1.8	-77.54	-113.1	2,164.1	3,381.0	3,312.1	68.82	49.124	
10,500.0	6,719.0	6,500.0	6,498.5	71.1	1.8	-77.54	-113.1	2,164.1	3,445.0	3,375.0	70.05	49.183	
10,531.5	6,718.8	6,500.0	6,498.5	71.7	1.8	-77.54	-113.1	2,164.1	3,475.2	3,404.6	70.62	49.209	
10,600.0	6,718.3	6,500.0	6,498.5	72.9	1.8	-77.54	-113.1	2,164.1	3,540.9	3,469.0	71.87	49.267	
10,629.9	6,718.1	6,500.0	6,498.5	73.4	1.8	-77.54	-113.1	2,164.1	3,569.6	3,497.2	72.42	49.291	
10,700.0	6,717.6	6,500.0	6,498.5	74.7	1.8	-77.54	-113.1	2,164.1	3,637.0	3,563.3	73.70	49.347	
10,728.3	6,717.4	6,500.0	6,498.5	75.2	1.8	-77.54	-113.1	2,164.1	3,664.3	3,590.1	74.22	49.370	
10,800.0	6,717.0	6,500.0	6,498.5	76.5	1.8	-77.54	-113.1	2,164.1	3,733.3	3,657.8	75.53	49.425	
10,826.7	6,716.8	6,500.0	6,498.5	77.0	1.8	-77.54	-113.1	2,164.1	3,759.1	3,683.1	76.03	49.446	
10,900.0	6,716.3	6,500.0	6,498.5	78.3	1.8	-77.54	-113.1	2,164.1	3,829.8	3,752.5	77.37	49.500	
10,925.2	6,716.1	6,500.0	6,498.5	78.8	1.8	-77.54	-113.1	2,164.1	3,854.2	3,776.3	77.83	49.519	
11,000.0	6,715.6	6,500.0	6,498.5	80.2	1.8	-77.54	-113.1	2,164.1	3,926.5	3,847.3	79.21	49.573	
11,023.6	6,715.4	6,500.0	6,498.5	80.6	1.8	-77.54	-113.1	2,164.1	3,949.4	3,869.7	79.64	49.589	
11,100.0	6,714.9	6,500.0	6,498.5	82.0	1.8	-77.54	-113.1	2,164.1	4,023.4	3,942.3	81.05	49.642	
11,122.0	6,714.8	6,500.0	6,498.5	82.4	1.8	-77.54	-113.1	2,164.1	4,044.7	3,963.3	81.45	49.657	
11,200.0	6,714.2	6,500.0	6,498.5	83.8	1.8	-77.54	-113.1	2,164.1	4,120.3	4,037.5	82.89	49.709	
11,220.4	6,714.1	6,500.0	6,498.5	84.2	1.8	-77.54	-113.1	2,164.1	4,140.2	4,056.9	83.27	49.723	
11,300.0	6,713.5	6,500.0	6,498.5	85.7	1.8	-77.54	-113.1	2,164.1	4,217.5	4,132.7	84.73	49.774	
11,318.9	6,713.4	6,500.0	6,498.5	86.0	1.8	-77.54	-113.1	2,164.1	4,235.8	4,150.7	85.08	49.786	
11,400.0	6,712.9	6,500.0	6,498.5	87.5	1.8	-77.54	-113.1	2,164.1	4,314.7	4,228.2	86.58	49.836	
11,417.3	6,712.7	6,500.0	6,498.5	87.8	1.8	-77.54	-113.1	2,164.1	4,331.6	4,244.7	86.90	49.847	
11,500.0	6,712.2	6,500.0	6,498.5	89.3	1.8	-77.54	-113.1	2,164.1	4,412.1	4,323.7	88.42	49.897	
11,515.7	6,712.1	6,500.0	6,498.5	89.6	1.8	-77.54	-113.1	2,164.1	4,427.4	4,338.7	88.72	49.906	
11,600.0	6,711.5	6,500.0	6,498.5	91.2	1.8	-77.54	-113.1	2,164.1	4,509.6	4,419.3	90.27	49.955	
11,614.1	6,711.4	6,500.0	6,498.5	91.4	1.8	-77.54	-113.1	2,164.1	4,523.4	4,432.9	90.54	49.963	
11,700.0	6,710.8	6,500.0	6,498.5	93.0	1.8	-77.54	-113.1	2,164.1	4,607.2	4,515.1	92.12	50.011	
11,712.6	6,710.7	6,500.0	6,498.5	93.3	1.8	-77.54	-113.1	2,164.1	4,619.5	4,527.2	92.36	50.018	
11,800.0	6,710.1	6,500.0	6,498.5	94.9	1.8	-77.54	-113.1	2,164.1	4,704.9	4,611.0	93.98	50.066	
11,811.0	6,710.1	6,500.0	6,498.5	95.1	1.8	-77.54	-113.1	2,164.1	4,715.7	4,621.5	94.18	50.071	
11,900.0	6,709.5	6,500.0	6,498.5	96.7	1.8	-77.54	-113.1	2,164.1	4,802.7	4,706.9	95.83	50.118	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT NOFFSINGER #31-5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,909.4	6,709.4	6,500.0	6,498.5	96.9	1.8	-77.54	-113.1	2,164.1	4,812.0	4,716.0	96.00	50.123	
12,000.0	6,708.8	6,500.0	6,498.5	98.6	1.8	-77.54	-113.1	2,164.1	4,900.6	4,802.9	97.68	50.169	
12,007.8	6,708.7	6,500.0	6,498.5	98.7	1.8	-77.54	-113.1	2,164.1	4,908.3	4,810.5	97.83	50.173	
12,100.0	6,708.1	6,500.0	6,498.5	100.4	1.8	-77.54	-113.1	2,164.1	4,998.6	4,899.1	99.54	50.218	
12,106.3	6,708.1	6,500.0	6,498.5	100.6	1.8	-77.54	-113.1	2,164.1	5,004.7	4,905.1	99.65	50.221	
12,200.0	6,707.4	6,500.0	6,498.5	102.3	1.8	-77.54	-113.1	2,164.1	5,096.6	4,995.3	101.39	50.266	
12,204.7	6,707.4	6,500.0	6,498.5	102.4	1.8	-77.54	-113.1	2,164.1	5,101.3	4,999.8	101.48	50.268	
12,300.0	6,706.7	6,500.0	6,498.5	104.2	1.8	-77.54	-113.1	2,164.1	5,194.8	5,091.5	103.25	50.312	
12,303.1	6,706.7	6,500.0	6,498.5	104.2	1.8	-77.54	-113.1	2,164.1	5,197.8	5,094.5	103.31	50.314	
12,400.0	6,706.1	6,500.0	6,498.5	106.0	1.8	-77.54	-113.1	2,164.1	5,293.0	5,187.9	105.11	50.357	
12,401.5	6,706.0	6,500.0	6,498.5	106.1	1.8	-77.54	-113.1	2,164.1	5,294.5	5,189.4	105.14	50.358	
12,500.0	6,705.4	6,500.0	6,498.5	107.9	1.8	-77.54	-113.1	2,164.1	5,391.2	5,284.3	106.97	50.400	
12,598.4	6,704.7	6,500.0	6,498.5	109.7	1.8	-77.54	-113.1	2,164.1	5,488.0	5,379.2	108.80	50.442	
12,600.0	6,704.7	6,500.0	6,498.5	109.8	1.8	-77.54	-113.1	2,164.1	5,489.6	5,380.7	108.83	50.442	
12,696.8	6,704.0	6,500.0	6,498.5	111.6	1.8	-77.54	-113.1	2,164.1	5,584.8	5,474.2	110.63	50.482	
12,700.0	6,704.0	6,500.0	6,498.5	111.6	1.8	-77.54	-113.1	2,164.1	5,587.9	5,477.3	110.69	50.483	
12,795.2	6,703.4	6,500.0	6,498.5	113.4	1.8	-77.54	-113.1	2,164.1	5,681.7	5,569.2	112.46	50.521	
12,800.0	6,703.3	6,500.0	6,498.5	113.5	1.8	-77.54	-113.1	2,164.1	5,686.4	5,573.8	112.55	50.523	
12,893.7	6,702.7	6,500.0	6,498.5	115.3	1.8	-77.54	-113.1	2,164.1	5,778.6	5,664.4	114.30	50.559	
12,900.0	6,702.7	6,500.0	6,498.5	115.4	1.8	-77.54	-113.1	2,164.1	5,784.9	5,670.5	114.41	50.561	
12,992.1	6,702.0	6,500.0	6,498.5	117.1	1.8	-77.54	-113.1	2,164.1	5,875.6	5,759.5	116.13	50.596	
13,000.0	6,702.0	6,500.0	6,498.5	117.3	1.8	-77.54	-113.1	2,164.1	5,883.4	5,767.1	116.28	50.598	
13,090.5	6,701.4	6,500.0	6,498.5	119.0	1.8	-77.54	-113.1	2,164.1	5,972.7	5,854.7	117.96	50.631	
13,100.0	6,701.3	6,500.0	6,498.5	119.1	1.8	-77.54	-113.1	2,164.1	5,982.0	5,863.9	118.14	50.635	
13,188.9	6,700.7	6,500.0	6,498.5	120.8	1.8	-77.54	-113.1	2,164.1	6,069.8	5,950.0	119.80	50.666	
13,200.0	6,700.6	6,500.0	6,498.5	121.0	1.8	-77.54	-113.1	2,164.1	6,080.7	5,960.7	120.01	50.670	
13,287.4	6,700.0	6,500.0	6,498.5	122.7	1.8	-77.54	-113.1	2,164.1	6,166.9	6,045.2	121.63	50.700	
13,300.0	6,699.9	6,500.0	6,498.5	122.9	1.8	-77.54	-113.1	2,164.1	6,179.3	6,057.5	121.87	50.704	
13,385.8	6,699.3	6,500.0	6,498.5	124.5	1.8	-77.54	-113.1	2,164.1	6,264.0	6,140.6	123.47	50.733	
13,400.0	6,699.3	6,500.0	6,498.5	124.8	1.8	-77.54	-113.1	2,164.1	6,278.1	6,154.3	123.74	50.738	
13,484.2	6,698.7	6,500.0	6,498.5	126.4	1.8	-77.54	-113.1	2,164.1	6,361.2	6,235.9	125.31	50.765	
13,500.0	6,698.6	6,500.0	6,498.5	126.7	1.8	-77.54	-113.1	2,164.1	6,376.8	6,251.2	125.60	50.770	
13,582.6	6,698.0	6,500.0	6,498.5	128.2	1.8	-77.54	-113.1	2,164.1	6,458.5	6,331.3	127.15	50.796	
13,600.0	6,697.9	6,500.0	6,498.5	128.5	1.8	-77.54	-113.1	2,164.1	6,475.6	6,348.2	127.47	50.802	
13,681.1	6,697.3	6,500.0	6,498.5	130.1	1.8	-77.54	-113.1	2,164.1	6,555.8	6,426.8	128.98	50.827	
13,700.0	6,697.2	6,500.0	6,498.5	130.4	1.8	-77.54	-113.1	2,164.1	6,574.5	6,445.1	129.34	50.832	
13,779.5	6,696.7	6,500.0	6,498.5	131.9	1.8	-77.54	-113.1	2,164.1	6,653.1	6,522.3	130.82	50.856	
13,800.0	6,696.5	6,500.0	6,498.5	132.3	1.8	-77.54	-113.1	2,164.1	6,673.3	6,542.1	131.20	50.862	
13,877.9	6,696.0	6,500.0	6,498.5	133.8	1.8	-77.54	-113.1	2,164.1	6,750.4	6,617.8	132.66	50.885	
13,900.0	6,695.8	6,500.0	6,498.5	134.2	1.8	-77.54	-113.1	2,164.1	6,772.3	6,639.2	133.07	50.892	
13,976.3	6,695.3	6,500.0	6,498.5	135.6	1.8	-77.54	-113.1	2,164.1	6,847.8	6,713.3	134.50	50.913	
14,000.0	6,695.2	6,500.0	6,498.5	136.1	1.8	-77.54	-113.1	2,164.1	6,871.2	6,736.3	134.94	50.920	
14,034.1	6,695.0	6,500.0	6,498.5	136.7	1.8	-77.54	-113.1	2,164.1	6,904.9	6,769.3	135.58	50.930	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT NOFFSINGER #32-5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	128.13	-1,709.6	2,178.2	2,769.2				
98.4	98.4	52.6	52.6	0.1	0.0	128.13	-1,709.7	2,178.4	2,769.2	2,769.1	0.12	N/A	
100.0	100.0	53.8	53.8	0.1	0.0	128.13	-1,709.7	2,178.4	2,769.2	2,769.1	0.13	N/A	
196.8	196.8	136.4	136.4	0.3	0.1	128.12	-1,709.8	2,179.2	2,770.0	2,769.6	0.43	6,407.751	
200.0	200.0	139.5	139.5	0.3	0.1	128.12	-1,709.8	2,179.2	2,770.1	2,769.6	0.44	6,239.209	
295.3	295.3	232.5	232.5	0.5	0.3	128.10	-1,709.9	2,180.5	2,771.1	2,770.4	0.78	3,563.194	
300.0	300.0	237.2	237.2	0.5	0.3	128.10	-1,709.9	2,180.5	2,771.2	2,770.4	0.79	3,497.142	
393.7	393.7	332.7	332.7	0.7	0.3	128.09	-1,710.0	2,181.9	2,772.3	2,771.2	1.08	2,566.035	
400.0	400.0	339.5	339.5	0.8	0.3	128.09	-1,710.0	2,182.0	2,772.3	2,771.2	1.10	2,522.091	
492.1	492.1	436.5	436.4	1.0	0.4	128.07	-1,710.0	2,183.1	2,773.2	2,771.9	1.37	2,024.670	
500.0	500.0	444.5	444.4	1.0	0.4	128.07	-1,710.0	2,183.2	2,773.3	2,771.9	1.39	1,992.103	
590.5	590.5	532.2	532.2	1.2	0.5	128.06	-1,710.1	2,184.1	2,774.1	2,772.5	1.65	1,686.025	
600.0	600.0	540.7	540.6	1.2	0.5	128.06	-1,710.1	2,184.2	2,774.2	2,772.5	1.67	1,660.173	
689.0	689.0	623.6	623.5	1.4	0.5	128.05	-1,710.5	2,185.2	2,775.2	2,773.3	1.91	1,450.467	
700.0	700.0	635.0	634.9	1.4	0.5	128.05	-1,710.5	2,185.3	2,775.4	2,773.4	1.94	1,427.954	
787.4	787.4	729.7	729.6	1.6	0.6	128.04	-1,710.6	2,186.6	2,776.4	2,774.2	2.19	1,270.646	
800.0	800.0	744.9	744.9	1.7	0.6	128.03	-1,710.6	2,186.8	2,776.5	2,774.3	2.22	1,250.461	
885.8	885.8	844.0	843.9	1.9	0.6	128.01	-1,710.1	2,188.0	2,777.0	2,774.5	2.46	1,128.758	
900.0	900.0	859.4	859.4	1.9	0.6	128.01	-1,710.0	2,188.1	2,777.0	2,774.5	2.50	1,111.158	
984.2	984.2	947.7	947.7	2.1	0.7	127.99	-1,709.5	2,188.8	2,777.3	2,774.5	2.73	1,018.280	
1,000.0	1,000.0	963.7	963.6	2.1	0.7	127.99	-1,709.4	2,188.9	2,777.3	2,774.5	2.77	1,002.600	
1,082.7	1,082.7	1,044.7	1,044.7	2.3	0.7	127.97	-1,708.9	2,189.5	2,777.5	2,774.5	2.99	928.113	
1,100.0	1,100.0	1,061.3	1,061.2	2.3	0.7	127.97	-1,708.8	2,189.6	2,777.5	2,774.5	3.04	914.007	
1,181.1	1,181.1	1,142.9	1,142.8	2.5	0.8	127.95	-1,708.3	2,190.3	2,777.8	2,774.5	3.26	852.967	
1,200.0	1,200.0	1,162.9	1,162.8	2.6	0.8	127.95	-1,708.1	2,190.5	2,777.8	2,774.5	3.31	839.817	
1,279.5	1,279.5	1,247.0	1,246.9	2.7	0.8	127.92	-1,707.3	2,191.3	2,777.9	2,774.4	3.52	788.785	
1,300.0	1,300.0	1,268.6	1,268.5	2.8	0.8	127.92	-1,707.0	2,191.5	2,777.9	2,774.3	3.58	776.655	
1,377.9	1,377.9	1,352.4	1,352.3	3.0	0.8	127.89	-1,706.1	2,192.2	2,777.9	2,774.1	3.79	733.794	
1,400.0	1,400.0	1,376.3	1,376.2	3.0	0.8	127.89	-1,705.8	2,192.4	2,777.8	2,774.0	3.84	722.521	
1,476.4	1,476.4	1,456.8	1,456.7	3.2	0.9	127.86	-1,704.8	2,192.8	2,777.5	2,773.5	4.05	686.366	
1,500.0	1,500.0	1,481.5	1,481.4	3.2	0.9	127.86	-1,704.5	2,192.9	2,777.4	2,773.3	4.11	675.937	
1,574.8	1,574.8	1,557.9	1,557.8	3.4	0.9	127.84	-1,703.6	2,193.1	2,777.1	2,772.8	4.30	645.165	
1,600.0	1,600.0	1,583.5	1,583.4	3.5	0.9	127.84	-1,703.4	2,193.1	2,777.0	2,772.6	4.37	635.439	
1,673.2	1,673.2	1,658.8	1,658.6	3.6	0.9	127.82	-1,702.6	2,193.2	2,776.5	2,772.0	4.56	608.936	
1,700.0	1,700.0	1,686.4	1,686.2	3.7	0.9	127.82	-1,702.3	2,193.2	2,776.4	2,771.8	4.63	599.799	
1,771.6	1,771.6	1,757.6	1,757.4	3.8	1.0	127.81	-1,701.6	2,193.2	2,775.9	2,771.1	4.81	576.964	
1,800.0	1,800.0	1,785.5	1,785.4	3.9	1.0	127.80	-1,701.4	2,193.1	2,775.8	2,770.9	4.88	568.428	
1,870.1	1,870.1	1,854.9	1,854.8	4.1	1.0	127.80	-1,701.0	2,193.0	2,775.4	2,770.3	5.06	548.817	
1,900.0	1,900.0	1,884.6	1,884.5	4.1	1.0	127.80	-1,700.8	2,192.9	2,775.2	2,770.1	5.13	540.895	
1,968.5	1,968.5	1,949.9	1,949.7	4.3	1.0	127.80	-1,700.6	2,192.6	2,774.8	2,769.6	5.29	524.337	
2,000.0	2,000.0	1,979.5	1,979.4	4.4	1.0	127.80	-1,700.6	2,192.5	2,774.7	2,769.4	5.37	517.158	
2,066.9	2,066.9	2,049.3	2,049.2	4.5	1.0	127.81	-1,700.7	2,192.1	2,774.5	2,768.9	5.52	502.485	
2,100.0	2,100.0	2,085.5	2,085.4	4.6	1.0	127.81	-1,700.8	2,191.7	2,774.3	2,768.7	5.60	495.508	
2,165.3	2,165.3	2,156.2	2,156.0	4.7	1.0	127.83	-1,701.1	2,190.9	2,773.8	2,768.1	5.75	482.230	
2,200.0	2,200.0	2,193.5	2,193.4	4.8	1.0	127.84	-1,701.2	2,190.4	2,773.5	2,767.7	5.83	475.454	
2,250.0	2,250.0	2,242.7	2,242.6	4.9	1.0	127.85	-1,701.5	2,189.6	2,773.1	2,767.2	5.95	466.022	
2,263.8	2,263.8	2,256.1	2,255.9	4.9	1.0	55.95	-1,701.6	2,189.4	2,773.0	2,767.1	5.92	468.776	
2,300.0	2,300.0	2,291.2	2,291.1	5.0	1.0	55.97	-1,701.8	2,188.9	2,772.5	2,766.5	6.00	461.990	
2,362.2	2,362.2	2,352.6	2,352.4	5.2	1.0	56.04	-1,702.1	2,188.1	2,771.0	2,764.8	6.14	451.043	
2,400.0	2,399.9	2,389.9	2,389.8	5.2	1.0	56.10	-1,702.2	2,187.6	2,769.7	2,763.5	6.23	444.587	
2,460.6	2,460.4	2,448.2	2,448.0	5.4	1.1	56.22	-1,702.5	2,186.9	2,767.2	2,760.8	6.37	434.375	
2,500.0	2,499.7	2,485.8	2,485.7	5.4	1.1	56.31	-1,702.6	2,186.4	2,765.2	2,758.7	6.46	427.939	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT NOFFSINGER #32-5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,559.0	2,558.5	2,545.8	2,545.6	5.6	1.1	56.49	-1,702.8	2,185.8	2,761.6	2,755.0	6.60	418.243	
2,600.0	2,599.1	2,588.1	2,587.9	5.7	1.1	56.63	-1,703.0	2,185.3	2,758.7	2,752.0	6.70	411.685	
2,657.5	2,656.1	2,648.6	2,648.4	5.8	1.1	56.86	-1,703.2	2,184.6	2,754.1	2,747.2	6.84	402.352	
2,700.0	2,698.2	2,693.4	2,693.2	5.9	1.1	57.05	-1,703.3	2,184.0	2,750.2	2,743.3	6.95	395.577	
2,755.9	2,753.3	2,750.6	2,750.4	6.1	1.1	57.32	-1,703.3	2,183.2	2,744.6	2,737.5	7.10	386.494	
2,800.0	2,796.6	2,795.5	2,795.3	6.2	1.1	57.56	-1,703.3	2,182.6	2,739.7	2,732.5	7.22	379.483	
2,854.3	2,849.9	2,851.8	2,851.6	6.3	1.1	57.88	-1,703.3	2,181.8	2,733.2	2,725.8	7.38	370.516	
2,900.0	2,894.4	2,899.0	2,898.8	6.5	1.1	58.17	-1,703.1	2,181.2	2,727.3	2,719.8	7.51	363.133	
2,952.7	2,945.7	2,954.3	2,954.1	6.6	1.1	58.54	-1,702.9	2,180.4	2,719.9	2,712.3	7.68	354.158	
3,000.0	2,991.5	3,003.9	3,003.6	6.8	1.1	58.89	-1,702.6	2,179.6	2,712.9	2,705.1	7.83	346.321	
3,051.2	3,040.8	3,061.4	3,061.2	7.0	1.2	59.32	-1,702.1	2,178.8	2,704.8	2,696.8	8.02	337.317	
3,100.0	3,087.6	3,115.4	3,115.2	7.1	1.2	59.75	-1,701.4	2,177.9	2,696.5	2,688.3	8.20	328.862	
3,149.6	3,134.9	3,168.4	3,168.2	7.4	1.2	60.20	-1,700.4	2,177.2	2,687.6	2,679.2	8.40	319.856	
3,200.0	3,182.7	3,222.3	3,222.0	7.6	1.2	60.67	-1,699.0	2,176.6	2,678.1	2,669.5	8.61	310.879	
3,248.0	3,228.0	3,273.5	3,273.2	7.8	1.2	61.15	-1,697.5	2,176.0	2,668.6	2,659.8	8.84	301.884	
3,300.0	3,276.6	3,323.3	3,323.0	8.1	1.2	61.66	-1,695.9	2,175.5	2,657.9	2,648.8	9.09	292.518	
3,346.4	3,319.9	3,363.3	3,363.0	8.3	1.2	62.11	-1,694.6	2,175.1	2,648.1	2,638.7	9.33	283.810	
3,400.0	3,369.4	3,409.4	3,409.1	8.6	1.2	62.65	-1,693.0	2,174.9	2,636.5	2,626.9	9.62	274.135	
3,444.9	3,410.5	3,448.7	3,448.3	8.9	1.3	63.12	-1,691.7	2,174.7	2,626.5	2,616.6	9.89	265.684	
3,500.0	3,460.7	3,496.5	3,496.1	9.2	1.3	63.73	-1,690.0	2,174.5	2,614.0	2,603.8	10.22	255.723	
3,543.3	3,499.8	3,535.0	3,534.6	9.5	1.3	64.23	-1,688.7	2,174.4	2,604.0	2,593.5	10.52	247.590	
3,600.0	3,550.6	3,585.2	3,584.7	9.9	1.3	64.91	-1,687.0	2,174.3	2,590.7	2,579.8	10.91	237.424	
3,641.7	3,587.6	3,622.3	3,621.8	10.3	1.3	65.43	-1,685.7	2,174.2	2,580.7	2,569.4	11.24	229.694	
3,709.9	3,647.5	3,682.9	3,682.3	10.8	1.3	66.32	-1,683.7	2,174.1	2,564.0	2,552.2	11.77	217.760	
3,740.1	3,673.9	3,709.0	3,708.4	11.1	1.3	66.58	-1,682.8	2,174.0	2,556.6	2,544.6	12.03	212.595	
3,800.0	3,726.2	3,758.7	3,758.1	11.6	1.3	67.07	-1,681.1	2,173.9	2,542.1	2,529.6	12.53	202.944	
3,838.6	3,759.9	3,790.7	3,790.1	11.9	1.4	67.40	-1,680.0	2,173.8	2,532.9	2,520.0	12.86	196.959	
3,900.0	3,813.5	3,843.6	3,843.0	12.5	1.4	67.93	-1,678.3	2,173.8	2,518.5	2,505.1	13.40	187.975	
3,937.0	3,845.8	3,875.8	3,875.1	12.8	1.4	68.26	-1,677.3	2,173.7	2,510.0	2,496.3	13.73	182.783	
4,000.0	3,900.8	3,928.2	3,927.5	13.4	1.4	68.79	-1,675.6	2,173.7	2,495.7	2,481.4	14.30	174.481	
4,035.4	3,931.7	3,956.6	3,955.9	13.7	1.4	69.08	-1,674.8	2,173.7	2,487.9	2,473.2	14.63	170.028	
4,100.0	3,988.1	4,008.5	4,007.8	14.3	1.4	69.62	-1,673.3	2,173.7	2,473.9	2,458.6	15.24	162.381	
4,133.8	4,017.6	4,035.9	4,035.2	14.7	1.4	69.91	-1,672.6	2,173.6	2,466.7	2,451.1	15.56	158.555	
4,200.0	4,075.4	4,089.5	4,088.7	15.3	1.4	70.48	-1,671.3	2,173.6	2,453.0	2,436.8	16.19	151.501	
4,232.3	4,103.5	4,115.9	4,115.2	15.6	1.4	70.76	-1,670.8	2,173.5	2,446.5	2,430.0	16.51	148.216	
4,300.0	4,162.6	4,171.7	4,171.0	16.2	1.5	71.37	-1,669.7	2,173.3	2,433.2	2,416.0	17.17	141.697	
4,330.7	4,189.4	4,197.0	4,196.2	16.5	1.5	71.65	-1,669.3	2,173.2	2,427.3	2,409.8	17.48	138.879	
4,400.0	4,249.9	4,260.2	4,259.5	17.2	1.5	72.35	-1,668.3	2,172.7	2,414.2	2,396.0	18.18	132.807	
4,429.1	4,275.4	4,286.9	4,286.2	17.5	1.5	72.65	-1,667.9	2,172.5	2,408.8	2,390.4	18.48	130.370	
4,500.0	4,337.2	4,349.4	4,348.7	18.2	1.5	73.36	-1,667.1	2,171.8	2,396.0	2,376.8	19.20	124.764	
4,527.5	4,361.3	4,373.5	4,372.7	18.5	1.5	73.63	-1,666.8	2,171.4	2,391.2	2,371.7	19.49	122.687	
4,600.0	4,424.5	4,436.6	4,435.8	19.2	1.5	74.36	-1,666.2	2,170.4	2,378.7	2,358.4	20.24	117.502	
4,626.0	4,447.2	4,459.3	4,458.5	19.5	1.5	74.63	-1,665.9	2,170.1	2,374.3	2,353.8	20.52	115.728	
4,700.0	4,511.8	4,522.7	4,521.9	20.2	1.5	75.37	-1,665.3	2,169.1	2,362.3	2,341.0	21.29	110.932	
4,724.4	4,533.1	4,542.8	4,542.0	20.5	1.6	75.61	-1,665.0	2,168.8	2,358.4	2,336.9	21.55	109.427	
4,796.7	4,596.3	4,600.0	4,599.2	21.2	1.6	76.28	-1,664.4	2,168.1	2,347.4	2,325.1	22.32	105.190	
4,800.0	4,599.1	4,600.0	4,599.2	21.2	1.6	76.27	-1,664.4	2,168.1	2,346.9	2,324.6	22.34	105.035	
4,822.8	4,619.1	4,622.8	4,622.0	21.4	1.6	76.47	-1,664.1	2,167.9	2,343.6	2,321.0	22.54	103.969	
4,900.0	4,687.3	4,683.4	4,682.6	22.0	1.6	76.94	-1,663.4	2,167.5	2,333.1	2,309.9	23.19	100.600	
4,921.2	4,706.2	4,700.0	4,699.2	22.2	1.6	77.07	-1,663.3	2,167.4	2,330.5	2,307.1	23.36	99.753	
5,000.0	4,777.1	4,758.0	4,757.2	22.8	1.6	77.50	-1,662.8	2,167.3	2,321.4	2,297.4	23.98	96.793	
5,019.7	4,794.9	4,772.6	4,771.8	22.9	1.6	77.61	-1,662.7	2,167.3	2,319.4	2,295.3	24.13	96.122	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT NOFFSINGER #32-5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	4,868.3	4,840.1	4,839.3	23.5	1.6	78.12	-1,662.5	2,167.6	2,311.8	2,287.1	24.73	93.475	
5,118.1	4,885.0	4,856.9	4,856.0	23.6	1.6	78.24	-1,662.4	2,167.7	2,310.2	2,285.3	24.86	92.932	
5,200.0	4,961.0	4,933.3	4,932.5	24.2	1.6	78.80	-1,662.0	2,168.2	2,303.6	2,278.1	25.44	90.561	
5,216.5	4,976.4	4,948.9	4,948.1	24.3	1.6	78.91	-1,661.9	2,168.3	2,302.3	2,276.8	25.54	90.129	
5,300.0	5,054.8	5,027.6	5,026.7	24.8	1.7	79.44	-1,661.5	2,168.8	2,296.5	2,270.4	26.09	88.027	
5,314.9	5,069.0	5,041.6	5,040.8	24.8	1.7	79.53	-1,661.4	2,168.9	2,295.6	2,269.4	26.18	87.691	
5,400.0	5,149.9	5,122.6	5,121.8	25.3	1.7	80.02	-1,660.9	2,169.7	2,290.6	2,263.9	26.68	85.839	
5,413.4	5,162.7	5,135.8	5,135.0	25.4	1.7	80.10	-1,660.8	2,169.8	2,289.9	2,263.1	26.76	85.580	
5,500.0	5,245.9	5,220.8	5,220.0	25.8	1.7	80.56	-1,660.1	2,170.9	2,285.5	2,258.3	27.22	83.951	
5,511.8	5,257.3	5,232.1	5,231.3	25.9	1.7	80.62	-1,660.0	2,171.0	2,285.0	2,257.7	27.28	83.756	
5,600.0	5,342.9	5,316.1	5,315.3	26.3	1.7	81.01	-1,659.2	2,172.2	2,281.3	2,253.6	27.70	82.345	
5,610.2	5,352.9	5,325.6	5,324.7	26.3	1.7	81.06	-1,659.1	2,172.4	2,280.9	2,253.2	27.75	82.203	
5,700.0	5,440.7	5,409.6	5,408.7	26.7	1.7	81.39	-1,658.3	2,173.9	2,278.0	2,249.8	28.13	80.990	
5,708.6	5,449.1	5,418.0	5,417.1	26.7	1.7	81.42	-1,658.2	2,174.1	2,277.7	2,249.5	28.16	80.889	
5,800.0	5,539.1	5,507.4	5,506.5	27.0	1.8	81.71	-1,657.3	2,175.9	2,275.4	2,246.9	28.49	79.862	
5,807.1	5,546.1	5,514.5	5,513.6	27.0	1.8	81.73	-1,657.3	2,176.0	2,275.2	2,246.7	28.51	79.795	
5,900.0	5,638.1	5,608.6	5,607.6	27.3	1.8	81.97	-1,656.3	2,178.0	2,273.4	2,244.6	28.80	78.931	
5,905.5	5,643.5	5,614.0	5,613.0	27.3	1.8	81.98	-1,656.2	2,178.2	2,273.3	2,244.5	28.82	78.889	
6,000.0	5,737.5	5,707.4	5,706.4	27.5	1.8	82.15	-1,655.3	2,180.1	2,271.9	2,242.8	29.06	78.185	
6,003.9	5,741.4	5,711.4	5,710.4	27.5	1.8	82.15	-1,655.2	2,180.2	2,271.8	2,242.8	29.07	78.162	
6,100.0	5,837.2	5,808.6	5,807.6	27.7	1.8	82.26	-1,654.4	2,181.9	2,270.9	2,241.6	29.26	77.606	
6,102.3	5,839.6	5,811.0	5,810.0	27.7	1.8	82.26	-1,654.3	2,182.0	2,270.9	2,241.6	29.27	77.596	
6,200.0	5,937.2	5,911.0	5,910.0	27.9	1.8	82.30	-1,653.5	2,183.4	2,270.3	2,240.8	29.42	77.179	
6,200.8	5,937.9	5,911.8	5,910.8	27.9	1.8	82.30	-1,653.5	2,183.5	2,270.3	2,240.8	29.42	77.176	
6,256.6	5,993.8	5,967.0	5,966.0	27.9	1.9	154.20	-1,653.0	2,184.2	2,270.1	2,240.6	29.48	77.006	
6,286.6	6,023.8	5,996.6	5,995.6	27.9	1.9	154.18	-1,652.8	2,184.6	2,270.1	2,240.5	29.51	76.922	
6,299.2	6,036.4	6,008.9	6,007.9	27.9	1.9	-25.83	-1,652.7	2,184.7	2,269.9	2,240.4	29.53	76.876	
6,300.0	6,037.2	6,009.6	6,008.6	27.9	1.9	-25.83	-1,652.7	2,184.7	2,269.9	2,240.4	29.53	76.873	
6,350.0	6,087.1	6,058.2	6,057.1	28.0	1.9	-25.96	-1,652.4	2,185.2	2,267.5	2,237.9	29.55	76.729	
6,397.6	6,134.3	6,104.2	6,103.2	28.0	1.9	-26.21	-1,652.2	2,185.7	2,262.3	2,232.8	29.51	76.648	
6,400.0	6,136.7	6,106.5	6,105.5	28.0	1.9	-26.23	-1,652.2	2,185.7	2,261.9	2,232.4	29.51	76.645	
6,450.0	6,185.7	6,155.1	6,154.1	28.0	1.9	-26.66	-1,652.0	2,186.0	2,253.3	2,223.9	29.40	76.644	
6,496.0	6,230.2	6,199.2	6,198.1	28.0	1.9	-27.20	-1,651.9	2,186.3	2,242.7	2,213.5	29.22	76.744	
6,500.0	6,234.0	6,203.1	6,202.1	28.0	1.9	-27.25	-1,651.9	2,186.3	2,241.7	2,212.5	29.21	76.755	
6,550.0	6,281.3	6,253.3	6,252.3	28.0	1.9	-28.03	-1,651.8	2,186.4	2,227.0	2,198.1	28.92	77.001	
6,594.5	6,322.2	6,296.9	6,295.8	27.9	1.9	-28.88	-1,651.7	2,186.5	2,211.5	2,182.9	28.59	77.360	
6,600.0	6,327.3	6,300.0	6,299.0	27.9	1.9	-28.99	-1,651.7	2,186.5	2,209.4	2,180.9	28.54	77.412	
6,650.0	6,371.8	6,344.4	6,343.4	27.9	1.9	-30.15	-1,651.6	2,186.5	2,189.0	2,161.0	28.06	78.010	
6,692.9	6,408.6	6,379.6	6,378.6	27.9	1.9	-31.33	-1,651.6	2,186.5	2,169.5	2,141.9	27.57	78.685	
6,700.0	6,414.6	6,385.3	6,384.3	27.8	1.9	-31.54	-1,651.6	2,186.5	2,166.0	2,138.5	27.49	78.807	
6,750.0	6,455.5	6,427.2	6,426.2	27.8	1.9	-33.21	-1,651.7	2,186.4	2,140.5	2,113.7	26.82	79.801	
6,791.3	6,487.7	6,461.5	6,460.5	27.7	1.9	-34.82	-1,651.7	2,186.3	2,117.6	2,091.4	26.22	80.776	
6,800.0	6,494.3	6,468.5	6,467.5	27.7	1.9	-35.19	-1,651.7	2,186.3	2,112.6	2,086.5	26.08	80.992	
6,850.0	6,530.8	6,507.5	6,506.4	27.7	1.9	-37.53	-1,651.6	2,186.1	2,082.4	2,057.1	25.28	82.358	
6,889.7	6,558.1	6,537.1	6,536.0	27.6	2.0	-39.66	-1,651.6	2,185.9	2,056.9	2,032.3	24.62	83.540	
6,900.0	6,564.9	6,544.4	6,543.4	27.6	2.0	-40.26	-1,651.6	2,185.9	2,050.1	2,025.7	24.45	83.847	
6,950.0	6,596.3	6,578.5	6,577.4	27.6	2.0	-43.42	-1,651.5	2,185.6	2,016.0	1,992.4	23.61	85.379	
6,988.2	6,618.4	6,602.4	6,601.4	27.5	2.0	-46.16	-1,651.5	2,185.4	1,988.8	1,965.8	22.99	86.506	
7,000.0	6,624.9	6,609.4	6,608.3	27.5	2.0	-47.07	-1,651.5	2,185.3	1,980.2	1,957.4	22.81	86.824	
7,050.0	6,650.6	6,636.8	6,635.8	27.5	2.0	-51.21	-1,651.4	2,184.9	1,943.0	1,920.9	22.07	88.022	
7,086.6	6,667.5	6,654.9	6,653.8	27.5	2.0	-54.57	-1,651.4	2,184.7	1,915.0	1,893.4	21.60	88.666	
7,100.0	6,673.3	6,661.0	6,660.0	27.5	2.0	-55.87	-1,651.4	2,184.6	1,904.5	1,883.1	21.44	88.821	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,150.0	6,692.7	6,681.7	6,680.7	27.5	2.0	-61.02	-1,651.3	2,184.3	1,865.2	1,844.2	20.92	89.146	
7,185.0	6,704.4	6,694.1	6,693.1	27.5	2.0	-64.89	-1,651.3	2,184.2	1,837.1	1,816.5	20.65	88.965	
7,200.0	6,709.0	6,698.9	6,697.9	27.5	2.0	-66.59	-1,651.2	2,184.1	1,825.1	1,804.6	20.50	89.047	
7,250.0	6,721.8	6,712.5	6,711.5	27.5	2.0	-72.45	-1,651.2	2,183.9	1,784.5	1,764.4	20.13	88.669	
7,283.4	6,728.6	6,719.6	6,718.5	27.5	2.0	-76.45	-1,651.2	2,183.8	1,757.2	1,737.3	19.90	88.293	
7,300.0	6,731.3	6,722.4	6,721.4	27.6	2.0	-78.43	-1,651.2	2,183.7	1,743.7	1,723.9	19.79	88.115	
7,350.0	6,737.3	6,728.6	6,727.6	27.7	2.0	-84.33	-1,651.1	2,183.7	1,703.0	1,683.5	19.51	87.289	
7,381.9	6,739.4	6,730.6	6,729.6	27.7	2.0	-87.96	-1,651.1	2,183.6	1,677.2	1,657.8	19.40	86.465	
7,400.0	6,739.9	6,731.1	6,730.0	27.8	2.0	-89.96	-1,651.1	2,183.6	1,662.6	1,643.2	19.35	85.907	
7,416.5	6,740.0	6,731.1	6,730.0	27.8	2.0	-91.74	-1,651.1	2,183.6	1,649.3	1,630.0	19.33	85.306	
7,480.3	6,739.5	6,730.3	6,729.2	28.0	2.0	-91.70	-1,651.1	2,183.6	1,598.7	1,578.8	19.87	80.470	
7,500.0	6,739.4	6,730.0	6,729.0	28.1	2.0	-91.68	-1,651.1	2,183.6	1,583.2	1,563.2	20.03	79.038	
7,578.7	6,738.9	6,729.1	6,728.0	28.5	2.0	-91.63	-1,651.1	2,183.6	1,522.5	1,501.7	20.80	73.191	
7,600.0	6,738.7	6,728.8	6,727.8	28.6	2.0	-91.61	-1,651.1	2,183.7	1,506.4	1,485.4	21.01	71.698	
7,677.1	6,738.2	6,727.9	6,726.8	29.1	2.0	-91.56	-1,651.1	2,183.7	1,449.0	1,427.2	21.87	66.258	
7,700.0	6,738.1	6,727.6	6,726.5	29.2	2.0	-91.54	-1,651.1	2,183.7	1,432.4	1,410.3	22.12	64.744	
7,775.6	6,737.5	6,726.7	6,725.6	29.7	2.0	-91.49	-1,651.1	2,183.7	1,378.7	1,355.6	23.05	59.806	
7,800.0	6,737.4	6,726.4	6,725.3	29.9	2.0	-91.47	-1,651.1	2,183.7	1,361.8	1,338.4	23.35	58.313	
7,874.0	6,736.9	6,725.5	6,724.5	30.6	2.0	-91.42	-1,651.1	2,183.7	1,311.9	1,287.6	24.33	53.917	
7,900.0	6,736.7	6,725.2	6,724.2	30.8	2.0	-91.40	-1,651.1	2,183.7	1,295.0	1,270.3	24.68	52.478	
7,972.4	6,736.2	6,724.3	6,723.3	31.5	2.0	-91.35	-1,651.1	2,183.7	1,249.4	1,223.7	25.69	48.625	
8,000.0	6,736.0	6,724.0	6,723.0	31.8	2.0	-91.33	-1,651.1	2,183.7	1,232.7	1,206.6	26.08	47.264	
8,070.8	6,735.5	6,723.2	6,722.2	32.5	2.0	-91.29	-1,651.1	2,183.7	1,191.7	1,164.6	27.12	43.935	
8,100.0	6,735.3	6,722.9	6,721.8	32.8	2.0	-91.27	-1,651.1	2,183.7	1,175.6	1,148.1	27.55	42.668	
8,169.3	6,734.9	6,722.0	6,721.0	33.6	2.0	-91.22	-1,651.2	2,183.8	1,139.6	1,111.0	28.61	39.829	
8,200.0	6,734.6	6,721.7	6,720.7	34.0	2.0	-91.20	-1,651.2	2,183.8	1,124.6	1,095.5	29.08	38.671	
8,267.7	6,734.2	6,720.9	6,719.9	34.8	2.0	-91.15	-1,651.2	2,183.8	1,093.8	1,063.7	30.15	36.283	
8,300.0	6,734.0	6,720.6	6,719.5	35.2	2.0	-91.13	-1,651.2	2,183.8	1,080.4	1,049.7	30.66	35.242	
8,366.1	6,733.5	6,719.8	6,718.8	36.1	2.0	-91.09	-1,651.2	2,183.8	1,055.4	1,023.6	31.72	33.266	
8,400.0	6,733.3	6,719.4	6,718.4	36.5	2.0	-91.07	-1,651.2	2,183.8	1,043.9	1,011.7	32.27	32.348	
8,464.5	6,732.8	6,718.7	6,717.7	37.4	2.0	-91.03	-1,651.2	2,183.8	1,024.9	991.6	33.34	30.744	
8,500.0	6,732.6	6,718.3	6,717.3	37.9	2.0	-91.00	-1,651.2	2,183.8	1,016.0	982.1	33.92	29.953	
8,563.0	6,732.2	6,717.6	6,716.6	38.8	2.0	-90.96	-1,651.2	2,183.8	1,003.2	968.2	34.98	28.680	
8,600.0	6,731.9	6,717.2	6,716.2	39.3	2.0	-90.94	-1,651.2	2,183.8	997.4	961.8	35.60	28.018	
8,661.4	6,731.5	6,716.5	6,715.5	40.2	2.0	-90.90	-1,651.2	2,183.8	990.9	954.2	36.65	27.038	
8,700.0	6,731.2	6,716.1	6,715.1	40.8	2.0	-90.87	-1,651.2	2,183.8	988.7	951.4	37.30	26.503	
8,737.3	6,731.0	6,715.7	6,714.7	41.3	2.0	-90.85	-1,651.2	2,183.8	988.0	950.0	37.95	26.035 CC	
8,759.8	6,730.8	6,715.4	6,714.4	41.7	2.0	-90.84	-1,651.2	2,183.8	988.2	949.9	38.34	25.777 ES	
8,800.0	6,730.6	6,715.0	6,714.0	42.3	2.0	-90.81	-1,651.2	2,183.9	989.9	950.9	39.03	25.364	
8,858.2	6,730.2	6,714.4	6,713.3	43.2	2.0	-90.77	-1,651.2	2,183.9	995.3	955.3	40.05	24.855	
8,900.0	6,729.9	6,713.9	6,712.9	43.8	2.0	-90.75	-1,651.2	2,183.9	1,001.3	960.5	40.77	24.557	
8,956.7	6,729.5	6,713.3	6,712.3	44.7	2.0	-90.71	-1,651.2	2,183.9	1,012.0	970.3	41.77	24.228	
9,000.0	6,729.2	6,712.9	6,711.8	45.4	2.0	-90.69	-1,651.2	2,183.9	1,022.3	979.8	42.53	24.035	
9,055.1	6,728.8	6,712.3	6,711.3	46.3	2.0	-90.65	-1,651.2	2,183.9	1,037.8	994.3	43.51	23.851	
9,100.0	6,728.5	6,711.8	6,710.8	47.0	2.0	-90.63	-1,651.2	2,183.9	1,052.4	1,008.1	44.31	23.752	
9,153.5	6,728.2	6,711.3	6,710.2	47.9	2.0	-90.59	-1,651.2	2,183.9	1,072.1	1,026.8	45.27	23.684	
9,200.0	6,727.8	6,710.8	6,709.7	48.6	2.0	-90.57	-1,651.2	2,183.9	1,090.9	1,044.8	46.10	23.667 SF	
9,251.9	6,727.5	6,710.2	6,709.2	49.5	2.0	-90.53	-1,651.2	2,183.9	1,114.0	1,066.9	47.03	23.686	
9,300.0	6,727.2	6,709.7	6,708.7	50.3	2.0	-90.51	-1,651.2	2,183.9	1,137.0	1,089.1	47.89	23.739	
9,350.4	6,726.8	6,709.2	6,708.2	51.1	2.0	-90.48	-1,651.2	2,183.9	1,162.7	1,113.9	48.81	23.824	
9,400.0	6,726.5	6,708.7	6,707.7	51.9	2.0	-90.45	-1,651.2	2,183.9	1,189.6	1,139.9	49.70	23.935	
9,448.8	6,726.1	6,708.2	6,707.2	52.7	2.0	-90.42	-1,651.2	2,184.0	1,217.5	1,166.9	50.59	24.066	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT NOFFSINGER #32-5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,500.0	6,725.8	6,707.7	6,706.7	53.6	2.0	-90.39	-1,651.2	2,184.0	1,248.1	1,196.6	51.52	24.226	
9,547.2	6,725.5	6,707.2	6,706.2	54.4	2.0	-90.36	-1,651.2	2,184.0	1,277.5	1,225.1	52.38	24.388	
9,600.0	6,725.1	6,706.7	6,705.7	55.3	2.0	-90.33	-1,651.2	2,184.0	1,311.6	1,258.3	53.35	24.587	
9,645.6	6,724.8	6,706.2	6,705.2	56.1	2.0	-90.30	-1,651.2	2,184.0	1,342.1	1,287.9	54.18	24.770	
9,700.0	6,724.4	6,705.7	6,704.7	57.0	2.0	-90.27	-1,651.2	2,184.0	1,379.4	1,324.3	55.18	25.000	
9,744.1	6,724.1	6,705.3	6,704.2	57.8	2.0	-90.25	-1,651.2	2,184.0	1,410.5	1,354.6	55.99	25.194	
9,800.0	6,723.8	6,704.7	6,703.7	58.7	2.0	-90.21	-1,651.2	2,184.0	1,451.0	1,394.0	57.02	25.449	
9,842.5	6,723.5	6,704.3	6,703.3	59.5	2.0	-90.19	-1,651.2	2,184.0	1,482.4	1,424.6	57.80	25.647	
9,900.0	6,723.1	6,703.7	6,702.7	60.5	2.0	-90.16	-1,651.2	2,184.0	1,525.7	1,466.9	58.86	25.922	
9,940.9	6,722.8	6,703.3	6,702.3	61.2	2.0	-90.13	-1,651.2	2,184.0	1,557.1	1,497.5	59.62	26.120	
10,000.0	6,722.4	6,700.0	6,699.0	62.2	2.0	-89.94	-1,651.2	2,184.1	1,603.3	1,542.5	60.72	26.404	
10,039.3	6,722.1	6,700.0	6,699.0	62.9	2.0	-89.94	-1,651.2	2,184.1	1,634.4	1,573.0	61.45	26.598	
10,100.0	6,721.7	6,700.0	6,699.0	64.0	2.0	-89.94	-1,651.2	2,184.1	1,683.1	1,620.6	62.57	26.900	
10,137.8	6,721.5	6,700.0	6,699.0	64.7	2.0	-89.94	-1,651.2	2,184.1	1,713.9	1,650.6	63.27	27.088	
10,200.0	6,721.0	6,700.0	6,699.0	65.8	2.0	-89.94	-1,651.2	2,184.1	1,765.1	1,700.6	64.42	27.398	
10,236.2	6,720.8	6,700.0	6,699.0	66.4	2.0	-89.94	-1,651.2	2,184.1	1,795.2	1,730.1	65.10	27.577	
10,300.0	6,720.4	6,699.9	6,698.9	67.5	2.0	-89.93	-1,651.2	2,184.1	1,848.8	1,782.5	66.28	27.892	
10,334.6	6,720.1	6,699.5	6,698.5	68.2	2.0	-89.91	-1,651.2	2,184.1	1,878.1	1,811.2	66.93	28.062	
10,400.0	6,719.7	6,698.9	6,697.8	69.3	2.0	-89.88	-1,651.2	2,184.1	1,934.0	1,865.9	68.15	28.380	
10,433.0	6,719.4	6,698.5	6,697.5	69.9	2.0	-89.86	-1,651.2	2,184.1	1,962.5	1,893.7	68.77	28.539	
10,500.0	6,719.0	6,697.8	6,696.8	71.1	2.0	-89.82	-1,651.2	2,184.1	2,020.6	1,950.6	70.02	28.859	
10,531.5	6,718.8	6,697.5	6,696.5	71.7	2.0	-89.80	-1,651.2	2,184.1	2,048.2	1,977.5	70.61	29.008	
10,600.0	6,718.3	6,696.8	6,695.8	72.9	2.0	-89.76	-1,651.2	2,184.1	2,108.4	2,036.5	71.89	29.329	
10,629.9	6,718.1	6,696.5	6,695.5	73.4	2.0	-89.74	-1,651.3	2,184.1	2,134.9	2,062.4	72.45	29.467	
10,700.0	6,717.6	6,695.8	6,694.8	74.7	2.0	-89.70	-1,651.3	2,184.1	2,197.3	2,123.5	73.77	29.787	
10,728.3	6,717.4	6,695.5	6,694.5	75.2	2.0	-89.68	-1,651.3	2,184.1	2,222.6	2,148.3	74.30	29.915	
10,800.0	6,717.0	6,694.8	6,693.8	76.5	2.0	-89.64	-1,651.3	2,184.2	2,287.0	2,211.4	75.64	30.235	
10,826.7	6,716.8	6,694.5	6,693.5	77.0	2.0	-89.62	-1,651.3	2,184.2	2,311.2	2,235.0	76.15	30.352	
10,900.0	6,716.3	6,693.8	6,692.8	78.3	2.0	-89.58	-1,651.3	2,184.2	2,377.6	2,300.1	77.52	30.670	
10,925.2	6,716.1	6,693.5	6,692.5	78.8	2.0	-89.57	-1,651.3	2,184.2	2,400.5	2,322.5	78.00	30.777	
11,000.0	6,715.6	6,692.8	6,691.8	80.2	2.0	-89.52	-1,651.3	2,184.2	2,468.9	2,389.5	79.40	31.093	
11,023.6	6,715.4	6,692.6	6,691.5	80.6	2.0	-89.51	-1,651.3	2,184.2	2,490.6	2,410.7	79.85	31.191	
11,100.0	6,714.9	6,691.8	6,690.8	82.0	2.0	-89.46	-1,651.3	2,184.2	2,560.9	2,479.6	81.29	31.503	
11,122.0	6,714.8	6,691.6	6,690.5	82.4	2.0	-89.45	-1,651.3	2,184.2	2,581.2	2,499.5	81.70	31.592	
11,200.0	6,714.2	6,690.8	6,689.8	83.8	2.0	-89.41	-1,651.3	2,184.2	2,653.4	2,570.2	83.17	31.902	
11,220.4	6,714.1	6,690.6	6,689.6	84.2	2.0	-89.40	-1,651.3	2,184.2	2,672.4	2,588.8	83.56	31.981	
11,300.0	6,713.5	6,689.8	6,688.8	85.7	2.0	-89.35	-1,651.3	2,184.2	2,746.5	2,661.4	85.06	32.288	
11,318.9	6,713.4	6,689.6	6,688.6	86.0	2.0	-89.34	-1,651.3	2,184.2	2,764.1	2,678.7	85.42	32.359	
11,400.0	6,712.9	6,688.8	6,687.8	87.5	2.0	-89.29	-1,651.3	2,184.2	2,840.0	2,753.0	86.95	32.662	
11,417.3	6,712.7	6,688.6	6,687.6	87.8	2.0	-89.28	-1,651.3	2,184.2	2,856.2	2,768.9	87.28	32.725	
11,500.0	6,712.2	6,687.8	6,686.8	89.3	2.0	-89.24	-1,651.3	2,184.3	2,933.9	2,845.1	88.84	33.024	
11,515.7	6,712.1	6,687.7	6,686.6	89.6	2.0	-89.23	-1,651.3	2,184.3	2,948.8	2,859.6	89.14	33.080	
11,600.0	6,711.5	6,686.8	6,685.8	91.2	2.0	-89.18	-1,651.3	2,184.3	3,028.3	2,937.5	90.73	33.375	
11,614.1	6,711.4	6,686.7	6,685.7	91.4	2.0	-89.17	-1,651.3	2,184.3	3,041.7	2,950.7	91.00	33.424	
11,700.0	6,710.8	6,685.9	6,684.8	93.0	2.0	-89.12	-1,651.3	2,184.3	3,123.0	3,030.3	92.63	33.715	
11,712.6	6,710.7	6,685.7	6,684.7	93.3	2.0	-89.11	-1,651.3	2,184.3	3,134.9	3,042.0	92.87	33.757	
11,800.0	6,710.1	6,684.9	6,683.9	94.9	2.0	-89.07	-1,651.3	2,184.3	3,218.0	3,123.5	94.52	34.045	
11,811.0	6,710.1	6,684.8	6,683.8	95.1	2.0	-89.06	-1,651.3	2,184.3	3,228.5	3,133.7	94.73	34.080	
11,900.0	6,709.5	6,683.9	6,682.9	96.7	2.0	-89.01	-1,651.3	2,184.3	3,313.3	3,216.9	96.42	34.364	
11,909.4	6,709.4	6,683.8	6,682.8	96.9	2.0	-89.00	-1,651.3	2,184.3	3,322.3	3,225.7	96.60	34.394	
12,000.0	6,708.8	6,683.0	6,681.9	98.6	2.0	-88.95	-1,651.3	2,184.3	3,408.9	3,310.6	98.31	34.673	
12,007.8	6,708.7	6,682.9	6,681.8	98.7	2.0	-88.95	-1,651.3	2,184.3	3,416.4	3,317.9	98.46	34.697	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,100.0	6,708.1	6,682.0	6,681.0	100.4	2.0	-88.90	-1,651.3	2,184.3	3,504.7	3,404.5	100.21	34.973	
12,106.3	6,708.1	6,681.9	6,680.9	100.6	2.0	-88.89	-1,651.3	2,184.3	3,510.7	3,410.4	100.33	34.991	
12,200.0	6,707.4	6,681.0	6,680.0	102.3	2.0	-88.84	-1,651.3	2,184.4	3,600.7	3,498.6	102.11	35.263	
12,204.7	6,707.4	6,681.0	6,680.0	102.4	2.0	-88.84	-1,651.3	2,184.4	3,605.3	3,503.1	102.20	35.277	
12,300.0	6,706.7	6,680.1	6,679.0	104.2	2.0	-88.79	-1,651.3	2,184.4	3,697.0	3,593.0	104.01	35.545	
12,303.1	6,706.7	6,680.0	6,679.0	104.2	2.0	-88.78	-1,651.3	2,184.4	3,700.0	3,596.0	104.07	35.553	
12,400.0	6,706.1	6,679.1	6,678.1	106.0	2.0	-88.73	-1,651.3	2,184.4	3,793.5	3,687.6	105.91	35.818	
12,401.5	6,706.0	6,679.1	6,678.1	106.1	2.0	-88.73	-1,651.3	2,184.4	3,795.0	3,689.0	105.94	35.822	
12,500.0	6,705.4	6,678.2	6,677.1	107.9	2.0	-88.68	-1,651.3	2,184.4	3,890.1	3,782.3	107.81	36.083	
12,598.4	6,704.7	6,677.2	6,676.2	109.7	2.0	-88.62	-1,651.3	2,184.4	3,985.3	3,875.7	109.68	36.335	
12,600.0	6,704.7	6,677.2	6,676.2	109.8	2.0	-88.62	-1,651.3	2,184.4	3,986.9	3,877.2	109.71	36.339	
12,696.8	6,704.0	6,676.3	6,675.3	111.6	2.0	-88.57	-1,651.3	2,184.4	4,080.8	3,969.2	111.55	36.581	
12,700.0	6,704.0	6,676.3	6,675.2	111.6	2.0	-88.57	-1,651.3	2,184.4	4,083.8	3,972.2	111.61	36.589	
12,795.2	6,703.4	6,675.4	6,674.4	113.4	2.0	-88.51	-1,651.3	2,184.4	4,176.3	4,062.9	113.43	36.819	
12,800.0	6,703.3	6,675.3	6,674.3	113.5	2.0	-88.51	-1,651.3	2,184.4	4,180.9	4,067.4	113.52	36.831	
12,893.7	6,702.7	6,674.5	6,673.4	115.3	2.0	-88.46	-1,651.3	2,184.4	4,272.0	4,156.7	115.30	37.051	
12,900.0	6,702.7	6,674.4	6,673.4	115.4	2.0	-88.46	-1,651.3	2,184.4	4,278.2	4,162.7	115.42	37.066	
12,992.1	6,702.0	6,673.5	6,672.5	117.1	2.0	-88.41	-1,651.3	2,184.5	4,367.8	4,250.6	117.17	37.276	
13,000.0	6,702.0	6,673.5	6,672.4	117.3	2.0	-88.40	-1,651.3	2,184.5	4,375.5	4,258.2	117.32	37.294	
13,090.5	6,701.4	6,672.6	6,671.6	119.0	2.0	-88.35	-1,651.3	2,184.5	4,463.7	4,344.7	119.05	37.495	
13,100.0	6,701.3	6,672.5	6,671.5	119.1	2.0	-88.35	-1,651.3	2,184.5	4,473.0	4,353.8	119.23	37.516	
13,188.9	6,700.7	6,671.7	6,670.7	120.8	2.0	-88.30	-1,651.3	2,184.5	4,559.8	4,438.9	120.92	37.708	
13,200.0	6,700.6	6,671.6	6,670.6	121.0	2.0	-88.30	-1,651.3	2,184.5	4,570.6	4,449.4	121.13	37.731	
13,287.4	6,700.0	6,670.8	6,669.8	122.7	2.0	-88.25	-1,651.3	2,184.5	4,655.9	4,533.1	122.80	37.915	
13,300.0	6,699.9	6,670.7	6,669.7	122.9	2.0	-88.24	-1,651.3	2,184.5	4,668.2	4,545.2	123.04	37.941	
13,385.8	6,699.3	6,669.9	6,668.9	124.5	2.0	-88.20	-1,651.3	2,184.5	4,752.1	4,627.5	124.67	38.116	
13,400.0	6,699.3	6,669.8	6,668.7	124.8	2.0	-88.19	-1,651.3	2,184.5	4,766.0	4,641.1	124.94	38.145	
13,484.2	6,698.7	6,669.0	6,668.0	126.4	2.0	-88.14	-1,651.3	2,184.5	4,848.4	4,721.9	126.55	38.312	
13,500.0	6,698.6	6,668.8	6,667.8	126.7	2.0	-88.14	-1,651.3	2,184.5	4,863.9	4,737.0	126.85	38.343	
13,582.6	6,698.0	6,668.1	6,667.1	128.2	2.0	-88.09	-1,651.3	2,184.5	4,944.8	4,816.4	128.43	38.503	
13,600.0	6,697.9	6,667.9	6,666.9	128.5	2.0	-88.08	-1,651.3	2,184.5	4,961.8	4,833.1	128.76	38.536	
13,681.1	6,697.3	6,667.2	6,666.2	130.1	2.0	-88.04	-1,651.3	2,184.5	5,041.3	4,911.0	130.30	38.689	
13,700.0	6,697.2	6,667.0	6,666.0	130.4	2.0	-88.03	-1,651.3	2,184.6	5,059.9	4,929.2	130.66	38.724	
13,779.5	6,696.7	6,666.3	6,665.3	131.9	2.0	-87.99	-1,651.3	2,184.6	5,137.9	5,005.7	132.18	38.870	
13,800.0	6,696.5	6,666.1	6,665.1	132.3	2.0	-87.98	-1,651.3	2,184.6	5,158.0	5,025.4	132.57	38.907	
13,877.9	6,696.0	6,665.4	6,664.4	133.8	2.0	-87.94	-1,651.3	2,184.6	5,234.5	5,100.4	134.06	39.047	
13,900.0	6,695.8	6,665.2	6,664.2	134.2	2.0	-87.93	-1,651.3	2,184.6	5,256.2	5,121.7	134.48	39.086	
13,976.3	6,695.3	6,664.5	6,663.5	135.6	2.0	-87.89	-1,651.3	2,184.6	5,331.2	5,195.2	135.93	39.219	
14,000.0	6,695.2	6,664.3	6,663.3	136.1	2.0	-87.87	-1,651.3	2,184.6	5,354.4	5,218.0	136.39	39.259	
14,034.1	6,695.0	6,664.1	6,663.0	136.7	2.0	-87.86	-1,651.3	2,184.6	5,387.9	5,250.9	137.04	39.318	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 25-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	174.49	-6,968.6	672.5	7,001.3				
98.4	98.4	45.5	45.5	0.1	0.0	174.49	-6,968.5	672.4	7,000.9	7,000.8	0.09	N/A	
100.0	100.0	46.9	46.9	0.1	0.0	174.49	-6,968.5	672.4	7,000.9	7,000.8	0.09	N/A	
196.8	196.8	135.7	135.7	0.3	0.1	174.49	-6,968.3	672.6	7,000.7	7,000.3	0.39	N/A	
200.0	200.0	138.7	138.7	0.3	0.1	174.49	-6,968.3	672.6	7,000.7	7,000.3	0.40	N/A	
295.3	295.3	231.7	231.7	0.5	0.2	174.49	-6,968.2	672.8	7,000.6	6,999.8	0.76	9,201.388	
300.0	300.0	236.5	236.5	0.5	0.2	174.49	-6,968.2	672.8	7,000.6	6,999.8	0.78	9,030.770	
393.7	393.7	331.7	331.7	0.7	0.3	174.48	-6,968.0	672.8	7,000.5	6,999.4	1.06	6,634.114	
400.0	400.0	338.0	338.0	0.8	0.3	174.48	-6,968.0	672.8	7,000.4	6,999.4	1.07	6,521.755	
492.1	492.1	430.6	430.6	1.0	0.4	174.48	-6,967.9	673.0	7,000.3	6,999.0	1.34	5,229.870	
500.0	500.0	438.7	438.7	1.0	0.4	174.48	-6,967.9	673.0	7,000.3	6,999.0	1.36	5,143.231	
590.5	590.5	530.1	530.1	1.2	0.4	174.48	-6,967.7	673.1	7,000.2	6,998.6	1.62	4,331.460	
600.0	600.0	539.4	539.4	1.2	0.4	174.48	-6,967.7	673.2	7,000.2	6,998.5	1.64	4,263.458	
689.0	689.0	627.0	627.0	1.4	0.5	174.48	-6,967.6	673.2	7,000.0	6,998.2	1.88	3,715.680	
700.0	700.0	638.1	638.1	1.4	0.5	174.48	-6,967.6	673.2	7,000.0	6,998.1	1.91	3,657.781	
787.4	787.4	724.5	724.5	1.6	0.5	174.48	-6,967.5	673.3	6,999.9	6,997.8	2.14	3,263.377	
800.0	800.0	736.6	736.6	1.7	0.5	174.48	-6,967.4	673.3	6,999.9	6,997.7	2.18	3,216.059	
885.8	885.8	819.4	819.4	1.9	0.6	174.48	-6,967.4	673.2	6,999.8	6,997.4	2.39	2,924.861	
900.0	900.0	833.2	833.2	1.9	0.6	174.48	-6,967.4	673.2	6,999.8	6,997.4	2.43	2,880.650	
984.2	984.2	914.1	914.1	2.1	0.6	174.48	-6,967.3	673.1	6,999.8	6,997.1	2.65	2,644.718	
992.0	992.0	921.0	921.0	2.1	0.6	174.48	-6,967.3	673.1	6,999.8	6,997.1	2.67	2,625.562	
1,000.0	1,000.0	928.1	928.1	2.1	0.6	174.48	-6,967.3	673.1	6,999.8	6,997.1	2.69	2,605.936	
1,082.7	1,082.7	1,001.7	1,001.7	2.3	0.6	174.48	-6,967.4	673.0	6,999.8	6,997.0	2.89	2,419.757	
1,100.0	1,100.0	1,018.5	1,018.5	2.3	0.6	174.48	-6,967.4	672.9	6,999.9	6,996.9	2.94	2,382.794	
1,181.1	1,181.1	1,096.9	1,096.9	2.5	0.7	174.49	-6,967.6	672.7	7,000.0	6,996.9	3.15	2,224.055	
1,200.0	1,200.0	1,112.6	1,112.6	2.6	0.7	174.49	-6,967.6	672.6	7,000.1	6,996.9	3.20	2,190.523	
1,279.5	1,279.5	1,176.8	1,176.8	2.7	0.7	174.49	-6,967.9	672.2	7,000.3	6,996.9	3.40	2,060.977	
1,300.0	1,300.0	1,200.0	1,200.0	2.8	0.7	174.49	-6,968.0	672.0	7,000.4	6,997.0	3.45	2,028.779	
1,377.9	1,377.9	1,260.4	1,260.4	3.0	0.7	174.50	-6,968.5	671.3	7,000.9	6,997.2	3.65	1,919.965	
1,400.0	1,400.0	1,279.5	1,279.5	3.0	0.7	174.50	-6,968.6	671.0	7,001.0	6,997.3	3.70	1,890.899	
1,476.4	1,476.4	1,353.7	1,353.7	3.2	0.7	174.51	-6,969.3	669.8	7,001.6	6,997.7	3.90	1,795.645	
1,500.0	1,500.0	1,377.8	1,377.7	3.2	0.7	174.51	-6,969.5	669.4	7,001.8	6,997.8	3.96	1,767.955	
1,574.8	1,574.8	1,459.2	1,459.1	3.4	0.8	174.53	-6,970.2	668.1	7,002.3	6,998.1	4.16	1,685.130	
1,600.0	1,600.0	1,487.3	1,487.3	3.5	0.8	174.53	-6,970.4	667.6	7,002.4	6,998.2	4.22	1,658.873	
1,673.2	1,673.2	1,575.4	1,575.3	3.6	0.8	174.54	-6,971.0	666.2	7,002.8	6,998.4	4.41	1,586.367	
1,700.0	1,700.0	1,608.1	1,608.1	3.7	0.8	174.55	-6,971.2	665.7	7,002.9	6,998.4	4.49	1,561.347	
1,771.6	1,771.6	1,697.1	1,697.0	3.8	0.8	174.56	-6,971.4	664.4	7,003.0	6,998.4	4.67	1,497.983	
1,800.0	1,800.0	1,734.3	1,734.2	3.9	0.8	174.56	-6,971.5	664.0	7,003.0	6,998.3	4.75	1,474.162	
1,870.1	1,870.1	1,820.2	1,820.1	4.1	0.9	174.57	-6,971.4	663.2	7,002.9	6,997.9	4.94	1,418.957	
1,900.0	1,900.0	1,850.1	1,850.0	4.1	0.9	174.57	-6,971.3	663.0	7,002.8	6,997.8	5.01	1,397.238	
1,968.5	1,968.5	1,916.0	1,915.9	4.3	0.9	174.57	-6,971.1	662.8	7,002.6	6,997.4	5.19	1,350.112	
2,000.0	2,000.0	1,943.1	1,943.0	4.4	0.9	174.57	-6,971.1	662.7	7,002.5	6,997.2	5.27	1,329.715	
2,066.9	2,066.9	2,000.0	1,999.9	4.5	0.9	174.57	-6,971.0	662.6	7,002.4	6,997.0	5.43	1,288.428	
2,073.3	2,073.3	2,000.0	1,999.9	4.5	0.9	174.57	-6,971.0	662.6	7,002.4	6,997.0	5.45	1,285.045	
2,100.0	2,100.0	2,020.8	2,020.7	4.6	0.9	174.57	-6,971.0	662.6	7,002.4	6,996.9	5.51	1,270.744	
2,165.3	2,165.3	2,060.7	2,060.6	4.7	0.9	174.57	-6,971.1	662.6	7,002.6	6,997.0	5.66	1,237.240	
2,200.0	2,200.0	2,100.0	2,099.9	4.8	0.9	174.57	-6,971.4	662.6	7,002.9	6,997.1	5.74	1,219.966	
2,250.0	2,250.0	2,115.6	2,115.6	4.9	0.9	174.57	-6,971.5	662.7	7,003.2	6,997.4	5.86	1,196.005	
2,263.8	2,263.8	2,126.2	2,126.1	4.9	0.9	102.66	-6,971.6	662.7	7,003.4	6,997.5	5.86	1,195.804	
2,300.0	2,300.0	2,154.0	2,153.9	5.0	0.9	102.65	-6,971.9	662.8	7,003.8	6,997.9	5.94	1,179.023	
2,362.2	2,362.2	2,200.0	2,199.9	5.2	1.0	102.64	-6,972.4	662.9	7,004.9	6,998.9	6.08	1,152.228	
2,400.0	2,399.9	2,233.2	2,233.1	5.2	1.0	102.63	-6,972.8	663.0	7,005.8	6,999.6	6.17	1,136.365	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PAULINE #5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 25-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,460.6	2,460.4	2,283.3	2,283.2	5.4	1.0	102.63	-6,973.6	663.1	7,007.5	7,001.2	6.31	1,111.358	
2,500.0	2,499.7	2,320.7	2,320.6	5.4	1.0	102.62	-6,974.1	663.1	7,008.8	7,002.4	6.40	1,095.541	
2,559.0	2,558.5	2,384.4	2,384.3	5.6	1.0	102.63	-6,975.1	663.1	7,011.0	7,004.4	6.54	1,071.501	
2,600.0	2,599.1	2,429.1	2,428.9	5.7	1.0	102.64	-6,975.8	663.0	7,012.6	7,006.0	6.64	1,055.430	
2,657.5	2,656.1	2,492.0	2,491.8	5.8	1.0	102.66	-6,976.6	662.9	7,015.1	7,008.3	6.79	1,032.469	
2,700.0	2,698.2	2,539.3	2,539.1	5.9	1.0	102.68	-6,977.3	662.8	7,017.0	7,010.1	6.91	1,016.081	
2,755.9	2,753.3	2,601.6	2,601.5	6.1	1.0	102.71	-6,978.0	662.7	7,019.8	7,012.7	7.06	993.739	
2,800.0	2,796.6	2,655.1	2,655.0	6.2	1.1	102.75	-6,978.6	662.6	7,022.1	7,014.9	7.19	976.646	
2,854.3	2,849.9	2,716.7	2,716.6	6.3	1.1	102.79	-6,979.2	662.5	7,025.0	7,017.7	7.36	954.603	
2,900.0	2,894.4	2,761.2	2,761.0	6.5	1.1	102.81	-6,979.6	662.4	7,027.7	7,020.2	7.50	937.004	
2,952.7	2,945.7	2,812.6	2,812.5	6.6	1.1	102.84	-6,980.1	662.5	7,031.0	7,023.3	7.68	915.279	
3,000.0	2,991.5	2,859.5	2,859.3	6.8	1.1	102.88	-6,980.5	662.5	7,034.2	7,026.3	7.85	896.571	
3,051.2	3,040.8	2,909.7	2,909.6	7.0	1.1	102.91	-6,980.9	662.5	7,037.8	7,029.7	8.05	874.776	
3,100.0	3,087.6	2,956.5	2,956.4	7.1	1.1	102.95	-6,981.3	662.6	7,041.4	7,033.2	8.24	854.970	
3,149.6	3,134.9	3,003.6	3,003.5	7.4	1.1	102.98	-6,981.7	662.6	7,045.4	7,036.9	8.46	833.271	
3,200.0	3,182.7	3,048.6	3,048.5	7.6	1.1	103.01	-6,982.1	662.7	7,049.6	7,040.9	8.68	812.369	
3,248.0	3,228.0	3,091.2	3,091.0	7.8	1.2	103.04	-6,982.5	662.7	7,053.9	7,045.0	8.92	790.936	
3,300.0	3,276.6	3,139.4	3,139.3	8.1	1.2	103.08	-6,982.9	662.8	7,058.8	7,049.6	9.18	768.953	
3,346.4	3,319.9	3,182.8	3,182.7	8.3	1.2	103.12	-6,983.3	662.9	7,063.4	7,053.9	9.44	747.929	
3,400.0	3,369.4	3,233.2	3,233.0	8.6	1.2	103.16	-6,983.8	663.1	7,068.9	7,059.2	9.75	725.075	
3,444.9	3,410.5	3,275.4	3,275.2	8.9	1.2	103.20	-6,984.2	663.2	7,073.8	7,063.7	10.04	704.754	
3,500.0	3,460.7	3,323.8	3,323.7	9.2	1.2	103.23	-6,984.6	663.4	7,080.0	7,069.6	10.39	681.368	
3,543.3	3,499.8	3,359.4	3,359.3	9.5	1.2	103.25	-6,984.9	663.5	7,085.2	7,074.5	10.70	662.086	
3,600.0	3,550.6	3,406.4	3,406.2	9.9	1.2	103.28	-6,985.4	663.7	7,092.2	7,081.1	11.11	638.457	
3,641.7	3,587.6	3,444.5	3,444.3	10.3	1.2	103.31	-6,985.8	663.8	7,097.6	7,086.2	11.44	620.206	
3,709.9	3,647.5	3,500.0	3,499.8	10.8	1.3	103.34	-6,986.3	664.0	7,106.9	7,094.9	11.99	592.662	
3,740.1	3,673.9	3,528.8	3,528.6	11.1	1.3	103.45	-6,986.6	664.1	7,111.1	7,098.9	12.25	580.393	
3,800.0	3,726.2	3,575.4	3,575.3	11.6	1.3	103.63	-6,987.1	664.3	7,119.6	7,106.9	12.77	557.716	
3,838.6	3,759.9	3,606.0	3,605.9	11.9	1.3	103.74	-6,987.5	664.4	7,125.2	7,112.1	13.11	543.601	
3,900.0	3,813.5	3,658.5	3,658.3	12.5	1.3	103.94	-6,988.1	664.6	7,134.1	7,120.5	13.65	522.563	
3,937.0	3,845.8	3,690.1	3,689.9	12.8	1.3	104.06	-6,988.4	664.7	7,139.6	7,125.6	13.99	510.372	
4,000.0	3,900.8	3,742.1	3,741.9	13.4	1.3	104.26	-6,989.1	664.8	7,149.0	7,134.4	14.56	490.944	
4,035.4	3,931.7	3,771.1	3,770.9	13.7	1.3	104.37	-6,989.4	664.8	7,154.3	7,139.4	14.89	480.468	
4,100.0	3,988.1	3,827.2	3,827.0	14.3	1.3	104.59	-6,990.1	664.9	7,164.2	7,148.7	15.49	462.523	
4,133.8	4,017.6	3,858.7	3,858.5	14.7	1.3	104.71	-6,990.5	664.9	7,169.4	7,153.6	15.81	453.508	
4,200.0	4,075.4	3,918.8	3,918.6	15.3	1.4	104.94	-6,991.3	664.9	7,179.6	7,163.2	16.43	436.936	
4,232.3	4,103.5	3,946.8	3,946.5	15.6	1.4	105.04	-6,991.6	664.8	7,184.7	7,167.9	16.74	429.211	
4,300.0	4,162.6	4,009.1	4,008.9	16.2	1.4	105.28	-6,992.3	664.5	7,195.4	7,178.0	17.38	413.909	
4,330.7	4,189.4	4,054.5	4,054.3	16.5	1.4	105.46	-6,992.8	664.3	7,200.2	7,182.5	17.68	407.249	
4,400.0	4,249.9	4,136.4	4,136.2	17.2	1.4	105.77	-6,993.4	663.6	7,211.1	7,192.7	18.34	393.093	
4,429.1	4,275.4	4,163.9	4,163.7	17.5	1.4	105.88	-6,993.5	663.4	7,215.6	7,197.0	18.62	387.419	
4,500.0	4,337.2	4,231.6	4,231.3	18.2	1.4	106.14	-6,993.9	662.8	7,226.9	7,207.6	19.31	374.319	
4,527.5	4,361.3	4,258.2	4,258.0	18.5	1.5	106.24	-6,994.0	662.6	7,231.2	7,211.7	19.57	369.440	
4,600.0	4,424.5	4,321.6	4,321.4	19.2	1.5	106.48	-6,994.3	662.1	7,242.9	7,222.6	20.27	357.244	
4,626.0	4,447.2	4,340.7	4,340.5	19.5	1.5	106.55	-6,994.4	662.0	7,247.1	7,226.5	20.53	353.051	
4,700.0	4,511.8	4,400.0	4,399.8	20.2	1.5	106.78	-6,994.7	661.7	7,259.2	7,238.0	21.25	341.665	
4,724.4	4,533.1	4,419.9	4,419.7	20.5	1.5	106.85	-6,994.8	661.6	7,263.3	7,241.8	21.48	338.068	
4,796.7	4,596.3	4,499.8	4,499.6	21.2	1.5	107.15	-6,995.2	661.1	7,275.3	7,253.1	22.19	327.862	
4,800.0	4,599.1	4,502.9	4,502.7	21.2	1.5	107.17	-6,995.2	661.1	7,275.9	7,253.7	22.22	327.475	
4,822.8	4,619.1	4,524.5	4,524.3	21.4	1.5	107.33	-6,995.2	660.9	7,279.7	7,257.3	22.39	325.166	
4,900.0	4,687.3	4,598.2	4,598.0	22.0	1.5	107.84	-6,995.4	660.2	7,292.1	7,269.1	22.96	317.627	
4,921.2	4,706.2	4,619.3	4,619.1	22.2	1.5	107.97	-6,995.5	660.1	7,295.4	7,272.3	23.11	315.741	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 25-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	4,777.1	4,698.6	4,698.4	22.8	1.6	108.47	-6,995.6	659.4	7,307.4	7,283.7	23.65	308.969	
5,019.7	4,794.9	4,715.5	4,715.3	22.9	1.6	108.58	-6,995.6	659.3	7,310.3	7,286.5	23.78	307.438	
5,100.0	4,868.3	4,784.2	4,783.9	23.5	1.6	109.01	-6,995.7	658.8	7,321.8	7,297.5	24.30	301.361	
5,118.1	4,885.0	4,800.0	4,799.8	23.6	1.6	109.11	-6,995.7	658.7	7,324.3	7,299.9	24.40	300.133	
5,200.0	4,961.0	4,890.9	4,890.7	24.2	1.6	109.57	-6,995.8	658.0	7,335.2	7,310.3	24.89	294.729	
5,216.5	4,976.4	4,908.1	4,907.9	24.3	1.6	109.66	-6,995.8	657.9	7,337.3	7,312.4	24.98	293.760	
5,300.0	5,054.8	4,988.8	4,988.5	24.8	1.6	110.06	-6,995.7	657.2	7,347.5	7,322.1	25.43	288.964	
5,314.9	5,069.0	5,000.0	4,999.8	24.8	1.6	110.12	-6,995.7	657.1	7,349.3	7,323.8	25.50	288.203	
5,400.0	5,149.9	5,078.8	5,078.5	25.3	1.7	110.48	-6,995.6	656.5	7,358.8	7,332.8	25.92	283.948	
5,413.4	5,162.7	5,090.8	5,090.5	25.4	1.7	110.54	-6,995.6	656.4	7,360.2	7,334.2	25.97	283.362	
5,500.0	5,245.9	5,170.6	5,170.3	25.8	1.7	110.87	-6,995.6	655.7	7,369.0	7,342.6	26.35	279.607	
5,511.8	5,257.3	5,181.5	5,181.3	25.9	1.7	110.91	-6,995.6	655.6	7,370.1	7,343.7	26.40	279.164	
5,600.0	5,342.9	5,257.2	5,256.9	26.3	1.7	111.20	-6,995.7	655.0	7,378.1	7,351.3	26.75	275.865	
5,610.2	5,352.9	5,265.8	5,265.5	26.3	1.7	111.23	-6,995.7	654.9	7,379.0	7,352.2	26.78	275.538	
5,700.0	5,440.7	5,356.0	5,355.8	26.7	1.7	111.51	-6,995.8	654.2	7,386.1	7,359.0	27.09	272.671	
5,708.6	5,449.1	5,365.9	5,365.6	26.7	1.7	111.53	-6,995.9	654.1	7,386.8	7,359.6	27.11	272.438	
5,800.0	5,539.1	5,460.3	5,460.0	27.0	1.7	111.77	-6,995.9	653.3	7,392.8	7,365.4	27.38	269.970	
5,807.1	5,546.1	5,467.2	5,467.0	27.0	1.8	111.79	-6,995.9	653.3	7,393.3	7,365.9	27.40	269.812	
5,900.0	5,638.1	5,557.1	5,556.9	27.3	1.8	111.98	-6,996.0	652.6	7,398.3	7,370.6	27.64	267.711	
5,905.5	5,643.5	5,562.4	5,562.1	27.3	1.8	111.99	-6,996.0	652.5	7,398.5	7,370.9	27.65	267.611	
6,000.0	5,737.5	5,665.0	5,664.7	27.5	1.8	112.14	-6,996.0	651.8	7,402.4	7,374.6	27.84	265.850	
6,003.9	5,741.4	5,669.6	5,669.4	27.5	1.8	112.15	-6,996.0	651.8	7,402.5	7,374.7	27.85	265.792	
6,100.0	5,837.2	5,784.7	5,784.4	27.7	1.8	112.26	-6,995.9	651.2	7,405.0	7,377.0	28.01	264.373	
6,102.3	5,839.6	5,787.5	5,787.3	27.7	1.8	112.26	-6,995.9	651.2	7,405.1	7,377.1	28.01	264.347	
6,200.0	5,937.2	5,892.1	5,891.8	27.9	1.8	112.31	-6,995.5	650.7	7,406.1	7,378.0	28.13	263.241	
6,200.8	5,937.9	5,892.9	5,892.7	27.9	1.8	112.31	-6,995.5	650.7	7,406.1	7,378.0	28.14	263.234	
6,256.6	5,993.8	5,952.3	5,952.0	27.9	1.8	-175.78	-6,995.3	650.5	7,406.1	7,378.0	28.19	262.747	
6,286.6	6,023.8	5,984.1	5,983.9	27.9	1.9	-175.78	-6,995.1	650.4	7,406.0	7,377.8	28.22	262.460	
6,299.2	6,036.4	5,997.5	5,997.2	27.9	1.9	4.23	-6,995.1	650.4	7,405.9	7,377.6	28.21	262.489	
6,300.0	6,037.2	5,998.3	5,998.1	27.9	1.9	4.23	-6,995.1	650.4	7,405.8	7,377.6	28.21	262.491	
6,350.0	6,087.1	6,049.5	6,049.3	28.0	1.9	4.25	-6,994.8	650.3	7,403.0	7,374.8	28.18	262.733	
6,397.6	6,134.3	6,097.9	6,097.7	28.0	1.9	4.29	-6,994.6	650.2	7,397.0	7,368.9	28.11	263.118	
6,400.0	6,136.7	6,100.0	6,099.7	28.0	1.9	4.29	-6,994.6	650.2	7,396.6	7,368.5	28.11	263.144	
6,450.0	6,185.7	6,137.3	6,137.0	28.0	1.9	4.35	-6,994.5	650.2	7,386.8	7,358.8	27.99	263.900	
6,496.0	6,230.2	6,171.0	6,170.7	28.0	1.9	4.43	-6,994.4	650.2	7,374.9	7,347.1	27.82	265.048	
6,500.0	6,234.0	6,173.8	6,173.5	28.0	1.9	4.44	-6,994.4	650.2	7,373.8	7,346.0	27.81	265.171	
6,550.0	6,281.3	6,212.3	6,212.0	28.0	1.9	4.56	-6,994.3	650.2	7,357.4	7,329.9	27.55	267.096	
6,594.5	6,322.2	6,252.1	6,251.8	27.9	1.9	4.69	-6,994.3	650.2	7,340.2	7,313.0	27.24	269.422	
6,600.0	6,327.3	6,256.9	6,256.6	27.9	1.9	4.71	-6,994.3	650.2	7,337.9	7,310.7	27.20	269.759	
6,650.0	6,371.8	6,300.2	6,299.9	27.9	1.9	4.89	-6,994.3	650.1	7,315.2	7,288.5	26.77	273.292	
6,692.9	6,408.6	6,341.4	6,341.1	27.9	1.9	5.09	-6,994.3	650.1	7,293.3	7,267.0	26.33	277.039	
6,700.0	6,414.6	6,348.1	6,347.8	27.8	1.9	5.12	-6,994.3	650.1	7,289.5	7,263.2	26.25	277.734	
6,750.0	6,455.5	6,393.8	6,393.5	27.8	1.9	5.40	-6,994.3	650.1	7,260.8	7,235.2	25.64	283.216	
6,791.3	6,487.7	6,427.9	6,427.7	27.7	1.9	5.68	-6,994.2	650.1	7,235.0	7,209.9	25.07	288.609	
6,800.0	6,494.3	6,434.8	6,434.6	27.7	1.9	5.74	-6,994.2	650.1	7,229.3	7,204.4	24.94	289.854	
6,850.0	6,530.8	6,473.0	6,472.8	27.7	1.9	6.16	-6,994.2	650.2	7,195.2	7,171.1	24.17	297.747	
6,889.7	6,558.1	6,500.0	6,499.7	27.6	1.9	6.56	-6,994.1	650.2	7,166.4	7,142.9	23.50	305.001	
6,900.0	6,564.9	6,507.7	6,507.4	27.6	1.9	6.67	-6,994.1	650.3	7,158.7	7,135.4	23.32	307.018	
6,950.0	6,596.3	6,537.0	6,536.7	27.6	1.9	7.31	-6,994.1	650.3	7,119.8	7,097.4	22.40	317.802	
6,988.2	6,618.4	6,557.6	6,557.3	27.5	1.9	7.90	-6,994.0	650.4	7,088.8	7,067.1	21.67	327.067	
7,000.0	6,624.9	6,563.7	6,563.4	27.5	1.9	8.11	-6,994.0	650.4	7,078.9	7,057.5	21.44	330.161	
7,050.0	6,650.6	6,587.6	6,587.4	27.5	1.9	9.15	-6,994.0	650.4	7,036.2	7,015.7	20.45	344.148	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PAULINE #5 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 25-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,086.6	6,667.5	6,603.9	6,603.6	27.5	1.9	10.13	-6,994.0	650.4	7,003.8	6,984.1	19.71	355.325		
7,100.0	6,673.3	6,610.0	6,609.7	27.5	1.9	10.54	-6,994.0	650.5	6,991.7	6,972.3	19.44	359.702		
7,150.0	6,692.7	6,630.7	6,630.4	27.5	1.9	12.48	-6,994.0	650.5	6,945.8	6,927.3	18.44	376.638		
7,185.0	6,704.4	6,643.1	6,642.8	27.5	1.9	14.33	-6,993.9	650.5	6,912.9	6,895.1	17.74	389.735		
7,200.0	6,709.0	6,647.9	6,647.6	27.5	1.9	15.30	-6,993.9	650.5	6,898.6	6,881.1	17.49	394.520		
7,250.0	6,721.8	6,661.5	6,661.2	27.5	1.9	19.76	-6,993.9	650.6	6,850.5	6,833.8	16.63	411.974		
7,283.4	6,728.6	6,668.6	6,668.3	27.5	1.9	24.45	-6,993.9	650.6	6,817.8	6,801.6	16.19	421.209		
7,300.0	6,731.3	6,671.5	6,671.2	27.6	1.9	27.63	-6,993.9	650.6	6,801.5	6,785.5	16.05	423.655		
7,350.0	6,737.3	6,677.8	6,677.5	27.7	1.9	43.87	-6,993.9	650.6	6,752.0	6,735.5	16.52	408.780		
7,381.9	6,739.4	6,679.9	6,679.7	27.7	1.9	63.91	-6,993.9	650.6	6,720.3	6,702.4	17.91	375.319		
7,400.0	6,739.9	6,680.5	6,680.2	27.8	1.9	79.89	-6,993.9	650.6	6,702.3	6,683.4	18.83	355.877		
7,416.5	6,740.0	6,680.5	6,680.2	27.8	1.9	95.93	-6,993.9	650.6	6,685.8	6,665.6	20.18	331.262		
7,480.3	6,739.5	6,680.0	6,679.7	28.0	1.9	95.87	-6,993.9	650.6	6,622.2	6,601.5	20.71	319.695		
7,500.0	6,739.4	6,679.8	6,679.5	28.1	1.9	95.85	-6,993.9	650.6	6,602.6	6,581.7	20.88	316.242		
7,578.7	6,738.9	6,679.1	6,678.8	28.5	1.9	95.78	-6,993.9	650.6	6,524.2	6,502.5	21.64	301.462		
7,600.0	6,738.7	6,678.9	6,678.6	28.6	1.9	95.76	-6,993.9	650.6	6,503.0	6,481.1	21.85	297.645		
7,677.1	6,738.2	6,678.2	6,677.9	29.1	1.9	95.69	-6,993.9	650.6	6,426.1	6,403.4	22.70	283.139		
7,700.0	6,738.1	6,678.0	6,677.7	29.2	1.9	95.67	-6,993.9	650.6	6,403.3	6,380.4	22.95	279.047		
7,775.6	6,737.5	6,677.3	6,677.1	29.7	1.9	95.60	-6,993.9	650.6	6,328.0	6,304.2	23.86	265.205		
7,800.0	6,737.4	6,677.1	6,676.9	29.9	1.9	95.57	-6,993.9	650.6	6,303.7	6,279.5	24.16	260.954		
7,874.0	6,736.9	6,676.5	6,676.2	30.6	1.9	95.51	-6,993.9	650.6	6,230.0	6,204.9	25.12	248.008		
7,900.0	6,736.7	6,676.3	6,676.0	30.8	1.9	95.48	-6,993.9	650.6	6,204.1	6,178.6	25.46	243.691		
7,972.4	6,736.2	6,675.6	6,675.3	31.5	1.9	95.42	-6,993.9	650.6	6,131.9	6,105.5	26.46	231.752		
8,000.0	6,736.0	6,675.4	6,675.1	31.8	1.9	95.39	-6,993.9	650.6	6,104.5	6,077.6	26.84	227.439		
8,070.8	6,735.5	6,674.8	6,674.5	32.5	1.9	95.33	-6,993.9	650.6	6,033.9	6,006.1	27.87	216.537		
8,100.0	6,735.3	6,674.5	6,674.2	32.8	1.9	95.30	-6,993.9	650.6	6,004.9	5,976.6	28.29	212.279		
8,169.3	6,734.9	6,673.9	6,673.6	33.6	1.9	95.24	-6,993.9	650.6	5,935.9	5,906.6	29.33	202.389		
8,200.0	6,734.6	6,673.6	6,673.4	34.0	1.9	95.21	-6,993.9	650.6	5,905.3	5,875.5	29.79	198.222		
8,267.7	6,734.2	6,673.0	6,672.8	34.8	1.9	95.15	-6,993.9	650.6	5,837.9	5,807.1	30.84	189.287		
8,300.0	6,734.0	6,672.8	6,672.5	35.2	1.9	95.12	-6,993.9	650.6	5,805.8	5,774.4	31.34	185.234		
8,366.1	6,733.5	6,672.2	6,671.9	36.1	1.9	95.06	-6,993.9	650.6	5,739.9	5,707.5	32.40	177.185		
8,400.0	6,733.3	6,671.9	6,671.6	36.5	1.9	95.03	-6,993.9	650.6	5,706.2	5,673.3	32.93	173.259		
8,464.5	6,732.8	6,671.3	6,671.1	37.4	1.9	94.97	-6,993.9	650.6	5,642.0	5,608.0	33.98	166.017		
8,500.0	6,732.6	6,671.0	6,670.8	37.9	1.9	94.94	-6,993.9	650.6	5,606.7	5,572.1	34.56	162.226		
8,563.0	6,732.2	6,670.5	6,670.2	38.8	1.9	94.88	-6,993.9	650.6	5,544.0	5,508.4	35.60	155.714		
8,600.0	6,731.9	6,670.2	6,669.9	39.3	1.9	94.85	-6,993.9	650.6	5,507.2	5,470.9	36.22	152.059		
8,661.4	6,731.5	6,669.6	6,669.4	40.2	1.9	94.79	-6,993.9	650.6	5,446.1	5,408.8	37.25	146.204		
8,700.0	6,731.2	6,669.3	6,669.0	40.8	1.9	94.76	-6,993.9	650.6	5,407.7	5,369.8	37.90	142.686		
8,759.8	6,730.8	6,668.8	6,668.5	41.7	1.9	94.70	-6,993.9	650.6	5,348.2	5,309.2	38.92	137.419		
8,800.0	6,730.6	6,668.4	6,668.2	42.3	1.9	94.67	-6,993.9	650.6	5,308.2	5,268.6	39.60	134.034		
8,858.2	6,730.2	6,667.9	6,667.7	43.2	1.9	94.62	-6,993.9	650.6	5,250.3	5,209.6	40.61	129.293		
8,900.0	6,729.9	6,667.6	6,667.3	43.8	1.9	94.58	-6,993.9	650.6	5,208.7	5,167.4	41.33	126.037		
8,956.7	6,729.5	6,667.1	6,666.8	44.7	1.9	94.53	-6,993.9	650.6	5,152.4	5,110.1	42.31	121.767		
9,000.0	6,729.2	6,666.7	6,666.4	45.4	1.9	94.49	-6,993.9	650.6	5,109.3	5,066.2	43.07	118.634		
9,055.1	6,728.8	6,666.2	6,666.0	46.3	1.9	94.44	-6,993.9	650.6	5,054.5	5,010.5	44.04	114.784		
9,100.0	6,728.5	6,665.9	6,665.6	47.0	1.9	94.40	-6,993.9	650.6	5,009.9	4,965.1	44.82	111.769		
9,153.5	6,728.2	6,665.4	6,665.1	47.9	1.9	94.35	-6,993.9	650.6	4,956.7	4,910.9	45.77	108.295		
9,200.0	6,727.8	6,665.0	6,664.7	48.6	1.9	94.31	-6,993.9	650.6	4,910.5	4,863.9	46.59	105.392		
9,251.9	6,727.5	6,664.6	6,664.3	49.5	1.9	94.26	-6,993.9	650.6	4,858.9	4,811.4	47.52	102.254		
9,300.0	6,727.2	6,664.1	6,663.9	50.3	1.9	94.22	-6,993.9	650.6	4,811.1	4,762.8	48.37	99.458		
9,350.4	6,726.8	6,663.7	6,663.4	51.1	1.9	94.18	-6,993.9	650.6	4,761.1	4,711.8	49.28	96.621		
9,400.0	6,726.5	6,663.3	6,663.0	51.9	1.9	94.13	-6,993.9	650.6	4,711.8	4,661.6	50.16	93.926		

