

PDC ENERGY

**WELD COUNTY, COLORADO
NE SW SEC. 21 T4N R67W 6th P.M.
SHARON 21N-334**

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

28 March, 2016



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are 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 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 us	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	28/03/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	14,370.2	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
Offset Well - Wellbore - Design						
NE SW SEC. 21 T4N R67W 6th P.M.						
ABDN VERT BROWN 20-2 - Wellbore #1 - Wellbore #1	14,008.7	6,800.0	519.0	352.6	3.120	CC, ES, SF
EXIST DD BROWN 20AD - Wellbore #1 - Wellbore #1	13,685.4	7,226.8	262.3	63.2	1.318	Level 3, CC, ES
EXIST DD BROWN 20AD - Wellbore #1 - Wellbore #1	13,700.0	7,227.0	262.7	63.2	1.317	Level 3, SF
EXIST DD BROWN 20MD - Wellbore #1 - Wellbore #1	12,554.1	7,294.9	1,529.3	1,366.5	9.394	CC
EXIST DD BROWN 20MD - Wellbore #1 - Wellbore #1	12,600.0	7,294.4	1,530.0	1,365.9	9.325	ES
EXIST DD BROWN 20MD - Wellbore #1 - Wellbore #1	13,000.0	7,283.0	1,593.0	1,417.8	9.094	SF
EXIST DD BROWN 20ND - Wellbore #1 - Wellbore #1	12,546.0	7,130.3	167.1	7.2	1.045	Level 2, CC, ES, SF
EXIST DD BROWN 20OD - Wellbore #1 - Wellbore #1	12,538.5	7,286.7	1,004.2	842.6	6.215	CC, ES
EXIST DD BROWN 20OD - Wellbore #1 - Wellbore #1	12,700.0	7,287.2	1,017.1	851.1	6.125	SF
EXIST DD CENTENNIAL 12-21DU - Wellbore #1 - Wellb	9,310.4	7,265.6	536.1	462.5	7.283	CC, ES
EXIST DD CENTENNIAL 12-21DU - Wellbore #1 - Wellb	9,400.0	7,263.5	543.5	467.6	7.158	SF
EXIST DD CENTENNIAL 21GDU - Wellbore #1 - Wellbo	9,920.0	7,317.0	1,086.8	996.5	12.037	CC, ES
EXIST DD CENTENNIAL 21GDU - Wellbore #1 - Wellbo	10,300.0	7,308.5	1,151.3	1,050.8	11.458	SF
EXIST DD CENTENNIAL 21KDU - Wellbore #1 - Wellbor	8,653.6	7,476.0	1,061.3	995.3	16.082	CC
EXIST DD CENTENNIAL 21KDU - Wellbore #1 - Wellbor	8,700.0	7,475.3	1,062.3	995.2	15.831	ES
EXIST DD CENTENNIAL 21KDU - Wellbore #1 - Wellbor	9,100.0	7,471.0	1,151.3	1,074.2	14.935	SF
EXIST DD CENTENNIAL 22-21DU - Wellbore #1 - Wellb	8,020.2	7,505.5	495.1	433.2	7.998	CC, ES
EXIST DD CENTENNIAL 22-21DU - Wellbore #1 - Wellb	8,100.0	7,505.3	501.5	438.2	7.918	SF
EXIST DD EEE 21ADU - Wellbore #1 - Wellbore #1	8,651.9	7,333.6	166.2	100.8	2.541	CC, ES, SF
EXIST DD EEE 21NDU - Wellbore #1 - Wellbore #1	7,400.0	7,511.2	146.8	79.9	2.194	SF
EXIST DD EEE 21NDU - Wellbore #1 - Wellbore #1	7,407.2	7,515.1	146.6	79.8	2.196	CC, ES
EXIST DD RYLAND 20CD - Wellbore #1 - Wellbore #1	11,278.5	7,394.5	190.4	48.2	1.339	Level 3, CC, ES, SF
EXIST DD RYLAND 20SD - Wellbore #1 - Wellbore #1	11,241.1	7,563.0	1,182.9	1,041.0	8.336	CC
EXIST DD RYLAND 20SD - Wellbore #1 - Wellbore #1	11,300.0	7,564.3	1,184.4	1,040.9	8.252	ES
EXIST DD RYLAND 20SD - Wellbore #1 - Wellbore #1	11,500.0	7,568.8	1,210.9	1,061.8	8.123	SF
EXIST DD RYLAND 20VD - Wellbore #1 - Wellbore #1	10,097.7	7,200.5	191.4	98.1	2.051	CC
EXIST DD RYLAND 20VD - Wellbore #1 - Wellbore #1	10,100.0	7,200.5	191.4	98.1	2.050	ES, SF
EXIST DD RYLAND 31-20D - Wellbore #1 - Wellbore #1	11,839.3	7,266.6	912.6	765.3	6.195	CC, ES
EXIST DD RYLAND 31-20D - Wellbore #1 - Wellbore #1	12,000.0	7,265.7	926.6	774.9	6.106	SF
EXIST DD RYLAND 32-20D - Wellbore #1 - Wellbore #1	11,861.7	7,278.0	452.3	303.8	3.047	CC, ES
EXIST DD RYLAND 32-20D - Wellbore #1 - Wellbore #1	11,900.0	7,281.6	453.9	304.3	3.035	SF
EXIST DD RYLAND 42-20D - Wellbore #1 - Wellbore #1	10,620.2	7,316.2	474.8	361.0	4.172	CC, ES
EXIST DD RYLAND 42-20D - Wellbore #1 - Wellbore #1	10,700.0	7,316.4	481.4	365.4	4.151	SF
EXIST VERT BROWN 20-1 - Wellbore #1 - Design #1	14,216.8	7,104.7	1,015.6	683.3	3.056	CC, ES
EXIST VERT BROWN 20-1 - Wellbore #1 - Design #1	14,300.0	7,104.1	1,019.0	684.4	3.045	SF
EXIST VERT BROWN 22-20 - Wellbore #1 - Design #1	13,104.8	7,101.8	473.6	172.2	1.571	CC, ES, SF
EXIST VERT CYPRIUS 1 - Wellbore #1 - Design #1	12,956.6	7,110.0	898.7	601.4	3.022	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 SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are 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
NE SW SEC. 21 T4N R67W 6th P.M.						
EXIST VERT CYPRUS 1 - Wellbore #1 - Design #1	13,000.0	7,109.7	899.8	601.2	3.014	ES, SF
SHARON 21N-234 - ORIGINAL WELLBORE - PROPOS	300.0	299.0	14.9	13.8	13.690	CC
SHARON 21N-234 - ORIGINAL WELLBORE - PROPOS	14,370.2	14,221.2	211.2	-159.7	0.569	Level 1, ES, SF
SHARON 21O-204 - ORIGINAL WELLBORE - PROPOS	300.0	298.0	75.0	74.0	68.916	CC, ES
SHARON 21O-204 - ORIGINAL WELLBORE - PROPOS	12,100.0	11,702.4	1,084.2	823.4	4.156	SF
SHARON 21O-214 - ORIGINAL WELLBORE - PROPOS	300.0	299.0	45.2	44.1	41.400	CC, ES
SHARON 21O-214 - ORIGINAL WELLBORE - PROPOS	14,370.2	14,154.2	643.7	253.9	1.651	SF
SHARON 21O-234 - ORIGINAL WELLBORE - PROPOS	300.0	298.0	104.9	103.8	96.341	CC, ES
SHARON 21O-234 - ORIGINAL WELLBORE - PROPOS	12,200.0	11,692.6	1,625.3	1,360.7	6.142	SF
SHARON 21O-304 - ORIGINAL WELLBORE - PROPOS	300.0	298.0	60.1	59.0	55.201	CC, ES
SHARON 21O-304 - ORIGINAL WELLBORE - PROPOS	14,370.2	14,253.5	840.6	447.9	2.141	SF
SHARON 21O-314 - ORIGINAL WELLBORE - PROPOS	300.0	299.0	29.9	28.8	27.376	CC
SHARON 21O-314 - ORIGINAL WELLBORE - PROPOS	14,370.2	14,295.0	400.9	8.9	1.023	Level 2, ES, SF
SHARON 21O-334 - ORIGINAL WELLBORE - PROPOS	300.0	298.0	90.0	88.9	82.634	CC, ES
SHARON 21O-334 - ORIGINAL WELLBORE - PROPOS	12,100.0	11,797.6	1,341.3	1,079.1	5.115	SF
SE SW SEC. 21 T4N R67W 6th P.M.						
EXIST DD RYLAND 33-20D - Wellbore #1 - Wellbore #1	11,846.0	7,245.1	1,749.9	1,608.4	12.366	CC
EXIST DD RYLAND 33-20D - Wellbore #1 - Wellbore #1	11,900.0	7,244.5	1,750.7	1,607.7	12.243	ES
EXIST DD RYLAND 33-20D - Wellbore #1 - Wellbore #1	12,400.0	7,239.1	1,835.5	1,678.7	11.703	SF
EXIST DD RYLAND 43-20D - Wellbore #1 - Wellbore #1	10,581.2	7,327.6	1,750.3	1,633.0	14.917	CC
EXIST DD RYLAND 43-20D - Wellbore #1 - Wellbore #1	10,600.0	7,327.7	1,750.4	1,632.5	14.853	ES
EXIST DD RYLAND 43-20D - Wellbore #1 - Wellbore #1	11,300.0	7,330.9	1,892.1	1,755.1	13.803	SF
EXIST DD WALTERS #21ODU - Wellbore #1 - Wellbore	0.0	0.0	930.8			
EXIST DD WALTERS #21ODU - Wellbore #1 - Wellbore	300.0	298.7	931.2	930.4	1,086.057	ES
EXIST DD WALTERS #21ODU - Wellbore #1 - Wellbore	6,698.0	6,679.2	1,269.4	1,213.0	22.482	SF
EXIST DD WALTERS 23-21DU - Wellbore #1 - Wellbore	300.1	301.6	970.6	969.8	1,127.787	CC, ES
EXIST DD WALTERS 23-21DU - Wellbore #1 - Wellbore	10,100.0	7,244.3	2,813.6	2,718.7	29.655	SF
EXIST DD WEDCO #13-21DU - Wellbore #1 - Wellbore	0.0	0.0	951.1			
EXIST DD WEDCO #13-21DU - Wellbore #1 - Wellbore	200.0	198.0	951.4	950.9	1,801.038	ES
EXIST DD WEDCO #13-21DU - Wellbore #1 - Wellbore	10,400.0	7,305.2	2,114.9	2,005.1	19.269	SF
EXIST VERT BUNYAN #1 - Wellbore #1 - Wellbore #1	119.9	106.5	797.9	797.7	3,756.555	CC
EXIST VERT BUNYAN #1 - Wellbore #1 - Wellbore #1	200.0	182.1	798.1	797.6	1,718.593	ES
EXIST VERT BUNYAN #1 - Wellbore #1 - Wellbore #1	12,000.0	7,159.3	4,150.7	4,018.6	31.413	SF

Offset Design										NE SW SEC. 21 T4N R67W 6th P.M. - ABDN VERT BROWN 20-2 - Wellbore #1 - Wellbore #1				Offset Site Error:		0.0 usft	
Survey Program: 100-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	-80.47	1,042.3	-6,209.3	6,296.4								
100.0	100.0	46.0	46.0	0.1	0.0	-80.47	1,042.3	-6,209.3	6,296.2	6,296.1	0.10	N/A					
200.0	200.0	138.2	138.2	0.3	0.0	-80.47	1,041.9	-6,209.4	6,296.3	6,295.9	0.36	N/A					
300.0	300.0	241.0	241.0	0.5	0.2	-80.48	1,041.6	-6,209.7	6,296.5	6,295.7	0.75	8,434.391					
400.0	400.0	383.6	383.6	0.8	0.5	-105.72	1,040.6	-6,209.6	6,296.8	6,295.5	1.28	4,929.066					
500.0	499.8	496.1	496.1	1.0	0.7	-105.76	1,039.4	-6,209.0	6,297.5	6,295.8	1.74	3,609.513					
600.0	599.5	595.0	595.0	1.2	0.9	-105.81	1,038.6	-6,208.4	6,299.1	6,296.9	2.19	2,876.528					
700.0	698.7	700.0	700.0	1.5	1.2	-105.88	1,037.9	-6,207.6	6,301.6	6,298.9	2.68	2,351.624					
800.0	797.5	791.6	791.6	1.8	1.4	-105.95	1,036.9	-6,207.0	6,305.1	6,301.9	3.18	1,982.995					
900.0	895.6	859.7	859.7	2.2	1.5	-105.97	1,036.2	-6,206.8	6,309.9	6,306.3	3.67	1,718.548					
1,000.0	993.1	980.4	980.4	2.6	1.8	-106.10	1,035.1	-6,206.7	6,316.1	6,311.8	4.32	1,460.625					

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - ABDN VERT BROWN 20-2 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-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	
1,100.0	1,089.6	1,055.9	1,055.8	3.1	1.9	-106.15	1,034.3	-6,206.3	6,323.0	6,318.1	4.94	1,280.054	
1,127.2	1,115.8	1,072.6	1,072.5	3.2	1.9	-106.15	1,034.2	-6,206.3	6,325.1	6,320.0	5.11	1,237.975	
1,200.0	1,185.5	1,150.5	1,150.4	3.6	2.1	-106.35	1,033.6	-6,206.4	6,331.1	6,325.5	5.64	1,122.497	
1,300.0	1,281.4	1,260.6	1,260.5	4.1	2.3	-106.63	1,032.6	-6,206.0	6,339.0	6,332.6	6.39	992.404	
1,400.0	1,377.3	1,350.1	1,350.0	4.7	2.5	-106.86	1,031.7	-6,205.7	6,347.1	6,340.0	7.10	893.765	
1,500.0	1,473.1	1,432.4	1,432.3	5.2	2.7	-107.07	1,030.9	-6,205.5	6,355.4	6,347.6	7.81	814.160	
1,600.0	1,569.0	1,501.7	1,501.7	5.8	2.8	-107.24	1,030.6	-6,205.6	6,364.2	6,355.7	8.49	749.871	
1,700.0	1,664.8	1,617.1	1,617.0	6.4	3.1	-107.53	1,029.7	-6,205.8	6,373.0	6,363.8	9.26	687.911	
1,800.0	1,760.7	1,700.0	1,699.9	6.9	3.3	-107.74	1,029.1	-6,206.0	6,382.1	6,372.2	9.98	639.661	
1,900.0	1,856.6	1,800.0	1,799.9	7.5	3.5	-107.99	1,028.3	-6,206.3	6,391.5	6,380.7	10.72	595.988	
2,000.0	1,952.4	1,878.2	1,878.2	8.1	3.6	-108.19	1,027.8	-6,206.5	6,400.9	6,389.4	11.43	560.109	
2,100.0	2,048.3	1,960.5	1,960.4	8.6	3.8	-108.39	1,027.4	-6,207.0	6,410.6	6,398.5	12.14	528.080	
2,200.0	2,144.1	2,036.3	2,036.2	9.2	4.0	-108.57	1,027.2	-6,207.5	6,420.7	6,407.9	12.84	500.109	
2,300.0	2,240.0	2,108.3	2,108.2	9.8	4.1	-108.75	1,027.2	-6,208.3	6,431.3	6,417.8	13.53	475.310	
2,400.0	2,335.9	2,233.6	2,233.5	10.3	4.4	-109.05	1,027.8	-6,209.6	6,442.0	6,427.7	14.33	449.651	
2,500.0	2,431.7	2,371.1	2,371.0	10.9	4.7	-109.37	1,028.3	-6,210.1	6,452.2	6,437.0	15.14	426.063	
2,600.0	2,527.6	2,470.2	2,470.1	11.5	4.9	-109.61	1,028.7	-6,210.2	6,462.1	6,446.2	15.89	406.774	
2,700.0	2,623.4	2,570.6	2,570.5	12.1	5.1	-109.84	1,029.1	-6,210.2	6,472.2	6,455.5	16.63	389.156	
2,800.0	2,719.3	2,649.9	2,649.8	12.6	5.2	-110.03	1,029.4	-6,210.2	6,482.3	6,465.0	17.33	373.955	
2,900.0	2,815.2	2,727.7	2,727.6	13.2	5.4	-110.21	1,029.9	-6,210.6	6,493.0	6,474.9	18.03	360.035	
3,000.0	2,911.0	2,831.3	2,831.2	13.8	5.6	-110.45	1,030.6	-6,211.1	6,503.8	6,485.0	18.78	346.255	
3,100.0	3,006.9	2,936.8	2,936.7	14.4	5.8	-110.69	1,031.3	-6,211.4	6,514.5	6,495.0	19.53	333.481	
3,200.0	3,102.7	3,030.9	3,030.7	14.9	6.0	-110.91	1,031.8	-6,211.6	6,525.3	6,505.0	20.26	322.020	
3,300.0	3,198.6	3,122.1	3,122.0	15.5	6.2	-111.13	1,031.8	-6,211.9	6,536.2	6,515.3	20.99	311.446	
3,400.0	3,294.5	3,214.3	3,214.2	16.1	6.4	-111.34	1,031.4	-6,212.4	6,547.4	6,525.7	21.71	301.572	
3,500.0	3,390.3	3,322.9	3,322.8	16.7	6.7	-111.60	1,031.2	-6,212.7	6,558.5	6,536.1	22.46	291.960	
3,600.0	3,486.2	3,424.3	3,424.2	17.2	6.9	-111.84	1,030.9	-6,213.0	6,569.7	6,546.5	23.20	283.154	
3,700.0	3,582.0	3,549.2	3,549.1	17.8	7.1	-112.13	1,030.2	-6,212.9	6,580.7	6,556.7	23.98	274.369	
3,800.0	3,677.9	3,645.8	3,645.7	18.4	7.3	-112.36	1,029.5	-6,212.6	6,591.5	6,566.8	24.71	266.727	
3,900.0	3,773.7	3,730.7	3,730.6	19.0	7.5	-112.56	1,028.6	-6,212.4	6,602.6	6,577.1	25.42	259.767	
4,000.0	3,869.6	3,821.2	3,821.1	19.5	7.7	-112.78	1,027.5	-6,212.4	6,613.8	6,587.7	26.13	253.103	
4,100.0	3,965.5	3,909.7	3,909.6	20.1	7.9	-112.99	1,026.4	-6,212.4	6,625.3	6,598.5	26.84	246.841	
4,200.0	4,061.3	4,000.0	3,999.9	20.7	8.1	-113.21	1,025.1	-6,212.6	6,637.0	6,609.5	27.55	240.878	
4,300.0	4,157.2	4,080.1	4,079.9	21.3	8.3	-113.40	1,023.8	-6,212.8	6,649.0	6,620.7	28.25	235.398	
4,400.0	4,253.0	4,181.4	4,181.2	21.8	8.5	-113.65	1,022.1	-6,213.2	6,661.1	6,632.2	28.97	229.910	
4,500.0	4,348.9	4,260.9	4,260.7	22.4	8.6	-113.83	1,021.0	-6,213.5	6,673.4	6,643.8	29.66	225.032	
4,600.0	4,444.8	4,347.6	4,347.4	23.0	8.8	-114.04	1,020.1	-6,214.1	6,686.1	6,655.7	30.35	220.291	
4,700.0	4,540.6	4,501.4	4,501.2	23.6	9.1	-114.40	1,018.2	-6,214.7	6,698.6	6,667.4	31.17	214.899	
4,800.0	4,636.5	4,614.1	4,613.9	24.1	9.4	-114.66	1,016.8	-6,214.3	6,710.5	6,678.6	31.91	210.292	
4,900.0	4,732.3	4,700.0	4,699.8	24.7	9.6	-114.86	1,015.9	-6,214.0	6,722.5	6,689.9	32.60	206.220	
5,000.0	4,828.2	4,796.6	4,796.4	25.3	9.8	-115.08	1,015.1	-6,213.8	6,734.7	6,701.4	33.31	202.199	
5,100.0	4,924.1	4,871.8	4,871.6	25.9	9.9	-115.25	1,014.4	-6,213.6	6,747.1	6,713.1	33.98	198.572	
5,200.0	5,019.9	4,997.9	4,997.7	26.4	10.2	-115.54	1,013.1	-6,213.5	6,759.6	6,724.9	34.74	194.589	
5,300.0	5,115.8	5,070.9	5,070.7	27.0	10.3	-115.71	1,012.2	-6,213.3	6,772.1	6,736.7	35.40	191.289	
5,400.0	5,211.6	5,138.2	5,138.0	27.6	10.5	-115.86	1,011.3	-6,213.3	6,785.0	6,749.0	36.06	188.185	
5,500.0	5,307.5	5,205.0	5,204.7	28.2	10.6	-116.01	1,010.5	-6,213.7	6,798.5	6,761.8	36.71	185.217	
5,600.0	5,403.4	5,330.4	5,330.2	28.7	10.9	-116.30	1,008.7	-6,214.2	6,812.0	6,774.5	37.46	181.860	
5,700.0	5,499.2	5,439.5	5,439.3	29.3	11.1	-116.55	1,007.5	-6,214.4	6,825.3	6,787.1	38.18	178.776	
5,800.0	5,595.1	5,500.0	5,499.7	29.9	11.2	-116.68	1,006.7	-6,214.4	6,838.7	6,799.9	38.81	176.193	
5,840.7	5,634.1	5,543.5	5,543.2	30.1	11.3	-116.78	1,006.2	-6,214.6	6,844.2	6,805.1	39.11	175.021	
5,900.0	5,691.1	5,574.5	5,574.2	30.4	11.4	-116.99	1,005.8	-6,214.8	6,852.3	6,812.9	39.42	173.830	
6,000.0	5,788.0	5,675.9	5,675.6	30.8	11.6	-117.41	1,005.1	-6,215.8	6,865.0	6,825.1	39.95	171.844	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - ABDN VERT BROWN 20-2 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
6,100.0	5,885.7	5,758.9	5,758.7	31.2	11.8	-117.75	1,004.7	-6,216.6	6,876.0	6,835.6	40.41	170.145	
6,200.0	5,984.0	5,823.2	5,822.9	31.5	11.9	-118.01	1,003.8	-6,217.4	6,885.9	6,845.1	40.81	168.746	
6,300.0	6,083.0	5,900.0	5,899.7	31.8	12.1	-118.26	1,002.2	-6,218.8	6,894.8	6,853.6	41.19	167.401	
6,400.0	6,182.3	6,068.3	6,068.0	32.0	12.4	-118.53	1,000.8	-6,220.7	6,901.0	6,859.3	41.71	165.468	
6,500.0	6,282.0	6,131.4	6,131.0	32.2	12.6	-118.65	1,000.7	-6,221.4	6,905.8	6,863.8	41.99	164.479	
6,600.0	6,382.0	6,200.0	6,199.6	32.3	12.7	-118.73	1,000.5	-6,222.6	6,909.6	6,867.3	42.24	163.582	
6,668.0	6,449.9	6,294.6	6,294.2	32.4	12.9	-93.55	1,000.6	-6,224.3	6,911.2	6,876.3	34.95	197.748	
6,698.0	6,479.9	6,406.0	6,405.6	32.4	13.1	-93.55	1,000.9	-6,225.4	6,911.5	6,876.3	35.22	196.249	
6,700.0	6,481.9	6,407.8	6,407.4	32.4	13.1	-3.55	1,000.9	-6,225.4	6,911.5	6,868.7	42.75	161.672	
6,750.0	6,531.9	6,452.1	6,451.7	32.5	13.2	-3.56	1,001.1	-6,225.5	6,909.8	6,867.1	42.71	161.786	
6,800.0	6,581.6	6,500.0	6,499.6	32.5	13.3	-3.59	1,001.3	-6,225.8	6,904.6	6,862.2	42.49	162.508	
6,850.0	6,630.8	6,585.2	6,584.8	32.5	13.5	-3.63	1,001.7	-6,226.0	6,896.0	6,853.8	42.16	163.576	
6,900.0	6,679.3	6,628.9	6,628.5	32.4	13.6	-3.70	1,001.7	-6,225.9	6,883.7	6,842.1	41.56	165.640	
6,950.0	6,726.8	6,662.8	6,662.4	32.4	13.7	-3.80	1,001.8	-6,226.0	6,868.2	6,827.4	40.76	168.500	
7,000.0	6,773.1	6,700.0	6,699.6	32.3	13.7	-3.91	1,002.0	-6,226.1	6,849.5	6,809.7	39.80	172.103	
7,050.0	6,817.9	6,736.8	6,736.4	32.3	13.8	-4.06	1,002.1	-6,226.3	6,827.7	6,789.0	38.67	176.550	
7,100.0	6,861.2	6,777.6	6,777.2	32.2	13.9	-4.24	1,002.0	-6,226.4	6,802.8	6,765.4	37.40	181.891	
7,150.0	6,902.5	6,800.0	6,799.6	32.1	14.0	-4.45	1,001.9	-6,226.5	6,775.0	6,739.1	35.95	188.451	
7,200.0	6,941.8	6,800.0	6,799.6	32.0	14.0	-4.69	1,001.9	-6,226.5	6,744.6	6,710.3	34.33	196.440	
7,250.0	6,978.9	6,800.0	6,799.6	31.9	14.0	-4.99	1,001.9	-6,226.5	6,711.7	6,679.1	32.61	205.827	
7,300.0	7,013.5	6,800.0	6,799.6	31.7	14.0	-5.35	1,001.9	-6,226.5	6,676.5	6,645.7	30.79	216.815	
7,350.0	7,045.5	6,800.0	6,799.6	31.6	14.0	-5.79	1,001.9	-6,226.5	6,639.0	6,610.1	28.91	229.628	
7,400.0	7,074.8	6,800.0	6,799.6	31.5	14.0	-6.33	1,001.9	-6,226.5	6,599.5	6,572.6	26.99	244.494	
7,450.0	7,101.1	6,800.0	6,799.6	31.4	14.0	-7.02	1,001.9	-6,226.5	6,558.1	6,533.1	25.07	261.597	
7,500.0	7,124.5	6,800.0	6,799.6	31.3	14.0	-7.90	1,001.9	-6,226.5	6,515.0	6,491.8	23.19	280.961	
7,550.0	7,144.7	6,800.0	6,799.6	31.1	14.0	-9.09	1,001.9	-6,226.5	6,470.3	6,448.9	21.41	302.216	
7,600.0	7,161.6	6,800.0	6,799.6	31.0	14.0	-10.72	1,001.9	-6,226.5	6,424.2	6,404.4	19.82	324.060	
7,650.0	7,175.3	6,800.0	6,799.6	30.9	14.0	-13.11	1,001.9	-6,226.5	6,377.0	6,358.4	18.58	343.139	
7,700.0	7,185.5	6,800.0	6,799.6	30.8	14.0	-16.90	1,001.9	-6,226.5	6,328.7	6,310.7	18.00	351.610	
7,750.0	7,192.3	6,800.0	6,799.6	30.7	14.0	-23.66	1,001.9	-6,226.5	6,279.8	6,260.9	18.87	332.720	
7,800.0	7,195.7	6,800.0	6,799.6	30.7	14.0	-38.23	1,001.9	-6,226.5	6,230.3	6,206.6	23.68	263.085	
7,828.6	7,196.0	6,800.0	6,799.6	30.6	14.0	-55.35	1,001.9	-6,226.5	6,201.8	6,171.7	30.14	205.786	
7,900.0	7,195.4	6,800.0	6,799.6	30.6	14.0	-55.35	1,001.9	-6,226.5	6,130.7	6,099.7	30.97	197.931	
8,000.0	7,194.6	6,800.0	6,799.6	30.6	14.0	-55.36	1,001.9	-6,226.5	6,031.0	5,998.7	32.32	186.589	
8,100.0	7,193.8	6,800.0	6,799.6	31.0	14.0	-55.36	1,001.9	-6,226.5	5,931.4	5,897.6	33.84	175.266	
8,200.0	7,193.0	6,800.0	6,799.6	32.1	14.0	-55.36	1,001.9	-6,226.5	5,831.8	5,796.3	35.50	164.278	
8,300.0	7,192.2	6,800.0	6,799.6	33.8	14.0	-55.36	1,001.9	-6,226.5	5,732.2	5,694.9	37.27	153.814	
8,400.0	7,191.4	6,800.0	6,799.6	35.8	14.0	-55.36	1,001.9	-6,226.5	5,632.6	5,593.5	39.12	143.971	
8,500.0	7,190.6	6,800.0	6,799.6	38.0	14.0	-55.36	1,001.9	-6,226.5	5,533.0	5,492.0	41.05	134.785	
8,600.0	7,189.8	6,800.0	6,799.6	40.3	14.0	-55.36	1,001.9	-6,226.5	5,433.5	5,390.5	43.04	126.254	
8,700.0	7,189.0	6,800.0	6,799.6	42.7	14.0	-55.36	1,001.9	-6,226.5	5,334.0	5,288.9	45.07	118.350	
8,800.0	7,188.2	6,800.0	6,799.6	45.1	14.0	-55.36	1,001.9	-6,226.5	5,234.4	5,187.3	47.14	111.036	
8,900.0	7,187.4	6,800.0	6,799.6	47.5	14.0	-55.36	1,001.9	-6,226.5	5,134.9	5,085.7	49.25	104.270	
9,000.0	7,186.6	6,800.0	6,799.6	50.0	14.0	-55.36	1,001.9	-6,226.5	5,035.5	4,984.1	51.38	98.007	
9,100.0	7,185.7	6,800.0	6,799.6	52.6	14.0	-55.36	1,001.9	-6,226.5	4,936.0	4,882.5	53.53	92.203	
9,200.0	7,184.9	6,800.0	6,799.6	55.1	14.0	-55.36	1,001.9	-6,226.5	4,836.6	4,780.9	55.71	86.818	
9,300.0	7,184.1	6,800.0	6,799.6	57.7	14.0	-55.36	1,001.9	-6,226.5	4,737.2	4,679.3	57.90	81.815	
9,400.0	7,183.3	6,800.0	6,799.6	60.3	14.0	-55.36	1,001.9	-6,226.5	4,637.8	4,577.7	60.11	77.158	
9,500.0	7,182.5	6,800.0	6,799.6	62.9	14.0	-55.36	1,001.9	-6,226.5	4,538.4	4,476.1	62.33	72.816	
9,600.0	7,181.7	6,800.0	6,799.6	65.5	14.0	-55.37	1,001.9	-6,226.5	4,439.1	4,374.5	64.56	68.762	
9,700.0	7,180.9	6,800.0	6,799.6	68.1	14.0	-55.37	1,001.9	-6,226.5	4,339.8	4,273.0	66.80	64.970	
9,800.0	7,180.1	6,800.0	6,799.6	70.8	14.0	-55.37	1,001.9	-6,226.5	4,240.5	4,171.5	69.05	61.417	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - ABDN VERT BROWN 20-2 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,900.0	7,179.3	6,800.0	6,799.6	73.5	14.0	-55.37	1,001.9	-6,226.5	4,141.3	4,070.0	71.30	58.082	
10,000.0	7,178.5	6,800.0	6,799.6	76.1	14.0	-55.37	1,001.9	-6,226.5	4,042.1	3,968.5	73.56	54.947	
10,100.0	7,177.7	6,800.0	6,799.6	78.8	14.0	-55.37	1,001.9	-6,226.5	3,943.0	3,867.1	75.83	51.995	
10,200.0	7,176.9	6,800.0	6,799.6	81.5	14.0	-55.37	1,001.9	-6,226.5	3,843.8	3,765.7	78.11	49.213	
10,300.0	7,176.0	6,800.0	6,799.6	84.2	14.0	-55.37	1,001.9	-6,226.5	3,744.8	3,664.4	80.39	46.585	
10,400.0	7,175.2	6,800.0	6,799.6	86.9	14.0	-55.37	1,001.9	-6,226.5	3,645.8	3,563.1	82.67	44.101	
10,500.0	7,174.4	6,800.0	6,799.6	89.6	14.0	-55.37	1,001.9	-6,226.5	3,546.8	3,461.9	84.96	41.749	
10,600.0	7,173.6	6,800.0	6,799.6	92.3	14.0	-55.37	1,001.9	-6,226.5	3,447.9	3,360.7	87.25	39.519	
10,700.0	7,172.8	6,800.0	6,799.6	95.0	14.0	-55.37	1,001.9	-6,226.5	3,349.1	3,259.6	89.54	37.403	
10,800.0	7,172.0	6,800.0	6,799.6	97.8	14.0	-55.37	1,001.9	-6,226.5	3,250.4	3,158.5	91.84	35.392	
10,900.0	7,171.2	6,800.0	6,799.6	100.5	14.0	-55.37	1,001.9	-6,226.5	3,151.7	3,057.5	94.14	33.479	
11,000.0	7,170.4	6,800.0	6,799.6	103.2	14.0	-55.37	1,001.9	-6,226.5	3,053.1	2,956.6	96.44	31.657	
11,100.0	7,169.6	6,800.0	6,799.6	106.0	14.0	-55.37	1,001.9	-6,226.5	2,954.6	2,855.8	98.75	29.921	
11,200.0	7,168.8	6,800.0	6,799.6	108.7	14.0	-55.37	1,001.9	-6,226.5	2,856.2	2,755.1	101.05	28.264	
11,300.0	7,168.0	6,800.0	6,799.6	111.5	14.0	-55.37	1,001.9	-6,226.5	2,757.9	2,654.6	103.36	26.682	
11,400.0	7,167.1	6,800.0	6,799.6	114.2	14.0	-55.37	1,001.9	-6,226.5	2,659.8	2,554.1	105.67	25.170	
11,500.0	7,166.3	6,800.0	6,799.6	117.0	14.0	-55.37	1,001.9	-6,226.5	2,561.8	2,453.8	107.99	23.723	
11,600.0	7,165.5	6,800.0	6,799.6	119.7	14.0	-55.37	1,001.9	-6,226.5	2,463.9	2,353.6	110.30	22.339	
11,700.0	7,164.7	6,800.0	6,799.6	122.5	14.0	-55.37	1,001.9	-6,226.5	2,366.3	2,253.7	112.61	21.012	
11,800.0	7,163.9	6,800.0	6,799.6	125.2	14.0	-55.37	1,001.9	-6,226.5	2,268.8	2,153.9	114.93	19.741	
11,900.0	7,163.1	6,800.0	6,799.6	128.0	14.0	-55.37	1,001.9	-6,226.5	2,171.6	2,054.3	117.25	18.521	
12,000.0	7,162.3	6,800.0	6,799.6	130.7	14.0	-55.37	1,001.9	-6,226.5	2,074.6	1,955.0	119.57	17.351	
12,100.0	7,161.5	6,800.0	6,799.6	133.5	14.0	-55.37	1,001.9	-6,226.5	1,978.0	1,856.1	121.89	16.227	
12,200.0	7,160.7	6,800.0	6,799.6	136.3	14.0	-55.37	1,001.9	-6,226.5	1,881.6	1,757.4	124.21	15.149	
12,300.0	7,159.8	6,800.0	6,799.6	139.0	14.0	-55.38	1,001.9	-6,226.5	1,785.7	1,659.2	126.53	14.113	
12,400.0	7,159.0	6,800.0	6,799.6	141.8	14.0	-55.38	1,001.9	-6,226.5	1,690.3	1,561.4	128.86	13.118	
12,500.0	7,158.2	6,800.0	6,799.6	144.6	14.0	-55.38	1,001.9	-6,226.5	1,595.4	1,464.2	131.18	12.162	
12,600.0	7,157.4	6,800.0	6,799.6	147.3	14.0	-55.38	1,001.9	-6,226.5	1,501.2	1,367.7	133.51	11.245	
12,700.0	7,156.6	6,800.0	6,799.6	150.1	14.0	-55.38	1,001.9	-6,226.5	1,407.8	1,272.0	135.83	10.364	
12,800.0	7,155.8	6,800.0	6,799.6	152.9	14.0	-55.38	1,001.9	-6,226.5	1,315.4	1,177.2	138.16	9.521	
12,900.0	7,155.0	6,800.0	6,799.6	155.7	14.0	-55.38	1,001.9	-6,226.5	1,224.1	1,083.6	140.49	8.713	
13,000.0	7,154.2	6,800.0	6,799.6	158.4	14.0	-55.38	1,001.9	-6,226.5	1,134.3	991.5	142.81	7.943	
13,100.0	7,153.3	6,800.0	6,799.6	161.2	14.0	-55.38	1,001.9	-6,226.5	1,046.4	901.3	145.14	7.210	
13,200.0	7,152.5	6,800.0	6,799.6	164.0	14.0	-55.38	1,001.9	-6,226.5	960.9	813.4	147.47	6.516	
13,300.0	7,151.7	6,800.0	6,799.6	166.8	14.0	-55.38	1,001.9	-6,226.5	878.4	728.6	149.80	5.864	
13,400.0	7,150.9	6,800.0	6,799.6	169.5	14.0	-55.38	1,001.9	-6,226.5	799.9	647.7	152.13	5.258	
13,500.0	7,150.1	6,800.0	6,799.6	172.3	14.0	-55.38	1,001.9	-6,226.5	726.7	572.2	154.46	4.705	
13,600.0	7,149.3	6,800.0	6,799.6	175.1	14.0	-55.38	1,001.9	-6,226.5	660.5	503.8	156.79	4.213	
13,700.0	7,148.5	6,800.0	6,799.6	177.9	14.0	-55.38	1,001.9	-6,226.5	603.8	444.7	159.12	3.795	
13,800.0	7,147.6	6,800.0	6,799.6	180.7	14.0	-55.38	1,001.9	-6,226.5	559.3	397.9	161.46	3.464	
13,900.0	7,146.8	6,800.0	6,799.6	183.5	14.0	-55.38	1,001.9	-6,226.5	530.2	366.4	163.79	3.237	
14,000.0	7,146.0	6,800.0	6,799.6	186.2	14.0	-55.38	1,001.9	-6,226.5	519.0	352.9	166.12	3.124	
14,008.7	7,145.9	6,800.0	6,799.6	186.5	14.0	-55.38	1,001.9	-6,226.5	519.0	352.6	166.32	3.120 CC, ES, SF	
14,100.0	7,145.2	6,800.0	6,799.6	189.0	14.0	-55.38	1,001.9	-6,226.5	526.9	358.5	168.45	3.128	
14,200.0	7,144.4	6,800.0	6,799.6	191.8	14.0	-55.38	1,001.9	-6,226.5	553.1	382.3	170.79	3.239	
14,300.0	7,143.6	6,800.0	6,799.6	194.6	14.0	-55.38	1,001.9	-6,226.5	595.1	422.0	173.12	3.438	
14,370.2	7,143.0	6,800.0	6,799.6	196.6	14.0	-55.38	1,001.9	-6,226.5	632.5	457.7	174.76	3.619	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD BROWN 20AD - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 545-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	-72.96	1,532.4	-5,000.0	5,229.7				
100.0	100.0	59.9	59.9	0.1	0.1	-72.96	1,532.4	-5,000.0	5,229.6	5,229.4	0.15	N/A	
200.0	200.0	157.4	157.4	0.3	0.1	-72.96	1,532.2	-5,000.1	5,229.6	5,229.2	0.46	N/A	
300.0	300.0	254.8	254.8	0.5	0.2	-72.97	1,532.0	-5,000.3	5,229.7	5,229.0	0.77	6,756.105	
400.0	400.0	352.2	352.2	0.8	0.3	-98.19	1,531.6	-5,000.6	5,230.1	5,229.1	1.08	4,821.548	
500.0	499.8	449.5	449.5	1.0	0.4	-98.24	1,531.1	-5,001.0	5,231.1	5,229.7	1.40	3,737.201	
600.0	599.5	546.7	546.6	1.2	0.5	-98.31	1,530.5	-5,001.4	5,232.6	5,230.9	1.73	3,018.395	
700.0	698.7	651.9	651.8	1.5	0.7	-98.41	1,530.0	-5,001.8	5,234.6	5,232.4	2.22	2,361.738	
800.0	797.5	732.0	732.0	1.8	0.9	-98.50	1,529.5	-5,002.2	5,237.2	5,234.5	2.69	1,945.841	
900.0	895.6	803.0	803.0	2.2	1.0	-98.58	1,529.2	-5,002.8	5,240.9	5,237.7	3.20	1,637.224	
1,000.0	993.1	897.9	897.8	2.6	1.2	-98.72	1,529.2	-5,003.9	5,245.5	5,241.7	3.81	1,376.114	
1,100.0	1,089.6	954.8	954.8	3.1	1.3	-98.78	1,529.1	-5,004.7	5,251.0	5,246.6	4.40	1,192.590	
1,127.2	1,115.8	967.1	967.1	3.2	1.4	-98.78	1,529.0	-5,005.0	5,252.8	5,248.2	4.57	1,149.933	
1,200.0	1,185.5	1,012.0	1,012.0	3.6	1.5	-98.92	1,529.1	-5,006.2	5,258.0	5,252.9	5.04	1,042.492	
1,300.0	1,281.4	1,041.1	1,041.1	4.1	1.5	-99.01	1,529.1	-5,007.2	5,266.0	5,260.4	5.64	933.627	
1,400.0	1,377.3	1,106.0	1,105.9	4.7	1.7	-99.22	1,529.5	-5,010.3	5,275.4	5,269.0	6.32	834.064	
1,500.0	1,473.1	1,106.0	1,105.9	5.2	1.7	-99.22	1,529.5	-5,010.3	5,285.6	5,278.8	6.87	769.066	
1,600.0	1,569.0	1,151.1	1,150.8	5.8	1.8	-99.36	1,530.0	-5,013.1	5,297.2	5,289.7	7.53	703.809	
1,700.0	1,664.8	1,199.0	1,198.6	6.4	1.9	-99.51	1,530.7	-5,016.9	5,310.2	5,302.0	8.19	648.399	
1,800.0	1,760.7	1,199.0	1,198.6	6.9	1.9	-99.51	1,530.7	-5,016.9	5,324.4	5,315.6	8.75	608.662	
1,900.0	1,856.6	1,260.7	1,260.0	7.5	2.0	-99.70	1,531.7	-5,022.8	5,339.6	5,330.1	9.45	565.137	
2,000.0	1,952.4	1,293.0	1,292.1	8.1	2.1	-99.80	1,532.2	-5,026.3	5,356.0	5,345.9	10.08	531.188	
2,100.0	2,048.3	1,337.6	1,336.4	8.6	2.2	-99.94	1,533.0	-5,031.5	5,373.5	5,362.8	10.75	499.975	
2,200.0	2,144.1	1,386.0	1,384.4	9.2	2.4	-100.10	1,533.9	-5,037.9	5,392.2	5,380.8	11.42	472.115	
2,300.0	2,240.0	1,386.0	1,384.4	9.8	2.4	-100.10	1,533.9	-5,037.9	5,412.2	5,400.2	11.99	451.570	
2,400.0	2,335.9	1,435.6	1,433.4	10.3	2.5	-100.25	1,535.3	-5,045.1	5,433.2	5,420.5	12.66	429.034	
2,500.0	2,431.7	1,480.0	1,477.2	10.9	2.7	-100.38	1,536.9	-5,052.4	5,455.6	5,442.3	13.33	409.203	
2,600.0	2,527.6	1,480.0	1,477.2	11.5	2.7	-100.38	1,536.9	-5,052.4	5,479.2	5,465.3	13.90	394.258	
2,700.0	2,623.4	1,533.7	1,530.0	12.1	2.8	-100.54	1,539.4	-5,062.0	5,503.9	5,489.3	14.59	377.229	
2,800.0	2,719.3	1,573.0	1,568.5	12.6	3.0	-100.66	1,541.2	-5,069.5	5,529.7	5,514.4	15.25	362.679	
2,900.0	2,815.2	1,573.0	1,568.5	13.2	3.0	-100.66	1,541.2	-5,069.5	5,556.8	5,541.0	15.81	351.413	
3,000.0	2,911.0	1,629.0	1,623.2	13.8	3.2	-100.83	1,544.1	-5,081.2	5,584.7	5,568.2	16.51	338.196	
3,100.0	3,006.9	1,667.0	1,660.2	14.4	3.3	-100.94	1,546.1	-5,089.7	5,614.0	5,596.8	17.17	326.974	
3,200.0	3,102.7	1,710.3	1,702.2	14.9	3.5	-101.06	1,548.5	-5,099.8	5,644.2	5,626.4	17.84	316.400	
3,300.0	3,198.6	1,761.0	1,751.4	15.5	3.8	-101.21	1,551.0	-5,111.9	5,675.1	5,656.6	18.52	306.356	
3,400.0	3,294.5	1,832.0	1,820.1	16.1	4.1	-101.42	1,554.5	-5,129.2	5,706.6	5,687.4	19.26	296.342	
3,500.0	3,390.3	1,854.0	1,841.4	16.7	4.2	-101.49	1,555.5	-5,134.7	5,738.9	5,719.1	19.87	288.761	
3,600.0	3,486.2	1,899.5	1,885.4	17.2	4.4	-101.62	1,557.8	-5,146.4	5,772.2	5,751.6	20.55	280.860	
3,700.0	3,582.0	1,948.0	1,931.9	17.8	4.7	-101.77	1,560.3	-5,159.7	5,806.7	5,785.5	21.24	273.413	
3,800.0	3,677.9	2,056.5	2,036.1	18.4	5.2	-102.09	1,565.5	-5,189.7	5,841.8	5,819.7	22.05	264.929	
3,900.0	3,773.7	2,135.0	2,111.5	19.0	5.6	-102.32	1,568.9	-5,211.1	5,876.4	5,853.6	22.79	257.841	
4,000.0	3,869.6	2,221.6	2,194.8	19.5	6.0	-102.57	1,573.1	-5,234.8	5,911.3	5,887.7	23.56	250.928	
4,100.0	3,965.5	2,274.7	2,245.6	20.1	6.3	-102.72	1,575.8	-5,249.4	5,946.5	5,922.3	24.25	245.239	
4,200.0	4,061.3	2,326.8	2,295.6	20.7	6.6	-102.87	1,578.3	-5,264.1	5,982.5	5,957.6	24.94	239.920	
4,300.0	4,157.2	2,415.0	2,380.1	21.3	7.1	-103.12	1,582.3	-5,289.2	6,018.8	5,993.1	25.71	234.147	
4,400.0	4,253.0	2,462.7	2,425.7	21.8	7.3	-103.25	1,584.8	-5,302.8	6,055.5	6,029.1	26.38	229.546	
4,500.0	4,348.9	2,509.0	2,469.8	22.4	7.6	-103.37	1,587.8	-5,316.5	6,093.0	6,066.0	27.05	225.233	
4,600.0	4,444.8	2,564.3	2,522.4	23.0	7.9	-103.51	1,591.8	-5,333.0	6,131.3	6,103.5	27.76	220.905	
4,700.0	4,540.6	2,710.5	2,661.6	23.6	8.8	-103.88	1,602.1	-5,376.8	6,169.7	6,141.1	28.67	215.200	
4,800.0	4,636.5	2,840.4	2,785.8	24.1	9.5	-104.22	1,609.6	-5,414.3	6,206.9	6,177.3	29.53	210.178	
4,900.0	4,732.3	3,020.9	2,958.5	24.7	10.5	-104.68	1,619.9	-5,465.2	6,243.7	6,213.2	30.52	204.610	
5,000.0	4,828.2	3,109.4	3,043.6	25.3	11.0	-104.91	1,624.3	-5,489.4	6,279.7	6,248.5	31.28	200.738	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD BROWN 20AD - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 545-MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	4,924.1	3,188.9	3,119.8	25.9	11.4	-105.11	1,628.6	-5,511.3	6,316.0	6,284.0	32.03	197.169	
5,200.0	5,019.9	3,336.6	3,261.8	26.4	12.2	-105.47	1,636.7	-5,551.6	6,352.2	6,319.2	32.94	192.844	
5,300.0	5,115.8	3,415.7	3,337.9	27.0	12.6	-105.67	1,640.1	-5,572.8	6,387.9	6,354.2	33.69	189.632	
5,400.0	5,211.6	3,509.5	3,428.1	27.6	13.1	-105.91	1,643.6	-5,598.2	6,423.9	6,389.4	34.47	186.374	
5,500.0	5,307.5	3,605.4	3,520.4	28.2	13.7	-106.15	1,648.2	-5,623.9	6,459.8	6,424.5	35.25	183.232	
5,600.0	5,403.4	3,681.8	3,597.6	28.7	14.5	-110.31	1,696.6	-5,871.7	6,480.2	6,440.9	39.27	165.029	
5,700.0	5,499.2	3,768.7	3,684.5	29.3	15.6	-110.48	1,695.8	-5,872.9	6,492.2	6,452.3	39.93	162.600	
5,800.0	5,595.1	3,856.6	3,771.4	29.9	16.7	-110.68	1,695.0	-5,874.6	6,504.7	6,464.1	40.60	160.222	
5,840.7	5,634.1	3,895.2	3,811.9	30.1	16.8	-110.80	1,694.5	-5,875.7	6,509.8	6,468.9	40.90	159.163	
5,900.0	5,691.1	3,952.3	3,868.9	30.4	16.9	-111.14	1,693.9	-5,877.2	6,516.9	6,475.6	41.33	157.699	
6,000.0	5,788.0	4,049.2	3,965.8	30.8	20.0	-111.49	1,693.9	-5,878.3	6,527.9	6,486.0	41.85	155.992	
6,100.0	5,885.7	4,146.1	4,062.7	31.2	20.1	-111.82	1,694.2	-5,880.0	6,538.1	6,495.7	42.34	154.415	
6,200.0	5,984.0	4,243.0	4,159.9	31.5	20.2	-112.12	1,694.7	-5,882.0	6,547.0	6,504.2	42.83	152.865	
6,300.0	6,083.0	4,340.0	4,258.9	31.8	20.4	-112.36	1,695.1	-5,883.9	6,554.9	6,511.7	43.25	151.548	
6,400.0	6,182.3	4,437.9	4,358.8	32.0	20.7	-112.68	1,694.1	-5,887.2	6,560.6	6,516.7	43.88	149.515	
6,500.0	6,282.0	4,535.8	4,458.7	32.2	20.8	-112.80	1,693.7	-5,887.9	6,564.3	6,520.1	44.22	148.444	
6,600.0	6,382.0	4,633.7	4,558.6	32.3	20.9	-112.87	1,694.0	-5,888.6	6,566.9	6,522.4	44.52	147.504	
6,668.0	6,449.9	4,699.6	4,624.5	32.4	21.0	-87.68	1,694.3	-5,889.4	6,568.1	6,526.6	41.52	158.176	
6,698.0	6,479.9	4,729.6	4,654.5	32.4	21.0	-87.68	1,694.3	-5,889.6	6,568.6	6,527.0	41.58	157.957	
6,700.0	6,481.9	4,731.6	4,656.5	32.4	21.0	2.32	1,694.3	-5,889.6	6,568.6	6,523.8	44.77	146.724	
6,750.0	6,531.9	4,781.6	4,706.6	32.5	21.1	2.32	1,694.4	-5,890.3	6,567.5	6,522.6	44.87	146.373	
6,800.0	6,581.6	4,831.6	4,756.6	32.5	21.1	2.34	1,694.4	-5,891.1	6,563.0	6,518.2	44.77	146.591	
6,850.0	6,630.8	4,880.8	4,805.8	32.5	21.2	2.36	1,694.4	-5,891.8	6,555.1	6,510.6	44.47	147.393	
6,900.0	6,679.3	4,929.9	4,854.9	32.4	21.2	2.41	1,694.4	-5,892.7	6,543.8	6,499.8	44.00	148.736	
6,950.0	6,726.8	4,977.4	4,902.4	32.4	21.3	2.46	1,694.4	-5,893.6	6,529.3	6,485.9	43.33	150.698	
7,000.0	6,773.1	5,024.7	4,948.7	32.3	21.4	2.54	1,694.4	-5,894.5	6,511.4	6,468.9	42.49	153.245	
7,050.0	6,817.9	5,069.5	4,993.5	32.3	21.5	2.63	1,694.1	-5,895.8	6,490.2	6,448.7	41.51	156.360	
7,100.0	6,861.2	5,114.8	5,037.8	32.2	21.6	2.74	1,693.8	-5,896.6	6,465.8	6,425.5	40.34	160.272	
7,150.0	6,902.5	5,159.7	5,079.1	32.1	21.6	2.88	1,693.7	-5,897.3	6,438.5	6,399.5	39.00	165.085	
7,200.0	6,941.8	5,198.0	5,117.4	32.0	21.7	3.05	1,693.6	-5,897.9	6,408.4	6,370.8	37.52	170.784	
7,250.0	6,978.9	5,236.3	5,154.7	31.9	21.7	3.25	1,693.5	-5,898.5	6,375.5	6,339.6	35.93	177.439	
7,300.0	7,013.5	5,274.6	5,192.0	31.7	21.8	3.50	1,693.4	-5,899.1	6,340.2	6,306.0	34.24	185.146	
7,350.0	7,045.5	5,312.9	5,229.3	31.6	21.8	3.82	1,693.3	-5,899.8	6,302.5	6,270.0	32.49	193.986	
7,400.0	7,074.8	5,351.2	5,258.6	31.5	21.9	4.20	1,693.2	-5,900.3	6,262.6	6,231.9	30.70	204.018	
7,450.0	7,101.1	5,389.5	5,286.9	31.4	21.9	4.70	1,693.0	-5,900.7	6,220.8	6,191.8	28.92	215.134	
7,500.0	7,124.5	5,427.8	5,315.2	31.3	21.9	5.35	1,692.9	-5,901.1	6,177.1	6,149.9	27.21	227.006	
7,550.0	7,144.7	5,466.1	5,353.5	31.1	21.9	6.24	1,692.7	-5,901.5	6,131.9	6,106.3	25.67	238.867	
7,600.0	7,161.6	5,504.4	5,391.8	31.0	22.0	7.51	1,692.5	-5,902.0	6,085.4	6,060.9	24.44	249.011	
7,650.0	7,175.3	5,542.7	5,429.1	30.9	22.0	9.38	1,692.5	-5,902.0	6,037.7	6,014.0	23.67	255.084	
7,700.0	7,185.5	5,581.0	5,467.4	30.8	22.0	12.66	1,692.4	-5,902.4	5,989.1	5,965.2	23.89	250.704	
7,750.0	7,192.3	5,619.3	5,504.7	30.7	22.0	19.21	1,692.3	-5,902.6	5,939.8	5,913.6	26.16	227.083	
7,800.0	7,195.7	5,657.6	5,543.0	30.7	22.0	37.64	1,692.2	-5,902.7	5,890.1	5,855.3	34.77	169.416	
7,828.6	7,196.0	5,657.9	5,543.3	30.6	22.0	68.03	1,692.2	-5,902.7	5,861.5	5,816.7	44.82	130.784	
7,900.0	7,195.4	5,658.0	5,543.4	30.6	22.0	68.23	1,692.2	-5,902.7	5,790.2	5,744.4	45.81	126.385	
8,000.0	7,194.6	5,658.1	5,543.5	30.6	22.0	68.50	1,692.2	-5,902.8	5,690.3	5,643.0	47.38	120.112	
8,100.0	7,193.8	5,658.2	5,543.6	31.0	22.0	68.77	1,692.2	-5,902.8	5,590.5	5,541.3	49.10	113.847	
8,200.0	7,193.0	5,658.3	5,543.7	32.1	22.0	69.05	1,692.2	-5,902.8	5,490.6	5,439.6	50.98	107.708	
8,300.0	7,192.2	5,658.4	5,543.8	33.8	22.0	69.33	1,692.2	-5,902.9	5,390.7	5,337.7	52.97	101.772	
8,400.0	7,191.4	5,658.5	5,543.9	35.8	22.0	69.62	1,692.1	-5,902.9	5,290.9	5,235.8	55.06	96.089	
8,500.0	7,190.6	5,658.6	5,544.0	38.0	22.0	69.91	1,692.1	-5,903.0	5,191.0	5,133.8	57.24	90.686	
8,600.0	7,189.8	5,658.7	5,544.1	40.3	22.0	70.20	1,692.1	-5,903.0	5,091.1	5,031.7	59.49	85.573	
8,700.0	7,189.0	5,658.8	5,544.2	42.7	22.0	70.49	1,692.1	-5,903.0	4,991.3	4,929.5	61.81	80.751	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD BROWN 20AD - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 545-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,800.0	7,188.2	7,133.1	7,018.6	45.1	22.0	70.79	1,692.1	-5,903.1	4,891.5	4,827.3	64.18	76.212	
8,900.0	7,187.4	7,134.7	7,020.2	47.5	22.0	71.09	1,692.1	-5,903.1	4,791.6	4,725.0	66.60	71.945	
9,000.0	7,186.6	7,136.3	7,021.7	50.0	22.0	71.40	1,692.0	-5,903.2	4,691.8	4,622.7	69.06	67.936	
9,100.0	7,185.7	7,137.8	7,023.3	52.6	22.1	71.71	1,692.0	-5,903.2	4,592.0	4,520.4	71.56	64.169	
9,200.0	7,184.9	7,139.4	7,024.9	55.1	22.1	72.02	1,692.0	-5,903.3	4,492.2	4,418.1	74.09	60.629	
9,300.0	7,184.1	7,141.0	7,026.5	57.7	22.1	72.34	1,692.0	-5,903.3	4,392.4	4,315.7	76.65	57.301	
9,400.0	7,183.3	7,142.6	7,028.1	60.3	22.1	72.66	1,692.0	-5,903.3	4,292.6	4,213.3	79.24	54.170	
9,500.0	7,182.5	7,144.3	7,029.7	62.9	22.1	72.98	1,692.0	-5,903.4	4,192.8	4,110.9	81.85	51.222	
9,600.0	7,181.7	7,145.9	7,031.4	65.5	22.1	73.31	1,692.0	-5,903.4	4,093.0	4,008.5	84.49	48.444	
9,700.0	7,180.9	7,147.6	7,033.0	68.1	22.1	73.64	1,691.9	-5,903.5	3,993.2	3,906.1	87.15	45.822	
9,800.0	7,180.1	7,149.2	7,034.7	70.8	22.1	73.98	1,691.9	-5,903.5	3,893.5	3,803.6	89.82	43.347	
9,900.0	7,179.3	7,150.9	7,036.4	73.5	22.1	74.32	1,691.9	-5,903.6	3,793.7	3,701.2	92.51	41.008	
10,000.0	7,178.5	7,152.6	7,038.1	76.1	22.1	74.66	1,691.9	-5,903.6	3,694.0	3,598.8	95.22	38.794	
10,100.0	7,177.7	7,154.3	7,039.8	78.8	22.1	75.01	1,691.9	-5,903.7	3,594.3	3,496.3	97.94	36.697	
10,200.0	7,176.9	7,156.0	7,041.5	81.5	22.1	75.36	1,691.8	-5,903.7	3,494.6	3,393.9	100.68	34.709	
10,300.0	7,176.0	7,157.8	7,043.2	84.2	22.1	75.71	1,691.8	-5,903.8	3,394.9	3,291.4	103.43	32.823	
10,400.0	7,175.2	7,159.5	7,045.0	86.9	22.1	76.07	1,691.8	-5,903.8	3,295.2	3,189.0	106.19	31.030	
10,500.0	7,174.4	7,161.3	7,046.8	89.6	22.1	76.44	1,691.8	-5,903.9	3,195.5	3,086.6	108.97	29.326	
10,600.0	7,173.6	7,163.1	7,048.5	92.3	22.1	76.80	1,691.8	-5,903.9	3,095.9	2,984.2	111.75	27.704	
10,700.0	7,172.8	7,164.9	7,050.3	95.0	22.1	77.18	1,691.8	-5,904.0	2,996.3	2,881.8	114.54	26.158	
10,800.0	7,172.0	7,166.7	7,052.1	97.8	22.1	77.55	1,691.7	-5,904.0	2,896.7	2,779.4	117.35	24.685	
10,900.0	7,171.2	7,168.5	7,054.0	100.5	22.1	77.93	1,691.7	-5,904.1	2,797.2	2,677.0	120.16	23.279	
11,000.0	7,170.4	7,170.4	7,055.8	103.2	22.1	78.32	1,691.7	-5,904.1	2,697.6	2,574.7	122.98	21.936	
11,100.0	7,169.6	7,172.2	7,057.7	106.0	22.1	78.71	1,691.7	-5,904.2	2,598.2	2,472.4	125.80	20.652	
11,200.0	7,168.8	7,174.1	7,059.6	108.7	22.1	79.10	1,691.7	-5,904.2	2,498.7	2,370.1	128.64	19.425	
11,300.0	7,168.0	7,176.0	7,061.5	111.5	22.1	79.50	1,691.7	-5,904.3	2,399.3	2,267.8	131.47	18.249	
11,400.0	7,167.1	7,177.9	7,063.4	114.2	22.1	79.91	1,691.6	-5,904.4	2,300.0	2,165.6	134.32	17.123	
11,500.0	7,166.3	7,179.8	7,065.3	117.0	22.1	80.31	1,691.6	-5,904.4	2,200.7	2,063.5	137.17	16.044	
11,600.0	7,165.5	7,181.8	7,067.2	119.7	22.1	80.73	1,691.6	-5,904.5	2,101.4	1,961.4	140.02	15.008	
11,700.0	7,164.7	7,183.7	7,069.1	122.5	22.1	81.14	1,691.6	-5,904.6	2,002.3	1,859.2	143.06	13.996	
11,800.0	7,163.9	7,185.7	7,071.0	125.2	22.1	81.54	1,691.6	-5,904.6	1,903.2	1,757.4	145.80	13.053	
11,900.0	7,163.1	7,187.8	7,072.9	128.0	22.1	81.94	1,691.5	-5,904.7	1,804.2	1,655.6	148.60	12.141	
12,000.0	7,162.3	7,190.0	7,074.8	130.7	22.1	82.35	1,691.5	-5,904.7	1,705.4	1,553.9	151.50	11.256	
12,100.0	7,161.5	7,192.3	7,076.7	133.5	22.1	82.76	1,691.5	-5,904.8	1,606.7	1,452.3	154.39	10.406	
12,200.0	7,160.7	7,194.6	7,078.6	136.3	22.1	83.17	1,691.5	-5,904.9	1,508.1	1,350.9	157.27	9.589	
12,300.0	7,159.8	7,196.9	7,080.5	139.0	22.2	83.58	1,691.5	-5,905.0	1,409.8	1,249.6	160.14	8.803	
12,400.0	7,159.0	7,201.1	7,082.4	141.8	22.2	84.00	1,691.4	-5,905.0	1,311.7	1,148.7	163.00	8.047	
12,500.0	7,158.2	7,203.4	7,084.3	144.6	22.2	84.42	1,691.4	-5,905.1	1,213.9	1,048.0	165.85	7.319	
12,600.0	7,157.4	7,205.7	7,086.2	147.3	22.2	84.84	1,691.4	-5,905.2	1,116.5	947.8	168.69	6.618	
12,700.0	7,156.6	7,207.9	7,088.1	150.1	22.2	85.26	1,691.4	-5,905.2	1,019.6	848.0	171.53	5.944	
12,800.0	7,155.8	7,210.1	7,089.9	152.9	22.2	85.68	1,691.4	-5,905.3	923.3	748.9	174.35	5.296	
12,900.0	7,155.0	7,212.2	7,091.8	155.7	22.2	86.10	1,691.3	-5,905.3	827.9	650.7	177.17	4.673	
13,000.0	7,154.2	7,214.2	7,093.7	158.4	22.2	86.52	1,691.3	-5,905.4	733.8	553.8	179.98	4.077	
13,100.0	7,153.3	7,216.2	7,095.6	161.2	22.2	86.94	1,691.3	-5,905.4	641.4	458.6	182.78	3.509	
13,200.0	7,152.5	7,218.1	7,097.5	164.0	22.2	87.36	1,691.3	-5,905.5	551.7	366.1	185.57	2.973	
13,300.0	7,151.7	7,220.0	7,099.4	166.8	22.2	87.78	1,691.3	-5,905.5	466.1	277.8	188.36	2.475	
13,400.0	7,150.9	7,221.8	7,101.3	169.5	22.2	88.20	1,691.3	-5,905.6	387.6	196.4	191.14	2.028	
13,500.0	7,150.1	7,223.6	7,103.2	172.3	22.2	88.62	1,691.2	-5,905.6	321.2	127.2	193.91	1.656	
13,600.0	7,149.3	7,225.3	7,105.1	175.1	22.2	89.04	1,691.2	-5,905.7	275.8	79.1	196.68	1.402 Level 3	
13,685.4	7,148.6	7,226.8	7,107.0	177.5	22.2	89.46	1,691.2	-5,905.7	262.3	63.2	199.03	1.318 Level 3, CC, ES	
13,700.0	7,148.5	7,227.0	7,108.9	177.9	22.2	89.88	1,691.2	-5,905.7	262.7	63.2	199.44	1.317 Level 3, SF	
13,800.0	7,147.6	7,228.6	7,110.8	180.7	22.2	90.30	1,691.2	-5,905.8	286.2	84.0	202.19	1.415 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 SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD BROWN 20AD - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 545-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
13,900.0	7,146.8	7,230.2	7,115.7	183.5	22.2	91.22	1,691.2	-5,905.8	338.8	133.9	204.94	1.653	
14,000.0	7,146.0	7,231.8	7,117.2	186.2	22.2	91.56	1,691.2	-5,905.8	409.5	201.9	207.68	1.972	
14,100.0	7,145.2	7,233.3	7,118.7	189.0	22.2	91.89	1,691.2	-5,905.9	490.5	280.1	210.42	2.331	
14,200.0	7,144.4	7,234.8	7,120.2	191.8	22.2	92.22	1,691.2	-5,905.9	577.5	364.4	213.15	2.709	
14,300.0	7,143.6	7,236.2	7,121.7	194.6	22.2	92.53	1,691.1	-5,906.0	668.1	452.3	215.87	3.095	
14,370.2	7,143.0	7,237.2	7,122.7	196.6	22.2	92.75	1,691.1	-5,906.0	733.2	515.4	217.79	3.367	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 545-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	-72.52	1,556.4	-4,943.7	5,183.0				
100.0	100.0	58.6	58.6	0.1	0.1	-72.52	1,556.4	-4,943.7	5,182.9	5,182.8	0.15	N/A	
200.0	200.0	153.9	153.9	0.3	0.1	-72.52	1,556.5	-4,943.8	5,183.0	5,182.6	0.46	N/A	
300.0	300.0	249.2	249.2	0.5	0.2	-72.52	1,556.6	-4,943.9	5,183.2	5,182.4	0.77	6,747.254	
400.0	400.0	344.5	344.5	0.8	0.3	-97.74	1,556.7	-4,944.2	5,183.7	5,182.6	1.08	4,815.572	
500.0	499.8	439.7	439.7	1.0	0.4	-97.78	1,556.9	-4,944.5	5,184.8	5,183.4	1.39	3,732.076	
600.0	599.5	545.0	545.0	1.2	0.5	-97.84	1,557.1	-4,945.0	5,186.5	5,184.7	1.73	3,000.990	
700.0	698.7	616.7	616.7	1.5	0.6	-97.89	1,557.4	-4,945.4	5,188.8	5,186.6	2.16	2,401.023	
800.0	797.5	707.2	707.2	1.8	0.8	-97.98	1,558.0	-4,946.1	5,191.9	5,189.3	2.67	1,946.898	
900.0	895.6	797.5	797.5	2.2	1.0	-98.09	1,558.9	-4,946.8	5,195.7	5,192.5	3.21	1,617.165	
1,000.0	993.1	874.8	874.8	2.6	1.2	-98.16	1,561.2	-4,947.2	5,200.4	5,196.6	3.79	1,372.659	
1,100.0	1,089.6	947.9	947.7	3.1	1.4	-98.21	1,565.5	-4,947.2	5,206.0	5,201.6	4.42	1,177.948	
1,127.2	1,115.8	968.2	967.9	3.2	1.4	-98.23	1,567.1	-4,947.2	5,207.7	5,203.1	4.60	1,130.994	
1,200.0	1,185.5	1,024.5	1,024.0	3.6	1.5	-98.34	1,572.5	-4,946.9	5,212.5	5,207.4	5.12	1,018.917	
1,300.0	1,281.4	1,106.0	1,104.9	4.1	1.7	-98.49	1,582.5	-4,946.1	5,219.4	5,213.5	5.86	891.399	
1,400.0	1,377.3	1,176.0	1,174.1	4.7	1.9	-98.60	1,592.7	-4,945.2	5,226.7	5,220.1	6.60	792.264	
1,500.0	1,473.1	1,235.0	1,232.3	5.2	2.1	-98.68	1,602.1	-4,944.7	5,234.8	5,227.5	7.33	714.557	
1,600.0	1,569.0	1,293.0	1,289.4	5.8	2.3	-98.76	1,612.3	-4,944.4	5,243.7	5,235.7	8.06	650.295	
1,700.0	1,664.8	1,507.0	1,498.1	6.4	3.2	-98.91	1,659.4	-4,938.8	5,251.7	5,242.3	9.45	555.914	
1,800.0	1,760.7	1,574.0	1,562.8	6.9	3.5	-98.92	1,676.6	-4,935.7	5,259.0	5,248.7	10.31	510.285	
1,900.0	1,856.6	1,636.7	1,622.9	7.5	3.8	-98.92	1,694.2	-4,932.9	5,267.0	5,255.8	11.19	470.880	
2,000.0	1,952.4	1,716.0	1,698.4	8.1	4.2	-98.90	1,718.2	-4,929.5	5,275.8	5,263.7	12.17	433.512	
2,100.0	2,048.3	1,829.9	1,806.2	8.6	4.9	-98.85	1,754.4	-4,924.1	5,284.5	5,271.1	13.39	394.795	
2,200.0	2,144.1	1,888.1	1,860.9	9.2	5.2	-98.81	1,774.1	-4,921.0	5,293.3	5,279.0	14.31	370.009	
2,300.0	2,240.0	1,948.0	1,916.8	9.8	5.6	-98.76	1,795.5	-4,918.3	5,303.3	5,288.0	15.25	347.767	
2,400.0	2,335.9	2,034.1	1,996.9	10.3	6.2	-98.68	1,826.9	-4,914.6	5,313.8	5,297.5	16.35	325.053	
2,500.0	2,431.7	2,104.6	2,062.5	10.9	6.6	-98.62	1,852.6	-4,911.7	5,324.4	5,307.1	17.34	307.081	
2,600.0	2,527.6	2,339.8	2,281.0	11.5	8.1	-98.39	1,938.7	-4,899.6	5,334.4	5,315.0	19.40	274.946	
2,700.0	2,623.4	2,441.5	2,374.4	12.1	8.8	-98.26	1,978.2	-4,891.9	5,342.5	5,321.8	20.69	258.259	
2,800.0	2,719.3	2,511.0	2,437.5	12.6	9.3	-98.15	2,006.8	-4,886.8	5,351.4	5,329.7	21.78	245.720	
2,900.0	2,815.2	2,544.5	2,467.8	13.2	9.6	-98.10	2,020.9	-4,884.6	5,361.1	5,338.5	22.60	237.203	
3,000.0	2,911.0	2,604.0	2,521.6	13.8	10.1	-98.00	2,046.1	-4,880.9	5,371.7	5,348.1	23.62	227.412	
3,100.0	3,006.9	2,686.1	2,596.3	14.4	10.6	-97.88	2,079.9	-4,876.6	5,382.8	5,358.0	24.76	217.390	
3,200.0	3,102.7	2,786.3	2,688.3	14.9	11.3	-97.76	2,119.3	-4,872.1	5,394.1	5,368.1	26.00	207.458	
3,300.0	3,198.6	2,946.5	2,835.0	15.5	12.5	-97.55	2,183.1	-4,863.8	5,405.1	5,377.3	27.73	194.950	
3,400.0	3,294.5	3,166.0	3,037.7	16.1	14.0	-97.31	2,266.0	-4,849.3	5,413.7	5,384.0	29.77	181.874	
3,500.0	3,390.3	3,239.6	3,106.1	16.7	14.5	-97.24	2,292.9	-4,844.0	5,421.7	5,390.9	30.83	175.885	
3,600.0	3,486.2	3,323.8	3,184.3	17.2	15.0	-97.16	2,323.5	-4,838.6	5,430.4	5,398.5	31.93	170.047	
3,700.0	3,582.0	3,388.4	3,244.5	17.8	15.4	-97.11	2,346.7	-4,834.7	5,439.4	5,406.5	32.91	165.276	
3,800.0	3,677.9	3,447.0	3,299.2	18.4	15.8	-97.06	2,367.4	-4,831.9	5,449.3	5,415.4	33.85	160.997	
3,900.0	3,773.7	3,526.6	3,373.6	19.0	16.3	-97.00	2,395.5	-4,828.6	5,459.7	5,424.8	34.92	156.368	
4,000.0	3,869.6	3,615.4	3,456.6	19.5	16.8	-96.94	2,426.6	-4,825.0	5,470.3	5,434.3	36.04	151.792	
4,100.0	3,965.5	3,758.7	3,589.9	20.1	17.8	-96.81	2,478.9	-4,817.8	5,480.3	5,442.7	37.57	145.883	
4,200.0	4,061.3	3,821.0	3,646.9	20.7	18.3	-96.73	2,503.8	-4,814.2	5,490.7	5,452.1	38.59	142.276	
4,300.0	4,157.2	3,866.4	3,688.2	21.3	18.6	-96.67	2,522.5	-4,811.7	5,501.8	5,462.3	39.51	139.262	
4,400.0	4,253.0	3,915.0	3,732.3	21.8	19.0	-96.59	2,542.8	-4,809.3	5,513.8	5,473.4	40.45	136.322	
4,500.0	4,348.9	3,981.1	3,792.1	22.4	19.5	-96.50	2,570.7	-4,806.5	5,526.5	5,485.0	41.51	133.127	
4,600.0	4,444.8	4,228.1	4,020.3	23.0	21.2	-96.25	2,664.5	-4,796.9	5,538.2	5,494.5	43.73	126.641	
4,700.0	4,540.6	4,289.0	4,077.1	23.6	21.6	-96.20	2,686.3	-4,794.3	5,548.9	5,504.2	44.70	124.150	
4,800.0	4,636.5	4,362.3	4,145.7	24.1	22.1	-96.15	2,712.1	-4,791.7	5,560.2	5,514.5	45.73	121.585	
4,900.0	4,732.3	4,591.9	4,363.5	24.7	23.4	-96.09	2,784.4	-4,785.4	5,571.2	5,523.6	47.60	117.047	
5,000.0	4,828.2	4,789.0	4,553.4	25.3	24.4	-96.14	2,836.4	-4,778.5	5,579.4	5,530.3	49.15	113.524	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD BROWN 20MD - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 545-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	4,924.1	4,851.0	4,613.6	25.9	24.7	-96.17	2,851.5	-4,776.6	5,587.5	5,537.5	50.01	111.722	
5,200.0	5,019.9	4,990.1	4,749.2	26.4	25.3	-96.27	2,881.9	-4,773.4	5,595.6	5,544.5	51.17	109.356	
5,300.0	5,115.8	5,201.4	4,958.1	27.0	26.0	-96.56	2,913.7	-4,769.6	5,601.9	5,549.5	52.42	106.860	
5,400.0	5,211.6	5,279.4	5,035.6	27.6	26.2	-96.71	2,922.0	-4,768.8	5,607.7	5,554.5	53.19	105.429	
5,500.0	5,307.5	5,378.7	5,134.6	28.2	26.4	-96.92	2,929.8	-4,768.9	5,613.9	5,559.9	53.96	104.031	
5,600.0	5,403.4	5,599.0	5,354.8	28.7	26.6	-97.54	2,932.6	-4,770.1	5,618.0	5,563.3	54.77	102.581	
5,700.0	5,499.2	5,693.0	5,448.8	29.3	26.7	-97.81	2,932.4	-4,770.4	5,622.2	5,566.8	55.42	101.455	
5,800.0	5,595.1	5,777.8	5,533.6	29.9	26.7	-98.06	2,932.2	-4,770.8	5,626.7	5,570.6	56.06	100.378	
5,840.7	5,634.1	5,817.7	5,573.5	30.1	26.8	-98.17	2,931.9	-4,771.0	5,628.6	5,572.2	56.32	99.939	
5,900.0	5,691.1	5,877.1	5,632.9	30.4	26.8	-98.39	2,931.9	-4,771.2	5,631.2	5,574.6	56.67	99.373	
6,000.0	5,788.0	5,960.6	5,716.3	30.8	26.9	-98.68	2,932.1	-4,771.6	5,635.5	5,578.4	57.15	98.607	
6,100.0	5,885.7	6,056.2	5,812.0	31.2	27.0	-98.97	2,932.5	-4,772.1	5,639.5	5,581.9	57.61	97.898	
6,200.0	5,984.0	6,181.7	5,937.5	31.5	27.1	-99.25	2,933.1	-4,772.4	5,642.7	5,584.7	58.05	97.211	
6,300.0	6,083.0	6,277.2	6,033.0	31.8	27.2	-99.44	2,933.8	-4,772.4	5,645.3	5,586.9	58.42	96.635	
6,400.0	6,182.3	6,376.0	6,131.8	32.0	27.3	-99.58	2,934.8	-4,772.3	5,647.4	5,588.6	58.76	96.116	
6,500.0	6,282.0	6,464.3	6,220.1	32.2	27.4	-99.67	2,935.7	-4,772.3	5,648.9	5,589.9	59.04	95.682	
6,600.0	6,382.0	6,539.5	6,295.2	32.3	27.5	-99.71	2,936.7	-4,772.5	5,650.3	5,591.0	59.26	95.343	
6,668.0	6,449.9	6,631.6	6,387.4	32.4	27.6	-74.51	2,938.2	-4,772.7	5,650.8	5,616.5	34.32	164.665	
6,698.0	6,479.9	6,660.0	6,415.7	32.4	27.6	-74.50	2,938.7	-4,772.7	5,650.9	5,616.5	34.41	164.223	
6,700.0	6,481.9	6,661.9	6,417.7	32.4	27.6	15.50	2,938.7	-4,772.7	5,650.9	5,591.4	59.51	94.963	
6,750.0	6,531.9	6,709.2	6,464.9	32.5	27.7	15.54	2,939.6	-4,772.7	5,649.4	5,589.9	59.47	94.998	
6,800.0	6,581.6	6,754.7	6,510.4	32.5	27.8	15.67	2,940.5	-4,772.7	5,644.5	5,585.3	59.17	95.389	
6,850.0	6,630.8	6,799.2	6,555.0	32.5	27.8	15.88	2,941.5	-4,772.7	5,636.3	5,577.6	58.63	96.140	
6,900.0	6,679.3	6,853.0	6,608.7	32.4	27.9	16.19	2,942.7	-4,772.7	5,624.8	5,567.0	57.85	97.233	
6,950.0	6,726.8	6,908.0	6,663.7	32.4	28.0	16.61	2,943.8	-4,772.7	5,610.0	5,553.2	56.84	98.696	
7,000.0	6,773.1	6,946.5	6,702.1	32.3	28.0	17.11	2,944.7	-4,772.6	5,592.1	5,536.5	55.60	100.585	
7,050.0	6,817.9	6,981.9	6,737.6	32.3	28.1	17.72	2,945.5	-4,772.6	5,571.2	5,517.0	54.14	102.894	
7,100.0	6,861.2	7,002.0	6,757.7	32.2	28.1	18.43	2,946.0	-4,772.7	5,547.4	5,494.9	52.49	105.679	
7,150.0	6,902.5	7,039.0	6,794.7	32.1	28.1	19.34	2,947.1	-4,772.8	5,520.8	5,470.1	50.72	108.854	
7,200.0	6,941.8	7,063.7	6,819.4	32.0	28.2	20.39	2,947.8	-4,772.9	5,491.7	5,442.9	48.81	112.521	
7,250.0	6,978.9	7,095.0	6,850.6	31.9	28.2	21.68	2,948.9	-4,773.2	5,460.1	5,413.2	46.83	116.591	
7,300.0	7,013.5	7,123.1	6,878.7	31.7	28.3	23.22	2,949.9	-4,773.4	5,426.1	5,381.2	44.84	121.023	
7,350.0	7,045.5	7,163.7	6,919.3	31.6	28.3	25.17	2,951.4	-4,773.7	5,389.8	5,346.9	42.92	125.576	
7,400.0	7,074.8	7,202.6	6,958.2	31.5	28.4	27.56	2,952.9	-4,773.9	5,351.4	5,310.2	41.16	130.018	
7,450.0	7,101.1	7,241.2	6,996.7	31.4	28.5	30.52	2,954.4	-4,774.0	5,311.1	5,271.4	39.68	133.863	
7,500.0	7,124.5	7,275.0	7,030.4	31.3	28.5	34.20	2,955.8	-4,773.9	5,269.0	5,230.4	38.60	136.501	
7,550.0	7,144.7	7,311.6	7,067.0	31.1	28.6	38.90	2,957.5	-4,773.8	5,225.4	5,187.3	38.12	137.081	
7,600.0	7,161.6	7,344.0	7,099.4	31.0	28.6	44.85	2,959.1	-4,773.5	5,180.6	5,142.3	38.32	135.192	
7,650.0	7,175.3	7,369.1	7,124.5	30.9	28.7	52.31	2,960.4	-4,773.2	5,134.7	5,095.5	39.17	131.098	
7,700.0	7,185.5	7,377.0	7,132.4	30.8	28.7	61.19	2,960.8	-4,773.1	5,088.1	5,047.7	40.33	126.149	
7,750.0	7,192.3	7,377.0	7,132.4	30.7	28.7	71.62	2,960.8	-4,773.1	5,040.9	4,999.5	41.34	121.939	
7,800.0	7,195.7	7,388.0	7,143.3	30.7	28.7	83.84	2,961.5	-4,772.9	4,993.4	4,951.9	41.51	120.284	
7,828.6	7,196.0	7,387.9	7,143.3	30.6	28.7	90.89	2,961.4	-4,772.9	4,966.2	4,925.1	41.03	121.050	
7,900.0	7,195.4	7,386.6	7,142.0	30.6	28.7	90.84	2,961.4	-4,772.9	4,988.3	4,856.3	42.04	116.514	
8,000.0	7,194.6	7,377.0	7,132.4	30.6	28.7	90.48	2,960.8	-4,773.1	4,803.4	4,759.8	43.68	109.961	
8,100.0	7,193.8	7,377.0	7,132.4	31.0	28.7	90.48	2,960.8	-4,773.1	4,708.8	4,663.3	45.48	103.540	
8,200.0	7,193.0	7,377.0	7,132.4	32.1	28.7	90.48	2,960.8	-4,773.1	4,614.3	4,566.9	47.43	97.293	
8,300.0	7,192.2	7,377.0	7,132.4	33.8	28.7	90.48	2,960.8	-4,773.1	4,520.1	4,470.6	49.50	91.309	
8,400.0	7,191.4	7,377.0	7,132.4	35.8	28.7	90.48	2,960.8	-4,773.1	4,426.2	4,374.5	51.68	85.639	
8,500.0	7,190.6	7,373.8	7,129.2	38.0	28.7	90.37	2,960.7	-4,773.1	4,332.5	4,278.5	53.96	80.290	
8,600.0	7,189.8	7,370.3	7,125.6	40.3	28.7	90.23	2,960.5	-4,773.2	4,239.1	4,182.8	56.31	75.282	
8,700.0	7,189.0	7,366.9	7,122.2	42.7	28.7	90.11	2,960.3	-4,773.2	4,146.0	4,087.3	58.72	70.612	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 545-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,800.0	7,188.2	7,363.6	7,118.9	45.1	28.7	89.98	2,960.1	-4,773.2	4,053.2	3,992.1	61.17	66.262	
8,900.0	7,187.4	7,360.4	7,115.8	47.5	28.7	89.87	2,959.9	-4,773.3	3,960.8	3,897.2	63.66	62.214	
9,000.0	7,186.6	7,357.4	7,112.8	50.0	28.7	89.75	2,959.8	-4,773.3	3,868.8	3,802.6	66.19	58.447	
9,100.0	7,185.7	7,354.5	7,109.9	52.6	28.7	89.64	2,959.6	-4,773.4	3,777.2	3,708.4	68.75	54.940	
9,200.0	7,184.9	7,351.7	7,107.1	55.1	28.7	89.54	2,959.5	-4,773.4	3,686.0	3,614.6	71.33	51.672	
9,300.0	7,184.1	7,349.0	7,104.4	57.7	28.6	89.44	2,959.3	-4,773.4	3,595.2	3,521.3	73.94	48.625	
9,400.0	7,183.3	7,346.4	7,101.8	60.3	28.6	89.34	2,959.2	-4,773.5	3,505.0	3,428.4	76.56	45.780	
9,500.0	7,182.5	7,343.9	7,099.3	62.9	28.6	89.25	2,959.1	-4,773.5	3,415.3	3,336.1	79.20	43.122	
9,600.0	7,181.7	7,341.4	7,096.8	65.5	28.6	89.16	2,959.0	-4,773.5	3,326.2	3,244.4	81.85	40.636	
9,700.0	7,180.9	7,339.1	7,094.5	68.1	28.6	89.07	2,958.8	-4,773.5	3,237.7	3,153.2	84.52	38.308	
9,800.0	7,180.1	7,336.8	7,092.2	70.8	28.6	88.99	2,958.7	-4,773.6	3,150.0	3,062.8	87.20	36.125	
9,900.0	7,179.3	7,334.6	7,090.1	73.5	28.6	88.90	2,958.6	-4,773.6	3,062.9	2,973.1	89.88	34.077	
10,000.0	7,178.5	7,332.5	7,087.9	76.1	28.6	88.82	2,958.5	-4,773.6	2,976.7	2,884.1	92.58	32.154	
10,100.0	7,177.7	7,330.5	7,085.9	78.8	28.6	88.75	2,958.4	-4,773.6	2,891.4	2,796.1	95.28	30.346	
10,200.0	7,176.9	7,328.5	7,083.9	81.5	28.6	88.67	2,958.3	-4,773.6	2,807.0	2,709.0	97.99	28.646	
10,300.0	7,176.0	7,326.6	7,082.0	84.2	28.6	88.60	2,958.2	-4,773.7	2,723.7	2,623.0	100.71	27.046	
10,400.0	7,175.2	7,324.7	7,080.1	86.9	28.6	88.53	2,958.1	-4,773.7	2,641.6	2,538.2	103.43	25.540	
10,500.0	7,174.4	7,322.9	7,078.3	89.6	28.6	88.46	2,958.0	-4,773.7	2,560.7	2,454.6	106.16	24.122	
10,600.0	7,173.6	7,321.1	7,076.6	92.3	28.6	88.40	2,957.9	-4,773.7	2,481.2	2,372.4	108.89	22.787	
10,700.0	7,172.8	7,319.4	7,074.9	95.0	28.6	88.34	2,957.9	-4,773.7	2,403.3	2,291.7	111.62	21.530	
10,800.0	7,172.0	7,317.8	7,073.2	97.8	28.6	88.27	2,957.8	-4,773.7	2,327.0	2,212.7	114.36	20.348	
10,900.0	7,171.2	7,316.2	7,071.6	100.5	28.6	88.21	2,957.7	-4,773.7	2,252.6	2,135.5	117.11	19.236	
11,000.0	7,170.4	7,314.6	7,070.0	103.2	28.6	88.15	2,957.6	-4,773.8	2,180.3	2,060.4	119.85	18.191	
11,100.0	7,169.6	7,313.1	7,068.5	106.0	28.6	88.10	2,957.6	-4,773.8	2,110.2	1,987.6	122.60	17.211	
11,200.0	7,168.8	7,311.6	7,067.1	108.7	28.6	88.04	2,957.5	-4,773.8	2,042.5	1,917.2	125.35	16.294	
11,300.0	7,168.0	7,310.2	7,065.6	111.5	28.6	87.99	2,957.4	-4,773.8	1,977.7	1,849.6	128.11	15.438	
11,400.0	7,167.1	7,308.8	7,064.2	114.2	28.6	87.94	2,957.4	-4,773.8	1,915.8	1,785.0	130.87	14.640	
11,500.0	7,166.3	7,307.4	7,062.9	117.0	28.6	87.89	2,957.3	-4,773.8	1,857.3	1,723.7	133.62	13.900	
11,600.0	7,165.5	7,306.1	7,061.5	119.7	28.6	87.84	2,957.2	-4,773.8	1,802.5	1,666.1	136.39	13.216	
11,700.0	7,164.7	7,304.8	7,060.2	122.5	28.6	87.79	2,957.2	-4,773.8	1,751.6	1,612.5	139.15	12.588	
11,800.0	7,163.9	7,303.5	7,059.0	125.2	28.6	87.74	2,957.1	-4,773.8	1,705.1	1,563.2	141.91	12.015	
11,900.0	7,163.1	7,302.3	7,057.7	128.0	28.6	87.69	2,957.1	-4,773.8	1,663.3	1,518.6	144.68	11.496	
12,000.0	7,162.3	7,301.1	7,056.5	130.7	28.6	87.65	2,957.0	-4,773.8	1,626.6	1,479.1	147.45	11.032	
12,100.0	7,161.5	7,299.9	7,055.4	133.5	28.6	87.60	2,957.0	-4,773.8	1,595.3	1,445.1	150.22	10.620	
12,200.0	7,160.7	7,298.8	7,054.2	136.3	28.6	87.56	2,956.9	-4,773.9	1,569.7	1,416.8	152.99	10.261	
12,300.0	7,159.8	7,297.6	7,053.1	139.0	28.6	87.52	2,956.8	-4,773.9	1,550.3	1,394.5	155.76	9.953	
12,400.0	7,159.0	7,296.6	7,052.0	141.8	28.6	87.48	2,956.8	-4,773.9	1,537.0	1,378.5	158.53	9.696	
12,500.0	7,158.2	7,295.5	7,051.0	144.6	28.5	87.44	2,956.7	-4,773.9	1,530.3	1,368.9	161.30	9.487	
12,554.1	7,157.8	7,294.9	7,050.4	146.1	28.5	87.42	2,956.7	-4,773.9	1,529.3	1,366.5	162.80	9.394 CC	
12,600.0	7,157.4	7,294.4	7,049.9	147.3	28.5	87.40	2,956.7	-4,773.9	1,530.0	1,365.9	164.08	9.325 ES	
12,700.0	7,156.6	7,293.4	7,048.9	150.1	28.5	87.36	2,956.7	-4,773.9	1,536.2	1,369.4	166.85	9.207	
12,800.0	7,155.8	7,292.4	7,047.9	152.9	28.5	87.32	2,956.6	-4,773.9	1,548.9	1,379.3	169.63	9.131	
12,900.0	7,155.0	7,293.0	7,038.5	155.7	28.5	86.97	2,956.2	-4,773.9	1,568.0	1,395.6	172.39	9.096	
13,000.0	7,154.2	7,283.0	7,038.5	158.4	28.5	86.97	2,956.2	-4,773.9	1,593.0	1,417.8	175.17	9.094 SF	
13,100.0	7,153.3	7,283.0	7,038.5	161.2	28.5	86.97	2,956.2	-4,773.9	1,623.8	1,445.9	177.95	9.125	
13,200.0	7,152.5	7,283.0	7,038.5	164.0	28.5	86.97	2,956.2	-4,773.9	1,660.1	1,479.4	180.73	9.186	
13,300.0	7,151.7	7,283.0	7,038.5	166.8	28.5	86.97	2,956.2	-4,773.9	1,701.5	1,518.0	183.51	9.272	
13,400.0	7,150.9	7,283.0	7,038.5	169.5	28.5	86.97	2,956.2	-4,773.9	1,747.6	1,561.4	186.29	9.381	
13,500.0	7,150.1	7,283.0	7,038.5	172.3	28.5	86.97	2,956.2	-4,773.9	1,798.2	1,609.1	189.07	9.510	
13,600.0	7,149.3	7,283.0	7,038.5	175.1	28.5	86.97	2,956.2	-4,773.9	1,852.7	1,660.9	191.86	9.657	
13,700.0	7,148.5	7,283.0	7,038.5	177.9	28.5	86.97	2,956.2	-4,773.9	1,911.0	1,716.3	194.64	9.818	
13,800.0	7,147.6	7,283.0	7,038.5	180.7	28.5	86.97	2,956.2	-4,773.9	1,972.5	1,775.1	197.43	9.991	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD BROWN 20MD - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 545-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
13,900.0	7,146.8	7,283.0	7,038.5	183.5	28.5	86.97	2,956.2	-4,773.9	2,037.2	1,837.0	200.21	10.175	
14,000.0	7,146.0	7,283.0	7,038.5	186.2	28.5	86.97	2,956.2	-4,773.9	2,104.6	1,901.6	203.00	10.367	
14,100.0	7,145.2	7,283.0	7,038.5	189.0	28.5	86.97	2,956.2	-4,773.9	2,174.5	1,968.7	205.79	10.567	
14,200.0	7,144.4	7,283.0	7,038.5	191.8	28.5	86.97	2,956.2	-4,773.9	2,246.7	2,038.1	208.58	10.771	
14,300.0	7,143.6	7,283.0	7,038.5	194.6	28.5	86.97	2,956.2	-4,773.9	2,320.9	2,109.6	211.36	10.981	
14,370.2	7,143.0	7,283.0	7,038.5	196.6	28.5	86.97	2,956.2	-4,773.9	2,374.2	2,160.9	213.32	11.130	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 545-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	-72.38	1,564.1	-4,924.4	5,167.0				
100.0	100.0	58.0	58.0	0.1	0.1	-72.38	1,564.1	-4,924.4	5,166.9	5,166.7	0.15	N/A	
200.0	200.0	152.3	152.3	0.3	0.1	-72.38	1,564.1	-4,924.6	5,167.0	5,166.5	0.46	N/A	
300.0	300.0	246.6	246.6	0.5	0.2	-72.38	1,564.0	-4,924.8	5,167.2	5,166.5	0.77	6,744.715	
400.0	400.0	340.9	340.9	0.8	0.3	-97.60	1,564.0	-4,925.2	5,167.8	5,166.7	1.07	4,812.726	
500.0	499.8	435.1	435.1	1.0	0.4	-97.63	1,563.9	-4,925.6	5,168.9	5,167.6	1.39	3,729.770	
600.0	599.5	529.0	529.0	1.2	0.5	-97.69	1,563.9	-4,926.2	5,170.7	5,169.0	1.71	3,015.161	
700.0	698.7	611.1	611.1	1.5	0.6	-97.76	1,563.8	-4,926.9	5,173.1	5,171.0	2.15	2,404.603	
800.0	797.5	704.5	704.5	1.8	0.8	-97.86	1,563.6	-4,928.0	5,176.3	5,173.6	2.66	1,942.594	
900.0	895.6	799.8	799.7	2.2	1.0	-97.99	1,563.2	-4,929.2	5,180.1	5,176.9	3.23	1,605.736	
1,000.0	993.1	897.6	897.6	2.6	1.3	-98.16	1,562.8	-4,930.4	5,184.5	5,180.6	3.85	1,347.535	
1,100.0	1,089.6	997.6	997.6	3.1	1.5	-98.35	1,562.3	-4,931.7	5,189.4	5,184.9	4.52	1,149.349	
1,127.2	1,115.8	1,022.6	1,022.6	3.2	1.5	-98.40	1,562.2	-4,932.0	5,190.9	5,186.2	4.70	1,103.995	
1,200.0	1,185.5	1,081.7	1,081.7	3.6	1.6	-98.59	1,562.1	-4,932.7	5,194.9	5,189.7	5.20	999.732	
1,300.0	1,281.4	1,293.3	1,293.3	4.1	2.0	-99.26	1,560.5	-4,934.1	5,200.3	5,194.1	6.16	844.650	
1,400.0	1,377.3	1,431.8	1,431.7	4.7	2.3	-99.67	1,562.4	-4,931.2	5,203.3	5,196.3	6.97	746.526	
1,500.0	1,473.1	1,502.7	1,502.6	5.2	2.5	-99.87	1,563.6	-4,929.7	5,206.7	5,199.1	7.66	679.408	
1,600.0	1,569.0	1,574.0	1,573.8	5.8	2.6	-100.07	1,564.9	-4,928.6	5,210.8	5,202.4	8.37	622.815	
1,700.0	1,664.8	1,657.6	1,657.4	6.4	2.8	-100.31	1,566.3	-4,927.6	5,215.3	5,206.2	9.10	573.136	
1,800.0	1,760.7	1,738.8	1,738.6	6.9	3.0	-100.55	1,567.8	-4,926.8	5,220.2	5,210.3	9.83	531.188	
1,900.0	1,856.6	2,603.0	2,598.3	7.5	4.9	-102.82	1,586.4	-4,855.6	5,219.7	5,207.5	12.19	428.111	