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 EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PAULINE #5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 25-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	6,726.1	6,662.9	6,662.6	52.7	1.9	94.09	-6,993.9	650.6	4,663.3	4,612.3	51.04	91.360	
9,500.0	6,725.8	6,662.4	6,662.2	53.6	1.9	94.04	-6,993.9	650.6	4,612.5	4,560.5	51.97	88.760	
9,547.2	6,725.5	6,662.0	6,661.8	54.4	1.9	94.00	-6,993.9	650.6	4,565.6	4,512.8	52.82	86.437	
9,600.0	6,725.1	6,661.6	6,661.3	55.3	1.9	93.95	-6,993.9	650.6	4,513.2	4,459.4	53.77	83.928	
9,645.6	6,724.8	6,661.2	6,660.9	56.1	1.9	93.91	-6,993.9	650.6	4,467.9	4,413.3	54.60	81.823	
9,700.0	6,724.4	6,660.7	6,660.5	57.0	1.9	93.86	-6,993.9	650.6	4,414.0	4,358.4	55.59	79.399	
9,744.1	6,724.1	6,660.4	6,660.1	57.8	1.9	93.83	-6,993.9	650.6	4,370.2	4,313.8	56.40	77.492	
9,800.0	6,723.8	6,659.9	6,659.6	58.7	1.9	93.78	-6,993.9	650.6	4,314.7	4,257.3	57.42	75.149	
9,842.5	6,723.5	6,659.5	6,659.3	59.5	1.9	93.74	-6,993.9	650.6	4,272.6	4,214.4	58.19	73.421	
9,900.0	6,723.1	6,659.1	6,658.8	60.5	1.9	93.69	-6,993.9	650.6	4,215.6	4,156.3	59.25	71.154	
9,940.9	6,722.8	6,658.7	6,658.4	61.2	1.9	93.65	-6,993.9	650.6	4,175.0	4,115.0	60.00	69.587	
10,000.0	6,722.4	6,658.2	6,657.9	62.2	1.9	93.60	-6,993.9	650.6	4,116.4	4,055.3	61.08	67.393	
10,039.3	6,722.1	6,657.9	6,657.6	62.9	1.9	93.56	-6,993.9	650.6	4,077.4	4,015.6	61.81	65.972	
10,100.0	6,721.7	6,657.4	6,657.1	64.0	1.9	93.51	-6,993.9	650.6	4,017.3	3,954.4	62.92	63.846	
10,137.8	6,721.5	6,657.0	6,656.8	64.7	1.9	93.48	-6,993.9	650.6	3,979.9	3,916.3	63.62	62.558	
10,200.0	6,721.0	6,656.5	6,656.2	65.8	1.9	93.42	-6,993.9	650.6	3,918.3	3,853.5	64.77	60.497	
10,236.2	6,720.8	6,656.2	6,655.9	66.4	1.9	93.39	-6,993.9	650.6	3,882.4	3,817.0	65.44	59.330	
10,300.0	6,720.4	6,655.7	6,655.4	67.5	1.9	93.34	-6,993.9	650.6	3,819.3	3,752.7	66.62	57.331	
10,334.6	6,720.1	6,655.4	6,655.1	68.2	1.9	93.30	-6,993.9	650.6	3,785.0	3,717.8	67.26	56.275	
10,400.0	6,719.7	6,654.8	6,654.6	69.3	1.9	93.25	-6,993.9	650.6	3,720.3	3,651.9	68.47	54.334	
10,433.0	6,719.4	6,654.6	6,654.3	69.9	1.9	93.22	-6,993.9	650.6	3,687.7	3,618.6	69.09	53.378	
10,500.0	6,719.0	6,654.0	6,653.7	71.1	1.9	93.16	-6,993.9	650.6	3,621.5	3,551.1	70.33	51.493	
10,531.5	6,718.8	6,653.7	6,653.5	71.7	1.9	93.13	-6,993.9	650.6	3,590.4	3,519.4	70.92	50.628	
10,600.0	6,718.3	6,653.2	6,652.9	72.9	1.9	93.07	-6,993.9	650.5	3,522.6	3,450.4	72.19	48.796	
10,629.9	6,718.1	6,652.9	6,652.7	73.4	1.9	93.05	-6,993.9	650.5	3,493.1	3,420.4	72.75	48.016	
10,700.0	6,717.6	6,652.3	6,652.1	74.7	1.9	92.99	-6,993.9	650.5	3,423.9	3,349.8	74.06	46.234	
10,728.3	6,717.4	6,652.1	6,651.8	75.2	1.9	92.96	-6,993.9	650.5	3,395.9	3,321.3	74.58	45.531	
10,800.0	6,717.0	6,651.5	6,651.2	76.5	1.9	92.90	-6,993.9	650.5	3,325.2	3,249.3	75.92	43.797	
10,826.7	6,716.8	6,651.3	6,651.0	77.0	1.9	92.87	-6,993.9	650.5	3,298.8	3,222.4	76.42	43.165	
10,900.0	6,716.3	6,650.7	6,650.4	78.3	1.9	92.81	-6,993.9	650.5	3,226.6	3,148.8	77.79	41.477	
10,925.2	6,716.1	6,650.5	6,650.2	78.8	1.9	92.79	-6,993.9	650.5	3,201.8	3,123.5	78.26	40.910	
11,000.0	6,715.6	6,649.9	6,649.6	80.2	1.9	92.72	-6,993.9	650.5	3,128.1	3,048.4	79.66	39.266	
11,023.6	6,715.4	6,649.7	6,649.4	80.6	1.9	92.70	-6,993.9	650.5	3,104.9	3,024.7	80.11	38.759	
11,100.0	6,714.9	6,649.0	6,648.7	82.0	1.9	92.64	-6,993.9	650.5	3,029.7	2,948.1	81.54	37.156	
11,122.0	6,714.8	6,648.8	6,648.6	82.4	1.9	92.62	-6,993.9	650.5	3,008.0	2,926.1	81.95	36.704	
11,200.0	6,714.2	6,648.2	6,647.9	83.8	1.9	92.55	-6,993.9	650.5	2,931.4	2,848.0	83.42	35.141	
11,220.4	6,714.1	6,648.0	6,647.8	84.2	1.9	92.53	-6,993.9	650.5	2,911.3	2,827.5	83.80	34.741	
11,300.0	6,713.5	6,647.4	6,647.1	85.7	1.9	92.46	-6,993.9	650.5	2,833.2	2,747.9	85.30	33.216	
11,318.9	6,713.4	6,647.2	6,646.9	86.0	1.9	92.45	-6,993.9	650.5	2,814.7	2,729.0	85.65	32.862	
11,400.0	6,712.9	6,646.6	6,646.3	87.5	1.9	92.38	-6,993.9	650.5	2,735.1	2,647.9	87.18	31.375	
11,417.3	6,712.7	6,646.4	6,646.1	87.8	1.9	92.36	-6,993.9	650.5	2,718.2	2,630.7	87.50	31.064	
11,500.0	6,712.2	6,645.7	6,645.5	89.3	1.9	92.29	-6,993.9	650.5	2,637.2	2,548.2	89.06	29.612	
11,515.7	6,712.1	6,645.6	6,645.3	89.6	1.9	92.28	-6,993.9	650.5	2,621.8	2,532.5	89.36	29.342	
11,600.0	6,711.5	6,644.9	6,644.6	91.2	1.9	92.21	-6,993.9	650.5	2,539.5	2,448.5	90.94	27.924	
11,614.1	6,711.4	6,644.8	6,644.5	91.4	1.9	92.19	-6,993.9	650.5	2,525.6	2,434.4	91.21	27.690	
11,700.0	6,710.8	6,644.1	6,643.8	93.0	1.9	92.12	-6,993.9	650.5	2,441.9	2,349.1	92.83	26.305	
11,712.6	6,710.7	6,644.0	6,643.7	93.3	1.9	92.11	-6,993.9	650.5	2,429.6	2,336.6	93.07	26.107	
11,800.0	6,710.1	6,643.3	6,643.0	94.9	1.9	92.03	-6,993.9	650.5	2,344.5	2,249.8	94.72	24.753	
11,811.0	6,710.1	6,643.2	6,642.9	95.1	1.9	92.03	-6,993.9	650.5	2,333.8	2,238.9	94.92	24.586	
11,900.0	6,709.5	6,642.5	6,642.2	96.7	1.9	91.95	-6,993.9	650.5	2,247.4	2,150.8	96.60	23.264	
11,909.4	6,709.4	6,642.4	6,642.1	96.9	1.9	91.94	-6,993.9	650.5	2,238.3	2,141.5	96.78	23.127	
12,000.0	6,708.8	6,641.6	6,641.4	98.6	1.9	91.86	-6,993.9	650.5	2,150.5	2,052.0	98.49	21.834	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PAULINE #5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 25-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,708.7	6,641.6	6,641.3	98.7	1.9	91.86	-6,993.9	650.5	2,142.9	2,044.3	98.64	21.724	
12,100.0	6,708.1	6,640.8	6,640.6	100.4	1.9	91.78	-6,993.9	650.5	2,054.0	1,953.6	100.39	20.461	
12,106.3	6,708.1	6,640.8	6,640.5	100.6	1.9	91.77	-6,993.9	650.5	2,047.9	1,947.4	100.50	20.376	
12,200.0	6,707.4	6,640.0	6,639.7	102.3	1.9	91.69	-6,993.9	650.5	1,957.7	1,855.5	102.28	19.141	
12,204.7	6,707.4	6,640.0	6,639.7	102.4	1.9	91.69	-6,993.9	650.5	1,953.2	1,850.9	102.37	19.081	
12,300.0	6,706.7	6,639.2	6,638.9	104.2	1.9	91.61	-6,994.0	650.5	1,861.9	1,757.7	104.17	17.874	
12,303.1	6,706.7	6,639.2	6,638.9	104.2	1.9	91.61	-6,994.0	650.5	1,858.9	1,754.7	104.23	17.835	
12,400.0	6,706.1	6,638.4	6,638.1	106.0	1.9	91.52	-6,994.0	650.5	1,766.5	1,660.5	106.06	16.655	
12,401.5	6,706.0	6,638.4	6,638.1	106.1	1.9	91.52	-6,994.0	650.5	1,765.1	1,659.0	106.09	16.637	
12,500.0	6,705.4	6,637.6	6,637.3	107.9	1.9	91.44	-6,994.0	650.5	1,671.7	1,563.8	107.96	15.485	
12,598.4	6,704.7	6,636.8	6,636.5	109.7	1.9	91.36	-6,994.0	650.5	1,579.0	1,469.2	109.83	14.378	
12,600.0	6,704.7	6,636.8	6,636.5	109.8	1.9	91.35	-6,994.0	650.5	1,577.5	1,467.7	109.86	14.360	
12,696.8	6,704.0	6,636.0	6,635.7	111.6	1.9	91.27	-6,994.0	650.5	1,487.1	1,375.4	111.69	13.314	
12,700.0	6,704.0	6,636.0	6,635.7	111.6	1.9	91.27	-6,994.0	650.5	1,484.1	1,372.4	111.75	13.280	
12,795.2	6,703.4	6,635.2	6,634.9	113.4	1.9	91.19	-6,994.0	650.5	1,396.0	1,282.4	113.56	12.293	
12,800.0	6,703.3	6,635.2	6,634.9	113.5	1.9	91.19	-6,994.0	650.5	1,391.6	1,277.9	113.65	12.245	
12,893.7	6,702.7	6,634.4	6,634.2	115.3	1.9	91.11	-6,994.0	650.5	1,305.9	1,190.5	115.43	11.314	
12,900.0	6,702.7	6,634.4	6,634.1	115.4	1.9	91.10	-6,994.0	650.5	1,300.2	1,184.6	115.55	11.252	
12,992.1	6,702.0	6,633.6	6,633.4	117.1	1.9	91.02	-6,994.0	650.5	1,217.2	1,099.9	117.30	10.377	
13,000.0	6,702.0	6,633.6	6,633.3	117.3	1.9	91.02	-6,994.0	650.5	1,210.1	1,092.7	117.45	10.304	
13,090.5	6,701.4	6,632.9	6,632.6	119.0	1.9	90.94	-6,994.0	650.5	1,130.1	1,010.9	119.17	9.483	
13,100.0	6,701.3	6,632.8	6,632.5	119.1	1.9	90.93	-6,994.0	650.5	1,121.8	1,002.4	119.35	9.400	
13,188.9	6,700.7	6,632.1	6,631.8	120.8	1.9	90.86	-6,994.0	650.5	1,045.0	923.9	121.04	8.634	
13,200.0	6,700.6	6,632.0	6,631.7	121.0	1.9	90.85	-6,994.0	650.5	1,035.6	914.3	121.25	8.541	
13,287.4	6,700.0	6,631.3	6,631.0	122.7	1.9	90.78	-6,994.0	650.5	962.4	839.5	122.91	7.830	
13,300.0	6,699.9	6,631.2	6,630.9	122.9	1.9	90.77	-6,994.0	650.5	952.0	828.9	123.15	7.731	
13,385.8	6,699.3	6,630.5	6,630.2	124.5	1.9	90.69	-6,994.0	650.5	883.1	758.3	124.78	7.077	
13,400.0	6,699.3	6,630.4	6,630.1	124.8	1.9	90.68	-6,994.0	650.5	872.0	746.9	125.05	6.973	
13,484.2	6,698.7	6,629.7	6,629.5	126.4	1.9	90.61	-6,994.0	650.5	808.0	681.3	126.65	6.380	
13,500.0	6,698.6	6,629.6	6,629.3	126.7	1.9	90.60	-6,994.0	650.5	796.4	669.5	126.95	6.273	
13,582.6	6,698.0	6,629.0	6,628.7	128.2	1.9	90.53	-6,994.0	650.5	738.4	609.8	128.52	5.745	
13,600.0	6,697.9	6,628.8	6,628.5	128.5	1.9	90.52	-6,994.0	650.5	726.8	597.9	128.85	5.641	
13,681.1	6,697.3	6,628.2	6,627.9	130.1	1.9	90.45	-6,994.0	650.5	676.0	545.6	130.39	5.184	
13,700.0	6,697.2	6,628.0	6,627.8	130.4	1.9	90.43	-6,994.0	650.5	665.0	534.2	130.75	5.086	
13,779.5	6,696.7	6,627.4	6,627.1	131.9	1.9	90.37	-6,994.0	650.5	622.9	490.7	132.26	4.710	
13,800.0	6,696.5	6,627.2	6,627.0	132.3	1.9	90.35	-6,994.0	650.5	613.3	480.6	132.65	4.623	
13,877.9	6,696.0	6,626.6	6,626.3	133.8	1.9	90.29	-6,994.0	650.5	581.8	447.7	134.14	4.337	
13,900.0	6,695.8	6,626.5	6,626.2	134.2	1.9	90.27	-6,994.0	650.5	574.5	440.0	134.56	4.270	
13,976.3	6,695.3	6,625.9	6,625.6	135.6	1.9	90.21	-6,994.0	650.5	555.3	419.3	136.01	4.083	
14,000.0	6,695.2	6,625.7	6,625.4	136.1	1.9	90.19	-6,994.0	650.5	551.4	414.9	136.46	4.041	
14,034.1	6,695.0	6,625.5	6,625.2	136.7	1.9	90.16	-6,994.0	650.5	547.4	410.3	137.11	3.993 CC, ES, SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-175.99	-6,896.1	-483.1	6,913.3				
98.4	98.4	40.3	40.3	0.1	0.0	-175.99	-6,896.0	-483.2	6,913.0	6,912.9	0.09	N/A	
100.0	100.0	42.4	42.4	0.1	0.0	-175.99	-6,896.0	-483.2	6,912.9	6,912.9	0.09	N/A	
196.8	196.8	155.9	155.9	0.3	0.1	-175.99	-6,895.6	-483.6	6,912.6	6,912.2	0.43	N/A	
200.0	200.0	159.1	159.1	0.3	0.1	-175.99	-6,895.6	-483.6	6,912.6	6,912.2	0.44	N/A	
295.3	295.3	254.8	254.8	0.5	0.3	-175.98	-6,895.2	-484.0	6,912.2	6,911.4	0.79	8,778.755	
300.0	300.0	259.5	259.5	0.5	0.3	-175.98	-6,895.2	-484.1	6,912.2	6,911.4	0.80	8,615.950	
393.7	393.7	339.9	339.9	0.7	0.3	-175.98	-6,894.8	-484.4	6,911.9	6,910.8	1.07	6,435.286	
400.0	400.0	344.7	344.7	0.8	0.3	-175.98	-6,894.8	-484.4	6,911.8	6,910.7	1.09	6,334.579	
455.7	455.7	386.7	386.7	0.9	0.4	-175.98	-6,894.8	-484.6	6,911.8	6,910.5	1.24	5,564.547	
492.1	492.1	417.4	417.4	1.0	0.4	-175.98	-6,894.8	-484.7	6,911.8	6,910.5	1.34	5,147.237	
500.0	500.0	424.7	424.7	1.0	0.4	-175.98	-6,894.8	-484.7	6,911.8	6,910.4	1.37	5,063.593	
590.5	590.5	508.7	508.7	1.2	0.4	-175.98	-6,894.9	-485.1	6,911.9	6,910.3	1.62	4,267.622	
600.0	600.0	517.7	517.7	1.2	0.4	-175.98	-6,894.9	-485.1	6,912.0	6,910.3	1.65	4,199.844	
689.0	689.0	602.5	602.5	1.4	0.5	-175.97	-6,895.1	-485.4	6,912.2	6,910.3	1.89	3,653.596	
700.0	700.0	613.1	613.1	1.4	0.5	-175.97	-6,895.1	-485.5	6,912.2	6,910.3	1.92	3,596.604	
787.4	787.4	697.5	697.5	1.6	0.5	-175.97	-6,895.3	-485.8	6,912.4	6,910.3	2.16	3,200.403	
800.0	800.0	708.9	708.9	1.7	0.5	-175.97	-6,895.3	-485.9	6,912.5	6,910.3	2.19	3,152.321	
885.8	885.8	785.2	785.2	1.9	0.6	-175.97	-6,895.6	-486.1	6,912.8	6,910.4	2.42	2,859.216	
900.0	900.0	800.0	800.0	1.9	0.6	-175.97	-6,895.7	-486.2	6,912.9	6,910.4	2.46	2,815.092	
984.2	984.2	872.3	872.2	2.1	0.6	-175.97	-6,896.1	-486.3	6,913.3	6,910.7	2.67	2,588.005	
1,000.0	1,000.0	886.2	886.2	2.1	0.6	-175.97	-6,896.2	-486.3	6,913.4	6,910.7	2.71	2,549.572	
1,082.7	1,082.7	964.5	964.4	2.3	0.6	-175.97	-6,896.7	-486.4	6,914.0	6,911.1	2.92	2,364.814	
1,100.0	1,100.0	981.1	981.1	2.3	0.6	-175.97	-6,896.8	-486.5	6,914.1	6,911.2	2.97	2,329.461	
1,181.1	1,181.1	1,057.1	1,057.1	2.5	0.7	-175.97	-6,897.4	-486.5	6,914.7	6,911.6	3.17	2,178.893	
1,200.0	1,200.0	1,074.7	1,074.7	2.6	0.7	-175.97	-6,897.5	-486.5	6,914.9	6,911.7	3.22	2,146.703	
1,279.5	1,279.5	1,152.1	1,152.1	2.7	0.7	-175.97	-6,898.2	-486.3	6,915.6	6,912.1	3.42	2,020.853	
1,300.0	1,300.0	1,172.5	1,172.4	2.8	0.7	-175.97	-6,898.4	-486.3	6,915.7	6,912.3	3.47	1,990.779	
1,377.9	1,377.9	1,246.8	1,246.8	3.0	0.7	-175.97	-6,899.0	-486.1	6,916.4	6,912.7	3.67	1,884.709	
1,400.0	1,400.0	1,267.4	1,267.4	3.0	0.7	-175.97	-6,899.2	-486.1	6,916.6	6,912.9	3.72	1,856.831	
1,476.4	1,476.4	1,345.2	1,345.1	3.2	0.8	-175.97	-6,899.9	-485.9	6,917.3	6,913.4	3.92	1,765.629	
1,500.0	1,500.0	1,371.0	1,370.9	3.2	0.8	-175.97	-6,900.2	-485.8	6,917.5	6,913.5	3.98	1,739.022	
1,574.8	1,574.8	1,456.4	1,456.4	3.4	0.8	-175.97	-6,900.9	-485.7	6,918.1	6,914.0	4.17	1,659.507	
1,600.0	1,600.0	1,485.9	1,485.9	3.5	0.8	-175.97	-6,901.1	-485.7	6,918.3	6,914.1	4.23	1,634.270	
1,673.2	1,673.2	1,567.0	1,567.0	3.6	0.9	-175.97	-6,901.6	-485.7	6,918.7	6,914.3	4.42	1,565.646	
1,700.0	1,700.0	1,596.4	1,596.3	3.7	0.9	-175.97	-6,901.7	-485.7	6,918.9	6,914.4	4.49	1,542.010	
1,771.6	1,771.6	1,681.1	1,681.1	3.8	0.9	-175.97	-6,902.0	-485.9	6,919.2	6,914.5	4.67	1,482.522	
1,800.0	1,800.0	1,711.9	1,711.9	3.9	0.9	-175.97	-6,902.1	-486.1	6,919.2	6,914.5	4.74	1,460.211	
1,870.1	1,870.1	1,778.9	1,778.8	4.1	0.9	-175.97	-6,902.3	-486.5	6,919.4	6,914.5	4.92	1,407.768	
1,900.0	1,900.0	1,809.2	1,809.2	4.1	0.9	-175.97	-6,902.4	-486.7	6,919.5	6,914.6	4.99	1,386.384	
1,968.5	1,968.5	1,890.0	1,890.0	4.3	1.0	-175.96	-6,902.5	-487.4	6,919.7	6,914.5	5.17	1,339.025	
2,000.0	2,000.0	1,924.1	1,924.1	4.4	1.0	-175.96	-6,902.5	-487.7	6,919.7	6,914.5	5.25	1,318.454	
2,066.9	2,066.9	1,994.2	1,994.1	4.5	1.0	-175.95	-6,902.5	-488.4	6,919.8	6,914.4	5.42	1,276.880	
2,100.0	2,100.0	2,037.4	2,037.4	4.6	1.0	-175.95	-6,902.5	-488.8	6,919.8	6,914.3	5.51	1,256.717	
2,165.3	2,165.3	2,122.9	2,122.8	4.7	1.0	-175.94	-6,902.2	-489.8	6,919.6	6,913.9	5.68	1,218.664	
2,200.0	2,200.0	2,163.8	2,163.7	4.8	1.0	-175.94	-6,902.0	-490.2	6,919.5	6,913.7	5.77	1,199.656	
2,250.0	2,250.0	2,220.4	2,220.3	4.9	1.1	-175.93	-6,901.7	-490.7	6,919.2	6,913.3	5.90	1,173.386	
2,263.8	2,263.8	2,234.9	2,234.8	4.9	1.1	112.16	-6,901.6	-490.8	6,919.1	6,913.2	5.95	1,162.989	
2,295.8	2,295.8	2,268.7	2,268.6	5.0	1.1	112.17	-6,901.4	-491.0	6,919.1	6,913.0	6.02	1,148.683	
2,300.0	2,300.0	2,273.0	2,273.0	5.0	1.1	112.17	-6,901.3	-491.0	6,919.1	6,913.0	6.03	1,146.852	
2,362.2	2,362.2	2,336.2	2,336.1	5.2	1.1	112.18	-6,900.9	-491.3	6,919.4	6,913.2	6.17	1,121.198	
2,400.0	2,399.9	2,373.5	2,373.4	5.2	1.1	112.18	-6,900.7	-491.5	6,919.8	6,913.5	6.26	1,106.264	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PJ #3 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,460.6	2,460.4	2,428.3	2,428.2	5.4	1.1	112.19	-6,900.3	-491.6	6,920.9	6,914.5	6.39	1,082.705	
2,500.0	2,499.7	2,461.2	2,461.1	5.4	1.1	112.19	-6,900.2	-491.7	6,921.9	6,915.4	6.48	1,068.023	
2,559.0	2,558.5	2,510.3	2,510.2	5.6	1.1	112.20	-6,900.0	-491.8	6,923.8	6,917.2	6.62	1,045.971	
2,600.0	2,599.1	2,543.8	2,543.7	5.7	1.1	112.19	-6,899.9	-491.9	6,925.5	6,918.8	6.72	1,031.228	
2,657.5	2,656.1	2,590.7	2,590.7	5.8	1.1	112.19	-6,899.8	-491.9	6,928.3	6,921.5	6.86	1,010.143	
2,700.0	2,698.2	2,630.1	2,630.1	5.9	1.1	112.19	-6,899.8	-491.9	6,930.7	6,923.8	6.96	995.693	
2,755.9	2,753.3	2,684.0	2,684.0	6.1	1.1	112.19	-6,899.8	-491.9	6,934.3	6,927.2	7.10	976.120	
2,800.0	2,796.6	2,718.8	2,718.8	6.2	1.1	112.18	-6,899.8	-491.9	6,937.4	6,930.2	7.22	960.949	
2,854.3	2,849.9	2,755.9	2,755.8	6.3	1.1	112.16	-6,899.9	-491.9	6,941.7	6,934.3	7.38	940.875	
2,900.0	2,894.4	2,800.0	2,799.9	6.5	1.1	112.16	-6,900.1	-492.0	6,945.8	6,938.2	7.51	924.350	
2,952.7	2,945.7	2,828.4	2,828.3	6.6	1.1	112.12	-6,900.3	-492.0	6,950.8	6,943.1	7.69	903.985	
3,000.0	2,991.5	2,868.4	2,868.3	6.8	1.2	112.10	-6,900.6	-492.1	6,955.8	6,947.9	7.85	886.063	
3,051.2	3,040.8	2,911.0	2,911.0	7.0	1.2	112.08	-6,901.0	-492.2	6,961.5	6,953.5	8.05	865.242	
3,100.0	3,087.6	2,950.5	2,950.4	7.1	1.2	112.06	-6,901.3	-492.3	6,967.4	6,959.2	8.23	846.396	
3,149.6	3,134.9	2,990.4	2,990.3	7.4	1.2	112.03	-6,901.7	-492.4	6,973.8	6,965.3	8.45	825.767	
3,200.0	3,182.7	3,027.4	3,027.3	7.6	1.2	112.00	-6,902.1	-492.5	6,980.6	6,972.0	8.66	805.962	
3,248.0	3,228.0	3,061.5	3,061.4	7.8	1.2	111.95	-6,902.6	-492.7	6,987.6	6,978.7	8.89	785.651	
3,300.0	3,276.6	3,100.0	3,099.9	8.1	1.2	111.91	-6,903.1	-492.9	6,995.6	6,986.4	9.15	764.825	
3,346.4	3,319.9	3,133.8	3,133.7	8.3	1.2	111.87	-6,903.7	-493.1	7,003.1	6,993.7	9.40	744.889	
3,400.0	3,369.4	3,174.9	3,174.8	8.6	1.3	111.82	-6,904.3	-493.5	7,012.2	7,002.5	9.70	723.185	
3,444.9	3,410.5	3,209.5	3,209.4	8.9	1.3	111.77	-6,905.0	-493.8	7,020.2	7,010.3	9.97	703.836	
3,500.0	3,460.7	3,253.3	3,253.2	9.2	1.3	111.72	-6,905.7	-494.3	7,030.5	7,020.2	10.32	681.519	
3,543.3	3,499.8	3,287.3	3,287.2	9.5	1.3	111.68	-6,906.4	-494.7	7,039.0	7,028.3	10.62	663.037	
3,600.0	3,550.6	3,336.9	3,336.8	9.9	1.3	111.63	-6,907.3	-495.4	7,050.4	7,039.4	11.01	640.334	
3,641.7	3,587.6	3,374.7	3,374.5	10.3	1.3	111.61	-6,908.1	-496.0	7,059.2	7,047.9	11.33	622.789	
3,709.9	3,647.5	3,432.1	3,431.9	10.8	1.3	111.54	-6,909.1	-496.9	7,074.1	7,062.2	11.86	596.262	
3,740.1	3,673.9	3,456.2	3,456.0	11.1	1.3	111.63	-6,909.6	-497.3	7,080.9	7,068.8	12.11	584.573	
3,800.0	3,726.2	3,503.9	3,503.7	11.6	1.4	111.82	-6,910.5	-498.2	7,094.4	7,081.8	12.60	562.848	
3,838.6	3,759.9	3,535.5	3,535.3	11.9	1.4	111.94	-6,911.1	-498.9	7,103.2	7,090.2	12.93	549.275	
3,900.0	3,813.5	3,585.7	3,585.5	12.5	1.4	112.14	-6,912.1	-499.8	7,117.3	7,103.8	13.45	529.074	
3,937.0	3,845.8	3,618.2	3,618.0	12.8	1.4	112.26	-6,912.8	-500.5	7,125.8	7,112.0	13.77	517.322	
4,000.0	3,900.8	3,677.0	3,676.7	13.4	1.4	112.49	-6,913.9	-501.6	7,140.4	7,126.1	14.32	498.557	
4,035.4	3,931.7	3,708.9	3,708.6	13.7	1.4	112.61	-6,914.5	-502.2	7,148.7	7,134.1	14.64	488.421	
4,100.0	3,988.1	3,762.3	3,762.1	14.3	1.4	112.81	-6,915.5	-503.2	7,163.9	7,148.6	15.21	471.084	
4,133.8	4,017.6	3,790.4	3,790.1	14.7	1.4	112.92	-6,916.1	-503.7	7,171.8	7,156.3	15.51	462.365	
4,200.0	4,075.4	3,845.4	3,845.1	15.3	1.5	113.13	-6,917.2	-504.8	7,187.6	7,171.5	16.10	446.304	
4,232.3	4,103.5	3,872.3	3,871.9	15.6	1.5	113.23	-6,917.7	-505.3	7,195.3	7,178.9	16.40	438.792	
4,300.0	4,162.6	3,925.2	3,924.8	16.2	1.5	113.43	-6,918.8	-506.3	7,211.6	7,194.6	17.01	423.910	
4,330.7	4,189.4	3,947.7	3,947.3	16.5	1.5	113.52	-6,919.2	-506.7	7,219.1	7,201.8	17.29	417.447	
4,400.0	4,249.9	4,000.0	3,999.6	17.2	1.5	113.71	-6,920.4	-507.7	7,236.1	7,218.2	17.93	403.632	
4,429.1	4,275.4	4,026.5	4,026.1	17.5	1.5	113.81	-6,921.0	-508.3	7,243.3	7,225.1	18.20	398.071	
4,500.0	4,337.2	4,268.3	4,267.8	18.2	1.6	114.74	-6,923.2	-515.3	7,260.5	7,241.7	18.83	385.518	
4,527.5	4,361.3	4,300.0	4,299.5	18.5	1.6	114.86	-6,923.0	-516.3	7,266.8	7,247.7	19.08	380.812	
4,600.0	4,424.5	4,358.1	4,357.6	19.2	1.6	115.08	-6,922.6	-518.1	7,283.3	7,263.6	19.74	368.930	
4,626.0	4,447.2	4,376.3	4,375.7	19.5	1.6	115.15	-6,922.5	-518.6	7,289.3	7,269.3	19.98	364.836	
4,700.0	4,511.8	4,426.6	4,426.0	20.2	1.6	115.34	-6,922.3	-520.1	7,306.6	7,285.9	20.66	353.689	
4,724.4	4,533.1	4,442.8	4,442.2	20.5	1.6	115.40	-6,922.3	-520.5	7,312.3	7,291.4	20.88	350.151	
4,796.7	4,596.3	4,500.0	4,499.4	21.2	1.7	115.61	-6,922.3	-522.0	7,329.5	7,308.0	21.55	340.127	
4,800.0	4,599.1	4,500.0	4,499.4	21.2	1.7	115.63	-6,922.3	-522.0	7,330.3	7,308.8	21.58	339.760	
4,822.8	4,619.1	4,509.6	4,509.0	21.4	1.7	115.76	-6,922.3	-522.2	7,335.8	7,314.0	21.73	337.595	
4,900.0	4,687.3	4,569.9	4,569.3	22.0	1.7	116.31	-6,922.4	-523.7	7,353.7	7,331.5	22.25	330.545	
4,921.2	4,706.2	4,586.7	4,586.1	22.2	1.7	116.45	-6,922.4	-524.1	7,358.6	7,336.2	22.38	328.784	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PJ #3 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,777.1	4,647.4	4,646.8	22.8	1.7	116.97	-6,922.6	-525.5	7,376.0	7,353.1	22.87	322.451	
5,019.7	4,794.9	4,662.6	4,661.9	22.9	1.7	117.10	-6,922.7	-525.9	7,380.3	7,357.3	22.99	321.027	
5,100.0	4,868.3	4,731.1	4,730.4	23.5	1.7	117.61	-6,923.0	-527.3	7,397.1	7,373.6	23.46	315.368	
5,118.1	4,885.0	4,748.7	4,748.0	23.6	1.7	117.73	-6,923.1	-527.6	7,400.8	7,377.2	23.55	314.230	
5,200.0	4,961.0	4,831.4	4,830.7	24.2	1.8	118.24	-6,923.6	-529.0	7,416.7	7,392.7	23.99	309.191	
5,216.5	4,976.4	4,849.1	4,848.4	24.3	1.8	118.34	-6,923.7	-529.2	7,419.8	7,395.8	24.07	308.291	
5,300.0	5,054.8	4,942.4	4,941.7	24.8	1.8	118.83	-6,924.1	-530.4	7,434.7	7,410.3	24.47	303.828	
5,314.9	5,069.0	4,960.0	4,959.3	24.8	1.8	118.92	-6,924.1	-530.6	7,437.3	7,412.7	24.54	303.128	
5,400.0	5,149.9	5,074.3	5,073.6	25.3	1.8	119.41	-6,924.2	-532.0	7,450.9	7,426.0	24.90	299.231	
5,413.4	5,162.7	5,093.8	5,093.0	25.4	1.8	119.48	-6,924.2	-532.3	7,452.9	7,427.9	24.95	298.702	
5,500.0	5,245.9	5,175.7	5,175.0	25.8	1.9	119.86	-6,924.0	-533.2	7,465.0	7,439.8	25.28	295.264	
5,511.8	5,257.3	5,186.6	5,185.9	25.9	1.9	119.90	-6,924.0	-533.3	7,466.6	7,441.3	25.32	294.862	
5,600.0	5,342.9	5,247.3	5,246.6	26.3	1.9	120.20	-6,923.9	-533.9	7,477.7	7,452.1	25.62	291.816	
5,610.2	5,352.9	5,253.9	5,253.2	26.3	1.9	120.23	-6,924.0	-533.9	7,478.9	7,453.3	25.66	291.517	
5,700.0	5,440.7	5,300.0	5,299.3	26.7	1.9	120.48	-6,924.1	-534.3	7,489.1	7,463.2	25.92	288.888	
5,708.6	5,449.1	5,317.8	5,317.1	26.7	1.9	120.52	-6,924.3	-534.4	7,490.0	7,464.1	25.95	288.655	
5,800.0	5,539.1	5,378.0	5,377.3	27.0	1.9	120.75	-6,924.8	-534.9	7,499.2	7,473.0	26.19	286.354	
5,807.1	5,546.1	5,382.7	5,381.9	27.0	1.9	120.76	-6,924.8	-535.0	7,499.8	7,473.6	26.20	286.208	
5,900.0	5,638.1	5,445.4	5,444.7	27.3	1.9	120.96	-6,925.6	-535.6	7,508.0	7,481.5	26.41	284.262	
5,905.5	5,643.5	5,449.2	5,448.4	27.3	1.9	120.97	-6,925.7	-535.6	7,508.4	7,482.0	26.42	284.171	
6,000.0	5,737.5	5,518.7	5,517.9	27.5	2.0	121.15	-6,926.8	-536.4	7,515.3	7,488.7	26.60	282.545	
6,003.9	5,741.4	5,522.4	5,521.6	27.5	2.0	121.15	-6,926.9	-536.5	7,515.6	7,489.0	26.60	282.491	
6,100.0	5,837.2	5,613.8	5,613.0	27.7	2.0	121.29	-6,928.6	-537.3	7,521.1	7,494.4	26.76	281.105	
6,102.3	5,839.6	5,616.3	5,615.6	27.7	2.0	121.30	-6,928.7	-537.3	7,521.2	7,494.5	26.76	281.079	
6,200.0	5,937.2	5,719.0	5,718.2	27.9	2.0	121.38	-6,930.7	-537.6	7,525.1	7,498.2	26.88	279.907	
6,200.8	5,937.9	5,719.8	5,719.0	27.9	2.0	121.38	-6,930.8	-537.6	7,525.1	7,498.2	26.88	279.900	
6,256.6	5,993.8	5,772.4	5,771.6	27.9	2.0	-166.68	-6,931.9	-537.5	7,526.5	7,499.6	26.94	279.365	
6,286.6	6,023.8	5,801.2	5,800.4	27.9	2.0	-166.68	-6,932.5	-537.4	7,527.1	7,500.1	26.98	278.981	
6,299.2	6,036.4	5,820.6	5,819.8	27.9	2.0	13.31	-6,932.9	-537.3	7,527.3	7,500.3	26.98	279.041	
6,300.0	6,037.2	5,821.9	5,821.0	27.9	2.0	13.31	-6,933.0	-537.3	7,527.3	7,500.3	26.98	279.046	
6,350.0	6,087.1	5,899.2	5,898.3	28.0	2.1	13.35	-6,934.5	-536.8	7,525.6	7,498.6	26.92	279.544	
6,397.6	6,134.3	5,950.1	5,949.2	28.0	2.1	13.44	-6,935.4	-536.5	7,520.7	7,493.9	26.82	280.408	
6,400.0	6,136.7	5,952.6	5,951.8	28.0	2.1	13.45	-6,935.4	-536.5	7,520.3	7,493.5	26.81	280.463	
6,450.0	6,185.7	6,024.7	6,023.8	28.0	2.1	13.64	-6,936.5	-536.3	7,511.7	7,485.1	26.66	281.775	
6,496.0	6,230.2	6,125.0	6,124.1	28.0	2.1	13.90	-6,937.3	-536.1	7,500.5	7,474.0	26.47	283.318	
6,500.0	6,234.0	6,128.2	6,127.3	28.0	2.1	13.92	-6,937.4	-536.1	7,499.4	7,472.9	26.45	283.503	
6,550.0	6,281.3	6,168.2	6,167.3	28.0	2.1	14.27	-6,937.6	-536.0	7,483.8	7,457.6	26.14	286.243	
6,594.5	6,322.2	6,204.1	6,203.2	27.9	2.1	14.65	-6,937.9	-536.0	7,467.2	7,441.4	25.80	289.431	
6,600.0	6,327.3	6,210.1	6,209.2	27.9	2.1	14.71	-6,937.9	-535.9	7,465.0	7,439.2	25.75	289.881	
6,650.0	6,371.8	6,263.2	6,262.3	27.9	2.1	15.26	-6,938.3	-535.8	7,443.1	7,417.9	25.28	294.480	
6,692.9	6,408.6	6,307.0	6,306.1	27.9	2.1	15.84	-6,938.5	-535.7	7,422.0	7,397.2	24.80	299.325	
6,700.0	6,414.6	6,314.0	6,313.1	27.8	2.1	15.94	-6,938.6	-535.7	7,418.3	7,393.6	24.71	300.227	
6,750.0	6,455.5	6,361.6	6,360.7	27.8	2.1	16.76	-6,938.8	-535.5	7,390.5	7,366.4	24.05	307.252	
6,791.3	6,487.7	6,399.1	6,398.3	27.7	2.1	17.57	-6,939.0	-535.3	7,365.5	7,342.0	23.45	314.102	
6,800.0	6,494.3	6,408.5	6,407.6	27.7	2.1	17.76	-6,939.0	-535.3	7,360.0	7,336.7	23.32	315.676	
6,850.0	6,530.8	6,461.7	6,460.8	27.7	2.1	18.99	-6,939.2	-534.9	7,326.9	7,304.4	22.51	325.547	
6,889.7	6,558.1	6,501.3	6,500.4	27.6	2.1	20.16	-6,939.2	-534.5	7,298.8	7,276.9	21.82	334.532	
6,900.0	6,564.9	6,511.1	6,510.2	27.6	2.1	20.49	-6,939.2	-534.4	7,291.3	7,269.6	21.63	337.068	
6,950.0	6,596.3	6,500.0	6,499.1	27.6	2.1	22.13	-6,939.2	-534.5	7,253.6	7,232.9	20.66	351.025	
6,988.2	6,618.4	6,500.0	6,499.1	27.5	2.1	23.65	-6,939.2	-534.5	7,223.5	7,203.6	19.92	362.630	
7,000.0	6,624.9	6,500.0	6,499.1	27.5	2.1	24.18	-6,939.2	-534.5	7,213.9	7,194.3	19.68	366.495	
7,050.0	6,650.6	6,500.0	6,499.1	27.5	2.1	26.71	-6,939.2	-534.5	7,172.6	7,153.8	18.72	383.117	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PJ #3 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,086.6	6,667.5	6,500.0	6,499.1	27.5	2.1	28.96	-6,939.2	-534.5	7,141.3	7,123.2	18.07	395.158	
7,100.0	6,673.3	6,500.0	6,499.1	27.5	2.1	29.89	-6,939.2	-534.5	7,129.6	7,111.8	17.84	399.694	
7,150.0	6,692.7	6,500.0	6,499.1	27.5	2.1	33.95	-6,939.2	-534.5	7,085.3	7,068.2	17.12	413.862	
7,185.0	6,704.4	6,500.0	6,499.1	27.5	2.1	37.48	-6,939.2	-534.5	7,053.5	7,036.8	16.72	421.772	
7,200.0	6,709.0	6,500.0	6,499.1	27.5	2.1	39.20	-6,939.2	-534.5	7,039.8	7,023.1	16.69	421.890	
7,250.0	6,721.8	6,500.0	6,499.1	27.5	2.1	46.09	-6,939.2	-534.5	6,993.2	6,976.6	16.66	419.783	
7,283.4	6,728.6	6,500.0	6,499.1	27.5	2.1	51.88	-6,939.2	-534.5	6,961.6	6,944.7	16.90	411.858	
7,300.0	6,731.3	6,500.0	6,499.1	27.6	2.1	55.14	-6,939.2	-534.5	6,945.9	6,928.8	17.09	406.326	
7,350.0	6,737.3	6,500.0	6,499.1	27.7	2.1	66.78	-6,939.2	-534.5	6,898.0	6,880.1	17.90	385.377	
7,381.9	6,739.4	6,500.0	6,499.1	27.7	2.1	75.51	-6,939.2	-534.5	6,867.3	6,848.8	18.53	370.557	
7,400.0	6,739.9	6,500.0	6,499.1	27.8	2.1	80.83	-6,939.2	-534.5	6,849.8	6,830.8	18.94	361.729	
7,416.5	6,740.0	6,500.0	6,499.1	27.8	2.1	85.81	-6,939.2	-534.5	6,833.8	6,814.4	19.38	352.652	
7,480.3	6,739.5	6,500.0	6,499.1	28.0	2.1	85.81	-6,939.2	-534.5	6,772.1	6,752.2	19.90	340.240	
7,500.0	6,739.4	6,500.0	6,499.1	28.1	2.1	85.81	-6,939.2	-534.5	6,753.1	6,733.0	20.07	336.539	
7,578.7	6,738.9	6,500.0	6,499.1	28.5	2.1	85.81	-6,939.2	-534.5	6,677.0	6,656.2	20.83	320.562	
7,600.0	6,738.7	6,500.0	6,499.1	28.6	2.1	85.81	-6,939.2	-534.5	6,656.5	6,635.5	21.04	316.444	
7,677.1	6,738.2	6,500.0	6,499.1	29.1	2.1	85.81	-6,939.2	-534.5	6,582.1	6,560.2	21.89	300.713	
7,700.0	6,738.1	6,500.0	6,499.1	29.2	2.1	85.81	-6,939.2	-534.5	6,560.0	6,537.9	22.14	296.287	
7,775.6	6,737.5	6,500.0	6,499.1	29.7	2.1	85.81	-6,939.2	-534.5	6,487.2	6,464.1	23.06	281.277	
7,800.0	6,737.4	6,500.0	6,499.1	29.9	2.1	85.81	-6,939.2	-534.5	6,463.6	6,440.3	23.36	276.681	
7,874.0	6,736.9	6,500.0	6,499.1	30.6	2.1	85.81	-6,939.2	-534.5	6,392.4	6,368.0	24.34	262.670	
7,900.0	6,736.7	6,500.0	6,499.1	30.8	2.1	85.81	-6,939.2	-534.5	6,367.4	6,342.7	24.68	258.012	
7,972.4	6,736.2	6,500.0	6,499.1	31.5	2.1	85.81	-6,939.2	-534.5	6,297.7	6,272.0	25.69	245.131	
8,000.0	6,736.0	6,500.0	6,499.1	31.8	2.1	85.81	-6,939.2	-534.5	6,271.2	6,245.1	26.08	240.492	
8,070.8	6,735.5	6,500.0	6,499.1	32.5	2.1	85.81	-6,939.2	-534.5	6,203.1	6,176.0	27.12	228.772	
8,100.0	6,735.3	6,500.0	6,499.1	32.8	2.1	85.81	-6,939.2	-534.5	6,175.2	6,147.6	27.54	224.208	
8,169.3	6,734.9	6,500.0	6,499.1	33.6	2.1	85.81	-6,939.2	-534.5	6,108.7	6,080.1	28.60	213.616	
8,200.0	6,734.6	6,500.0	6,499.1	34.0	2.1	85.81	-6,939.2	-534.5	6,079.3	6,050.2	29.06	209.166	
8,267.7	6,734.2	6,500.0	6,499.1	34.8	2.1	85.81	-6,939.2	-534.5	6,014.4	5,984.3	30.13	199.635	
8,300.0	6,734.0	6,500.0	6,499.1	35.2	2.1	85.81	-6,939.2	-534.5	5,983.5	5,952.9	30.63	195.322	
8,366.1	6,733.5	6,500.0	6,499.1	36.1	2.1	85.81	-6,939.2	-534.5	5,920.2	5,888.5	31.70	186.766	
8,400.0	6,733.3	6,500.0	6,499.1	36.5	2.1	85.81	-6,939.2	-534.5	5,887.9	5,855.6	32.24	182.604	
8,464.5	6,732.8	6,500.0	6,499.1	37.4	2.1	85.81	-6,939.2	-534.5	5,826.2	5,792.9	33.31	174.934	
8,500.0	6,732.6	6,500.0	6,499.1	37.9	2.1	85.81	-6,939.2	-534.5	5,792.4	5,758.5	33.89	170.928	
8,563.0	6,732.2	6,500.0	6,499.1	38.8	2.1	85.81	-6,939.2	-534.5	5,732.3	5,697.4	34.94	164.055	
8,600.0	6,731.9	6,500.0	6,499.1	39.3	2.1	85.81	-6,939.2	-534.5	5,697.0	5,661.5	35.56	160.205	
8,661.4	6,731.5	6,500.0	6,499.1	40.2	2.1	85.81	-6,939.2	-534.5	5,638.6	5,602.0	36.60	154.045	
8,700.0	6,731.2	6,500.0	6,499.1	40.8	2.1	85.81	-6,939.2	-534.5	5,601.9	5,564.6	37.26	150.350	
8,759.8	6,730.8	6,500.0	6,499.1	41.7	2.1	85.81	-6,939.2	-534.5	5,545.0	5,506.7	38.29	144.825	
8,800.0	6,730.6	6,500.0	6,499.1	42.3	2.1	85.81	-6,939.2	-534.5	5,506.9	5,467.9	38.98	141.280	
8,858.2	6,730.2	6,500.0	6,499.1	43.2	2.1	85.81	-6,939.2	-534.5	5,451.6	5,411.6	39.99	136.322	
8,900.0	6,729.9	6,500.0	6,499.1	43.8	2.1	85.81	-6,939.2	-534.5	5,412.1	5,371.4	40.72	132.920	
8,956.7	6,729.5	6,500.0	6,499.1	44.7	2.1	85.81	-6,939.2	-534.5	5,358.4	5,316.7	41.71	128.465	
9,000.0	6,729.2	6,500.0	6,499.1	45.4	2.1	85.81	-6,939.2	-534.5	5,317.4	5,275.0	42.47	125.202	
9,055.1	6,728.8	6,500.0	6,499.1	46.3	2.1	85.81	-6,939.2	-534.5	5,265.4	5,221.9	43.45	121.195	
9,100.0	6,728.5	6,500.0	6,499.1	47.0	2.1	85.81	-6,939.2	-534.5	5,223.0	5,178.8	44.24	118.062	
9,153.5	6,728.2	6,500.0	6,499.1	47.9	2.1	85.81	-6,939.2	-534.5	5,172.6	5,127.4	45.19	114.455	
9,200.0	6,727.8	6,500.0	6,499.1	48.6	2.1	85.81	-6,939.2	-534.5	5,128.8	5,082.8	46.02	111.446	
9,251.9	6,727.5	6,500.0	6,499.1	49.5	2.1	85.81	-6,939.2	-534.5	5,080.0	5,033.0	46.95	108.195	
9,300.0	6,727.2	6,500.0	6,499.1	50.3	2.1	85.81	-6,939.2	-534.5	5,034.8	4,987.0	47.81	105.302	
9,350.4	6,726.8	6,500.0	6,499.1	51.1	2.1	85.81	-6,939.2	-534.5	4,987.6	4,938.8	48.72	102.370	
9,400.0	6,726.5	6,500.0	6,499.1	51.9	2.1	85.81	-6,939.2	-534.5	4,941.1	4,891.5	49.61	99.588	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PJ #3 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,448.8	6,726.1	6,500.0	6,499.1	52.7	2.1	85.81	-6,939.2	-534.5	4,895.4	4,844.9	50.50	96.941	
9,500.0	6,725.8	6,500.0	6,499.1	53.6	2.1	85.81	-6,939.2	-534.5	4,847.6	4,796.1	51.43	94.263	
9,547.2	6,725.5	6,500.0	6,499.1	54.4	2.1	85.81	-6,939.2	-534.5	4,803.5	4,751.2	52.28	91.872	
9,600.0	6,725.1	6,500.0	6,499.1	55.3	2.1	85.81	-6,939.2	-534.5	4,754.3	4,701.1	53.24	89.293	
9,645.6	6,724.8	6,500.0	6,499.1	56.1	2.1	85.81	-6,939.2	-534.5	4,711.9	4,657.8	54.08	87.131	
9,700.0	6,724.4	6,500.0	6,499.1	57.0	2.1	85.81	-6,939.2	-534.5	4,661.4	4,606.3	55.07	84.645	
9,744.1	6,724.1	6,500.0	6,499.1	57.8	2.1	85.81	-6,939.2	-534.5	4,620.5	4,564.6	55.88	82.690	
9,800.0	6,723.8	6,500.0	6,499.1	58.7	2.1	85.81	-6,939.2	-534.5	4,568.7	4,511.8	56.90	80.291	
9,842.5	6,723.5	6,500.0	6,499.1	59.5	2.1	85.81	-6,939.2	-534.5	4,529.4	4,471.7	57.68	78.523	
9,900.0	6,723.1	6,500.0	6,499.1	60.5	2.1	85.81	-6,939.2	-534.5	4,476.4	4,417.6	58.74	76.207	
9,940.9	6,722.8	6,500.0	6,499.1	61.2	2.1	85.81	-6,939.2	-534.5	4,438.7	4,379.2	59.49	74.608	
10,000.0	6,722.4	6,500.0	6,499.1	62.2	2.1	85.81	-6,939.2	-534.5	4,384.3	4,323.8	60.58	72.371	
10,039.3	6,722.1	6,500.0	6,499.1	62.9	2.1	85.81	-6,939.2	-534.5	4,348.2	4,286.9	61.31	70.924	
10,100.0	6,721.7	6,500.0	6,499.1	64.0	2.1	85.81	-6,939.2	-534.5	4,292.7	4,230.3	62.43	68.761	
10,137.8	6,721.5	6,500.0	6,499.1	64.7	2.1	85.81	-6,939.2	-534.5	4,258.2	4,195.0	63.13	67.452	
10,200.0	6,721.0	6,500.0	6,499.1	65.8	2.1	85.81	-6,939.2	-534.5	4,201.4	4,137.1	64.28	65.360	
10,236.2	6,720.8	6,500.0	6,499.1	66.4	2.1	85.81	-6,939.2	-534.5	4,168.5	4,103.5	64.95	64.177	
10,300.0	6,720.4	6,500.0	6,499.1	67.5	2.1	85.81	-6,939.2	-534.5	4,110.6	4,044.4	66.14	62.153	
10,334.6	6,720.1	6,500.0	6,499.1	68.2	2.1	85.81	-6,939.2	-534.5	4,079.2	4,012.4	66.78	61.084	
10,400.0	6,719.7	6,500.0	6,499.1	69.3	2.1	85.81	-6,939.2	-534.5	4,020.1	3,952.1	68.00	59.123	
10,433.0	6,719.4	6,500.0	6,499.1	69.9	2.1	85.81	-6,939.2	-534.5	3,990.3	3,921.7	68.61	58.159	
10,500.0	6,719.0	6,500.0	6,499.1	71.1	2.1	85.81	-6,939.2	-534.5	3,930.2	3,860.3	69.86	56.259	
10,531.5	6,718.8	6,500.0	6,499.1	71.7	2.1	85.81	-6,939.2	-534.5	3,901.9	3,831.5	70.45	55.390	
10,600.0	6,718.3	6,500.0	6,499.1	72.9	2.1	85.81	-6,939.2	-534.5	3,840.7	3,769.0	71.72	53.549	
10,629.9	6,718.1	6,500.0	6,499.1	73.4	2.1	85.81	-6,939.2	-534.5	3,814.0	3,741.7	72.28	52.766	
10,700.0	6,717.6	6,500.0	6,499.1	74.7	2.1	85.81	-6,939.2	-534.5	3,751.7	3,678.1	73.59	50.981	
10,728.3	6,717.4	6,500.0	6,499.1	75.2	2.1	85.81	-6,939.2	-534.5	3,726.6	3,652.5	74.12	50.278	
10,800.0	6,717.0	6,500.0	6,499.1	76.5	2.1	85.81	-6,939.2	-534.5	3,663.4	3,587.9	75.46	48.546	
10,826.7	6,716.8	6,500.0	6,499.1	77.0	2.1	85.81	-6,939.2	-534.5	3,639.8	3,563.9	75.96	47.916	
10,900.0	6,716.3	6,500.0	6,499.1	78.3	2.1	85.81	-6,939.2	-534.5	3,575.6	3,498.3	77.34	46.235	
10,925.2	6,716.1	6,500.0	6,499.1	78.8	2.1	85.81	-6,939.2	-534.5	3,553.6	3,475.8	77.81	45.672	
11,000.0	6,715.6	6,500.0	6,499.1	80.2	2.1	85.81	-6,939.2	-534.5	3,488.5	3,409.3	79.21	44.041	
11,023.6	6,715.4	6,500.0	6,499.1	80.6	2.1	85.81	-6,939.2	-534.5	3,468.1	3,388.4	79.65	43.539	
11,100.0	6,714.9	6,500.0	6,499.1	82.0	2.1	85.81	-6,939.2	-534.5	3,402.1	3,321.0	81.09	41.956	
11,122.0	6,714.8	6,500.0	6,499.1	82.4	2.1	85.81	-6,939.2	-534.5	3,383.2	3,301.7	81.50	41.511	
11,200.0	6,714.2	6,500.0	6,499.1	83.8	2.1	85.81	-6,939.2	-534.5	3,316.5	3,233.5	82.97	39.973	
11,220.4	6,714.1	6,500.0	6,499.1	84.2	2.1	85.81	-6,939.2	-534.5	3,299.1	3,215.7	83.35	39.580	
11,300.0	6,713.5	6,500.0	6,499.1	85.7	2.1	85.81	-6,939.2	-534.5	3,231.7	3,146.9	84.85	38.088	
11,318.9	6,713.4	6,500.0	6,499.1	86.0	2.1	85.81	-6,939.2	-534.5	3,215.8	3,130.6	85.20	37.742	
11,400.0	6,712.9	6,500.0	6,499.1	87.5	2.1	85.81	-6,939.2	-534.5	3,147.8	3,061.1	86.73	36.294	
11,417.3	6,712.7	6,500.0	6,499.1	87.8	2.1	85.81	-6,939.2	-534.5	3,133.4	3,046.3	87.06	35.992	
11,500.0	6,712.2	6,500.0	6,499.1	89.3	2.1	85.81	-6,939.2	-534.5	3,064.9	2,976.2	88.62	34.586	
11,515.7	6,712.1	6,500.0	6,499.1	89.6	2.1	85.81	-6,939.2	-534.5	3,051.9	2,963.0	88.91	34.325	
11,600.0	6,711.5	6,500.0	6,499.1	91.2	2.1	85.81	-6,939.2	-534.5	2,983.0	2,892.5	90.50	32.960	
11,614.1	6,711.4	6,500.0	6,499.1	91.4	2.1	85.81	-6,939.2	-534.5	2,971.5	2,880.7	90.77	32.737	
11,700.0	6,710.8	6,500.0	6,499.1	93.0	2.1	85.81	-6,939.2	-534.5	2,902.2	2,809.8	92.39	31.413	
11,712.6	6,710.7	6,500.0	6,499.1	93.3	2.1	85.81	-6,939.2	-534.5	2,892.1	2,799.5	92.63	31.224	
11,800.0	6,710.1	6,500.0	6,499.1	94.9	2.1	85.81	-6,939.2	-534.5	2,822.7	2,728.4	94.28	29.940	
11,811.0	6,710.1	6,500.0	6,499.1	95.1	2.1	85.81	-6,939.2	-534.5	2,814.0	2,719.5	94.48	29.783	
11,900.0	6,709.5	6,500.0	6,499.1	96.7	2.1	85.81	-6,939.2	-534.5	2,744.5	2,648.3	96.17	28.539	
11,909.4	6,709.4	6,500.0	6,499.1	96.9	2.1	85.81	-6,939.2	-534.5	2,737.2	2,640.9	96.34	28.411	
12,000.0	6,708.8	6,500.0	6,499.1	98.6	2.1	85.81	-6,939.2	-534.5	2,667.8	2,569.7	98.06	27.206	