2,000.0	1,952.4	2,668.1	2,662.5	8.1	5.1	-102.97	1,588.6	-4,844.8	5,210.7	5,197.8	12.90	404.059	
2,100.0	2,048.3	2,804.7	2,797.3	8.6	5.5	-103.30	1,592.7	-4,823.6	5,202.5	5,188.7	13.76	378.053	
2,200.0	2,144.1	2,884.0	2,875.5	9.2	5.8	-103.48	1,595.3	-4,810.6	5,193.6	5,179.1	14.50	358.135	
2,300.0	2,240.0	2,977.0	2,967.3	9.8	6.0	-103.70	1,598.3	-4,795.8	5,185.1	5,169.9	15.27	339.475	
2,400.0	2,335.9	3,016.7	3,006.5	10.3	6.1	-103.80	1,599.2	-4,789.9	5,177.4	5,161.5	15.92	325.181	
2,500.0	2,431.7	3,071.0	3,060.3	10.9	6.3	-103.94	1,600.1	-4,782.3	5,170.7	5,154.1	16.60	311.446	
2,600.0	2,527.6	3,123.0	3,111.9	11.5	6.5	-104.08	1,600.7	-4,775.5	5,164.9	5,147.6	17.28	298.972	
2,700.0	2,623.4	3,165.0	3,153.5	12.1	6.6	-104.19	1,601.2	-4,770.4	5,160.0	5,142.1	17.93	287.839	
2,800.0	2,719.3	3,225.5	3,213.6	12.6	6.7	-104.36	1,601.9	-4,763.5	5,156.0	5,137.4	18.62	276.941	
2,900.0	2,815.2	3,258.0	3,245.9	13.2	6.8	-104.44	1,602.5	-4,760.0	5,153.2	5,133.9	19.25	267.725	
3,000.0	2,911.0	3,304.1	3,291.8	13.8	6.9	-104.57	1,603.3	-4,755.7	5,151.5	5,131.6	19.91	258.780	
3,087.2	2,994.6	3,352.0	3,339.5	14.3	7.1	-104.70	1,604.3	-4,751.9	5,151.2	5,130.7	20.50	251.310	
3,100.0	3,006.9	3,352.0	3,339.5	14.4	7.1	-104.70	1,604.3	-4,751.9	5,151.1	5,130.6	20.57	250.433	
3,200.0	3,102.7	3,352.0	3,339.5	14.9	7.1	-104.70	1,604.3	-4,751.9	5,152.1	5,131.0	21.13	243.841	
3,300.0	3,198.6	3,415.9	3,403.3	15.5	7.2	-104.87	1,605.5	-4,748.0	5,154.1	5,132.3	21.82	236.190	
3,400.0	3,294.5	3,446.0	3,433.4	16.1	7.3	-104.96	1,606.0	-4,746.6	5,157.4	5,135.0	22.44	229.788	
3,500.0	3,390.3	3,484.1	3,471.5	16.7	7.4	-105.07	1,606.5	-4,745.3	5,162.0	5,138.9	23.08	223.668	
3,600.0	3,486.2	3,540.0	3,527.3	17.2	7.5	-105.24	1,606.5	-4,744.7	5,168.2	5,144.4	23.75	217.632	
3,700.0	3,582.0	3,554.1	3,541.5	17.8	7.5	-105.28	1,606.4	-4,744.7	5,175.3	5,151.0	24.33	212.683	
3,800.0	3,677.9	3,635.2	3,622.5	18.4	7.7	-105.53	1,605.9	-4,744.9	5,183.4	5,158.3	25.04	206.980	
3,900.0	3,773.7	3,727.0	3,714.3	19.0	7.8	-105.81	1,605.6	-4,745.3	5,191.7	5,165.9	25.77	201.477	
4,000.0	3,869.6	3,808.9	3,796.2	19.5	8.0	-106.07	1,605.3	-4,745.7	5,200.4	5,173.9	26.47	196.438	
4,100.0	3,965.5	3,914.0	3,901.3	20.1	8.2	-106.39	1,604.6	-4,746.4	5,209.2	5,181.9	27.22	191.397	
4,200.0	4,061.3	4,008.0	3,995.3	20.7	8.4	-106.68	1,603.9	-4,746.9	5,218.1	5,190.2	27.94	186.766	
4,300.0	4,157.2	4,101.0	4,088.3	21.3	8.5	-106.98	1,602.5	-4,747.5	5,227.1	5,198.5	28.66	182.397	
4,400.0	4,253.0	4,194.0	4,181.3	21.8	8.7	-107.28	1,600.9	-4,748.3	5,236.5	5,207.1	29.38	178.259	
4,500.0	4,348.9	4,247.8	4,235.0	22.4	8.8	-107.45	1,599.9	-4,749.1	5,246.5	5,216.5	30.03	174.727	
4,600.0	4,444.8	4,386.5	4,373.8	23.0	9.1	-107.89	1,597.3	-4,751.2	5,256.9	5,226.1	30.82	170.568	
4,700.0	4,540.6	4,489.9	4,477.1	23.6	9.3	-108.21	1,595.8	-4,751.9	5,266.6	5,235.0	31.55	166.944	
4,800.0	4,636.5	4,569.0	4,556.2	24.1	9.4	-108.45	1,595.3	-4,752.5	5,276.6	5,244.3	32.24	163.679	
4,900.0	4,732.3	4,683.2	4,670.4	24.7	9.6	-108.79	1,595.4	-4,753.0	5,286.5	5,253.5	32.99	160.249	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 545-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	4,828.2	4,756.0	4,743.2	25.3	9.8	-109.00	1,595.8	-4,753.6	5,296.8	5,263.2	33.67	157.316	
5,100.0	4,924.1	4,843.5	4,830.7	25.9	9.9	-109.25	1,596.2	-4,754.5	5,307.6	5,273.2	34.38	154.397	
5,200.0	5,019.9	4,930.6	4,917.8	26.4	10.1	-109.50	1,596.4	-4,755.4	5,318.6	5,283.5	35.08	151.614	
5,300.0	5,115.8	5,026.0	5,013.2	27.0	10.3	-109.78	1,596.6	-4,756.6	5,329.8	5,294.0	35.80	148.892	
5,400.0	5,211.6	5,121.4	5,108.6	27.6	10.5	-110.05	1,596.8	-4,757.7	5,341.1	5,304.6	36.51	146.294	
5,500.0	5,307.5	5,208.7	5,195.9	28.2	10.7	-110.31	1,596.8	-4,758.8	5,352.6	5,315.4	37.21	143.855	
5,600.0	5,403.4	5,305.0	5,292.2	28.7	10.8	-110.58	1,596.7	-4,760.2	5,364.3	5,326.4	37.92	141.460	
5,700.0	5,499.2	5,398.8	5,386.0	29.3	11.0	-110.86	1,596.6	-4,761.4	5,376.2	5,337.6	38.63	139.184	
5,800.0	5,595.1	5,478.5	5,465.6	29.9	11.2	-111.08	1,596.5	-4,762.7	5,388.3	5,349.0	39.31	137.081	
5,840.7	5,634.1	5,510.7	5,497.9	30.1	11.3	-111.18	1,596.3	-4,763.2	5,393.4	5,353.8	39.58	136.251	
5,900.0	5,691.1	5,562.2	5,549.3	30.4	11.4	-111.46	1,596.0	-4,764.2	5,400.7	5,360.7	39.94	135.224	
6,000.0	5,788.0	5,810.3	5,797.4	30.8	11.8	-112.28	1,593.8	-4,765.6	5,410.7	5,370.0	40.72	132.882	
6,100.0	5,885.7	5,884.4	5,871.5	31.2	12.0	-112.57	1,593.9	-4,765.2	5,418.4	5,377.2	41.18	131.587	
6,200.0	5,984.0	5,972.0	5,959.1	31.5	12.2	-112.85	1,593.7	-4,764.8	5,425.1	5,383.4	41.62	130.332	
6,300.0	6,083.0	6,066.0	6,053.1	31.8	12.4	-113.09	1,593.0	-4,764.7	5,430.6	5,388.5	42.05	129.157	
6,400.0	6,182.3	6,159.0	6,146.1	32.0	12.6	-113.28	1,592.2	-4,764.6	5,434.9	5,392.4	42.43	128.095	
6,500.0	6,282.0	6,245.5	6,232.6	32.2	12.7	-113.41	1,591.6	-4,764.7	5,437.9	5,395.2	42.76	127.177	
6,600.0	6,382.0	6,357.2	6,344.3	32.3	13.0	-113.49	1,591.2	-4,764.8	5,439.7	5,396.6	43.10	126.207	
6,668.0	6,449.9	6,417.8	6,404.9	32.4	13.1	-88.29	1,591.1	-4,764.8	5,440.0	5,406.1	33.88	160.546	
6,698.0	6,479.9	6,440.0	6,427.1	32.4	13.1	-88.29	1,591.1	-4,764.8	5,440.1	5,406.1	33.97	160.147	
6,700.0	6,481.9	6,440.0	6,427.1	32.4	13.1	1.71	1,591.1	-4,764.8	5,440.1	5,396.7	43.36	125.474	
6,750.0	6,531.9	6,487.8	6,474.9	32.5	13.2	1.71	1,591.1	-4,765.0	5,438.3	5,395.0	43.32	125.537	
6,800.0	6,581.6	6,533.0	6,520.1	32.5	13.3	1.73	1,591.0	-4,765.2	5,433.2	5,390.1	43.09	126.077	
6,850.0	6,630.8	6,589.7	6,576.8	32.5	13.4	1.75	1,591.0	-4,765.4	5,424.5	5,381.8	42.71	127.018	
6,900.0	6,679.3	6,658.7	6,645.8	32.4	13.6	1.79	1,590.9	-4,765.5	5,412.4	5,370.2	42.17	128.359	
6,950.0	6,726.8	6,729.0	6,716.1	32.4	13.7	1.84	1,591.3	-4,765.2	5,396.6	5,355.2	41.45	130.181	
7,000.0	6,773.1	6,767.1	6,754.1	32.3	13.8	1.90	1,591.6	-4,765.0	5,377.6	5,337.1	40.51	132.732	
7,050.0	6,817.9	6,804.0	6,791.0	32.3	13.9	1.98	1,592.0	-4,764.9	5,355.4	5,316.0	39.42	135.868	
7,100.0	6,861.2	6,835.4	6,822.4	32.2	13.9	2.08	1,592.4	-4,764.9	5,330.2	5,292.1	38.16	139.671	
7,150.0	6,902.5	6,863.9	6,851.0	32.1	14.0	2.19	1,592.8	-4,764.9	5,302.2	5,265.5	36.77	144.188	
7,200.0	6,941.8	6,891.2	6,878.2	32.0	14.1	2.33	1,593.2	-4,765.0	5,271.5	5,236.2	35.27	149.480	
7,250.0	6,978.9	6,919.7	6,906.8	31.9	14.1	2.49	1,593.5	-4,765.1	5,238.2	5,204.5	33.67	155.594	
7,300.0	7,013.5	6,951.4	6,938.5	31.7	14.2	2.70	1,593.9	-4,765.3	5,202.4	5,170.4	32.00	162.575	
7,350.0	7,045.5	6,980.8	6,967.9	31.6	14.2	2.96	1,594.3	-4,765.5	5,164.2	5,133.9	30.28	170.522	
7,400.0	7,074.8	7,010.8	6,997.9	31.5	14.3	3.29	1,594.7	-4,765.8	5,123.9	5,095.4	28.56	179.396	
7,450.0	7,101.1	7,046.0	7,033.1	31.4	14.4	3.72	1,595.1	-4,766.0	5,081.7	5,054.8	26.89	189.004	
7,500.0	7,124.5	7,077.1	7,064.1	31.3	14.4	4.30	1,595.4	-4,766.1	5,037.6	5,012.3	25.30	199.136	
7,550.0	7,144.7	7,102.4	7,089.5	31.1	14.5	5.09	1,595.7	-4,766.2	4,992.0	4,968.1	23.87	209.130	
7,600.0	7,161.6	7,121.6	7,108.6	31.0	14.5	6.24	1,596.0	-4,766.3	4,945.0	4,922.3	22.72	217.687	
7,650.0	7,175.3	7,137.0	7,124.1	30.9	14.6	8.05	1,596.1	-4,766.3	4,897.0	4,875.0	22.02	222.408	
7,700.0	7,185.5	7,148.6	7,135.6	30.8	14.6	11.29	1,596.3	-4,766.3	4,848.1	4,826.0	22.12	219.130	
7,750.0	7,192.3	7,156.3	7,143.4	30.7	14.6	18.60	1,596.4	-4,766.3	4,798.6	4,774.6	24.09	199.201	
7,800.0	7,195.7	7,160.1	7,147.2	30.7	14.6	46.07	1,596.4	-4,766.3	4,748.8	4,715.5	33.32	142.539	
7,828.6	7,196.0	7,160.6	7,147.6	30.6	14.6	99.53	1,596.4	-4,766.3	4,720.2	4,682.9	37.29	126.590	
7,900.0	7,195.4	7,160.0	7,147.1	30.6	14.6	99.36	1,596.4	-4,766.3	4,648.9	4,610.6	38.31	121.356	
8,000.0	7,194.6	7,159.3	7,146.4	30.6	14.6	99.13	1,596.4	-4,766.3	4,548.9	4,509.0	39.93	113.916	
8,100.0	7,193.8	7,158.6	7,145.7	31.0	14.6	98.90	1,596.4	-4,766.3	4,449.0	4,407.3	41.75	106.565	
8,200.0	7,193.0	7,157.9	7,145.0	32.1	14.6	98.66	1,596.4	-4,766.3	4,349.1	4,305.4	43.72	99.469	
8,300.0	7,192.2	7,157.2	7,144.3	33.8	14.6	98.43	1,596.4	-4,766.3	4,249.2	4,203.3	45.83	92.725	
8,400.0	7,191.4	7,156.5	7,143.6	35.8	14.6	98.20	1,596.4	-4,766.3	4,149.2	4,101.2	48.03	86.384	
8,500.0	7,190.6	7,155.8	7,142.9	38.0	14.6	97.97	1,596.4	-4,766.3	4,049.3	3,999.0	50.33	80.463	
8,600.0	7,189.8	7,155.2	7,142.2	40.3	14.6	97.74	1,596.4	-4,766.3	3,949.4	3,896.7	52.69	74.957	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD BROWN 20ND - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 545-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,700.0	7,189.0	7,154.5	7,141.5	42.7	14.6	97.51	1,596.4	-4,766.3	3,849.5	3,794.4	55.11	69.849	
8,800.0	7,188.2	7,153.8	7,140.8	45.1	14.6	97.29	1,596.3	-4,766.3	3,749.6	3,692.0	57.58	65.115	
8,900.0	7,187.4	7,153.1	7,140.2	47.5	14.6	97.06	1,596.3	-4,766.3	3,649.7	3,589.6	60.10	60.729	
9,000.0	7,186.6	7,152.4	7,139.5	50.0	14.6	96.83	1,596.3	-4,766.3	3,549.8	3,487.2	62.65	56.664	
9,100.0	7,185.7	7,151.8	7,138.8	52.6	14.6	96.61	1,596.3	-4,766.3	3,449.9	3,384.7	65.23	52.892	
9,200.0	7,184.9	7,151.1	7,138.1	55.1	14.6	96.38	1,596.3	-4,766.3	3,350.1	3,282.2	67.83	49.388	
9,300.0	7,184.1	7,150.4	7,137.5	57.7	14.6	96.16	1,596.3	-4,766.3	3,250.2	3,179.7	70.46	46.129	
9,400.0	7,183.3	7,149.8	7,136.8	60.3	14.6	95.94	1,596.3	-4,766.3	3,150.3	3,077.2	73.11	43.092	
9,500.0	7,182.5	7,149.1	7,136.2	62.9	14.6	95.71	1,596.3	-4,766.3	3,050.5	2,974.7	75.77	40.259	
9,600.0	7,181.7	7,148.4	7,135.5	65.5	14.6	95.49	1,596.3	-4,766.3	2,950.6	2,872.2	78.45	37.612	
9,700.0	7,180.9	7,147.8	7,134.8	68.1	14.6	95.27	1,596.3	-4,766.3	2,850.8	2,769.7	81.14	35.133	
9,800.0	7,180.1	7,147.1	7,134.2	70.8	14.6	95.05	1,596.3	-4,766.3	2,751.0	2,667.1	83.85	32.810	
9,900.0	7,179.3	7,146.5	7,133.5	73.5	14.6	94.83	1,596.3	-4,766.3	2,651.2	2,564.6	86.56	30.628	
10,000.0	7,178.5	7,145.8	7,132.9	76.1	14.6	94.61	1,596.2	-4,766.3	2,551.4	2,462.1	89.28	28.576	
10,100.0	7,177.7	7,145.2	7,132.2	78.8	14.6	94.40	1,596.2	-4,766.3	2,451.6	2,359.6	92.02	26.643	
10,200.0	7,176.9	7,144.5	7,131.6	81.5	14.6	94.18	1,596.2	-4,766.3	2,351.9	2,257.1	94.75	24.820	
10,300.0	7,176.0	7,143.9	7,131.0	84.2	14.6	93.96	1,596.2	-4,766.3	2,252.1	2,154.6	97.50	23.099	
10,400.0	7,175.2	7,143.3	7,130.3	86.9	14.6	93.75	1,596.2	-4,766.3	2,152.4	2,052.2	100.25	21.470	
10,500.0	7,174.4	7,142.6	7,129.7	89.6	14.6	93.53	1,596.2	-4,766.3	2,052.7	1,949.7	103.01	19.928	
10,600.0	7,173.6	7,142.0	7,129.1	92.3	14.6	93.32	1,596.2	-4,766.3	1,953.1	1,847.3	105.77	18.466	
10,700.0	7,172.8	7,141.4	7,128.4	95.0	14.6	93.11	1,596.2	-4,766.3	1,853.5	1,744.9	108.53	17.077	
10,800.0	7,172.0	7,140.8	7,127.8	97.8	14.6	92.90	1,596.2	-4,766.3	1,753.9	1,642.6	111.30	15.758	
10,900.0	7,171.2	7,140.1	7,127.2	100.5	14.6	92.68	1,596.2	-4,766.3	1,654.4	1,540.3	114.07	14.503	
11,000.0	7,170.4	7,139.5	7,126.6	103.2	14.6	92.47	1,596.2	-4,766.3	1,554.9	1,438.1	116.85	13.307	
11,100.0	7,169.6	7,138.9	7,126.0	106.0	14.6	92.26	1,596.2	-4,766.3	1,455.6	1,335.9	119.63	12.168	
11,200.0	7,168.8	7,138.3	7,125.4	108.7	14.6	92.05	1,596.2	-4,766.3	1,356.3	1,233.9	122.40	11.080	
11,300.0	7,168.0	7,137.7	7,124.7	111.5	14.6	91.85	1,596.1	-4,766.3	1,257.1	1,131.9	125.18	10.042	
11,400.0	7,167.1	7,137.1	7,124.1	114.2	14.6	91.64	1,596.1	-4,766.3	1,158.1	1,030.1	127.97	9.050	
11,500.0	7,166.3	7,136.5	7,123.5	117.0	14.6	91.43	1,596.1	-4,766.3	1,059.2	928.5	130.75	8.101	
11,600.0	7,165.5	7,135.9	7,122.9	119.7	14.6	91.23	1,596.1	-4,766.3	960.6	827.1	133.54	7.193	
11,700.0	7,164.7	7,135.3	7,122.3	122.5	14.6	91.02	1,596.1	-4,766.3	862.3	726.0	136.32	6.325	
11,800.0	7,163.9	7,134.7	7,121.7	125.2	14.6	90.82	1,596.1	-4,766.3	764.4	625.3	139.11	5.495	
11,900.0	7,163.1	7,134.1	7,121.1	128.0	14.6	90.61	1,596.1	-4,766.3	667.2	525.3	141.89	4.702	
12,000.0	7,162.3	7,133.5	7,120.5	130.7	14.6	90.41	1,596.1	-4,766.3	570.9	426.3	144.68	3.946	
12,100.0	7,161.5	7,132.9	7,119.9	133.5	14.6	90.21	1,596.1	-4,766.3	476.2	328.8	147.47	3.229	
12,200.0	7,160.7	7,132.3	7,119.4	136.3	14.6	90.01	1,596.1	-4,766.3	384.2	233.9	150.25	2.557	
12,300.0	7,159.8	7,131.7	7,118.8	139.0	14.6	89.81	1,596.1	-4,766.3	297.3	144.3	153.04	1.943	
12,400.0	7,159.0	7,131.1	7,118.2	141.8	14.6	89.61	1,596.1	-4,766.3	221.9	66.0	155.82	1.424 Level 3	
12,500.0	7,158.2	7,130.6	7,117.6	144.6	14.5	89.41	1,596.1	-4,766.3	173.3	14.7	158.61	1.093 Level 2	
12,546.0	7,157.8	7,130.3	7,117.3	145.8	14.5	89.32	1,596.1	-4,766.3	167.1	7.2	159.89	1.045 Level 2, CC, ES, SF	
12,600.0	7,157.4	7,130.0	7,117.0	147.3	14.5	89.21	1,596.1	-4,766.3	175.6	14.2	161.39	1.088 Level 2	
12,700.0	7,156.6	7,129.4	7,116.5	150.1	14.5	89.01	1,596.1	-4,766.3	227.3	63.1	164.18	1.384 Level 3	
12,800.0	7,155.8	7,128.8	7,115.9	152.9	14.5	88.81	1,596.0	-4,766.3	304.1	137.1	166.96	1.821	
12,900.0	7,155.0	7,128.3	7,115.3	155.7	14.5	88.62	1,596.0	-4,766.3	391.5	221.7	169.74	2.306	
13,000.0	7,154.2	7,127.7	7,114.7	158.4	14.5	88.42	1,596.0	-4,766.3	483.8	311.3	172.52	2.804	
13,100.0	7,153.3	7,127.1	7,114.2	161.2	14.5	88.23	1,596.0	-4,766.3	578.7	403.4	175.30	3.301	
13,200.0	7,152.5	7,126.6	7,113.6	164.0	14.5	88.04	1,596.0	-4,766.3	675.0	497.0	178.08	3.791	
13,300.0	7,151.7	7,126.0	7,113.1	166.8	14.5	87.84	1,596.0	-4,766.3	772.3	591.5	180.85	4.270	
13,400.0	7,150.9	7,125.4	7,112.5	169.5	14.5	87.65	1,596.0	-4,766.3	870.2	686.6	183.62	4.739	
13,500.0	7,150.1	7,124.9	7,111.9	172.3	14.5	87.46	1,596.0	-4,766.3	968.5	782.2	186.40	5.196	
13,600.0	7,149.3	7,124.3	7,111.4	175.1	14.5	87.27	1,596.0	-4,766.3	1,067.2	878.0	189.17	5.642	
13,700.0	7,148.5	7,123.8	7,110.8	177.9	14.5	87.08	1,596.0	-4,766.3	1,166.1	974.1	191.93	6.075	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD BROWN 20ND - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 545-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
13,800.0	7,147.6	7,123.2	7,110.3	180.7	14.5	86.89	1,596.0	-4,766.3	1,265.1	1,070.4	194.70	6.498	
13,900.0	7,146.8	7,122.7	7,109.7	183.5	14.5	86.70	1,596.0	-4,766.3	1,364.3	1,166.8	197.46	6.909	
14,000.0	7,146.0	7,122.1	7,109.2	186.2	14.5	86.51	1,596.0	-4,766.3	1,463.6	1,263.4	200.23	7.310	
14,100.0	7,145.2	7,121.6	7,108.6	189.0	14.5	86.33	1,596.0	-4,766.3	1,563.0	1,360.0	202.99	7.700	
14,200.0	7,144.4	7,121.0	7,108.1	191.8	14.5	86.14	1,596.0	-4,766.3	1,662.4	1,456.7	205.74	8.080	
14,300.0	7,143.6	7,120.5	7,107.6	194.6	14.5	85.96	1,595.9	-4,766.3	1,762.0	1,553.5	208.50	8.451	
14,370.2	7,143.0	7,120.1	7,107.2	196.6	14.5	85.83	1,595.9	-4,766.3	1,831.9	1,621.4	210.43	8.705	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 575-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	-72.83	1,539.3	-4,981.9	5,214.4				
100.0	100.0	62.6	62.6	0.1	0.1	-72.83	1,539.3	-4,981.9	5,214.3	5,214.1	0.15	N/A	
200.0	200.0	164.4	164.4	0.3	0.1	-72.83	1,539.1	-4,981.9	5,214.2	5,213.8	0.47	N/A	
300.0	300.0	266.3	266.3	0.5	0.2	-72.84	1,538.8	-4,981.9	5,214.2	5,213.4	0.79	6,618.040	
320.1	320.1	286.7	286.7	0.6	0.3	-98.05	1,538.7	-4,981.9	5,214.2	5,213.3	0.85	6,124.474	
400.0	400.0	368.0	368.0	0.8	0.3	-98.07	1,538.3	-4,982.0	5,214.3	5,213.2	1.10	4,726.121	
500.0	499.8	469.7	469.7	1.0	0.4	-98.12	1,537.7	-4,982.0	5,214.9	5,213.5	1.42	3,664.238	
600.0	599.5	571.0	571.0	1.2	0.5	-98.21	1,536.9	-4,982.1	5,216.0	5,214.2	1.76	2,963.918	
700.0	698.7	652.4	652.4	1.5	0.7	-98.29	1,536.2	-4,982.2	5,217.7	5,215.5	2.19	2,377.256	
800.0	797.5	797.3	797.3	1.8	1.0	-98.52	1,534.1	-4,982.2	5,219.5	5,216.7	2.81	1,858.518	
900.0	895.6	954.6	954.5	2.2	1.3	-98.85	1,529.9	-4,982.0	5,221.8	5,218.3	3.50	1,489.811	
1,000.0	993.1	1,334.4	1,332.7	2.6	2.3	-100.10	1,497.8	-4,974.7	5,222.1	5,217.3	4.87	1,072.858	
1,100.0	1,089.6	1,444.1	1,441.2	3.1	2.6	-100.61	1,482.2	-4,970.7	5,219.3	5,213.7	5.66	921.969	
1,127.2	1,115.8	1,472.0	1,468.8	3.2	2.7	-100.75	1,477.9	-4,969.7	5,218.7	5,212.8	5.89	886.522	
1,200.0	1,185.5	1,896.8	1,882.3	3.6	4.6	-102.92	1,384.9	-4,947.5	5,214.7	5,206.8	7.96	655.186	
1,300.0	1,281.4	1,970.7	1,952.6	4.1	5.0	-103.36	1,362.6	-4,942.8	5,207.0	5,198.1	8.87	587.174	
1,400.0	1,377.3	2,233.3	2,200.8	4.7	6.4	-104.95	1,279.1	-4,923.8	5,199.1	5,188.4	10.74	484.163	
1,500.0	1,473.1	2,315.2	2,277.9	5.2	6.9	-105.45	1,252.5	-4,916.3	5,189.7	5,177.9	11.75	441.726	
1,600.0	1,569.0	2,353.0	2,313.4	5.8	7.1	-105.69	1,239.8	-4,913.0	5,181.1	5,168.6	12.51	414.034	
1,700.0	1,664.8	2,415.4	2,371.9	6.4	7.5	-106.08	1,219.0	-4,908.0	5,173.6	5,160.2	13.39	386.274	
1,800.0	1,760.7	2,465.1	2,418.8	6.9	7.8	-106.38	1,202.8	-4,904.3	5,167.4	5,153.2	14.21	363.643	
1,900.0	1,856.6	2,527.9	2,477.9	7.5	8.2	-106.78	1,181.9	-4,900.1	5,162.1	5,147.0	15.10	341.765	
2,000.0	1,952.4	2,657.2	2,598.5	8.1	9.0	-107.62	1,136.2	-4,891.5	5,157.2	5,140.7	16.47	313.132	
2,100.0	2,048.3	2,706.9	2,644.8	8.6	9.3	-107.94	1,118.4	-4,888.2	5,152.9	5,135.5	17.32	297.471	
2,200.0	2,144.1	2,774.8	2,708.2	9.2	9.7	-108.38	1,094.5	-4,884.0	5,149.6	5,131.4	18.26	282.094	
2,300.0	2,240.0	2,851.4	2,780.0	9.8	10.2	-108.87	1,068.2	-4,879.1	5,147.1	5,127.9	19.24	267.567	
2,400.0	2,335.9	2,927.0	2,850.6	10.3	10.7	-109.36	1,041.7	-4,874.6	5,145.4	5,125.2	20.23	254.288	
2,500.0	2,431.7	3,147.9	3,058.9	10.9	12.0	-110.73	970.1	-4,857.0	5,142.8	5,120.8	22.02	233.546	
2,600.0	2,527.6	3,195.0	3,103.4	11.5	12.2	-111.02	955.4	-4,852.8	5,140.4	5,117.5	22.83	225.197	
2,700.0	2,623.4	3,257.5	3,162.5	12.1	12.6	-111.40	935.9	-4,847.5	5,139.0	5,115.2	23.71	216.706	
2,800.0	2,719.3	3,383.0	3,281.6	12.6	13.3	-112.16	897.6	-4,836.7	5,138.0	5,113.1	24.93	206.107	
2,888.2	2,803.9	3,427.2	3,323.5	13.1	13.6	-112.42	884.3	-4,832.6	5,137.4	5,111.8	25.65	200.304	
2,900.0	2,815.2	3,431.1	3,327.2	13.2	13.6	-112.45	883.1	-4,832.3	5,137.4	5,111.7	25.73	199.641	
3,000.0	2,911.0	3,476.0	3,369.8	13.8	13.9	-112.72	869.3	-4,828.9	5,138.3	5,111.8	26.52	193.761	
3,100.0	3,006.9	3,503.0	3,395.4	14.4	14.0	-112.88	861.0	-4,827.1	5,140.5	5,113.3	27.21	188.902	
3,200.0	3,102.7	3,543.9	3,434.2	14.9	14.3	-113.13	848.1	-4,824.6	5,144.0	5,116.1	27.98	183.817	
3,300.0	3,198.6	3,601.6	3,488.8	15.5	14.6	-113.49	829.7	-4,821.6	5,148.8	5,119.9	28.85	178.455	
3,400.0	3,294.5	3,684.0	3,566.7	16.1	15.1	-114.00	803.3	-4,817.5	5,154.2	5,124.4	29.86	172.603	
3,500.0	3,390.3	3,757.0	3,635.7	16.7	15.6	-114.46	779.6	-4,813.9	5,160.4	5,129.6	30.82	167.424	
3,600.0	3,486.2	3,898.3	3,768.0	17.2	16.5	-115.36	730.8	-4,806.3	5,166.7	5,134.5	32.25	160.229	
3,700.0	3,582.0	3,980.4	3,844.4	17.8	17.1	-115.90	701.1	-4,801.4	5,173.2	5,139.9	33.30	155.343	
3,800.0	3,677.9	4,051.9	3,911.0	18.4	17.6	-116.37	675.3	-4,797.3	5,180.5	5,146.3	34.27	151.172	
3,900.0	3,773.7	4,159.6	4,012.2	19.0	18.2	-117.04	639.1	-4,790.8	5,188.2	5,152.9	35.39	146.621	
4,000.0	3,869.6	4,236.7	4,085.6	19.5	18.6	-117.50	615.9	-4,786.1	5,196.5	5,160.2	36.30	143.147	
4,100.0	3,965.5	4,311.2	4,156.7	20.1	19.0	-117.93	594.4	-4,781.7	5,205.4	5,168.2	37.20	139.927	
4,200.0	4,061.3	4,420.7	4,261.9	20.7	19.6	-118.54	564.7	-4,775.2	5,214.7	5,176.4	38.24	136.378	
4,300.0	4,157.2	4,493.9	4,332.9	21.3	20.0	-118.93	547.3	-4,770.9	5,224.4	5,185.3	39.05	133.774	
4,400.0	4,253.0	4,555.9	4,393.2	21.8	20.2	-119.24	533.5	-4,767.6	5,234.8	5,195.0	39.81	131.504	
4,500.0	4,348.9	4,622.9	4,458.8	22.4	20.5	-119.57	519.7	-4,764.4	5,246.1	5,205.5	40.56	129.327	
4,600.0	4,444.8	4,692.0	4,526.6	23.0	20.8	-119.89	506.9	-4,761.4	5,257.9	5,216.6	41.31	127.279	
4,700.0	4,540.6	4,758.6	4,592.2	23.6	21.0	-120.19	495.9	-4,758.9	5,270.5	5,228.5	42.02	125.431	
4,800.0	4,636.5	4,817.3	4,650.2	24.1	21.2	-120.44	487.2	-4,757.2	5,284.0	5,241.3	42.69	123.763	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 575-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,900.0	4,732.3	4,879.0	4,711.4	24.7	21.4	-120.69	478.7	-4,755.9	5,298.2	5,254.9	43.37	122.170	
5,000.0	4,828.2	4,962.3	4,794.0	25.3	21.6	-121.03	468.1	-4,754.5	5,313.1	5,269.0	44.08	120.545	
5,100.0	4,924.1	5,092.7	4,923.7	25.9	21.9	-121.51	454.8	-4,752.2	5,327.9	5,283.0	44.84	118.816	
5,200.0	5,019.9	5,170.7	5,001.4	26.4	22.1	-121.78	448.9	-4,751.1	5,342.7	5,297.2	45.48	117.477	
5,300.0	5,115.8	5,260.1	5,090.6	27.0	22.3	-122.08	443.3	-4,750.0	5,357.9	5,311.8	46.12	116.186	
5,400.0	5,211.6	5,348.0	5,178.4	27.6	22.4	-122.35	439.3	-4,749.3	5,373.4	5,326.6	46.73	114.993	
5,500.0	5,307.5	5,420.1	5,250.5	28.2	22.5	-122.55	437.4	-4,749.1	5,389.2	5,341.9	47.30	113.943	
5,600.0	5,403.4	5,505.3	5,335.7	28.7	22.6	-122.78	436.4	-4,749.3	5,405.5	5,357.7	47.87	112.928	
5,700.0	5,499.2	5,591.1	5,421.5	29.3	22.7	-123.01	435.6	-4,749.7	5,422.1	5,373.7	48.43	111.957	
5,800.0	5,595.1	5,670.8	5,501.2	29.9	22.8	-123.22	435.0	-4,750.3	5,439.0	5,390.0	48.99	111.027	
5,840.7	5,634.1	5,702.1	5,532.5	30.1	22.8	-123.30	434.7	-4,750.6	5,446.0	5,396.8	49.21	110.659	
5,900.0	5,691.1	5,751.5	5,581.9	30.4	22.9	-123.59	434.3	-4,751.2	5,456.0	5,406.4	49.51	110.191	
6,000.0	5,788.0	5,871.0	5,701.4	30.8	23.0	-124.12	433.3	-4,752.5	5,471.4	5,421.4	49.96	109.510	
6,100.0	5,885.7	5,994.8	5,825.2	31.2	23.1	-124.57	432.3	-4,753.0	5,484.2	5,433.8	50.38	108.849	
6,200.0	5,984.0	6,094.0	5,924.3	31.5	23.2	-124.92	431.3	-4,753.2	5,494.9	5,444.2	50.75	108.266	
6,300.0	6,083.0	6,230.6	6,061.0	31.8	23.4	-125.24	430.4	-4,752.9	5,503.2	5,452.1	51.12	107.650	
6,400.0	6,182.3	6,372.9	6,203.2	32.0	23.6	-125.48	428.8	-4,751.9	5,509.2	5,457.7	51.47	107.035	
6,500.0	6,282.0	6,470.0	6,300.3	32.2	23.7	-125.61	427.9	-4,750.7	5,512.6	5,460.8	51.74	106.543	
6,600.0	6,382.0	6,564.0	6,394.3	32.3	23.8	-125.68	426.7	-4,749.3	5,513.8	5,461.8	51.97	106.088	
6,668.0	6,449.9	6,604.4	6,434.7	32.4	23.9	-100.48	426.2	-4,748.8	5,513.6	5,475.0	38.67	142.590	
6,698.0	6,479.9	6,616.3	6,446.6	32.4	23.9	-100.48	426.1	-4,748.8	5,513.6	5,474.8	38.72	142.380	
6,700.0	6,481.9	6,617.1	6,447.4	32.4	23.9	-10.48	426.1	-4,748.8	5,513.6	5,461.4	52.12	105.783	
6,750.0	6,531.9	6,657.0	6,487.3	32.5	24.0	-10.51	425.7	-4,748.9	5,511.9	5,459.9	51.99	106.026	
6,800.0	6,581.6	6,657.0	6,487.3	32.5	24.0	-10.59	425.7	-4,748.9	5,506.9	5,455.3	51.56	106.803	
6,850.0	6,630.8	6,689.7	6,520.1	32.5	24.0	-10.72	425.4	-4,749.2	5,498.8	5,447.9	50.94	107.955	
6,900.0	6,679.3	6,722.6	6,552.9	32.4	24.0	-10.92	425.2	-4,749.7	5,487.5	5,437.4	50.08	109.579	
6,950.0	6,726.8	6,758.4	6,588.7	32.4	24.1	-11.17	424.9	-4,750.3	5,473.0	5,424.0	49.00	111.705	
7,000.0	6,773.1	6,818.1	6,648.4	32.3	24.1	-11.52	424.7	-4,751.3	5,455.2	5,407.5	47.71	114.331	
7,050.0	6,817.9	6,865.5	6,695.8	32.3	24.2	-11.94	425.0	-4,752.0	5,434.2	5,388.0	46.21	117.588	
7,100.0	6,861.2	6,903.1	6,733.3	32.2	24.2	-12.45	425.2	-4,752.7	5,410.3	5,365.7	44.51	121.546	
7,150.0	6,902.5	6,938.0	6,768.3	32.1	24.3	-13.06	425.3	-4,753.3	5,383.4	5,340.7	42.63	126.274	
7,200.0	6,941.8	6,976.0	6,806.3	32.0	24.3	-13.82	425.4	-4,754.0	5,353.7	5,313.1	40.61	131.848	
7,250.0	6,978.9	7,010.8	6,841.1	31.9	24.4	-14.73	425.3	-4,754.7	5,321.5	5,283.0	38.45	138.404	
7,300.0	7,013.5	7,052.7	6,882.9	31.7	24.4	-15.88	425.1	-4,755.4	5,286.7	5,250.5	36.21	146.008	
7,350.0	7,045.5	7,105.1	6,935.4	31.6	24.5	-17.34	424.9	-4,756.2	5,249.5	5,215.6	33.94	154.681	
7,400.0	7,074.8	7,138.9	6,969.1	31.5	24.5	-19.09	424.8	-4,756.6	5,210.1	5,178.4	31.68	164.446	
7,450.0	7,101.1	7,160.3	6,990.6	31.4	24.5	-21.24	424.8	-4,756.9	5,168.8	5,139.3	29.56	174.887	
7,500.0	7,124.5	7,179.5	7,009.7	31.3	24.6	-23.97	424.8	-4,757.2	5,125.8	5,098.1	27.73	184.843	
7,550.0	7,144.7	7,196.2	7,026.5	31.1	24.6	-27.54	424.8	-4,757.5	5,081.3	5,054.8	26.47	191.930	
7,600.0	7,161.6	7,218.0	7,048.2	31.0	24.6	-32.41	424.8	-4,757.8	5,035.5	5,009.2	26.22	192.083	
7,650.0	7,175.3	7,225.8	7,056.0	30.9	24.6	-38.86	424.8	-4,757.9	4,988.6	4,961.2	27.32	182.578	
7,700.0	7,185.5	7,242.5	7,072.7	30.8	24.6	-48.17	424.8	-4,758.2	4,940.8	4,910.6	30.24	163.401	
7,750.0	7,192.3	7,253.8	7,084.0	30.7	24.6	-61.05	424.8	-4,758.4	4,892.4	4,857.9	34.55	141.589	
7,800.0	7,195.7	7,259.9	7,090.1	30.7	24.6	-77.75	424.8	-4,758.5	4,843.7	4,804.9	38.78	124.912	
7,828.6	7,196.0	7,260.9	7,091.2	30.6	24.6	-88.38	424.8	-4,758.5	4,815.7	4,775.5	40.25	119.659	
7,900.0	7,195.4	7,261.6	7,091.8	30.6	24.6	-88.42	424.8	-4,758.5	4,745.9	4,704.7	41.26	115.031	
8,000.0	7,194.6	7,262.4	7,092.6	30.6	24.6	-88.46	424.8	-4,758.5	4,648.2	4,605.4	42.87	108.432	
8,100.0	7,193.8	7,263.2	7,093.4	31.0	24.6	-88.51	424.8	-4,758.5	4,550.7	4,506.0	44.67	101.881	
8,200.0	7,193.0	7,264.0	7,094.2	32.1	24.7	-88.56	424.8	-4,758.5	4,453.2	4,406.6	46.62	95.521	
8,300.0	7,192.2	7,264.8	7,095.0	33.8	24.7	-88.60	424.8	-4,758.5	4,355.8	4,307.1	48.70	89.441	
8,400.0	7,191.4	7,265.6	7,095.8	35.8	24.7	-88.65	424.8	-4,758.5	4,258.6	4,207.7	50.88	83.691	
8,500.0	7,190.6	7,266.3	7,096.5	38.0	24.7	-88.69	424.8	-4,758.6	4,161.5	4,108.3	53.15	78.290	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 575-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,600.0	7,189.8	7,267.0	7,097.3	40.3	24.7	-88.73	424.8	-4,758.6	4,064.5	4,009.0	55.49	73.241	
8,700.0	7,189.0	7,267.8	7,098.0	42.7	24.7	-88.77	424.8	-4,758.6	3,967.7	3,909.8	57.89	68.535	
8,800.0	7,188.2	7,268.4	7,098.7	45.1	24.7	-88.81	424.8	-4,758.6	3,871.0	3,810.7	60.34	64.153	
8,900.0	7,187.4	7,269.1	7,099.4	47.5	24.7	-88.85	424.8	-4,758.6	3,774.5	3,711.7	62.83	60.076	
9,000.0	7,186.6	7,269.8	7,100.0	50.0	24.7	-88.89	424.8	-4,758.6	3,678.2	3,612.9	65.35	56.283	
9,100.0	7,185.7	7,270.5	7,100.7	52.6	24.7	-88.93	424.8	-4,758.6	3,582.1	3,514.2	67.91	52.752	
9,200.0	7,184.9	7,271.1	7,101.3	55.1	24.7	-88.96	424.8	-4,758.6	3,486.2	3,415.8	70.48	49.462	
9,300.0	7,184.1	7,271.7	7,101.9	57.7	24.7	-89.00	424.8	-4,758.6	3,390.6	3,317.5	73.08	46.393	
9,400.0	7,183.3	7,272.3	7,102.6	60.3	24.7	-89.03	424.8	-4,758.6	3,295.2	3,219.5	75.70	43.528	
9,500.0	7,182.5	7,272.9	7,103.2	62.9	24.7	-89.07	424.8	-4,758.6	3,200.1	3,121.8	78.34	40.849	
9,600.0	7,181.7	7,273.5	7,103.7	65.5	24.7	-89.10	424.8	-4,758.7	3,105.3	3,024.4	80.99	38.342	
9,700.0	7,180.9	7,274.1	7,104.3	68.1	24.7	-89.14	424.8	-4,758.7	3,010.9	2,927.2	83.66	35.992	
9,800.0	7,180.1	7,274.7	7,104.9	70.8	24.7	-89.17	424.8	-4,758.7	2,916.8	2,830.5	86.33	33.786	
9,900.0	7,179.3	7,275.2	7,105.4	73.5	24.7	-89.20	424.8	-4,758.7	2,823.1	2,734.1	89.02	31.715	
10,000.0	7,178.5	7,275.8	7,106.0	76.1	24.7	-89.23	424.8	-4,758.7	2,729.9	2,638.2	91.71	29.766	
10,100.0	7,177.7	7,276.3	7,106.5	78.8	24.7	-89.26	424.8	-4,758.7	2,637.2	2,542.8	94.41	27.932	
10,200.0	7,176.9	7,276.8	7,107.0	81.5	24.7	-89.29	424.8	-4,758.7	2,545.0	2,447.9	97.12	26.204	
10,300.0	7,176.0	7,277.3	7,107.6	84.2	24.7	-89.32	424.8	-4,758.7	2,453.4	2,353.6	99.84	24.573	
10,400.0	7,175.2	7,277.8	7,108.1	86.9	24.7	-89.35	424.8	-4,758.7	2,362.5	2,260.0	102.56	23.035	
10,500.0	7,174.4	7,278.3	7,108.5	89.6	24.7	-89.38	424.8	-4,758.7	2,272.4	2,167.1	105.29	21.582	
10,600.0	7,173.6	7,278.8	7,109.0	92.3	24.7	-89.41	424.8	-4,758.7	2,183.2	2,075.1	108.02	20.210	
10,700.0	7,172.8	7,279.3	7,109.5	95.0	24.7	-89.43	424.8	-4,758.7	2,094.9	1,984.1	110.76	18.913	
10,800.0	7,172.0	7,279.7	7,110.0	97.8	24.7	-89.46	424.8	-4,758.7	2,007.7	1,894.2	113.50	17.688	
10,900.0	7,171.2	7,280.2	7,110.4	100.5	24.7	-89.49	424.8	-4,758.7	1,921.8	1,805.5	116.25	16.531	
11,000.0	7,170.4	7,280.7	7,110.9	103.2	24.7	-89.51	424.8	-4,758.7	1,837.2	1,718.2	119.00	15.439	
11,100.0	7,169.6	7,281.1	7,111.3	106.0	24.7	-89.54	424.8	-4,758.7	1,754.4	1,632.6	121.75	14.410	
11,200.0	7,168.8	7,281.5	7,111.8	108.7	24.7	-89.56	424.8	-4,758.8	1,673.3	1,548.8	124.50	13.440	
11,300.0	7,168.0	7,282.0	7,112.2	111.5	24.7	-89.59	424.8	-4,758.8	1,594.5	1,467.2	127.26	12.529	
11,400.0	7,167.1	7,282.4	7,112.6	114.2	24.7	-89.61	424.8	-4,758.8	1,518.1	1,388.1	130.02	11.676	
11,500.0	7,166.3	7,282.8	7,113.0	117.0	24.7	-89.64	424.8	-4,758.8	1,444.6	1,311.8	132.78	10.880	
11,600.0	7,165.5	7,283.2	7,113.4	119.7	24.7	-89.66	424.8	-4,758.8	1,374.5	1,239.0	135.55	10.140	
11,700.0	7,164.7	7,283.6	7,113.8	122.5	24.7	-89.68	424.8	-4,758.8	1,308.3	1,169.9	138.32	9.459	
11,800.0	7,163.9	7,284.0	7,114.2	125.2	24.7	-89.70	424.8	-4,758.8	1,246.5	1,105.5	141.08	8.835	
11,900.0	7,163.1	7,284.4	7,114.6	128.0	24.7	-89.73	424.8	-4,758.8	1,190.0	1,046.2	143.85	8.272	
12,000.0	7,162.3	7,284.7	7,115.0	130.7	24.7	-89.75	424.8	-4,758.8	1,139.5	992.9	146.63	7.771	
12,100.0	7,161.5	7,285.1	7,115.3	133.5	24.7	-89.77	424.8	-4,758.8	1,095.8	946.4	149.40	7.335	
12,200.0	7,160.7	7,285.5	7,115.7	136.3	24.7	-89.79	424.8	-4,758.8	1,059.7	907.6	152.18	6.964	
12,300.0	7,159.8	7,285.8	7,116.1	139.0	24.7	-89.81	424.8	-4,758.8	1,032.2	877.2	154.95	6.661	
12,400.0	7,159.0	7,286.2	7,116.4	141.8	24.7	-89.83	424.8	-4,758.8	1,013.7	856.0	157.73	6.427	
12,500.0	7,158.2	7,286.6	7,116.8	144.6	24.7	-89.85	424.8	-4,758.8	1,005.0	844.5	160.51	6.261	
12,538.5	7,157.9	7,286.7	7,116.9	145.6	24.7	-89.86	424.8	-4,758.8	1,004.2	842.6	161.58	6.215 CC, ES	
12,600.0	7,157.4	7,286.9	7,117.1	147.3	24.7	-89.87	424.8	-4,758.8	1,006.1	842.8	163.29	6.162	
12,700.0	7,156.6	7,287.2	7,117.5	150.1	24.7	-89.89	424.8	-4,758.8	1,017.1	851.1	166.07	6.125 SF	
12,800.0	7,155.8	7,287.6	7,117.8	152.9	24.7	-89.91	424.8	-4,758.8	1,037.7	868.9	168.85	6.146	
12,900.0	7,155.0	7,287.9	7,118.1	155.7	24.7	-89.93	424.8	-4,758.8	1,067.3	895.7	171.63	6.218	
13,000.0	7,154.2	7,288.2	7,118.4	158.4	24.7	-89.95	424.8	-4,758.8	1,105.2	930.8	174.42	6.336	
13,100.0	7,153.3	7,288.5	7,118.8	161.2	24.7	-89.96	424.8	-4,758.8	1,150.5	973.3	177.20	6.493	