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 EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,708.7	6,500.0	6,499.1	98.7	2.1	85.81	-6,939.2	-534.5	2,661.8	2,563.6	98.21	27.104	
12,100.0	6,708.1	6,500.0	6,499.1	100.4	2.1	85.81	-6,939.2	-534.5	2,592.6	2,492.7	99.95	25.940	
12,106.3	6,708.1	6,500.0	6,499.1	100.6	2.1	85.81	-6,939.2	-534.5	2,588.0	2,487.9	100.07	25.862	
12,200.0	6,707.4	6,500.0	6,499.1	102.3	2.1	85.81	-6,939.2	-534.5	2,519.2	2,417.4	101.84	24.737	
12,204.7	6,707.4	6,500.0	6,499.1	102.4	2.1	85.81	-6,939.2	-534.5	2,515.8	2,413.9	101.93	24.682	
12,300.0	6,706.7	6,500.0	6,499.1	104.2	2.1	85.81	-6,939.2	-534.5	2,447.7	2,343.9	103.74	23.595	
12,303.1	6,706.7	6,500.0	6,499.1	104.2	2.1	85.81	-6,939.2	-534.5	2,445.5	2,341.7	103.79	23.561	
12,400.0	6,706.1	6,500.0	6,499.1	106.0	2.1	85.81	-6,939.2	-534.5	2,378.2	2,272.6	105.63	22.515	
12,401.5	6,706.0	6,500.0	6,499.1	106.1	2.1	85.81	-6,939.2	-534.5	2,377.1	2,271.5	105.66	22.498	
12,500.0	6,705.4	6,500.0	6,499.1	107.9	2.1	85.81	-6,939.2	-534.5	2,311.0	2,203.4	107.53	21.492	
12,598.4	6,704.7	6,500.0	6,499.1	109.7	2.1	85.81	-6,939.2	-534.5	2,247.2	2,137.8	109.39	20.543	
12,600.0	6,704.7	6,500.0	6,499.1	109.8	2.1	85.81	-6,939.2	-534.5	2,246.2	2,136.8	109.42	20.528	
12,696.8	6,704.0	6,500.0	6,499.1	111.6	2.1	85.81	-6,939.2	-534.5	2,186.0	2,074.7	111.26	19.648	
12,700.0	6,704.0	6,500.0	6,499.1	111.6	2.1	85.81	-6,939.2	-534.5	2,184.0	2,072.7	111.32	19.620	
12,795.2	6,703.4	6,500.0	6,499.1	113.4	2.1	85.81	-6,939.2	-534.5	2,127.5	2,014.4	113.13	18.807	
12,800.0	6,703.3	6,500.0	6,499.1	113.5	2.1	85.81	-6,939.2	-534.5	2,124.8	2,011.6	113.22	18.768	
12,893.7	6,702.7	6,500.0	6,499.1	115.3	2.1	85.81	-6,939.2	-534.5	2,072.1	1,957.1	114.99	18.019	
12,900.0	6,702.7	6,500.0	6,499.1	115.4	2.1	85.81	-6,939.2	-534.5	2,068.7	1,953.6	115.11	17.971	
12,992.1	6,702.0	6,500.0	6,499.1	117.1	2.1	85.81	-6,939.2	-534.5	2,020.0	1,903.2	116.86	17.285	
13,000.0	6,702.0	6,500.0	6,499.1	117.3	2.1	85.81	-6,939.2	-534.5	2,016.0	1,899.0	117.01	17.229	
13,090.5	6,701.4	6,500.0	6,499.1	119.0	2.1	85.81	-6,939.2	-534.5	1,971.4	1,852.7	118.73	16.604	
13,100.0	6,701.3	6,500.0	6,499.1	119.1	2.1	85.81	-6,939.2	-534.5	1,967.0	1,848.0	118.91	16.541	
13,188.9	6,700.7	6,500.0	6,499.1	120.8	2.1	85.81	-6,939.2	-534.5	1,926.7	1,806.1	120.60	15.975	
13,200.0	6,700.6	6,500.0	6,499.1	121.0	2.1	85.81	-6,939.2	-534.5	1,921.9	1,801.1	120.81	15.908	
13,287.4	6,700.0	6,500.0	6,499.1	122.7	2.1	85.81	-6,939.2	-534.5	1,886.0	1,763.5	122.47	15.399	
13,300.0	6,699.9	6,500.0	6,499.1	122.9	2.1	85.81	-6,939.2	-534.5	1,881.1	1,758.3	122.71	15.329	
13,385.8	6,699.3	6,500.0	6,499.1	124.5	2.1	85.81	-6,939.2	-534.5	1,849.6	1,725.3	124.35	14.875	
13,400.0	6,699.3	6,500.0	6,499.1	124.8	2.1	85.81	-6,939.2	-534.5	1,844.8	1,720.1	124.62	14.803	
13,484.2	6,698.7	6,500.0	6,499.1	126.4	2.1	85.81	-6,939.2	-534.5	1,817.9	1,691.7	126.22	14.403	
13,500.0	6,698.6	6,500.0	6,499.1	126.7	2.1	85.81	-6,939.2	-534.5	1,813.2	1,686.7	126.52	14.332	
13,582.6	6,698.0	6,500.0	6,499.1	128.2	2.1	85.81	-6,939.2	-534.5	1,791.0	1,662.9	128.09	13.982	
13,600.0	6,697.9	6,500.0	6,499.1	128.5	2.1	85.81	-6,939.2	-534.5	1,786.8	1,658.4	128.42	13.913	
13,681.1	6,697.3	6,500.0	6,499.1	130.1	2.1	85.81	-6,939.2	-534.5	1,769.2	1,639.2	129.96	13.613	
13,700.0	6,697.2	6,500.0	6,499.1	130.4	2.1	85.81	-6,939.2	-534.5	1,765.6	1,635.3	130.32	13.548	
13,779.5	6,696.7	6,500.0	6,499.1	131.9	2.1	85.81	-6,939.2	-534.5	1,752.6	1,620.8	131.84	13.294	
13,800.0	6,696.5	6,500.0	6,499.1	132.3	2.1	85.81	-6,939.2	-534.5	1,749.9	1,617.6	132.23	13.234	
13,877.9	6,696.0	6,500.0	6,499.1	133.8	2.1	85.81	-6,939.2	-534.5	1,741.5	1,607.8	133.71	13.024	
13,900.0	6,695.8	6,500.0	6,499.1	134.2	2.1	85.81	-6,939.2	-534.5	1,739.8	1,605.6	134.13	12.971	
13,976.3	6,695.3	6,500.0	6,499.1	135.6	2.1	85.81	-6,939.2	-534.5	1,735.9	1,600.3	135.58	12.803	
14,000.0	6,695.2	6,500.0	6,499.1	136.1	2.1	85.81	-6,939.2	-534.5	1,735.4	1,599.3	136.03	12.757	
14,026.4	6,695.0	6,500.0	6,499.1	136.6	2.1	85.81	-6,939.2	-534.5	1,735.2	1,598.6	136.54	12.708 CC	
14,034.1	6,695.0	6,500.0	6,499.1	136.7	2.1	85.80	-6,939.2	-534.5	1,735.2	1,598.5	136.68	12.695 ES, SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	178.67	-6,240.7	144.5	6,242.8				
98.4	98.4	25.9	25.9	0.1	0.0	178.67	-6,240.7	144.5	6,242.4	6,242.3	0.09	N/A	
100.0	100.0	27.4	27.4	0.1	0.0	178.67	-6,240.7	144.5	6,242.4	6,242.3	0.09	N/A	
196.8	196.8	125.1	125.1	0.3	0.0	178.67	-6,240.7	144.6	6,242.4	6,242.0	0.35	N/A	
200.0	200.0	128.5	128.5	0.3	0.0	178.67	-6,240.7	144.6	6,242.4	6,242.0	0.36	N/A	
295.3	295.3	232.7	232.7	0.5	0.2	178.67	-6,240.6	144.6	6,242.3	6,241.6	0.71	8,815.123	
300.0	300.0	237.8	237.8	0.5	0.2	178.67	-6,240.6	144.6	6,242.3	6,241.6	0.72	8,626.056	
393.7	393.7	326.4	326.4	0.7	0.3	178.67	-6,240.4	144.6	6,242.1	6,241.1	1.00	6,214.915	
400.0	400.0	331.0	331.0	0.8	0.3	178.67	-6,240.4	144.5	6,242.1	6,241.1	1.02	6,117.553	
411.1	411.1	339.1	339.1	0.8	0.3	178.67	-6,240.4	144.5	6,242.1	6,241.1	1.05	5,952.766	
492.1	492.1	400.0	400.0	1.0	0.3	178.68	-6,240.6	144.1	6,242.3	6,241.0	1.25	4,975.428	
500.0	500.0	400.0	400.0	1.0	0.3	178.68	-6,240.6	144.1	6,242.3	6,241.0	1.27	4,906.234	
590.5	590.5	485.6	485.6	1.2	0.3	178.69	-6,241.0	143.1	6,242.7	6,241.2	1.54	4,062.909	
600.0	600.0	494.1	494.1	1.2	0.4	178.69	-6,241.0	143.0	6,242.7	6,241.2	1.56	3,992.106	
689.0	689.0	580.8	580.7	1.4	0.4	178.70	-6,241.5	141.7	6,243.2	6,241.4	1.82	3,436.422	
700.0	700.0	591.6	591.6	1.4	0.4	178.70	-6,241.6	141.6	6,243.3	6,241.5	1.85	3,378.231	
787.4	787.4	675.6	675.5	1.6	0.5	178.71	-6,242.1	140.3	6,243.8	6,241.7	2.09	2,987.331	
800.0	800.0	687.7	687.6	1.7	0.5	178.71	-6,242.2	140.1	6,243.9	6,241.8	2.12	2,938.444	
885.8	885.8	776.5	776.4	1.9	0.5	178.73	-6,242.8	138.9	6,244.5	6,242.1	2.36	2,643.595	
900.0	900.0	791.3	791.3	1.9	0.5	178.73	-6,242.9	138.7	6,244.5	6,242.1	2.40	2,600.592	
984.2	984.2	880.2	880.1	2.1	0.6	178.74	-6,243.4	137.7	6,245.0	6,242.4	2.63	2,373.103	
1,000.0	1,000.0	896.8	896.8	2.1	0.6	178.74	-6,243.5	137.5	6,245.1	6,242.4	2.67	2,334.983	
1,082.7	1,082.7	983.6	983.5	2.3	0.6	178.75	-6,243.9	136.5	6,245.5	6,242.6	2.90	2,154.851	
1,100.0	1,100.0	1,000.0	999.9	2.3	0.6	178.75	-6,244.0	136.3	6,245.6	6,242.6	2.94	2,121.155	
1,181.1	1,181.1	1,079.8	1,079.7	2.5	0.7	178.76	-6,244.4	135.4	6,245.9	6,242.8	3.16	1,976.370	
1,200.0	1,200.0	1,098.0	1,098.0	2.6	0.7	178.76	-6,244.5	135.2	6,246.0	6,242.8	3.21	1,945.535	
1,279.5	1,279.5	1,170.7	1,170.6	2.7	0.7	178.77	-6,244.9	134.3	6,246.4	6,243.0	3.42	1,827.388	
1,300.0	1,300.0	1,189.4	1,189.3	2.8	0.7	178.77	-6,245.0	134.0	6,246.6	6,243.1	3.47	1,799.282	
1,377.9	1,377.9	1,259.1	1,259.0	3.0	0.7	178.78	-6,245.5	133.2	6,247.1	6,243.4	3.67	1,700.711	
1,400.0	1,400.0	1,278.8	1,278.7	3.0	0.7	178.78	-6,245.6	133.0	6,247.3	6,243.5	3.73	1,674.818	
1,476.4	1,476.4	1,347.9	1,347.8	3.2	0.8	178.79	-6,246.2	132.2	6,247.9	6,244.0	3.93	1,591.316	
1,500.0	1,500.0	1,369.4	1,369.3	3.2	0.8	178.79	-6,246.4	132.0	6,248.1	6,244.1	3.99	1,567.211	
1,574.8	1,574.8	1,444.5	1,444.4	3.4	0.8	178.80	-6,247.2	131.3	6,248.8	6,244.7	4.18	1,494.867	
1,600.0	1,600.0	1,471.8	1,471.7	3.5	0.8	178.80	-6,247.4	131.1	6,249.1	6,244.8	4.25	1,471.810	
1,673.2	1,673.2	1,551.5	1,551.4	3.6	0.8	178.80	-6,248.1	130.4	6,249.7	6,245.3	4.44	1,408.665	
1,700.0	1,700.0	1,580.8	1,580.7	3.7	0.9	178.81	-6,248.4	130.1	6,249.9	6,245.4	4.51	1,386.909	
1,771.6	1,771.6	1,662.8	1,662.6	3.8	0.9	178.81	-6,248.9	129.4	6,250.4	6,245.7	4.69	1,331.535	
1,800.0	1,800.0	1,695.6	1,695.5	3.9	0.9	178.82	-6,249.1	129.2	6,250.5	6,245.8	4.77	1,310.786	
1,870.1	1,870.1	1,826.4	1,826.3	4.1	0.9	178.82	-6,249.1	128.9	6,250.5	6,245.6	4.94	1,266.067	
1,900.0	1,900.0	1,865.7	1,865.6	4.1	0.9	178.82	-6,248.9	129.1	6,250.4	6,245.4	5.01	1,246.947	
1,968.5	1,968.5	1,940.4	1,940.2	4.3	0.9	178.81	-6,248.4	129.6	6,249.9	6,244.7	5.18	1,206.198	
2,000.0	2,000.0	1,970.4	1,970.2	4.4	0.9	178.81	-6,248.2	129.8	6,249.7	6,244.4	5.26	1,188.598	
2,066.9	2,066.9	2,037.6	2,037.5	4.5	0.9	178.81	-6,247.7	130.3	6,249.2	6,243.8	5.42	1,152.701	
2,100.0	2,100.0	2,072.4	2,072.2	4.6	0.9	178.80	-6,247.5	130.5	6,249.0	6,243.5	5.50	1,135.686	
2,165.3	2,165.3	2,154.2	2,154.1	4.7	0.9	178.80	-6,246.8	130.8	6,248.5	6,242.8	5.67	1,102.892	
2,200.0	2,200.0	2,202.2	2,202.0	4.8	1.0	178.80	-6,246.3	130.7	6,248.1	6,242.3	5.75	1,086.024	
2,250.0	2,250.0	2,265.7	2,265.5	4.9	1.0	178.81	-6,245.5	130.2	6,247.5	6,241.6	5.88	1,061.620	
2,263.8	2,263.8	2,283.2	2,283.0	4.9	1.0	106.90	-6,245.2	130.0	6,247.3	6,241.4	5.87	1,063.506	
2,300.0	2,300.0	2,317.9	2,317.7	5.0	1.0	106.92	-6,244.7	129.6	6,246.8	6,240.9	5.96	1,048.158	
2,362.2	2,362.2	2,366.3	2,366.2	5.2	1.0	106.94	-6,244.1	129.1	6,246.5	6,240.4	6.10	1,024.025	
2,367.7	2,367.7	2,370.6	2,370.5	5.2	1.0	106.94	-6,244.1	129.0	6,246.5	6,240.4	6.11	1,021.938	
2,400.0	2,399.9	2,400.0	2,399.8	5.2	1.0	106.96	-6,243.7	128.7	6,246.6	6,240.4	6.19	1,009.775	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PJ #5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,460.6	2,460.4	2,451.8	2,451.7	5.4	1.0	106.98	-6,243.2	128.3	6,247.1	6,240.8	6.33	987.310	
2,500.0	2,499.7	2,488.8	2,488.6	5.4	1.0	107.00	-6,242.8	128.0	6,247.6	6,241.2	6.42	973.147	
2,559.0	2,558.5	2,541.5	2,541.4	5.6	1.1	107.02	-6,242.3	127.6	6,248.8	6,242.2	6.56	952.059	
2,600.0	2,599.1	2,577.6	2,577.4	5.7	1.1	107.04	-6,242.1	127.2	6,249.8	6,243.1	6.66	938.023	
2,657.5	2,656.1	2,626.8	2,626.6	5.8	1.1	107.07	-6,241.7	126.7	6,251.6	6,244.8	6.81	918.020	
2,700.0	2,698.2	2,662.3	2,662.1	5.9	1.1	107.09	-6,241.5	126.3	6,253.2	6,246.3	6.92	903.820	
2,755.9	2,753.3	2,710.0	2,709.8	6.1	1.1	107.12	-6,241.2	125.7	6,255.7	6,248.6	7.07	884.428	
2,800.0	2,796.6	2,751.2	2,751.0	6.2	1.1	107.15	-6,241.1	125.2	6,257.9	6,250.7	7.20	869.660	
2,854.3	2,849.9	2,800.0	2,799.8	6.3	1.1	107.18	-6,240.9	124.7	6,261.0	6,253.6	7.36	850.536	
2,900.0	2,894.4	2,843.6	2,843.4	6.5	1.1	107.21	-6,240.7	124.2	6,263.8	6,256.3	7.50	835.066	
2,952.7	2,945.7	2,891.8	2,891.6	6.6	1.2	107.24	-6,240.6	123.8	6,267.4	6,259.7	7.68	816.053	
3,000.0	2,991.5	2,929.5	2,929.3	6.8	1.2	107.26	-6,240.5	123.4	6,270.9	6,263.1	7.84	799.940	
3,051.2	3,040.8	2,968.8	2,968.6	7.0	1.2	107.28	-6,240.5	123.1	6,275.1	6,267.0	8.03	781.166	
3,100.0	3,087.6	3,000.0	2,999.8	7.1	1.2	107.27	-6,240.5	122.9	6,279.4	6,271.2	8.22	764.224	
3,149.6	3,134.9	3,031.2	3,031.0	7.4	1.2	107.26	-6,240.6	122.8	6,284.2	6,275.8	8.43	745.812	
3,200.0	3,182.7	3,058.3	3,058.1	7.6	1.2	107.24	-6,240.8	122.7	6,289.5	6,280.9	8.64	728.078	
3,248.0	3,228.0	3,100.0	3,099.8	7.8	1.2	107.26	-6,241.2	122.7	6,295.0	6,286.2	8.87	709.472	
3,300.0	3,276.6	3,116.9	3,116.7	8.1	1.2	107.19	-6,241.5	122.7	6,301.4	6,292.3	9.12	690.714	
3,346.4	3,319.9	3,152.6	3,152.4	8.3	1.2	107.18	-6,242.0	122.7	6,307.5	6,298.1	9.38	672.342	
3,400.0	3,369.4	3,200.0	3,199.8	8.6	1.2	107.20	-6,242.7	122.8	6,314.9	6,305.2	9.68	652.278	
3,444.9	3,410.5	3,462.1	3,461.9	8.9	1.3	108.02	-6,242.3	120.4	6,320.8	6,310.8	9.98	633.663	
3,500.0	3,460.7	3,521.7	3,521.5	9.2	1.3	108.11	-6,241.1	119.9	6,327.2	6,316.9	10.32	613.195	
3,543.3	3,499.8	3,549.2	3,549.0	9.5	1.3	108.11	-6,240.5	119.6	6,332.6	6,322.0	10.62	596.303	
3,600.0	3,550.6	3,584.9	3,584.6	9.9	1.3	108.11	-6,239.8	119.3	6,340.2	6,329.2	11.01	575.604	
3,641.7	3,587.6	3,612.0	3,611.7	10.3	1.3	108.11	-6,239.4	118.9	6,346.1	6,334.8	11.34	559.590	
3,709.9	3,647.5	3,658.2	3,657.9	10.8	1.3	108.10	-6,238.7	118.3	6,356.4	6,344.5	11.87	535.286	
3,740.1	3,673.9	3,678.5	3,678.2	11.1	1.3	108.19	-6,238.5	118.0	6,361.1	6,349.0	12.13	524.546	
3,800.0	3,726.2	3,726.1	3,725.8	11.6	1.4	108.40	-6,237.9	117.2	6,370.7	6,358.1	12.63	504.567	
3,838.6	3,759.9	3,762.3	3,762.0	11.9	1.4	108.56	-6,237.5	116.5	6,377.0	6,364.0	12.96	492.099	
3,900.0	3,813.5	3,800.0	3,799.7	12.5	1.4	108.72	-6,237.0	115.7	6,387.0	6,373.5	13.48	473.646	
3,937.0	3,845.8	3,825.3	3,825.0	12.8	1.4	108.84	-6,236.7	115.1	6,393.2	6,379.4	13.81	462.909	
4,000.0	3,900.8	3,852.7	3,852.3	13.4	1.4	108.96	-6,236.5	114.5	6,404.0	6,389.6	14.36	445.855	
4,035.4	3,931.7	3,868.1	3,867.8	13.7	1.4	109.02	-6,236.4	114.2	6,410.2	6,395.5	14.68	436.643	
4,100.0	3,988.1	3,900.0	3,899.6	14.3	1.4	109.16	-6,236.4	113.6	6,421.9	6,406.6	15.26	420.865	
4,133.8	4,017.6	3,900.0	3,899.6	14.7	1.4	109.16	-6,236.4	113.6	6,428.2	6,412.6	15.57	412.973	
4,200.0	4,075.4	3,947.0	3,946.6	15.3	1.4	109.36	-6,236.7	112.7	6,440.7	6,424.5	16.17	398.282	
4,232.3	4,103.5	3,963.6	3,963.2	15.6	1.4	109.44	-6,236.8	112.5	6,446.9	6,430.5	16.47	391.477	
4,300.0	4,162.6	4,000.0	3,999.6	16.2	1.4	109.59	-6,237.2	111.9	6,460.3	6,443.2	17.09	377.936	
4,330.7	4,189.4	4,000.0	3,999.6	16.5	1.4	109.59	-6,237.2	111.9	6,466.5	6,449.1	17.38	372.092	
4,400.0	4,249.9	4,055.0	4,054.6	17.2	1.4	109.83	-6,238.1	111.1	6,480.6	6,462.6	18.02	359.538	
4,429.1	4,275.4	4,071.5	4,071.1	17.5	1.4	109.90	-6,238.4	110.9	6,486.7	6,468.4	18.30	354.491	
4,500.0	4,337.2	4,100.0	4,099.6	18.2	1.5	110.02	-6,239.0	110.5	6,501.7	6,482.8	18.96	342.850	
4,527.5	4,361.3	4,129.0	4,128.5	18.5	1.5	110.14	-6,239.6	110.1	6,507.7	6,488.4	19.22	338.509	
4,600.0	4,424.5	4,172.5	4,172.0	19.2	1.5	110.32	-6,240.7	109.4	6,523.5	6,503.6	19.91	327.677	
4,626.0	4,447.2	4,200.0	4,199.6	19.5	1.5	110.44	-6,241.5	109.0	6,529.3	6,509.1	20.16	323.953	
4,700.0	4,511.8	4,241.2	4,240.7	20.2	1.5	110.61	-6,242.6	108.3	6,545.9	6,525.0	20.86	313.859	
4,724.4	4,533.1	4,259.8	4,259.3	20.5	1.5	110.69	-6,243.2	108.1	6,551.4	6,530.3	21.09	310.668	
4,796.7	4,596.3	4,315.3	4,314.8	21.2	1.5	110.92	-6,244.8	107.1	6,568.0	6,546.2	21.77	301.631	
4,800.0	4,599.1	4,317.8	4,317.3	21.2	1.5	110.95	-6,244.9	107.1	6,568.8	6,547.0	21.80	301.298	
4,822.8	4,619.1	4,335.8	4,335.3	21.4	1.5	111.12	-6,245.5	106.8	6,574.0	6,552.0	21.96	299.333	
4,900.0	4,687.3	4,400.0	4,399.4	22.0	1.5	111.71	-6,247.4	105.7	6,591.4	6,568.9	22.50	292.925	
4,921.2	4,706.2	4,400.0	4,399.4	22.2	1.5	111.80	-6,247.4	105.7	6,596.1	6,573.5	22.64	291.313	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,000.0	4,777.1	4,463.5	4,462.9	22.8	1.5	112.36	-6,249.5	104.6	6,613.2	6,590.1	23.16	285.565	
5,019.7	4,794.9	4,476.6	4,476.0	22.9	1.5	112.49	-6,250.0	104.4	6,617.4	6,594.2	23.28	284.274	
5,100.0	4,868.3	4,530.9	4,530.2	23.5	1.6	112.99	-6,252.0	103.5	6,634.3	6,610.6	23.77	279.148	
5,118.1	4,885.0	4,543.3	4,542.6	23.6	1.6	113.10	-6,252.5	103.3	6,638.1	6,614.2	23.87	278.119	
5,200.0	4,961.0	4,600.0	4,599.3	24.2	1.6	113.59	-6,254.8	102.3	6,654.6	6,630.3	24.32	273.579	
5,216.5	4,976.4	4,624.0	4,623.3	24.3	1.6	113.72	-6,255.7	101.9	6,657.8	6,633.4	24.41	272.783	
5,300.0	5,054.8	4,732.0	4,731.2	24.8	1.6	114.32	-6,259.9	100.7	6,673.5	6,648.6	24.83	268.809	
5,314.9	5,069.0	4,746.8	4,745.9	24.8	1.6	114.40	-6,260.4	100.5	6,676.1	6,651.2	24.89	268.185	
5,400.0	5,149.9	4,828.9	4,828.0	25.3	1.6	114.88	-6,263.4	99.8	6,690.8	6,665.5	25.28	264.672	
5,413.4	5,162.7	4,841.1	4,840.2	25.4	1.6	114.95	-6,263.9	99.7	6,693.0	6,667.7	25.33	264.192	
5,500.0	5,245.9	4,918.8	4,917.8	25.8	1.6	115.37	-6,266.7	99.0	6,706.9	6,681.2	25.69	261.110	
5,511.8	5,257.3	4,928.5	4,927.5	25.9	1.6	115.42	-6,267.1	99.0	6,708.7	6,682.9	25.73	260.751	
5,600.0	5,342.9	5,000.0	4,999.0	26.3	1.7	115.80	-6,269.8	98.3	6,721.7	6,695.6	26.04	258.079	
5,610.2	5,352.9	5,010.8	5,009.8	26.3	1.7	115.84	-6,270.2	98.2	6,723.1	6,697.0	26.08	257.818	
5,700.0	5,440.7	5,091.2	5,090.1	26.7	1.7	116.19	-6,273.5	97.5	6,735.2	6,708.8	26.36	255.521	
5,708.6	5,449.1	5,246.9	5,245.8	26.7	1.7	116.45	-6,278.0	95.8	6,736.2	6,709.8	26.38	255.311	
5,800.0	5,539.1	5,377.9	5,376.7	27.0	1.7	116.79	-6,279.7	94.5	6,744.7	6,718.0	26.63	253.256	
5,807.1	5,546.1	5,384.8	5,383.6	27.0	1.7	116.81	-6,279.8	94.5	6,745.3	6,718.6	26.65	253.125	
5,900.0	5,638.1	5,464.3	5,463.1	27.3	1.8	117.02	-6,280.9	94.3	6,752.5	6,725.7	26.86	251.357	
5,905.5	5,643.5	5,468.9	5,467.7	27.3	1.8	117.03	-6,281.0	94.3	6,752.9	6,726.1	26.87	251.273	
6,000.0	5,737.5	5,559.9	5,558.6	27.5	1.8	117.21	-6,282.5	94.6	6,759.0	6,732.0	27.06	249.777	
6,003.9	5,741.4	5,564.0	5,562.7	27.5	1.8	117.22	-6,282.6	94.6	6,759.3	6,732.2	27.07	249.728	
6,100.0	5,837.2	5,661.7	5,660.5	27.7	1.8	117.34	-6,284.3	95.6	6,763.9	6,736.7	27.22	248.477	
6,102.3	5,839.6	5,664.1	5,662.8	27.7	1.8	117.34	-6,284.3	95.7	6,764.0	6,736.8	27.22	248.454	
6,200.0	5,937.2	5,767.7	5,766.4	27.9	1.8	117.41	-6,286.1	96.9	6,767.1	6,739.8	27.35	247.423	
6,200.8	5,937.9	5,768.5	5,767.2	27.9	1.8	117.42	-6,286.1	97.0	6,767.2	6,739.8	27.35	247.417	
6,256.6	5,993.8	5,823.7	5,822.5	27.9	1.8	-170.66	-6,287.1	97.7	6,768.2	6,740.8	27.41	246.944	
6,286.6	6,023.8	5,850.0	5,848.7	27.9	1.8	-170.66	-6,287.5	98.0	6,768.7	6,741.2	27.44	246.633	
6,299.2	6,036.4	5,861.0	5,859.7	27.9	1.8	9.33	-6,287.7	98.2	6,768.7	6,741.3	27.44	246.701	
6,300.0	6,037.2	5,861.7	5,860.4	27.9	1.8	9.33	-6,287.7	98.2	6,768.7	6,741.3	27.44	246.706	
6,350.0	6,087.1	5,907.4	5,906.1	28.0	1.8	9.36	-6,288.6	98.8	6,766.9	6,739.5	27.38	247.113	
6,397.6	6,134.3	5,963.8	5,962.5	28.0	1.8	9.42	-6,289.6	99.5	6,761.9	6,734.6	27.30	247.653	
6,400.0	6,136.7	5,966.6	5,965.3	28.0	1.8	9.43	-6,289.6	99.5	6,761.6	6,734.3	27.30	247.687	
6,450.0	6,185.7	6,024.1	6,022.8	28.0	1.8	9.55	-6,290.5	100.2	6,752.8	6,725.6	27.17	248.584	
6,496.0	6,230.2	6,075.0	6,073.6	28.0	1.8	9.72	-6,291.3	100.8	6,741.7	6,714.7	26.99	249.827	
6,500.0	6,234.0	6,079.3	6,077.9	28.0	1.8	9.74	-6,291.4	100.9	6,740.6	6,713.6	26.97	249.959	
6,550.0	6,281.3	6,137.5	6,136.2	28.0	1.8	9.98	-6,292.2	101.5	6,725.1	6,698.4	26.69	251.935	
6,594.5	6,322.2	6,190.2	6,188.9	27.9	1.8	10.26	-6,292.8	102.1	6,708.4	6,682.0	26.38	254.292	
6,600.0	6,327.3	6,196.7	6,195.3	27.9	1.8	10.30	-6,292.9	102.1	6,706.2	6,679.8	26.34	254.634	
6,650.0	6,371.8	6,235.1	6,233.7	27.9	1.8	10.69	-6,293.3	102.5	6,684.2	6,658.3	25.88	258.296	
6,692.9	6,408.6	6,266.0	6,264.7	27.9	1.8	11.08	-6,293.7	102.8	6,662.9	6,637.5	25.41	262.214	
6,700.0	6,414.6	6,271.0	6,269.7	27.8	1.8	11.15	-6,293.7	102.8	6,659.2	6,633.8	25.33	262.944	
6,750.0	6,455.5	6,306.9	6,305.5	27.8	1.9	11.72	-6,294.2	103.2	6,631.3	6,606.6	24.68	268.664	
6,791.3	6,487.7	6,340.9	6,339.5	27.7	1.9	12.29	-6,294.7	103.6	6,606.2	6,582.1	24.09	274.220	
6,800.0	6,494.3	6,347.8	6,346.4	27.7	1.9	12.43	-6,294.8	103.6	6,600.7	6,576.7	23.96	275.509	
6,850.0	6,530.8	6,386.4	6,385.0	27.7	1.9	13.28	-6,295.3	104.1	6,567.4	6,544.3	23.15	283.656	
6,889.7	6,558.1	6,419.1	6,417.7	27.6	1.9	14.10	-6,295.7	104.4	6,539.2	6,516.8	22.47	291.074	
6,900.0	6,564.9	6,428.0	6,426.6	27.6	1.9	14.34	-6,295.8	104.5	6,531.7	6,509.4	22.28	293.155	
6,950.0	6,596.3	6,469.6	6,468.2	27.6	1.9	15.66	-6,296.3	105.0	6,493.7	6,472.3	21.35	304.142	
6,988.2	6,618.4	6,475.0	6,473.6	27.5	1.9	16.81	-6,296.3	105.1	6,463.2	6,442.6	20.59	313.895	
7,000.0	6,624.9	6,475.0	6,473.6	27.5	1.9	17.20	-6,296.3	105.1	6,453.6	6,433.2	20.35	317.194	
7,050.0	6,650.6	6,475.0	6,473.6	27.5	1.9	19.11	-6,296.3	105.1	6,411.7	6,392.4	19.32	331.888	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PJ #5 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
7,086.6	6,667.5	6,475.0	6,473.6	27.5	1.9	20.85	-6,296.3	105.1	6,380.0	6,361.4	18.58	343.298		
7,100.0	6,673.3	6,475.0	6,473.6	27.5	1.9	21.57	-6,296.3	105.1	6,368.2	6,349.9	18.31	347.754		
7,150.0	6,692.7	6,475.0	6,473.6	27.5	1.9	24.79	-6,296.3	105.1	6,323.3	6,305.9	17.39	363.704		
7,185.0	6,704.4	6,475.0	6,473.6	27.5	1.9	27.70	-6,296.3	105.1	6,291.0	6,274.3	16.79	374.793		
7,200.0	6,709.0	6,475.0	6,473.6	27.5	1.9	29.15	-6,296.3	105.1	6,277.1	6,260.5	16.64	377.293		
7,250.0	6,721.8	6,475.0	6,473.6	27.5	1.9	35.25	-6,296.3	105.1	6,229.9	6,213.7	16.23	383.940		
7,283.4	6,728.6	6,475.0	6,473.6	27.5	1.9	40.76	-6,296.3	105.1	6,197.9	6,181.6	16.25	381.463		
7,300.0	6,731.3	6,475.0	6,473.6	27.6	1.9	44.05	-6,296.3	105.1	6,181.9	6,165.5	16.37	377.667		
7,350.0	6,737.3	6,475.0	6,473.6	27.7	1.9	56.96	-6,296.3	105.1	6,133.3	6,116.1	17.20	356.551		
7,381.9	6,739.4	6,475.0	6,473.6	27.7	1.9	67.90	-6,296.3	105.1	6,102.0	6,084.0	18.00	338.958		
7,400.0	6,739.9	6,475.0	6,473.6	27.8	1.9	75.04	-6,296.3	105.1	6,084.2	6,065.8	18.49	329.118		
7,416.5	6,740.0	6,475.0	6,473.6	27.8	1.9	81.98	-6,296.3	105.1	6,068.0	6,049.0	18.98	319.749		
7,480.3	6,739.5	6,475.0	6,473.6	28.0	1.9	81.98	-6,296.3	105.1	6,005.3	5,985.8	19.50	308.025		
7,500.0	6,739.4	6,475.0	6,473.6	28.1	1.9	81.98	-6,296.3	105.1	5,985.9	5,966.3	19.66	304.530		
7,578.7	6,738.9	6,475.0	6,473.6	28.5	1.9	81.98	-6,296.3	105.1	5,908.6	5,888.2	20.41	289.463		
7,600.0	6,738.7	6,475.0	6,473.6	28.6	1.9	81.98	-6,296.3	105.1	5,887.7	5,867.1	20.62	285.582		
7,677.1	6,738.2	6,475.0	6,473.6	29.1	1.9	81.98	-6,296.3	105.1	5,811.9	5,790.4	21.46	270.778		
7,700.0	6,738.1	6,475.0	6,473.6	29.2	1.9	81.98	-6,296.3	105.1	5,789.5	5,767.7	21.71	266.617		
7,775.6	6,737.5	6,475.0	6,473.6	29.7	1.9	81.98	-6,296.3	105.1	5,715.3	5,692.7	22.63	252.527		
7,800.0	6,737.4	6,475.0	6,473.6	29.9	1.9	81.98	-6,296.3	105.1	5,691.3	5,668.4	22.93	248.217		
7,874.0	6,736.9	6,475.0	6,473.6	30.6	1.9	81.98	-6,296.3	105.1	5,618.7	5,594.8	23.90	235.098		
7,900.0	6,736.7	6,475.0	6,473.6	30.8	1.9	81.98	-6,296.3	105.1	5,593.2	5,569.0	24.24	230.740		
7,972.4	6,736.2	6,475.0	6,473.6	31.5	1.9	81.98	-6,296.3	105.1	5,522.3	5,497.0	25.25	218.710		
8,000.0	6,736.0	6,475.0	6,473.6	31.8	1.9	81.98	-6,296.3	105.1	5,495.2	5,469.6	25.63	214.381		
8,070.8	6,735.5	6,475.0	6,473.6	32.5	1.9	81.98	-6,296.3	105.1	5,425.8	5,399.2	26.67	203.460		
8,100.0	6,735.3	6,475.0	6,473.6	32.8	1.9	81.98	-6,296.3	105.1	5,397.3	5,370.2	27.09	199.212		
8,169.3	6,734.9	6,475.0	6,473.6	33.6	1.9	81.98	-6,296.3	105.1	5,329.5	5,301.4	28.14	189.364		
8,200.0	6,734.6	6,475.0	6,473.6	34.0	1.9	81.98	-6,296.3	105.1	5,299.5	5,270.8	28.61	185.231		
8,267.7	6,734.2	6,475.0	6,473.6	34.8	1.9	81.98	-6,296.3	105.1	5,233.3	5,203.6	29.67	176.387		
8,300.0	6,734.0	6,475.0	6,473.6	35.2	1.9	81.98	-6,296.3	105.1	5,201.7	5,171.5	30.17	172.389		
8,366.1	6,733.5	6,475.0	6,473.6	36.1	1.9	81.98	-6,296.3	105.1	5,137.1	5,105.8	31.23	164.466		
8,400.0	6,733.3	6,475.0	6,473.6	36.5	1.9	81.98	-6,296.3	105.1	5,104.0	5,072.2	31.78	160.614		
8,464.5	6,732.8	6,475.0	6,473.6	37.4	1.9	81.98	-6,296.3	105.1	5,041.0	5,008.1	32.84	153.523		
8,500.0	6,732.6	6,475.0	6,473.6	37.9	1.9	81.98	-6,296.3	105.1	5,006.4	4,973.0	33.42	149.821		
8,563.0	6,732.2	6,475.0	6,473.6	38.8	1.9	81.98	-6,296.3	105.1	4,945.0	4,910.5	34.47	143.477		
8,600.0	6,731.9	6,475.0	6,473.6	39.3	1.9	81.98	-6,296.3	105.1	4,908.9	4,873.8	35.08	139.925		
8,661.4	6,731.5	6,475.0	6,473.6	40.2	1.9	81.98	-6,296.3	105.1	4,849.1	4,813.0	36.12	134.246		
8,700.0	6,731.2	6,475.0	6,473.6	40.8	1.9	81.98	-6,296.3	105.1	4,811.5	4,774.7	36.77	130.842		
8,759.8	6,730.8	6,475.0	6,473.6	41.7	1.9	81.98	-6,296.3	105.1	4,753.3	4,715.5	37.80	125.755		
8,800.0	6,730.6	6,475.0	6,473.6	42.3	1.9	81.98	-6,296.3	105.1	4,714.2	4,675.7	38.49	122.492		
8,858.2	6,730.2	6,475.0	6,473.6	43.2	1.9	81.98	-6,296.3	105.1	4,657.6	4,618.1	39.49	117.932		
8,900.0	6,729.9	6,475.0	6,473.6	43.8	1.9	81.98	-6,296.3	105.1	4,617.0	4,576.8	40.22	114.805		
8,956.7	6,729.5	6,475.0	6,473.6	44.7	1.9	81.98	-6,296.3	105.1	4,562.0	4,520.8	41.21	110.711		
9,000.0	6,729.2	6,475.0	6,473.6	45.4	1.9	81.98	-6,296.3	105.1	4,520.0	4,478.0	41.96	107.713		
9,055.1	6,728.8	6,475.0	6,473.6	46.3	1.9	81.98	-6,296.3	105.1	4,466.6	4,423.6	42.93	104.035		
9,100.0	6,728.5	6,475.0	6,473.6	47.0	1.9	81.98	-6,296.3	105.1	4,423.1	4,379.4	43.72	101.159		
9,153.5	6,728.2	6,475.0	6,473.6	47.9	1.9	81.98	-6,296.3	105.1	4,371.3	4,326.6	44.67	97.850		
9,200.0	6,727.8	6,475.0	6,473.6	48.6	1.9	81.98	-6,296.3	105.1	4,326.3	4,280.8	45.50	95.090		
9,251.9	6,727.5	6,475.0	6,473.6	49.5	1.9	81.98	-6,296.3	105.1	4,276.1	4,229.7	46.42	92.110		
9,300.0	6,727.2	6,475.0	6,473.6	50.3	1.9	81.98	-6,296.3	105.1	4,229.7	4,182.4	47.28	89.459		
9,350.4	6,726.8	6,475.0	6,473.6	51.1	1.9	81.98	-6,296.3	105.1	4,181.1	4,132.9	48.18	86.773		
9,400.0	6,726.5	6,475.0	6,473.6	51.9	1.9	81.98	-6,296.3	105.1	4,133.2	4,084.1	49.07	84.224		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PJ #5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,448.8	6,726.1	6,475.0	6,473.6	52.7	1.9	81.98	-6,296.3	105.1	4,086.2	4,036.2	49.95	81.800	
9,500.0	6,725.8	6,475.0	6,473.6	53.6	1.9	81.98	-6,296.3	105.1	4,036.9	3,986.0	50.88	79.348	
9,547.2	6,725.5	6,475.0	6,473.6	54.4	1.9	81.98	-6,296.3	105.1	3,991.5	3,939.8	51.73	77.160	
9,600.0	6,725.1	6,475.0	6,473.6	55.3	1.9	81.98	-6,296.3	105.1	3,940.8	3,888.1	52.69	74.799	
9,645.6	6,724.8	6,475.0	6,473.6	56.1	1.9	81.98	-6,296.3	105.1	3,897.0	3,843.5	53.51	72.821	
9,700.0	6,724.4	6,475.0	6,473.6	57.0	1.9	81.98	-6,296.3	105.1	3,844.9	3,790.4	54.50	70.546	
9,744.1	6,724.1	6,475.0	6,473.6	57.8	1.9	81.98	-6,296.3	105.1	3,802.7	3,747.4	55.31	68.758	
9,800.0	6,723.8	6,475.0	6,473.6	58.7	1.9	81.98	-6,296.3	105.1	3,749.2	3,692.9	56.32	66.564	
9,842.5	6,723.5	6,475.0	6,473.6	59.5	1.9	81.98	-6,296.3	105.1	3,708.6	3,651.5	57.10	64.948	
9,900.0	6,723.1	6,475.0	6,473.6	60.5	1.9	81.98	-6,296.3	105.1	3,653.7	3,595.6	58.15	62.830	
9,940.9	6,722.8	6,475.0	6,473.6	61.2	1.9	81.98	-6,296.3	105.1	3,614.7	3,555.8	58.90	61.368	
10,000.0	6,722.4	6,475.0	6,473.6	62.2	1.9	81.98	-6,296.3	105.1	3,558.5	3,498.5	59.99	59.323	
10,039.3	6,722.1	6,475.0	6,473.6	62.9	1.9	81.98	-6,296.3	105.1	3,521.1	3,460.4	60.71	58.000	
10,100.0	6,721.7	6,475.0	6,473.6	64.0	1.9	81.98	-6,296.3	105.1	3,463.6	3,401.7	61.82	56.023	
10,137.8	6,721.5	6,475.0	6,473.6	64.7	1.9	81.98	-6,296.3	105.1	3,427.8	3,365.2	62.52	54.827	
10,200.0	6,721.0	6,475.0	6,473.6	65.8	1.9	81.98	-6,296.3	105.1	3,368.9	3,305.2	63.67	52.916	
10,236.2	6,720.8	6,475.0	6,473.6	66.4	1.9	81.98	-6,296.3	105.1	3,334.7	3,270.4	64.33	51.835	
10,300.0	6,720.4	6,475.0	6,473.6	67.5	1.9	81.98	-6,296.3	105.1	3,274.6	3,209.1	65.51	49.985	
10,334.6	6,720.1	6,475.0	6,473.6	68.2	1.9	81.98	-6,296.3	105.1	3,242.0	3,175.8	66.15	49.009	
10,400.0	6,719.7	6,475.0	6,473.6	69.3	1.9	81.98	-6,296.3	105.1	3,180.6	3,113.2	67.36	47.217	
10,433.0	6,719.4	6,475.0	6,473.6	69.9	1.9	81.98	-6,296.3	105.1	3,149.6	3,081.6	67.97	46.336	
10,500.0	6,719.0	6,475.0	6,473.6	71.1	1.9	81.98	-6,296.3	105.1	3,087.0	3,017.7	69.21	44.601	
10,531.5	6,718.8	6,475.0	6,473.6	71.7	1.9	81.98	-6,296.3	105.1	3,057.6	2,987.8	69.80	43.807	
10,600.0	6,718.3	6,475.0	6,473.6	72.9	1.9	81.98	-6,296.3	105.1	2,993.8	2,922.7	71.07	42.125	
10,629.9	6,718.1	6,475.0	6,473.6	73.4	1.9	81.98	-6,296.3	105.1	2,966.0	2,894.3	71.62	41.411	
10,700.0	6,717.6	6,475.0	6,473.6	74.7	1.9	81.98	-6,296.3	105.1	2,901.0	2,828.1	72.93	39.780	
10,728.3	6,717.4	6,475.0	6,473.6	75.2	1.9	81.98	-6,296.3	105.1	2,874.8	2,801.4	73.45	39.138	
10,800.0	6,717.0	6,475.0	6,473.6	76.5	1.9	81.98	-6,296.3	105.1	2,808.8	2,734.0	74.79	37.557	
10,826.7	6,716.8	6,475.0	6,473.6	77.0	1.9	81.98	-6,296.3	105.1	2,784.2	2,708.9	75.28	36.982	
10,900.0	6,716.3	6,475.0	6,473.6	78.3	1.9	81.98	-6,296.3	105.1	2,717.1	2,640.4	76.65	35.448	
10,925.2	6,716.1	6,475.0	6,473.6	78.8	1.9	81.98	-6,296.3	105.1	2,694.1	2,616.9	77.12	34.934	
11,000.0	6,715.6	6,475.0	6,473.6	80.2	1.9	81.98	-6,296.3	105.1	2,626.0	2,547.4	78.51	33.446	
11,023.6	6,715.4	6,475.0	6,473.6	80.6	1.9	81.98	-6,296.3	105.1	2,604.5	2,525.6	78.95	32.988	
11,100.0	6,714.9	6,475.0	6,473.6	82.0	1.9	81.98	-6,296.3	105.1	2,535.5	2,455.1	80.38	31.544	
11,122.0	6,714.8	6,475.0	6,473.6	82.4	1.9	81.98	-6,296.3	105.1	2,515.7	2,434.9	80.79	31.138	
11,200.0	6,714.2	6,475.0	6,473.6	83.8	1.9	81.98	-6,296.3	105.1	2,445.8	2,363.6	82.25	29.737	
11,220.4	6,714.1	6,475.0	6,473.6	84.2	1.9	81.98	-6,296.3	105.1	2,427.6	2,345.0	82.63	29.378	
11,300.0	6,713.5	6,475.0	6,473.6	85.7	1.9	81.98	-6,296.3	105.1	2,357.0	2,272.9	84.12	28.019	
11,318.9	6,713.4	6,475.0	6,473.6	86.0	1.9	81.98	-6,296.3	105.1	2,340.3	2,255.9	84.47	27.705	
11,400.0	6,712.9	6,475.0	6,473.6	87.5	1.9	81.98	-6,296.3	105.1	2,269.1	2,183.1	85.99	26.387	
11,417.3	6,712.7	6,475.0	6,473.6	87.8	1.9	81.98	-6,296.3	105.1	2,254.0	2,167.6	86.32	26.113	
11,500.0	6,712.2	6,475.0	6,473.6	89.3	1.9	81.98	-6,296.3	105.1	2,182.2	2,094.3	87.87	24.835	
11,515.7	6,712.1	6,475.0	6,473.6	89.6	1.9	81.98	-6,296.3	105.1	2,168.6	2,080.5	88.16	24.599	
11,600.0	6,711.5	6,475.0	6,473.6	91.2	1.9	81.98	-6,296.3	105.1	2,096.5	2,006.7	89.74	23.361	
11,614.1	6,711.4	6,475.0	6,473.6	91.4	1.9	81.98	-6,296.3	105.1	2,084.5	1,994.4	90.01	23.159	
11,700.0	6,710.8	6,475.0	6,473.6	93.0	1.9	81.98	-6,296.3	105.1	2,012.1	1,920.5	91.62	21.962	
11,712.6	6,710.7	6,475.0	6,473.6	93.3	1.9	81.98	-6,296.3	105.1	2,001.6	1,909.7	91.85	21.791	
11,800.0	6,710.1	6,475.0	6,473.6	94.9	1.9	81.98	-6,296.3	105.1	1,929.2	1,835.7	93.49	20.634	
11,811.0	6,710.1	6,475.0	6,473.6	95.1	1.9	81.98	-6,296.3	105.1	1,920.2	1,826.5	93.70	20.492	
11,900.0	6,709.5	6,475.0	6,473.6	96.7	1.9	81.98	-6,296.3	105.1	1,848.0	1,752.6	95.37	19.376	
11,909.4	6,709.4	6,475.0	6,473.6	96.9	1.9	81.98	-6,296.3	105.1	1,840.4	1,744.9	95.55	19.261	
12,000.0	6,708.8	6,475.0	6,473.6	98.6	1.9	81.98	-6,296.3	105.1	1,768.7	1,671.4	97.25	18.186	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PJ #5 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,708.7	6,475.0	6,473.6	98.7	1.9	81.98	-6,296.3	105.1	1,762.6	1,665.2	97.40	18.096	
12,100.0	6,708.1	6,475.0	6,473.6	100.4	1.9	81.98	-6,296.3	105.1	1,691.6	1,592.5	99.13	17.064	
12,106.3	6,708.1	6,475.0	6,473.6	100.6	1.9	81.98	-6,296.3	105.1	1,686.9	1,587.6	99.25	16.996	
12,200.0	6,707.4	6,475.0	6,473.6	102.3	1.9	81.98	-6,296.3	105.1	1,617.0	1,516.0	101.02	16.008	
12,204.7	6,707.4	6,475.0	6,473.6	102.4	1.9	81.98	-6,296.3	105.1	1,613.6	1,512.5	101.10	15.960	
12,300.0	6,706.7	6,475.0	6,473.6	104.2	1.9	81.98	-6,296.3	105.1	1,545.3	1,442.4	102.90	15.018	
12,303.1	6,706.7	6,475.0	6,473.6	104.2	1.9	81.98	-6,296.3	105.1	1,543.1	1,440.2	102.96	14.988	
12,400.0	6,706.1	6,475.0	6,473.6	106.0	1.9	81.98	-6,296.3	105.1	1,476.9	1,372.2	104.78	14.095	
12,401.5	6,706.0	6,475.0	6,473.6	106.1	1.9	81.98	-6,296.3	105.1	1,475.9	1,371.1	104.81	14.081	
12,500.0	6,705.4	6,475.0	6,473.6	107.9	1.9	81.98	-6,296.3	105.1	1,412.3	1,305.6	106.67	13.240	
12,598.4	6,704.7	6,475.0	6,473.6	109.7	1.9	81.98	-6,296.3	105.1	1,352.9	1,244.4	108.52	12.467	
12,600.0	6,704.7	6,475.0	6,473.6	109.8	1.9	81.98	-6,296.3	105.1	1,352.0	1,243.4	108.55	12.455	
12,696.8	6,704.0	6,475.0	6,473.6	111.6	1.9	81.98	-6,296.3	105.1	1,298.3	1,187.9	110.38	11.762	
12,700.0	6,704.0	6,475.0	6,473.6	111.6	1.9	81.98	-6,296.3	105.1	1,296.6	1,186.1	110.44	11.740	
12,795.2	6,703.4	6,475.0	6,473.6	113.4	1.9	81.98	-6,296.3	105.1	1,249.0	1,136.7	112.24	11.128	
12,800.0	6,703.3	6,475.0	6,473.6	113.5	1.9	81.98	-6,296.3	105.1	1,246.8	1,134.4	112.32	11.100	
12,893.7	6,702.7	6,475.0	6,473.6	115.3	1.9	81.98	-6,296.3	105.1	1,205.7	1,091.7	114.09	10.568	
12,900.0	6,702.7	6,475.0	6,473.6	115.4	1.9	81.98	-6,296.3	105.1	1,203.2	1,089.0	114.21	10.535	
12,992.1	6,702.0	6,475.0	6,473.6	117.1	1.9	81.98	-6,296.3	105.1	1,169.2	1,053.3	115.95	10.084	
13,000.0	6,702.0	6,475.0	6,473.6	117.3	1.9	81.98	-6,296.3	105.1	1,166.6	1,050.5	116.10	10.048	
13,090.5	6,701.4	6,475.0	6,473.6	119.0	1.9	81.98	-6,296.3	105.1	1,140.0	1,022.2	117.81	9.677	
13,100.0	6,701.3	6,475.0	6,473.6	119.1	1.9	81.98	-6,296.3	105.1	1,137.6	1,019.6	117.99	9.642	
13,188.9	6,700.7	6,475.0	6,473.6	120.8	1.9	81.98	-6,296.3	105.1	1,118.8	999.1	119.67	9.349	
13,200.0	6,700.6	6,475.0	6,473.6	121.0	1.9	81.98	-6,296.3	105.1	1,116.9	997.0	119.88	9.317	
13,287.4	6,700.0	6,475.0	6,473.6	122.7	1.9	81.98	-6,296.3	105.1	1,105.9	984.4	121.53	9.100	
13,300.0	6,699.9	6,475.0	6,473.6	122.9	1.9	81.98	-6,296.3	105.1	1,104.9	983.1	121.77	9.074	
13,383.7	6,699.4	6,475.0	6,473.6	124.5	1.9	81.98	-6,296.3	105.1	1,101.7	978.3	123.35	8.931 CC	
13,385.8	6,699.3	6,475.0	6,473.6	124.5	1.9	81.98	-6,296.3	105.1	1,101.7	978.3	123.39	8.929	
13,400.0	6,699.3	6,475.0	6,473.6	124.8	1.9	81.98	-6,296.3	105.1	1,101.8	978.2	123.66	8.910 ES	
13,484.2	6,698.7	6,475.0	6,473.6	126.4	1.9	81.98	-6,296.3	105.1	1,106.3	981.0	125.25	8.832	
13,500.0	6,698.6	6,475.0	6,473.6	126.7	1.9	81.98	-6,296.3	105.1	1,107.8	982.3	125.55	8.824	
13,582.6	6,698.0	6,475.0	6,473.6	128.2	1.9	81.98	-6,296.3	105.1	1,119.5	992.4	127.11	8.807 SF	
13,600.0	6,697.9	6,475.0	6,473.6	128.5	1.9	81.98	-6,296.3	105.1	1,122.7	995.3	127.44	8.810	
13,681.1	6,697.3	6,475.0	6,473.6	130.1	1.9	81.98	-6,296.3	105.1	1,141.1	1,012.2	128.97	8.848	
13,700.0	6,697.2	6,475.0	6,473.6	130.4	1.9	81.98	-6,296.3	105.1	1,146.2	1,016.9	129.33	8.863	
13,779.5	6,696.7	6,475.0	6,473.6	131.9	1.9	81.98	-6,296.3	105.1	1,170.6	1,039.8	130.84	8.947	
13,800.0	6,696.5	6,475.0	6,473.6	132.3	1.9	81.98	-6,296.3	105.1	1,177.7	1,046.5	131.22	8.975	
13,877.9	6,696.0	6,475.0	6,473.6	133.8	1.9	81.98	-6,296.3	105.1	1,207.5	1,074.8	132.70	9.099	
13,900.0	6,695.8	6,475.0	6,473.6	134.2	1.9	81.98	-6,296.3	105.1	1,216.7	1,083.6	133.12	9.140	
13,976.3	6,695.3	6,475.0	6,473.6	135.6	1.9	81.98	-6,296.3	105.1	1,251.0	1,116.4	134.56	9.297	
14,000.0	6,695.2	6,475.0	6,473.6	136.1	1.9	81.98	-6,296.3	105.1	1,262.4	1,127.4	135.01	9.350	
14,034.1	6,695.0	6,475.0	6,473.6	136.7	1.9	81.97	-6,296.3	105.1	1,279.3	1,143.7	135.65	9.431	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PLUMB #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-176.14	-5,454.9	-368.4	5,467.7				
98.4	98.4	28.5	28.5	0.1	0.0	-176.14	-5,454.9	-368.4	5,467.3	5,467.2	0.09	N/A	
100.0	100.0	30.1	30.1	0.1	0.0	-176.14	-5,454.9	-368.4	5,467.3	5,467.2	0.09	N/A	
196.8	196.8	131.3	131.3	0.3	0.1	-176.14	-5,454.9	-368.1	5,467.3	5,466.9	0.37	N/A	
200.0	200.0	135.0	134.9	0.3	0.1	-176.14	-5,454.9	-368.1	5,467.3	5,466.9	0.39	N/A	
295.3	295.3	247.1	247.1	0.5	0.2	-176.14	-5,454.6	-367.7	5,467.0	5,466.3	0.77	7,106.821	
300.0	300.0	252.9	252.9	0.5	0.3	-176.14	-5,454.6	-367.7	5,467.0	5,466.2	0.78	6,965.521	
393.7	393.7	360.1	360.0	0.7	0.3	-176.15	-5,454.0	-367.3	5,466.5	5,465.4	1.08	5,078.173	
400.0	400.0	366.9	366.9	0.8	0.3	-176.15	-5,454.0	-367.3	5,466.4	5,465.4	1.10	4,991.132	
492.1	492.1	461.4	461.4	1.0	0.4	-176.15	-5,453.3	-367.1	5,465.8	5,464.4	1.36	4,021.045	
500.0	500.0	469.2	469.2	1.0	0.4	-176.15	-5,453.3	-367.1	5,465.7	5,464.4	1.38	3,956.565	
590.5	590.5	556.6	556.6	1.2	0.5	-176.15	-5,452.7	-366.9	5,465.1	5,463.5	1.63	3,351.426	
600.0	600.0	565.6	565.6	1.2	0.5	-176.15	-5,452.6	-366.8	5,465.0	5,463.4	1.66	3,299.347	
689.0	689.0	647.5	647.5	1.4	0.5	-176.15	-5,452.1	-366.7	5,464.5	5,462.6	1.89	2,883.727	
700.0	700.0	657.4	657.4	1.4	0.5	-176.15	-5,452.1	-366.6	5,464.5	5,462.5	1.92	2,839.864	
787.4	787.4	736.3	736.3	1.6	0.6	-176.15	-5,451.7	-366.5	5,464.1	5,461.9	2.15	2,535.944	
800.0	800.0	747.8	747.7	1.7	0.6	-176.15	-5,451.7	-366.4	5,464.0	5,461.9	2.19	2,497.690	
885.8	885.8	824.7	824.7	1.9	0.6	-176.16	-5,451.5	-366.2	5,463.8	5,461.4	2.41	2,266.783	
900.0	900.0	837.2	837.1	1.9	0.6	-176.16	-5,451.5	-366.2	5,463.8	5,461.4	2.45	2,233.273	
957.5	957.5	887.5	887.5	2.0	0.6	-176.16	-5,451.5	-366.1	5,463.8	5,461.2	2.59	2,106.900	
984.2	984.2	911.6	911.6	2.1	0.6	-176.16	-5,451.5	-366.0	5,463.8	5,461.1	2.66	2,052.304	
1,000.0	1,000.0	926.3	926.3	2.1	0.6	-176.16	-5,451.5	-366.0	5,463.8	5,461.1	2.70	2,021.010	
1,082.7	1,082.7	1,003.5	1,003.5	2.3	0.7	-176.16	-5,451.6	-365.7	5,463.9	5,461.0	2.92	1,871.221	
1,100.0	1,100.0	1,020.2	1,020.2	2.3	0.7	-176.16	-5,451.7	-365.7	5,463.9	5,460.9	2.97	1,842.490	
1,181.1	1,181.1	1,100.0	1,100.0	2.5	0.7	-176.16	-5,451.8	-365.5	5,464.1	5,460.9	3.18	1,718.663	
1,200.0	1,200.0	1,117.2	1,117.1	2.6	0.7	-176.16	-5,451.9	-365.5	5,464.1	5,460.9	3.23	1,692.825	
1,279.5	1,279.5	1,195.8	1,195.7	2.7	0.7	-176.17	-5,452.1	-365.4	5,464.3	5,460.9	3.43	1,591.146	
1,300.0	1,300.0	1,215.4	1,215.4	2.8	0.7	-176.17	-5,452.1	-365.4	5,464.4	5,460.9	3.49	1,567.016	
1,377.9	1,377.9	1,289.8	1,289.7	3.0	0.7	-176.17	-5,452.3	-365.3	5,464.6	5,460.9	3.69	1,481.685	
1,400.0	1,400.0	1,310.8	1,310.8	3.0	0.8	-176.17	-5,452.4	-365.3	5,464.7	5,460.9	3.74	1,459.269	
1,476.4	1,476.4	1,383.6	1,383.6	3.2	0.8	-176.17	-5,452.7	-365.3	5,465.0	5,461.0	3.94	1,386.827	
1,500.0	1,500.0	1,406.4	1,406.4	3.2	0.8	-176.17	-5,452.8	-365.3	5,465.1	5,461.1	4.00	1,365.858	
1,574.8	1,574.8	1,481.3	1,481.2	3.4	0.8	-176.17	-5,453.1	-365.3	5,465.4	5,461.2	4.19	1,303.367	
1,600.0	1,600.0	1,506.6	1,506.5	3.5	0.8	-176.17	-5,453.2	-365.2	5,465.5	5,461.2	4.26	1,283.549	
1,673.2	1,673.2	1,580.9	1,580.9	3.6	0.8	-176.17	-5,453.6	-365.2	5,465.8	5,461.4	4.45	1,229.457	
1,700.0	1,700.0	1,608.4	1,608.4	3.7	0.8	-176.17	-5,453.7	-365.2	5,465.9	5,461.4	4.51	1,210.755	
1,771.6	1,771.6	1,683.5	1,683.5	3.8	0.9	-176.17	-5,453.9	-365.1	5,466.2	5,461.5	4.70	1,163.212	
1,800.0	1,800.0	1,712.8	1,712.8	3.9	0.9	-176.17	-5,454.0	-365.0	5,466.3	5,461.5	4.77	1,145.448	
1,870.1	1,870.1	1,784.0	1,784.0	4.1	0.9	-176.17	-5,454.3	-365.0	5,466.5	5,461.5	4.95	1,104.020	
1,900.0	1,900.0	1,815.0	1,815.0	4.1	0.9	-176.17	-5,454.4	-364.9	5,466.6	5,461.5	5.03	1,087.200	
1,968.5	1,968.5	1,887.6	1,887.6	4.3	0.9	-176.17	-5,454.5	-364.9	5,466.7	5,461.5	5.20	1,050.516	
2,000.0	2,000.0	1,918.9	1,918.9	4.4	0.9	-176.17	-5,454.6	-364.9	5,466.8	5,461.5	5.28	1,034.661	
2,066.9	2,066.9	1,982.6	1,982.6	4.5	0.9	-176.17	-5,454.7	-364.8	5,466.9	5,461.5	5.45	1,002.751	
2,100.0	2,100.0	2,013.9	2,013.8	4.6	1.0	-176.17	-5,454.8	-364.8	5,467.0	5,461.5	5.54	987.718	
2,165.3	2,165.3	2,075.1	2,075.1	4.7	1.0	-176.17	-5,455.0	-364.8	5,467.3	5,461.6	5.70	959.361	
2,200.0	2,200.0	2,108.2	2,108.1	4.8	1.0	-176.17	-5,455.2	-364.8	5,467.4	5,461.6	5.79	944.943	
2,250.0	2,250.0	2,158.5	2,158.5	4.9	1.0	-176.18	-5,455.4	-364.7	5,467.6	5,461.7	5.91	924.734	
2,263.8	2,263.8	2,172.4	2,172.4	4.9	1.0	111.91	-5,455.4	-364.7	5,467.7	5,461.8	5.90	926.371	
2,300.0	2,300.0	2,209.2	2,209.2	5.0	1.0	111.91	-5,455.6	-364.7	5,467.9	5,462.0	5.99	912.726	
2,362.2	2,362.2	2,274.3	2,274.3	5.2	1.0	111.91	-5,455.8	-364.6	5,468.8	5,462.7	6.14	890.903	
2,400.0	2,399.9	2,313.6	2,313.5	5.2	1.0	111.92	-5,455.9	-364.5	5,469.6	5,463.4	6.23	878.208	
2,460.6	2,460.4	2,375.6	2,375.5	5.4	1.1	111.92	-5,456.1	-364.5	5,471.2	5,464.8	6.37	858.265	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PLUMB #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,499.7	2,415.1	2,415.1	5.4	1.1	111.93	-5,456.2	-364.5	5,472.5	5,466.0	6.47	845.833	
2,559.0	2,558.5	2,472.6	2,472.6	5.6	1.1	111.94	-5,456.4	-364.5	5,474.8	5,468.2	6.62	827.258	
2,600.0	2,599.1	2,512.6	2,512.6	5.7	1.1	111.95	-5,456.5	-364.5	5,476.7	5,470.0	6.72	814.882	
2,657.5	2,656.1	2,569.4	2,569.4	5.8	1.1	111.97	-5,456.7	-364.6	5,479.7	5,472.8	6.87	797.228	
2,700.0	2,698.2	2,611.8	2,611.7	5.9	1.1	111.98	-5,456.8	-364.6	5,482.2	5,475.3	6.99	784.700	
2,755.9	2,753.3	2,669.0	2,669.0	6.1	1.1	112.01	-5,457.0	-364.7	5,485.9	5,478.8	7.15	767.644	
2,800.0	2,796.6	2,713.3	2,713.3	6.2	1.1	112.03	-5,457.1	-364.7	5,489.1	5,481.8	7.27	754.801	
2,854.3	2,849.9	2,765.5	2,765.5	6.3	1.2	112.05	-5,457.2	-364.7	5,493.4	5,486.0	7.44	738.273	
2,900.0	2,894.4	2,809.4	2,809.4	6.5	1.2	112.07	-5,457.3	-364.8	5,497.3	5,489.7	7.58	724.997	
2,952.7	2,945.7	2,860.5	2,860.5	6.6	1.2	112.09	-5,457.4	-364.9	5,502.2	5,494.5	7.76	708.814	
3,000.0	2,991.5	2,905.6	2,905.5	6.8	1.2	112.12	-5,457.6	-365.0	5,506.9	5,499.0	7.92	695.004	
3,051.2	3,040.8	2,950.2	2,950.1	7.0	1.2	112.13	-5,457.7	-365.2	5,512.4	5,504.3	8.12	679.018	
3,100.0	3,087.6	2,992.5	2,992.5	7.1	1.2	112.15	-5,457.8	-365.4	5,518.1	5,509.8	8.30	664.507	
3,149.6	3,134.9	3,037.3	3,037.3	7.4	1.2	112.16	-5,458.0	-365.6	5,524.2	5,515.7	8.52	648.581	
3,200.0	3,182.7	3,083.0	3,083.0	7.6	1.2	112.18	-5,458.2	-366.0	5,530.8	5,522.0	8.73	633.237	
3,248.0	3,228.0	3,126.5	3,126.4	7.8	1.2	112.20	-5,458.5	-366.3	5,537.4	5,528.4	8.97	617.525	
3,300.0	3,276.6	3,173.2	3,173.2	8.1	1.2	112.23	-5,458.7	-366.8	5,545.0	5,535.8	9.22	601.491	
3,346.4	3,319.9	3,214.4	3,214.3	8.3	1.3	112.24	-5,458.9	-367.4	5,552.1	5,542.6	9.47	586.125	
3,400.0	3,369.4	3,261.0	3,261.0	8.6	1.3	112.26	-5,459.1	-368.0	5,560.8	5,551.0	9.76	569.463	
3,444.9	3,410.5	3,300.0	3,300.0	8.9	1.3	112.27	-5,459.3	-368.5	5,568.4	5,558.4	10.04	554.585	
3,500.0	3,460.7	3,343.6	3,343.5	9.2	1.3	112.26	-5,459.6	-369.1	5,578.2	5,567.8	10.38	537.431	
3,543.3	3,499.8	3,377.6	3,377.6	9.5	1.3	112.26	-5,459.9	-369.6	5,586.3	5,575.6	10.68	523.199	
3,600.0	3,550.6	3,426.3	3,426.2	9.9	1.3	112.26	-5,460.3	-370.2	5,597.4	5,586.3	11.07	505.716	
3,641.7	3,587.6	3,465.2	3,465.1	10.3	1.3	112.28	-5,460.6	-370.7	5,605.9	5,594.5	11.39	492.164	
3,709.9	3,647.5	3,525.2	3,525.1	10.8	1.3	112.29	-5,461.1	-371.5	5,620.3	5,608.4	11.92	471.668	
3,740.1	3,673.9	3,550.2	3,550.1	11.1	1.3	112.41	-5,461.3	-371.8	5,626.9	5,614.8	12.16	462.653	
3,800.0	3,726.2	3,600.0	3,599.9	11.6	1.3	112.65	-5,461.7	-372.5	5,640.1	5,627.4	12.65	445.897	
3,838.6	3,759.9	3,633.6	3,633.5	11.9	1.3	112.81	-5,461.9	-372.9	5,648.7	5,635.7	12.97	435.422	
3,900.0	3,813.5	3,688.0	3,687.9	12.5	1.4	113.07	-5,462.4	-373.7	5,662.4	5,648.9	13.49	419.831	
3,937.0	3,845.8	3,719.8	3,719.7	12.8	1.4	113.22	-5,462.6	-374.1	5,670.7	5,656.9	13.81	410.766	
4,000.0	3,900.8	3,773.0	3,772.9	13.4	1.4	113.48	-5,463.1	-374.9	5,685.0	5,670.7	14.34	396.312	
4,035.4	3,931.7	3,800.0	3,799.9	13.7	1.4	113.61	-5,463.3	-375.2	5,693.2	5,678.5	14.65	388.504	
4,100.0	3,988.1	3,853.2	3,853.1	14.3	1.4	113.86	-5,463.7	-376.0	5,708.1	5,692.9	15.22	375.098	
4,133.8	4,017.6	3,879.7	3,879.6	14.7	1.4	113.98	-5,464.0	-376.3	5,716.0	5,700.5	15.52	368.354	
4,200.0	4,075.4	3,931.8	3,931.7	15.3	1.4	114.23	-5,464.5	-377.0	5,731.6	5,715.5	16.10	355.926	
4,232.3	4,103.5	3,957.3	3,957.2	15.6	1.4	114.34	-5,464.8	-377.3	5,739.3	5,722.9	16.39	350.107	
4,300.0	4,162.6	4,013.3	4,013.2	16.2	1.4	114.60	-5,465.5	-377.9	5,755.6	5,738.6	17.00	338.579	
4,330.7	4,189.4	4,043.0	4,042.9	16.5	1.4	114.74	-5,465.9	-378.2	5,763.0	5,745.7	17.28	333.567	
4,400.0	4,249.9	4,109.2	4,109.0	17.2	1.5	115.05	-5,466.6	-378.8	5,779.8	5,761.9	17.90	322.863	
4,429.1	4,275.4	4,134.7	4,134.6	17.5	1.5	115.16	-5,466.9	-379.0	5,786.9	5,768.8	18.17	318.551	
4,500.0	4,337.2	4,196.9	4,196.8	18.2	1.5	115.44	-5,467.6	-379.4	5,804.3	5,785.5	18.81	308.602	
4,527.5	4,361.3	4,219.1	4,218.9	18.5	1.5	115.54	-5,467.8	-379.6	5,811.2	5,792.1	19.06	304.886	
4,600.0	4,424.5	4,276.5	4,276.4	19.2	1.5	115.80	-5,468.5	-379.9	5,829.2	5,809.5	19.72	295.595	
4,626.0	4,447.2	4,300.0	4,299.8	19.5	1.5	115.91	-5,468.8	-379.9	5,835.7	5,815.8	19.96	292.399	
4,700.0	4,511.8	4,355.4	4,355.3	20.2	1.5	116.15	-5,469.6	-380.0	5,854.5	5,833.9	20.64	283.710	
4,724.4	4,533.1	4,374.7	4,374.5	20.5	1.5	116.24	-5,469.9	-380.1	5,860.7	5,839.9	20.86	280.960	
4,796.7	4,596.3	4,425.5	4,425.4	21.2	1.5	116.46	-5,470.7	-380.0	5,879.4	5,857.9	21.52	273.161	
4,800.0	4,599.1	4,427.6	4,427.4	21.2	1.5	116.49	-5,470.8	-380.0	5,880.3	5,858.7	21.55	272.882	
4,822.8	4,619.1	4,442.2	4,442.0	21.4	1.6	116.66	-5,471.0	-380.0	5,886.2	5,864.5	21.70	271.246	
4,900.0	4,687.3	4,500.0	4,499.8	22.0	1.6	117.26	-5,472.2	-380.1	5,905.8	5,883.6	22.21	265.910	
4,921.2	4,706.2	4,507.2	4,507.0	22.2	1.6	117.39	-5,472.4	-380.1	5,911.1	5,888.8	22.34	264.580	
5,000.0	4,777.1	4,574.3	4,574.1	22.8	1.6	117.99	-5,473.9	-380.1	5,930.3	5,907.5	22.83	259.811	

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 EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PLUMB #1 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,019.7	4,794.9	4,591.2	4,591.0	22.9	1.6	118.14	-5,474.3	-380.1	5,935.0	5,912.0	22.94	258.743		
5,100.0	4,868.3	4,736.3	4,736.1	23.5	1.6	118.97	-5,476.7	-380.3	5,953.0	5,929.6	23.38	254.578		
5,118.1	4,885.0	4,760.0	4,759.8	23.6	1.6	119.12	-5,476.9	-380.3	5,956.8	5,933.3	23.48	253.737		
5,200.0	4,961.0	4,842.3	4,842.1	24.2	1.7	119.68	-5,477.6	-380.1	5,973.4	5,949.5	23.90	249.957		
5,216.5	4,976.4	4,856.0	4,855.7	24.3	1.7	119.77	-5,477.8	-380.1	5,976.6	5,952.6	23.98	249.280		
5,300.0	5,054.8	4,927.6	4,927.4	24.8	1.7	120.25	-5,478.5	-379.9	5,992.3	5,968.0	24.37	245.911		
5,314.9	5,069.0	4,941.3	4,941.0	24.8	1.7	120.34	-5,478.6	-379.9	5,995.0	5,970.6	24.43	245.383		
5,400.0	5,149.9	5,018.7	5,018.5	25.3	1.7	120.79	-5,479.4	-379.7	6,009.8	5,985.0	24.79	242.407		
5,413.4	5,162.7	5,030.7	5,030.5	25.4	1.7	120.86	-5,479.6	-379.7	6,012.0	5,987.1	24.84	242.002		
5,500.0	5,245.9	5,110.0	5,109.8	25.8	1.8	121.27	-5,480.5	-379.6	6,025.6	6,000.4	25.17	239.388		
5,511.8	5,257.3	5,122.1	5,121.8	25.9	1.8	121.33	-5,480.6	-379.6	6,027.3	6,002.1	25.21	239.084		
5,600.0	5,342.9	5,211.6	5,211.3	26.3	1.8	121.72	-5,481.6	-379.4	6,039.7	6,014.2	25.51	236.795		
5,610.2	5,352.9	5,221.3	5,221.0	26.3	1.8	121.76	-5,481.7	-379.4	6,041.0	6,015.5	25.54	236.571		
5,700.0	5,440.7	5,306.6	5,306.3	26.7	1.8	122.08	-5,482.7	-379.2	6,052.0	6,026.2	25.80	234.578		
5,708.6	5,449.1	5,314.7	5,314.5	26.7	1.8	122.11	-5,482.8	-379.2	6,053.0	6,027.2	25.82	234.418		
5,800.0	5,539.1	5,400.0	5,399.7	27.0	1.8	122.39	-5,483.8	-379.0	6,062.6	6,036.6	26.05	232.692		
5,807.1	5,546.1	5,407.9	5,407.6	27.0	1.8	122.41	-5,483.9	-379.0	6,063.3	6,037.2	26.07	232.581		
5,900.0	5,638.1	5,493.1	5,492.8	27.3	1.9	122.64	-5,485.0	-378.8	6,071.5	6,045.2	26.27	231.096		
5,905.5	5,643.5	5,500.0	5,499.7	27.3	1.9	122.66	-5,485.1	-378.8	6,071.9	6,045.6	26.28	231.024		
6,000.0	5,737.5	5,586.8	5,586.5	27.5	1.9	122.84	-5,486.3	-378.7	6,078.6	6,052.1	26.46	229.753		
6,003.9	5,741.4	5,590.5	5,590.2	27.5	1.9	122.84	-5,486.3	-378.7	6,078.8	6,052.3	26.46	229.712		
6,100.0	5,837.2	5,690.6	5,690.3	27.7	1.9	122.98	-5,487.7	-378.7	6,083.8	6,057.2	26.61	228.611		
6,102.3	5,839.6	5,693.1	5,692.8	27.7	1.9	122.98	-5,487.7	-378.7	6,083.9	6,057.3	26.61	228.590		
6,200.0	5,937.2	5,793.1	5,792.8	27.9	2.0	123.07	-5,488.9	-379.1	6,087.1	6,060.3	26.74	227.643		
6,200.8	5,937.9	5,793.9	5,793.6	27.9	2.0	123.07	-5,488.9	-379.1	6,087.1	6,060.3	26.74	227.636		
6,256.6	5,993.8	5,846.4	5,846.1	27.9	2.0	-165.00	-5,489.5	-379.3	6,088.1	6,061.3	26.80	227.184		
6,286.6	6,023.8	5,874.3	5,874.0	27.9	2.0	-165.00	-5,489.9	-379.4	6,088.5	6,061.6	26.84	226.862		
6,299.2	6,036.4	5,886.0	5,885.7	27.9	2.0	15.00	-5,490.0	-379.5	6,088.5	6,061.7	26.83	226.929		
6,300.0	6,037.2	5,886.8	5,886.4	27.9	2.0	15.00	-5,490.0	-379.5	6,088.5	6,061.7	26.83	226.934		
6,350.0	6,087.1	5,948.6	5,948.3	28.0	2.0	15.05	-5,490.8	-379.7	6,086.6	6,059.8	26.77	227.398		
6,397.6	6,134.3	6,009.4	6,009.0	28.0	2.0	15.17	-5,491.4	-379.9	6,081.4	6,054.8	26.66	228.132		
6,400.0	6,136.7	6,011.7	6,011.3	28.0	2.0	15.18	-5,491.4	-379.9	6,081.1	6,054.5	26.65	228.181		
6,450.0	6,185.7	6,059.6	6,059.3	28.0	2.0	15.39	-5,491.8	-379.9	6,072.3	6,045.8	26.47	229.397		
6,496.0	6,230.2	6,103.8	6,103.5	28.0	2.1	15.66	-5,492.2	-380.0	6,061.3	6,035.0	26.24	230.957		
6,500.0	6,234.0	6,108.4	6,108.0	28.0	2.1	15.69	-5,492.3	-380.0	6,060.2	6,034.0	26.22	231.114		
6,550.0	6,281.3	6,165.1	6,164.8	28.0	2.1	16.09	-5,492.8	-380.0	6,044.8	6,018.9	25.90	233.415		
6,594.5	6,322.2	6,213.8	6,213.4	27.9	2.1	16.54	-5,493.1	-379.9	6,028.5	6,002.9	25.54	236.052		
6,600.0	6,327.3	6,219.6	6,219.2	27.9	2.1	16.60	-5,493.2	-379.9	6,026.2	6,000.8	25.49	236.429		
6,650.0	6,371.8	6,270.9	6,270.6	27.9	2.1	17.24	-5,493.5	-379.8	6,004.5	5,979.6	24.99	240.265		
6,692.9	6,408.6	6,311.8	6,311.5	27.9	2.1	17.88	-5,493.7	-379.7	5,983.5	5,959.0	24.49	244.287		
6,700.0	6,414.6	6,317.9	6,317.5	27.8	2.1	18.00	-5,493.8	-379.7	5,979.9	5,955.5	24.40	245.037		
6,750.0	6,455.5	6,359.4	6,359.0	27.8	2.1	18.92	-5,494.0	-379.6	5,952.3	5,928.6	23.73	250.862		
6,791.3	6,487.7	6,392.1	6,391.7	27.7	2.1	19.83	-5,494.2	-379.5	5,927.6	5,904.5	23.11	256.518		
6,800.0	6,494.3	6,398.7	6,398.4	27.7	2.1	20.03	-5,494.2	-379.5	5,922.1	5,899.2	22.97	257.831		
6,850.0	6,530.8	6,441.2	6,440.8	27.7	2.2	21.39	-5,494.4	-379.4	5,889.4	5,867.2	22.14	266.001		
6,889.7	6,558.1	6,473.0	6,472.7	27.6	2.2	22.67	-5,494.6	-379.2	5,861.6	5,840.2	21.44	273.385		
6,900.0	6,564.9	6,480.9	6,480.6	27.6	2.2	23.03	-5,494.6	-379.1	5,854.2	5,833.0	21.25	275.464		
6,950.0	6,596.3	6,516.2	6,515.8	27.6	2.2	25.03	-5,494.7	-378.9	5,816.8	5,796.5	20.32	286.203		
6,988.2	6,618.4	6,539.9	6,539.5	27.5	2.2	26.84	-5,494.8	-378.7	5,786.9	5,767.3	19.61	295.063		
7,000.0	6,624.9	6,546.9	6,546.5	27.5	2.2	27.47	-5,494.9	-378.6	5,777.4	5,758.1	19.39	297.989		
7,050.0	6,650.6	6,574.5	6,574.1	27.5	2.2	30.49	-5,495.0	-378.3	5,736.2	5,717.7	18.49	310.178		
7,086.6	6,667.5	6,592.6	6,592.3	27.5	2.2	33.16	-5,495.1	-378.1	5,705.0	5,687.1	17.92	318.435		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PLUMB #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,100.0	6,673.3	6,598.8	6,598.5	27.5	2.2	34.26	-5,495.1	-378.1	5,693.4	5,675.7	17.71	321.430	
7,150.0	6,692.7	6,617.6	6,617.3	27.5	2.2	39.00	-5,495.2	-377.8	5,649.2	5,632.0	17.14	329.506	
7,185.0	6,704.4	6,628.9	6,628.5	27.5	2.2	43.07	-5,495.2	-377.7	5,617.5	5,600.6	16.88	332.811	
7,200.0	6,709.0	6,633.2	6,632.9	27.5	2.2	45.03	-5,495.2	-377.7	5,603.8	5,586.9	16.90	331.593	
7,250.0	6,721.8	6,645.7	6,645.3	27.5	2.2	52.69	-5,495.3	-377.5	5,557.5	5,540.4	17.05	326.041	
7,283.4	6,728.6	6,652.2	6,651.8	27.5	2.2	58.89	-5,495.3	-377.4	5,526.1	5,508.7	17.35	318.593	
7,300.0	6,731.3	6,654.9	6,654.5	27.6	2.2	62.29	-5,495.3	-377.4	5,510.4	5,492.9	17.53	314.281	
7,350.0	6,737.3	6,660.8	6,660.5	27.7	2.2	73.82	-5,495.4	-377.3	5,462.9	5,444.7	18.21	300.071	
7,381.9	6,739.4	6,662.9	6,662.6	27.7	2.2	81.94	-5,495.4	-377.3	5,432.5	5,413.7	18.72	290.166	
7,400.0	6,739.9	6,663.5	6,663.1	27.8	2.2	86.69	-5,495.4	-377.3	5,415.1	5,396.0	19.10	283.496	
7,416.5	6,740.0	6,663.6	6,663.3	27.8	2.2	91.04	-5,495.4	-377.3	5,399.3	5,379.8	19.56	276.047	
7,480.3	6,739.5	6,663.5	6,663.2	28.0	2.2	91.03	-5,495.4	-377.3	5,338.3	5,318.2	20.09	265.694	
7,500.0	6,739.4	6,663.5	6,663.1	28.1	2.2	91.03	-5,495.4	-377.3	5,319.5	5,299.3	20.26	262.608	
7,578.7	6,738.9	6,663.3	6,663.0	28.5	2.2	91.03	-5,495.4	-377.3	5,244.4	5,223.3	21.02	249.435	
7,600.0	6,738.7	6,663.3	6,662.9	28.6	2.2	91.02	-5,495.4	-377.3	5,224.1	5,202.8	21.23	246.039	
7,677.1	6,738.2	6,663.1	6,662.8	29.1	2.2	91.02	-5,495.4	-377.3	5,150.6	5,128.5	22.09	233.179	
7,700.0	6,738.1	6,663.1	6,662.7	29.2	2.2	91.02	-5,495.4	-377.3	5,128.8	5,106.5	22.34	229.559	
7,775.6	6,737.5	6,662.9	6,662.6	29.7	2.2	91.01	-5,495.4	-377.3	5,056.9	5,033.7	23.27	217.357	
7,800.0	6,737.4	6,662.9	6,662.5	29.9	2.2	91.01	-5,495.4	-377.3	5,033.7	5,010.2	23.56	213.618	
7,874.0	6,736.9	6,662.7	6,662.4	30.6	2.2	91.00	-5,495.4	-377.3	4,963.5	4,938.9	24.54	202.271	
7,900.0	6,736.7	6,662.7	6,662.3	30.8	2.2	91.00	-5,495.4	-377.3	4,938.8	4,914.0	24.88	198.496	
7,972.4	6,736.2	6,662.6	6,662.2	31.5	2.2	91.00	-5,495.4	-377.3	4,870.2	4,844.3	25.89	188.090	
8,000.0	6,736.0	6,662.5	6,662.2	31.8	2.2	91.00	-5,495.4	-377.3	4,844.1	4,817.9	26.28	184.340	
8,070.8	6,735.5	6,662.4	6,662.0	32.5	2.2	90.99	-5,495.4	-377.3	4,777.2	4,749.9	27.32	174.890	
8,100.0	6,735.3	6,662.3	6,662.0	32.8	2.2	90.99	-5,495.4	-377.3	4,749.7	4,721.9	27.74	171.208	
8,169.3	6,734.9	6,662.2	6,661.8	33.6	2.2	90.98	-5,495.4	-377.3	4,684.4	4,655.6	28.80	162.678	
8,200.0	6,734.6	6,662.1	6,661.8	34.0	2.2	90.98	-5,495.4	-377.3	4,655.4	4,626.2	29.26	159.093	
8,267.7	6,734.2	6,662.0	6,661.6	34.8	2.2	90.98	-5,495.4	-377.3	4,591.8	4,561.5	30.32	151.426	
8,300.0	6,734.0	6,661.9	6,661.6	35.2	2.2	90.97	-5,495.4	-377.3	4,561.5	4,530.6	30.83	147.955	
8,366.1	6,733.5	6,661.8	6,661.4	36.1	2.2	90.97	-5,495.4	-377.3	4,499.5	4,467.6	31.89	141.078	
8,400.0	6,733.3	6,661.7	6,661.4	36.5	2.2	90.97	-5,495.4	-377.3	4,467.7	4,435.3	32.44	137.731	
8,464.5	6,732.8	6,661.6	6,661.2	37.4	2.2	90.96	-5,495.4	-377.3	4,407.4	4,373.9	33.50	131.571	
8,500.0	6,732.6	6,661.5	6,661.2	37.9	2.2	90.96	-5,495.4	-377.3	4,374.3	4,340.2	34.08	128.353	
8,563.0	6,732.2	6,661.4	6,661.0	38.8	2.2	90.95	-5,495.4	-377.3	4,315.6	4,280.4	35.13	122.836	
8,600.0	6,731.9	6,661.3	6,661.0	39.3	2.2	90.95	-5,495.4	-377.3	4,281.1	4,245.4	35.75	119.746	
8,661.4	6,731.5	6,661.2	6,660.8	40.2	2.2	90.95	-5,495.4	-377.3	4,224.1	4,187.3	36.79	114.806	
8,700.0	6,731.2	6,661.1	6,660.8	40.8	2.2	90.94	-5,495.4	-377.3	4,188.3	4,150.8	37.45	111.842	
8,759.8	6,730.8	6,661.0	6,660.6	41.7	2.2	90.94	-5,495.4	-377.3	4,132.9	4,094.4	38.48	107.415	
8,800.0	6,730.6	6,660.9	6,660.6	42.3	2.2	90.94	-5,495.4	-377.3	4,095.8	4,056.6	39.17	104.573	
8,858.2	6,730.2	6,660.8	6,660.4	43.2	2.2	90.93	-5,495.4	-377.3	4,042.1	4,001.9	40.18	100.603	
8,900.0	6,729.9	6,660.7	6,660.4	43.8	2.2	90.93	-5,495.4	-377.3	4,003.6	3,962.7	40.90	97.879	
8,956.7	6,729.5	6,660.6	6,660.2	44.7	2.2	90.93	-5,495.4	-377.3	3,951.6	3,909.7	41.90	94.315	
9,000.0	6,729.2	6,660.5	6,660.2	45.4	2.2	90.92	-5,495.4	-377.3	3,911.9	3,869.2	42.66	91.704	
9,055.1	6,728.8	6,660.4	6,660.1	46.3	2.2	90.92	-5,495.4	-377.3	3,861.5	3,817.9	43.63	88.502	
9,100.0	6,728.5	6,660.3	6,660.0	47.0	2.2	90.92	-5,495.4	-377.3	3,820.5	3,776.1	44.43	85.998	
9,153.5	6,728.2	6,660.2	6,659.9	47.9	2.2	90.91	-5,495.4	-377.4	3,771.8	3,726.5	45.38	83.118	
9,200.0	6,727.8	6,660.1	6,659.8	48.6	2.2	90.91	-5,495.4	-377.4	3,729.7	3,683.4	46.21	80.716	
9,251.9	6,727.5	6,660.0	6,659.7	49.5	2.2	90.90	-5,495.4	-377.4	3,682.6	3,635.5	47.14	78.124	
9,300.0	6,727.2	6,659.9	6,659.6	50.3	2.2	90.90	-5,495.4	-377.4	3,639.2	3,591.2	48.00	75.819	
9,350.4	6,726.8	6,659.8	6,659.5	51.1	2.2	90.90	-5,495.4	-377.4	3,593.9	3,545.0	48.91	73.484	
9,400.0	6,726.5	6,659.7	6,659.4	51.9	2.2	90.89	-5,495.4	-377.4	3,549.3	3,499.5	49.80	71.270	
9,448.8	6,726.1	6,659.6	6,659.3	52.7	2.2	90.89	-5,495.4	-377.4	3,505.7	3,455.0	50.69	69.165	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PLUMB #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,500.0	6,725.8	6,659.5	6,659.2	53.6	2.2	90.89	-5,495.4	-377.4	3,460.0	3,408.4	51.61	67.037	
9,547.2	6,725.5	6,659.4	6,659.1	54.4	2.2	90.88	-5,495.4	-377.4	3,418.0	3,365.5	52.47	65.140	
9,600.0	6,725.1	6,659.3	6,659.0	55.3	2.2	90.88	-5,495.4	-377.4	3,371.2	3,317.8	53.43	63.094	
9,645.6	6,724.8	6,659.2	6,658.9	56.1	2.2	90.88	-5,495.4	-377.4	3,330.9	3,276.7	54.27	61.382	
9,700.0	6,724.4	6,659.1	6,658.7	57.0	2.2	90.87	-5,495.4	-377.4	3,283.1	3,227.9	55.26	59.414	
9,744.1	6,724.1	6,659.0	6,658.7	57.8	2.2	90.87	-5,495.4	-377.4	3,244.5	3,188.4	56.07	57.869	
9,800.0	6,723.8	6,658.9	6,658.5	58.7	2.2	90.86	-5,495.4	-377.4	3,195.7	3,138.6	57.09	55.976	
9,842.5	6,723.5	6,658.8	6,658.5	59.5	2.2	90.86	-5,495.4	-377.4	3,158.8	3,100.9	57.87	54.582	
9,900.0	6,723.1	6,658.7	6,658.3	60.5	2.2	90.86	-5,495.4	-377.4	3,109.1	3,050.1	58.93	52.759	
9,940.9	6,722.8	6,658.6	6,658.3	61.2	2.2	90.85	-5,495.4	-377.4	3,073.8	3,014.2	59.68	51.502	
10,000.0	6,722.4	6,658.5	6,658.1	62.2	2.2	90.85	-5,495.4	-377.4	3,023.2	2,962.5	60.77	49.746	
10,039.3	6,722.1	6,658.4	6,658.1	62.9	2.2	90.85	-5,495.4	-377.4	2,989.7	2,928.2	61.50	48.612	
10,100.0	6,721.7	6,658.3	6,657.9	64.0	2.2	90.84	-5,495.4	-377.4	2,938.3	2,875.7	62.62	46.921	
10,137.8	6,721.5	6,658.2	6,657.9	64.7	2.2	90.84	-5,495.4	-377.4	2,906.5	2,843.2	63.32	45.900	
10,200.0	6,721.0	6,658.1	6,657.7	65.8	2.2	90.83	-5,495.4	-377.4	2,854.4	2,789.9	64.48	44.270	
10,236.2	6,720.8	6,658.0	6,657.7	66.4	2.2	90.83	-5,495.4	-377.4	2,824.2	2,759.1	65.15	43.351	
10,300.0	6,720.4	6,657.9	6,657.5	67.5	2.2	90.83	-5,495.4	-377.4	2,771.5	2,705.1	66.33	41.781	
10,334.6	6,720.1	6,657.8	6,657.5	68.2	2.2	90.82	-5,495.4	-377.4	2,743.0	2,676.1	66.98	40.955	
10,400.0	6,719.7	6,657.7	6,657.3	69.3	2.2	90.82	-5,495.4	-377.4	2,689.8	2,621.6	68.19	39.443	
10,433.0	6,719.4	6,657.6	6,657.2	69.9	2.2	90.82	-5,495.4	-377.4	2,663.0	2,594.2	68.81	38.701	
10,500.0	6,719.0	6,657.5	6,657.1	71.1	2.2	90.81	-5,495.4	-377.4	2,609.3	2,539.3	70.06	37.245	
10,531.5	6,718.8	6,657.4	6,657.0	71.7	2.2	90.81	-5,495.4	-377.4	2,584.3	2,513.6	70.65	36.581	
10,600.0	6,718.3	6,657.3	6,656.9	72.9	2.2	90.80	-5,495.3	-377.4	2,530.3	2,458.3	71.93	35.179	
10,629.9	6,718.1	6,657.2	6,656.8	73.4	2.2	90.80	-5,495.3	-377.4	2,506.9	2,434.4	72.48	34.585	
10,700.0	6,717.6	6,657.0	6,656.7	74.7	2.2	90.80	-5,495.3	-377.4	2,452.7	2,378.9	73.80	33.237	
10,728.3	6,717.4	6,657.0	6,656.6	75.2	2.2	90.79	-5,495.3	-377.4	2,431.1	2,356.8	74.33	32.708	
10,800.0	6,717.0	6,656.8	6,656.5	76.5	2.2	90.79	-5,495.3	-377.4	2,376.9	2,301.2	75.67	31.412	
10,826.7	6,716.8	6,656.8	6,656.4	77.0	2.2	90.79	-5,495.3	-377.4	2,356.9	2,280.7	76.17	30.943	
10,900.0	6,716.3	6,656.6	6,656.3	78.3	2.2	90.78	-5,495.3	-377.4	2,302.9	2,225.4	77.54	29.698	
10,925.2	6,716.1	6,656.6	6,656.2	78.8	2.2	90.78	-5,495.3	-377.4	2,284.6	2,206.6	78.02	29.283	
11,000.0	6,715.6	6,656.4	6,656.1	80.2	2.2	90.77	-5,495.3	-377.4	2,230.9	2,151.5	79.42	28.090	
11,023.6	6,715.4	6,656.4	6,656.0	80.6	2.2	90.77	-5,495.3	-377.4	2,214.3	2,134.4	79.87	27.725	
11,100.0	6,714.9	6,656.2	6,655.9	82.0	2.2	90.77	-5,495.3	-377.4	2,161.2	2,079.9	81.30	26.582	
11,122.0	6,714.8	6,656.2	6,655.8	82.4	2.2	90.76	-5,495.3	-377.4	2,146.2	2,064.4	81.72	26.264	
11,200.0	6,714.2	6,656.0	6,655.7	83.8	2.2	90.76	-5,495.3	-377.4	2,093.9	2,010.7	83.18	25.172	
11,220.4	6,714.1	6,656.0	6,655.6	84.2	2.2	90.76	-5,495.3	-377.4	2,080.5	1,996.9	83.57	24.895	
11,300.0	6,713.5	6,655.8	6,655.4	85.7	2.2	90.75	-5,495.3	-377.4	2,029.3	1,944.3	85.07	23.856	
11,318.9	6,713.4	6,655.8	6,655.4	86.0	2.2	90.75	-5,495.3	-377.4	2,017.5	1,932.0	85.42	23.617	
11,400.0	6,712.9	6,655.6	6,655.2	87.5	2.2	90.74	-5,495.3	-377.4	1,967.7	1,880.8	86.95	22.630	
11,417.3	6,712.7	6,655.6	6,655.2	87.8	2.2	90.74	-5,495.3	-377.4	1,957.4	1,870.1	87.28	22.427	
11,500.0	6,712.2	6,655.4	6,655.0	89.3	2.2	90.74	-5,495.3	-377.4	1,909.3	1,820.5	88.84	21.492	
11,515.7	6,712.1	6,655.3	6,655.0	89.6	2.2	90.73	-5,495.3	-377.4	1,900.5	1,811.3	89.14	21.321	
11,600.0	6,711.5	6,655.2	6,654.8	91.2	2.2	90.73	-5,495.3	-377.4	1,854.5	1,763.8	90.73	20.441	
11,614.1	6,711.4	6,655.1	6,654.8	91.4	2.2	90.73	-5,495.3	-377.4	1,847.1	1,756.1	91.00	20.299	
11,700.0	6,710.8	6,655.0	6,654.6	93.0	2.2	90.72	-5,495.3	-377.4	1,803.6	1,711.0	92.62	19.474	
11,712.6	6,710.7	6,654.9	6,654.6	93.3	2.2	90.72	-5,495.3	-377.4	1,797.5	1,704.6	92.86	19.358	
11,800.0	6,710.1	6,654.7	6,654.4	94.9	2.2	90.71	-5,495.3	-377.4	1,756.9	1,662.4	94.51	18.590	
11,811.0	6,710.1	6,654.7	6,654.4	95.1	2.2	90.71	-5,495.3	-377.4	1,752.0	1,657.3	94.72	18.498	
11,900.0	6,709.5	6,654.5	6,654.2	96.7	2.2	90.71	-5,495.3	-377.4	1,714.8	1,618.4	96.40	17.788	
11,909.4	6,709.4	6,654.5	6,654.2	96.9	2.2	90.70	-5,495.3	-377.4	1,711.0	1,614.5	96.58	17.716	
12,000.0	6,708.8	6,654.3	6,654.0	98.6	2.2	90.70	-5,495.3	-377.4	1,677.5	1,579.2	98.29	17.066	
12,007.8	6,708.7	6,654.3	6,654.0	98.7	2.2	90.70	-5,495.3	-377.4	1,674.8	1,576.4	98.44	17.013	