13,200.0	7,152.5	7,288.8	7,119.1	164.0	24.7	-89.98	424.8	-4,758.8	1,202.5	1,022.5	179.99	6.681	
13,300.0	7,151.7	7,289.2	7,119.4	166.8	24.7	-90.00	424.8	-4,758.8	1,260.3	1,077.5	182.78	6.895	
13,400.0	7,150.9	7,289.5	7,119.7	169.5	24.7	-90.02	424.8	-4,758.8	1,323.1	1,137.5	185.56	7.130	
13,500.0	7,150.1	7,289.8	7,120.0	172.3	24.7	-90.03	424.8	-4,758.9	1,390.3	1,201.9	188.35	7.381	
13,600.0	7,149.3	7,290.1	7,120.3	175.1	24.7	-90.05	424.7	-4,758.9	1,461.2	1,270.1	191.14	7.645	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD BROWN 20OD - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 575-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
13,700.0	7,148.5	7,290.3	7,120.6	177.9	24.7	-90.07	424.7	-4,758.9	1,535.4	1,341.5	193.93	7.917	
13,800.0	7,147.6	7,290.6	7,120.9	180.7	24.7	-90.08	424.7	-4,758.9	1,612.4	1,415.7	196.72	8.196	
13,900.0	7,146.8	7,290.9	7,121.1	183.5	24.7	-90.10	424.7	-4,758.9	1,691.8	1,492.3	199.51	8.480	
14,000.0	7,146.0	7,291.2	7,121.4	186.2	24.7	-90.11	424.7	-4,758.9	1,773.2	1,570.9	202.30	8.765	
14,100.0	7,145.2	7,291.5	7,121.7	189.0	24.7	-90.13	424.7	-4,758.9	1,856.5	1,651.4	205.09	9.052	
14,200.0	7,144.4	7,291.7	7,122.0	191.8	24.7	-90.15	424.7	-4,758.9	1,941.4	1,733.5	207.88	9.339	
14,300.0	7,143.6	7,292.0	7,122.2	194.6	24.7	-90.16	424.7	-4,758.9	2,027.6	1,817.0	210.67	9.624	
14,370.2	7,143.0	7,292.2	7,122.4	196.6	24.7	-90.17	424.7	-4,758.9	2,088.9	1,876.3	212.63	9.824	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 704-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	-47.02	1,781.2	-1,911.5	2,612.8				
100.0	100.0	85.3	85.3	0.1	0.1	-47.02	1,781.1	-1,911.5	2,612.7	2,612.5	0.17	N/A	
200.0	200.0	187.5	187.5	0.3	0.2	-47.02	1,781.0	-1,911.4	2,612.6	2,612.1	0.49	5,304.116	
300.0	300.0	289.7	289.7	0.5	0.3	-47.03	1,780.8	-1,911.4	2,612.4	2,611.6	0.81	3,224.043	
400.0	400.0	391.9	391.9	0.8	0.4	-72.29	1,780.4	-1,911.3	2,611.6	2,610.4	1.13	2,317.419	
500.0	499.8	493.9	493.9	1.0	0.4	-72.45	1,780.0	-1,911.2	2,609.6	2,608.2	1.45	1,800.690	
600.0	599.5	595.6	595.6	1.2	0.5	-72.70	1,779.4	-1,911.1	2,606.5	2,604.7	1.79	1,457.536	
700.0	698.7	697.0	697.0	1.5	0.6	-73.05	1,778.8	-1,910.9	2,602.4	2,600.2	2.16	1,207.399	
800.0	797.5	795.1	795.1	1.8	0.8	-73.48	1,778.1	-1,910.8	2,597.3	2,594.6	2.66	975.160	
900.0	895.6	891.0	891.0	2.2	1.0	-73.99	1,777.5	-1,910.8	2,591.4	2,588.1	3.21	806.472	
1,000.0	993.1	992.0	991.9	2.6	1.2	-74.62	1,776.9	-1,910.7	2,584.7	2,580.9	3.82	676.541	
1,100.0	1,089.6	1,181.8	1,181.7	3.1	1.6	-75.95	1,770.5	-1,910.2	2,575.4	2,570.7	4.71	547.041	
1,127.2	1,115.8	1,249.0	1,248.7	3.2	1.8	-76.50	1,765.8	-1,909.7	2,572.1	2,567.1	5.01	513.840	
1,200.0	1,185.5	1,376.2	1,375.3	3.6	2.1	-77.47	1,753.9	-1,908.2	2,562.0	2,556.3	5.70	449.620	
1,300.0	1,281.4	1,619.4	1,616.0	4.1	2.9	-79.51	1,719.9	-1,901.6	2,544.6	2,537.7	6.90	368.703	
1,400.0	1,377.3	1,817.8	1,810.6	4.7	3.6	-81.31	1,682.5	-1,890.8	2,523.0	2,514.9	8.07	312.596	
1,500.0	1,473.1	2,059.7	2,045.3	5.2	4.6	-83.60	1,629.5	-1,867.6	2,497.1	2,487.6	9.42	265.093	
1,600.0	1,569.0	2,146.1	2,128.8	5.8	5.0	-84.42	1,609.9	-1,856.9	2,469.6	2,459.4	10.25	240.941	
1,700.0	1,664.8	2,232.0	2,211.8	6.4	5.3	-85.25	1,590.5	-1,846.2	2,442.8	2,431.7	11.08	220.425	
1,800.0	1,760.7	2,317.0	2,293.9	6.9	5.7	-86.10	1,570.8	-1,836.2	2,416.8	2,404.9	11.94	202.384	
1,900.0	1,856.6	2,414.9	2,388.2	7.5	6.2	-87.13	1,547.1	-1,825.2	2,391.3	2,378.4	12.89	185.555	
2,000.0	1,952.4	2,551.7	2,519.6	8.1	6.9	-88.62	1,512.5	-1,809.1	2,365.7	2,351.7	14.04	168.445	
2,100.0	2,048.3	2,668.0	2,630.3	8.6	7.6	-89.96	1,480.2	-1,794.3	2,338.9	2,323.8	15.17	154.229	
2,200.0	2,144.1	2,745.9	2,704.4	9.2	8.1	-90.89	1,458.3	-1,784.3	2,312.7	2,296.6	16.09	143.751	
2,300.0	2,240.0	2,809.1	2,764.6	9.8	8.4	-91.65	1,440.7	-1,776.6	2,287.9	2,271.0	16.93	135.103	
2,400.0	2,335.9	2,875.7	2,828.2	10.3	8.7	-92.46	1,422.3	-1,769.2	2,265.0	2,247.2	17.80	127.219	
2,500.0	2,431.7	2,965.7	2,914.1	10.9	9.2	-93.59	1,397.3	-1,759.4	2,243.2	2,224.4	18.81	119.241	
2,600.0	2,527.6	3,058.3	3,002.5	11.5	9.7	-94.75	1,371.7	-1,749.0	2,222.1	2,202.3	19.84	111.985	
2,700.0	2,623.4	3,137.0	3,077.8	12.1	10.1	-95.74	1,350.8	-1,739.9	2,202.2	2,181.4	20.78	105.976	
2,800.0	2,719.3	3,222.6	3,160.0	12.6	10.6	-96.80	1,329.0	-1,729.8	2,183.4	2,161.7	21.74	100.437	
2,900.0	2,815.2	3,290.2	3,225.0	13.2	10.9	-97.65	1,312.0	-1,721.9	2,165.9	2,143.3	22.61	95.773	
3,000.0	2,911.0	3,361.6	3,293.7	13.8	11.2	-98.53	1,294.9	-1,713.9	2,150.1	2,126.6	23.50	91.496	
3,100.0	3,006.9	3,435.6	3,365.3	14.4	11.6	-99.44	1,277.8	-1,705.8	2,135.8	2,111.4	24.39	87.578	
3,200.0	3,102.7	3,510.0	3,437.4	14.9	11.9	-100.36	1,261.3	-1,698.2	2,123.3	2,098.0	25.27	84.015	
3,300.0	3,198.6	3,567.3	3,493.2	15.5	12.2	-101.07	1,248.8	-1,693.0	2,112.7	2,086.6	26.08	80.999	
3,400.0	3,294.5	3,655.2	3,578.7	16.1	12.6	-102.15	1,230.1	-1,685.4	2,103.7	2,076.7	27.02	77.866	
3,500.0	3,390.3	3,798.5	3,717.7	16.7	13.3	-103.94	1,198.7	-1,671.2	2,094.5	2,066.3	28.22	74.229	
3,600.0	3,486.2	3,902.1	3,817.4	17.2	13.8	-105.32	1,172.9	-1,659.9	2,084.7	2,055.4	29.29	71.171	
3,700.0	3,582.0	3,998.4	3,909.7	17.8	14.3	-106.64	1,147.7	-1,648.9	2,075.3	2,045.0	30.34	68.406	
3,800.0	3,677.9	4,071.0	3,979.4	18.4	14.7	-107.64	1,128.9	-1,640.8	2,067.5	2,036.2	31.25	66.157	
3,900.0	3,773.7	4,140.6	4,046.4	19.0	15.1	-108.57	1,111.7	-1,633.5	2,061.4	2,029.3	32.11	64.194	
4,000.0	3,869.6	4,222.9	4,126.0	19.5	15.5	-109.66	1,092.6	-1,625.0	2,057.0	2,024.0	33.02	62.286	
4,100.0	3,965.5	4,320.9	4,220.7	20.1	16.0	-110.97	1,069.3	-1,614.9	2,053.6	2,019.6	34.01	60.373	
4,200.0	4,061.3	4,401.9	4,298.8	20.7	16.4	-112.07	1,049.6	-1,606.3	2,050.9	2,016.0	34.92	58.735	
4,300.0	4,157.2	4,479.4	4,373.7	21.3	16.8	-113.10	1,031.6	-1,598.6	2,050.0	2,014.3	35.78	57.291	
4,318.3	4,174.8	4,495.3	4,389.2	21.4	16.9	-113.31	1,028.0	-1,597.0	2,050.0	2,014.1	35.94	57.033	
4,400.0	4,253.0	4,559.2	4,451.2	21.8	17.2	-114.14	1,013.7	-1,590.7	2,050.4	2,013.8	36.63	55.979	
4,500.0	4,348.9	4,633.0	4,523.1	22.4	17.5	-115.07	998.6	-1,584.1	2,052.8	2,015.3	37.43	54.843	
4,600.0	4,444.8	4,702.9	4,591.5	23.0	17.8	-115.91	985.6	-1,578.4	2,056.8	2,018.6	38.18	53.864	
4,700.0	4,540.6	4,779.0	4,666.3	23.6	18.0	-116.80	972.8	-1,572.6	2,062.2	2,023.2	38.94	52.963	
4,800.0	4,636.5	4,871.7	4,757.7	24.1	18.4	-117.83	958.8	-1,566.1	2,068.9	2,029.2	39.71	52.106	
4,900.0	4,732.3	4,954.7	4,839.7	24.7	18.6	-118.71	947.6	-1,560.1	2,076.1	2,035.7	40.42	51.364	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 704-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	4,828.2	5,024.0	4,908.5	25.3	18.9	-119.39	940.2	-1,555.9	2,085.0	2,043.9	41.08	50.756	
5,100.0	4,924.1	5,107.4	4,991.4	25.9	19.1	-120.17	932.5	-1,551.7	2,095.2	2,053.5	41.73	50.202	
5,200.0	5,019.9	5,195.0	5,078.7	26.4	19.3	-120.93	926.4	-1,547.7	2,106.2	2,063.9	42.37	49.714	
5,300.0	5,115.8	5,269.4	5,153.0	27.0	19.4	-121.53	922.8	-1,545.0	2,118.3	2,075.4	42.95	49.317	
5,400.0	5,211.6	5,334.5	5,218.0	27.6	19.5	-122.02	920.6	-1,543.5	2,131.9	2,088.4	43.51	49.000	
5,500.0	5,307.5	5,403.3	5,286.8	28.2	19.6	-122.48	920.2	-1,543.2	2,147.2	2,103.1	44.05	48.742	
5,600.0	5,403.4	5,493.3	5,376.9	28.7	19.7	-123.05	920.3	-1,543.6	2,163.4	2,118.9	44.58	48.526	
5,700.0	5,499.2	5,589.5	5,473.0	29.3	19.8	-123.66	920.6	-1,544.0	2,180.0	2,134.9	45.11	48.326	
5,800.0	5,595.1	5,681.6	5,565.2	29.9	19.9	-124.24	920.5	-1,544.5	2,196.9	2,151.3	45.63	48.144	
5,840.7	5,634.1	5,724.7	5,608.2	30.1	20.0	-124.50	920.4	-1,544.8	2,203.9	2,158.0	45.85	48.071	
5,900.0	5,691.1	5,785.7	5,669.2	30.4	20.0	-125.03	920.3	-1,544.9	2,213.6	2,167.5	46.13	47.985	
6,000.0	5,788.0	5,885.7	5,769.3	30.8	20.1	-125.82	919.5	-1,544.9	2,228.5	2,181.9	46.54	47.884	
6,100.0	5,885.7	5,985.8	5,869.3	31.2	20.3	-126.51	918.5	-1,544.8	2,241.3	2,194.4	46.92	47.770	
6,200.0	5,984.0	6,085.6	5,969.2	31.5	20.4	-127.08	917.3	-1,544.5	2,252.2	2,204.9	47.27	47.644	
6,300.0	6,083.0	6,186.0	6,069.5	31.8	20.6	-127.55	916.1	-1,544.1	2,260.9	2,213.4	47.59	47.506	
6,400.0	6,182.3	6,287.2	6,170.7	32.0	20.7	-127.91	914.8	-1,543.6	2,267.6	2,219.7	47.89	47.353	
6,500.0	6,282.0	6,388.0	6,271.5	32.2	20.8	-128.17	913.5	-1,543.1	2,272.0	2,223.9	48.15	47.187	
6,600.0	6,382.0	6,490.9	6,374.4	32.3	21.0	-128.33	912.0	-1,542.4	2,274.3	2,225.9	48.39	47.002	
6,668.0	6,449.9	6,559.0	6,442.5	32.4	21.1	-103.16	911.0	-1,541.9	2,274.5	2,235.6	38.92	58.436	
6,698.0	6,479.9	6,588.8	6,472.3	32.4	21.1	-103.18	910.6	-1,541.7	2,274.4	2,235.3	39.02	58.294	
6,700.0	6,481.9	6,590.8	6,474.3	32.4	21.1	-13.18	910.6	-1,541.7	2,274.3	2,225.7	48.60	46.796	
6,750.0	6,531.9	6,642.7	6,526.1	32.5	21.2	-13.25	909.7	-1,541.2	2,272.3	2,223.8	48.48	46.872	
6,800.0	6,581.6	6,694.7	6,578.1	32.5	21.3	-13.41	908.9	-1,540.8	2,266.8	2,218.7	48.13	47.096	
6,850.0	6,630.8	6,747.6	6,631.1	32.5	21.4	-13.66	908.0	-1,540.2	2,257.9	2,210.3	47.56	47.470	
6,900.0	6,679.3	6,799.0	6,682.4	32.4	21.5	-14.01	907.0	-1,539.5	2,245.6	2,198.8	46.78	48.006	
6,950.0	6,726.8	6,847.4	6,730.8	32.4	21.6	-14.46	906.1	-1,538.8	2,230.0	2,184.2	45.78	48.714	
7,000.0	6,773.1	6,894.7	6,778.1	32.3	21.6	-15.03	905.0	-1,538.1	2,211.3	2,166.7	44.58	49.606	
7,050.0	6,817.9	6,940.8	6,824.1	32.3	21.7	-15.75	903.8	-1,537.4	2,189.4	2,146.2	43.19	50.697	
7,100.0	6,861.2	6,985.7	6,869.1	32.2	21.8	-16.62	902.5	-1,536.5	2,164.6	2,122.9	41.62	52.006	
7,150.0	6,902.5	7,030.1	6,913.4	32.1	21.9	-17.69	901.0	-1,535.6	2,136.9	2,096.9	39.91	53.546	
7,200.0	6,941.8	7,071.5	6,954.8	32.0	22.0	-18.99	899.6	-1,534.7	2,106.4	2,068.3	38.06	55.339	
7,250.0	6,978.9	7,107.5	6,990.7	31.9	22.0	-20.52	898.3	-1,533.8	2,073.4	2,037.3	36.13	57.385	
7,300.0	7,013.5	7,141.0	7,024.2	31.7	22.1	-22.37	897.2	-1,533.1	2,038.1	2,004.0	34.17	59.648	
7,350.0	7,045.5	7,170.5	7,053.7	31.6	22.1	-24.60	896.4	-1,532.4	2,000.7	1,968.4	32.26	62.025	
7,400.0	7,074.8	7,195.7	7,078.9	31.5	22.2	-27.30	895.6	-1,531.9	1,961.3	1,930.8	30.51	64.283	
7,450.0	7,101.1	7,218.3	7,101.5	31.4	22.2	-30.61	894.9	-1,531.5	1,920.2	1,891.1	29.12	65.951	
7,500.0	7,124.5	7,238.4	7,121.5	31.3	22.3	-34.71	894.2	-1,531.1	1,877.6	1,849.3	28.33	66.285	
7,550.0	7,144.7	7,253.0	7,136.1	31.1	22.3	-39.70	893.7	-1,530.9	1,833.7	1,805.3	28.40	64.557	
7,600.0	7,161.6	7,270.2	7,153.3	31.0	22.3	-46.16	893.1	-1,530.6	1,788.7	1,759.1	29.65	60.324	
7,650.0	7,175.3	7,281.8	7,164.9	30.9	22.3	-53.95	892.7	-1,530.4	1,742.8	1,710.9	31.92	54.602	
7,700.0	7,185.5	7,290.4	7,173.5	30.8	22.4	-63.27	892.4	-1,530.3	1,696.3	1,661.5	34.85	48.679	
7,750.0	7,192.3	7,295.9	7,179.0	30.7	22.4	-73.87	892.2	-1,530.2	1,649.4	1,611.6	37.77	43.666	
7,800.0	7,195.7	7,298.2	7,181.3	30.7	22.4	-85.11	892.1	-1,530.2	1,602.3	1,562.3	40.00	40.056	
7,828.6	7,196.0	7,298.2	7,181.3	30.6	22.4	-91.46	892.1	-1,530.2	1,575.4	1,534.6	40.81	38.607	
7,900.0	7,195.4	7,296.7	7,179.8	30.6	22.4	-91.31	892.1	-1,530.2	1,508.5	1,466.7	41.81	36.081	
8,000.0	7,194.6	7,294.6	7,177.8	30.6	22.4	-91.09	892.2	-1,530.2	1,415.5	1,372.1	43.40	32.614	
8,100.0	7,193.8	7,292.6	7,175.7	31.0	22.4	-90.87	892.3	-1,530.2	1,323.5	1,278.3	45.18	29.293	
8,200.0	7,193.0	7,290.5	7,173.6	32.1	22.4	-90.64	892.4	-1,530.3	1,232.7	1,185.6	47.12	26.164	
8,300.0	7,192.2	7,288.3	7,171.4	33.8	22.4	-90.41	892.5	-1,530.3	1,143.5	1,094.4	49.18	23.254	
8,400.0	7,191.4	7,286.2	7,169.3	35.8	22.3	-90.19	892.5	-1,530.3	1,056.3	1,004.9	51.34	20.574	
8,500.0	7,190.6	7,284.0	7,167.1	38.0	22.3	-89.95	892.6	-1,530.4	971.4	917.9	53.59	18.127	
8,600.0	7,189.8	7,281.8	7,164.9	40.3	22.3	-89.72	892.7	-1,530.4	889.8	833.9	55.91	15.915	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 704-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,700.0	7,189.0	7,279.6	7,162.7	42.7	22.3	-89.49	892.8	-1,530.4	812.2	753.9	58.29	13.935	
8,800.0	7,188.2	7,277.4	7,160.5	45.1	22.3	-89.25	892.8	-1,530.5	740.1	679.4	60.71	12.190	
8,900.0	7,187.4	7,275.1	7,158.3	47.5	22.3	-89.01	892.9	-1,530.5	675.0	611.9	63.18	10.684	
9,000.0	7,186.6	7,272.9	7,156.0	50.0	22.3	-88.76	893.0	-1,530.5	619.4	553.7	65.68	9.430	
9,100.0	7,185.7	7,270.6	7,153.7	52.6	22.3	-88.52	893.1	-1,530.6	575.8	507.6	68.21	8.442	
9,200.0	7,184.9	7,268.2	7,151.3	55.1	22.3	-88.27	893.2	-1,530.6	547.3	476.5	70.76	7.734	
9,300.0	7,184.1	7,265.9	7,149.0	57.7	22.3	-88.02	893.2	-1,530.7	536.2	462.8	73.34	7.311	
9,310.4	7,184.0	7,265.6	7,148.8	57.9	22.3	-87.99	893.3	-1,530.7	536.1	462.5	73.60	7.283 CC, ES	
9,400.0	7,183.3	7,263.5	7,146.6	60.3	22.3	-87.76	893.3	-1,530.7	543.5	467.6	75.93	7.158 SF	
9,500.0	7,182.5	7,261.1	7,144.2	62.9	22.3	-87.51	893.4	-1,530.7	568.6	490.1	78.53	7.240	
9,600.0	7,181.7	7,258.7	7,141.8	65.5	22.3	-87.25	893.5	-1,530.8	609.3	528.1	81.15	7.508	
9,700.0	7,180.9	7,256.2	7,139.4	68.1	22.3	-86.99	893.6	-1,530.8	662.6	578.9	83.78	7.910	
9,800.0	7,180.1	7,253.7	7,136.9	70.8	22.3	-86.72	893.7	-1,530.9	725.9	639.5	86.41	8.401	
9,900.0	7,179.3	7,251.3	7,134.4	73.5	22.3	-86.46	893.8	-1,530.9	796.8	707.7	89.06	8.947	
10,000.0	7,178.5	7,248.7	7,131.9	76.1	22.3	-86.19	893.8	-1,530.9	873.3	781.6	91.71	9.523	
10,100.0	7,177.7	7,246.2	7,129.3	78.8	22.3	-85.92	893.9	-1,531.0	954.2	859.8	94.36	10.112	
10,200.0	7,176.9	7,243.6	7,126.8	81.5	22.3	-85.64	894.0	-1,531.0	1,038.4	941.4	97.02	10.703	
10,300.0	7,176.0	7,241.0	7,124.2	84.2	22.3	-85.36	894.1	-1,531.1	1,125.2	1,025.6	99.68	11.288	
10,400.0	7,175.2	7,238.4	7,121.6	86.9	22.3	-85.08	894.2	-1,531.1	1,214.1	1,111.7	102.34	11.863	
10,500.0	7,174.4	7,235.8	7,118.9	89.6	22.3	-84.80	894.3	-1,531.2	1,304.5	1,199.5	105.00	12.423	
10,600.0	7,173.6	7,233.1	7,116.2	92.3	22.2	-84.52	894.4	-1,531.2	1,396.2	1,288.6	107.67	12.968	
10,700.0	7,172.8	7,230.4	7,113.5	95.0	22.2	-84.23	894.5	-1,531.3	1,489.0	1,378.7	110.33	13.497	
10,800.0	7,172.0	7,227.6	7,110.8	97.8	22.2	-83.94	894.6	-1,531.3	1,582.7	1,469.7	112.99	14.008	
10,900.0	7,171.2	7,224.8	7,108.0	100.5	22.2	-83.64	894.6	-1,531.4	1,677.1	1,561.5	115.64	14.502	
11,000.0	7,170.4	7,222.0	7,105.2	103.2	22.2	-83.34	894.7	-1,531.4	1,772.1	1,653.8	118.30	14.980	
11,100.0	7,169.6	7,219.2	7,102.4	106.0	22.2	-83.04	894.8	-1,531.5	1,867.7	1,746.7	120.95	15.442	
11,200.0	7,168.8	7,216.3	7,099.5	108.7	22.2	-82.74	894.9	-1,531.5	1,963.6	1,840.0	123.60	15.887	
11,300.0	7,168.0	7,213.4	7,096.6	111.5	22.2	-82.43	895.0	-1,531.6	2,060.0	1,933.7	126.24	16.318	
11,400.0	7,167.1	7,210.5	7,093.7	114.2	22.2	-82.12	895.1	-1,531.6	2,156.6	2,027.8	128.88	16.734	
11,500.0	7,166.3	7,207.5	7,090.7	117.0	22.2	-81.80	895.2	-1,531.7	2,253.6	2,122.1	131.51	17.137	
11,600.0	7,165.5	7,204.5	7,087.7	119.7	22.2	-81.49	895.3	-1,531.7	2,350.8	2,216.7	134.13	17.526	
11,700.0	7,164.7	7,201.5	7,084.6	122.5	22.2	-81.17	895.4	-1,531.8	2,448.3	2,311.5	136.75	17.903	
11,800.0	7,163.9	7,198.4	7,081.6	125.2	22.2	-80.84	895.5	-1,531.9	2,545.9	2,406.5	139.36	18.269	
11,900.0	7,163.1	7,195.3	7,078.5	128.0	22.2	-80.51	895.6	-1,531.9	2,643.7	2,501.7	141.96	18.623	
12,000.0	7,162.3	7,192.1	7,075.3	130.7	22.2	-80.18	895.7	-1,532.0	2,741.7	2,597.1	144.55	18.967	
12,100.0	7,161.5	7,188.9	7,072.1	133.5	22.2	-79.85	895.8	-1,532.0	2,839.8	2,692.6	147.13	19.301	
12,200.0	7,160.7	7,185.7	7,068.9	136.3	22.2	-79.51	895.9	-1,532.1	2,938.0	2,788.3	149.71	19.625	
12,300.0	7,159.8	7,182.5	7,065.6	139.0	22.2	-79.17	896.0	-1,532.2	3,036.3	2,884.0	152.27	19.940	
12,400.0	7,159.0	7,179.1	7,062.3	141.8	22.2	-78.83	896.1	-1,532.2	3,134.8	2,979.9	154.82	20.248	
12,500.0	7,158.2	7,175.8	7,059.0	144.6	22.1	-78.48	896.2	-1,532.3	3,233.3	3,075.9	157.36	20.547	
12,600.0	7,157.4	7,172.4	7,055.6	147.3	22.1	-78.12	896.3	-1,532.4	3,331.9	3,172.0	159.89	20.839	
12,700.0	7,156.6	7,169.0	7,052.2	150.1	22.1	-77.77	896.4	-1,532.5	3,430.6	3,268.2	162.40	21.124	
12,800.0	7,155.8	7,165.5	7,048.7	152.9	22.1	-77.41	896.5	-1,532.5	3,529.4	3,364.5	164.90	21.403	
12,900.0	7,155.0	7,162.0	7,045.2	155.7	22.1	-77.05	896.6	-1,532.6	3,628.2	3,460.8	167.39	21.676	
13,000.0	7,154.2	7,158.4	7,041.6	158.4	22.1	-76.68	896.7	-1,532.7	3,727.1	3,557.2	169.86	21.942	
13,100.0	7,153.3	7,155.0	7,038.2	161.2	22.1	-76.33	896.8	-1,532.8	3,826.0	3,653.7	172.33	22.202	
13,200.0	7,152.5	7,151.5	7,034.8	164.0	22.1	-75.98	896.9	-1,532.8	3,925.0	3,750.2	174.78	22.457	
13,300.0	7,151.7	7,148.1	7,031.3	166.8	22.1	-75.62	897.0	-1,532.9	4,024.1	3,846.8	177.22	22.706	
13,400.0	7,150.9	7,144.6	7,027.8	169.5	22.1	-75.27	897.1	-1,533.0	4,123.1	3,943.5	179.65	22.951	
13,500.0	7,150.1	7,141.1	7,024.3	172.3	22.1	-74.91	897.2	-1,533.1	4,222.3	4,040.2	182.06	23.191	
13,600.0	7,149.3	7,137.5	7,020.8	175.1	22.1	-74.55	897.4	-1,533.1	4,321.4	4,137.0	184.46	23.428	
13,700.0	7,148.5	7,134.0	7,017.2	177.9	22.1	-74.20	897.5	-1,533.2	4,420.6	4,233.8	186.84	23.660	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD CENTENNIAL 12-21DU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 704-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
13,800.0	7,147.6	7,130.4	7,013.6	180.7	22.1	-73.84	897.6	-1,533.3	4,519.9	4,330.7	189.21	23.888	
13,900.0	7,146.8	7,126.8	7,010.1	183.5	22.1	-73.48	897.7	-1,533.4	4,619.1	4,427.6	191.56	24.113	
14,000.0	7,146.0	7,123.2	7,006.5	186.2	22.1	-73.12	897.8	-1,533.5	4,718.4	4,524.5	193.89	24.335	
14,100.0	7,145.2	7,119.6	7,002.8	189.0	22.0	-72.75	897.9	-1,533.5	4,817.7	4,621.5	196.21	24.554	
14,200.0	7,144.4	7,115.9	6,999.2	191.8	22.0	-72.39	898.0	-1,533.6	4,917.1	4,718.6	198.51	24.770	
14,300.0	7,143.6	7,112.3	6,995.5	194.6	22.0	-72.03	898.2	-1,533.7	5,016.5	4,815.7	200.79	24.983	
14,370.2	7,143.0	7,109.7	6,992.9	196.6	22.0	-71.77	898.3	-1,533.8	5,086.2	4,883.9	202.39	25.131	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 703-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	-47.40	1,778.2	-1,934.1	2,627.4				
100.0	100.0	83.1	83.1	0.1	0.1	-47.40	1,778.3	-1,934.0	2,627.3	2,627.1	0.17	N/A	
200.0	200.0	182.6	182.6	0.3	0.2	-47.39	1,778.7	-1,933.7	2,627.3	2,626.8	0.49	5,367.668	
300.0	300.0	282.1	282.1	0.5	0.3	-47.37	1,779.3	-1,933.2	2,627.4	2,626.6	0.81	3,261.740	
400.0	400.0	381.5	381.5	0.8	0.4	-72.60	1,780.2	-1,932.4	2,626.9	2,625.8	1.12	2,342.274	
500.0	499.8	481.0	480.9	1.0	0.4	-72.71	1,781.4	-1,931.5	2,625.4	2,624.0	1.44	1,820.631	
600.0	599.5	580.2	580.2	1.2	0.5	-72.90	1,782.8	-1,930.3	2,623.0	2,621.2	1.78	1,474.124	
700.0	698.7	679.3	679.2	1.5	0.6	-73.17	1,784.4	-1,929.0	2,619.5	2,617.3	2.14	1,221.426	
800.0	797.5	776.5	776.4	1.8	0.8	-73.52	1,786.2	-1,927.6	2,615.1	2,612.5	2.63	996.132	
900.0	895.6	866.4	866.3	2.2	1.0	-73.96	1,787.1	-1,927.2	2,610.0	2,606.8	3.15	828.388	
1,000.0	993.1	993.1	993.0	2.6	1.2	-74.75	1,784.9	-1,929.2	2,603.9	2,600.1	3.80	684.821	
1,100.0	1,089.6	1,147.8	1,147.2	3.1	1.5	-76.01	1,774.6	-1,934.5	2,595.3	2,590.7	4.60	564.244	
1,127.2	1,115.8	1,267.9	1,266.3	3.2	1.8	-77.10	1,760.3	-1,939.4	2,592.3	2,587.3	5.04	514.435	
1,200.0	1,185.5	1,367.2	1,364.3	3.6	2.1	-78.03	1,744.5	-1,943.4	2,582.3	2,576.6	5.71	452.301	
1,300.0	1,281.4	1,462.9	1,458.1	4.1	2.5	-78.99	1,726.7	-1,948.6	2,568.7	2,562.1	6.56	391.447	
1,400.0	1,377.3	1,705.2	1,692.2	4.7	3.5	-81.74	1,665.9	-1,963.0	2,552.2	2,544.0	8.17	312.545	
1,500.0	1,473.1	1,851.9	1,831.7	5.2	4.3	-83.56	1,621.1	-1,970.6	2,533.9	2,524.4	9.49	267.059	
1,600.0	1,569.0	1,973.5	1,947.0	5.8	5.0	-85.09	1,582.9	-1,975.1	2,515.3	2,504.7	10.68	235.590	
1,700.0	1,664.8	2,070.6	2,038.9	6.4	5.5	-86.33	1,551.7	-1,977.3	2,496.5	2,484.8	11.76	212.292	
1,800.0	1,760.7	2,134.3	2,099.2	6.9	5.9	-87.15	1,531.2	-1,978.9	2,479.2	2,466.5	12.66	195.785	
1,900.0	1,856.6	2,199.0	2,160.7	7.5	6.2	-87.99	1,511.0	-1,981.0	2,463.9	2,450.3	13.56	181.701	
2,000.0	1,952.4	2,258.3	2,217.1	8.1	6.5	-88.75	1,492.9	-1,983.4	2,450.5	2,436.0	14.44	169.657	
2,100.0	2,048.3	2,368.2	2,321.5	8.6	7.1	-90.19	1,458.9	-1,987.7	2,438.3	2,422.7	15.62	156.063	
2,200.0	2,144.1	2,471.7	2,419.8	9.2	7.7	-91.55	1,426.7	-1,990.3	2,426.2	2,409.4	16.77	144.655	
2,300.0	2,240.0	2,566.1	2,509.3	9.8	8.3	-92.81	1,396.7	-1,992.4	2,414.8	2,396.9	17.90	134.913	
2,400.0	2,335.9	2,660.8	2,598.6	10.3	8.9	-94.10	1,365.3	-1,994.6	2,404.4	2,385.3	19.07	126.103	
2,500.0	2,431.7	2,761.0	2,692.8	10.9	9.5	-95.49	1,331.2	-1,996.4	2,394.6	2,374.3	20.27	118.128	
2,600.0	2,527.6	2,836.1	2,763.6	11.5	10.0	-96.53	1,306.1	-1,997.4	2,385.9	2,364.7	21.27	112.191	
2,700.0	2,623.4	2,905.7	2,829.4	12.1	10.4	-97.48	1,283.4	-1,998.5	2,379.2	2,356.9	22.23	107.020	
2,800.0	2,719.3	2,968.7	2,888.7	12.6	10.7	-98.37	1,262.2	-2,000.1	2,374.2	2,351.1	23.16	102.501	
2,900.0	2,815.2	3,021.6	2,938.5	13.2	11.1	-99.11	1,244.5	-2,002.0	2,371.6	2,347.5	24.05	98.629	
2,963.9	2,876.4	3,056.2	2,971.1	13.6	11.3	-99.60	1,232.9	-2,003.6	2,371.1	2,346.5	24.60	96.369	
3,000.0	2,911.0	3,076.7	2,990.5	13.8	11.4	-99.89	1,226.3	-2,004.6	2,371.3	2,346.4	24.92	95.159	
3,100.0	3,006.9	3,135.0	3,045.8	14.4	11.7	-100.69	1,208.2	-2,007.6	2,373.3	2,347.5	25.79	92.007	
3,200.0	3,102.7	3,210.9	3,117.9	14.9	12.1	-101.72	1,184.9	-2,012.0	2,377.2	2,350.4	26.77	88.793	
3,300.0	3,198.6	3,273.8	3,177.4	15.5	12.5	-102.59	1,165.1	-2,016.1	2,382.8	2,355.1	27.68	86.079	
3,400.0	3,294.5	3,355.5	3,254.9	16.1	13.0	-103.71	1,139.6	-2,022.0	2,390.4	2,361.7	28.68	83.344	
3,500.0	3,390.3	3,508.5	3,399.9	16.7	13.9	-105.79	1,091.7	-2,030.0	2,397.7	2,367.7	30.04	79.831	
3,600.0	3,486.2	3,547.3	3,436.7	17.2	14.1	-106.32	1,079.4	-2,031.9	2,406.1	2,375.3	30.79	78.149	
3,700.0	3,582.0	3,603.0	3,489.6	17.8	14.4	-107.06	1,062.5	-2,035.8	2,417.3	2,385.7	31.62	76.449	
3,800.0	3,677.9	3,631.8	3,517.0	18.4	14.6	-107.44	1,053.9	-2,038.2	2,431.0	2,398.7	32.31	75.237	
3,900.0	3,773.7	3,697.0	3,578.9	19.0	14.9	-108.30	1,034.5	-2,044.5	2,447.2	2,414.0	33.16	73.789	
4,000.0	3,869.6	3,783.2	3,660.4	19.5	15.5	-109.45	1,007.6	-2,053.2	2,464.9	2,430.8	34.14	72.202	
4,100.0	3,965.5	3,882.6	3,753.5	20.1	16.1	-110.81	974.0	-2,062.2	2,483.1	2,447.9	35.21	70.530	
4,200.0	4,061.3	3,994.0	3,856.8	20.7	16.9	-112.37	933.6	-2,071.3	2,501.9	2,465.6	36.34	68.841	
4,300.0	4,157.2	4,108.5	3,963.1	21.3	17.7	-113.97	891.5	-2,079.0	2,520.9	2,483.4	37.44	67.332	
4,400.0	4,253.0	4,190.3	4,039.0	21.8	18.2	-115.09	861.7	-2,083.8	2,540.6	2,502.2	38.33	66.275	
4,500.0	4,348.9	4,258.0	4,102.4	22.4	18.6	-115.98	838.0	-2,088.2	2,561.9	2,522.8	39.14	65.452	
4,600.0	4,444.8	4,339.8	4,178.8	23.0	19.2	-117.06	809.4	-2,093.6	2,584.7	2,544.7	40.01	64.599	
4,700.0	4,540.6	4,422.1	4,255.3	23.6	19.8	-118.15	779.4	-2,098.7	2,608.4	2,567.5	40.90	63.775	
4,800.0	4,636.5	4,513.2	4,339.7	24.1	20.4	-119.35	745.8	-2,104.1	2,633.2	2,591.4	41.82	62.968	
4,900.0	4,732.3	4,581.5	4,402.9	24.7	20.9	-120.24	720.0	-2,107.9	2,659.1	2,616.5	42.63	62.380	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD CENTENNIAL 21GDU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 703-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	4,828.2	4,644.3	4,460.7	25.3	21.4	-121.07	695.8	-2,111.7	2,686.7	2,643.3	43.39	61.913	
5,100.0	4,924.1	4,745.4	4,554.4	25.9	22.0	-122.36	658.2	-2,118.0	2,715.3	2,671.0	44.26	61.356	
5,200.0	5,019.9	4,855.4	4,666.6	26.4	22.8	-123.72	618.0	-2,123.7	2,744.1	2,698.9	45.11	60.835	
5,300.0	5,115.8	4,937.2	4,733.0	27.0	23.3	-124.70	589.1	-2,127.7	2,773.4	2,727.6	45.85	60.493	
5,400.0	5,211.6	5,006.0	4,797.3	27.6	23.7	-125.50	564.9	-2,131.2	2,804.0	2,757.5	46.53	60.268	
5,500.0	5,307.5	5,314.1	5,093.5	28.2	25.2	-128.54	482.4	-2,141.7	2,831.4	2,783.9	47.50	59.602	
5,600.0	5,403.4	5,441.6	5,219.1	28.7	25.7	-129.55	459.9	-2,143.7	2,856.2	2,808.1	48.07	59.411	
5,700.0	5,499.2	5,559.2	5,335.5	29.3	26.0	-130.37	443.7	-2,145.5	2,880.4	2,831.8	48.60	59.270	
5,800.0	5,595.1	5,633.0	5,408.8	29.9	26.2	-130.85	435.2	-2,147.0	2,904.8	2,855.7	49.09	59.179	
5,840.7	5,634.1	5,665.5	5,441.0	30.1	26.3	-131.06	431.6	-2,147.9	2,915.0	2,865.8	49.28	59.149	
5,900.0	5,691.1	5,779.4	5,554.3	30.4	26.6	-131.95	420.0	-2,150.1	2,929.0	2,879.5	49.50	59.169	
6,000.0	5,788.0	5,912.1	5,686.6	30.8	26.9	-132.94	408.8	-2,151.2	2,949.4	2,899.6	49.81	59.210	
6,100.0	5,885.7	6,025.0	5,799.2	31.2	27.1	-133.69	401.1	-2,151.6	2,966.9	2,916.8	50.11	59.212	
6,200.0	5,984.0	6,161.0	5,935.0	31.5	27.3	-134.37	393.8	-2,151.4	2,981.1	2,930.7	50.39	59.157	
6,300.0	6,083.0	6,290.5	6,064.4	31.8	27.5	-134.88	388.7	-2,150.6	2,992.1	2,941.5	50.67	59.055	
6,400.0	6,182.3	6,396.0	6,169.9	32.0	27.6	-135.20	386.1	-2,149.4	2,999.8	2,948.9	50.91	58.919	
6,500.0	6,282.0	6,482.3	6,256.1	32.2	27.8	-135.41	383.9	-2,148.7	3,005.3	2,954.2	51.13	58.774	
6,600.0	6,382.0	6,575.2	6,349.0	32.3	27.9	-135.57	381.1	-2,148.1	3,008.7	2,957.4	51.34	58.599	
6,668.0	6,449.9	6,640.2	6,413.9	32.4	28.0	-110.42	379.0	-2,147.7	3,009.7	2,964.0	45.70	65.856	
6,698.0	6,479.9	6,668.9	6,442.6	32.4	28.0	-110.44	377.9	-2,147.5	3,009.9	2,964.1	45.79	65.740	
6,700.0	6,481.9	6,670.8	6,444.5	32.4	28.0	-20.44	377.9	-2,147.5	3,009.9	2,958.3	51.56	58.382	
6,750.0	6,531.9	6,717.4	6,491.1	32.5	28.1	-20.52	376.1	-2,147.2	3,008.5	2,957.0	51.47	58.452	
6,800.0	6,581.6	6,762.9	6,536.5	32.5	28.2	-20.72	374.2	-2,147.0	3,003.9	2,952.8	51.11	58.772	
6,850.0	6,630.8	6,821.4	6,595.0	32.5	28.3	-21.07	371.7	-2,146.6	2,996.1	2,945.6	50.49	59.335	
6,900.0	6,679.3	6,885.9	6,659.4	32.4	28.4	-21.57	369.0	-2,145.8	2,984.8	2,935.2	49.61	60.161	
6,950.0	6,726.8	6,930.1	6,703.5	32.4	28.4	-22.17	367.1	-2,145.1	2,970.3	2,921.9	48.47	61.288	
7,000.0	6,773.1	6,971.0	6,744.4	32.3	28.5	-22.90	365.2	-2,144.5	2,952.9	2,905.8	47.07	62.727	
7,050.0	6,817.9	7,014.1	6,787.5	32.3	28.6	-23.82	363.1	-2,143.9	2,932.5	2,887.0	45.47	64.499	
7,100.0	6,861.2	7,053.7	6,827.0	32.2	28.7	-24.91	361.0	-2,143.3	2,909.3	2,865.7	43.66	66.640	
7,150.0	6,902.5	7,089.1	6,862.3	32.1	28.7	-26.19	359.0	-2,142.8	2,883.5	2,841.9	41.69	69.168	
7,200.0	6,941.8	7,121.9	6,895.1	32.0	28.8	-27.70	357.1	-2,142.3	2,855.3	2,815.6	39.61	72.092	
7,250.0	6,978.9	7,158.0	6,931.1	31.9	28.9	-29.54	354.9	-2,141.9	2,824.6	2,787.2	37.47	75.382	
7,300.0	7,013.5	7,186.3	6,959.4	31.7	28.9	-31.64	353.1	-2,141.6	2,791.8	2,756.4	35.38	78.900	
7,350.0	7,045.5	7,218.2	6,991.2	31.6	29.0	-34.20	351.1	-2,141.2	2,756.8	2,723.4	33.47	82.371	
7,400.0	7,074.8	7,247.1	7,020.1	31.5	29.0	-37.22	349.2	-2,140.8	2,720.0	2,688.1	31.90	85.263	
7,450.0	7,101.1	7,274.2	7,047.1	31.4	29.1	-40.80	347.4	-2,140.5	2,681.4	2,650.5	30.89	86.797	
7,500.0	7,124.5	7,298.2	7,071.1	31.3	29.1	-45.01	345.9	-2,140.1	2,641.4	2,610.7	30.64	86.200	
7,550.0	7,144.7	7,318.8	7,091.6	31.1	29.2	-49.92	344.5	-2,139.8	2,600.0	2,568.8	31.26	83.180	
7,600.0	7,161.6	7,335.9	7,108.6	31.0	29.2	-55.59	343.3	-2,139.5	2,557.6	2,524.9	32.69	78.237	
7,650.0	7,175.3	7,349.4	7,122.1	30.9	29.2	-62.01	342.4	-2,139.3	2,514.4	2,479.7	34.71	72.430	
7,700.0	7,185.5	7,359.4	7,132.1	30.8	29.3	-69.11	341.7	-2,139.2	2,470.5	2,433.5	36.97	66.817	
7,750.0	7,192.3	7,365.7	7,138.4	30.7	29.3	-76.68	341.3	-2,139.1	2,426.2	2,387.2	39.07	62.094	
7,800.0	7,195.7	7,368.3	7,141.0	30.7	29.3	-84.45	341.1	-2,139.0	2,381.8	2,341.1	40.69	58.540	
7,828.6	7,196.0	7,368.2	7,140.8	30.6	29.3	-88.85	341.2	-2,139.0	2,356.4	2,315.1	41.32	57.024	
7,900.0	7,195.4	7,366.3	7,138.9	30.6	29.3	-88.75	341.3	-2,139.0	2,293.3	2,251.0	42.33	54.182	
8,000.0	7,194.6	7,363.7	7,136.3	30.6	29.3	-88.61	341.5	-2,139.1	2,205.8	2,161.9	43.92	50.221	
8,100.0	7,193.8	7,361.1	7,133.7	31.0	29.3	-88.48	341.6	-2,139.1	2,119.4	2,073.7	45.71	46.369	
8,200.0	7,193.0	7,358.5	7,131.2	32.1	29.3	-88.34	341.8	-2,139.2	2,034.2	1,986.6	47.65	42.694	
8,300.0	7,192.2	7,355.9	7,128.6	33.8	29.3	-88.21	342.0	-2,139.2	1,950.4	1,900.7	49.71	39.234	
8,400.0	7,191.4	7,353.4	7,126.1	35.8	29.3	-88.07	342.2	-2,139.3	1,868.2	1,816.4	51.88	36.009	
8,500.0	7,190.6	7,350.8	7,123.5	38.0	29.2	-87.94	342.3	-2,139.3	1,787.9	1,733.7	54.14	33.025	
8,600.0	7,189.8	7,348.3	7,121.0	40.3	29.2	-87.81	342.5	-2,139.3	1,709.6	1,653.1	56.46	30.278	

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 SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD CENTENNIAL 21GDU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 703-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,700.0	7,189.0	7,345.8	7,118.5	42.7	29.2	-87.67	342.7	-2,139.4	1,633.6	1,574.8	58.85	27.761	
8,800.0	7,188.2	7,343.3	7,116.1	45.1	29.2	-87.54	342.8	-2,139.4	1,560.4	1,499.1	61.28	25.464	
8,900.0	7,187.4	7,340.9	7,113.6	47.5	29.2	-87.42	343.0	-2,139.5	1,490.3	1,426.6	63.75	23.377	
9,000.0	7,186.6	7,338.5	7,111.2	50.0	29.2	-87.29	343.2	-2,139.5	1,423.8	1,357.5	66.26	21.488	
9,100.0	7,185.7	7,336.1	7,108.8	52.6	29.2	-87.16	343.3	-2,139.5	1,361.3	1,292.5	68.80	19.788	
9,200.0	7,184.9	7,333.7	7,106.4	55.1	29.2	-87.04	343.5	-2,139.6	1,303.6	1,232.2	71.36	18.268	
9,300.0	7,184.1	7,331.3	7,104.1	57.7	29.2	-86.91	343.6	-2,139.6	1,251.2	1,177.2	73.94	16.921	
9,400.0	7,183.3	7,329.0	7,101.7	60.3	29.2	-86.79	343.8	-2,139.7	1,204.8	1,128.2	76.54	15.739	
9,500.0	7,182.5	7,326.6	7,099.4	62.9	29.2	-86.67	344.0	-2,139.7	1,165.1	1,086.0	79.16	14.718	
9,600.0	7,181.7	7,324.3	7,097.1	65.5	29.2	-86.54	344.1	-2,139.7	1,132.9	1,051.1	81.79	13.851	
9,700.0	7,180.9	7,322.0	7,094.8	68.1	29.2	-86.42	344.3	-2,139.8	1,108.9	1,024.4	84.44	13.132	
9,800.0	7,180.1	7,319.7	7,092.5	70.8	29.2	-86.30	344.4	-2,139.8	1,093.4	1,006.3	87.09	12.555	