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

Anticollision Report



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Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PLUMB #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,100.0	6,708.1	6,654.1	6,653.8	100.4	2.2	90.69	-5,495.3	-377.4	1,645.5	1,545.4	100.19	16.424	
12,106.3	6,708.1	6,654.1	6,653.8	100.6	2.2	90.69	-5,495.3	-377.4	1,643.7	1,543.4	100.31	16.387	
12,200.0	6,707.4	6,653.9	6,653.6	102.3	2.2	90.68	-5,495.3	-377.4	1,619.1	1,517.0	102.09	15.860	
12,204.7	6,707.4	6,653.9	6,653.5	102.4	2.2	90.68	-5,495.3	-377.4	1,618.0	1,515.8	102.17	15.836	
12,300.0	6,706.7	6,653.7	6,653.3	104.2	2.2	90.67	-5,495.3	-377.4	1,598.5	1,494.5	103.98	15.373	
12,303.1	6,706.7	6,653.7	6,653.3	104.2	2.2	90.67	-5,495.3	-377.4	1,598.0	1,493.9	104.04	15.359	
12,400.0	6,706.1	6,653.5	6,653.1	106.0	2.2	90.67	-5,495.3	-377.4	1,584.0	1,478.1	105.88	14.960	
12,401.5	6,706.0	6,653.5	6,653.1	106.1	2.2	90.67	-5,495.3	-377.4	1,583.8	1,477.9	105.91	14.954	
12,500.0	6,705.4	6,653.3	6,652.9	107.9	2.2	90.66	-5,495.3	-377.4	1,575.6	1,467.9	107.78	14.619	
12,581.5	6,704.8	6,653.1	6,652.7	109.4	2.2	90.65	-5,495.3	-377.4	1,573.5	1,464.2	109.33	14.393 CC	
12,598.4	6,704.7	6,653.1	6,652.7	109.7	2.2	90.65	-5,495.3	-377.4	1,573.6	1,464.0	109.65	14.352	
12,600.0	6,704.7	6,653.0	6,652.7	109.8	2.2	90.65	-5,495.3	-377.4	1,573.6	1,464.0	109.68	14.348 ES	
12,696.8	6,704.0	6,652.8	6,652.5	111.6	2.2	90.64	-5,495.3	-377.4	1,577.8	1,466.2	111.52	14.148	
12,700.0	6,704.0	6,652.8	6,652.5	111.6	2.2	90.64	-5,495.3	-377.4	1,578.0	1,466.4	111.58	14.143	
12,795.2	6,703.4	6,652.6	6,652.3	113.4	2.2	90.64	-5,495.3	-377.4	1,588.0	1,474.6	113.39	14.005	
12,800.0	6,703.3	6,652.6	6,652.3	113.5	2.2	90.64	-5,495.3	-377.4	1,588.6	1,475.2	113.48	13.999	
12,893.7	6,702.7	6,652.4	6,652.1	115.3	2.2	90.63	-5,495.3	-377.4	1,604.2	1,488.9	115.26	13.918	
12,900.0	6,702.7	6,652.4	6,652.1	115.4	2.2	90.63	-5,495.3	-377.4	1,605.4	1,490.1	115.38	13.914	
12,992.1	6,702.0	6,652.2	6,651.9	117.1	2.2	90.62	-5,495.3	-377.4	1,626.2	1,509.1	117.13	13.884	
13,000.0	6,702.0	6,652.2	6,651.8	117.3	2.2	90.62	-5,495.3	-377.4	1,628.2	1,511.0	117.28	13.883 SF	
13,090.5	6,701.4	6,652.0	6,651.6	119.0	2.2	90.61	-5,495.3	-377.4	1,653.8	1,534.8	119.01	13.897	
13,100.0	6,701.3	6,652.0	6,651.6	119.1	2.2	90.61	-5,495.3	-377.4	1,656.8	1,537.6	119.19	13.901	
13,188.9	6,700.7	6,651.8	6,651.4	120.8	2.2	90.60	-5,495.3	-377.4	1,686.7	1,565.8	120.88	13.954	
13,200.0	6,700.6	6,651.8	6,651.4	121.0	2.2	90.60	-5,495.3	-377.4	1,690.7	1,569.6	121.09	13.963	
13,287.4	6,700.0	6,651.6	6,651.2	122.7	2.2	90.60	-5,495.3	-377.4	1,724.6	1,601.9	122.75	14.050	
13,300.0	6,699.9	6,651.5	6,651.2	122.9	2.2	90.60	-5,495.3	-377.4	1,729.8	1,606.8	122.99	14.064	
13,385.8	6,699.3	6,651.4	6,651.0	124.5	2.2	90.59	-5,495.3	-377.5	1,767.2	1,642.6	124.63	14.180	
13,400.0	6,699.3	6,651.3	6,651.0	124.8	2.2	90.59	-5,495.3	-377.5	1,773.7	1,648.8	124.90	14.201	
13,484.2	6,698.7	6,651.1	6,650.8	126.4	2.2	90.58	-5,495.3	-377.5	1,814.1	1,687.6	126.50	14.340	
13,500.0	6,698.6	6,651.1	6,650.8	126.7	2.2	90.58	-5,495.3	-377.5	1,822.0	1,695.2	126.80	14.369	
13,582.6	6,698.0	6,650.9	6,650.6	128.2	2.2	90.57	-5,495.3	-377.5	1,865.0	1,736.7	128.38	14.528	
13,600.0	6,697.9	6,650.9	6,650.5	128.5	2.2	90.57	-5,495.3	-377.5	1,874.4	1,745.7	128.71	14.563	
13,681.1	6,697.3	6,650.7	6,650.4	130.1	2.2	90.57	-5,495.3	-377.5	1,919.7	1,789.4	130.25	14.738	
13,700.0	6,697.2	6,650.7	6,650.3	130.4	2.2	90.56	-5,495.3	-377.5	1,930.6	1,800.0	130.61	14.781	
13,779.5	6,696.7	6,650.5	6,650.1	131.9	2.2	90.56	-5,495.3	-377.5	1,977.7	1,845.6	132.13	14.968	
13,800.0	6,696.5	6,650.4	6,650.1	132.3	2.2	90.56	-5,495.3	-377.5	1,990.2	1,857.7	132.52	15.018	
13,877.9	6,696.0	6,650.3	6,649.9	133.8	2.2	90.55	-5,495.3	-377.5	2,038.8	1,904.8	134.01	15.214	
13,900.0	6,695.8	6,650.2	6,649.9	134.2	2.2	90.55	-5,495.3	-377.5	2,052.9	1,918.5	134.43	15.271	
13,976.3	6,695.3	6,650.1	6,649.7	135.6	2.2	90.54	-5,495.3	-377.5	2,102.8	1,966.9	135.89	15.475	
14,000.0	6,695.2	6,650.0	6,649.7	136.1	2.2	90.54	-5,495.3	-377.5	2,118.5	1,982.2	136.34	15.539	
14,034.1	6,695.0	6,650.0	6,649.6	136.7	2.2	90.54	-5,495.3	-377.5	2,141.5	2,004.5	136.99	15.633	