9,900.0	7,179.3	7,317.5	7,090.2	73.5	29.2	-86.18	344.6	-2,139.8	1,087.0	997.3	89.76	12.111	
9,920.0	7,179.1	7,317.0	7,089.8	74.0	29.2	-86.16	344.6	-2,139.8	1,086.8	996.5	90.29	12.037 CC, ES	
10,000.0	7,178.5	7,315.2	7,088.0	76.1	29.2	-86.06	344.7	-2,139.9	1,089.8	997.3	92.43	11.790	
10,100.0	7,177.7	7,313.0	7,085.8	78.8	29.2	-85.94	344.9	-2,139.9	1,101.6	1,006.5	95.11	11.583	
10,200.0	7,176.9	7,310.8	7,083.5	81.5	29.2	-85.83	345.0	-2,139.9	1,122.3	1,024.5	97.79	11.476	
10,300.0	7,176.0	7,308.5	7,081.3	84.2	29.2	-85.71	345.2	-2,140.0	1,151.3	1,050.8	100.48	11.458 SF	
10,400.0	7,175.2	7,306.4	7,079.2	86.9	29.2	-85.60	345.3	-2,140.0	1,188.0	1,084.9	103.18	11.514	
10,500.0	7,174.4	7,304.2	7,077.0	89.6	29.2	-85.48	345.5	-2,140.0	1,231.8	1,125.9	105.88	11.634	
10,600.0	7,173.6	7,302.0	7,074.8	92.3	29.1	-85.37	345.6	-2,140.1	1,281.9	1,173.3	108.59	11.806	
10,700.0	7,172.8	7,299.9	7,072.7	95.0	29.1	-85.25	345.8	-2,140.1	1,337.6	1,226.3	111.29	12.019	
10,800.0	7,172.0	7,297.7	7,070.6	97.8	29.1	-85.14	345.9	-2,140.1	1,398.3	1,284.3	114.00	12.265	
10,900.0	7,171.2	7,295.6	7,068.4	100.5	29.1	-85.03	346.0	-2,140.2	1,463.2	1,346.5	116.72	12.537	
11,000.0	7,170.4	7,293.5	7,066.3	103.2	29.1	-84.92	346.2	-2,140.2	1,532.0	1,412.5	119.43	12.821	
11,100.0	7,169.6	7,291.4	7,064.3	106.0	29.1	-84.81	346.3	-2,140.2	1,604.0	1,481.9	122.15	13.137	
11,200.0	7,168.8	7,289.3	7,062.2	108.7	29.1	-84.70	346.5	-2,140.3	1,678.9	1,554.0	124.87	13.445	
11,300.0	7,168.0	7,287.3	7,060.1	111.5	29.1	-84.59	346.6	-2,140.3	1,756.3	1,628.7	127.59	13.765	
11,400.0	7,167.1	7,285.2	7,058.1	114.2	29.1	-84.48	346.7	-2,140.3	1,835.9	1,705.6	130.32	14.088	
11,500.0	7,166.3	7,283.2	7,056.0	117.0	29.1	-84.37	346.9	-2,140.3	1,917.4	1,784.3	133.04	14.412	
11,600.0	7,165.5	7,281.2	7,054.0	119.7	29.1	-84.27	347.0	-2,140.4	2,000.5	1,864.8	135.77	14.735	
11,700.0	7,164.7	7,279.2	7,052.0	122.5	29.1	-84.16	347.1	-2,140.4	2,085.2	1,946.7	138.49	15.056	
11,800.0	7,163.9	7,277.2	7,050.0	125.2	29.1	-84.06	347.3	-2,140.4	2,171.1	2,029.9	141.22	15.374	
11,900.0	7,163.1	7,275.2	7,048.0	128.0	29.1	-83.95	347.4	-2,140.5	2,258.2	2,114.3	143.95	15.688	
12,000.0	7,162.3	7,273.2	7,046.1	130.7	29.1	-83.85	347.5	-2,140.5	2,346.4	2,199.7	146.67	15.997	
12,100.0	7,161.5	7,271.2	7,044.1	133.5	29.1	-83.74	347.6	-2,140.5	2,435.4	2,286.0	149.40	16.301	
12,200.0	7,160.7	7,269.3	7,042.2	136.3	29.1	-83.64	347.8	-2,140.5	2,525.3	2,373.1	152.13	16.599	
12,300.0	7,159.8	7,267.4	7,040.3	139.0	29.1	-83.54	347.9	-2,140.6	2,615.9	2,461.0	154.86	16.892	
12,400.0	7,159.0	7,265.4	7,038.3	141.8	29.1	-83.44	348.0	-2,140.6	2,707.1	2,549.5	157.59	17.179	
12,500.0	7,158.2	7,263.5	7,036.4	144.6	29.1	-83.34	348.2	-2,140.6	2,799.0	2,638.7	160.31	17.459	
12,600.0	7,157.4	7,261.6	7,034.5	147.3	29.1	-83.24	348.3	-2,140.6	2,891.4	2,728.3	163.04	17.734	
12,700.0	7,156.6	7,259.8	7,032.7	150.1	29.1	-83.14	348.4	-2,140.7	2,984.3	2,818.5	165.77	18.002	
12,800.0	7,155.8	7,257.9	7,030.8	152.9	29.1	-83.04	348.5	-2,140.7	3,077.6	2,909.1	168.50	18.265	
12,900.0	7,155.0	7,251.0	7,023.9	155.7	29.0	-82.68	349.0	-2,140.8	3,171.3	3,000.2	171.13	18.532	
13,000.0	7,154.2	7,251.0	7,023.9	158.4	29.0	-82.68	349.0	-2,140.8	3,265.4	3,091.5	173.89	18.779	
13,100.0	7,153.3	7,251.0	7,023.9	161.2	29.0	-82.68	349.0	-2,140.8	3,359.9	3,183.2	176.65	19.020	
13,200.0	7,152.5	7,251.0	7,023.9	164.0	29.0	-82.68	349.0	-2,140.8	3,454.6	3,275.2	179.42	19.255	
13,300.0	7,151.7	7,251.0	7,023.9	166.8	29.0	-82.68	349.0	-2,140.8	3,549.7	3,367.5	182.18	19.484	
13,400.0	7,150.9	7,251.0	7,023.9	169.5	29.0	-82.68	349.0	-2,140.8	3,645.0	3,460.0	184.95	19.708	
13,500.0	7,150.1	7,244.8	7,017.7	172.3	29.0	-82.35	349.4	-2,140.9	3,740.5	3,552.9	187.57	19.942	
13,600.0	7,149.3	7,242.9	7,015.9	175.1	29.0	-82.25	349.5	-2,140.9	3,836.3	3,646.0	190.29	20.160	
13,700.0	7,148.5	7,241.0	7,014.0	177.9	29.0	-82.15	349.6	-2,140.9	3,932.3	3,739.3	193.01	20.373	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD CENTENNIAL 21GDU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 703-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
13,800.0	7,147.6	7,239.2	7,012.1	180.7	29.0	-82.06	349.7	-2,140.9	4,028.5	3,832.7	195.73	20.581	
13,900.0	7,146.8	7,237.3	7,010.2	183.5	29.0	-81.96	349.9	-2,140.9	4,124.8	3,926.4	198.45	20.785	
14,000.0	7,146.0	7,235.4	7,008.4	186.2	29.0	-81.86	350.0	-2,141.0	4,221.3	4,020.2	201.17	20.984	
14,100.0	7,145.2	7,233.6	7,006.5	189.0	29.0	-81.76	350.1	-2,141.0	4,318.0	4,114.1	203.88	21.179	
14,200.0	7,144.4	7,231.7	7,004.7	191.8	29.0	-81.67	350.2	-2,141.0	4,414.9	4,208.3	206.60	21.369	
14,300.0	7,143.6	7,229.9	7,002.9	194.6	29.0	-81.57	350.3	-2,141.0	4,511.8	4,302.5	209.31	21.556	
14,370.2	7,143.0	7,228.6	7,001.6	196.6	29.0	-81.50	350.4	-2,141.1	4,580.0	4,368.8	211.22	21.684	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 155-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	-46.67	1,783.7	-1,890.5	2,599.2				
100.0	100.0	91.4	91.4	0.1	0.0	-46.66	1,783.7	-1,890.4	2,599.1	2,598.9	0.11	N/A	
200.0	200.0	201.8	201.8	0.3	0.1	-46.65	1,783.6	-1,889.7	2,598.6	2,598.1	0.45	5,819.120	
300.0	300.0	611.1	609.7	0.5	1.2	-46.93	1,756.6	-1,879.0	2,592.8	2,591.1	1.70	1,525.247	
400.0	400.0	1,247.5	1,228.6	0.8	4.1	-73.74	1,635.8	-1,804.8	2,577.7	2,574.0	3.72	692.095	
500.0	499.8	1,468.8	1,435.1	1.0	5.6	-75.05	1,575.0	-1,753.7	2,540.2	2,535.5	4.68	542.977	
600.0	599.5	1,595.3	1,551.7	1.2	6.6	-76.37	1,537.1	-1,722.5	2,499.6	2,494.2	5.38	464.689	
700.0	698.7	1,670.0	1,620.6	1.5	7.1	-77.62	1,514.8	-1,704.3	2,458.6	2,452.7	5.93	414.524	
800.0	797.5	1,750.3	1,694.9	1.8	7.7	-79.00	1,490.8	-1,685.1	2,417.5	2,411.0	6.56	368.728	
900.0	895.6	1,828.8	1,767.3	2.2	8.2	-80.48	1,466.8	-1,666.8	2,376.0	2,368.8	7.26	327.444	
1,000.0	993.1	1,899.7	1,832.9	2.6	8.7	-81.99	1,445.3	-1,650.7	2,334.8	2,326.8	8.00	291.892	
1,100.0	1,089.6	1,975.0	1,902.7	3.1	9.2	-83.62	1,422.8	-1,633.9	2,294.1	2,285.3	8.84	259.449	
1,127.2	1,115.8	2,001.1	1,927.0	3.2	9.4	-84.14	1,414.9	-1,628.1	2,283.1	2,274.0	9.12	250.411	
1,200.0	1,185.5	2,065.6	1,986.7	3.6	9.8	-84.86	1,395.3	-1,613.8	2,253.6	2,243.8	9.80	229.980	
1,300.0	1,281.4	2,138.0	2,053.8	4.1	10.3	-85.68	1,373.4	-1,597.7	2,213.8	2,203.1	10.69	207.177	
1,400.0	1,377.3	2,210.4	2,121.1	4.7	10.8	-86.52	1,352.1	-1,581.6	2,175.0	2,163.4	11.57	188.004	
1,500.0	1,473.1	2,295.9	2,200.7	5.2	11.4	-87.52	1,327.3	-1,562.9	2,137.3	2,124.7	12.55	170.330	
1,600.0	1,569.0	2,369.0	2,268.7	5.8	11.9	-88.43	1,305.4	-1,547.3	2,100.2	2,086.7	13.49	155.655	
1,700.0	1,664.8	2,435.9	2,331.2	6.4	12.3	-89.28	1,285.5	-1,533.6	2,064.7	2,050.2	14.42	143.201	
1,800.0	1,760.7	2,512.0	2,402.3	6.9	12.8	-90.27	1,263.5	-1,518.2	2,030.4	2,015.0	15.39	131.899	
1,900.0	1,856.6	2,639.5	2,521.0	7.5	13.7	-91.99	1,225.1	-1,491.6	1,995.9	1,979.2	16.73	119.312	
2,000.0	1,952.4	2,744.8	2,618.4	8.1	14.5	-93.51	1,191.9	-1,469.4	1,961.7	1,943.7	18.00	109.010	
2,100.0	2,048.3	2,833.4	2,699.8	8.6	15.2	-94.84	1,162.8	-1,449.9	1,927.0	1,907.8	19.17	100.501	
2,200.0	2,144.1	2,900.1	2,761.4	9.2	15.7	-95.85	1,141.8	-1,435.4	1,894.2	1,874.0	20.20	93.762	
2,300.0	2,240.0	3,011.6	2,864.3	9.8	16.5	-97.57	1,106.8	-1,410.5	1,862.1	1,840.5	21.55	86.392	
2,400.0	2,335.9	3,104.2	2,949.3	10.3	17.2	-99.05	1,077.4	-1,388.8	1,830.1	1,807.2	22.80	80.249	
2,500.0	2,431.7	3,167.0	3,007.2	10.9	17.7	-100.06	1,058.1	-1,373.9	1,799.4	1,775.6	23.83	75.516	
2,600.0	2,527.6	3,237.9	3,072.9	11.5	18.2	-101.20	1,036.9	-1,357.4	1,770.8	1,745.9	24.89	71.143	
2,700.0	2,623.4	3,317.0	3,146.3	12.1	18.7	-102.51	1,013.5	-1,339.8	1,744.1	1,718.1	26.03	67.015	
2,800.0	2,719.3	3,401.8	3,225.1	12.6	19.3	-103.94	988.6	-1,320.8	1,718.7	1,691.4	27.21	63.170	
2,900.0	2,815.2	3,477.8	3,296.0	13.2	19.9	-105.22	967.1	-1,303.5	1,694.7	1,666.3	28.32	59.849	
3,000.0	2,911.0	3,546.1	3,359.7	13.8	20.3	-106.39	947.6	-1,288.7	1,672.8	1,643.4	29.36	56.964	
3,100.0	3,006.9	3,635.0	3,442.8	14.4	20.9	-107.96	922.2	-1,269.7	1,652.5	1,622.0	30.57	54.055	
3,200.0	3,102.7	3,702.4	3,505.8	14.9	21.4	-109.16	903.2	-1,255.5	1,634.1	1,602.5	31.61	51.691	
3,300.0	3,198.6	3,773.5	3,572.6	15.5	21.8	-110.44	883.3	-1,241.2	1,618.1	1,585.4	32.67	49.523	
3,400.0	3,294.5	3,874.6	3,667.7	16.1	22.5	-112.29	855.1	-1,221.2	1,604.0	1,570.0	33.96	47.235	
3,500.0	3,390.3	3,972.6	3,758.7	16.7	23.2	-114.17	825.6	-1,200.6	1,589.9	1,554.7	35.25	45.100	
3,600.0	3,486.2	4,052.4	3,832.7	17.2	23.8	-115.74	800.8	-1,183.9	1,577.8	1,541.3	36.42	43.326	
3,700.0	3,582.0	4,128.2	3,903.0	17.8	24.3	-117.27	776.9	-1,168.3	1,567.6	1,530.1	37.53	41.767	
3,800.0	3,677.9	4,198.9	3,968.7	18.4	24.8	-118.68	755.2	-1,154.2	1,560.1	1,521.5	38.58	40.432	
3,900.0	3,773.7	4,309.3	4,072.0	19.0	25.6	-120.83	723.4	-1,131.4	1,553.6	1,513.8	39.86	38.978	
4,000.0	3,869.6	4,383.0	4,141.1	19.5	26.1	-122.25	702.9	-1,116.1	1,549.0	1,508.2	40.85	37.917	
4,100.0	3,965.5	4,450.1	4,204.2	20.1	26.5	-123.55	684.2	-1,102.9	1,547.0	1,505.2	41.79	37.016	
4,134.3	3,998.4	4,476.0	4,228.5	20.3	26.7	-124.05	676.9	-1,097.9	1,546.9	1,504.7	42.13	36.718	
4,200.0	4,061.3	4,518.1	4,268.1	20.7	27.0	-124.87	664.9	-1,090.1	1,547.5	1,504.8	42.72	36.224	
4,300.0	4,157.2	4,603.3	4,348.3	21.3	27.5	-126.53	640.4	-1,074.9	1,550.7	1,507.0	43.74	35.457	
4,400.0	4,253.0	4,731.2	4,468.1	21.8	28.4	-129.03	603.7	-1,049.3	1,553.9	1,508.9	44.97	34.552	
4,500.0	4,348.9	4,814.5	4,546.1	22.4	28.9	-130.63	580.5	-1,031.8	1,557.8	1,511.9	45.91	33.932	
4,600.0	4,444.8	4,893.8	4,620.6	23.0	29.4	-132.14	558.6	-1,015.5	1,563.9	1,517.1	46.78	33.427	
4,700.0	4,540.6	4,978.5	4,700.8	23.6	30.0	-133.68	537.0	-998.8	1,571.7	1,524.1	47.65	32.985	
4,800.0	4,636.5	5,059.5	4,777.5	24.1	30.5	-135.15	516.1	-982.8	1,581.3	1,532.9	48.47	32.627	
4,900.0	4,732.3	5,134.9	4,849.1	24.7	30.9	-136.48	497.3	-968.6	1,592.9	1,543.7	49.23	32.357	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD CENTENNIAL 21KDU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 155-MWD												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	4,828.2	5,217.2	4,927.8	25.3	31.4	-137.85	478.3	-954.2	1,606.4	1,556.5	49.96	32.153	
5,100.0	4,924.1	5,286.3	4,994.5	25.9	31.8	-138.92	464.0	-943.3	1,621.8	1,571.2	50.60	32.051	
5,200.0	5,019.9	5,360.2	5,066.5	26.4	32.1	-139.97	450.4	-933.4	1,639.3	1,588.0	51.21	32.009	
5,300.0	5,115.8	5,441.2	5,145.8	27.0	32.4	-141.04	437.2	-924.1	1,658.3	1,606.5	51.80	32.014	
5,400.0	5,211.6	5,525.6	5,228.9	27.6	32.7	-142.06	425.1	-915.6	1,678.6	1,626.2	52.35	32.063	
5,500.0	5,307.5	5,608.3	5,310.7	28.2	33.0	-142.97	415.0	-908.7	1,700.0	1,647.1	52.87	32.154	
5,600.0	5,403.4	5,696.3	5,398.1	28.7	33.2	-143.84	406.1	-902.8	1,722.3	1,669.0	53.36	32.280	
5,700.0	5,499.2	5,797.6	5,498.9	29.3	33.4	-144.75	397.7	-897.0	1,745.0	1,691.2	53.82	32.425	
5,800.0	5,595.1	5,908.8	5,609.7	29.9	33.7	-145.63	391.2	-891.2	1,767.2	1,713.0	54.25	32.574	
5,840.7	5,634.1	5,945.3	5,646.1	30.1	33.7	-145.90	389.6	-889.5	1,776.3	1,721.8	54.42	32.639	
5,900.0	5,691.1	5,999.5	5,700.2	30.4	33.8	-146.43	387.2	-887.1	1,789.1	1,734.3	54.74	32.685	
6,000.0	5,788.0	6,090.9	5,791.4	30.8	34.0	-147.22	383.5	-883.3	1,808.7	1,753.5	55.20	32.769	
6,100.0	5,885.7	6,180.8	5,881.2	31.2	34.1	-147.87	380.2	-880.3	1,826.2	1,770.5	55.61	32.838	
6,200.0	5,984.0	6,285.8	5,986.2	31.5	34.2	-148.44	378.2	-877.7	1,840.5	1,784.5	55.97	32.880	
6,300.0	6,083.0	6,372.4	6,072.8	31.8	34.3	-148.82	377.2	-876.4	1,852.3	1,796.0	56.28	32.912	
6,400.0	6,182.3	6,467.8	6,168.2	32.0	34.4	-149.14	375.8	-875.2	1,861.6	1,805.0	56.54	32.923	
6,500.0	6,282.0	6,564.4	6,264.7	32.2	34.5	-149.38	374.2	-874.1	1,868.0	1,811.3	56.76	32.909	
6,600.0	6,382.0	6,658.1	6,358.4	32.3	34.6	-149.54	372.4	-873.1	1,871.8	1,814.9	56.94	32.876	
6,668.0	6,449.9	6,725.5	6,425.8	32.4	34.7	-124.39	371.1	-872.6	1,872.8	1,825.8	46.98	39.867	
6,698.0	6,479.9	6,756.1	6,456.4	32.4	34.8	-124.41	370.6	-872.4	1,872.9	1,825.9	47.06	39.801	
6,700.0	6,481.9	6,758.2	6,458.5	32.4	34.8	-34.41	370.6	-872.3	1,872.9	1,815.8	57.09	32.804	
6,750.0	6,531.9	6,809.1	6,509.4	32.5	34.8	-34.53	369.9	-872.1	1,871.5	1,814.6	56.91	32.885	
6,800.0	6,581.6	6,855.4	6,555.7	32.5	34.9	-34.83	369.3	-871.9	1,867.3	1,810.8	56.49	33.055	
6,850.0	6,630.8	6,900.6	6,600.9	32.5	34.9	-35.31	368.8	-871.9	1,860.3	1,804.5	55.85	33.311	
6,900.0	6,679.3	6,947.5	6,647.8	32.4	34.9	-35.99	368.3	-872.0	1,850.7	1,795.7	54.99	33.654	
6,950.0	6,726.8	6,994.1	6,694.4	32.4	35.0	-36.87	367.9	-872.2	1,838.3	1,784.4	53.95	34.077	
7,000.0	6,773.1	7,039.3	6,739.6	32.3	35.0	-37.98	367.7	-872.5	1,823.4	1,770.6	52.74	34.574	
7,050.0	6,817.9	7,083.2	6,783.5	32.3	35.1	-39.31	367.5	-872.9	1,805.9	1,754.5	51.41	35.131	
7,100.0	6,861.2	7,128.2	6,828.5	32.2	35.1	-40.93	367.3	-873.3	1,786.1	1,736.1	49.99	35.726	
7,150.0	6,902.5	7,172.6	6,872.9	32.1	35.1	-42.85	367.2	-873.7	1,763.9	1,715.4	48.57	36.318	
7,200.0	6,941.8	7,214.4	6,914.7	32.0	35.2	-45.06	367.1	-873.9	1,739.6	1,692.4	47.21	36.850	
7,250.0	6,978.9	7,253.7	6,953.9	31.9	35.2	-47.58	367.0	-874.2	1,713.4	1,667.4	46.00	37.247	
7,300.0	7,013.5	7,291.2	6,991.5	31.7	35.2	-50.45	367.1	-874.4	1,685.4	1,640.3	45.04	37.419	
7,350.0	7,045.5	7,329.5	7,029.7	31.6	35.3	-53.75	367.2	-874.6	1,655.8	1,611.4	44.42	37.273	
7,400.0	7,074.8	7,364.1	7,064.4	31.5	35.3	-57.37	367.3	-874.6	1,624.8	1,580.7	44.18	36.775	
7,450.0	7,101.1	7,392.9	7,093.2	31.4	35.3	-61.21	367.4	-874.5	1,592.8	1,548.5	44.30	35.957	
7,500.0	7,124.5	7,416.7	7,117.0	31.3	35.3	-65.22	367.5	-874.4	1,560.0	1,515.3	44.70	34.897	
7,550.0	7,144.7	7,437.3	7,137.6	31.1	35.3	-69.38	367.6	-874.3	1,526.7	1,481.4	45.32	33.687	
7,600.0	7,161.6	7,454.4	7,154.7	31.0	35.4	-73.60	367.7	-874.3	1,493.1	1,447.1	46.06	32.421	
7,650.0	7,175.3	7,468.1	7,168.4	30.9	35.4	-77.76	367.7	-874.2	1,459.6	1,412.8	46.83	31.167	
7,700.0	7,185.5	7,478.5	7,178.7	30.8	35.4	-81.79	367.7	-874.1	1,426.4	1,378.8	47.61	29.962	
7,750.0	7,192.3	7,485.2	7,185.5	30.7	35.4	-85.57	367.8	-874.1	1,393.8	1,345.4	48.36	28.821	
7,800.0	7,195.7	7,488.3	7,188.6	30.7	35.4	-89.04	367.8	-874.0	1,361.9	1,312.8	49.10	27.738	
7,828.6	7,196.0	7,488.4	7,188.7	30.6	35.4	-90.85	367.8	-874.0	1,344.2	1,294.7	49.53	27.140	
7,900.0	7,195.4	7,487.3	7,187.5	30.6	35.4	-90.79	367.8	-874.0	1,301.6	1,251.1	50.54	25.756	
8,000.0	7,194.6	7,485.7	7,186.0	30.6	35.4	-90.71	367.8	-874.1	1,246.4	1,194.2	52.14	23.905	
8,100.0	7,193.8	7,484.1	7,184.4	31.0	35.4	-90.62	367.8	-874.1	1,197.0	1,143.0	53.93	22.196	
8,200.0	7,193.0	7,482.6	7,182.9	32.1	35.4	-90.54	367.8	-874.1	1,154.1	1,098.3	55.87	20.657	
8,300.0	7,192.2	7,481.1	7,181.4	33.8	35.4	-90.46	367.7	-874.1	1,118.6	1,060.7	57.94	19.306	
8,400.0	7,191.4	7,479.6	7,179.9	35.8	35.4	-90.38	367.7	-874.1	1,091.2	1,031.0	60.12	18.150	
8,500.0	7,190.6	7,478.1	7,178.4	38.0	35.4	-90.30	367.7	-874.1	1,072.3	1,010.0	62.38	17.191	
8,600.0	7,189.8	7,476.7	7,177.0	40.3	35.4	-90.22	367.7	-874.1	1,062.6	997.9	64.71	16.421	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 155-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,653.6	7,189.3	7,476.0	7,176.2	41.6	35.4	-90.18	367.7	-874.1	1,061.3	995.3	65.99	16.082	CC
8,700.0	7,189.0	7,475.3	7,175.6	42.7	35.4	-90.15	367.7	-874.1	1,062.3	995.2	67.10	15.831	ES
8,800.0	7,188.2	7,473.9	7,174.2	45.1	35.4	-90.07	367.7	-874.1	1,071.3	1,001.8	69.54	15.406	
8,900.0	7,187.4	7,471.0	7,171.3	47.5	35.4	-89.92	367.7	-874.2	1,089.5	1,017.5	72.02	15.128	
9,000.0	7,186.6	7,471.0	7,171.3	50.0	35.4	-89.92	367.7	-874.2	1,116.4	1,041.8	74.54	14.977	
9,100.0	7,185.7	7,471.0	7,171.3	52.6	35.4	-89.92	367.7	-874.2	1,151.3	1,074.2	77.09	14.935	SF
9,200.0	7,184.9	7,468.5	7,168.7	55.1	35.4	-89.78	367.7	-874.2	1,193.6	1,114.0	79.65	14.985	
9,300.0	7,184.1	7,467.1	7,167.4	57.7	35.4	-89.70	367.7	-874.2	1,242.6	1,160.3	82.25	15.108	
9,400.0	7,183.3	7,465.7	7,166.0	60.3	35.4	-89.63	367.7	-874.2	1,297.4	1,212.5	84.86	15.289	
9,500.0	7,182.5	7,464.4	7,164.7	62.9	35.4	-89.56	367.7	-874.2	1,357.4	1,269.9	87.49	15.515	
9,600.0	7,181.7	7,463.0	7,163.3	65.5	35.4	-89.49	367.7	-874.2	1,421.9	1,331.7	90.13	15.775	
9,700.0	7,180.9	7,461.7	7,162.0	68.1	35.4	-89.41	367.7	-874.2	1,490.3	1,397.5	92.79	16.061	
9,800.0	7,180.1	7,460.4	7,160.7	70.8	35.4	-89.34	367.7	-874.2	1,562.1	1,466.6	95.46	16.364	
9,900.0	7,179.3	7,459.1	7,159.4	73.5	35.4	-89.27	367.7	-874.2	1,636.9	1,538.8	98.14	16.679	
10,000.0	7,178.5	7,457.8	7,158.1	76.1	35.4	-89.20	367.7	-874.2	1,714.2	1,613.4	100.83	17.002	
10,100.0	7,177.7	7,456.5	7,156.8	78.8	35.4	-89.13	367.7	-874.2	1,793.8	1,690.3	103.52	17.328	
10,200.0	7,176.9	7,455.2	7,155.5	81.5	35.4	-89.06	367.7	-874.3	1,875.4	1,769.2	106.23	17.655	
10,300.0	7,176.0	7,453.9	7,154.2	84.2	35.4	-88.99	367.7	-874.3	1,958.6	1,849.7	108.94	17.980	
10,400.0	7,175.2	7,452.6	7,152.9	86.9	35.4	-88.92	367.7	-874.3	2,043.4	1,931.7	111.65	18.302	
10,500.0	7,174.4	7,451.4	7,151.6	89.6	35.4	-88.85	367.6	-874.3	2,129.5	2,015.1	114.37	18.619	
10,600.0	7,173.6	7,450.1	7,150.4	92.3	35.4	-88.79	367.6	-874.3	2,216.7	2,099.6	117.10	18.931	
10,700.0	7,172.8	7,448.9	7,149.1	95.0	35.4	-88.72	367.6	-874.3	2,305.0	2,185.2	119.83	19.236	
10,800.0	7,172.0	7,447.6	7,147.9	97.8	35.4	-88.65	367.6	-874.3	2,394.2	2,271.7	122.56	19.535	
10,900.0	7,171.2	7,446.4	7,146.7	100.5	35.4	-88.59	367.6	-874.3	2,484.2	2,358.9	125.30	19.827	
11,000.0	7,170.4	7,445.2	7,145.4	103.2	35.4	-88.52	367.6	-874.3	2,575.0	2,447.0	128.04	20.111	
11,100.0	7,169.6	7,444.0	7,144.2	106.0	35.4	-88.45	367.6	-874.3	2,666.4	2,535.6	130.78	20.388	
11,200.0	7,168.8	7,442.7	7,143.0	108.7	35.3	-88.39	367.6	-874.3	2,758.4	2,624.9	133.53	20.658	
11,300.0	7,168.0	7,441.5	7,141.8	111.5	35.3	-88.32	367.6	-874.3	2,851.0	2,714.7	136.28	20.921	
11,400.0	7,167.1	7,440.3	7,140.6	114.2	35.3	-88.26	367.6	-874.3	2,944.0	2,805.0	139.03	21.176	
11,500.0	7,166.3	7,439.2	7,139.4	117.0	35.3	-88.19	367.6	-874.3	3,037.5	2,895.7	141.78	21.424	
11,600.0	7,165.5	7,438.0	7,138.3	119.7	35.3	-88.13	367.6	-874.3	3,131.4	2,986.9	144.54	21.665	
11,700.0	7,164.7	7,436.8	7,137.1	122.5	35.3	-88.07	367.6	-874.3	3,225.7	3,078.4	147.29	21.900	
11,800.0	7,163.9	7,435.6	7,135.9	125.2	35.3	-88.00	367.6	-874.4	3,320.2	3,170.2	150.05	22.127	
11,900.0	7,163.1	7,434.5	7,134.8	128.0	35.3	-87.94	367.6	-874.4	3,415.1	3,262.3	152.81	22.349	
12,000.0	7,162.3	7,433.3	7,133.6	130.7	35.3	-87.88	367.6	-874.4	3,510.3	3,354.7	155.57	22.564	
12,100.0	7,161.5	7,432.2	7,132.5	133.5	35.3	-87.82	367.6	-874.4	3,605.8	3,447.4	158.33	22.773	
12,200.0	7,160.7	7,431.0	7,131.3	136.3	35.3	-87.75	367.6	-874.4	3,701.4	3,540.3	161.10	22.976	
12,300.0	7,159.8	7,429.9	7,130.2	139.0	35.3	-87.69	367.6	-874.4	3,797.3	3,633.5	163.86	23.174	
12,400.0	7,159.0	7,428.8	7,129.1	141.8	35.3	-87.63	367.6	-874.4	3,893.4	3,726.8	166.63	23.366	
12,500.0	7,158.2	7,427.7	7,127.9	144.6	35.3	-87.57	367.6	-874.4	3,989.7	3,820.4	169.40	23.553	
12,600.0	7,157.4	7,426.5	7,126.8	147.3	35.3	-87.51	367.6	-874.4	4,086.2	3,914.1	172.16	23.735	
12,700.0	7,156.6	7,425.4	7,125.7	150.1	35.3	-87.45	367.6	-874.4	4,182.9	4,007.9	174.93	23.912	
12,800.0	7,155.8	7,424.3	7,124.6	152.9	35.3	-87.39	367.5	-874.4	4,279.7	4,102.0	177.70	24.084	
12,900.0	7,155.0	7,423.2	7,123.5	155.7	35.3	-87.33	367.5	-874.4	4,376.6	4,196.1	180.47	24.251	
13,000.0	7,154.2	7,422.2	7,122.4	158.4	35.3	-87.27	367.5	-874.4	4,473.7	4,290.4	183.24	24.414	
13,100.0	7,153.3	7,421.1	7,121.4	161.2	35.3	-87.22	367.5	-874.4	4,570.9	4,384.9	186.01	24.573	
13,200.0	7,152.5	7,420.0	7,120.3	164.0	35.3	-87.16	367.5	-874.4	4,668.2	4,479.4	188.78	24.728	
13,300.0	7,151.7	7,418.9	7,119.2	166.8	35.3	-87.10	367.5	-874.4	4,765.6	4,574.1	191.55	24.879	
13,400.0	7,150.9	7,417.9	7,118.2	169.5	35.3	-87.04	367.5	-874.4	4,863.1	4,668.8	194.32	25.026	
13,500.0	7,150.1	7,416.8	7,117.1	172.3	35.3	-86.98	367.5	-874.4	4,960.8	4,763.7	197.10	25.169	
13,600.0	7,149.3	7,415.8	7,116.1	175.1	35.3	-86.93	367.5	-874.4	5,058.5	4,858.6	199.87	25.309	
13,700.0	7,148.5	7,414.7	7,115.0	177.9	35.3	-86.87	367.5	-874.4	5,156.3	4,953.7	202.64	25.446	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD CENTENNIAL 21KDU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 155-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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,800.0	7,147.6	7,413.7	7,114.0	180.7	35.3	-86.82	367.5	-874.5	5,254.2	5,048.8	205.41	25.579	
13,900.0	7,146.8	7,412.7	7,112.9	183.5	35.3	-86.76	367.5	-874.5	5,352.2	5,144.0	208.19	25.708	
14,000.0	7,146.0	7,411.6	7,111.9	186.2	35.3	-86.70	367.5	-874.5	5,450.2	5,239.3	210.96	25.835	
14,100.0	7,145.2	7,410.6	7,110.9	189.0	35.3	-86.65	367.5	-874.5	5,548.3	5,334.6	213.73	25.959	
14,200.0	7,144.4	7,409.6	7,109.9	191.8	35.3	-86.59	367.5	-874.5	5,646.5	5,430.0	216.51	26.080	
14,300.0	7,143.6	7,408.6	7,108.9	194.6	35.3	-86.54	367.5	-874.5	5,744.7	5,525.5	219.28	26.198	
14,370.2	7,143.0	7,407.9	7,108.2	196.6	35.3	-86.50	367.5	-874.5	5,813.8	5,592.5	221.23	26.279	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD CENTENNIAL 22-21DU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 147-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	-46.32	1,785.5	-1,869.6	2,585.3				
100.0	100.0	116.7	116.7	0.1	0.0	-46.31	1,785.4	-1,868.7	2,584.7	2,584.6	0.13	N/A	
200.0	200.0	229.9	229.9	0.3	0.2	-46.29	1,784.8	-1,866.7	2,583.1	2,582.6	0.52	4,962.701	
300.0	300.0	497.0	496.6	0.5	0.8	-46.25	1,776.9	-1,856.0	2,578.3	2,576.9	1.36	1,894.957	
400.0	400.0	652.1	651.0	0.8	1.3	-71.72	1,766.5	-1,845.8	2,568.3	2,566.4	1.95	1,317.998	
500.0	499.8	1,105.0	1,096.9	1.0	2.9	-72.52	1,716.8	-1,788.2	2,551.6	2,548.3	3.31	771.469	
600.0	599.5	1,198.0	1,187.0	1.2	3.3	-73.08	1,706.0	-1,767.7	2,524.9	2,521.2	3.78	668.471	
700.0	698.7	1,434.3	1,413.5	1.5	4.6	-73.83	1,678.7	-1,706.3	2,494.2	2,489.5	4.69	531.424	
800.0	797.5	1,624.0	1,592.3	1.8	5.9	-74.79	1,652.5	-1,648.6	2,457.6	2,452.1	5.57	441.190	
900.0	895.6	1,789.2	1,746.5	2.2	7.0	-75.93	1,628.4	-1,594.4	2,418.8	2,412.4	6.42	376.679	
1,000.0	993.1	1,925.1	1,871.6	2.6	8.1	-77.28	1,605.0	-1,547.1	2,375.5	2,368.3	7.24	328.200	
1,100.0	1,089.6	2,068.4	2,002.8	3.1	9.2	-78.88	1,579.1	-1,495.3	2,330.3	2,322.2	8.13	286.745	
1,127.2	1,115.8	2,090.9	2,023.3	3.2	9.4	-79.27	1,574.9	-1,487.0	2,317.7	2,309.3	8.33	278.275	
1,200.0	1,185.5	2,147.2	2,074.5	3.6	9.9	-79.56	1,564.8	-1,466.0	2,283.9	2,275.0	8.88	257.190	
1,300.0	1,281.4	2,211.6	2,133.2	4.1	10.4	-79.90	1,553.6	-1,442.1	2,238.3	2,228.7	9.60	233.067	
1,400.0	1,377.3	2,287.3	2,202.5	4.7	10.9	-80.29	1,541.2	-1,414.2	2,193.5	2,183.2	10.37	211.512	
1,500.0	1,473.1	2,376.4	2,284.2	5.2	11.6	-80.77	1,526.8	-1,381.5	2,149.1	2,137.9	11.19	192.068	
1,600.0	1,569.0	2,466.8	2,367.0	5.8	12.3	-81.28	1,511.7	-1,348.5	2,104.7	2,092.6	12.02	175.089	
1,700.0	1,664.8	2,561.5	2,453.6	6.4	13.1	-81.86	1,495.7	-1,314.1	2,060.3	2,047.4	12.87	160.068	
1,800.0	1,760.7	2,660.6	2,544.2	6.9	13.9	-82.49	1,478.6	-1,277.6	2,015.5	2,001.8	13.74	146.664	
1,900.0	1,856.6	2,761.4	2,636.2	7.5	14.7	-83.19	1,460.1	-1,240.7	1,970.5	1,955.9	14.62	134.752	
2,000.0	1,952.4	2,834.2	2,702.5	8.1	15.3	-83.72	1,446.6	-1,213.9	1,925.4	1,910.0	15.41	124.916	
2,100.0	2,048.3	2,905.9	2,768.2	8.6	15.9	-84.26	1,433.8	-1,188.2	1,881.6	1,865.4	16.20	116.143	
2,200.0	2,144.1	3,002.5	2,856.6	9.2	16.7	-85.02	1,416.5	-1,153.5	1,837.9	1,820.9	17.07	107.673	
2,300.0	2,240.0	3,092.1	2,938.7	9.8	17.4	-85.78	1,400.2	-1,121.3	1,794.4	1,776.5	17.93	100.101	
2,400.0	2,335.9	3,182.4	3,021.2	10.3	18.2	-86.58	1,383.4	-1,088.7	1,750.7	1,731.9	18.79	93.182	
2,500.0	2,431.7	3,257.0	3,089.7	10.9	18.8	-87.29	1,369.3	-1,062.6	1,708.0	1,688.4	19.60	87.136	
2,600.0	2,527.6	3,329.6	3,156.5	11.5	19.3	-88.00	1,356.1	-1,037.5	1,666.4	1,646.0	20.41	81.650	
2,700.0	2,623.4	3,402.8	3,223.9	12.1	19.9	-88.70	1,343.9	-1,011.8	1,625.5	1,604.3	21.22	76.598	
2,800.0	2,719.3	3,482.6	3,297.8	12.6	20.5	-89.48	1,331.5	-984.2	1,585.9	1,563.8	22.06	71.886	
2,900.0	2,815.2	3,568.1	3,376.9	13.2	21.1	-90.37	1,317.9	-954.8	1,546.6	1,523.7	22.93	67.458	
3,000.0	2,911.0	3,644.4	3,447.8	13.8	21.7	-91.19	1,306.2	-928.9	1,508.4	1,484.6	23.77	63.462	
3,100.0	3,006.9	3,725.0	3,522.7	14.4	22.3	-92.13	1,293.1	-902.5	1,471.1	1,446.5	24.63	59.720	
3,200.0	3,102.7	3,811.2	3,603.1	14.9	22.9	-93.22	1,278.4	-875.0	1,434.7	1,409.1	25.54	56.181	
3,300.0	3,198.6	3,948.8	3,730.5	15.5	23.9	-95.02	1,255.1	-828.4	1,397.0	1,370.3	26.68	52.353	
3,400.0	3,294.5	4,040.2	3,814.4	16.1	24.7	-96.28	1,239.1	-796.1	1,358.6	1,330.9	27.67	49.094	
3,500.0	3,390.3	4,121.3	3,889.0	16.7	25.3	-97.48	1,224.4	-767.8	1,320.8	1,292.2	28.63	46.128	
3,600.0	3,486.2	4,194.0	3,956.1	17.2	25.9	-98.61	1,211.4	-743.0	1,284.6	1,255.1	29.57	43.448	
3,700.0	3,582.0	4,286.0	4,041.0	17.8	26.6	-100.09	1,195.5	-711.4	1,249.2	1,218.5	30.62	40.795	
3,800.0	3,677.9	4,361.1	4,110.4	18.4	27.1	-101.36	1,182.2	-686.0	1,214.9	1,183.3	31.61	38.432	
3,900.0	3,773.7	4,451.6	4,194.3	19.0	27.8	-103.06	1,164.9	-656.9	1,182.5	1,149.8	32.74	36.114	
4,000.0	3,869.6	4,535.4	4,271.9	19.5	28.5	-104.72	1,148.6	-629.8	1,150.9	1,117.1	33.86	33.986	
4,100.0	3,965.5	4,632.7	4,362.4	20.1	29.2	-106.54	1,133.4	-597.4	1,120.5	1,085.5	35.07	31.956	
4,200.0	4,061.3	4,722.5	4,445.6	20.7	29.9	-108.31	1,119.2	-566.7	1,090.4	1,054.2	36.25	30.084	
4,300.0	4,157.2	4,808.3	4,525.2	21.3	30.5	-110.10	1,105.2	-537.7	1,061.8	1,024.3	37.43	28.367	
4,400.0	4,253.0	4,889.9	4,600.9	21.8	31.1	-111.88	1,091.9	-510.5	1,034.6	996.0	38.60	26.802	
4,500.0	4,348.9	4,970.4	4,675.8	22.4	31.7	-113.74	1,078.2	-484.4	1,009.8	970.0	39.80	25.373	
4,600.0	4,444.8	5,058.9	4,758.3	23.0	32.3	-115.88	1,063.1	-456.1	986.7	945.6	41.08	24.017	
4,700.0	4,540.6	5,146.1	4,839.6	23.6	33.0	-118.01	1,049.1	-428.1	965.3	922.9	42.36	22.789	
4,800.0	4,636.5	5,222.0	4,910.7	24.1	33.5	-119.93	1,037.0	-404.3	946.3	902.7	43.53	21.737	
4,900.0	4,732.3	5,275.6	4,961.3	24.7	33.8	-121.30	1,028.5	-388.9	931.4	886.9	44.50	20.932	
5,000.0	4,828.2	5,336.7	5,019.8	25.3	34.2	-122.85	1,019.4	-373.6	921.8	876.3	45.50	20.258	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD CENTENNIAL 22-21DU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 147-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	4,924.1	5,417.1	5,097.1	25.9	34.6	-124.88	1,007.7	-355.0	915.8	869.1	46.63	19.640	
5,200.0	5,019.9	5,502.0	5,179.2	26.4	35.0	-126.98	996.3	-336.5	912.6	864.8	47.74	19.116	
5,253.4	5,071.1	5,537.7	5,213.9	26.8	35.2	-127.83	992.0	-329.1	912.1	863.8	48.23	18.910	
5,300.0	5,115.8	5,572.5	5,247.8	27.0	35.3	-128.64	988.1	-322.4	912.4	863.8	48.68	18.744	
5,400.0	5,211.6	5,645.9	5,319.7	27.6	35.6	-130.28	980.8	-309.4	915.7	866.1	49.58	18.468	
5,500.0	5,307.5	5,723.3	5,395.9	28.2	35.9	-131.89	974.2	-297.8	922.3	871.8	50.45	18.282	
5,600.0	5,403.4	5,805.9	5,477.6	28.7	36.2	-133.51	968.3	-286.8	931.3	880.0	51.27	18.163	
5,700.0	5,499.2	5,885.9	5,556.9	29.3	36.4	-134.95	963.7	-277.8	942.7	890.7	52.03	18.119	
5,800.0	5,595.1	5,970.0	5,640.6	29.9	36.6	-136.35	959.9	-270.0	956.4	903.6	52.74	18.132	
5,840.7	5,634.1	6,002.2	5,672.6	30.1	36.6	-136.85	958.6	-267.4	962.5	909.5	53.01	18.156	
5,900.0	5,691.1	6,051.7	5,721.9	30.4	36.7	-137.71	956.9	-263.9	971.6	918.1	53.48	18.166	
6,000.0	5,788.0	6,138.7	5,808.7	30.8	36.9	-139.01	954.4	-258.7	986.0	931.9	54.16	18.207	
6,100.0	5,885.7	6,229.6	5,899.5	31.2	37.0	-140.13	952.2	-254.3	999.1	944.4	54.75	18.248	
6,200.0	5,984.0	6,323.3	5,993.2	31.5	37.2	-141.08	950.3	-250.5	1,010.3	955.1	55.26	18.282	
6,300.0	6,083.0	6,419.6	6,089.4	31.8	37.3	-141.85	948.7	-247.2	1,019.4	963.7	55.70	18.302	
6,400.0	6,182.3	6,516.2	6,185.9	32.0	37.4	-142.44	947.4	-244.2	1,026.0	970.0	56.05	18.307	
6,500.0	6,282.0	6,616.6	6,286.3	32.2	37.5	-142.90	945.9	-241.3	1,030.1	973.8	56.33	18.288	
6,600.0	6,382.0	6,716.8	6,386.4	32.3	37.6	-143.20	944.4	-238.2	1,031.4	974.9	56.54	18.243	
6,668.0	6,449.9	6,783.8	6,453.4	32.4	37.7	-118.10	943.6	-236.2	1,030.7	976.6	54.12	19.045	
6,698.0	6,479.9	6,812.0	6,481.6	32.4	37.8	-118.13	943.4	-235.5	1,030.1	975.9	54.18	19.013	
6,700.0	6,481.9	6,812.0	6,481.6	32.4	37.8	-28.13	943.4	-235.5	1,030.1	973.4	56.69	18.169	
6,750.0	6,531.9	6,856.7	6,526.3	32.5	37.8	-28.31	942.9	-234.5	1,027.7	971.2	56.45	18.204	
6,800.0	6,581.6	6,905.0	6,574.6	32.5	37.9	-28.70	942.4	-233.9	1,022.7	966.6	56.05	18.247	
6,850.0	6,630.8	6,941.9	6,611.5	32.5	37.9	-29.21	942.0	-233.7	1,014.9	959.4	55.46	18.301	
6,900.0	6,679.3	6,985.5	6,655.0	32.4	37.9	-29.97	941.4	-233.6	1,004.4	949.7	54.73	18.354	
6,950.0	6,726.8	7,028.5	6,698.0	32.4	38.0	-30.95	940.8	-233.8	991.3	937.5	53.87	18.404	
7,000.0	6,773.1	7,070.7	6,740.2	32.3	38.0	-32.18	940.1	-234.1	975.6	922.7	52.91	18.440	
7,050.0	6,817.9	7,110.5	6,780.0	32.3	38.0	-33.66	939.4	-234.6	957.5	905.6	51.89	18.454	
7,100.0	6,861.2	7,147.7	6,817.2	32.2	38.0	-35.39	938.6	-235.2	937.1	886.3	50.84	18.431	
7,150.0	6,902.5	7,186.0	6,855.5	32.1	38.1	-37.50	937.6	-236.1	914.7	864.8	49.86	18.346	
7,200.0	6,941.8	7,229.8	6,899.2	32.0	38.1	-40.19	936.5	-237.1	890.1	841.1	49.04	18.150	
7,250.0	6,978.9	7,274.2	6,943.6	31.9	38.1	-43.43	935.7	-237.9	863.3	814.8	48.50	17.799	
7,300.0	7,013.5	7,311.6	6,981.1	31.7	38.2	-46.98	935.4	-238.6	834.7	786.4	48.30	17.280	
7,350.0	7,045.5	7,345.8	7,015.2	31.6	38.2	-50.98	935.0	-239.1	804.6	756.1	48.55	16.574	