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Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	163.82	-2,954.2	857.0	3,076.4				
98.4	98.4	52.1	52.1	0.1	0.0	163.83	-2,954.2	856.8	3,076.0	3,075.8	0.13	N/A	
100.0	100.0	53.7	53.7	0.1	0.0	163.83	-2,954.2	856.8	3,076.0	3,075.8	0.14	N/A	
196.8	196.8	151.6	151.6	0.3	0.2	163.84	-2,954.3	856.0	3,075.8	3,075.4	0.47	6,553.607	
200.0	200.0	154.7	154.7	0.3	0.2	163.84	-2,954.3	856.0	3,075.8	3,075.3	0.48	6,398.155	
295.3	295.3	252.2	252.2	0.5	0.3	163.86	-2,954.5	855.0	3,075.7	3,074.9	0.80	3,827.827	
300.0	300.0	257.2	257.2	0.5	0.3	163.86	-2,954.5	854.9	3,075.7	3,074.9	0.82	3,757.823	
393.7	393.7	357.0	357.0	0.7	0.4	163.88	-2,954.5	853.9	3,075.4	3,074.3	1.11	2,780.010	
400.0	400.0	363.7	363.7	0.8	0.4	163.88	-2,954.5	853.8	3,075.4	3,074.3	1.13	2,733.298	
492.1	492.1	456.0	455.9	1.0	0.4	163.90	-2,954.4	852.7	3,075.0	3,073.6	1.39	2,207.935	
500.0	500.0	463.5	463.5	1.0	0.4	163.90	-2,954.4	852.6	3,074.9	3,073.5	1.42	2,172.920	
590.5	590.5	552.6	552.6	1.2	0.5	163.92	-2,954.3	851.5	3,074.6	3,072.9	1.67	1,839.736	
600.0	600.0	562.1	562.0	1.2	0.5	163.92	-2,954.3	851.4	3,074.6	3,072.9	1.70	1,810.898	
689.0	689.0	652.2	652.2	1.4	0.5	163.94	-2,954.3	850.4	3,074.2	3,072.3	1.95	1,578.932	
700.0	700.0	663.5	663.5	1.4	0.5	163.94	-2,954.3	850.3	3,074.2	3,072.2	1.98	1,554.343	
787.4	787.4	748.6	748.6	1.6	0.6	163.96	-2,954.2	849.2	3,073.9	3,071.6	2.22	1,385.933	
800.0	800.0	760.4	760.4	1.7	0.6	163.96	-2,954.2	849.1	3,073.8	3,071.6	2.25	1,364.851	
885.8	885.8	841.8	841.7	1.9	0.6	163.98	-2,954.3	848.2	3,073.6	3,071.1	2.48	1,237.002	
900.0	900.0	855.4	855.3	1.9	0.6	163.98	-2,954.3	848.1	3,073.6	3,071.1	2.52	1,218.201	
984.2	984.2	937.4	937.4	2.1	0.7	163.99	-2,954.4	847.4	3,073.5	3,070.8	2.75	1,117.274	
1,000.0	1,000.0	953.1	953.1	2.1	0.7	164.00	-2,954.4	847.3	3,073.5	3,070.7	2.79	1,100.231	
1,082.7	1,082.7	1,035.5	1,035.5	2.3	0.7	164.01	-2,954.5	846.6	3,073.5	3,070.4	3.02	1,018.812	
1,100.0	1,100.0	1,052.8	1,052.8	2.3	0.7	164.01	-2,954.6	846.5	3,073.5	3,070.4	3.06	1,003.292	
1,181.1	1,181.1	1,134.3	1,134.2	2.5	0.8	164.02	-2,954.7	845.9	3,073.4	3,070.1	3.28	936.582	
1,200.0	1,200.0	1,153.4	1,153.3	2.6	0.8	164.03	-2,954.7	845.8	3,073.4	3,070.1	3.33	922.312	
1,279.5	1,279.5	1,233.5	1,233.4	2.7	0.8	164.03	-2,954.7	845.5	3,073.3	3,069.8	3.55	866.822	
1,300.0	1,300.0	1,254.0	1,253.9	2.8	0.8	164.03	-2,954.7	845.4	3,073.3	3,069.7	3.60	853.627	
1,377.9	1,377.9	1,332.4	1,332.4	3.0	0.9	164.04	-2,954.7	845.1	3,073.2	3,069.4	3.81	806.936	
1,400.0	1,400.0	1,354.8	1,354.8	3.0	0.9	164.04	-2,954.7	845.1	3,073.2	3,069.3	3.87	794.667	
1,476.4	1,476.4	1,430.3	1,430.3	3.2	0.9	164.04	-2,954.7	844.9	3,073.1	3,069.0	4.07	755.658	
1,500.0	1,500.0	1,452.8	1,452.7	3.2	0.9	164.04	-2,954.7	844.9	3,073.1	3,069.0	4.13	744.673	
1,534.9	1,534.9	1,486.0	1,485.9	3.3	0.9	164.04	-2,954.7	844.8	3,073.1	3,068.9	4.22	729.000	
1,574.8	1,574.8	1,521.5	1,521.5	3.4	0.9	164.04	-2,954.7	844.8	3,073.1	3,068.8	4.31	712.323	
1,600.0	1,600.0	1,543.1	1,543.0	3.5	0.9	164.04	-2,954.7	844.8	3,073.1	3,068.8	4.38	702.319	
1,673.2	1,673.2	1,600.0	1,599.9	3.6	0.9	164.04	-2,955.0	844.9	3,073.5	3,068.9	4.55	675.020	
1,700.0	1,700.0	1,626.0	1,625.9	3.7	0.9	164.04	-2,955.1	844.9	3,073.7	3,069.0	4.62	665.536	
1,771.6	1,771.6	1,681.6	1,681.6	3.8	1.0	164.04	-2,955.7	845.0	3,074.4	3,069.6	4.79	641.842	
1,800.0	1,800.0	1,700.0	1,699.9	3.9	1.0	164.05	-2,956.0	845.1	3,074.8	3,070.0	4.86	633.043	
1,870.1	1,870.1	1,764.3	1,764.2	4.1	1.0	164.05	-2,957.1	845.3	3,076.0	3,071.0	5.03	611.824	
1,900.0	1,900.0	1,790.0	1,790.0	4.1	1.0	164.05	-2,957.6	845.3	3,076.6	3,071.5	5.10	603.249	
1,968.5	1,968.5	1,857.0	1,856.9	4.3	1.0	164.06	-2,959.0	845.3	3,078.0	3,072.7	5.27	584.183	
2,000.0	2,000.0	1,888.5	1,888.4	4.4	1.0	164.06	-2,959.7	845.2	3,078.6	3,073.3	5.35	575.790	
2,066.9	2,066.9	1,964.1	1,964.0	4.5	1.0	164.07	-2,961.2	845.0	3,079.9	3,074.4	5.52	558.411	
2,100.0	2,100.0	2,002.8	2,002.7	4.6	1.0	164.08	-2,962.0	844.7	3,080.5	3,074.9	5.60	550.144	
2,165.3	2,165.3	2,090.4	2,090.3	4.7	1.1	164.10	-2,963.3	843.9	3,081.2	3,075.5	5.77	533.936	
2,200.0	2,200.0	2,126.5	2,126.3	4.8	1.1	164.11	-2,963.7	843.5	3,081.5	3,075.7	5.86	525.881	
2,250.0	2,250.0	2,174.6	2,174.5	4.9	1.1	164.13	-2,964.3	842.9	3,081.9	3,075.9	5.99	514.747	
2,263.8	2,263.8	2,187.9	2,187.7	4.9	1.1	92.22	-2,964.5	842.7	3,082.1	3,076.2	5.90	522.402	
2,300.0	2,300.0	2,225.9	2,225.7	5.0	1.1	92.23	-2,965.0	842.2	3,082.4	3,076.4	5.99	514.859	
2,362.2	2,362.2	2,294.0	2,293.9	5.2	1.1	92.28	-2,965.8	841.2	3,082.9	3,076.8	6.13	502.734	
2,400.0	2,399.9	2,333.5	2,333.3	5.2	1.2	92.32	-2,966.2	840.5	3,083.2	3,077.0	6.22	495.693	
2,460.6	2,460.4	2,396.1	2,395.9	5.4	1.2	92.41	-2,966.9	839.4	3,083.7	3,077.3	6.36	484.571	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PLUMB #B5-11 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,500.0	2,499.7	2,436.4	2,436.2	5.4	1.2	92.48	-2,967.3	838.6	3,084.0	3,077.6	6.46	477.635	
2,559.0	2,558.5	2,496.5	2,496.3	5.6	1.2	92.60	-2,967.9	837.5	3,084.5	3,077.9	6.60	467.232	
2,600.0	2,599.1	2,536.4	2,536.2	5.7	1.2	92.69	-2,968.3	836.7	3,084.9	3,078.2	6.70	460.322	
2,657.5	2,656.1	2,592.0	2,591.7	5.8	1.2	92.84	-2,968.9	835.5	3,085.6	3,078.7	6.85	450.453	
2,700.0	2,698.2	2,638.4	2,638.1	5.9	1.3	92.98	-2,969.4	834.4	3,086.1	3,079.1	6.96	443.344	
2,755.9	2,753.3	2,700.8	2,700.5	6.1	1.3	93.19	-2,970.0	832.8	3,086.7	3,079.6	7.12	433.629	
2,800.0	2,796.6	2,746.5	2,746.2	6.2	1.3	93.36	-2,970.3	831.6	3,087.2	3,080.0	7.24	426.299	
2,854.3	2,849.9	2,802.8	2,802.4	6.3	1.3	93.58	-2,970.7	830.0	3,087.9	3,080.5	7.41	416.767	
2,900.0	2,894.4	2,853.3	2,852.9	6.5	1.3	93.80	-2,971.0	828.5	3,088.5	3,080.9	7.55	409.030	
2,952.7	2,945.7	2,910.7	2,910.3	6.6	1.4	94.07	-2,971.3	826.8	3,089.2	3,081.4	7.73	399.489	
3,000.0	2,991.5	2,959.5	2,959.2	6.8	1.4	94.31	-2,971.4	825.3	3,089.8	3,081.9	7.90	391.323	
3,051.2	3,040.8	3,017.3	3,016.9	7.0	1.4	94.61	-2,971.4	823.6	3,090.6	3,082.5	8.10	381.764	
3,100.0	3,087.6	3,088.2	3,087.7	7.1	1.4	95.01	-2,971.1	821.2	3,091.2	3,082.9	8.29	372.912	
3,149.6	3,134.9	3,155.5	3,155.0	7.4	1.4	95.41	-2,970.4	818.7	3,091.6	3,083.1	8.51	363.256	
3,200.0	3,182.7	3,221.4	3,220.8	7.6	1.5	95.84	-2,969.3	815.9	3,091.9	3,083.2	8.74	353.937	
3,248.0	3,228.0	3,281.5	3,280.8	7.8	1.5	96.24	-2,968.0	813.1	3,092.2	3,083.2	8.98	344.408	
3,300.0	3,276.6	3,348.3	3,347.5	8.1	1.5	96.72	-2,966.3	809.7	3,092.4	3,083.1	9.24	334.621	
3,346.4	3,319.9	3,407.9	3,407.0	8.3	1.5	97.17	-2,964.5	806.2	3,092.5	3,083.0	9.51	325.286	
3,400.0	3,369.4	3,474.1	3,473.1	8.6	1.5	97.70	-2,962.2	801.9	3,092.7	3,082.9	9.81	315.150	
3,444.9	3,410.5	3,524.5	3,523.3	8.9	1.6	98.11	-2,960.2	798.5	3,092.8	3,082.7	10.10	306.192	
3,500.0	3,460.7	3,580.8	3,579.4	9.2	1.6	98.59	-2,957.9	794.6	3,093.3	3,082.8	10.45	295.903	
3,543.3	3,499.8	3,620.7	3,619.1	9.5	1.6	98.93	-2,956.2	791.9	3,093.8	3,083.0	10.76	287.451	
3,600.0	3,550.6	3,668.4	3,666.7	9.9	1.6	99.35	-2,954.1	788.7	3,094.9	3,083.7	11.17	277.138	
3,641.7	3,587.6	3,703.4	3,701.6	10.3	1.6	99.65	-2,952.6	786.4	3,095.9	3,084.4	11.50	269.222	
3,709.9	3,647.5	3,762.0	3,760.0	10.8	1.6	100.17	-2,950.0	782.6	3,098.2	3,086.2	12.04	257.272	
3,740.1	3,673.9	3,787.8	3,785.7	11.1	1.6	100.43	-2,948.9	781.0	3,099.5	3,087.2	12.30	251.961	
3,800.0	3,726.2	3,832.7	3,830.5	11.6	1.6	100.87	-2,947.0	778.1	3,102.1	3,089.3	12.81	242.125	
3,838.6	3,759.9	3,860.6	3,858.3	11.9	1.7	101.14	-2,945.8	776.5	3,104.1	3,091.0	13.15	236.024	
3,900.0	3,813.5	3,900.0	3,897.6	12.5	1.7	101.52	-2,944.3	774.4	3,107.6	3,093.9	13.69	226.979	
3,937.0	3,845.8	3,932.1	3,929.7	12.8	1.7	101.82	-2,943.0	772.8	3,110.0	3,095.9	14.03	221.743	
4,000.0	3,900.8	3,978.0	3,975.5	13.4	1.7	102.26	-2,941.3	770.6	3,114.3	3,099.7	14.59	213.427	
4,035.4	3,931.7	4,004.3	4,001.8	13.7	1.7	102.51	-2,940.4	769.4	3,117.0	3,102.0	14.92	208.956	
4,100.0	3,988.1	4,056.8	4,054.2	14.3	1.7	103.00	-2,938.6	767.2	3,122.1	3,106.6	15.51	201.330	
4,133.8	4,017.6	4,084.4	4,081.7	14.7	1.7	103.26	-2,937.7	766.1	3,125.0	3,109.2	15.82	197.513	
4,200.0	4,075.4	4,142.6	4,139.8	15.3	1.7	103.80	-2,935.7	763.8	3,130.9	3,114.4	16.43	190.522	
4,232.3	4,103.5	4,171.9	4,169.1	15.6	1.7	104.07	-2,934.7	762.7	3,133.9	3,117.1	16.73	187.269	
4,300.0	4,162.6	4,230.5	4,227.7	16.2	1.8	104.62	-2,932.7	760.5	3,140.4	3,123.0	17.37	180.843	
4,330.7	4,189.4	4,256.0	4,253.1	16.5	1.8	104.85	-2,931.8	759.6	3,143.4	3,125.8	17.65	178.063	
4,400.0	4,249.9	4,315.2	4,312.2	17.2	1.8	105.39	-2,929.8	757.5	3,150.7	3,132.4	18.30	172.152	
4,429.1	4,275.4	4,342.5	4,339.5	17.5	1.8	105.64	-2,928.8	756.6	3,153.8	3,135.2	18.58	169.784	
4,500.0	4,337.2	4,409.1	4,406.0	18.2	1.8	106.25	-2,926.5	754.3	3,161.6	3,142.4	19.24	164.341	
4,527.5	4,361.3	4,435.3	4,432.2	18.5	1.8	106.49	-2,925.5	753.5	3,164.8	3,145.3	19.50	162.321	
4,600.0	4,424.5	4,504.2	4,501.0	19.2	1.8	107.11	-2,922.8	751.3	3,173.2	3,153.0	20.17	157.292	
4,626.0	4,447.2	4,528.0	4,524.7	19.5	1.8	107.32	-2,921.9	750.5	3,176.3	3,155.8	20.42	155.566	
4,700.0	4,511.8	4,595.5	4,592.2	20.2	1.8	107.93	-2,919.1	748.2	3,185.3	3,164.2	21.11	150.902	
4,724.4	4,533.1	4,616.9	4,613.5	20.5	1.9	108.12	-2,918.2	747.5	3,188.3	3,167.0	21.34	149.429	
4,796.7	4,596.3	4,679.9	4,676.5	21.2	1.9	108.68	-2,915.6	745.4	3,197.6	3,175.6	22.01	145.271	
4,800.0	4,599.1	4,682.8	4,679.4	21.2	1.9	108.72	-2,915.5	745.4	3,198.1	3,176.0	22.04	145.116	
4,822.8	4,619.1	4,702.9	4,699.4	21.4	1.9	108.95	-2,914.7	744.8	3,201.0	3,178.8	22.20	144.201	
4,900.0	4,687.3	4,772.5	4,768.9	22.0	1.9	109.73	-2,911.8	742.7	3,210.9	3,188.2	22.74	141.224	
4,921.2	4,706.2	4,791.8	4,788.2	22.2	1.9	109.93	-2,911.0	742.1	3,213.6	3,190.7	22.87	140.485	
5,000.0	4,777.1	4,859.0	4,855.3	22.8	1.9	110.65	-2,908.1	739.9	3,223.2	3,199.9	23.39	137.821	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PLUMB #B5-11 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,019.7	4,794.9	4,875.8	4,872.1	22.9	1.9	110.82	-2,907.4	739.4	3,225.6	3,202.1	23.51	137.226		
5,100.0	4,868.3	4,940.5	4,936.7	23.5	1.9	111.47	-2,904.9	737.5	3,235.0	3,211.1	23.99	134.852		
5,118.1	4,885.0	4,954.6	4,950.9	23.6	1.9	111.61	-2,904.3	737.1	3,237.1	3,213.0	24.09	134.377		
5,200.0	4,961.0	5,020.6	5,016.7	24.2	2.0	112.22	-2,901.9	735.3	3,246.4	3,221.9	24.54	132.284		
5,216.5	4,976.4	5,034.6	5,030.8	24.3	2.0	112.35	-2,901.4	734.9	3,248.2	3,223.6	24.62	131.914		
5,300.0	5,054.8	5,107.8	5,103.9	24.8	2.0	112.96	-2,899.0	732.8	3,257.1	3,232.1	25.04	130.088		
5,314.9	5,069.0	5,124.4	5,120.4	24.8	2.0	113.08	-2,898.4	732.3	3,258.6	3,233.5	25.10	129.812		
5,400.0	5,149.9	5,217.5	5,213.5	25.3	2.0	113.74	-2,895.1	729.9	3,266.6	3,241.1	25.47	128.241		
5,413.4	5,162.7	5,231.1	5,227.1	25.4	2.0	113.83	-2,894.6	729.6	3,267.8	3,242.2	25.52	128.026		
5,500.0	5,245.9	5,320.6	5,316.5	25.8	2.0	114.41	-2,891.1	726.9	3,274.7	3,248.8	25.86	126.629		
5,511.8	5,257.3	5,333.4	5,329.2	25.9	2.0	114.48	-2,890.6	726.5	3,275.5	3,249.6	25.90	126.467		
5,600.0	5,342.9	5,430.5	5,426.1	26.3	2.1	115.03	-2,886.4	723.1	3,281.2	3,255.0	26.20	125.243		
5,610.2	5,352.9	5,442.0	5,437.7	26.3	2.1	115.09	-2,885.9	722.7	3,281.8	3,255.6	26.23	125.124		
5,700.0	5,440.7	5,535.6	5,531.0	26.7	2.1	115.55	-2,881.4	718.6	3,286.1	3,259.6	26.49	124.030		
5,708.6	5,449.1	5,543.5	5,539.0	26.7	2.1	115.59	-2,881.0	718.3	3,286.5	3,259.9	26.52	123.940		
5,800.0	5,539.1	5,624.5	5,619.8	27.0	2.1	115.95	-2,877.1	714.4	3,289.7	3,262.9	26.75	122.958		
5,807.1	5,546.1	5,630.3	5,625.5	27.0	2.1	115.97	-2,876.9	714.1	3,289.9	3,263.1	26.77	122.895		
5,900.0	5,638.1	5,706.7	5,701.8	27.3	2.2	116.25	-2,873.5	710.3	3,292.2	3,265.3	26.98	122.038		
5,905.5	5,643.5	5,711.6	5,706.6	27.3	2.2	116.27	-2,873.3	710.0	3,292.4	3,265.4	26.99	121.997		
6,000.0	5,737.5	5,800.0	5,794.9	27.5	2.2	116.52	-2,869.8	705.8	3,293.7	3,266.6	27.16	121.265		
6,003.9	5,741.4	5,800.0	5,794.9	27.5	2.2	116.52	-2,869.8	705.8	3,293.8	3,266.6	27.17	121.237		
6,100.0	5,837.2	5,892.9	5,887.6	27.7	2.2	116.70	-2,866.4	701.8	3,293.9	3,266.6	27.31	120.592		
6,102.3	5,839.6	5,895.2	5,889.9	27.7	2.2	116.71	-2,866.3	701.7	3,293.9	3,266.6	27.32	120.579		
6,200.0	5,937.2	6,000.0	5,994.6	27.9	2.2	116.82	-2,862.3	697.4	3,292.4	3,265.0	27.44	119.989		
6,200.8	5,937.9	6,000.0	5,994.6	27.9	2.2	116.82	-2,862.3	697.4	3,292.4	3,265.0	27.44	119.985		
6,256.6	5,993.8	6,054.4	6,048.9	27.9	2.3	-171.24	-2,860.1	695.3	3,290.8	3,263.3	27.50	119.673		
6,286.6	6,023.8	6,081.1	6,075.5	27.9	2.3	-171.22	-2,859.1	694.3	3,289.9	3,262.4	27.53	119.504		
6,299.2	6,036.4	6,092.2	6,086.7	27.9	2.3	8.79	-2,858.7	693.9	3,289.4	3,261.9	27.53	119.477		
6,300.0	6,037.2	6,093.0	6,087.4	27.9	2.3	8.79	-2,858.7	693.8	3,289.4	3,261.8	27.53	119.475		
6,350.0	6,087.1	6,143.5	6,137.9	28.0	2.3	8.89	-2,856.9	692.1	3,285.2	3,257.7	27.52	119.370		
6,397.6	6,134.3	6,192.5	6,186.8	28.0	2.3	9.02	-2,855.1	690.6	3,278.1	3,250.6	27.48	119.294		
6,400.0	6,136.7	6,194.9	6,189.2	28.0	2.3	9.03	-2,855.1	690.5	3,277.6	3,250.1	27.48	119.292		
6,450.0	6,185.7	6,238.6	6,232.9	28.0	2.3	9.22	-2,853.5	689.3	3,266.7	3,239.3	27.37	119.335		
6,496.0	6,230.2	6,277.6	6,271.8	28.0	2.3	9.45	-2,852.3	688.4	3,253.7	3,226.5	27.22	119.554		
6,500.0	6,234.0	6,280.9	6,275.1	28.0	2.3	9.47	-2,852.2	688.3	3,252.4	3,225.2	27.20	119.584		
6,550.0	6,281.3	6,324.4	6,318.6	28.0	2.3	9.79	-2,850.8	687.3	3,235.0	3,208.1	26.94	120.099		
6,594.5	6,322.2	6,363.8	6,358.0	27.9	2.4	10.13	-2,849.6	686.4	3,216.9	3,190.3	26.63	120.820		
6,600.0	6,327.3	6,368.6	6,362.8	27.9	2.4	10.18	-2,849.5	686.3	3,214.5	3,187.9	26.58	120.931		
6,650.0	6,371.8	6,411.7	6,405.9	27.9	2.4	10.67	-2,848.1	685.3	3,190.9	3,164.7	26.13	122.123		
6,692.9	6,408.6	6,448.4	6,442.5	27.9	2.4	11.17	-2,847.0	684.4	3,168.3	3,142.6	25.66	123.454		
6,700.0	6,414.6	6,454.4	6,448.4	27.8	2.4	11.26	-2,846.9	684.3	3,164.3	3,138.7	25.58	123.708		
6,750.0	6,455.5	6,495.0	6,489.1	27.8	2.4	11.97	-2,845.7	683.6	3,134.9	3,110.0	24.93	125.733		
6,791.3	6,487.7	6,533.3	6,527.3	27.7	2.4	12.69	-2,844.5	683.1	3,108.5	3,084.2	24.33	127.742		
6,800.0	6,494.3	6,541.3	6,535.3	27.7	2.4	12.86	-2,844.3	683.0	3,102.8	3,078.6	24.20	128.215		
6,850.0	6,530.8	6,585.5	6,579.5	27.7	2.4	13.96	-2,842.8	682.4	3,068.0	3,044.6	23.38	131.232		
6,889.7	6,558.1	6,615.7	6,609.7	27.6	2.4	15.00	-2,841.7	682.0	3,038.6	3,016.0	22.67	134.047		
6,900.0	6,564.9	6,622.8	6,616.7	27.6	2.4	15.30	-2,841.5	681.9	3,030.8	3,008.4	22.48	134.850		
6,950.0	6,596.3	6,655.2	6,649.1	27.6	2.4	16.95	-2,840.3	681.6	2,991.5	2,970.0	21.50	139.111		
6,988.2	6,618.4	6,677.8	6,671.8	27.5	2.4	18.49	-2,839.5	681.5	2,960.1	2,939.4	20.73	142.783		
7,000.0	6,624.9	6,684.5	6,678.4	27.5	2.4	19.02	-2,839.3	681.5	2,950.2	2,929.7	20.48	144.026		
7,050.0	6,650.6	6,707.4	6,701.3	27.5	2.4	21.65	-2,838.5	681.5	2,907.1	2,887.6	19.44	149.523		
7,086.6	6,667.5	6,719.4	6,713.3	27.5	2.4	24.03	-2,838.1	681.5	2,874.6	2,855.9	18.70	153.682		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PLUMB #B5-11 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,100.0	6,673.3	6,723.5	6,717.4	27.5	2.4	25.03	-2,837.9	681.5	2,862.5	2,844.1	18.43	155.286	
7,150.0	6,692.7	6,737.2	6,731.1	27.5	2.4	29.56	-2,837.5	681.5	2,816.6	2,799.1	17.55	160.484	
7,185.0	6,704.4	6,750.0	6,743.9	27.5	2.4	33.86	-2,837.1	681.5	2,783.8	2,766.8	17.04	163.362	
7,200.0	6,709.0	6,750.0	6,743.9	27.5	2.4	35.86	-2,837.1	681.5	2,769.7	2,752.7	16.96	163.335	
7,250.0	6,721.8	6,750.0	6,743.9	27.5	2.4	44.22	-2,837.1	681.5	2,721.9	2,705.0	16.85	161.514	
7,283.4	6,728.6	6,750.0	6,743.9	27.5	2.4	51.69	-2,837.1	681.5	2,689.6	2,672.4	17.15	156.838	
7,300.0	6,731.3	6,750.0	6,743.9	27.6	2.4	56.05	-2,837.1	681.5	2,673.5	2,656.1	17.40	153.643	
7,350.0	6,737.3	6,750.0	6,743.9	27.7	2.4	72.14	-2,837.1	681.5	2,624.7	2,606.2	18.49	141.971	
7,381.9	6,739.4	6,750.0	6,743.9	27.7	2.4	84.22	-2,837.1	681.5	2,593.5	2,574.0	19.44	133.390	
7,400.0	6,739.9	6,750.0	6,743.9	27.8	2.4	91.34	-2,837.1	681.5	2,575.7	2,555.5	20.16	127.733	
7,416.5	6,740.0	6,750.0	6,743.9	27.8	2.4	97.75	-2,837.1	681.5	2,559.5	2,538.6	20.94	122.258	
7,480.3	6,739.5	6,750.0	6,743.9	28.0	2.4	97.75	-2,837.1	681.5	2,497.1	2,475.6	21.47	116.284	
7,500.0	6,739.4	6,750.0	6,743.9	28.1	2.4	97.75	-2,837.1	681.5	2,477.8	2,456.2	21.64	114.500	
7,578.7	6,738.9	6,750.0	6,743.9	28.5	2.4	97.75	-2,837.1	681.5	2,400.9	2,378.5	22.41	107.129	
7,600.0	6,738.7	6,750.0	6,743.9	28.6	2.4	97.75	-2,837.1	681.5	2,380.1	2,357.5	22.62	105.224	
7,677.1	6,738.2	6,750.0	6,743.9	29.1	2.4	97.75	-2,837.1	681.5	2,304.9	2,281.4	23.47	98.192	
7,700.0	6,738.1	6,750.0	6,743.9	29.2	2.4	97.75	-2,837.1	681.5	2,282.7	2,258.9	23.73	96.207	
7,775.6	6,737.5	6,750.0	6,743.9	29.7	2.4	97.75	-2,837.1	681.5	2,209.1	2,184.5	24.64	89.639	
7,800.0	6,737.4	6,750.0	6,743.9	29.9	2.4	97.75	-2,837.1	681.5	2,185.4	2,160.5	24.94	87.621	
7,874.0	6,736.9	6,750.0	6,743.9	30.6	2.4	97.75	-2,837.1	681.5	2,113.6	2,087.7	25.91	81.579	
7,900.0	6,736.7	6,750.0	6,743.9	30.8	2.4	97.75	-2,837.1	681.5	2,088.4	2,062.1	26.25	79.563	
7,972.4	6,736.2	6,750.0	6,743.9	31.5	2.4	97.75	-2,837.1	681.5	2,018.3	1,991.1	27.25	74.065	
8,000.0	6,736.0	6,750.0	6,743.9	31.8	2.4	97.75	-2,837.1	681.5	1,991.7	1,964.1	27.63	72.078	
8,070.8	6,735.5	6,750.0	6,743.9	32.5	2.4	97.75	-2,837.1	681.5	1,923.4	1,894.7	28.66	67.112	
8,100.0	6,735.3	6,750.0	6,743.9	32.8	2.4	97.75	-2,837.1	681.5	1,895.3	1,866.2	29.08	65.173	
8,169.3	6,734.9	6,746.0	6,739.9	33.6	2.4	97.31	-2,837.2	681.5	1,828.8	1,798.7	30.08	60.789	
8,200.0	6,734.6	6,745.0	6,738.9	34.0	2.4	97.20	-2,837.2	681.5	1,799.4	1,768.8	30.54	58.922	
8,267.7	6,734.2	6,742.9	6,736.8	34.8	2.4	96.97	-2,837.3	681.5	1,734.6	1,703.1	31.57	54.948	
8,300.0	6,734.0	6,741.8	6,735.7	35.2	2.4	96.85	-2,837.3	681.5	1,703.8	1,671.8	32.06	53.144	
8,366.1	6,733.5	6,739.7	6,733.6	36.1	2.4	96.62	-2,837.4	681.5	1,641.0	1,607.9	33.10	49.583	
8,400.0	6,733.3	6,738.6	6,732.5	36.5	2.4	96.50	-2,837.4	681.5	1,608.9	1,575.2	33.63	47.846	
8,464.5	6,732.8	6,736.5	6,730.4	37.4	2.4	96.26	-2,837.5	681.5	1,547.9	1,513.2	34.66	44.661	
8,500.0	6,732.6	6,735.3	6,729.2	37.9	2.4	96.13	-2,837.5	681.5	1,514.5	1,479.3	35.23	42.995	
8,563.0	6,732.2	6,733.2	6,727.1	38.8	2.4	95.90	-2,837.6	681.5	1,455.5	1,419.2	36.25	40.149	
8,600.0	6,731.9	6,731.9	6,725.8	39.3	2.4	95.76	-2,837.7	681.5	1,420.9	1,384.1	36.86	38.553	
8,661.4	6,731.5	6,729.8	6,723.7	40.2	2.4	95.53	-2,837.7	681.5	1,363.9	1,326.1	37.87	36.012	
8,700.0	6,731.2	6,728.4	6,722.4	40.8	2.4	95.38	-2,837.8	681.5	1,328.3	1,289.8	38.51	34.489	
8,759.8	6,730.8	6,726.3	6,720.3	41.7	2.4	95.15	-2,837.8	681.5	1,273.4	1,233.9	39.52	32.222	
8,800.0	6,730.6	6,724.9	6,718.8	42.3	2.4	94.99	-2,837.9	681.5	1,236.8	1,196.6	40.19	30.770	
8,858.2	6,730.2	6,722.8	6,716.8	43.2	2.4	94.76	-2,837.9	681.5	1,184.1	1,142.9	41.19	28.751	
8,900.0	6,729.9	6,721.3	6,715.2	43.8	2.4	94.59	-2,838.0	681.5	1,146.7	1,104.8	41.90	27.370	
8,956.7	6,729.5	6,719.2	6,713.2	44.7	2.4	94.36	-2,838.1	681.5	1,096.4	1,053.5	42.87	25.575	
9,000.0	6,729.2	6,717.6	6,711.6	45.4	2.4	94.19	-2,838.1	681.5	1,058.3	1,014.7	43.61	24.266	
9,055.1	6,728.8	6,715.6	6,709.5	46.3	2.4	93.96	-2,838.2	681.5	1,010.6	966.0	44.57	22.675	
9,100.0	6,728.5	6,713.9	6,707.8	47.0	2.4	93.77	-2,838.2	681.5	972.2	926.9	45.35	21.440	
9,153.5	6,728.2	6,711.8	6,705.8	47.9	2.4	93.54	-2,838.3	681.5	927.3	881.0	46.28	20.036	
9,200.0	6,727.8	6,710.0	6,704.0	48.6	2.4	93.34	-2,838.4	681.5	889.0	841.9	47.09	18.878	
9,251.9	6,727.5	6,708.0	6,701.9	49.5	2.4	93.12	-2,838.5	681.5	847.2	799.2	48.01	17.648	
9,300.0	6,727.2	6,706.1	6,700.0	50.3	2.4	92.91	-2,838.5	681.5	809.6	760.8	48.85	16.573	
9,350.4	6,726.8	6,704.1	6,698.0	51.1	2.4	92.68	-2,838.6	681.5	771.4	721.7	49.74	15.508	
9,400.0	6,726.5	6,702.1	6,696.0	51.9	2.4	92.46	-2,838.7	681.5	735.2	684.6	50.62	14.524	
9,448.8	6,726.1	6,700.0	6,693.9	52.7	2.4	92.23	-2,838.7	681.5	701.2	649.7	51.49	13.619	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PLUMB #B5-11 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	6,725.8	6,697.7	6,691.7	53.6	2.4	91.98	-2,838.8	681.5	667.5	615.1	52.40	12.740	
9,547.2	6,725.5	6,695.6	6,689.5	54.4	2.4	91.74	-2,838.9	681.5	638.5	585.3	53.24	11.994	
9,600.0	6,725.1	6,693.2	6,687.1	55.3	2.4	91.47	-2,839.0	681.5	608.8	554.6	54.18	11.237	
9,645.6	6,724.8	6,691.1	6,685.0	56.1	2.4	91.24	-2,839.1	681.5	585.7	530.7	54.99	10.650	
9,700.0	6,724.4	6,688.6	6,682.5	57.0	2.4	90.96	-2,839.1	681.5	561.7	505.8	55.96	10.038	
9,744.1	6,724.1	6,686.6	6,680.5	57.8	2.4	90.74	-2,839.2	681.5	545.6	488.8	56.76	9.613	
9,800.0	6,723.8	6,684.0	6,678.0	58.7	2.4	90.45	-2,839.3	681.5	529.6	471.9	57.76	9.169	
9,842.5	6,723.5	6,682.1	6,676.0	59.5	2.4	90.24	-2,839.4	681.5	521.2	462.7	58.52	8.906	
9,900.0	6,723.1	6,679.4	6,673.4	60.5	2.4	89.94	-2,839.5	681.5	515.1	455.6	59.56	8.650	
9,925.7	6,722.9	6,678.3	6,672.2	60.9	2.4	89.81	-2,839.5	681.5	514.5	454.5	60.02	8.572 CC	
9,940.9	6,722.8	6,677.6	6,671.5	61.2	2.4	89.74	-2,839.5	681.5	514.7	454.4	60.29	8.537 ES	
10,000.0	6,722.4	6,674.9	6,668.8	62.2	2.4	89.44	-2,839.6	681.5	519.8	458.5	61.36	8.472 SF	
10,039.3	6,722.1	6,673.1	6,667.0	62.9	2.4	89.24	-2,839.7	681.5	526.9	464.8	62.07	8.489	
10,100.0	6,721.7	6,670.3	6,664.3	64.0	2.4	88.93	-2,839.8	681.5	543.2	480.0	63.16	8.600	
10,137.8	6,721.5	6,668.6	6,662.5	64.7	2.4	88.74	-2,839.9	681.5	556.4	492.6	63.84	8.715	
10,200.0	6,721.0	6,665.7	6,659.7	65.8	2.4	88.42	-2,840.0	681.6	582.9	517.9	64.97	8.972	
10,236.2	6,720.8	6,664.1	6,658.1	66.4	2.4	88.24	-2,840.0	681.6	600.8	535.1	65.62	9.155	
10,300.0	6,720.4	6,661.2	6,655.1	67.5	2.4	87.91	-2,840.1	681.6	636.0	569.2	66.78	9.525	
10,334.6	6,720.1	6,659.6	6,653.6	68.2	2.4	87.74	-2,840.2	681.6	657.0	589.6	67.40	9.747	
10,400.0	6,719.7	6,656.6	6,650.6	69.3	2.4	87.41	-2,840.3	681.6	699.4	630.9	68.58	10.198	
10,433.0	6,719.4	6,655.1	6,649.1	69.9	2.4	87.24	-2,840.3	681.6	722.2	653.0	69.18	10.439	
10,500.0	6,719.0	6,652.1	6,646.0	71.1	2.4	86.90	-2,840.4	681.6	770.6	700.2	70.39	10.948	
10,531.5	6,718.8	6,650.6	6,644.6	71.7	2.4	86.74	-2,840.5	681.6	794.3	723.4	70.96	11.194	
10,600.0	6,718.3	6,647.5	6,641.5	72.9	2.4	86.39	-2,840.6	681.7	847.6	775.4	72.20	11.740	
10,629.9	6,718.1	6,646.1	6,640.1	73.4	2.4	86.24	-2,840.7	681.7	871.6	798.8	72.74	11.982	
10,700.0	6,717.6	6,642.9	6,636.9	74.7	2.4	85.89	-2,840.8	681.7	929.0	855.0	74.00	12.553	
10,728.3	6,717.4	6,641.7	6,635.6	75.2	2.4	85.75	-2,840.8	681.7	952.7	878.2	74.52	12.785	
10,800.0	6,717.0	6,638.4	6,632.4	76.5	2.4	85.38	-2,840.9	681.7	1,013.7	937.9	75.81	13.372	
10,826.7	6,716.8	6,637.2	6,631.1	77.0	2.4	85.25	-2,841.0	681.8	1,036.8	960.5	76.29	13.590	
10,900.0	6,716.3	6,633.8	6,627.8	78.3	2.4	84.88	-2,841.1	681.8	1,100.9	1,023.3	77.61	14.186	
10,925.2	6,716.1	6,632.7	6,626.7	78.8	2.4	84.75	-2,841.1	681.8	1,123.2	1,045.2	78.06	14.389	
11,000.0	6,715.6	6,629.3	6,623.3	80.2	2.4	84.38	-2,841.3	681.8	1,190.2	1,110.8	79.41	14.988	
11,023.6	6,715.4	6,628.2	6,622.2	80.6	2.4	84.26	-2,841.3	681.8	1,211.5	1,131.7	79.83	15.176	
11,100.0	6,714.9	6,624.7	6,618.7	82.0	2.4	83.88	-2,841.4	681.9	1,281.0	1,199.8	81.20	15.776	
11,122.0	6,714.8	6,623.7	6,617.7	82.4	2.4	83.76	-2,841.5	681.9	1,301.2	1,219.6	81.60	15.947	
11,200.0	6,714.2	6,620.2	6,614.2	83.8	2.4	83.37	-2,841.6	681.9	1,373.1	1,290.1	82.99	16.545	
11,220.4	6,714.1	6,619.2	6,613.2	84.2	2.4	83.27	-2,841.6	681.9	1,392.0	1,308.7	83.36	16.700	
11,300.0	6,713.5	6,615.6	6,609.6	85.7	2.4	82.87	-2,841.7	682.0	1,466.2	1,381.4	84.78	17.295	
11,318.9	6,713.4	6,614.8	6,608.8	86.0	2.4	82.78	-2,841.8	682.0	1,483.9	1,398.7	85.11	17.434	
11,400.0	6,712.9	6,611.1	6,605.1	87.5	2.4	82.38	-2,841.9	682.0	1,560.1	1,473.6	86.56	18.025	
11,417.3	6,712.7	6,610.3	6,604.3	87.8	2.4	82.29	-2,841.9	682.0	1,576.5	1,489.6	86.86	18.149	
11,500.0	6,712.2	6,606.5	6,600.5	89.3	2.4	81.88	-2,842.1	682.1	1,654.8	1,566.4	88.33	18.734	
11,515.7	6,712.1	6,605.8	6,599.8	89.6	2.4	81.80	-2,842.1	682.1	1,669.7	1,581.1	88.61	18.844	
11,600.0	6,711.5	6,602.0	6,596.0	91.2	2.4	81.38	-2,842.2	682.1	1,750.0	1,659.9	90.10	19.423	
11,614.1	6,711.4	6,601.4	6,595.4	91.4	2.4	81.31	-2,842.3	682.2	1,763.5	1,673.2	90.35	19.519	
11,700.0	6,710.8	6,600.0	6,594.0	93.0	2.4	81.16	-2,842.3	682.2	1,845.7	1,753.8	91.92	20.079	
11,712.6	6,710.7	6,600.0	6,594.0	93.3	2.4	81.16	-2,842.3	682.2	1,857.8	1,765.6	92.16	20.159	
11,800.0	6,710.1	6,594.1	6,588.1	94.9	2.4	80.52	-2,842.5	682.3	1,941.9	1,848.2	93.64	20.737	
11,811.0	6,710.1	6,593.7	6,587.7	95.1	2.4	80.48	-2,842.5	682.3	1,952.5	1,858.6	93.84	20.806	
11,900.0	6,709.5	6,590.4	6,584.4	96.7	2.4	80.12	-2,842.6	682.3	2,038.4	1,943.0	95.42	21.363	
11,909.4	6,709.4	6,590.0	6,584.0	96.9	2.4	80.08	-2,842.7	682.3	2,047.5	1,951.9	95.58	21.421	
12,000.0	6,708.8	6,586.7	6,580.7	98.6	2.4	79.72	-2,842.8	682.4	2,135.2	2,038.0	97.18	21.971	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PLUMB #B5-11 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,708.7	6,586.4	6,580.4	98.7	2.4	79.69	-2,842.8	682.4	2,142.8	2,045.5	97.32	22.018	
12,100.0	6,708.1	6,583.1	6,577.1	100.4	2.4	79.33	-2,842.9	682.4	2,232.3	2,133.3	98.94	22.561	
12,106.3	6,708.1	6,582.8	6,576.9	100.6	2.4	79.30	-2,842.9	682.4	2,238.4	2,139.3	99.06	22.597	
12,200.0	6,707.4	6,579.5	6,573.5	102.3	2.4	78.94	-2,843.0	682.5	2,329.6	2,228.9	100.70	23.134	
12,204.7	6,707.4	6,579.3	6,573.3	102.4	2.4	78.92	-2,843.0	682.5	2,334.2	2,233.4	100.79	23.160	
12,300.0	6,706.7	6,575.9	6,569.9	104.2	2.4	78.56	-2,843.1	682.5	2,427.2	2,324.7	102.46	23.690	
12,303.1	6,706.7	6,575.8	6,569.8	104.2	2.4	78.55	-2,843.1	682.5	2,430.2	2,327.7	102.51	23.707	
12,400.0	6,706.1	6,572.4	6,566.4	106.0	2.4	78.18	-2,843.3	682.6	2,524.9	2,420.7	104.20	24.230	
12,401.5	6,706.0	6,572.3	6,566.4	106.1	2.4	78.17	-2,843.3	682.6	2,526.4	2,422.2	104.23	24.238	
12,500.0	6,705.4	6,568.9	6,562.9	107.9	2.4	77.81	-2,843.4	682.6	2,622.8	2,516.9	105.95	24.755	
12,598.4	6,704.7	6,565.5	6,559.6	109.7	2.4	77.45	-2,843.5	682.6	2,719.3	2,611.6	107.66	25.258	
12,600.0	6,704.7	6,565.5	6,559.5	109.8	2.4	77.44	-2,843.5	682.7	2,720.8	2,613.2	107.69	25.266	
12,696.8	6,704.0	6,562.2	6,556.2	111.6	2.4	77.09	-2,843.6	682.7	2,815.9	2,706.5	109.37	25.747	
12,700.0	6,704.0	6,562.1	6,556.1	111.6	2.4	77.08	-2,843.6	682.7	2,819.0	2,709.6	109.42	25.763	
12,795.2	6,703.4	6,558.9	6,552.9	113.4	2.4	76.74	-2,843.7	682.7	2,912.7	2,801.6	111.07	26.224	
12,800.0	6,703.3	6,558.7	6,552.8	113.5	2.4	76.72	-2,843.7	682.7	2,917.3	2,806.2	111.15	26.246	
12,893.7	6,702.7	6,555.6	6,549.6	115.3	2.4	76.39	-2,843.8	682.8	3,009.5	2,896.7	112.77	26.688	
12,900.0	6,702.7	6,555.4	6,549.4	115.4	2.4	76.37	-2,843.8	682.8	3,015.7	2,902.9	112.88	26.717	
12,992.1	6,702.0	6,552.4	6,546.4	117.1	2.4	76.05	-2,843.9	682.8	3,106.4	2,992.0	114.46	27.140	
13,000.0	6,702.0	6,552.1	6,546.1	117.3	2.4	76.02	-2,843.9	682.8	3,114.2	2,999.6	114.59	27.176	
13,090.5	6,701.4	6,549.2	6,543.2	119.0	2.4	75.71	-2,844.0	682.9	3,203.5	3,087.3	116.15	27.581	
13,100.0	6,701.3	6,548.9	6,542.9	119.1	2.4	75.68	-2,844.0	682.9	3,212.8	3,096.5	116.31	27.623	
13,188.9	6,700.7	6,546.0	6,540.0	120.8	2.4	75.38	-2,844.1	682.9	3,300.6	3,182.8	117.83	28.011	
13,200.0	6,700.6	6,545.6	6,539.7	121.0	2.4	75.34	-2,844.1	682.9	3,311.5	3,193.5	118.02	28.059	
13,287.4	6,700.0	6,542.9	6,536.9	122.7	2.4	75.05	-2,844.2	683.0	3,397.8	3,278.3	119.51	28.431	
13,300.0	6,699.9	6,542.5	6,536.5	122.9	2.4	75.01	-2,844.2	683.0	3,410.2	3,290.5	119.72	28.485	
13,385.8	6,699.3	6,539.7	6,533.8	124.5	2.4	74.73	-2,844.3	683.0	3,495.0	3,373.8	121.18	28.841	
13,400.0	6,699.3	6,539.3	6,533.4	124.8	2.4	74.68	-2,844.3	683.0	3,509.0	3,387.6	121.42	28.900	
13,484.2	6,698.7	6,536.7	6,530.7	126.4	2.4	74.41	-2,844.4	683.1	3,592.3	3,469.5	122.85	29.242	
13,500.0	6,698.6	6,536.2	6,530.2	126.7	2.4	74.36	-2,844.4	683.1	3,607.9	3,484.8	123.12	29.305	
13,582.6	6,698.0	6,533.6	6,527.7	128.2	2.4	74.09	-2,844.5	683.1	3,689.7	3,565.2	124.51	29.633	
13,600.0	6,697.9	6,533.1	6,527.2	128.5	2.4	74.04	-2,844.5	683.1	3,706.9	3,582.1	124.80	29.701	
13,681.1	6,697.3	6,530.6	6,524.7	130.1	2.4	73.78	-2,844.6	683.1	3,787.1	3,660.9	126.17	30.016	
13,700.0	6,697.2	6,530.1	6,524.1	130.4	2.4	73.72	-2,844.6	683.1	3,805.8	3,679.4	126.49	30.089	
13,779.5	6,696.7	6,527.7	6,521.7	131.9	2.4	73.47	-2,844.7	683.2	3,884.6	3,756.7	127.82	30.390	
13,800.0	6,696.5	6,527.0	6,521.1	132.3	2.4	73.41	-2,844.7	683.2	3,904.9	3,776.7	128.17	30.467	
13,877.9	6,696.0	6,524.7	6,518.8	133.8	2.4	73.17	-2,844.8	683.2	3,982.1	3,852.6	129.47	30.757	
13,900.0	6,695.8	6,524.0	6,518.1	134.2	2.4	73.10	-2,844.8	683.2	4,004.0	3,874.1	129.84	30.838	
13,976.3	6,695.3	6,521.8	6,515.8	135.6	2.4	72.87	-2,844.9	683.3	4,079.6	3,948.5	131.11	31.115	
14,000.0	6,695.2	6,521.1	6,515.1	136.1	2.4	72.80	-2,844.9	683.3	4,103.1	3,971.6	131.51	31.200	
14,034.1	6,695.0	6,520.1	6,514.2	136.7	2.4	72.70	-2,844.9	683.3	4,136.8	4,004.8	132.07	31.322	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	166.49	-4,032.2	968.6	4,147.3				