7,400.0	7,074.8	7,377.0	7,046.5	31.5	38.2	-55.39	934.8	-239.5	773.5	724.2	49.28	15.696	
7,450.0	7,101.1	7,405.5	7,074.9	31.4	38.2	-60.18	934.5	-239.9	741.7	691.3	50.44	14.706	
7,500.0	7,124.5	7,430.5	7,100.0	31.3	38.2	-65.17	934.4	-240.1	709.7	657.8	51.84	13.689	
7,550.0	7,144.7	7,452.2	7,121.6	31.1	38.3	-70.18	934.2	-240.3	677.9	624.5	53.31	12.715	
7,600.0	7,161.6	7,470.2	7,139.6	31.0	38.3	-74.99	934.1	-240.4	646.8	592.1	54.68	11.828	
7,650.0	7,175.3	7,484.3	7,153.7	30.9	38.3	-79.37	934.0	-240.5	617.0	561.2	55.86	11.046	
7,700.0	7,185.5	7,495.0	7,164.4	30.8	38.3	-83.19	934.0	-240.6	589.2	532.4	56.85	10.364	
7,750.0	7,192.3	7,502.1	7,171.5	30.7	38.3	-86.34	933.9	-240.6	563.9	506.2	57.71	9.772	
7,800.0	7,195.7	7,505.7	7,175.1	30.7	38.3	-88.72	933.9	-240.6	541.9	483.4	58.49	9.263	
7,828.6	7,196.0	7,506.2	7,175.6	30.6	38.3	-89.73	933.9	-240.6	530.9	472.0	58.93	9.009	
7,900.0	7,195.4	7,505.9	7,175.3	30.6	38.3	-89.70	933.9	-240.6	509.5	449.5	59.94	8.500	
8,000.0	7,194.6	7,505.6	7,175.0	30.6	38.3	-89.66	933.9	-240.6	495.5	434.0	61.54	8.052	
8,020.2	7,194.5	7,505.5	7,174.9	30.6	38.3	-89.65	933.9	-240.6	495.1	433.2	61.90	7.998 CC, ES	
8,100.0	7,193.8	7,505.3	7,174.7	31.0	38.3	-89.62	933.9	-240.6	501.5	438.2	63.33	7.918 SF	
8,200.0	7,193.0	7,504.9	7,174.3	32.1	38.3	-89.58	933.9	-240.6	526.8	461.5	65.28	8.069	
8,300.0	7,192.2	7,504.6	7,174.0	33.8	38.3	-89.54	933.9	-240.6	568.7	501.4	67.35	8.444	
8,400.0	7,191.4	7,504.3	7,173.7	35.8	38.3	-89.51	933.9	-240.6	624.0	554.5	69.53	8.975	
8,500.0	7,190.6	7,504.0	7,173.4	38.0	38.3	-89.47	933.9	-240.6	689.5	617.7	71.79	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 SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 147-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,600.0	7,189.8	7,503.6	7,173.1	40.3	38.3	-89.43	933.9	-240.6	762.4	688.3	74.13	10.285	
8,700.0	7,189.0	7,503.3	7,172.7	42.7	38.3	-89.40	933.9	-240.6	841.0	764.5	76.52	10.991	
8,800.0	7,188.2	7,503.0	7,172.4	45.1	38.3	-89.36	933.9	-240.6	923.7	844.7	78.96	11.698	
8,900.0	7,187.4	7,502.7	7,172.1	47.5	38.3	-89.32	933.9	-240.6	1,009.6	928.1	81.44	12.396	
9,000.0	7,186.6	7,502.4	7,171.8	50.0	38.3	-89.29	933.9	-240.6	1,097.8	1,013.8	83.96	13.075	
9,100.0	7,185.7	7,502.1	7,171.5	52.6	38.3	-89.25	933.9	-240.6	1,187.9	1,101.4	86.51	13.732	
9,200.0	7,184.9	7,501.8	7,171.2	55.1	38.3	-89.22	933.9	-240.6	1,279.5	1,190.4	89.08	14.363	
9,300.0	7,184.1	7,501.5	7,170.9	57.7	38.3	-89.18	933.9	-240.6	1,372.2	1,280.6	91.68	14.968	
9,400.0	7,183.3	7,501.2	7,170.6	60.3	38.3	-89.15	933.9	-240.6	1,465.9	1,371.7	94.29	15.547	
9,500.0	7,182.5	7,500.9	7,170.3	62.9	38.3	-89.12	933.9	-240.6	1,560.4	1,463.5	96.92	16.100	
9,600.0	7,181.7	7,500.6	7,170.0	65.5	38.3	-89.08	933.9	-240.6	1,655.6	1,556.0	99.57	16.628	
9,700.0	7,180.9	7,500.3	7,169.8	68.1	38.3	-89.05	933.9	-240.6	1,751.3	1,649.0	102.23	17.131	
9,800.0	7,180.1	7,500.0	7,169.5	70.8	38.3	-89.01	933.9	-240.6	1,847.4	1,742.5	104.90	17.612	
9,900.0	7,179.3	7,499.8	7,169.2	73.5	38.3	-88.98	933.9	-240.6	1,943.9	1,836.3	107.58	18.070	
10,000.0	7,178.5	7,499.5	7,168.9	76.1	38.3	-88.95	933.9	-240.6	2,040.8	1,930.5	110.27	18.508	
10,100.0	7,177.7	7,499.2	7,168.6	78.8	38.3	-88.92	933.9	-240.6	2,137.9	2,025.0	112.96	18.926	
10,200.0	7,176.9	7,498.9	7,168.4	81.5	38.3	-88.88	933.9	-240.6	2,235.3	2,119.7	115.67	19.325	
10,300.0	7,176.0	7,498.7	7,168.1	84.2	38.3	-88.85	933.9	-240.6	2,332.9	2,214.6	118.38	19.707	
10,400.0	7,175.2	7,498.4	7,167.8	86.9	38.3	-88.82	933.9	-240.6	2,430.8	2,309.7	121.10	20.073	
10,500.0	7,174.4	7,498.1	7,167.5	89.6	38.3	-88.79	933.9	-240.6	2,528.7	2,404.9	123.82	20.423	
10,600.0	7,173.6	7,497.9	7,167.3	92.3	38.3	-88.76	933.9	-240.6	2,626.9	2,500.3	126.55	20.758	
10,700.0	7,172.8	7,497.6	7,167.0	95.0	38.3	-88.73	933.9	-240.6	2,725.2	2,595.9	129.28	21.079	
10,800.0	7,172.0	7,497.3	7,166.8	97.8	38.3	-88.70	933.9	-240.6	2,823.5	2,691.5	132.02	21.388	
10,900.0	7,171.2	7,497.1	7,166.5	100.5	38.3	-88.67	934.0	-240.6	2,922.1	2,787.3	134.76	21.684	
11,000.0	7,170.4	7,496.8	7,166.2	103.2	38.3	-88.64	934.0	-240.6	3,020.7	2,883.2	137.50	21.968	
11,100.0	7,169.6	7,496.6	7,166.0	106.0	38.3	-88.61	934.0	-240.6	3,119.3	2,979.1	140.25	22.242	
11,200.0	7,168.8	7,496.3	7,165.7	108.7	38.3	-88.58	934.0	-240.6	3,218.1	3,075.1	143.00	22.505	
11,300.0	7,168.0	7,496.1	7,165.5	111.5	38.3	-88.55	934.0	-240.6	3,317.0	3,171.2	145.75	22.758	
11,400.0	7,167.1	7,495.8	7,165.2	114.2	38.3	-88.52	934.0	-240.6	3,415.9	3,267.4	148.50	23.002	
11,500.0	7,166.3	7,495.6	7,165.0	117.0	38.3	-88.49	934.0	-240.6	3,514.8	3,363.6	151.26	23.237	
11,600.0	7,165.5	7,495.3	7,164.7	119.7	38.3	-88.46	934.0	-240.6	3,613.9	3,459.9	154.02	23.464	
11,700.0	7,164.7	7,495.1	7,164.5	122.5	38.3	-88.43	934.0	-240.6	3,713.0	3,556.2	156.78	23.682	
11,800.0	7,163.9	7,494.8	7,164.3	125.2	38.3	-88.40	934.0	-240.6	3,812.1	3,652.5	159.54	23.894	
11,900.0	7,163.1	7,494.6	7,164.0	128.0	38.3	-88.37	934.0	-240.6	3,911.3	3,748.9	162.31	24.098	
12,000.0	7,162.3	7,494.4	7,163.8	130.7	38.3	-88.35	934.0	-240.6	4,010.5	3,845.4	165.08	24.295	
12,100.0	7,161.5	7,494.1	7,163.5	133.5	38.3	-88.32	934.0	-240.6	4,109.7	3,941.9	167.84	24.486	
12,200.0	7,160.7	7,493.9	7,163.3	136.3	38.3	-88.29	934.0	-240.6	4,209.0	4,038.4	170.61	24.670	
12,300.0	7,159.8	7,493.6	7,163.1	139.0	38.3	-88.26	934.0	-240.6	4,308.3	4,135.0	173.38	24.849	
12,400.0	7,159.0	7,493.4	7,162.8	141.8	38.3	-88.24	934.0	-240.6	4,407.7	4,231.5	176.15	25.022	
12,500.0	7,158.2	7,493.2	7,162.6	144.6	38.3	-88.21	934.0	-240.6	4,507.1	4,328.1	178.93	25.189	
12,600.0	7,157.4	7,493.0	7,162.4	147.3	38.3	-88.18	934.0	-240.6	4,606.5	4,424.8	181.70	25.352	
12,700.0	7,156.6	7,492.7	7,162.2	150.1	38.3	-88.15	934.0	-240.6	4,705.9	4,521.4	184.48	25.510	
12,800.0	7,155.8	7,492.5	7,161.9	152.9	38.3	-88.13	934.0	-240.6	4,805.4	4,618.1	187.25	25.662	
12,900.0	7,155.0	7,492.3	7,161.7	155.7	38.3	-88.10	934.0	-240.6	4,904.8	4,714.8	190.03	25.811	
13,000.0	7,154.2	7,492.1	7,161.5	158.4	38.3	-88.08	934.0	-240.6	5,004.3	4,811.5	192.81	25.955	
13,100.0	7,153.3	7,491.9	7,161.3	161.2	38.3	-88.05	934.0	-240.6	5,103.9	4,908.3	195.59	26.095	
13,200.0	7,152.5	7,491.6	7,161.1	164.0	38.3	-88.02	934.0	-240.6	5,203.4	5,005.0	198.36	26.231	
13,300.0	7,151.7	7,491.4	7,160.9	166.8	38.3	-88.00	934.0	-240.6	5,303.0	5,101.8	201.14	26.364	
13,400.0	7,150.9	7,491.2	7,160.6	169.5	38.3	-87.97	934.0	-240.6	5,402.5	5,198.6	203.93	26.493	
13,500.0	7,150.1	7,491.0	7,160.4	172.3	38.3	-87.95	934.0	-240.6	5,502.1	5,295.4	206.71	26.618	
13,600.0	7,149.3	7,490.8	7,160.2	175.1	38.3	-87.92	934.0	-240.6	5,601.7	5,392.2	209.49	26.740	
13,700.0	7,148.5	7,490.6	7,160.0	177.9	38.3	-87.90	934.0	-240.6	5,701.3	5,489.1	212.27	26.859	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD CENTENNIAL 22-21DU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 147-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
13,800.0	7,147.6	7,490.4	7,159.8	180.7	38.3	-87.87	934.0	-240.6	5,801.0	5,585.9	215.05	26.974	
13,900.0	7,146.8	7,490.2	7,159.6	183.5	38.3	-87.85	934.0	-240.6	5,900.6	5,682.8	217.84	27.087	
14,000.0	7,146.0	7,490.0	7,159.4	186.2	38.3	-87.82	934.0	-240.6	6,000.2	5,779.6	220.62	27.197	
14,100.0	7,145.2	7,489.8	7,159.2	189.0	38.3	-87.80	934.0	-240.6	6,099.9	5,876.5	223.41	27.304	
14,200.0	7,144.4	7,489.6	7,159.0	191.8	38.3	-87.77	934.0	-240.6	6,199.6	5,973.4	226.19	27.409	
14,300.0	7,143.6	7,489.4	7,158.8	194.6	38.3	-87.75	934.0	-240.6	6,299.3	6,070.3	228.98	27.511	
14,370.2	7,143.0	7,489.2	7,158.7	196.6	38.3	-87.73	934.0	-240.6	6,369.3	6,138.3	230.93	27.581	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD EEE 21ADU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 706-MWD												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
0.0	0.0	0.0	0.0	0.0	0.0	-46.12	1,908.3	-1,984.2	2,753.0				
100.0	100.0	82.4	82.4	0.1	0.1	-46.12	1,908.3	-1,984.2	2,753.0	2,752.8	0.17	N/A	
200.0	200.0	181.0	181.0	0.3	0.2	-46.11	1,908.5	-1,984.2	2,753.1	2,752.6	0.49	5,662.294	
300.0	300.0	279.6	279.6	0.5	0.3	-46.11	1,908.8	-1,984.1	2,753.2	2,752.4	0.80	3,439.430	
400.0	400.0	378.3	378.3	0.8	0.3	-71.35	1,909.1	-1,983.9	2,752.8	2,751.7	1.11	2,471.350	
500.0	499.8	476.8	476.8	1.0	0.4	-71.47	1,909.6	-1,983.8	2,751.3	2,749.9	1.43	1,920.845	
600.0	599.5	575.1	575.1	1.2	0.5	-71.68	1,910.2	-1,983.6	2,748.8	2,747.1	1.77	1,555.268	
700.0	698.7	673.1	673.1	1.5	0.6	-71.97	1,910.9	-1,983.3	2,745.3	2,743.2	2.13	1,288.718	
800.0	797.5	769.6	769.6	1.8	0.8	-72.34	1,911.7	-1,983.0	2,740.8	2,738.2	2.60	1,052.640	
900.0	895.6	875.3	875.3	2.2	1.0	-72.83	1,912.5	-1,982.8	2,735.4	2,732.2	3.17	863.828	
1,000.0	993.1	1,146.5	1,146.3	2.6	1.5	-74.17	1,910.4	-1,974.7	2,726.5	2,722.4	4.15	657.674	
1,100.0	1,089.6	1,430.9	1,428.8	3.1	2.3	-75.74	1,901.4	-1,944.1	2,708.4	2,703.2	5.28	513.072	
1,127.2	1,115.8	1,606.0	1,601.2	3.2	2.9	-76.64	1,892.4	-1,914.8	2,702.0	2,696.2	5.85	461.519	
1,200.0	1,185.5	1,764.9	1,756.0	3.6	3.5	-77.32	1,881.5	-1,881.0	2,681.6	2,675.0	6.65	403.265	
1,300.0	1,281.4	1,861.9	1,850.1	4.1	4.0	-77.73	1,874.6	-1,858.6	2,652.4	2,645.0	7.44	356.595	
1,400.0	1,377.3	1,986.0	1,970.3	4.7	4.5	-78.20	1,867.8	-1,828.0	2,623.5	2,615.1	8.32	315.214	
1,500.0	1,473.1	2,132.7	2,111.4	5.2	5.3	-78.75	1,858.2	-1,788.9	2,592.2	2,582.9	9.30	278.649	
1,600.0	1,569.0	2,232.8	2,207.3	5.8	5.8	-79.14	1,851.3	-1,761.5	2,560.3	2,550.2	10.15	252.286	
1,700.0	1,664.8	2,351.5	2,321.0	6.4	6.5	-79.60	1,843.0	-1,728.3	2,528.0	2,517.0	11.06	228.495	
1,800.0	1,760.7	2,505.6	2,467.8	6.9	7.5	-80.21	1,831.0	-1,682.8	2,494.2	2,482.1	12.11	206.026	
1,900.0	1,856.6	2,647.3	2,601.7	7.5	8.4	-80.80	1,817.5	-1,638.8	2,458.2	2,445.1	13.11	187.463	
2,000.0	1,952.4	2,739.7	2,688.9	8.1	9.0	-81.20	1,808.0	-1,609.4	2,421.4	2,407.4	13.96	173.509	
2,100.0	2,048.3	2,802.5	2,748.2	8.6	9.3	-81.50	1,801.4	-1,590.0	2,385.2	2,370.5	14.70	162.293	
2,200.0	2,144.1	2,857.0	2,800.0	9.2	9.6	-81.76	1,796.1	-1,573.8	2,350.6	2,335.1	15.41	152.530	
2,300.0	2,240.0	2,959.6	2,897.6	9.8	10.2	-82.27	1,786.1	-1,544.1	2,316.5	2,300.3	16.26	142.442	
2,400.0	2,335.9	3,044.0	2,978.0	10.3	10.7	-82.71	1,777.9	-1,519.5	2,282.6	2,265.6	17.07	133.718	
2,500.0	2,431.7	3,098.4	3,029.9	10.9	11.0	-82.99	1,773.2	-1,504.0	2,249.8	2,232.0	17.79	126.473	
2,600.0	2,527.6	3,170.3	3,098.8	11.5	11.4	-83.35	1,768.0	-1,484.1	2,218.7	2,200.1	18.56	119.552	
2,700.0	2,623.4	3,274.6	3,198.7	12.1	12.0	-83.90	1,760.1	-1,455.2	2,187.4	2,168.0	19.42	112.622	
2,800.0	2,719.3	3,363.0	3,283.4	12.6	12.5	-84.38	1,753.6	-1,430.6	2,156.4	2,136.2	20.24	106.526	
2,900.0	2,815.2	3,456.5	3,372.9	13.2	13.0	-84.88	1,747.0	-1,404.5	2,125.7	2,104.6	21.08	100.841	
3,000.0	2,911.0	3,542.5	3,455.2	13.8	13.5	-85.34	1,741.5	-1,380.2	2,095.0	2,073.1	21.90	95.667	
3,100.0	3,006.9	3,612.9	3,522.6	14.4	13.9	-85.70	1,738.0	-1,360.3	2,065.4	2,042.8	22.68	91.088	
3,200.0	3,102.7	3,702.9	3,609.2	14.9	14.4	-86.21	1,732.8	-1,336.1	2,036.6	2,013.1	23.49	86.694	
3,300.0	3,198.6	3,841.7	3,742.5	15.5	15.2	-87.13	1,720.9	-1,299.3	2,006.8	1,982.4	24.42	82.167	
3,400.0	3,294.5	3,972.0	3,867.0	16.1	16.0	-88.06	1,707.6	-1,263.3	1,975.6	1,950.3	25.33	77.983	
3,500.0	3,390.3	4,049.2	3,940.6	16.7	16.4	-88.63	1,699.4	-1,241.5	1,944.0	1,917.9	26.10	74.472	
3,600.0	3,486.2	4,114.1	4,002.6	17.2	16.8	-89.12	1,693.0	-1,223.7	1,913.6	1,886.8	26.83	71.312	
3,700.0	3,582.0	4,169.0	4,055.4	17.8	17.1	-89.54	1,687.9	-1,209.4	1,885.0	1,857.5	27.54	68.454	
3,800.0	3,677.9	4,251.1	4,134.6	18.4	17.5	-90.19	1,680.7	-1,189.0	1,857.9	1,829.6	28.30	65.655	
3,900.0	3,773.7	4,351.8	4,231.9	19.0	18.0	-91.00	1,672.3	-1,164.1	1,831.5	1,802.4	29.11	62.918	
4,000.0	3,869.6	4,429.3	4,306.7	19.5	18.4	-91.61	1,666.6	-1,144.8	1,805.5	1,775.7	29.87	60.444	
4,100.0	3,965.5	4,547.4	4,420.7	20.1	19.0	-92.55	1,658.4	-1,115.0	1,779.9	1,749.2	30.73	57.917	
4,200.0	4,061.3	4,665.8	4,534.4	20.7	19.7	-93.51	1,649.8	-1,083.0	1,752.8	1,721.2	31.60	55.461	
4,300.0	4,157.2	4,755.4	4,620.3	21.3	20.2	-94.27	1,643.0	-1,058.6	1,725.7	1,693.3	32.40	53.265	
4,400.0	4,253.0	4,846.7	4,707.9	21.8	20.7	-95.06	1,636.2	-1,033.9	1,699.1	1,665.9	33.19	51.190	
4,500.0	4,348.9	4,934.9	4,792.6	22.4	21.2	-95.84	1,629.7	-1,009.9	1,672.8	1,638.8	33.98	49.231	
4,600.0	4,444.8	5,011.0	4,865.8	23.0	21.6	-96.53	1,624.5	-990.1	1,648.0	1,613.3	34.73	47.451	
4,700.0	4,540.6	5,058.1	4,911.4	23.6	21.9	-96.96	1,621.7	-978.6	1,625.3	1,589.9	35.41	45.905	
4,800.0	4,636.5	5,104.0	4,956.1	24.1	22.1	-97.39	1,619.3	-968.3	1,605.4	1,569.3	36.08	44.497	
4,900.0	4,732.3	5,177.1	5,027.5	24.7	22.4	-98.08	1,615.8	-953.4	1,587.8	1,551.0	36.80	43.148	
5,000.0	4,828.2	5,241.6	5,090.9	25.3	22.6	-98.71	1,613.1	-941.5	1,572.6	1,535.1	37.50	41.940	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD EEE 21ADU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 706-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	4,924.1	5,307.9	5,156.2	25.9	22.9	-99.36	1,610.8	-930.5	1,559.6	1,521.4	38.19	40.837	
5,200.0	5,019.9	5,385.0	5,232.5	26.4	23.1	-100.14	1,608.2	-919.3	1,548.9	1,510.0	38.90	39.817	
5,300.0	5,115.8	5,449.8	5,296.7	27.0	23.3	-100.81	1,606.2	-910.8	1,540.2	1,500.6	39.58	38.911	
5,400.0	5,211.6	5,527.1	5,373.4	27.6	23.5	-101.60	1,604.3	-901.6	1,533.2	1,493.0	40.28	38.063	
5,500.0	5,307.5	5,598.3	5,444.1	28.2	23.7	-102.32	1,602.9	-893.9	1,528.0	1,487.0	40.97	37.299	
5,600.0	5,403.4	5,666.0	5,511.6	28.7	23.8	-103.01	1,602.2	-887.9	1,525.2	1,483.6	41.64	36.631	
5,658.8	5,459.7	5,697.7	5,543.3	29.1	23.9	-103.32	1,602.1	-885.6	1,524.7	1,482.7	42.01	36.291	
5,700.0	5,499.2	5,724.5	5,570.0	29.3	24.0	-103.58	1,602.2	-883.9	1,525.0	1,482.7	42.29	36.063	
5,800.0	5,595.1	5,789.1	5,634.5	29.9	24.1	-104.21	1,602.8	-880.7	1,527.2	1,484.3	42.94	35.568	
5,840.7	5,634.1	5,815.2	5,660.6	30.1	24.1	-104.47	1,603.1	-879.8	1,528.8	1,485.6	43.20	35.390	
5,900.0	5,691.1	5,854.0	5,699.3	30.4	24.1	-104.89	1,603.5	-878.9	1,531.7	1,488.2	43.53	35.189	
6,000.0	5,788.0	5,941.5	5,786.8	30.8	24.2	-105.75	1,604.1	-877.6	1,537.2	1,493.2	44.02	34.924	
6,100.0	5,885.7	6,036.2	5,881.5	31.2	24.3	-106.55	1,604.5	-876.7	1,542.4	1,497.9	44.47	34.681	
6,200.0	5,984.0	6,129.1	5,974.5	31.5	24.4	-107.22	1,604.7	-876.1	1,547.0	1,502.1	44.89	34.464	
6,300.0	6,083.0	6,227.0	6,072.3	31.8	24.5	-107.80	1,604.8	-875.7	1,551.0	1,505.8	45.27	34.262	
6,400.0	6,182.3	6,321.0	6,166.3	32.0	24.6	-108.22	1,604.9	-875.5	1,554.3	1,508.6	45.61	34.080	
6,500.0	6,282.0	6,418.7	6,264.0	32.2	24.7	-108.52	1,605.0	-875.5	1,556.7	1,510.8	45.91	33.910	
6,600.0	6,382.0	6,522.5	6,367.8	32.3	24.9	-108.69	1,605.2	-875.4	1,557.9	1,511.7	46.18	33.738	
6,668.0	6,449.9	6,587.9	6,433.2	32.4	24.9	-83.49	1,605.5	-875.3	1,558.1	1,513.6	44.50	35.017	
6,698.0	6,479.9	6,617.4	6,462.8	32.4	25.0	-83.49	1,605.7	-875.3	1,558.1	1,513.6	44.57	34.961	
6,700.0	6,481.9	6,619.5	6,464.8	32.4	25.0	6.51	1,605.8	-875.3	1,558.1	1,511.7	46.40	33.578	
6,750.0	6,531.9	6,669.8	6,515.1	32.5	25.0	6.55	1,606.1	-875.2	1,556.3	1,510.1	46.20	33.688	
6,800.0	6,581.6	6,718.6	6,563.9	32.5	25.1	6.64	1,606.4	-875.2	1,550.9	1,505.2	45.79	33.871	
6,850.0	6,630.8	6,765.8	6,611.1	32.5	25.1	6.76	1,606.7	-875.3	1,542.3	1,497.1	45.19	34.130	
6,900.0	6,679.3	6,812.5	6,657.8	32.4	25.2	6.94	1,606.9	-875.4	1,530.2	1,485.8	44.40	34.465	
6,950.0	6,726.8	6,858.7	6,704.0	32.4	25.2	7.17	1,606.9	-875.5	1,514.9	1,471.5	43.43	34.879	
7,000.0	6,773.1	6,906.2	6,751.5	32.3	25.3	7.46	1,606.7	-875.8	1,496.4	1,454.1	42.31	35.370	
7,050.0	6,817.9	6,954.8	6,800.2	32.3	25.3	7.81	1,606.2	-875.9	1,474.6	1,433.6	41.03	35.937	
7,100.0	6,861.2	7,000.4	6,845.7	32.2	25.4	8.25	1,605.5	-876.0	1,449.7	1,410.0	39.62	36.587	
7,150.0	6,902.5	7,043.1	6,888.4	32.1	25.4	8.78	1,604.7	-876.1	1,421.8	1,383.7	38.10	37.318	
7,200.0	6,941.8	7,085.0	6,930.3	32.0	25.5	9.44	1,603.7	-876.1	1,391.0	1,354.5	36.50	38.113	
7,250.0	6,978.9	7,126.7	6,972.0	31.9	25.5	10.26	1,602.6	-876.0	1,357.5	1,322.7	34.86	38.942	
7,300.0	7,013.5	7,165.8	7,011.0	31.7	25.6	11.29	1,601.4	-875.8	1,321.5	1,288.2	33.24	39.755	
7,350.0	7,045.5	7,207.0	7,052.2	31.6	25.6	12.66	1,600.0	-875.4	1,283.0	1,251.2	31.74	40.425	
7,400.0	7,074.8	7,243.9	7,089.1	31.5	25.7	14.42	1,598.5	-874.8	1,242.2	1,211.7	30.45	40.790	
7,450.0	7,101.1	7,275.2	7,120.4	31.4	25.7	16.74	1,597.3	-874.1	1,199.4	1,169.8	29.56	40.580	
7,500.0	7,124.5	7,301.6	7,146.7	31.3	25.8	19.87	1,596.2	-873.4	1,154.9	1,125.6	29.31	39.411	
7,550.0	7,144.7	7,323.8	7,169.0	31.1	25.8	24.24	1,595.4	-872.7	1,109.0	1,079.0	30.06	36.898	
7,600.0	7,161.6	7,341.9	7,187.0	31.0	25.8	30.53	1,594.8	-872.2	1,061.9	1,029.7	32.26	32.914	
7,650.0	7,175.3	7,355.8	7,200.9	30.9	25.9	39.86	1,594.3	-871.7	1,013.9	977.6	36.37	27.876	
7,700.0	7,185.5	7,365.6	7,210.7	30.8	25.9	53.71	1,594.0	-871.3	965.3	923.1	42.22	22.861	
7,750.0	7,192.3	7,371.3	7,216.3	30.7	25.9	72.76	1,593.8	-871.1	916.3	868.7	47.56	19.265	
7,800.0	7,195.7	7,372.8	7,217.9	30.7	25.9	94.03	1,593.8	-871.0	867.2	818.8	48.41	17.914	
7,828.6	7,196.0	7,371.9	7,217.0	30.6	25.9	104.99	1,593.8	-871.0	839.1	792.5	46.64	17.993	
7,900.0	7,195.4	7,368.2	7,213.2	30.6	25.9	103.75	1,593.9	-871.2	769.4	721.4	47.92	16.055	
8,000.0	7,194.6	7,363.0	7,208.1	30.6	25.9	102.05	1,594.1	-871.4	672.2	622.3	49.89	13.472	
8,100.0	7,193.8	7,358.1	7,203.2	31.0	25.9	100.38	1,594.2	-871.6	575.9	523.9	52.03	11.069	
8,200.0	7,193.0	7,353.3	7,198.4	32.1	25.9	98.76	1,594.4	-871.7	481.1	426.8	54.29	8.862	
8,300.0	7,192.2	7,348.7	7,193.7	33.8	25.9	97.19	1,594.5	-871.9	388.9	332.2	56.65	6.865	
8,400.0	7,191.4	7,344.2	7,189.3	35.8	25.8	95.66	1,594.7	-872.1	301.6	242.5	59.08	5.105	
8,500.0	7,190.6	7,339.9	7,185.0	38.0	25.8	94.17	1,594.8	-872.2	225.1	163.5	61.56	3.656	
8,600.0	7,189.8	7,335.7	7,180.8	40.3	25.8	92.73	1,595.0	-872.4	174.1	110.0	64.08	2.717	

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 SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD EEE 21ADU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 706-MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,651.9	7,189.4	7,333.6	7,178.7	41.5	25.8	92.00	1,595.1	-872.4	166.2	100.8	65.40	2.541	CC, ES, SF
8,700.0	7,189.0	7,331.6	7,176.7	42.7	25.8	91.33	1,595.1	-872.5	173.0	106.4	66.61	2.597	
8,800.0	7,188.2	7,327.7	7,172.8	45.1	25.8	89.97	1,595.3	-872.6	222.5	153.3	69.16	3.217	
8,900.0	7,187.4	7,323.8	7,168.9	47.5	25.8	88.65	1,595.4	-872.7	298.4	226.7	71.71	4.161	
9,000.0	7,186.6	7,320.1	7,165.2	50.0	25.8	87.37	1,595.5	-872.9	385.5	311.2	74.26	5.191	
9,100.0	7,185.7	7,316.5	7,161.6	52.6	25.8	86.13	1,595.7	-873.0	477.6	400.8	76.80	6.218	
9,200.0	7,184.9	7,313.0	7,158.1	55.1	25.8	84.94	1,595.8	-873.1	572.3	493.0	79.33	7.215	
9,300.0	7,184.1	7,309.5	7,154.7	57.7	25.8	83.78	1,595.9	-873.2	668.6	586.7	81.84	8.169	
9,400.0	7,183.3	7,306.2	7,151.3	60.3	25.8	82.65	1,596.1	-873.3	765.8	681.4	84.33	9.081	
9,500.0	7,182.5	7,302.9	7,148.1	62.9	25.8	81.57	1,596.2	-873.4	863.6	776.8	86.80	9.949	
9,600.0	7,181.7	7,299.8	7,144.9	65.5	25.8	80.52	1,596.3	-873.5	961.8	872.6	89.25	10.777	
9,700.0	7,180.9	7,296.7	7,141.8	68.1	25.8	79.50	1,596.4	-873.6	1,060.4	968.7	91.68	11.567	
9,800.0	7,180.1	7,293.7	7,138.8	70.8	25.8	78.52	1,596.5	-873.6	1,159.2	1,065.1	94.08	12.321	
9,900.0	7,179.3	7,290.8	7,135.9	73.5	25.8	77.57	1,596.6	-873.7	1,258.2	1,161.7	96.47	13.043	
10,000.0	7,178.5	7,287.9	7,133.1	76.1	25.7	76.66	1,596.8	-873.8	1,357.3	1,258.5	98.82	13.735	
10,100.0	7,177.7	7,285.1	7,130.3	78.8	25.7	75.77	1,596.9	-873.9	1,456.6	1,355.4	101.16	14.399	
10,200.0	7,176.9	7,282.4	7,127.6	81.5	25.7	74.91	1,597.0	-873.9	1,555.9	1,452.4	103.47	15.037	
10,300.0	7,176.0	7,279.8	7,124.9	84.2	25.7	74.08	1,597.1	-874.0	1,655.3	1,549.6	105.76	15.651	
10,400.0	7,175.2	7,277.2	7,122.4	86.9	25.7	73.28	1,597.2	-874.1	1,754.8	1,646.8	108.03	16.243	
10,500.0	7,174.4	7,274.7	7,119.8	89.6	25.7	72.50	1,597.3	-874.1	1,854.3	1,744.0	110.28	16.815	
10,600.0	7,173.6	7,272.2	7,117.4	92.3	25.7	71.75	1,597.4	-874.2	1,953.9	1,841.4	112.50	17.367	
10,700.0	7,172.8	7,269.8	7,114.9	95.0	25.7	71.02	1,597.5	-874.2	2,053.5	1,938.8	114.71	17.902	
10,800.0	7,172.0	7,267.0	7,112.2	97.8	25.7	70.30	1,598.0	-874.5	2,153.2	2,038.2	114.96	18.729	
10,900.0	7,171.2	7,264.0	7,109.2	100.5	25.7	69.60	1,598.0	-874.5	2,252.8	2,135.3	117.50	19.172	
11,000.0	7,170.4	7,261.0	7,106.2	103.2	25.7	68.90	1,598.0	-874.5	2,352.5	2,232.5	120.05	19.597	
11,100.0	7,169.6	7,258.0	7,103.2	106.0	25.7	68.20	1,598.0	-874.5	2,452.2	2,329.6	122.59	20.003	
11,200.0	7,168.8	7,255.0	7,100.2	108.7	25.7	67.50	1,598.0	-874.5	2,551.9	2,426.8	125.14	20.392	
11,300.0	7,168.0	7,252.0	7,097.2	111.5	25.7	66.80	1,598.0	-874.5	2,651.7	2,524.0	127.69	20.766	
11,400.0	7,167.1	7,249.0	7,094.2	114.2	25.7	66.10	1,598.0	-874.5	2,751.5	2,621.2	130.25	21.125	
11,500.0	7,166.3	7,246.0	7,091.2	117.0	25.7	65.40	1,598.0	-874.5	2,851.2	2,718.4	132.81	21.469	
11,600.0	7,165.5	7,243.0	7,088.2	119.7	25.7	64.70	1,598.0	-874.5	2,951.0	2,815.7	135.37	21.801	
11,700.0	7,164.7	7,240.0	7,085.2	122.5	25.7	64.00	1,598.0	-874.5	3,050.9	2,912.9	137.93	22.119	
11,800.0	7,163.9	7,237.0	7,082.2	125.2	25.7	63.30	1,598.0	-874.5	3,150.7	3,010.2	140.49	22.426	
11,900.0	7,163.1	7,234.0	7,079.2	128.0	25.7	62.60	1,598.0	-874.5	3,250.5	3,107.5	143.06	22.722	
12,000.0	7,162.3	7,231.0	7,076.2	130.7	25.7	61.90	1,598.0	-874.5	3,350.4	3,204.7	145.62	23.007	
12,100.0	7,161.5	7,228.0	7,073.2	133.5	25.7	61.20	1,598.0	-874.5	3,450.2	3,302.0	148.19	23.282	
12,200.0	7,160.7	7,225.0	7,070.2	136.3	25.7	60.50	1,598.7	-874.9	3,550.0	3,404.1	145.88	24.335	
12,300.0	7,159.9	7,222.0	7,067.2	139.0	25.7	59.80	1,598.8	-874.9	3,649.9	3,502.0	147.86	24.684	
12,400.0	7,159.0	7,219.0	7,064.2	141.8	25.7	59.10	1,598.9	-874.9	3,749.7	3,599.9	149.83	25.026	
12,500.0	7,158.2	7,216.0	7,061.2	144.6	25.7	58.40	1,598.9	-875.0	3,849.6	3,697.8	151.80	25.361	
12,600.0	7,157.4	7,213.0	7,058.2	147.3	25.7	57.70	1,599.0	-875.0	3,949.5	3,795.7	153.75	25.688	
12,700.0	7,156.6	7,210.0	7,055.2	150.1	25.7	57.00	1,599.0	-875.0	4,049.4	3,893.7	155.69	26.009	
12,800.0	7,155.8	7,207.0	7,052.2	152.9	25.7	56.30	1,599.1	-875.1	4,149.3	3,991.6	157.63	26.323	
12,900.0	7,155.0	7,204.0	7,049.2	155.7	25.7	55.60	1,599.2	-875.1	4,249.1	4,089.6	159.56	26.630	
13,000.0	7,154.2	7,201.0	7,046.2	158.4	25.7	54.90	1,599.2	-875.1	4,349.0	4,187.6	161.48	26.932	
13,100.0	7,153.3	7,198.0	7,043.2	161.2	25.7	54.20	1,599.3	-875.1	4,448.9	4,285.5	163.40	27.227	
13,200.0	7,152.5	7,195.0	7,040.2	164.0	25.6	53.50	1,599.3	-875.2	4,548.8	4,383.5	165.31	27.517	
13,300.0	7,151.7	7,192.0	7,037.2	166.8	25.6	52.80	1,599.4	-875.2	4,648.7	4,481.5	167.21	27.802	
13,400.0	7,150.9	7,189.0	7,034.2	169.5	25.6	52.10	1,599.4	-875.2	4,748.7	4,579.5	169.11	28.080	
13,500.0	7,150.1	7,186.0	7,031.2	172.3	25.6	51.40	1,599.5	-875.2	4,848.6	4,677.6	171.00	28.354	
13,600.0	7,149.3	7,183.0	7,028.2	175.1	25.6	50.70	1,599.5	-875.2	4,948.5	4,775.6	172.89	28.623	
13,700.0	7,148.5	7,180.0	7,025.2	177.9	25.6	50.00	1,599.6	-875.3	5,048.4	4,873.6	174.77	28.887	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD EEE 21ADU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 706-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
13,800.0	7,147.6	7,216.2	7,061.4	180.7	25.6	56.81	1,599.6	-875.3	5,148.3	4,971.7	176.64	29.146	
13,900.0	7,146.8	7,215.0	7,060.2	183.5	25.6	56.52	1,599.7	-875.3	5,248.2	5,069.7	178.51	29.400	
14,000.0	7,146.0	7,213.7	7,059.0	186.2	25.6	56.25	1,599.7	-875.3	5,348.2	5,167.8	180.38	29.650	
14,100.0	7,145.2	7,212.6	7,057.8	189.0	25.6	55.98	1,599.8	-875.3	5,448.1	5,265.9	182.24	29.896	
14,200.0	7,144.4	7,211.4	7,056.6	191.8	25.6	55.71	1,599.8	-875.3	5,548.0	5,363.9	184.09	30.137	
14,300.0	7,143.6	7,210.2	7,055.5	194.6	25.6	55.46	1,599.9	-875.4	5,648.0	5,462.0	185.94	30.374	
14,370.2	7,143.0	7,209.4	7,054.7	196.6	25.6	55.28	1,599.9	-875.4	5,718.1	5,530.9	187.24	30.539	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD EEE 21NDU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 147-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	-45.97	1,787.3	-1,849.0	2,571.7				
100.0	100.0	101.9	101.9	0.1	0.0	-45.97	1,787.1	-1,848.7	2,571.3	2,571.2	0.12	N/A	
200.0	200.0	339.7	339.5	0.3	0.5	-45.92	1,783.8	-1,842.1	2,569.0	2,568.2	0.79	3,250.863	
300.0	300.0	603.2	601.6	0.5	1.2	-45.71	1,773.2	-1,817.4	2,559.0	2,557.3	1.65	1,548.054	
400.0	400.0	697.8	695.4	0.8	1.5	-71.07	1,769.0	-1,805.1	2,546.0	2,543.8	2.11	1,206.005	
500.0	499.8	793.7	790.3	1.0	1.8	-71.31	1,765.2	-1,792.6	2,532.2	2,529.6	2.56	990.088	
600.0	599.5	1,089.0	1,079.4	1.2	3.0	-71.38	1,758.8	-1,733.5	2,513.6	2,509.9	3.71	677.054	
700.0	698.7	1,336.8	1,315.4	1.5	4.5	-71.42	1,753.4	-1,658.6	2,485.5	2,480.5	5.01	496.044	
800.0	797.5	1,605.1	1,564.9	1.8	6.5	-71.51	1,744.6	-1,560.6	2,452.7	2,446.1	6.64	369.354	
900.0	895.6	1,738.5	1,685.5	2.2	7.7	-71.95	1,740.6	-1,503.8	2,414.2	2,406.5	7.72	312.695	
1,000.0	993.1	1,853.0	1,788.2	2.6	8.7	-72.58	1,736.3	-1,453.3	2,372.9	2,364.2	8.75	271.249	
1,100.0	1,089.6	1,926.3	1,853.9	3.1	9.4	-73.38	1,733.7	-1,420.8	2,330.7	2,321.2	9.55	244.010	
1,127.2	1,115.8	1,947.0	1,872.4	3.2	9.6	-73.61	1,733.1	-1,411.6	2,319.2	2,309.4	9.78	237.092	
1,200.0	1,185.5	2,005.6	1,925.0	3.6	10.1	-73.58	1,731.5	-1,385.8	2,288.5	2,278.0	10.47	218.553	
1,300.0	1,281.4	2,096.0	2,006.3	4.1	10.8	-73.54	1,728.7	-1,346.5	2,246.5	2,235.0	11.48	195.664	
1,400.0	1,377.3	2,189.7	2,090.8	4.7	11.6	-73.53	1,725.1	-1,306.1	2,204.4	2,191.8	12.52	176.073	
1,500.0	1,473.1	2,260.7	2,154.9	5.2	12.2	-73.52	1,722.4	-1,275.8	2,162.4	2,149.0	13.44	160.850	
1,600.0	1,569.0	2,321.0	2,209.6	5.8	12.7	-73.50	1,720.9	-1,250.4	2,121.8	2,107.5	14.32	148.209	
1,700.0	1,664.8	2,447.7	2,324.7	6.4	13.7	-73.51	1,716.8	-1,197.6	2,081.0	2,065.4	15.56	133.740	
1,800.0	1,760.7	2,596.1	2,458.8	6.9	15.1	-73.54	1,709.3	-1,134.5	2,038.7	2,021.7	16.94	120.323	
1,900.0	1,856.6	2,705.4	2,556.7	7.5	16.1	-73.56	1,702.1	-1,086.3	1,994.0	1,975.8	18.12	110.065	
2,000.0	1,952.4	2,789.0	2,631.4	8.1	16.9	-73.57	1,696.7	-1,049.3	1,949.2	1,930.1	19.13	101.870	
2,100.0	2,048.3	2,851.4	2,687.4	8.6	17.4	-73.58	1,693.0	-1,022.0	1,905.2	1,885.2	20.02	95.158	
2,200.0	2,144.1	2,916.5	2,746.1	9.2	18.0	-73.59	1,689.6	-994.2	1,862.3	1,841.4	20.92	89.000	
2,300.0	2,240.0	2,983.3	2,806.7	9.8	18.6	-73.59	1,687.1	-965.9	1,820.7	1,798.8	21.84	83.348	
2,400.0	2,335.9	3,086.7	2,900.3	10.3	19.5	-73.59	1,683.6	-922.2	1,779.4	1,756.4	22.99	77.403	
2,500.0	2,431.7	3,185.8	2,989.5	10.9	20.4	-73.56	1,679.8	-879.2	1,737.0	1,712.9	24.13	71.976	
2,600.0	2,527.6	3,257.0	3,053.9	11.5	21.0	-73.52	1,678.3	-848.9	1,696.0	1,670.9	25.11	67.538	
2,700.0	2,623.4	3,349.3	3,137.5	12.1	21.8	-73.47	1,676.8	-809.7	1,655.8	1,629.5	26.23	63.135	
2,800.0	2,719.3	3,448.5	3,227.0	12.6	22.7	-73.42	1,674.0	-767.1	1,614.4	1,587.0	27.38	58.960	
2,900.0	2,815.2	3,532.8	3,303.3	13.2	23.4	-73.40	1,671.2	-731.4	1,573.0	1,544.6	28.42	55.353	
3,000.0	2,911.0	3,619.3	3,381.7	13.8	24.2	-73.39	1,668.4	-695.0	1,531.9	1,502.4	29.47	51.986	
3,100.0	3,006.9	3,697.9	3,453.0	14.4	24.9	-73.36	1,666.6	-661.8	1,491.3	1,460.9	30.49	48.918	
3,200.0	3,102.7	3,801.2	3,546.7	14.9	25.7	-73.31	1,664.4	-618.4	1,451.1	1,419.5	31.65	45.848	
3,300.0	3,198.6	3,898.7	3,635.2	15.5	26.6	-73.32	1,660.8	-577.7	1,409.9	1,377.2	32.76	43.038	
3,400.0	3,294.5	4,007.1	3,733.5	16.1	27.5	-73.36	1,655.7	-532.3	1,368.1	1,334.2	33.92	40.339	
3,500.0	3,390.3	4,100.4	3,818.0	16.7	28.4	-73.42	1,650.5	-493.2	1,325.6	1,290.6	34.98	37.900	
3,600.0	3,486.2	4,211.6	3,918.2	17.2	29.4	-73.48	1,643.7	-445.5	1,282.0	1,245.9	36.14	35.470	
3,700.0	3,582.0	4,286.0	3,985.2	17.8	30.0	-73.52	1,639.0	-413.4	1,238.2	1,201.1	37.11	33.371	
3,800.0	3,677.9	4,360.2	4,052.5	18.4	30.7	-73.59	1,634.7	-382.3	1,195.7	1,157.6	38.05	31.426	
3,900.0	3,773.7	4,446.2	4,130.7	19.0	31.4	-73.65	1,630.8	-346.8	1,154.3	1,115.2	39.06	29.553	
4,000.0	3,869.6	4,554.8	4,228.9	19.5	32.4	-73.66	1,626.4	-300.6	1,112.4	1,072.2	40.24	27.644	
4,100.0	3,965.5	4,637.4	4,302.8	20.1	33.1	-73.55	1,624.0	-263.8	1,069.8	1,028.5	41.34	25.878	
4,200.0	4,061.3	4,736.6	4,391.0	20.7	34.1	-73.26	1,623.0	-218.5	1,027.5	984.9	42.62	24.111	
4,300.0	4,157.2	4,831.6	4,475.4	21.3	35.0	-73.01	1,620.9	-174.8	984.4	940.5	43.85	22.446	
4,400.0	4,253.0	4,919.6	4,554.0	21.8	35.8	-72.89	1,617.5	-135.7	941.2	896.2	44.98	20.925	
4,500.0	4,348.9	5,018.6	4,643.0	22.4	36.7	-72.84	1,612.4	-92.5	897.8	851.6	46.13	19.462	
4,600.0	4,444.8	5,119.9	4,733.4	23.0	37.7	-72.76	1,606.7	-47.1	853.2	805.9	47.33	18.028	
4,700.0	4,540.6	5,211.9	4,815.0	23.6	38.6	-72.61	1,601.4	-5.0	807.9	759.4	48.49	16.659	
4,800.0	4,636.5	5,286.0	4,881.0	24.1	39.3	-72.50	1,597.3	28.5	763.2	713.6	49.53	15.408	
4,900.0	4,732.3	5,359.7	4,947.5	24.7	40.0	-72.46	1,593.8	60.2	720.5	669.9	50.52	14.262	
5,000.0	4,828.2	5,435.2	5,016.5	25.3	40.6	-72.56	1,590.4	90.5	679.8	628.4	51.45	13.213	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD EEE 21NDU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 147-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	4,924.1	5,512.9	5,088.4	25.9	41.2	-72.82	1,587.0	119.6	641.3	588.9	52.32	12.256	