98.4	98.4	42.6	42.6	0.1	0.0	166.49	-4,032.2	968.6	4,146.9	4,146.8	0.13	N/A	
100.0	100.0	44.4	44.4	0.1	0.0	166.49	-4,032.2	968.6	4,146.9	4,146.8	0.13	N/A	
196.8	196.8	141.0	141.0	0.3	0.2	166.50	-4,032.1	968.0	4,146.7	4,146.3	0.46	9,012.764	
200.0	200.0	143.8	143.8	0.3	0.2	166.50	-4,032.1	968.0	4,146.7	4,146.3	0.47	8,808.678	
295.3	295.3	244.5	244.5	0.5	0.3	166.51	-4,032.3	967.3	4,146.7	4,145.9	0.79	5,251.502	
300.0	300.0	251.2	251.2	0.5	0.3	166.51	-4,032.3	967.2	4,146.7	4,145.9	0.81	5,150.670	
393.7	393.7	359.9	359.9	0.7	0.3	166.52	-4,031.9	966.6	4,146.2	4,145.1	1.09	3,806.141	
400.0	400.0	366.3	366.3	0.8	0.3	166.52	-4,031.8	966.5	4,146.1	4,145.0	1.11	3,743.383	
492.1	492.1	462.6	462.6	1.0	0.4	166.52	-4,031.2	966.3	4,145.5	4,144.1	1.37	3,025.392	
500.0	500.0	471.0	471.0	1.0	0.4	166.52	-4,031.1	966.3	4,145.5	4,144.1	1.39	2,977.020	
590.5	590.5	565.4	565.4	1.2	0.5	166.52	-4,030.3	966.4	4,144.7	4,143.1	1.64	2,521.492	
600.0	600.0	575.2	575.2	1.2	0.5	166.52	-4,030.2	966.4	4,144.7	4,143.0	1.67	2,482.149	
689.0	689.0	657.9	657.9	1.4	0.5	166.51	-4,029.5	966.5	4,143.9	4,142.0	1.91	2,172.242	
700.0	700.0	667.7	667.7	1.4	0.5	166.51	-4,029.5	966.5	4,143.9	4,141.9	1.94	2,139.507	
787.4	787.4	755.5	755.5	1.6	0.6	166.51	-4,028.9	966.5	4,143.3	4,141.1	2.17	1,908.918	
800.0	800.0	769.2	769.2	1.7	0.6	166.51	-4,028.8	966.5	4,143.2	4,141.0	2.20	1,879.480	
885.8	885.8	863.0	863.0	1.9	0.6	166.51	-4,028.0	966.5	4,142.5	4,140.1	2.43	1,701.693	
900.0	900.0	878.5	878.5	1.9	0.6	166.51	-4,027.9	966.5	4,142.4	4,139.9	2.47	1,675.578	
984.2	984.2	961.0	961.0	2.1	0.7	166.51	-4,027.1	966.4	4,141.6	4,138.9	2.69	1,538.299	
1,000.0	1,000.0	975.9	975.9	2.1	0.7	166.51	-4,027.0	966.4	4,141.5	4,138.8	2.73	1,515.247	
1,082.7	1,082.7	1,053.0	1,053.0	2.3	0.7	166.51	-4,026.4	966.3	4,140.8	4,137.9	2.95	1,405.555	
1,100.0	1,100.0	1,069.1	1,069.1	2.3	0.7	166.51	-4,026.3	966.2	4,140.7	4,137.7	2.99	1,384.625	
1,181.1	1,181.1	1,156.2	1,156.1	2.5	0.7	166.50	-4,025.6	966.2	4,140.1	4,136.9	3.20	1,293.176	
1,200.0	1,200.0	1,178.4	1,178.4	2.6	0.7	166.50	-4,025.5	966.1	4,140.0	4,136.7	3.25	1,273.368	
1,279.5	1,279.5	1,262.3	1,262.2	2.7	0.8	166.51	-4,024.7	965.8	4,139.2	4,135.7	3.46	1,197.146	
1,300.0	1,300.0	1,283.1	1,283.1	2.8	0.8	166.51	-4,024.5	965.8	4,138.9	4,135.4	3.51	1,179.039	
1,377.9	1,377.9	1,360.6	1,360.5	3.0	0.8	166.51	-4,023.7	965.5	4,138.1	4,134.4	3.71	1,115.260	
1,400.0	1,400.0	1,382.3	1,382.3	3.0	0.8	166.51	-4,023.5	965.5	4,137.9	4,134.1	3.77	1,098.480	
1,476.4	1,476.4	1,446.3	1,446.2	3.2	0.9	166.51	-4,022.9	965.3	4,137.2	4,133.3	3.96	1,045.766	
1,500.0	1,500.0	1,464.9	1,464.9	3.2	0.9	166.51	-4,022.8	965.3	4,137.1	4,133.0	4.01	1,030.636	
1,574.8	1,574.8	1,537.4	1,537.3	3.4	0.9	166.51	-4,022.4	965.3	4,136.7	4,132.5	4.20	984.975	
1,600.0	1,600.0	1,568.2	1,568.2	3.5	0.9	166.51	-4,022.3	965.2	4,136.5	4,132.3	4.26	970.220	
1,673.2	1,673.2	1,640.0	1,639.9	3.6	0.9	166.51	-4,021.8	964.8	4,136.0	4,131.6	4.45	930.054	
1,700.0	1,700.0	1,662.6	1,662.6	3.7	0.9	166.51	-4,021.7	964.6	4,135.8	4,131.3	4.51	916.255	
1,771.6	1,771.6	1,727.1	1,727.1	3.8	0.9	166.52	-4,021.6	964.0	4,135.5	4,130.8	4.70	880.825	
1,800.0	1,800.0	1,755.1	1,755.1	3.9	1.0	166.52	-4,021.6	963.6	4,135.4	4,130.7	4.77	867.270	
1,870.1	1,870.1	1,818.5	1,818.4	4.1	1.0	166.54	-4,021.5	962.9	4,135.2	4,130.3	4.95	835.944	
1,900.0	1,900.0	1,840.9	1,840.8	4.1	1.0	166.54	-4,021.6	962.6	4,135.2	4,130.1	5.02	823.604	
1,903.2	1,903.2	1,843.2	1,843.2	4.1	1.0	166.54	-4,021.6	962.5	4,135.2	4,130.1	5.03	822.313	
1,968.5	1,968.5	1,900.0	1,899.9	4.3	1.0	166.55	-4,021.9	961.9	4,135.3	4,130.1	5.19	796.357	
2,000.0	2,000.0	1,922.8	1,922.7	4.4	1.0	166.55	-4,022.0	961.6	4,135.4	4,130.2	5.27	784.590	
2,066.9	2,066.9	1,995.4	1,995.3	4.5	1.0	166.57	-4,022.5	960.9	4,135.7	4,130.2	5.44	759.630	
2,100.0	2,100.0	2,030.2	2,030.1	4.6	1.0	166.57	-4,022.7	960.5	4,135.8	4,130.2	5.53	747.886	
2,165.3	2,165.3	2,098.6	2,098.5	4.7	1.0	166.59	-4,023.0	959.5	4,135.9	4,130.2	5.70	725.719	
2,200.0	2,200.0	2,131.3	2,131.2	4.8	1.0	166.59	-4,023.2	959.0	4,135.9	4,130.2	5.79	714.644	
2,250.0	2,250.0	2,178.2	2,178.1	4.9	1.1	166.60	-4,023.5	958.4	4,136.1	4,130.2	5.91	699.259	
2,263.8	2,263.8	2,191.1	2,191.0	4.9	1.1	94.70	-4,023.6	958.2	4,136.1	4,130.1	5.99	691.005	
2,300.0	2,300.0	2,233.9	2,233.8	5.0	1.1	94.71	-4,023.8	957.5	4,136.2	4,130.2	6.07	681.210	
2,362.2	2,362.2	2,309.2	2,309.0	5.2	1.1	94.76	-4,024.2	955.9	4,136.4	4,130.1	6.22	665.449	
2,400.0	2,399.9	2,343.4	2,343.2	5.2	1.1	94.79	-4,024.4	955.0	4,136.5	4,130.2	6.30	656.420	
2,460.6	2,460.4	2,400.0	2,399.8	5.4	1.1	94.86	-4,024.7	953.5	4,136.8	4,130.3	6.44	642.101	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PLUMB B5-14 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,500.0	2,499.7	2,438.1	2,437.9	5.4	1.1	94.91	-4,025.0	952.4	4,137.1	4,130.5	6.53	633.148	
2,559.0	2,558.5	2,498.2	2,498.0	5.6	1.1	95.00	-4,025.4	950.7	4,137.6	4,130.9	6.68	619.642	
2,600.0	2,599.1	2,550.6	2,550.4	5.7	1.2	95.10	-4,025.7	949.2	4,137.9	4,131.2	6.78	610.389	
2,657.5	2,656.1	2,618.6	2,618.3	5.8	1.2	95.24	-4,025.8	947.2	4,138.4	4,131.4	6.93	597.242	
2,700.0	2,698.2	2,659.7	2,659.5	5.9	1.2	95.33	-4,025.9	946.0	4,138.7	4,131.7	7.04	587.991	
2,755.9	2,753.3	2,713.4	2,713.1	6.1	1.2	95.47	-4,026.0	944.4	4,139.3	4,132.1	7.19	575.384	
2,800.0	2,796.6	2,755.1	2,754.8	6.2	1.2	95.58	-4,026.0	943.2	4,139.9	4,132.6	7.32	565.822	
2,854.3	2,849.9	2,807.0	2,806.6	6.3	1.2	95.72	-4,026.1	941.9	4,140.8	4,133.3	7.48	553.376	
2,900.0	2,894.4	2,854.0	2,853.7	6.5	1.3	95.86	-4,026.1	940.8	4,141.6	4,134.0	7.62	543.256	
2,952.7	2,945.7	2,907.4	2,907.1	6.6	1.3	96.03	-4,026.1	939.5	4,142.6	4,134.8	7.80	530.775	
3,000.0	2,991.5	2,951.6	2,951.2	6.8	1.3	96.17	-4,026.2	938.4	4,143.7	4,135.7	7.97	520.106	
3,051.2	3,040.8	3,000.0	2,999.6	7.0	1.3	96.34	-4,026.2	937.1	4,145.0	4,136.8	8.17	507.640	
3,100.0	3,087.6	3,052.7	3,052.3	7.1	1.3	96.54	-4,026.2	935.7	4,146.4	4,138.0	8.36	496.207	
3,149.6	3,134.9	3,100.0	3,099.6	7.4	1.3	96.72	-4,026.2	934.3	4,147.8	4,139.3	8.57	483.732	
3,200.0	3,182.7	3,145.4	3,145.0	7.6	1.3	96.90	-4,026.1	932.9	4,149.5	4,140.7	8.80	471.715	
3,248.0	3,228.0	3,183.6	3,183.1	7.8	1.4	97.06	-4,026.2	931.6	4,151.3	4,142.3	9.04	459.429	
3,300.0	3,276.6	3,230.6	3,230.1	8.1	1.4	97.26	-4,026.4	930.0	4,153.6	4,144.3	9.30	446.797	
3,346.4	3,319.9	3,275.9	3,275.3	8.3	1.4	97.46	-4,026.5	928.4	4,155.7	4,146.2	9.56	434.683	
3,400.0	3,369.4	3,338.9	3,338.3	8.6	1.4	97.77	-4,026.6	926.0	4,158.4	4,148.5	9.87	421.443	
3,444.9	3,410.5	3,399.1	3,398.5	8.9	1.4	98.09	-4,026.5	923.4	4,160.6	4,150.5	10.16	409.615	
3,500.0	3,460.7	3,459.1	3,458.4	9.2	1.5	98.41	-4,026.2	920.4	4,163.4	4,152.9	10.51	396.028	
3,543.3	3,499.8	3,500.0	3,499.2	9.5	1.5	98.62	-4,025.9	918.3	4,165.8	4,155.0	10.82	384.877	
3,600.0	3,550.6	3,544.9	3,544.1	9.9	1.5	98.85	-4,025.6	916.1	4,169.2	4,158.0	11.23	371.232	
3,641.7	3,587.6	3,575.0	3,574.1	10.3	1.5	99.01	-4,025.5	914.6	4,172.0	4,160.4	11.56	360.745	
3,709.9	3,647.5	3,628.3	3,627.4	10.8	1.5	99.28	-4,025.3	912.1	4,177.1	4,164.9	12.11	344.865	
3,740.1	3,673.9	3,654.0	3,653.0	11.1	1.5	99.46	-4,025.2	910.9	4,179.5	4,167.1	12.37	337.803	
3,800.0	3,726.2	3,700.0	3,699.0	11.6	1.5	99.79	-4,025.1	908.8	4,184.4	4,171.5	12.89	324.705	
3,838.6	3,759.9	3,732.2	3,731.2	11.9	1.5	100.02	-4,025.0	907.3	4,187.8	4,174.5	13.23	316.560	
3,900.0	3,813.5	3,777.3	3,776.2	12.5	1.6	100.34	-4,024.9	905.5	4,193.4	4,179.6	13.77	304.469	
3,937.0	3,845.8	3,805.3	3,804.3	12.8	1.6	100.54	-4,024.9	904.4	4,196.9	4,182.8	14.11	297.467	
4,000.0	3,900.8	3,860.1	3,859.0	13.4	1.6	100.92	-4,024.9	902.3	4,203.1	4,188.4	14.68	286.303	
4,035.4	3,931.7	3,890.9	3,889.7	13.7	1.6	101.14	-4,024.8	901.2	4,206.7	4,191.7	15.01	280.289	
4,100.0	3,988.1	3,942.4	3,941.2	14.3	1.6	101.50	-4,024.8	899.4	4,213.4	4,197.8	15.60	270.016	
4,133.8	4,017.6	3,969.0	3,967.8	14.7	1.6	101.68	-4,024.8	898.5	4,217.1	4,201.2	15.92	264.864	
4,200.0	4,075.4	4,023.1	4,021.9	15.3	1.6	102.06	-4,024.9	896.7	4,224.5	4,208.0	16.54	255.398	
4,232.3	4,103.5	4,051.0	4,049.8	15.6	1.6	102.25	-4,024.9	895.9	4,228.2	4,211.4	16.85	250.984	
4,300.0	4,162.6	4,110.0	4,108.7	16.2	1.7	102.65	-4,024.9	894.1	4,236.2	4,218.8	17.49	242.253	
4,330.7	4,189.4	4,137.6	4,136.3	16.5	1.7	102.84	-4,024.9	893.2	4,239.9	4,222.2	17.78	238.472	
4,400.0	4,249.9	4,199.9	4,198.6	17.2	1.7	103.26	-4,024.9	891.5	4,248.5	4,230.0	18.44	230.406	
4,429.1	4,275.4	4,224.0	4,222.7	17.5	1.7	103.43	-4,024.9	890.8	4,252.1	4,233.4	18.72	227.163	
4,500.0	4,337.2	4,282.6	4,281.3	18.2	1.7	103.82	-4,024.9	889.2	4,261.3	4,241.9	19.40	219.690	
4,527.5	4,361.3	4,300.0	4,298.7	18.5	1.7	103.94	-4,024.9	888.7	4,264.9	4,245.3	19.66	216.905	
4,600.0	4,424.5	4,348.7	4,347.4	19.2	1.7	104.27	-4,025.0	887.5	4,274.9	4,254.5	20.36	209.969	
4,626.0	4,447.2	4,364.8	4,363.4	19.5	1.7	104.37	-4,025.1	887.1	4,278.6	4,258.0	20.61	207.586	
4,700.0	4,511.8	4,425.3	4,424.0	20.2	1.8	104.78	-4,025.6	886.0	4,289.5	4,268.1	21.32	201.156	
4,724.4	4,533.1	4,461.6	4,460.2	20.5	1.8	105.01	-4,025.8	885.4	4,293.1	4,271.5	21.56	199.152	
4,796.7	4,596.3	4,531.0	4,529.6	21.2	1.8	105.46	-4,025.8	884.5	4,303.7	4,281.4	22.25	193.418	
4,800.0	4,599.1	4,533.1	4,531.8	21.2	1.8	105.49	-4,025.8	884.4	4,304.1	4,281.9	22.28	193.200	
4,822.8	4,619.1	4,548.4	4,547.0	21.4	1.8	105.65	-4,025.9	884.3	4,307.5	4,285.1	22.45	191.908	
4,900.0	4,687.3	4,600.6	4,599.2	22.0	1.8	106.20	-4,026.1	883.8	4,319.0	4,296.0	23.01	187.699	
4,921.2	4,706.2	4,620.0	4,618.7	22.2	1.8	106.37	-4,026.3	883.6	4,322.2	4,299.0	23.16	186.658	
5,000.0	4,777.1	4,692.7	4,691.4	22.8	1.8	107.01	-4,026.7	883.0	4,333.6	4,309.9	23.69	182.923	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PLUMB B5-14 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,019.7	4,794.9	4,712.4	4,711.1	22.9	1.8	107.17	-4,026.8	882.8	4,336.4	4,312.6	23.81	182.089	
5,100.0	4,868.3	4,797.1	4,795.7	23.5	1.9	107.83	-4,027.1	882.0	4,347.4	4,323.1	24.32	178.781	
5,118.1	4,885.0	4,815.3	4,813.9	23.6	1.9	107.97	-4,027.2	881.8	4,349.8	4,325.3	24.42	178.114	
5,200.0	4,961.0	4,897.4	4,896.0	24.2	1.9	108.56	-4,027.3	881.0	4,360.2	4,335.3	24.89	175.155	
5,216.5	4,976.4	4,912.1	4,910.7	24.3	1.9	108.67	-4,027.3	880.9	4,362.2	4,337.2	24.98	174.626	
5,300.0	5,054.8	4,984.9	4,983.5	24.8	1.9	109.17	-4,027.5	880.5	4,372.2	4,346.7	25.42	172.000	
5,314.9	5,069.0	5,000.0	4,998.6	24.8	1.9	109.27	-4,027.5	880.5	4,373.9	4,348.4	25.49	171.591	
5,400.0	5,149.9	5,068.7	5,067.3	25.3	1.9	109.71	-4,027.8	880.3	4,383.4	4,357.5	25.89	169.287	
5,413.4	5,162.7	5,079.9	5,078.5	25.4	1.9	109.78	-4,027.8	880.3	4,384.8	4,358.9	25.95	168.974	
5,500.0	5,245.9	5,196.9	5,195.5	25.8	1.9	110.34	-4,028.1	880.4	4,393.6	4,367.3	26.30	167.066	
5,511.8	5,257.3	5,200.0	5,198.6	25.9	1.9	110.37	-4,028.1	880.4	4,394.7	4,368.3	26.34	166.820	
5,600.0	5,342.9	5,276.6	5,275.2	26.3	1.9	110.74	-4,028.1	880.7	4,402.3	4,375.7	26.67	165.044	
5,610.2	5,352.9	5,284.6	5,283.2	26.3	1.9	110.78	-4,028.2	880.8	4,403.2	4,376.5	26.71	164.870	
5,700.0	5,440.7	5,377.4	5,376.0	26.7	1.9	111.13	-4,028.4	881.4	4,410.2	4,383.2	27.00	163.331	
5,708.6	5,449.1	5,386.9	5,385.5	26.7	1.9	111.17	-4,028.4	881.5	4,410.8	4,383.8	27.03	163.207	
5,800.0	5,539.1	5,490.5	5,489.1	27.0	1.9	111.48	-4,028.4	882.4	4,416.6	4,389.4	27.29	161.867	
5,807.1	5,546.1	5,498.6	5,497.2	27.0	1.9	111.50	-4,028.4	882.5	4,417.0	4,389.7	27.30	161.781	
5,900.0	5,638.1	5,582.8	5,581.4	27.3	1.9	111.72	-4,028.3	883.4	4,421.7	4,394.2	27.53	160.616	
5,905.5	5,643.5	5,587.8	5,586.4	27.3	1.9	111.73	-4,028.3	883.5	4,422.0	4,394.4	27.54	160.560	
6,000.0	5,737.5	5,659.6	5,658.2	27.5	1.9	111.89	-4,028.4	884.0	4,425.9	4,398.1	27.73	159.608	
6,003.9	5,741.4	5,662.5	5,661.1	27.5	1.9	111.90	-4,028.4	884.0	4,426.0	4,398.3	27.74	159.578	
6,100.0	5,837.2	5,749.1	5,747.7	27.7	1.9	112.02	-4,029.1	884.3	4,429.2	4,401.3	27.89	158.809	
6,102.3	5,839.6	5,751.7	5,750.3	27.7	1.9	112.03	-4,029.1	884.3	4,429.3	4,401.4	27.89	158.795	
6,200.0	5,937.2	5,843.0	5,841.6	27.9	1.9	112.10	-4,029.7	884.7	4,431.3	4,403.3	28.02	158.171	
6,200.8	5,937.9	5,843.6	5,842.2	27.9	1.9	112.10	-4,029.7	884.7	4,431.3	4,403.3	28.02	158.167	
6,256.6	5,993.8	5,888.8	5,887.4	27.9	1.9	-175.97	-4,030.1	884.7	4,432.0	4,403.9	28.07	157.896	
6,286.6	6,023.8	5,914.8	5,913.4	27.9	1.9	-175.97	-4,030.4	884.6	4,432.3	4,404.2	28.10	157.727	
6,299.2	6,036.4	5,926.3	5,924.9	27.9	1.9	4.03	-4,030.5	884.6	4,432.4	4,404.3	28.10	157.742	
6,300.0	6,037.2	5,927.0	5,925.6	27.9	1.9	4.03	-4,030.5	884.6	4,432.4	4,404.3	28.10	157.743	
6,350.0	6,087.1	5,972.6	5,971.2	28.0	1.9	4.04	-4,031.1	884.5	4,430.3	4,402.2	28.07	157.831	
6,397.6	6,134.3	6,017.9	6,016.4	28.0	1.9	4.08	-4,031.7	884.4	4,425.1	4,397.1	28.02	157.955	
6,400.0	6,136.7	6,020.3	6,018.9	28.0	1.9	4.08	-4,031.7	884.4	4,424.8	4,396.8	28.01	157.963	
6,450.0	6,185.7	6,070.8	6,069.4	28.0	1.9	4.14	-4,032.4	884.4	4,415.9	4,388.0	27.91	158.236	
6,496.0	6,230.2	6,113.0	6,111.6	28.0	1.9	4.22	-4,032.9	884.4	4,404.6	4,376.9	27.75	158.718	
6,500.0	6,234.0	6,116.1	6,114.6	28.0	1.9	4.23	-4,032.9	884.4	4,403.5	4,375.8	27.73	158.774	
6,550.0	6,281.3	6,154.2	6,152.8	28.0	1.9	4.34	-4,033.5	884.4	4,387.9	4,360.4	27.48	159.682	
6,594.5	6,322.2	6,187.4	6,186.0	27.9	1.9	4.46	-4,034.0	884.4	4,371.4	4,344.2	27.18	160.849	
6,600.0	6,327.3	6,200.0	6,198.5	27.9	1.9	4.48	-4,034.3	884.4	4,369.2	4,342.0	27.14	160.994	
6,650.0	6,371.8	6,228.5	6,227.0	27.9	1.9	4.65	-4,034.8	884.5	4,347.3	4,320.6	26.70	162.844	
6,692.9	6,408.6	6,259.4	6,257.9	27.9	1.9	4.83	-4,035.4	884.5	4,326.2	4,299.9	26.25	164.829	
6,700.0	6,414.6	6,264.4	6,262.9	27.8	1.9	4.86	-4,035.5	884.5	4,322.4	4,296.3	26.16	165.200	
6,750.0	6,455.5	6,300.0	6,298.5	27.8	1.9	5.12	-4,036.3	884.5	4,294.7	4,269.2	25.54	168.134	
6,791.3	6,487.7	6,331.3	6,329.8	27.7	1.9	5.38	-4,037.0	884.5	4,269.7	4,244.7	24.97	171.003	
6,800.0	6,494.3	6,338.0	6,336.5	27.7	1.9	5.44	-4,037.2	884.5	4,264.2	4,239.3	24.84	171.665	
6,850.0	6,530.8	6,375.2	6,373.7	27.7	1.9	5.83	-4,038.1	884.6	4,231.0	4,206.9	24.06	175.863	
6,889.7	6,558.1	6,400.0	6,398.5	27.6	1.9	6.20	-4,038.6	884.7	4,202.8	4,179.4	23.38	179.734	
6,900.0	6,564.9	6,409.4	6,407.9	27.6	1.9	6.31	-4,038.9	884.7	4,195.3	4,172.1	23.20	180.792	
6,950.0	6,596.3	6,439.7	6,438.2	27.6	1.9	6.91	-4,039.6	884.9	4,157.2	4,134.9	22.29	186.508	
6,988.2	6,618.4	6,461.1	6,459.6	27.5	1.9	7.46	-4,040.1	884.9	4,126.7	4,105.2	21.56	191.408	
7,000.0	6,624.9	6,467.4	6,465.9	27.5	1.9	7.66	-4,040.3	884.9	4,117.1	4,095.7	21.33	193.042	
7,050.0	6,650.6	6,492.5	6,491.0	27.5	1.9	8.62	-4,040.9	885.0	4,074.9	4,054.6	20.33	200.403	
7,086.6	6,667.5	6,513.4	6,511.9	27.5	2.0	9.53	-4,041.4	885.0	4,043.0	4,023.4	19.61	206.202	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PLUMB B5-14 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
7,100.0	6,673.3	6,521.8	6,520.2	27.5	2.0	9.92	-4,041.6	885.0	4,031.1	4,011.7	19.34	208.460		
7,150.0	6,692.7	6,550.0	6,548.4	27.5	2.0	11.73	-4,042.2	885.0	3,985.6	3,967.2	18.36	217.137		
7,185.0	6,704.4	6,566.9	6,565.4	27.5	2.0	13.44	-4,042.5	885.0	3,952.9	3,935.3	17.66	223.803		
7,200.0	6,709.0	6,573.5	6,572.0	27.5	2.0	14.34	-4,042.7	885.0	3,938.8	3,921.4	17.41	226.192		
7,250.0	6,721.8	6,592.3	6,590.8	27.5	2.0	18.36	-4,043.0	885.0	3,890.9	3,874.3	16.56	234.940		
7,283.4	6,728.6	6,600.0	6,598.4	27.5	2.0	22.43	-4,043.2	885.0	3,858.4	3,842.3	16.10	239.693		
7,300.0	6,731.3	6,604.3	6,602.8	27.6	2.0	25.16	-4,043.2	884.9	3,842.2	3,826.2	15.94	241.114		
7,350.0	6,737.3	6,610.8	6,609.2	27.7	2.0	38.38	-4,043.4	884.9	3,792.8	3,776.7	16.08	235.818		
7,381.9	6,739.4	6,613.2	6,611.6	27.7	2.0	54.31	-4,043.4	884.9	3,761.2	3,744.0	17.20	218.692		
7,400.0	6,739.9	6,614.0	6,612.4	27.8	2.0	67.62	-4,043.4	884.9	3,743.1	3,724.9	18.18	205.902		
7,416.5	6,740.0	6,614.3	6,612.8	27.8	2.0	82.32	-4,043.4	884.9	3,726.7	3,707.5	19.16	194.474		
7,480.3	6,739.5	6,615.0	6,613.4	28.0	2.0	82.44	-4,043.4	884.9	3,663.1	3,643.4	19.69	186.034		
7,500.0	6,739.4	6,615.2	6,613.6	28.1	2.0	82.48	-4,043.4	884.9	3,643.5	3,623.6	19.85	183.518		
7,578.7	6,738.9	6,616.0	6,614.5	28.5	2.0	82.63	-4,043.5	884.9	3,565.1	3,544.4	20.62	172.881		
7,600.0	6,738.7	6,616.2	6,614.7	28.6	2.0	82.67	-4,043.5	884.9	3,543.9	3,523.0	20.83	170.141		
7,677.1	6,738.2	6,617.1	6,615.5	29.1	2.0	82.82	-4,043.5	884.9	3,467.0	3,445.3	21.69	159.856		
7,700.0	6,738.1	6,617.3	6,615.8	29.2	2.0	82.86	-4,043.5	884.9	3,444.3	3,422.3	21.94	156.964		
7,775.6	6,737.5	6,618.1	6,616.6	29.7	2.0	83.01	-4,043.5	884.9	3,369.0	3,346.1	22.87	147.289		
7,800.0	6,737.4	6,618.4	6,616.8	29.9	2.0	83.06	-4,043.5	884.9	3,344.7	3,321.5	23.17	144.329		
7,874.0	6,736.9	6,619.2	6,617.6	30.6	2.0	83.20	-4,043.5	884.9	3,271.0	3,246.9	24.16	135.403		
7,900.0	6,736.7	6,619.4	6,617.9	30.8	2.0	83.25	-4,043.5	884.9	3,245.1	3,220.6	24.50	132.438		
7,972.4	6,736.2	6,620.2	6,618.7	31.5	2.0	83.39	-4,043.5	884.9	3,173.1	3,147.5	25.53	124.312		
8,000.0	6,736.0	6,620.5	6,619.0	31.8	2.0	83.45	-4,043.5	884.9	3,145.6	3,119.7	25.91	121.387		
8,070.8	6,735.5	6,621.3	6,619.7	32.5	2.0	83.59	-4,043.6	884.9	3,075.1	3,048.2	26.96	114.054		
8,100.0	6,735.3	6,621.6	6,620.1	32.8	2.0	83.64	-4,043.6	884.9	3,046.1	3,018.8	27.39	111.201		
8,169.3	6,734.9	6,622.4	6,620.8	33.6	2.0	83.78	-4,043.6	884.9	2,977.2	2,948.8	28.46	104.620		
8,200.0	6,734.6	6,622.7	6,621.1	34.0	2.0	83.84	-4,043.6	884.9	2,946.7	2,917.8	28.93	101.857		
8,267.7	6,734.2	6,623.4	6,621.9	34.8	2.0	83.98	-4,043.6	884.9	2,879.4	2,849.4	30.00	95.972		
8,300.0	6,734.0	6,623.8	6,622.2	35.2	2.0	84.04	-4,043.6	884.9	2,847.3	2,816.8	30.51	93.310		
8,366.1	6,733.5	6,624.5	6,623.0	36.1	2.0	84.17	-4,043.6	885.0	2,781.6	2,750.0	31.59	88.055		
8,400.0	6,733.3	6,624.9	6,623.3	36.5	2.0	84.24	-4,043.6	885.0	2,747.9	2,715.8	32.14	85.499		
8,464.5	6,732.8	6,625.6	6,624.0	37.4	2.0	84.37	-4,043.6	885.0	2,683.8	2,650.6	33.21	80.810		
8,500.0	6,732.6	6,626.0	6,624.4	37.9	2.0	84.44	-4,043.6	885.0	2,648.6	2,614.8	33.80	78.361		
8,563.0	6,732.2	6,626.7	6,625.1	38.8	2.0	84.57	-4,043.7	885.0	2,586.1	2,551.2	34.86	74.176		
8,600.0	6,731.9	6,627.1	6,625.5	39.3	2.0	84.64	-4,043.7	885.0	2,549.3	2,513.8	35.49	71.833		
8,661.4	6,731.5	6,627.8	6,626.2	40.2	2.0	84.77	-4,043.7	885.0	2,488.4	2,451.8	36.54	68.096		
8,700.0	6,731.2	6,628.2	6,626.7	40.8	2.0	84.85	-4,043.7	885.0	2,450.1	2,412.9	37.20	65.855		
8,759.8	6,730.8	6,628.9	6,627.3	41.7	2.0	84.97	-4,043.7	885.0	2,390.8	2,352.5	38.24	62.514		
8,800.0	6,730.6	6,629.3	6,627.8	42.3	2.0	85.05	-4,043.7	885.0	2,350.9	2,312.0	38.94	60.371		
8,858.2	6,730.2	6,630.0	6,628.4	43.2	2.0	85.17	-4,043.7	885.0	2,293.2	2,253.2	39.96	57.381		
8,900.0	6,729.9	6,630.5	6,628.9	43.8	2.0	85.26	-4,043.7	885.0	2,251.9	2,211.2	40.70	55.331		
8,956.7	6,729.5	6,631.1	6,629.6	44.7	2.0	85.38	-4,043.7	885.0	2,195.7	2,154.0	41.70	52.652		
9,000.0	6,729.2	6,631.6	6,630.0	45.4	2.0	85.47	-4,043.7	885.0	2,152.9	2,110.4	42.47	50.691		
9,055.1	6,728.8	6,632.2	6,630.7	46.3	2.0	85.58	-4,043.8	885.0	2,098.4	2,054.9	43.46	48.287		
9,100.0	6,728.5	6,632.7	6,631.2	47.0	2.0	85.68	-4,043.8	885.0	2,054.0	2,009.7	44.26	46.408		
9,153.5	6,728.2	6,633.4	6,631.8	47.9	2.0	85.79	-4,043.8	885.0	2,001.1	1,955.9	45.22	44.250		
9,200.0	6,727.8	6,633.9	6,632.3	48.6	2.0	85.89	-4,043.8	885.0	1,955.2	1,909.1	46.06	42.449		
9,251.9	6,727.5	6,634.5	6,632.9	49.5	2.0	86.00	-4,043.8	885.0	1,903.9	1,856.9	47.00	40.508		
9,300.0	6,727.2	6,635.0	6,633.5	50.3	2.0	86.10	-4,043.8	885.0	1,856.5	1,808.7	47.87	38.781		
9,350.4	6,726.8	6,635.6	6,634.1	51.1	2.0	86.20	-4,043.8	885.0	1,806.9	1,758.1	48.79	37.034		
9,400.0	6,726.5	6,636.2	6,634.6	51.9	2.0	86.31	-4,043.8	885.0	1,758.0	1,708.3	49.69	35.377		
9,448.8	6,726.1	6,636.8	6,635.2	52.7	2.0	86.41	-4,043.8	885.0	1,710.0	1,659.4	50.59	33.803		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PLUMB B5-14 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	6,725.8	6,637.4	6,635.8	53.6	2.0	86.52	-4,043.8	885.0	1,659.7	1,608.2	51.53	32.211	
9,547.2	6,725.5	6,637.9	6,636.4	54.4	2.0	86.62	-4,043.9	885.0	1,613.4	1,561.0	52.40	30.792	
9,600.0	6,725.1	6,638.5	6,637.0	55.3	2.0	86.74	-4,043.9	885.0	1,561.6	1,508.2	53.37	29.262	
9,645.6	6,724.8	6,639.1	6,637.5	56.1	2.0	86.84	-4,043.9	885.0	1,516.9	1,462.7	54.21	27.982	
9,700.0	6,724.4	6,639.7	6,638.1	57.0	2.0	86.95	-4,043.9	885.0	1,463.8	1,408.5	55.21	26.511	
9,744.1	6,724.1	6,640.2	6,638.7	57.8	2.0	87.05	-4,043.9	885.0	1,420.7	1,364.7	56.03	25.356	
9,800.0	6,723.8	6,640.9	6,639.3	58.7	2.0	87.17	-4,043.9	885.0	1,366.2	1,309.1	57.07	23.940	
9,842.5	6,723.5	6,641.4	6,639.8	59.5	2.0	87.26	-4,043.9	885.0	1,324.9	1,267.0	57.86	22.898	
9,900.0	6,723.1	6,642.1	6,640.5	60.5	2.0	87.39	-4,043.9	885.0	1,269.0	1,210.1	58.93	21.536	
9,940.9	6,722.8	6,642.6	6,641.0	61.2	2.0	87.48	-4,043.9	885.0	1,229.4	1,169.7	59.69	20.596	
10,000.0	6,722.4	6,643.3	6,641.7	62.2	2.0	87.61	-4,044.0	885.0	1,172.4	1,111.6	60.79	19.284	
10,039.3	6,722.1	6,643.7	6,642.2	62.9	2.0	87.70	-4,044.0	885.0	1,134.5	1,072.9	61.53	18.438	
10,100.0	6,721.7	6,644.5	6,642.9	64.0	2.0	87.83	-4,044.0	885.0	1,076.3	1,013.6	62.66	17.175	
10,137.8	6,721.5	6,644.9	6,643.4	64.7	2.0	87.91	-4,044.0	885.0	1,040.2	976.8	63.37	16.414	
10,200.0	6,721.0	6,645.7	6,644.1	65.8	2.0	88.05	-4,044.0	885.0	981.0	916.4	64.54	15.200	
10,236.2	6,720.8	6,646.1	6,644.6	66.4	2.0	88.13	-4,044.0	885.0	946.7	881.5	65.22	14.516	
10,300.0	6,720.4	6,646.9	6,645.3	67.5	2.0	88.27	-4,044.0	885.0	886.7	820.3	66.42	13.351	
10,334.6	6,720.1	6,647.3	6,645.8	68.2	2.0	88.35	-4,044.0	885.0	854.4	787.3	67.07	12.739	
10,400.0	6,719.7	6,648.1	6,646.6	69.3	2.0	88.50	-4,044.1	885.0	793.8	725.5	68.30	11.623	
10,433.0	6,719.4	6,648.5	6,647.0	69.9	2.0	88.57	-4,044.1	885.0	763.5	694.6	68.92	11.078	
10,500.0	6,719.0	6,649.3	6,647.8	71.1	2.0	88.73	-4,044.1	885.0	702.9	632.8	70.18	10.016	
10,531.5	6,718.8	6,649.7	6,648.2	71.7	2.0	88.80	-4,044.1	885.0	674.9	604.1	70.78	9.535	
10,600.0	6,718.3	6,650.6	6,649.0	72.9	2.0	88.95	-4,044.1	885.0	614.9	542.8	72.07	8.531	
10,629.9	6,718.1	6,650.9	6,649.4	73.4	2.0	89.02	-4,044.1	885.0	589.3	516.6	72.64	8.112	
10,700.0	6,717.6	6,651.8	6,650.3	74.7	2.0	89.18	-4,044.1	885.0	531.0	457.0	73.96	7.179	
10,728.3	6,717.4	6,652.2	6,650.6	75.2	2.0	89.25	-4,044.1	885.0	508.3	433.8	74.50	6.823	
10,800.0	6,717.0	6,653.1	6,651.5	76.5	2.0	89.41	-4,044.1	885.0	453.8	377.9	75.85	5.982	
10,826.7	6,716.8	6,653.4	6,651.8	77.0	2.0	89.47	-4,044.2	885.0	434.7	358.3	76.36	5.692	
10,900.0	6,716.3	6,654.3	6,652.8	78.3	2.0	89.64	-4,044.2	885.0	387.1	309.3	77.75	4.978	
10,925.2	6,716.1	6,654.6	6,653.1	78.8	2.0	89.70	-4,044.2	885.0	372.6	294.4	78.23	4.763	
11,000.0	6,715.6	6,655.6	6,654.0	80.2	2.0	89.87	-4,044.2	885.0	337.2	257.6	79.65	4.234	
11,023.6	6,715.4	6,655.9	6,654.3	80.6	2.0	89.93	-4,044.2	885.0	328.8	248.7	80.09	4.106	
11,100.0	6,714.9	6,656.8	6,655.3	82.0	2.0	90.11	-4,044.2	885.0	312.5	230.9	81.54	3.832	
11,122.0	6,714.8	6,657.1	6,655.6	82.4	2.0	90.16	-4,044.2	885.0	311.1	229.1	81.96	3.796	
11,130.5	6,714.7	6,657.2	6,655.7	82.5	2.0	90.18	-4,044.2	885.0	311.0	228.9	82.12	3.787 CC, ES, SF	
11,200.0	6,714.2	6,658.1	6,656.6	83.8	2.0	90.34	-4,044.2	885.0	318.7	235.2	83.44	3.819	
11,220.4	6,714.1	6,658.4	6,656.8	84.2	2.0	90.39	-4,044.2	885.0	323.7	239.9	83.83	3.862	
11,300.0	6,713.5	6,659.4	6,657.8	85.7	2.0	90.58	-4,044.3	885.0	354.2	268.9	85.34	4.150	
11,318.9	6,713.4	6,659.6	6,658.1	86.0	2.0	90.62	-4,044.3	885.0	363.6	277.9	85.70	4.243	
11,400.0	6,712.9	6,660.7	6,659.1	87.5	2.0	90.82	-4,044.3	885.0	411.5	324.3	87.24	4.717	
11,417.3	6,712.7	6,660.9	6,659.4	87.8	2.0	90.86	-4,044.3	885.0	423.1	335.5	87.57	4.831	
11,500.0	6,712.2	6,662.0	6,660.4	89.3	2.0	91.05	-4,044.3	885.0	483.0	393.8	89.15	5.418	
11,515.7	6,712.1	6,662.2	6,660.6	89.6	2.0	91.09	-4,044.3	885.0	495.1	405.7	89.44	5.535	
11,600.0	6,711.5	6,663.3	6,661.7	91.2	2.0	91.29	-4,044.3	885.0	563.2	472.1	91.05	6.185	
11,614.1	6,711.4	6,663.5	6,661.9	91.4	2.0	91.33	-4,044.3	885.0	575.0	483.7	91.32	6.297	
11,700.0	6,710.8	6,664.6	6,663.0	93.0	2.0	91.54	-4,044.4	885.0	648.9	555.9	92.95	6.981	
11,712.6	6,710.7	6,664.8	6,663.2	93.3	2.0	91.57	-4,044.4	885.0	659.9	566.8	93.19	7.082	
11,800.0	6,710.1	6,665.9	6,664.4	94.9	2.0	91.78	-4,044.4	885.0	738.2	643.3	94.85	7.783	
11,811.0	6,710.1	6,666.1	6,664.5	95.1	2.0	91.80	-4,044.4	885.0	748.2	653.1	95.06	7.871	
11,900.0	6,709.5	6,667.2	6,665.7	96.7	2.0	92.02	-4,044.4	885.0	830.0	733.2	96.75	8.578	
11,909.4	6,709.4	6,667.4	6,665.8	96.9	2.0	92.04	-4,044.4	885.0	838.7	741.8	96.93	8.652	
12,000.0	6,708.8	6,668.6	6,667.0	98.6	2.0	92.27	-4,044.4	885.1	923.4	824.8	98.66	9.360	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NW NW SEC. 5 T5N R64W 6th P.M. - EXIST VERT PLUMB B5-14 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,708.7	6,668.7	6,667.1	98.7	2.0	92.29	-4,044.4	885.1	930.8	832.0	98.80	9.421	
12,100.0	6,708.1	6,669.9	6,668.3	100.4	2.0	92.51	-4,044.5	885.1	1,018.1	917.6	100.56	10.125	
12,106.3	6,708.1	6,670.0	6,668.4	100.6	2.0	92.53	-4,044.5	885.1	1,024.1	923.4	100.68	10.172	
12,200.0	6,707.4	6,671.3	6,669.7	102.3	2.0	92.76	-4,044.5	885.1	1,113.8	1,011.3	102.46	10.871	
12,204.7	6,707.4	6,671.3	6,669.8	102.4	2.0	92.77	-4,044.5	885.1	1,118.3	1,015.7	102.55	10.905	
12,300.0	6,706.7	6,672.6	6,671.0	104.2	2.0	93.01	-4,044.5	885.1	1,210.1	1,105.7	104.36	11.596	
12,303.1	6,706.7	6,672.7	6,671.1	104.2	2.0	93.02	-4,044.5	885.1	1,213.1	1,108.7	104.42	11.618	
12,400.0	6,706.1	6,674.0	6,672.4	106.0	2.0	93.26	-4,044.6	885.1	1,307.0	1,200.7	106.26	12.300	
12,401.5	6,706.0	6,674.0	6,672.4	106.1	2.0	93.26	-4,044.6	885.1	1,308.5	1,202.2	106.28	12.311	
12,500.0	6,705.4	6,675.3	6,673.8	107.9	2.0	93.51	-4,044.6	885.1	1,404.3	1,296.2	108.15	12.984	
12,598.4	6,704.7	6,676.7	6,675.1	109.7	2.0	93.76	-4,044.6	885.1	1,500.4	1,390.4	110.02	13.638	
12,600.0	6,704.7	6,676.7	6,675.2	109.8	2.0	93.77	-4,044.6	885.1	1,502.0	1,391.9	110.05	13.648	
12,696.8	6,704.0	6,678.1	6,676.5	111.6	2.0	94.01	-4,044.6	885.1	1,596.8	1,484.9	111.88	14.272	
12,700.0	6,704.0	6,678.1	6,676.5	111.6	2.0	94.02	-4,044.6	885.1	1,599.9	1,488.0	111.94	14.292	
12,795.2	6,703.4	6,679.4	6,677.9	113.4	2.0	94.26	-4,044.7	885.1	1,693.5	1,579.7	113.75	14.888	
12,800.0	6,703.3	6,679.5	6,677.9	113.5	2.0	94.28	-4,044.7	885.1	1,698.1	1,584.3	113.84	14.917	
12,893.7	6,702.7	6,680.8	6,679.3	115.3	2.0	94.52	-4,044.7	885.1	1,790.3	1,674.7	115.61	15.486	
12,900.0	6,702.7	6,680.9	6,679.3	115.4	2.0	94.53	-4,044.7	885.1	1,796.5	1,680.8	115.73	15.524	
12,992.1	6,702.0	6,682.2	6,680.6	117.1	2.0	94.77	-4,044.7	885.1	1,887.3	1,769.8	117.47	16.067	
13,000.0	6,702.0	6,682.3	6,680.8	117.3	2.0	94.79	-4,044.7	885.1	1,895.1	1,777.5	117.62	16.112	
13,090.5	6,701.4	6,683.6	6,682.0	119.0	2.0	95.03	-4,044.7	885.1	1,984.4	1,865.1	119.33	16.630	
13,100.0	6,701.3	6,683.7	6,682.2	119.1	2.0	95.05	-4,044.7	885.1	1,993.8	1,874.3	119.50	16.684	
13,188.9	6,700.7	6,685.0	6,683.4	120.8	2.0	95.28	-4,044.8	885.1	2,081.7	1,960.5	121.18	17.178	
13,200.0	6,700.6	6,685.2	6,683.6	121.0	2.0	95.31	-4,044.8	885.1	2,092.6	1,971.2	121.39	17.239	
13,287.4	6,700.0	6,686.4	6,684.8	122.7	2.0	95.54	-4,044.8	885.1	2,179.1	2,056.0	123.03	17.711	
13,300.0	6,699.9	6,686.6	6,685.0	122.9	2.0	95.57	-4,044.8	885.1	2,191.5	2,068.3	123.27	17.778	
13,385.8	6,699.3	6,687.8	6,686.3	124.5	2.0	95.80	-4,044.8	885.1	2,276.5	2,151.6	124.88	18.229	
13,400.0	6,699.3	6,688.0	6,686.5	124.8	2.0	95.84	-4,044.8	885.1	2,290.6	2,165.4	125.15	18.303	
13,484.2	6,698.7	6,689.3	6,687.7	126.4	2.0	96.06	-4,044.9	885.2	2,374.0	2,247.3	126.73	18.733	
13,500.0	6,698.6	6,689.5	6,687.9	126.7	2.0	96.10	-4,044.9	885.2	2,389.7	2,262.6	127.03	18.812	
13,582.6	6,698.0	6,690.7	6,689.1	128.2	2.0	96.32	-4,044.9	885.2	2,471.6	2,343.1	128.57	19.223	
13,600.0	6,697.9	6,691.0	6,689.4	128.5	2.0	96.37	-4,044.9	885.2	2,488.8	2,359.9	128.90	19.308	
13,681.1	6,697.3	6,692.1	6,690.6	130.1	2.0	96.58	-4,044.9	885.2	2,569.3	2,438.9	130.42	19.701	
13,700.0	6,697.2	6,692.4	6,690.9	130.4	2.0	96.63	-4,044.9	885.2	2,588.1	2,457.3	130.77	19.791	
13,779.5	6,696.7	6,693.6	6,692.0	131.9	2.0	96.85	-4,044.9	885.2	2,667.0	2,534.8	132.25	20.166	
13,800.0	6,696.5	6,693.9	6,692.3	132.3	2.0	96.90	-4,045.0	885.2	2,687.4	2,554.7	132.64	20.261	
13,877.9	6,696.0	6,695.1	6,693.5	133.8	2.0	97.11	-4,045.0	885.2	2,764.8	2,630.7	134.09	20.619	
13,900.0	6,695.8	6,695.4	6,693.8	134.2	2.0	97.17	-4,045.0	885.2	2,786.7	2,652.2	134.50	20.719	
13,976.3	6,695.3	6,696.5	6,695.0	135.6	2.0	97.38	-4,045.0	885.2	2,862.6	2,726.7	135.92	21.061	
14,000.0	6,695.2	6,696.9	6,695.3	136.1	2.0	97.44	-4,045.0	885.2	2,886.1	2,749.7	136.36	21.165	
14,034.1	6,695.0	6,697.5	6,695.9	136.7	2.0	97.54	-4,045.0	885.2	2,920.0	2,783.0	136.99	21.315	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