5,200.0	5,019.9	5,596.0	5,166.0	26.4	41.8	-73.20	1,584.1	149.3	604.5	551.3	53.16	11.371	
5,300.0	5,115.8	5,675.2	5,240.6	27.0	42.3	-73.65	1,582.0	176.1	569.6	515.7	53.94	10.559	
5,400.0	5,211.6	5,758.0	5,319.0	27.6	42.8	-74.30	1,580.3	202.2	536.9	482.3	54.65	9.824	
5,500.0	5,307.5	5,838.4	5,396.0	28.2	43.3	-75.14	1,579.1	225.5	506.5	451.2	55.27	9.164	
5,600.0	5,403.4	5,920.0	5,474.9	28.7	43.7	-76.22	1,578.7	246.7	479.1	423.3	55.77	8.590	
5,700.0	5,499.2	6,005.2	5,557.8	29.3	44.1	-77.68	1,578.5	266.1	454.4	398.3	56.12	8.098	
5,800.0	5,595.1	6,091.5	5,642.4	29.9	44.4	-79.52	1,578.1	283.3	432.3	376.0	56.30	7.679	
5,840.7	5,634.1	6,125.7	5,676.0	30.1	44.5	-80.36	1,578.0	289.4	424.2	367.8	56.32	7.531	
5,900.0	5,691.1	6,176.2	5,725.8	30.4	44.7	-81.43	1,577.8	297.4	413.5	357.1	56.39	7.332	
6,000.0	5,788.0	6,263.4	5,812.2	30.8	44.9	-83.31	1,577.5	309.2	398.4	342.1	56.34	7.072	
6,100.0	5,885.7	6,352.2	5,900.5	31.2	45.1	-85.12	1,577.5	318.8	386.9	330.7	56.21	6.882	
6,200.0	5,984.0	6,445.4	5,993.4	31.5	45.3	-86.81	1,577.8	327.0	378.0	321.9	56.06	6.742	
6,300.0	6,083.0	6,536.8	6,084.5	31.8	45.4	-88.23	1,578.1	333.3	371.4	315.5	55.94	6.640	
6,400.0	6,182.3	6,629.1	6,176.7	32.0	45.6	-89.43	1,578.3	337.3	367.3	311.4	55.83	6.578	
6,500.0	6,282.0	6,728.2	6,275.8	32.2	45.7	-90.34	1,578.2	340.5	364.3	308.5	55.79	6.531	
6,600.0	6,382.0	6,824.9	6,372.4	32.3	45.8	-90.79	1,578.1	343.0	362.0	306.2	55.87	6.480	
6,668.0	6,449.9	6,891.8	6,439.4	32.4	45.8	-65.60	1,578.0	344.2	360.8	299.3	61.54	5.864	
6,698.0	6,479.9	6,921.7	6,469.2	32.4	45.8	-65.57	1,578.0	344.8	360.3	298.7	61.60	5.850	
6,700.0	6,481.9	6,923.7	6,471.3	32.4	45.8	24.44	1,578.0	344.8	360.3	304.2	56.08	6.425	
6,750.0	6,531.9	6,973.9	6,521.4	32.5	45.9	24.69	1,577.9	345.7	357.8	301.9	55.85	6.406	
6,800.0	6,581.6	7,023.3	6,570.8	32.5	45.9	25.28	1,577.8	346.5	352.1	296.5	55.60	6.332	
6,850.0	6,630.8	7,071.7	6,619.3	32.5	46.0	26.24	1,577.6	347.2	343.3	288.0	55.36	6.202	
6,900.0	6,679.3	7,119.0	6,666.5	32.4	46.0	27.60	1,577.4	347.9	331.7	276.5	55.21	6.008	
6,950.0	6,726.8	7,165.0	6,712.5	32.4	46.0	29.44	1,577.3	348.2	317.4	262.2	55.20	5.750	
7,000.0	6,773.1	7,210.6	6,758.1	32.3	46.1	31.88	1,577.1	348.4	300.6	245.1	55.48	5.419	
7,050.0	6,817.9	7,255.4	6,802.9	32.3	46.1	35.11	1,576.9	348.6	281.4	225.3	56.16	5.011	
7,100.0	6,861.2	7,298.7	6,846.2	32.2	46.1	39.32	1,576.8	348.8	260.1	202.8	57.36	4.536	
7,150.0	6,902.5	7,340.2	6,887.8	32.1	46.2	44.72	1,576.6	349.0	237.3	178.2	59.13	4.013	
7,200.0	6,941.8	7,379.6	6,927.1	32.0	46.2	51.52	1,576.3	349.2	213.7	152.3	61.40	3.480	
7,250.0	6,978.9	7,416.2	6,963.7	31.9	46.2	59.72	1,576.1	349.3	190.5	126.6	63.83	2.984	
7,300.0	7,013.5	7,450.5	6,998.0	31.7	46.2	69.18	1,575.9	349.4	169.6	103.7	65.91	2.574	
7,350.0	7,045.5	7,482.2	7,029.7	31.6	46.3	79.24	1,575.7	349.5	153.9	86.9	67.03	2.296	
7,400.0	7,074.8	7,511.2	7,058.7	31.5	46.3	88.87	1,575.6	349.6	146.8	79.9	66.89	2.194 SF	
7,407.2	7,078.7	7,515.1	7,062.6	31.5	46.3	90.16	1,575.6	349.6	146.6	79.8	66.78	2.196 CC, ES	
7,450.0	7,101.1	7,537.1	7,084.7	31.4	46.3	97.12	1,575.6	349.7	151.1	85.3	65.79	2.297	
7,500.0	7,124.5	7,560.0	7,107.6	31.3	46.3	103.41	1,575.6	349.8	167.5	103.2	64.35	2.603	
7,550.0	7,144.7	7,580.0	7,127.6	31.1	46.3	107.64	1,575.6	349.9	193.9	130.8	63.15	3.071	
7,600.0	7,161.6	7,596.8	7,144.4	31.0	46.3	109.72	1,575.6	350.0	227.5	164.9	62.63	3.633	
7,650.0	7,175.3	7,610.3	7,157.8	30.9	46.4	109.61	1,575.6	350.0	266.2	203.1	63.06	4.221	
7,700.0	7,185.5	7,620.4	7,167.9	30.8	46.4	107.15	1,575.6	350.1	308.2	243.7	64.52	4.778	
7,750.0	7,192.3	7,627.1	7,174.6	30.7	46.4	102.07	1,575.6	350.1	352.6	285.8	66.80	5.279	
7,800.0	7,195.7	7,630.3	7,177.8	30.7	46.4	94.07	1,575.6	350.1	398.5	329.3	69.24	5.756	
7,828.6	7,196.0	7,630.5	7,178.0	30.6	46.4	88.16	1,575.6	350.1	425.3	355.1	70.20	6.058	
7,900.0	7,195.4	7,629.6	7,177.1	30.6	46.4	87.82	1,575.6	350.1	492.9	421.7	71.22	6.921	
8,000.0	7,194.6	7,628.4	7,175.9	30.6	46.4	87.35	1,575.6	350.1	589.1	516.3	72.84	8.088	
8,100.0	7,193.8	7,627.2	7,174.7	31.0	46.4	86.87	1,575.6	350.1	686.4	611.8	74.64	9.196	
8,200.0	7,193.0	7,626.0	7,173.5	32.1	46.4	86.39	1,575.6	350.1	784.4	707.8	76.59	10.241	
8,300.0	7,192.2	7,624.7	7,172.3	33.8	46.4	85.92	1,575.6	350.1	882.8	804.2	78.66	11.224	
8,400.0	7,191.4	7,623.5	7,171.0	35.8	46.4	85.44	1,575.6	350.1	981.6	900.8	80.82	12.146	
8,500.0	7,190.6	7,622.3	7,169.8	38.0	46.4	84.95	1,575.6	350.1	1,080.5	997.5	83.05	13.010	
8,600.0	7,189.8	7,621.0	7,168.5	40.3	46.4	84.47	1,575.6	350.1	1,179.7	1,094.3	85.35	13.822	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD EEE 21NDU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 147-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,700.0	7,189.0	7,619.8	7,167.3	42.7	46.4	83.99	1,575.6	350.1	1,279.0	1,191.3	87.70	14.584	
8,800.0	7,188.2	7,618.5	7,166.0	45.1	46.4	83.50	1,575.6	350.1	1,378.4	1,288.3	90.08	15.301	
8,900.0	7,187.4	7,617.3	7,164.8	47.5	46.4	83.02	1,575.6	350.1	1,477.8	1,385.3	92.49	15.978	
9,000.0	7,186.6	7,616.0	7,163.5	50.0	46.4	82.53	1,575.6	350.1	1,577.3	1,482.4	94.93	16.616	
9,100.0	7,185.7	7,614.7	7,162.2	52.6	46.4	82.04	1,575.6	350.1	1,676.9	1,579.5	97.39	17.220	
9,200.0	7,184.9	7,613.5	7,161.0	55.1	46.4	81.55	1,575.6	350.0	1,776.6	1,676.7	99.85	17.792	
9,300.0	7,184.1	7,612.2	7,159.7	57.7	46.4	81.06	1,575.6	350.0	1,876.2	1,773.9	102.33	18.335	
9,400.0	7,183.3	7,610.9	7,158.4	60.3	46.4	80.57	1,575.6	350.0	1,975.9	1,871.1	104.81	18.852	
9,500.0	7,182.5	7,609.6	7,157.1	62.9	46.4	80.08	1,575.6	350.0	2,075.7	1,968.4	107.30	19.345	
9,600.0	7,181.7	7,608.3	7,155.8	65.5	46.4	79.59	1,575.6	350.0	2,175.4	2,065.6	109.78	19.816	
9,700.0	7,180.9	7,607.0	7,154.5	68.1	46.4	79.10	1,575.6	350.0	2,275.2	2,162.9	112.26	20.267	
9,800.0	7,180.1	7,605.7	7,153.2	70.8	46.4	78.61	1,575.6	350.0	2,375.0	2,260.3	114.74	20.699	
9,900.0	7,179.3	7,604.4	7,151.9	73.5	46.4	78.11	1,575.6	350.0	2,474.8	2,357.6	117.21	21.114	
10,000.0	7,178.5	7,603.1	7,150.6	76.1	46.4	77.62	1,575.6	350.0	2,574.6	2,455.0	119.67	21.514	
10,100.0	7,177.7	7,601.8	7,149.3	78.8	46.4	77.13	1,575.6	350.0	2,674.5	2,552.3	122.13	21.899	
10,200.0	7,176.9	7,600.4	7,147.9	81.5	46.4	76.63	1,575.6	350.0	2,774.3	2,649.7	124.57	22.271	
10,300.0	7,176.0	7,599.1	7,146.6	84.2	46.4	76.14	1,575.6	350.0	2,874.2	2,747.2	127.00	22.631	
10,400.0	7,175.2	7,597.8	7,145.3	86.9	46.3	75.65	1,575.6	350.0	2,974.0	2,844.6	129.42	22.980	
10,500.0	7,174.4	7,596.4	7,143.9	89.6	46.3	75.15	1,575.6	350.0	3,073.9	2,942.1	131.82	23.319	
10,600.0	7,173.6	7,595.1	7,142.6	92.3	46.3	74.66	1,575.6	350.0	3,173.8	3,039.6	134.21	23.649	
10,700.0	7,172.8	7,593.7	7,141.2	95.0	46.3	74.16	1,575.6	350.0	3,273.7	3,137.1	136.58	23.969	
10,800.0	7,172.0	7,592.3	7,139.9	97.8	46.3	73.67	1,575.6	350.0	3,373.6	3,234.6	138.93	24.282	
10,900.0	7,171.2	7,591.0	7,138.5	100.5	46.3	73.18	1,575.6	349.9	3,473.5	3,332.2	141.27	24.587	
11,000.0	7,170.4	7,589.6	7,137.1	103.2	46.3	72.68	1,575.6	349.9	3,573.4	3,429.8	143.59	24.886	
11,100.0	7,169.6	7,588.2	7,135.7	106.0	46.3	72.19	1,575.6	349.9	3,673.3	3,527.4	145.89	25.179	
11,200.0	7,168.8	7,586.8	7,134.3	108.7	46.3	71.70	1,575.6	349.9	3,773.2	3,625.0	148.17	25.466	
11,300.0	7,168.0	7,585.4	7,133.0	111.5	46.3	71.21	1,575.6	349.9	3,873.1	3,722.7	150.43	25.748	
11,400.0	7,167.1	7,584.0	7,131.6	114.2	46.3	70.72	1,575.6	349.9	3,973.0	3,820.4	152.66	26.025	
11,500.0	7,166.3	7,582.6	7,130.2	117.0	46.3	70.23	1,575.6	349.9	4,073.0	3,918.1	154.88	26.297	
11,600.0	7,165.5	7,581.2	7,128.7	119.7	46.3	69.74	1,575.6	349.9	4,172.9	4,015.8	157.07	26.566	
11,700.0	7,164.7	7,579.8	7,127.3	122.5	46.3	69.25	1,575.6	349.9	4,272.8	4,113.6	159.25	26.832	
11,800.0	7,163.9	7,578.4	7,125.9	125.2	46.3	68.77	1,575.6	349.9	4,372.8	4,211.4	161.39	27.094	
11,900.0	7,163.1	7,577.0	7,124.5	128.0	46.3	68.28	1,575.6	349.9	4,472.7	4,309.2	163.52	27.353	
12,000.0	7,162.3	7,575.5	7,123.0	130.7	46.3	67.80	1,575.6	349.9	4,572.6	4,407.0	165.62	27.609	
12,100.0	7,161.5	7,574.1	7,121.6	133.5	46.3	67.31	1,575.6	349.9	4,672.6	4,504.9	167.70	27.863	
12,200.0	7,160.7	7,572.6	7,120.2	136.3	46.3	66.83	1,575.6	349.9	4,772.5	4,602.8	169.75	28.115	
12,300.0	7,159.8	7,571.2	7,118.7	139.0	46.3	66.35	1,575.6	349.9	4,872.5	4,700.7	171.78	28.365	
12,400.0	7,159.0	7,569.7	7,117.2	141.8	46.3	65.87	1,575.6	349.8	4,972.4	4,798.6	173.78	28.613	
12,500.0	7,158.2	7,568.3	7,115.8	144.6	46.3	65.39	1,575.6	349.8	5,072.4	4,896.6	175.76	28.860	
12,600.0	7,157.4	7,566.8	7,114.3	147.3	46.3	64.92	1,575.6	349.8	5,172.3	4,994.6	177.71	29.106	
12,700.0	7,156.6	7,565.3	7,112.8	150.1	46.3	64.44	1,575.6	349.8	5,272.3	5,092.6	179.63	29.350	
12,800.0	7,155.8	7,563.8	7,111.3	152.9	46.3	63.97	1,575.6	349.8	5,372.2	5,190.7	181.53	29.594	
12,900.0	7,155.0	7,562.3	7,109.8	155.7	46.3	63.50	1,575.6	349.8	5,472.2	5,288.8	183.40	29.837	
13,000.0	7,154.2	7,560.9	7,109.5	158.4	46.3	63.39	1,575.6	349.8	5,572.1	5,386.4	185.76	29.996	
13,100.0	7,153.3	7,562.0	7,109.5	161.2	46.3	63.39	1,575.6	349.8	5,672.1	5,483.8	188.26	30.128	
13,200.0	7,152.5	7,562.0	7,109.5	164.0	46.3	63.38	1,575.6	349.8	5,772.0	5,581.3	190.77	30.257	
13,300.0	7,151.7	7,562.0	7,109.5	166.8	46.3	63.38	1,575.6	349.8	5,872.0	5,678.7	193.28	30.381	
13,400.0	7,150.9	7,562.0	7,109.5	169.5	46.3	63.38	1,575.6	349.8	5,972.0	5,776.2	195.78	30.503	
13,500.0	7,150.1	7,562.0	7,109.5	172.3	46.3	63.38	1,575.6	349.8	6,071.9	5,873.6	198.29	30.621	
13,600.0	7,149.3	7,562.0	7,109.5	175.1	46.3	63.37	1,575.6	349.8	6,171.9	5,971.1	200.80	30.737	
13,700.0	7,148.5	7,562.0	7,109.5	177.9	46.3	63.37	1,575.6	349.8	6,271.9	6,068.5	203.31	30.849	
13,800.0	7,147.6	7,552.6	7,100.1	180.7	46.3	60.50	1,575.6	349.8	6,371.8	6,170.7	201.09	31.687	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD EEE 21NDU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 147-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	
13,900.0	7,146.8	7,551.5	7,099.0	183.5	46.3	60.19	1,575.6	349.8	6,471.8	6,268.8	202.99	31.882	
14,000.0	7,146.0	7,550.5	7,098.0	186.2	46.3	59.88	1,575.6	349.7	6,571.7	6,366.9	204.89	32.075	
14,100.0	7,145.2	7,549.5	7,097.0	189.0	46.3	59.58	1,575.6	349.7	6,671.7	6,464.9	206.77	32.266	
14,200.0	7,144.4	7,548.4	7,095.9	191.8	46.3	59.28	1,575.6	349.7	6,771.7	6,563.0	208.64	32.456	
14,300.0	7,143.6	4,515.5	4,193.5	194.6	32.0	3.81	1,628.0	-317.7	6,864.2	6,799.7	64.52	106.389	
14,370.2	7,143.0	4,505.1	4,184.1	196.6	31.9	3.81	1,628.4	-322.1	6,927.5	6,862.5	65.02	106.541	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 155-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	-45.81	1,929.4	-1,985.1	2,768.3				
100.0	100.0	55.0	55.0	0.1	0.0	-45.82	1,929.6	-1,985.4	2,768.7	2,768.6	0.12	N/A	
200.0	200.0	120.9	120.9	0.3	0.1	-45.83	1,930.0	-1,986.5	2,770.3	2,770.0	0.38	7,277.301	
300.0	300.0	194.3	194.3	0.5	0.1	-45.85	1,930.8	-1,988.6	2,773.1	2,772.5	0.69	4,008.223	
400.0	400.0	267.3	267.2	0.8	0.3	-71.05	1,931.5	-1,991.5	2,776.2	2,775.1	1.06	2,630.003	
500.0	499.8	333.0	332.8	1.0	0.4	-71.10	1,932.3	-1,995.3	2,779.4	2,778.0	1.44	1,934.309	
600.0	599.5	395.7	395.3	1.2	0.6	-71.21	1,933.1	-2,000.1	2,782.8	2,781.0	1.84	1,516.439	
700.0	698.7	473.3	472.6	1.5	0.8	-71.42	1,933.8	-2,007.1	2,786.2	2,783.9	2.30	1,212.013	
800.0	797.5	554.2	553.1	1.8	1.1	-71.71	1,934.5	-2,015.1	2,789.1	2,786.3	2.81	991.472	
900.0	895.6	642.1	640.4	2.2	1.3	-72.11	1,935.1	-2,024.6	2,791.7	2,788.3	3.39	822.871	
1,000.0	993.1	726.1	723.9	2.6	1.6	-72.57	1,935.4	-2,034.1	2,793.5	2,789.5	4.01	695.944	
1,100.0	1,089.6	796.0	793.2	3.1	1.8	-73.00	1,935.7	-2,043.0	2,795.7	2,791.0	4.66	600.184	
1,127.2	1,115.8	796.0	793.2	3.2	1.8	-72.98	1,935.7	-2,043.0	2,796.3	2,791.6	4.79	583.483	
1,200.0	1,185.5	845.0	841.8	3.6	2.0	-73.35	1,935.9	-2,050.0	2,798.6	2,793.3	5.31	527.064	
1,300.0	1,281.4	909.3	905.2	4.1	2.2	-73.84	1,935.6	-2,060.6	2,803.1	2,797.0	6.03	464.678	
1,400.0	1,377.3	983.0	977.5	4.7	2.5	-74.45	1,934.1	-2,074.5	2,808.9	2,802.0	6.81	412.339	
1,500.0	1,473.1	1,037.3	1,030.5	5.2	2.7	-74.93	1,932.2	-2,086.0	2,816.1	2,808.6	7.55	372.813	
1,600.0	1,569.0	1,106.9	1,098.2	5.8	3.1	-75.56	1,929.1	-2,102.2	2,825.0	2,816.6	8.38	337.168	
1,700.0	1,664.8	1,170.0	1,159.2	6.4	3.4	-76.16	1,925.0	-2,117.8	2,834.8	2,825.6	9.19	308.356	
1,800.0	1,760.7	1,240.2	1,226.7	6.9	3.8	-76.84	1,920.0	-2,136.1	2,846.1	2,836.0	10.06	282.895	
1,900.0	1,856.6	1,305.2	1,289.1	7.5	4.1	-77.48	1,915.4	-2,154.1	2,859.2	2,848.2	10.92	261.837	
2,000.0	1,952.4	1,383.9	1,364.3	8.1	4.6	-78.26	1,909.6	-2,176.3	2,873.5	2,861.6	11.85	242.423	
2,100.0	2,048.3	1,451.0	1,428.4	8.6	5.0	-78.92	1,904.4	-2,195.6	2,888.7	2,875.9	12.74	226.813	
2,200.0	2,144.1	1,517.1	1,491.4	9.2	5.4	-79.58	1,899.4	-2,214.9	2,905.3	2,891.7	13.61	213.535	
2,300.0	2,240.0	1,570.2	1,541.8	9.8	5.7	-80.09	1,895.8	-2,230.9	2,923.7	2,909.3	14.42	202.742	
2,400.0	2,335.9	1,638.0	1,606.0	10.3	6.1	-80.76	1,891.2	-2,252.4	2,944.0	2,928.7	15.31	192.264	
2,500.0	2,431.7	1,669.1	1,635.3	10.9	6.3	-81.07	1,889.2	-2,262.6	2,965.9	2,949.9	16.04	184.937	
2,600.0	2,527.6	1,731.0	1,693.4	11.5	6.8	-81.67	1,885.6	-2,283.7	2,989.9	2,973.0	16.92	176.731	
2,700.0	2,623.4	1,773.7	1,733.3	12.1	7.1	-82.09	1,883.2	-2,298.6	3,015.5	2,997.8	17.71	170.309	
2,800.0	2,719.3	1,859.0	1,813.0	12.6	7.7	-82.92	1,878.2	-2,328.8	3,042.2	3,023.5	18.70	162.692	
2,900.0	2,815.2	1,951.0	1,898.8	13.2	8.3	-83.81	1,872.0	-2,361.3	3,069.3	3,049.6	19.70	155.769	
3,000.0	2,911.0	2,012.0	1,955.7	13.8	8.8	-84.40	1,867.8	-2,383.0	3,097.4	3,076.9	20.56	150.669	
3,100.0	3,006.9	2,068.9	2,008.6	14.4	9.2	-84.95	1,864.1	-2,403.7	3,127.0	3,105.5	21.41	146.033	
3,200.0	3,102.7	2,163.1	2,095.8	14.9	9.9	-85.84	1,858.0	-2,438.6	3,157.8	3,135.4	22.42	140.844	
3,300.0	3,198.6	2,281.4	2,206.0	15.5	10.7	-86.93	1,849.9	-2,481.0	3,188.2	3,164.7	23.47	135.868	
3,400.0	3,294.5	2,350.8	2,270.7	16.1	11.1	-87.56	1,845.3	-2,505.7	3,219.1	3,194.7	24.32	132.345	
3,500.0	3,390.3	2,428.7	2,343.2	16.7	11.7	-88.26	1,840.2	-2,533.7	3,251.0	3,225.8	25.22	128.886	
3,600.0	3,486.2	2,479.0	2,390.0	17.2	12.1	-88.71	1,836.7	-2,551.8	3,283.6	3,257.6	26.01	126.245	
3,700.0	3,582.0	2,544.0	2,450.3	17.8	12.6	-89.28	1,832.4	-2,575.7	3,317.5	3,290.6	26.86	123.528	
3,800.0	3,677.9	2,602.7	2,504.5	18.4	13.0	-89.79	1,828.8	-2,597.9	3,352.9	3,325.2	27.68	121.144	
3,900.0	3,773.7	2,685.6	2,580.9	19.0	13.7	-90.51	1,823.2	-2,629.6	3,389.0	3,360.4	28.59	118.520	
4,000.0	3,869.6	2,883.3	2,763.9	19.5	15.1	-92.18	1,808.9	-2,703.0	3,425.3	3,395.4	29.89	114.592	
4,100.0	3,965.5	2,970.6	2,845.4	20.1	15.7	-92.90	1,802.2	-2,733.6	3,459.8	3,429.0	30.75	112.514	
4,200.0	4,061.3	3,060.0	2,929.0	20.7	16.3	-93.61	1,796.0	-2,764.7	3,494.7	3,463.1	31.61	110.570	
4,300.0	4,157.2	3,185.7	3,046.8	21.3	17.1	-94.57	1,787.9	-2,807.6	3,529.7	3,497.2	32.55	108.449	
4,400.0	4,253.0	3,273.9	3,130.0	21.8	17.7	-95.22	1,782.8	-2,836.7	3,564.2	3,530.8	33.37	106.800	
4,500.0	4,348.9	3,354.4	3,205.6	22.4	18.2	-95.82	1,777.7	-2,863.8	3,599.6	3,565.4	34.18	105.325	
4,600.0	4,444.8	3,486.6	3,330.2	23.0	19.1	-96.77	1,768.8	-2,906.9	3,634.5	3,599.4	35.10	103.534	
4,700.0	4,540.6	3,641.7	3,477.1	23.6	20.1	-97.87	1,757.5	-2,955.2	3,668.3	3,632.2	36.06	101.736	
4,800.0	4,636.5	3,719.7	3,551.2	24.1	20.5	-98.40	1,752.5	-2,979.0	3,702.3	3,665.4	36.81	100.572	
4,900.0	4,732.3	3,818.8	3,645.5	24.7	21.1	-99.07	1,746.0	-3,009.0	3,736.3	3,698.7	37.61	99.341	
5,000.0	4,828.2	3,888.5	3,711.7	25.3	21.6	-99.54	1,740.9	-3,030.3	3,771.0	3,732.7	38.34	98.348	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 155-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	4,924.1	3,976.0	3,794.7	25.9	22.1	-100.12	1,733.9	-3,057.1	3,806.2	3,767.1	39.12	97.293	
5,200.0	5,019.9	4,036.7	3,852.2	26.4	22.5	-100.53	1,729.1	-3,076.0	3,842.0	3,802.2	39.83	96.457	
5,300.0	5,115.8	4,119.5	3,930.5	27.0	23.1	-101.07	1,722.7	-3,102.1	3,878.7	3,838.1	40.59	95.558	
5,400.0	5,211.6	4,300.4	4,102.2	27.6	24.2	-102.23	1,707.5	-3,157.1	3,914.9	3,873.3	41.53	94.264	
5,500.0	5,307.5	4,385.7	4,183.7	28.2	24.7	-102.75	1,701.8	-3,181.4	3,949.7	3,907.5	42.25	93.482	
5,600.0	5,403.4	4,444.0	4,239.3	28.7	25.0	-103.08	1,698.7	-3,198.6	3,985.7	3,942.8	42.92	92.865	
5,700.0	5,499.2	4,534.3	4,325.4	29.3	25.6	-103.60	1,694.0	-3,225.4	4,022.4	3,978.8	43.64	92.169	
5,800.0	5,595.1	4,606.3	4,394.1	29.9	26.0	-104.00	1,689.8	-3,246.7	4,059.2	4,014.9	44.33	91.564	
5,840.7	5,634.1	4,631.0	4,417.6	30.1	26.1	-104.14	1,688.3	-3,254.1	4,074.4	4,029.8	44.60	91.346	
5,900.0	5,691.1	4,671.4	4,456.0	30.4	26.4	-104.83	1,685.9	-3,266.2	4,096.5	4,051.7	44.82	91.400	
6,000.0	5,788.0	5,971.1	5,732.0	30.8	30.8	-110.64	1,640.9	-3,468.9	4,118.5	4,072.2	46.34	88.873	
6,100.0	5,885.7	6,067.7	5,828.6	31.2	30.9	-111.09	1,639.8	-3,469.9	4,127.3	4,080.6	46.71	88.365	
6,200.0	5,984.0	6,166.0	5,926.9	31.5	31.0	-111.48	1,638.5	-3,470.9	4,134.9	4,087.8	47.06	87.856	
6,300.0	6,083.0	6,260.0	6,020.8	31.8	31.1	-111.79	1,637.3	-3,472.0	4,141.4	4,094.0	47.40	87.365	
6,400.0	6,182.3	6,358.3	6,119.2	32.0	31.2	-112.05	1,635.9	-3,473.2	4,146.6	4,098.9	47.73	86.874	
6,500.0	6,282.0	6,453.5	6,214.3	32.2	31.3	-112.24	1,634.3	-3,474.4	4,150.7	4,102.7	48.04	86.403	
6,600.0	6,382.0	6,546.6	6,307.3	32.3	31.4	-112.36	1,633.0	-3,475.6	4,153.6	4,105.2	48.32	85.952	
6,668.0	6,449.9	6,606.7	6,367.4	32.4	31.5	-87.20	1,632.2	-3,476.6	4,154.9	4,103.5	51.36	80.903	
6,698.0	6,479.9	6,631.3	6,392.1	32.4	31.5	-87.20	1,631.9	-3,477.0	4,155.4	4,103.9	51.43	80.802	
6,700.0	6,481.9	6,633.0	6,393.7	32.4	31.5	2.80	1,631.9	-3,477.0	4,155.4	4,106.8	48.58	85.537	
6,750.0	6,531.9	6,674.0	6,434.8	32.5	31.6	2.80	1,631.3	-3,477.8	4,154.4	4,105.7	48.77	85.187	
6,800.0	6,581.6	6,718.5	6,479.2	32.5	31.6	2.81	1,630.7	-3,478.7	4,150.1	4,101.3	48.75	85.123	
6,850.0	6,630.8	6,764.6	6,525.4	32.5	31.7	2.83	1,630.0	-3,479.7	4,142.3	4,093.8	48.53	85.349	
6,900.0	6,679.3	6,806.2	6,566.9	32.4	31.8	2.88	1,629.4	-3,480.7	4,131.2	4,083.1	48.10	85.886	
6,950.0	6,726.8	6,844.8	6,605.4	32.4	31.8	2.94	1,628.7	-3,481.7	4,116.7	4,069.3	47.46	86.741	
7,000.0	6,773.1	6,876.0	6,636.7	32.3	31.8	3.01	1,628.2	-3,482.5	4,099.2	4,052.5	46.61	87.943	
7,050.0	6,817.9	6,917.2	6,677.9	32.3	31.9	3.11	1,627.5	-3,483.7	4,078.4	4,032.8	45.59	89.454	
7,100.0	6,861.2	6,951.1	6,711.8	32.2	32.0	3.24	1,627.0	-3,484.8	4,054.7	4,010.3	44.38	91.357	
7,150.0	6,902.5	6,987.1	6,747.7	32.1	32.0	3.40	1,626.6	-3,486.1	4,028.1	3,985.1	43.01	93.649	
7,200.0	6,941.8	7,025.1	6,785.7	32.0	32.1	3.59	1,626.1	-3,487.4	3,998.6	3,957.1	41.50	96.360	
7,250.0	6,978.9	7,063.0	6,823.5	31.9	32.1	3.83	1,625.5	-3,488.8	3,966.4	3,926.6	39.85	99.537	
7,300.0	7,013.5	7,097.9	6,858.5	31.7	32.2	4.12	1,624.9	-3,490.0	3,931.7	3,893.6	38.09	103.221	
7,350.0	7,045.5	7,132.3	6,892.8	31.6	32.2	4.48	1,624.3	-3,491.3	3,894.5	3,858.2	36.25	107.426	
7,400.0	7,074.8	7,166.5	6,926.9	31.5	32.3	4.94	1,623.6	-3,492.5	3,855.0	3,820.6	34.38	112.140	
7,450.0	7,101.1	7,204.3	6,964.7	31.4	32.3	5.55	1,622.9	-3,493.8	3,813.5	3,781.0	32.52	117.253	
7,500.0	7,124.5	7,237.8	6,998.2	31.3	32.4	6.34	1,622.3	-3,494.8	3,770.1	3,739.3	30.75	122.595	
7,550.0	7,144.7	7,265.2	7,025.6	31.1	32.4	7.43	1,621.8	-3,495.6	3,725.0	3,695.8	29.17	127.714	
7,600.0	7,161.6	7,287.3	7,047.7	31.0	32.4	8.98	1,621.4	-3,496.2	3,678.5	3,650.6	27.94	131.656	
7,650.0	7,175.3	7,305.4	7,065.7	30.9	32.5	11.35	1,621.0	-3,496.7	3,630.8	3,603.5	27.38	132.590	
7,700.0	7,185.5	7,319.2	7,079.6	30.8	32.5	15.35	1,620.8	-3,497.1	3,582.3	3,554.1	28.15	127.235	
7,750.0	7,192.3	7,328.9	7,089.3	30.7	32.5	23.33	1,620.6	-3,497.4	3,533.0	3,501.0	32.02	110.341	
7,800.0	7,195.7	7,334.5	7,094.8	30.7	32.5	44.45	1,620.5	-3,497.5	3,483.3	3,438.9	44.35	78.535	
7,828.6	7,196.0	7,335.7	7,096.1	30.6	32.5	73.79	1,620.4	-3,497.5	3,454.7	3,399.6	55.18	62.613	
7,900.0	7,195.4	7,337.2	7,097.5	30.6	32.5	74.20	1,620.4	-3,497.6	3,383.5	3,327.2	56.23	60.171	
8,000.0	7,194.6	7,339.2	7,099.6	30.6	32.5	74.76	1,620.4	-3,497.6	3,283.7	3,225.8	57.88	56.729	
8,100.0	7,193.8	7,341.2	7,101.6	31.0	32.5	75.32	1,620.3	-3,497.7	3,183.8	3,124.1	59.71	53.320	
8,200.0	7,193.0	7,343.2	7,103.5	32.1	32.5	75.87	1,620.3	-3,497.7	3,084.0	3,022.4	61.69	49.995	
8,300.0	7,192.2	7,345.3	7,105.6	33.8	32.5	76.46	1,620.3	-3,497.8	2,984.2	2,920.5	63.79	46.781	
8,400.0	7,191.4	7,347.4	7,107.8	35.8	32.5	77.07	1,620.2	-3,497.8	2,884.5	2,818.5	66.00	43.701	
8,500.0	7,190.6	7,349.6	7,109.9	38.0	32.5	77.67	1,620.2	-3,497.9	2,784.7	2,716.4	68.30	40.770	
8,600.0	7,189.8	7,351.6	7,112.0	40.3	32.5	78.26	1,620.1	-3,497.9	2,685.0	2,614.3	70.67	37.992	
8,700.0	7,189.0	7,353.6	7,114.0	42.7	32.5	78.84	1,620.1	-3,498.0	2,585.2	2,512.1	73.10	35.365	

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 SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 155-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,800.0	7,188.2	7,355.6	7,116.0	45.1	32.5	79.42	1,620.1	-3,498.0	2,485.5	2,410.0	75.58	32.886	
8,900.0	7,187.4	7,357.6	7,117.9	47.5	32.5	79.98	1,620.0	-3,498.1	2,385.9	2,307.8	78.10	30.547	
9,000.0	7,186.6	7,359.5	7,119.8	50.0	32.5	80.53	1,620.0	-3,498.1	2,286.2	2,205.5	80.66	28.343	
9,100.0	7,185.7	7,361.3	7,121.7	52.6	32.5	81.08	1,620.0	-3,498.2	2,186.6	2,103.3	83.25	26.265	
9,200.0	7,184.9	7,363.2	7,123.5	55.1	32.5	81.61	1,619.9	-3,498.2	2,087.0	2,001.1	85.87	24.305	
9,300.0	7,184.1	7,365.0	7,125.3	57.7	32.5	82.14	1,619.9	-3,498.2	1,987.4	1,898.9	88.50	22.456	
9,400.0	7,183.3	7,366.7	7,127.1	60.3	32.6	82.66	1,619.9	-3,498.3	1,887.9	1,796.8	91.16	20.710	
9,500.0	7,182.5	7,368.5	7,128.8	62.9	32.6	83.17	1,619.8	-3,498.3	1,788.5	1,694.6	93.83	19.061	
9,600.0	7,181.7	7,370.1	7,130.5	65.5	32.6	83.67	1,619.8	-3,498.4	1,689.1	1,592.6	96.52	17.501	
9,700.0	7,180.9	7,371.8	7,132.2	68.1	32.6	84.16	1,619.8	-3,498.4	1,589.8	1,490.6	99.21	16.024	
9,800.0	7,180.1	7,373.4	7,133.8	70.8	32.6	84.65	1,619.7	-3,498.4	1,490.6	1,388.6	101.92	14.625	
9,900.0	7,179.3	7,375.0	7,135.4	73.5	32.6	85.13	1,619.7	-3,498.5	1,391.4	1,286.8	104.63	13.299	
10,000.0	7,178.5	7,376.6	7,137.0	76.1	32.6	85.60	1,619.7	-3,498.5	1,292.5	1,185.1	107.35	12.040	
10,100.0	7,177.7	7,378.2	7,138.5	78.8	32.6	86.06	1,619.7	-3,498.5	1,193.7	1,083.6	110.07	10.844	
10,200.0	7,176.9	7,379.7	7,140.0	81.5	32.6	86.51	1,619.6	-3,498.6	1,095.1	982.3	112.80	9.708	
10,300.0	7,176.0	7,381.2	7,141.5	84.2	32.6	86.96	1,619.6	-3,498.6	996.8	881.2	115.53	8.628	
10,400.0	7,175.2	7,382.6	7,143.0	86.9	32.6	87.40	1,619.6	-3,498.6	898.8	780.5	118.26	7.600	
10,500.0	7,174.4	7,384.1	7,144.4	89.6	32.6	87.83	1,619.5	-3,498.7	801.4	680.4	121.00	6.623	
10,600.0	7,173.6	7,385.5	7,145.8	92.3	32.6	88.26	1,619.5	-3,498.7	704.6	580.9	123.73	5.695	
10,700.0	7,172.8	7,386.9	7,147.2	95.0	32.6	88.67	1,619.5	-3,498.7	609.0	482.5	126.46	4.815	
10,800.0	7,172.0	7,388.3	7,148.6	97.8	32.6	89.08	1,619.5	-3,498.8	514.9	385.7	129.20	3.986	
10,900.0	7,171.2	7,389.6	7,149.9	100.5	32.6	89.49	1,619.5	-3,498.8	423.6	291.7	131.93	3.211	
11,000.0	7,170.4	7,390.9	7,151.3	103.2	32.6	89.89	1,619.4	-3,498.8	337.3	202.7	134.66	2.505	
11,100.0	7,169.6	7,392.2	7,152.6	106.0	32.6	90.28	1,619.4	-3,498.8	261.0	123.6	137.39	1.900	
11,200.0	7,168.8	7,393.5	7,153.8	108.7	32.6	90.66	1,619.4	-3,498.9	205.9	65.8	140.11	1.470 Level 3	
11,278.5	7,168.1	7,394.5	7,154.8	110.9	32.6	90.96	1,619.4	-3,498.9	190.4	48.2	142.25	1.339 Level 3, CC, ES, SF	
11,300.0	7,168.0	7,394.8	7,155.1	111.5	32.6	91.04	1,619.4	-3,498.9	191.6	48.8	142.84	1.342 Level 3	
11,400.0	7,167.1	7,396.0	7,156.3	114.2	32.6	91.41	1,619.3	-3,498.9	225.9	80.3	145.56	1.552	
11,500.0	7,166.3	7,397.2	7,157.5	117.0	32.6	91.78	1,619.3	-3,498.9	292.1	143.8	148.27	1.970	
11,600.0	7,165.5	7,398.4	7,158.7	119.7	32.6	92.14	1,619.3	-3,499.0	373.7	222.7	150.99	2.475	
11,700.0	7,164.7	7,399.6	7,159.9	122.5	32.6	92.50	1,619.3	-3,499.0	462.5	308.8	153.70	3.009	
11,800.0	7,163.9	7,400.8	7,161.1	125.2	32.6	92.84	1,619.3	-3,499.0	555.2	398.8	156.41	3.549	
11,900.0	7,163.1	7,401.9	7,162.2	128.0	32.6	93.19	1,619.2	-3,499.0	650.0	490.9	159.11	4.085	
12,000.0	7,162.3	7,403.0	7,163.4	130.7	32.6	93.53	1,619.2	-3,499.1	746.2	584.4	161.81	4.612	
12,100.0	7,161.5	7,404.1	7,164.5	133.5	32.6	93.86	1,619.2	-3,499.1	843.2	678.7	164.50	5.126	
12,200.0	7,160.7	7,405.2	7,165.6	136.3	32.6	94.19	1,619.2	-3,499.1	940.9	773.7	167.19	5.628	
12,300.0	7,159.8	7,406.3	7,166.6	139.0	32.6	94.51	1,619.2	-3,499.1	1,039.0	869.2	169.88	6.116	
12,400.0	7,159.0	7,407.4	7,167.7	141.8	32.6	94.82	1,619.2	-3,499.1	1,137.5	964.9	172.56	6.592	
12,500.0	7,158.2	7,408.4	7,168.7	144.6	32.6	95.14	1,619.1	-3,499.2	1,236.2	1,061.0	175.24	7.054	
12,600.0	7,157.4	7,409.4	7,169.8	147.3	32.6	95.44	1,619.1	-3,499.2	1,335.1	1,157.2	177.91	7.504	
12,700.0	7,156.6	7,410.4	7,170.8	150.1	32.6	95.75	1,619.1	-3,499.2	1,434.1	1,253.5	180.58	7.942	
12,800.0	7,155.8	7,411.4	7,171.8	152.9	32.6	96.04	1,619.1	-3,499.2	1,533.3	1,350.0	183.24	8.368	
12,900.0	7,155.0	7,412.4	7,172.8	155.7	32.6	96.34	1,619.1	-3,499.2	1,632.5	1,446.7	185.90	8.782	
13,000.0	7,154.2	7,413.4	7,173.7	158.4	32.6	96.63	1,619.1	-3,499.3	1,731.9	1,543.3	188.55	9.185	
13,100.0	7,153.3	7,414.4	7,174.7	161.2	32.6	96.91	1,619.0	-3,499.3	1,831.3	1,640.1	191.20	9.578	
13,200.0	7,152.5	7,415.3	7,175.6	164.0	32.6	97.19	1,619.0	-3,499.3	1,930.8	1,737.0	193.85	9.960	
13,300.0	7,151.7	7,416.2	7,176.6	166.8	32.6	97.46	1,619.0	-3,499.3	2,030.3	1,833.8	196.49	10.333	
13,400.0	7,150.9	7,417.1	7,177.5	169.5	32.6	97.74	1,619.0	-3,499.3	2,129.9	1,930.8	199.12	10.696	
13,500.0	7,150.1	7,418.0	7,178.4	172.3	32.6	98.00	1,619.0	-3,499.3	2,229.5	2,027.8	201.75	11.051	
13,600.0	7,149.3	7,418.9	7,179.3	175.1	32.6	98.27	1,619.0	-3,499.4	2,329.2	2,124.8	204.38	11.396	
13,700.0	7,148.5	7,419.8	7,180.1	177.9	32.6	98.53	1,619.0	-3,499.4	2,428.8	2,221.8	207.00	11.733	
13,800.0	7,147.6	7,420.7	7,181.0	180.7	32.6	98.78	1,618.9	-3,499.4	2,528.5	2,318.9	209.62	12.063	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 20CD - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 155-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
13,900.0	7,146.8	7,421.5	7,181.9	183.5	32.6	99.03	1,618.9	-3,499.4	2,628.3	2,416.0	212.23	12.384	
14,000.0	7,146.0	7,422.4	7,182.7	186.2	32.6	99.28	1,618.9	-3,499.4	2,728.0	2,513.2	214.84	12.698	
14,100.0	7,145.2	7,423.2	7,183.5	189.0	32.6	99.52	1,618.9	-3,499.4	2,827.8	2,610.3	217.44	13.005	
14,200.0	7,144.4	7,424.0	7,184.4	191.8	32.6	99.76	1,618.9	-3,499.5	2,927.5	2,707.5	220.04	13.304	
14,300.0	7,143.6	7,424.9	7,185.2	194.6	32.6	100.00	1,618.9	-3,499.5	3,027.3	2,804.7	222.64	13.598	
14,370.2	7,143.0	7,425.4	7,185.7	196.6	32.6	100.17	1,618.9	-3,499.5	3,097.4	2,872.9	224.46	13.800	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 155-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	-47.76	1,775.7	-1,955.3	2,641.3					
100.0	100.0	128.6	128.6	0.1	0.0	-47.75	1,775.1	-1,954.3	2,640.5	2,640.4	0.14	N/A		
200.0	200.0	212.5	212.4	0.3	0.2	-47.75	1,774.3	-1,953.1	2,638.9	2,638.4	0.47	5,565.647		
287.6	287.6	271.1	271.1	0.5	0.3	-47.75	1,773.8	-1,953.1	2,638.4	2,637.6	0.79	3,346.029		
300.0	300.0	279.1	279.1	0.5	0.3	-47.76	1,773.7	-1,953.2	2,638.4	2,637.6	0.83	3,162.758		
400.0	400.0	336.0	336.0	0.8	0.4	-73.02	1,772.8	-1,954.6	2,638.8	2,637.6	1.18	2,235.136		
500.0	499.8	402.3	402.2	1.0	0.6	-73.14	1,771.3	-1,958.0	2,639.5	2,638.0	1.57	1,683.908		
600.0	599.5	467.6	467.3	1.2	0.7	-73.34	1,769.5	-1,962.9	2,640.8	2,638.8	1.98	1,337.021		
700.0	698.7	544.2	543.4	1.5	0.9	-73.66	1,766.7	-1,970.4	2,642.3	2,639.8	2.45	1,076.534		
800.0	797.5	638.7	637.1	1.8	1.2	-74.18	1,761.7	-1,981.4	2,643.3	2,640.2	3.04	869.203		
900.0	895.6	722.6	720.2	2.2	1.5	-74.72	1,756.8	-1,991.7	2,643.8	2,640.2	3.66	722.384		
1,000.0	993.1	798.0	794.8	2.6	1.8	-75.28	1,751.9	-2,002.2	2,644.5	2,640.2	4.32	612.367		
1,100.0	1,089.6	906.6	901.4	3.1	2.2	-76.26	1,741.6	-2,019.7	2,644.9	2,639.7	5.20	509.095		
1,127.2	1,115.8	932.9	927.1	3.2	2.3	-76.52	1,738.5	-2,024.4	2,644.9	2,639.5	5.44	485.830		
1,148.5	1,136.2	953.1	946.8	3.3	2.4	-76.73	1,735.9	-2,028.0	2,644.9	2,639.3	5.64	468.925		
1,200.0	1,185.5	1,000.7	993.1	3.6	2.6	-77.23	1,729.2	-2,037.1	2,645.0	2,638.9	6.12	432.100		
1,300.0	1,281.4	1,097.8	1,086.9	4.1	3.1	-78.31	1,713.5	-2,056.8	2,645.8	2,638.7	7.13	370.829		
1,400.0	1,377.3	1,218.4	1,202.0	4.7	3.8	-79.74	1,689.0	-2,083.0	2,646.5	2,638.2	8.35	316.879		
1,500.0	1,473.1	1,322.9	1,300.7	5.2	4.5	-81.04	1,664.6	-2,106.9	2,647.9	2,638.4	9.52	278.040		
1,600.0	1,569.0	1,404.7	1,377.8	5.8	5.0	-82.07	1,644.5	-2,125.5	2,649.8	2,639.3	10.58	250.516		
1,700.0	1,664.8	1,468.1	1,437.3	6.4	5.4	-82.89	1,628.4	-2,140.5	2,653.5	2,642.0	11.54	229.911		
1,800.0	1,760.7	1,529.0	1,494.0	6.9	5.8	-83.68	1,612.4	-2,155.8	2,659.1	2,646.6	12.52	212.328		
1,900.0	1,856.6	1,603.1	1,562.5	7.5	6.4	-84.67	1,592.0	-2,175.3	2,666.5	2,652.9	13.62	195.790		
2,000.0	1,952.4	1,672.1	1,625.9	8.1	6.9	-85.60	1,572.2	-2,193.9	2,675.4	2,660.7	14.69	182.100		
2,100.0	2,048.3	1,733.0	1,681.7	8.6	7.4	-86.44	1,554.5	-2,210.8	2,686.2	2,670.5	15.71	170.980		
2,200.0	2,144.1	1,792.4	1,735.8	9.2	7.9	-87.25	1,536.7	-2,227.9	2,698.9	2,682.2	16.74	161.228		
2,300.0	2,240.0	1,864.8	1,801.1	9.8	8.5	-88.26	1,514.3	-2,249.5	2,713.6	2,695.8	17.84	152.079		