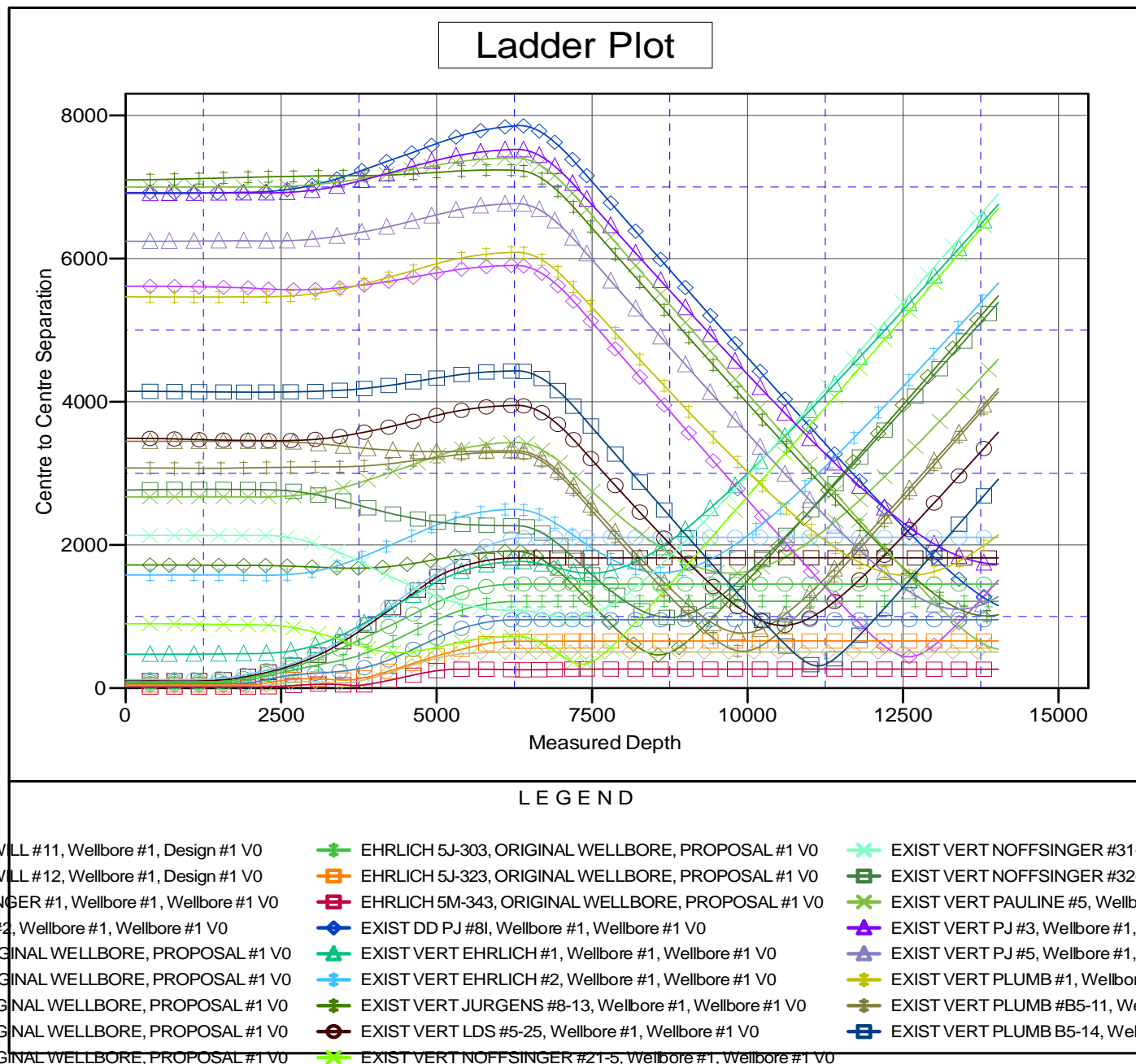
Reference Depths are relative to KB-EST @ 4664.0usft (Original Well ECoordinates are relative to: EHRLICH 5M-243

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: 0.59°





Company:	PDC ENERGY	Local Co-ordinate Reference:	Well EHRLICH 5M-243
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	NW NW SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	EHRLICH 5M-243	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB-EST @ 4664.0usft (Original Well ECoordinates are relative to: EHRLICH 5M-243

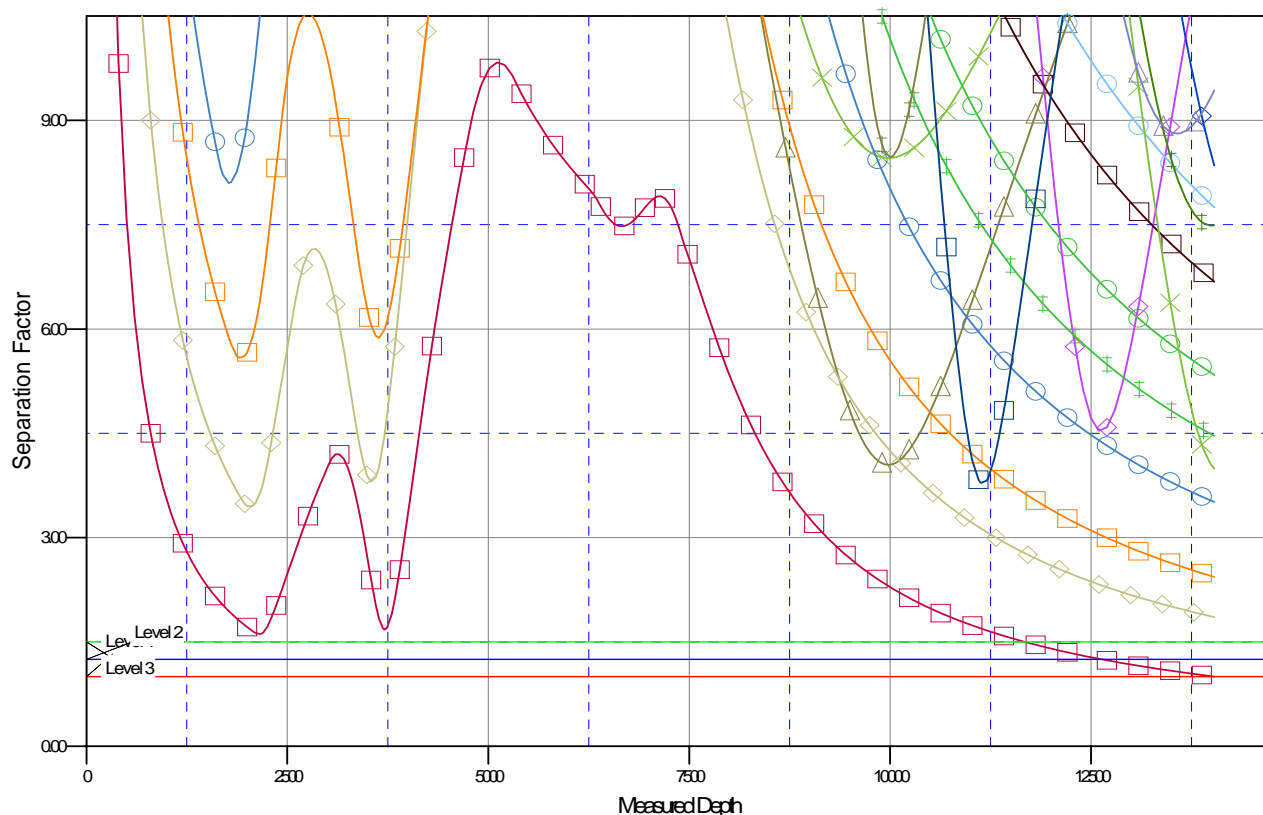
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.500000

Grid Convergence at Surface is: 0.59°

Separation Factor Plot



LEGEND

WELL #11, Wellbore #1, Design #1 V0	EHRLICH 5J-303, ORIGINAL WELLBORE, PROPOSAL #1 V0	EXIST VERT NOFFSINGER #31-5, 'V0'
WELL #12, Wellbore #1, Design #1 V0	EHRLICH 5J-323, ORIGINAL WELLBORE, PROPOSAL #1 V0	EXIST VERT NOFFSINGER #32-5, 'V0'
NGER #1, Wellbore #1, Wellbore #1 V0	EHRLICH 5M-343, ORIGINAL WELLBORE, PROPOSAL #1 V0	EXIST VERT PAULINE #5, Wellbore #1 V0
#2, Wellbore #1, Wellbore #1 V0	EXIST DD PJ #8I, Wellbore #1, Wellbore #1 V0	EXIST VERT PJ #3, Wellbore #1, Wellbore #1 V0
IGINAL WELLBORE, PROPOSAL #1 V0	EXIST VERT EHRLICH #1, Wellbore #1, Wellbore #1 V0	EXIST VERT PJ #5, Wellbore #1, Wellbore #1 V0
IGINAL WELLBORE, PROPOSAL #1 V0	EXIST VERT EHRLICH #2, Wellbore #1, Wellbore #1 V0	EXIST VERT PLUMB #1, Wellbore #1 V0
IGINAL WELLBORE, PROPOSAL #1 V0	EXIST VERT JURGENS #8-13, Wellbore #1, Wellbore #1 V0	EXIST VERT PLUMB #B5-11, Wellbore #1 V0
IGINAL WELLBORE, PROPOSAL #1 V0	EXIST VERT LDS #5-25, Wellbore #1, Wellbore #1 V0	EXIST VERT PLUMB B5-14, Wellbore #1 V0
IGINAL WELLBORE, PROPOSAL #1 V0	EXIST VERT NOFFSINGER #21-5, Wellbore #1, Wellbore #1 V0	