2,400.0	2,335.9	1,989.8	1,913.9	10.3	9.4	-90.00	1,474.8	-2,285.9	2,729.3	2,710.0	19.26	141.685		
2,500.0	2,431.7	2,053.4	1,971.3	10.9	9.9	-90.89	1,453.9	-2,303.8	2,745.5	2,725.2	20.27	135.463		
2,600.0	2,527.6	2,108.0	2,020.4	11.5	10.3	-91.64	1,436.2	-2,319.9	2,764.0	2,742.8	21.22	130.281		
2,700.0	2,623.4	2,176.4	2,081.9	12.1	10.9	-92.58	1,414.2	-2,340.2	2,784.3	2,762.1	22.23	125.276		
2,800.0	2,719.3	2,250.8	2,149.0	12.6	11.4	-93.58	1,390.7	-2,362.0	2,806.0	2,782.8	23.24	120.731		
2,900.0	2,815.2	2,324.7	2,216.0	13.2	11.9	-94.56	1,368.0	-2,383.6	2,829.1	2,804.9	24.25	116.655		
3,000.0	2,911.0	2,401.6	2,285.5	13.8	12.6	-95.57	1,344.1	-2,406.1	2,853.5	2,828.2	25.31	112.761		
3,100.0	3,006.9	2,468.1	2,345.5	14.4	13.1	-96.45	1,322.9	-2,425.7	2,879.3	2,853.0	26.33	109.374		
3,200.0	3,102.7	2,570.9	2,437.8	14.9	14.0	-97.80	1,289.4	-2,456.0	2,906.3	2,878.7	27.56	105.443		
3,300.0	3,198.6	2,637.0	2,497.0	15.5	14.6	-98.66	1,267.1	-2,475.2	2,934.2	2,905.6	28.56	102.734		
3,400.0	3,294.5	2,720.5	2,571.2	16.1	15.3	-99.77	1,237.8	-2,499.7	2,963.5	2,933.8	29.66	99.902		
3,500.0	3,390.3	2,838.9	2,676.7	16.7	16.3	-101.31	1,195.7	-2,533.3	2,993.3	2,962.4	30.92	96.803		
3,600.0	3,486.2	2,907.1	2,737.7	17.2	16.8	-102.18	1,172.0	-2,552.0	3,023.8	2,991.9	31.84	94.976		
3,700.0	3,582.0	2,950.0	2,776.3	17.8	17.1	-102.71	1,157.4	-2,564.0	3,055.8	3,023.2	32.61	93.697		
3,800.0	3,677.9	3,001.6	2,822.6	18.4	17.5	-103.35	1,140.0	-2,578.8	3,089.5	3,056.1	33.44	92.379		
3,900.0	3,773.7	3,043.0	2,859.6	19.0	17.9	-103.85	1,126.1	-2,591.1	3,125.2	3,091.0	34.22	91.337		
4,000.0	3,869.6	3,089.4	2,900.9	19.5	18.3	-104.42	1,110.4	-2,605.4	3,162.7	3,127.6	35.04	90.263		
4,100.0	3,965.5	3,137.0	2,942.9	20.1	18.7	-104.99	1,094.1	-2,620.4	3,201.7	3,165.8	35.86	89.287		
4,200.0	4,061.3	3,233.9	3,028.7	20.7	19.6	-106.15	1,060.7	-2,650.9	3,241.8	3,204.9	36.90	87.848		
4,300.0	4,157.2	3,322.8	3,107.4	21.3	20.3	-107.20	1,029.9	-2,678.3	3,282.3	3,244.4	37.87	86.668		
4,400.0	4,253.0	3,365.8	3,145.4	21.8	20.7	-107.70	1,014.9	-2,691.6	3,324.0	3,285.3	38.63	86.055		
4,500.0	4,348.9	3,417.0	3,190.7	22.4	21.1	-108.28	997.5	-2,708.0	3,367.2	3,327.8	39.41	85.435		
4,600.0	4,444.8	3,511.0	3,274.0	23.0	22.0	-109.33	965.9	-2,738.0	3,411.2	3,370.8	40.36	84.528		
4,700.0	4,540.6	3,567.3	3,324.1	23.6	22.4	-109.94	947.4	-2,755.9	3,455.8	3,414.7	41.12	84.046		
4,800.0	4,636.5	3,635.6	3,385.2	24.1	23.0	-110.64	926.4	-2,778.2	3,501.6	3,459.7	41.91	83.555		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 155-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,900.0	4,732.3	3,741.7	3,480.5	24.7	23.8	-111.70	894.9	-2,812.4	3,547.7	3,504.9	42.80	82.893	
5,000.0	4,828.2	3,883.4	3,608.3	25.3	25.0	-113.07	852.5	-2,856.4	3,593.6	3,549.8	43.77	82.093	
5,100.0	4,924.1	4,000.3	3,714.7	25.9	25.9	-114.15	818.4	-2,890.8	3,638.5	3,593.9	44.64	81.512	
5,200.0	5,019.9	4,053.1	3,762.6	26.4	26.3	-114.64	802.4	-2,906.2	3,684.1	3,638.8	45.33	81.273	
5,300.0	5,115.8	4,123.8	3,826.5	27.0	26.9	-115.30	780.2	-2,926.9	3,730.6	3,684.6	46.08	80.967	
5,400.0	5,211.6	4,217.8	3,911.1	27.6	27.7	-116.17	749.6	-2,954.2	3,777.6	3,730.7	46.87	80.596	
5,500.0	5,307.5	4,298.5	3,984.0	28.2	28.4	-116.90	723.8	-2,977.2	3,824.8	3,777.2	47.59	80.364	
5,600.0	5,403.4	4,377.0	4,055.5	28.7	29.0	-117.56	701.0	-3,000.3	3,872.6	3,824.3	48.28	80.205	
5,700.0	5,499.2	4,471.9	4,142.4	29.3	29.7	-118.32	674.9	-3,027.9	3,920.3	3,871.3	48.99	80.026	
5,800.0	5,595.1	4,518.0	4,184.4	29.9	30.0	-118.70	661.5	-3,041.3	3,968.9	3,919.3	49.60	80.012	
5,840.7	5,634.1	4,539.0	4,203.4	30.1	30.2	-118.87	655.0	-3,047.5	3,988.9	3,939.1	49.85	80.011	
5,900.0	5,691.1	4,590.7	4,250.3	30.4	30.6	-119.87	639.2	-3,062.6	4,018.1	3,968.1	49.96	80.428	
6,000.0	5,788.0	4,657.2	4,310.7	30.8	31.1	-121.30	619.3	-3,082.1	4,066.2	4,016.1	50.02	81.290	
6,100.0	5,885.7	4,699.7	4,349.1	31.2	31.5	-122.50	606.4	-3,094.9	4,113.7	4,063.7	50.00	82.267	
6,200.0	5,984.0	4,765.5	4,408.3	31.5	32.0	-123.80	586.0	-3,115.0	4,160.5	4,110.4	50.03	83.163	
6,300.0	6,083.0	4,934.4	4,560.9	31.8	33.4	-125.54	534.1	-3,165.2	4,205.1	4,154.8	50.30	83.598	
6,400.0	6,182.3	5,021.2	4,640.0	32.0	34.1	-126.70	508.4	-3,190.4	4,247.2	4,196.8	50.36	84.340	
6,500.0	6,282.0	5,558.4	6,122.1	32.2	40.9	-130.88	263.3	-3,433.6	4,267.9	4,215.0	52.83	80.792	
6,600.0	6,382.0	6,676.0	6,239.5	32.3	41.0	-131.04	260.6	-3,436.7	4,273.8	4,220.7	53.07	80.528	
6,668.0	6,449.9	6,747.6	6,311.1	32.4	41.1	-105.88	259.1	-3,438.5	4,276.2	4,214.2	62.04	68.922	
6,698.0	6,479.9	6,777.8	6,341.4	32.4	41.1	-105.89	258.5	-3,439.2	4,277.1	4,215.0	62.12	68.857	
6,700.0	6,481.9	6,779.9	6,343.4	32.4	41.1	-15.89	258.4	-3,439.3	4,277.2	4,223.8	53.32	80.221	
6,750.0	6,531.9	6,832.9	6,396.4	32.5	41.2	-15.91	257.4	-3,440.5	4,276.7	4,223.3	53.45	80.020	
6,800.0	6,581.6	6,879.0	6,442.5	32.5	41.3	-16.02	256.5	-3,441.6	4,273.0	4,219.7	53.26	80.226	
6,850.0	6,630.8	6,926.0	6,489.4	32.5	41.3	-16.22	255.6	-3,442.7	4,265.9	4,213.1	52.77	80.833	
6,900.0	6,679.3	6,972.0	6,535.4	32.4	41.4	-16.51	254.7	-3,443.9	4,255.6	4,203.6	51.99	81.853	
6,950.0	6,726.8	7,016.0	6,579.4	32.4	41.4	-16.89	253.9	-3,445.1	4,242.1	4,191.2	50.92	83.309	
7,000.0	6,773.1	7,065.2	6,628.6	32.3	41.5	-17.40	253.1	-3,446.4	4,225.4	4,175.8	49.58	85.228	
7,050.0	6,817.9	7,114.8	6,678.1	32.3	41.5	-18.03	252.3	-3,447.7	4,205.6	4,157.6	47.98	87.653	
7,100.0	6,861.2	7,159.0	6,722.3	32.2	41.6	-18.79	251.5	-3,448.8	4,182.7	4,136.6	46.15	90.632	
7,150.0	6,902.5	7,200.3	6,763.6	32.1	41.6	-19.71	250.9	-3,449.9	4,157.0	4,112.9	44.13	94.207	
7,200.0	6,941.8	7,236.9	6,800.2	32.0	41.7	-20.80	250.3	-3,450.9	4,128.6	4,086.6	41.96	98.402	
7,250.0	6,978.9	7,270.1	6,833.4	31.9	41.7	-22.11	249.8	-3,451.8	4,097.6	4,057.9	39.71	103.190	
7,300.0	7,013.5	7,300.3	6,863.6	31.7	41.8	-23.66	249.4	-3,452.7	4,064.2	4,026.7	37.48	108.429	
7,350.0	7,045.5	7,328.5	6,891.7	31.6	41.8	-25.54	249.1	-3,453.5	4,028.6	3,993.1	35.41	113.757	
7,400.0	7,074.8	7,355.8	6,919.0	31.5	41.8	-27.82	248.8	-3,454.4	3,990.9	3,957.2	33.70	118.427	
7,450.0	7,101.1	7,383.6	6,946.9	31.4	41.8	-30.63	248.5	-3,455.4	3,951.3	3,918.6	32.61	121.178	
7,500.0	7,124.5	7,408.5	6,971.7	31.3	41.9	-34.08	248.2	-3,456.2	3,909.9	3,877.5	32.46	120.453	
7,550.0	7,144.7	7,430.3	6,993.5	31.1	41.9	-38.34	248.1	-3,456.9	3,867.1	3,833.5	33.59	115.142	
7,600.0	7,161.6	7,449.0	7,012.2	31.0	41.9	-43.63	247.9	-3,457.6	3,823.0	3,786.8	36.20	105.618	
7,650.0	7,175.3	7,464.4	7,027.5	30.9	41.9	-50.19	247.8	-3,458.1	3,777.8	3,737.5	40.24	93.877	
7,700.0	7,185.5	7,476.3	7,039.5	30.8	42.0	-58.24	247.6	-3,458.5	3,731.7	3,686.4	45.29	82.388	
7,750.0	7,192.3	7,484.8	7,047.9	30.7	42.0	-67.83	247.5	-3,458.8	3,685.0	3,634.5	50.51	72.956	
7,800.0	7,195.7	7,489.8	7,052.9	30.7	42.0	-78.71	247.5	-3,458.9	3,638.0	3,583.2	54.72	66.486	
7,828.6	7,196.0	7,491.1	7,054.2	30.6	42.0	-85.27	247.5	-3,459.0	3,610.9	3,554.7	56.23	64.215	
7,900.0	7,195.4	7,492.8	7,056.0	30.6	42.0	-85.35	247.4	-3,459.0	3,543.6	3,486.3	57.25	61.898	
8,000.0	7,194.6	7,495.3	7,058.4	30.6	42.0	-85.47	247.4	-3,459.1	3,449.5	3,390.6	58.86	58.600	
8,100.0	7,193.8	7,497.7	7,060.8	31.0	42.0	-85.59	247.4	-3,459.2	3,355.8	3,295.1	60.67	55.310	
8,200.0	7,193.0	7,500.1	7,063.3	32.1	42.0	-85.70	247.3	-3,459.3	3,262.4	3,199.8	62.63	52.087	
8,300.0	7,192.2	7,502.5	7,065.7	33.8	42.0	-85.82	247.3	-3,459.3	3,169.4	3,104.7	64.72	48.968	
8,400.0	7,191.4	7,504.9	7,068.1	35.8	42.0	-85.94	247.3	-3,459.4	3,076.9	3,010.0	66.92	45.980	
8,500.0	7,190.6	7,507.3	7,070.4	38.0	42.0	-86.05	247.3	-3,459.5	2,984.9	2,915.7	69.20	43.135	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 20SD - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 155-MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,600.0	7,189.8	7,509.7	7,072.8	40.3	42.0	-86.17	247.2	-3,459.6	2,893.4	2,821.8	71.55	40.440	
8,700.0	7,189.0	7,512.0	7,075.1	42.7	42.0	-86.28	247.2	-3,459.6	2,802.4	2,728.5	73.96	37.893	
8,800.0	7,188.2	7,514.3	7,077.5	45.1	42.0	-86.39	247.2	-3,459.7	2,712.1	2,635.7	76.41	35.493	
8,900.0	7,187.4	7,516.7	7,079.8	47.5	42.0	-86.51	247.1	-3,459.8	2,622.5	2,543.6	78.91	33.234	
9,000.0	7,186.6	7,519.0	7,082.1	50.0	42.0	-86.62	247.1	-3,459.9	2,533.7	2,452.2	81.44	31.110	
9,100.0	7,185.7	7,521.3	7,084.4	52.6	42.0	-86.73	247.1	-3,459.9	2,445.7	2,361.7	84.01	29.114	
9,200.0	7,184.9	7,523.6	7,086.7	55.1	42.0	-86.84	247.0	-3,460.0	2,358.7	2,272.1	86.59	27.239	
9,300.0	7,184.1	7,525.9	7,089.0	57.7	42.0	-86.95	247.0	-3,460.1	2,272.8	2,183.6	89.20	25.478	
9,400.0	7,183.3	7,528.1	7,091.3	60.3	42.0	-87.06	247.0	-3,460.2	2,188.0	2,096.2	91.83	23.826	
9,500.0	7,182.5	7,530.4	7,093.5	62.9	42.0	-87.17	246.9	-3,460.2	2,104.6	2,010.1	94.48	22.276	
9,600.0	7,181.7	7,532.6	7,095.8	65.5	42.0	-87.28	246.9	-3,460.3	2,022.7	1,925.6	97.14	20.823	
9,700.0	7,180.9	7,535.0	7,098.1	68.1	42.0	-87.39	246.9	-3,460.4	1,942.5	1,842.7	99.81	19.461	
9,800.0	7,180.1	7,535.0	7,098.1	70.8	42.0	-87.39	246.9	-3,460.4	1,864.2	1,761.7	102.48	18.190	
9,900.0	7,179.3	7,535.0	7,098.1	73.5	42.0	-87.39	246.9	-3,460.4	1,788.0	1,682.9	105.17	17.002	
10,000.0	7,178.5	7,535.0	7,098.1	76.1	42.0	-87.39	246.9	-3,460.4	1,714.3	1,606.5	107.86	15.895	
10,100.0	7,177.7	7,535.0	7,098.1	78.8	42.0	-87.39	246.9	-3,460.4	1,643.4	1,532.9	110.55	14.865	
10,200.0	7,176.9	7,535.0	7,098.1	81.5	42.0	-87.39	246.9	-3,460.4	1,575.7	1,462.4	113.26	13.912	
10,300.0	7,176.0	7,535.0	7,098.1	84.2	42.0	-87.39	246.9	-3,460.4	1,511.5	1,395.6	115.97	13.033	
10,400.0	7,175.2	7,535.0	7,098.1	86.9	42.0	-87.39	246.9	-3,460.4	1,451.4	1,332.7	118.69	12.228	
10,500.0	7,174.4	7,548.3	7,111.4	89.6	42.1	-88.04	246.6	-3,460.8	1,395.8	1,274.3	121.50	11.489	
10,600.0	7,173.6	7,550.1	7,113.2	92.3	42.1	-88.13	246.6	-3,460.9	1,345.4	1,221.2	124.24	10.830	
10,700.0	7,172.8	7,552.0	7,115.1	95.0	42.1	-88.22	246.6	-3,460.9	1,300.8	1,173.8	126.98	10.244	
10,800.0	7,172.0	7,553.9	7,117.1	97.8	42.1	-88.31	246.5	-3,461.0	1,262.5	1,132.7	129.73	9.732	
10,900.0	7,171.2	7,555.9	7,119.0	100.5	42.1	-88.41	246.5	-3,461.1	1,231.1	1,098.6	132.48	9.293	
11,000.0	7,170.4	7,557.9	7,121.1	103.2	42.1	-88.50	246.5	-3,461.1	1,207.2	1,072.0	135.24	8.927	
11,100.0	7,169.6	7,560.0	7,123.1	106.0	42.1	-88.60	246.4	-3,461.2	1,191.3	1,053.3	138.00	8.633	
11,200.0	7,168.8	7,562.1	7,125.2	108.7	42.1	-88.71	246.4	-3,461.3	1,183.6	1,042.9	140.76	8.409	
11,241.1	7,168.4	7,563.0	7,126.1	109.8	42.1	-88.75	246.3	-3,461.3	1,182.9	1,041.0	141.90	8.336 CC	
11,300.0	7,168.0	7,564.3	7,127.4	111.5	42.1	-88.81	246.3	-3,461.4	1,184.4	1,040.9	143.53	8.252 ES	
11,400.0	7,167.1	7,566.5	7,129.6	114.2	42.1	-88.92	246.3	-3,461.4	1,193.5	1,047.2	146.29	8.158	
11,500.0	7,166.3	7,568.8	7,131.9	117.0	42.1	-89.03	246.2	-3,461.5	1,210.9	1,061.8	149.06	8.123 SF	
11,600.0	7,165.5	7,571.2	7,134.3	119.7	42.1	-89.14	246.2	-3,461.6	1,236.1	1,084.3	151.84	8.141	
11,700.0	7,164.7	7,573.6	7,136.7	122.5	42.1	-89.26	246.1	-3,461.7	1,268.8	1,114.1	154.61	8.206	
11,800.0	7,163.9	7,576.0	7,139.1	125.2	42.1	-89.38	246.0	-3,461.8	1,308.2	1,150.8	157.39	8.312	
11,900.0	7,163.1	7,578.6	7,141.7	128.0	42.1	-89.50	246.0	-3,461.9	1,353.9	1,193.8	160.16	8.453	
12,000.0	7,162.3	7,581.2	7,144.3	130.7	42.1	-89.63	245.9	-3,462.0	1,405.3	1,242.3	162.94	8.624	
12,100.0	7,161.5	7,583.9	7,146.9	133.5	42.1	-89.76	245.8	-3,462.1	1,461.7	1,295.9	165.72	8.820	
12,200.0	7,160.7	7,586.6	7,149.7	136.3	42.1	-89.89	245.8	-3,462.2	1,522.5	1,354.0	168.50	9.036	
12,300.0	7,159.8	7,589.4	7,152.5	139.0	42.1	-90.03	245.7	-3,462.3	1,587.4	1,416.1	171.28	9.267	
12,400.0	7,159.0	7,592.3	7,155.4	141.8	42.1	-90.17	245.6	-3,462.4	1,655.7	1,481.6	174.07	9.512	
12,500.0	7,158.2	7,595.3	7,158.4	144.6	42.1	-90.31	245.5	-3,462.5	1,727.1	1,550.3	176.85	9.766	
12,600.0	7,157.4	7,598.4	7,161.5	147.3	42.1	-90.46	245.4	-3,462.7	1,801.2	1,621.6	179.63	10.027	
12,700.0	7,156.6	7,601.6	7,164.6	150.1	42.1	-90.62	245.3	-3,462.8	1,877.8	1,695.4	182.41	10.294	
12,800.0	7,155.8	7,604.8	7,167.9	152.9	42.1	-90.77	245.2	-3,462.9	1,956.4	1,771.2	185.20	10.564	
12,900.0	7,155.0	7,608.2	7,171.3	155.7	42.1	-90.94	245.1	-3,463.1	2,036.9	1,848.9	187.98	10.836	
13,000.0	7,154.2	7,611.7	7,174.7	158.4	42.1	-91.10	245.0	-3,463.2	2,119.1	1,928.3	190.76	11.109	
13,100.0	7,153.3	7,615.3	7,178.3	161.2	42.2	-91.28	244.9	-3,463.4	2,202.7	2,009.2	193.54	11.381	
13,200.0	7,152.5	7,619.0	7,182.0	164.0	42.2	-91.45	244.8	-3,463.6	2,287.7	2,091.3	196.32	11.653	
13,300.0	7,151.7	7,622.8	7,185.8	166.8	42.2	-91.64	244.6	-3,463.7	2,373.8	2,174.7	199.09	11.923	
13,400.0	7,150.9	7,626.8	7,189.8	169.5	42.2	-91.83	244.5	-3,463.9	2,460.9	2,259.1	201.87	12.191	
13,500.0	7,150.1	7,629.0	7,192.0	172.3	42.2	-91.94	244.4	-3,464.0	2,549.0	2,344.4	204.65	12.456	
13,600.0	7,149.3	7,629.0	7,192.0	175.1	42.2	-91.94	244.4	-3,464.0	2,638.0	2,430.5	207.43	12.717	

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 SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 20SD - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 155-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
13,700.0	7,148.5	7,629.0	7,192.0	177.9	42.2	-91.94	244.4	-3,464.0	2,727.7	2,517.4	210.22	12.975	
13,800.0	7,147.6	7,629.0	7,192.0	180.7	42.2	-91.94	244.4	-3,464.0	2,818.1	2,605.1	213.01	13.230	
13,900.0	7,146.8	7,629.0	7,192.0	183.5	42.2	-91.94	244.4	-3,464.0	2,909.1	2,693.3	215.79	13.481	
14,000.0	7,146.0	7,643.6	7,206.6	186.2	42.2	-92.64	243.9	-3,464.7	3,000.6	2,782.1	218.51	13.732	
14,100.0	7,145.2	7,646.0	7,209.0	189.0	42.2	-92.76	243.8	-3,464.8	3,092.7	2,871.5	221.29	13.976	
14,200.0	7,144.4	7,648.4	7,211.4	191.8	42.2	-92.87	243.7	-3,464.9	3,185.3	2,961.3	224.06	14.216	
14,300.0	7,143.6	7,650.7	7,213.7	194.6	42.2	-92.98	243.6	-3,465.0	3,278.3	3,051.5	226.83	14.453	
14,370.2	7,143.0	7,652.3	7,215.3	196.6	42.2	-93.06	243.6	-3,465.0	3,343.9	3,115.1	228.78	14.616	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 672-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	-46.45	1,886.8	-1,984.8	2,738.6				
100.0	100.0	81.5	81.5	0.1	0.1	-46.45	1,886.8	-1,984.9	2,738.6	2,738.4	0.17	N/A	
200.0	200.0	179.0	179.0	0.3	0.2	-46.46	1,886.7	-1,985.1	2,738.7	2,738.2	0.48	5,664.055	
300.0	300.0	276.6	276.6	0.5	0.3	-46.46	1,886.5	-1,985.6	2,738.9	2,738.1	0.80	3,439.445	
400.0	400.0	374.1	374.1	0.8	0.3	-71.73	1,886.3	-1,986.2	2,738.6	2,737.5	1.11	2,469.954	
500.0	499.8	471.4	471.4	1.0	0.4	-71.87	1,886.0	-1,987.0	2,737.4	2,736.0	1.43	1,919.991	
600.0	599.5	568.5	568.5	1.2	0.5	-72.10	1,885.7	-1,988.0	2,735.2	2,733.4	1.76	1,554.744	
700.0	698.7	672.0	672.0	1.5	0.6	-72.44	1,885.2	-1,989.2	2,732.0	2,729.9	2.13	1,284.643	
800.0	797.5	767.2	767.1	1.8	0.8	-72.85	1,884.6	-1,990.5	2,727.9	2,725.2	2.65	1,030.978	
900.0	895.6	869.4	869.4	2.2	1.0	-73.37	1,883.9	-1,991.7	2,722.6	2,719.4	3.20	850.097	
1,000.0	993.1	953.0	952.9	2.6	1.2	-73.88	1,883.3	-1,992.9	2,716.8	2,713.0	3.78	719.222	
1,100.0	1,089.6	1,046.8	1,046.7	3.1	1.4	-74.53	1,882.8	-1,994.6	2,710.5	2,706.1	4.44	610.222	
1,127.2	1,115.8	1,073.0	1,072.9	3.2	1.4	-74.73	1,882.6	-1,995.1	2,708.7	2,704.1	4.63	584.481	
1,200.0	1,185.5	1,142.6	1,142.5	3.6	1.6	-75.16	1,882.2	-1,996.4	2,703.8	2,698.7	5.16	524.183	
1,300.0	1,281.4	1,233.0	1,232.9	4.1	1.8	-75.72	1,881.6	-1,998.2	2,697.5	2,691.6	5.88	458.418	
1,400.0	1,377.3	1,367.3	1,367.2	4.7	2.1	-76.55	1,880.4	-1,999.7	2,690.7	2,684.0	6.70	401.333	
1,500.0	1,473.1	1,465.2	1,465.1	5.2	2.3	-77.15	1,879.4	-2,000.1	2,683.6	2,676.2	7.45	360.309	
1,600.0	1,569.0	1,559.2	1,559.1	5.8	2.5	-77.73	1,878.6	-2,000.4	2,676.9	2,668.7	8.19	326.794	
1,700.0	1,664.8	1,654.1	1,653.9	6.4	2.6	-78.31	1,877.9	-2,000.7	2,670.5	2,661.6	8.94	298.577	
1,800.0	1,760.7	1,744.2	1,744.1	6.9	2.8	-78.86	1,877.3	-2,001.0	2,664.5	2,654.8	9.69	274.934	
1,900.0	1,856.6	1,831.9	1,831.7	7.5	3.0	-79.40	1,876.9	-2,001.4	2,659.1	2,648.6	10.44	254.753	
2,000.0	1,952.4	1,920.8	1,920.7	8.1	3.2	-79.95	1,876.8	-2,002.1	2,654.2	2,643.0	11.19	237.143	
2,100.0	2,048.3	2,005.2	2,005.1	8.6	3.4	-80.48	1,876.5	-2,003.0	2,649.9	2,638.0	11.94	221.878	
2,200.0	2,144.1	2,076.0	2,075.8	9.2	3.5	-80.95	1,875.5	-2,004.9	2,646.7	2,634.0	12.67	208.903	
2,300.0	2,240.0	2,169.0	2,168.7	9.8	3.7	-81.62	1,872.4	-2,009.3	2,644.3	2,630.8	13.46	196.513	
2,400.0	2,335.9	2,235.4	2,234.9	10.3	3.9	-82.14	1,869.0	-2,013.6	2,642.9	2,628.7	14.19	186.275	
2,500.0	2,431.7	2,334.8	2,333.7	10.9	4.2	-82.94	1,862.6	-2,021.6	2,642.5	2,627.5	15.01	176.039	
2,548.8	2,478.5	2,375.5	2,374.1	11.2	4.3	-83.29	1,859.0	-2,025.3	2,642.3	2,626.9	15.40	171.606	
2,600.0	2,527.6	2,407.4	2,405.7	11.5	4.3	-83.58	1,856.0	-2,028.5	2,642.6	2,626.8	15.78	167.477	
2,700.0	2,623.4	2,450.0	2,447.8	12.1	4.5	-83.96	1,851.8	-2,033.2	2,644.3	2,627.8	16.47	160.572	
2,800.0	2,719.3	2,517.2	2,513.9	12.6	4.7	-84.60	1,843.9	-2,042.4	2,647.9	2,630.6	17.25	153.509	
2,900.0	2,815.2	2,575.3	2,570.6	13.2	4.9	-85.20	1,835.9	-2,052.1	2,653.5	2,635.5	18.01	147.321	
3,000.0	2,911.0	2,647.6	2,641.1	13.8	5.1	-85.95	1,825.8	-2,064.9	2,660.7	2,641.9	18.83	141.309	
3,100.0	3,006.9	2,759.4	2,750.2	14.4	5.5	-87.07	1,810.8	-2,083.7	2,668.3	2,648.6	19.75	135.083	
3,200.0	3,102.7	2,824.0	2,813.5	14.9	5.7	-87.71	1,802.9	-2,094.3	2,676.9	2,656.4	20.52	130.452	
3,300.0	3,198.6	2,898.8	2,886.6	15.5	5.9	-88.44	1,793.9	-2,107.1	2,686.8	2,665.5	21.34	125.885	
3,400.0	3,294.5	3,034.7	3,019.3	16.1	6.4	-89.79	1,775.9	-2,130.6	2,697.4	2,675.0	22.37	120.568	
3,500.0	3,390.3	3,138.9	3,121.3	16.7	6.8	-90.80	1,762.3	-2,146.8	2,707.2	2,683.9	23.27	116.345	
3,600.0	3,486.2	3,215.7	3,196.7	17.2	7.1	-91.52	1,753.6	-2,158.3	2,717.9	2,693.8	24.07	112.893	
3,700.0	3,582.0	3,292.0	3,271.6	17.8	7.3	-92.21	1,745.4	-2,170.0	2,729.8	2,704.9	24.88	109.707	
3,800.0	3,677.9	3,352.9	3,331.4	18.4	7.6	-92.77	1,739.1	-2,179.8	2,743.0	2,717.3	25.65	106.940	
3,900.0	3,773.7	3,439.0	3,415.8	19.0	7.9	-93.55	1,730.0	-2,194.3	2,757.5	2,731.0	26.49	104.077	
4,000.0	3,869.6	3,527.9	3,502.8	19.5	8.2	-94.37	1,719.8	-2,209.3	2,772.5	2,745.1	27.34	101.405	
4,100.0	3,965.5	3,685.0	3,656.8	20.1	8.8	-95.79	1,701.6	-2,234.4	2,787.6	2,759.2	28.37	98.241	
4,200.0	4,061.3	3,760.0	3,730.1	20.7	9.1	-96.50	1,690.9	-2,246.1	2,802.0	2,772.9	29.18	96.032	
4,300.0	4,157.2	3,857.7	3,825.6	21.3	9.5	-97.42	1,676.5	-2,261.5	2,817.4	2,787.3	30.05	93.753	
4,400.0	4,253.0	4,034.0	3,998.8	21.8	10.1	-98.98	1,653.8	-2,284.7	2,831.3	2,800.2	31.09	91.076	
4,500.0	4,348.9	4,262.2	4,225.2	22.4	10.8	-100.77	1,632.6	-2,304.1	2,842.7	2,810.5	32.14	88.450	
4,600.0	4,444.8	4,446.1	4,408.8	23.0	11.2	-101.95	1,625.9	-2,309.4	2,850.3	2,817.3	32.98	86.426	
4,700.0	4,540.6	4,582.8	4,545.5	23.6	11.4	-102.75	1,624.2	-2,309.9	2,856.8	2,823.1	33.71	84.740	
4,800.0	4,636.5	4,688.7	4,651.4	24.1	11.6	-103.37	1,622.5	-2,309.1	2,862.4	2,828.0	34.40	83.204	
4,900.0	4,732.3	4,783.2	4,745.8	24.7	11.8	-103.92	1,621.2	-2,308.3	2,868.3	2,833.2	35.08	81.772	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 20VD - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 672-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	4,828.2	4,877.2	4,839.9	25.3	11.9	-104.45	1,620.1	-2,307.6	2,874.5	2,838.8	35.75	80.411	
5,100.0	4,924.1	4,963.6	4,926.2	25.9	12.1	-104.94	1,619.2	-2,307.0	2,881.2	2,844.8	36.41	79.135	
5,200.0	5,019.9	5,052.3	5,015.0	26.4	12.2	-105.44	1,618.5	-2,306.7	2,888.4	2,851.3	37.07	77.918	
5,300.0	5,115.8	5,148.3	5,111.0	27.0	12.4	-105.98	1,617.9	-2,306.4	2,896.0	2,858.3	37.74	76.744	
5,400.0	5,211.6	5,241.3	5,203.9	27.6	12.5	-106.49	1,617.3	-2,306.1	2,903.9	2,865.5	38.40	75.629	
5,500.0	5,307.5	5,334.7	5,297.4	28.2	12.7	-107.00	1,616.9	-2,305.9	2,912.2	2,873.1	39.06	74.564	
5,600.0	5,403.4	5,429.2	5,391.9	28.7	12.9	-107.51	1,616.8	-2,305.8	2,920.8	2,881.0	39.71	73.544	
5,700.0	5,499.2	5,532.9	5,495.6	29.3	13.0	-108.06	1,617.0	-2,305.4	2,929.5	2,889.1	40.38	72.554	
5,800.0	5,595.1	5,623.3	5,585.9	29.9	13.2	-108.53	1,617.5	-2,305.1	2,938.4	2,897.4	41.02	71.629	
5,840.7	5,634.1	5,655.8	5,618.5	30.1	13.2	-108.69	1,617.7	-2,305.0	2,942.2	2,900.9	41.28	71.273	
5,900.0	5,691.1	5,701.7	5,664.4	30.4	13.3	-109.03	1,618.0	-2,305.0	2,947.8	2,906.2	41.60	70.856	
6,000.0	5,788.0	5,787.6	5,750.2	30.8	13.5	-109.58	1,618.7	-2,305.5	2,956.8	2,914.7	42.07	70.285	
6,100.0	5,885.7	5,878.2	5,840.8	31.2	13.6	-110.07	1,619.7	-2,306.2	2,965.0	2,922.5	42.51	69.750	
6,200.0	5,984.0	5,971.4	5,934.0	31.5	13.8	-110.49	1,621.2	-2,307.0	2,972.4	2,929.5	42.92	69.252	
6,300.0	6,083.0	6,074.9	6,037.5	31.8	14.0	-110.85	1,622.7	-2,308.1	2,978.7	2,935.4	43.32	68.767	
6,400.0	6,182.3	6,171.7	6,134.3	32.0	14.1	-111.12	1,623.6	-2,308.9	2,983.7	2,940.0	43.67	68.319	
6,500.0	6,282.0	6,272.7	6,235.3	32.2	14.3	-111.31	1,624.5	-2,309.9	2,987.5	2,943.5	44.01	67.887	
6,600.0	6,382.0	6,368.2	6,330.8	32.3	14.5	-111.42	1,625.2	-2,310.9	2,990.1	2,945.8	44.30	67.491	
6,668.0	6,449.9	6,438.1	6,400.7	32.4	14.6	-86.23	1,625.7	-2,311.7	2,991.1	2,956.9	34.20	87.455	
6,698.0	6,479.9	6,469.6	6,432.2	32.4	14.7	-86.23	1,625.8	-2,312.0	2,991.5	2,957.2	34.30	87.206	
6,700.0	6,481.9	6,471.8	6,434.3	32.4	14.7	3.77	1,625.8	-2,312.0	2,991.5	2,946.9	44.59	67.088	
6,750.0	6,531.9	6,524.8	6,487.3	32.5	14.8	3.78	1,625.9	-2,312.6	2,990.1	2,945.5	44.61	67.023	
6,800.0	6,581.6	6,576.2	6,538.7	32.5	14.9	3.81	1,625.8	-2,313.0	2,985.2	2,940.7	44.44	67.166	
6,850.0	6,630.8	6,621.6	6,584.2	32.5	15.0	3.87	1,625.7	-2,313.5	2,976.8	2,932.8	44.08	67.532	
6,900.0	6,679.3	6,667.5	6,630.0	32.4	15.0	3.94	1,625.6	-2,314.0	2,965.2	2,921.6	43.53	68.111	
6,950.0	6,726.8	6,719.1	6,681.6	32.4	15.1	4.05	1,625.3	-2,314.5	2,950.1	2,907.3	42.82	68.890	
7,000.0	6,773.1	6,768.2	6,730.8	32.3	15.2	4.18	1,624.9	-2,315.0	2,931.7	2,889.8	41.94	69.905	
7,050.0	6,817.9	6,813.3	6,775.8	32.3	15.3	4.35	1,624.5	-2,315.4	2,910.1	2,869.2	40.89	71.177	
7,100.0	6,861.2	6,857.3	6,819.8	32.2	15.4	4.55	1,624.1	-2,315.8	2,885.4	2,845.7	39.68	72.713	
7,150.0	6,902.5	6,901.8	6,864.3	32.1	15.5	4.81	1,623.6	-2,316.2	2,857.7	2,819.4	38.35	74.526	
7,200.0	6,941.8	6,943.8	6,906.3	32.0	15.6	5.12	1,623.1	-2,316.6	2,827.2	2,790.3	36.89	76.645	
7,250.0	6,978.9	6,981.2	6,943.7	31.9	15.6	5.50	1,622.7	-2,316.8	2,794.0	2,758.7	35.32	79.096	
7,300.0	7,013.5	7,016.1	6,978.6	31.7	15.7	5.97	1,622.3	-2,317.1	2,758.2	2,724.6	33.69	81.882	
7,350.0	7,045.5	7,049.4	7,011.9	31.6	15.8	6.56	1,621.9	-2,317.4	2,720.2	2,688.1	32.01	84.983	
7,400.0	7,074.8	7,081.0	7,043.5	31.5	15.8	7.31	1,621.6	-2,317.6	2,679.9	2,649.6	30.34	88.342	
7,450.0	7,101.1	7,109.5	7,072.0	31.4	15.9	8.29	1,621.3	-2,317.7	2,637.7	2,609.0	28.72	91.834	
7,500.0	7,124.5	7,134.3	7,096.8	31.3	15.9	9.59	1,621.0	-2,317.9	2,593.7	2,566.4	27.25	95.186	
7,550.0	7,144.7	7,154.9	7,117.4	31.1	16.0	11.36	1,620.8	-2,318.0	2,548.2	2,522.1	26.03	97.882	
7,600.0	7,161.6	7,172.2	7,134.7	31.0	16.0	13.92	1,620.7	-2,318.1	2,501.4	2,476.1	25.27	98.996	
7,650.0	7,175.3	7,186.2	7,148.7	30.9	16.0	17.86	1,620.6	-2,318.1	2,453.5	2,428.2	25.28	97.063	
7,700.0	7,185.5	7,196.8	7,159.3	30.8	16.1	24.57	1,620.5	-2,318.2	2,404.7	2,378.0	26.70	90.072	
7,750.0	7,192.3	7,203.9	7,166.4	30.7	16.1	37.69	1,620.4	-2,318.2	2,355.4	2,324.5	30.85	76.349	
7,800.0	7,195.7	7,207.5	7,170.0	30.7	16.1	66.70	1,620.4	-2,318.2	2,305.7	2,267.5	38.24	60.297	
7,828.6	7,196.0	7,208.0	7,170.5	30.6	16.1	92.77	1,620.4	-2,318.2	2,277.2	2,238.1	39.11	58.222	
7,900.0	7,195.4	7,207.7	7,170.2	30.6	16.1	92.70	1,620.4	-2,318.2	2,206.1	2,165.9	40.13	54.977	
8,000.0	7,194.6	7,207.4	7,169.9	30.6	16.1	92.60	1,620.4	-2,318.2	2,106.5	2,064.7	41.74	50.465	
8,100.0	7,193.8	7,207.1	7,169.6	31.0	16.1	92.50	1,620.4	-2,318.2	2,006.9	1,963.4	43.54	46.089	
8,200.0	7,193.0	7,206.7	7,169.2	32.1	16.1	92.40	1,620.4	-2,318.2	1,907.4	1,861.9	45.50	41.918	
8,300.0	7,192.2	7,206.4	7,168.9	33.8	16.1	92.30	1,620.4	-2,318.2	1,807.9	1,760.3	47.59	37.990	
8,400.0	7,191.4	7,206.1	7,168.6	35.8	16.1	92.21	1,620.4	-2,318.2	1,708.5	1,658.7	49.78	34.322	
8,500.0	7,190.6	7,205.7	7,168.2	38.0	16.1	92.11	1,620.4	-2,318.2	1,609.2	1,557.1	52.05	30.914	
8,600.0	7,189.8	7,205.4	7,167.9	40.3	16.1	92.01	1,620.4	-2,318.2	1,509.9	1,455.5	54.40	27.756	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 20VD - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 672-MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,700.0	7,189.0	7,205.1	7,167.6	42.7	16.1	91.91	1,620.4	-2,318.2	1,410.8	1,354.0	56.80	24.836	
8,800.0	7,188.2	7,204.8	7,167.3	45.1	16.1	91.81	1,620.4	-2,318.2	1,311.8	1,252.5	59.26	22.138	
8,900.0	7,187.4	7,204.4	7,166.9	47.5	16.1	91.71	1,620.4	-2,318.2	1,213.0	1,151.2	61.75	19.643	
9,000.0	7,186.6	7,204.1	7,166.6	50.0	16.1	91.62	1,620.4	-2,318.2	1,114.3	1,050.0	64.28	17.336	
9,100.0	7,185.7	7,203.8	7,166.3	52.6	16.1	91.52	1,620.4	-2,318.2	1,016.0	949.1	66.84	15.200	
9,200.0	7,184.9	7,203.4	7,165.9	55.1	16.1	91.42	1,620.4	-2,318.2	917.9	848.5	69.42	13.223	
9,300.0	7,184.1	7,203.1	7,165.6	57.7	16.1	91.32	1,620.4	-2,318.2	820.4	748.4	72.03	11.390	
9,400.0	7,183.3	7,202.8	7,165.3	60.3	16.1	91.22	1,620.4	-2,318.2	723.5	648.9	74.65	9.692	
9,500.0	7,182.5	7,202.4	7,164.9	62.9	16.1	91.12	1,620.4	-2,318.2	627.7	550.4	77.29	8.120	
9,600.0	7,181.7	7,202.1	7,164.6	65.5	16.1	91.02	1,620.4	-2,318.2	533.3	453.3	79.95	6.670	
9,700.0	7,180.9	7,201.8	7,164.3	68.1	16.1	90.93	1,620.4	-2,318.2	441.4	358.8	82.62	5.343	
9,800.0	7,180.1	7,201.4	7,164.0	70.8	16.1	90.83	1,620.4	-2,318.2	354.0	268.7	85.30	4.150	
9,900.0	7,179.3	7,201.1	7,163.6	73.5	16.1	90.73	1,620.4	-2,318.2	275.2	187.2	87.99	3.128	
10,000.0	7,178.5	7,200.8	7,163.3	76.1	16.1	90.63	1,620.4	-2,318.2	215.0	124.3	90.69	2.370	
10,097.7	7,177.7	7,200.5	7,163.0	78.8	16.1	90.53	1,620.4	-2,318.2	191.4	98.1	93.34	2.051 CC	
10,100.0	7,177.7	7,200.5	7,163.0	78.8	16.1	90.53	1,620.4	-2,318.2	191.4	98.1	93.40	2.050 ES, SF	
10,200.0	7,176.9	7,200.1	7,162.6	81.5	16.1	90.43	1,620.4	-2,318.2	217.0	120.9	96.11	2.258	
10,300.0	7,176.0	7,199.8	7,162.3	84.2	16.1	90.33	1,620.4	-2,318.2	278.5	179.6	98.83	2.818	
10,400.0	7,175.2	7,199.5	7,162.0	86.9	16.1	90.23	1,620.4	-2,318.2	357.8	256.2	101.56	3.523	
10,500.0	7,174.4	7,199.1	7,161.6	89.6	16.1	90.14	1,620.4	-2,318.2	445.5	341.2	104.29	4.271	
10,600.0	7,173.6	7,198.8	7,161.3	92.3	16.1	90.04	1,620.4	-2,318.2	537.5	430.5	107.03	5.022	
10,700.0	7,172.8	7,198.5	7,161.0	95.0	16.1	89.94	1,620.4	-2,318.2	631.9	522.2	109.77	5.757	
10,800.0	7,172.0	7,198.1	7,160.7	97.8	16.1	89.84	1,620.4	-2,318.2	727.9	615.4	112.51	6.469	
10,900.0	7,171.2	7,197.8	7,160.3	100.5	16.1	89.74	1,620.4	-2,318.2	824.8	709.5	115.26	7.156	
11,000.0	7,170.4	7,197.5	7,160.0	103.2	16.1	89.64	1,620.5	-2,318.2	922.3	804.3	118.01	7.816	
11,100.0	7,169.6	7,197.2	7,159.7	106.0	16.1	89.54	1,620.5	-2,318.2	1,020.4	899.6	120.76	8.449	
11,200.0	7,168.8	7,196.8	7,159.3	108.7	16.1	89.44	1,620.5	-2,318.2	1,118.7	995.2	123.52	9.057	
11,300.0	7,168.0	7,196.5	7,159.0	111.5	16.1	89.34	1,620.5	-2,318.2	1,217.4	1,091.1	126.28	9.640	
11,400.0	7,167.1	7,196.2	7,158.7	114.2	16.1	89.25	1,620.5	-2,318.2	1,316.2	1,187.2	129.04	10.200	
11,500.0	7,166.3	7,195.8	7,158.3	117.0	16.1	89.15	1,620.5	-2,318.2	1,415.2	1,283.4	131.80	10.738	
11,600.0	7,165.5	7,195.5	7,158.0	119.7	16.1	89.05	1,620.5	-2,318.2	1,514.4	1,379.8	134.57	11.254	
11,700.0	7,164.7	7,195.2	7,157.7	122.5	16.1	88.95	1,620.5	-2,318.2	1,613.6	1,476.3	137.33	11.750	
11,800.0	7,163.9	7,194.9	7,157.4	125.2	16.1	88.85	1,620.5	-2,318.2	1,713.0	1,572.9	140.10	12.227	
11,900.0	7,163.1	7,194.5	7,157.0	128.0	16.1	88.75	1,620.5	-2,318.2	1,812.4	1,669.5	142.87	12.685	
12,000.0	7,162.3	7,194.2	7,156.7	130.7	16.1	88.65	1,620.5	-2,318.2	1,911.8	1,766.2	145.64	13.127	
12,100.0	7,161.5	7,193.9	7,156.4	133.5	16.1	88.55	1,620.5	-2,318.2	2,011.4	1,863.0	148.41	13.553	
12,200.0	7,160.7	7,193.5	7,156.0	136.3	16.1	88.45	1,620.5	-2,318.2	2,110.9	1,959.7	151.18	13.963	
12,300.0	7,159.8	7,193.2	7,155.7	139.0	16.1	88.35	1,620.5	-2,318.2	2,210.5	2,056.6	153.95	14.358	
12,400.0	7,159.0	7,192.9	7,155.4	141.8	16.1	88.25	1,620.5	-2,318.2	2,310.2	2,153.4	156.73	14.740	
12,500.0	7,158.2	7,192.6	7,155.1	144.6	16.1	88.16	1,620.5	-2,318.2	2,409.8	2,250.3	159.50	15.109	
12,600.0	7,157.4	7,192.2	7,154.7	147.3	16.1	88.06	1,620.5	-2,318.1	2,509.5	2,347.3	162.27	15.465	
12,700.0	7,156.6	7,191.9	7,154.4	150.1	16.1	87.96	1,620.5	-2,318.1	2,609.3	2,444.2	165.05	15.809	
12,800.0	7,155.8	7,191.6	7,154.1	152.9	16.1	87.86	1,620.5	-2,318.1	2,709.0	2,541.2	167.82	16.142	
12,900.0	7,155.0	7,191.2	7,153.7	155.7	16.1	87.76	1,620.5	-2,318.1	2,808.8	2,638.2	170.60	16.464	
13,000.0	7,154.2	7,190.9	7,153.4	158.4	16.1	87.66	1,620.5	-2,318.1	2,908.5	2,735.2	173.37	16.776	
13,100.0	7,153.3	7,190.6	7,153.1	161.2	16.1	87.56	1,620.5	-2,318.1	3,008.3	2,832.2	176.15	17.078	
13,200.0	7,152.5	7,190.3	7,152.8	164.0	16.0	87.46	1,620.5	-2,318.1	3,108.1	2,929.2	178.92	17.371	
13,300.0	7,151.7	7,189.9	7,152.4	166.8	16.0	87.36	1,620.5	-2,318.1	3,207.9	3,026.2	181.70	17.655	
13,400.0	7,150.9	7,189.6	7,152.1	169.5	16.0	87.26	1,620.5	-2,318.1	3,307.8	3,123.3	184.47	17.931	
13,500.0	7,150.1	7,189.3	7,151.8	172.3	16.0	87.16	1,620.5	-2,318.1	3,407.6	3,220.4	187.25	18.198	
13,600.0	7,149.3	7,188.9	7,151.5	175.1	16.0	87.06	1,620.5	-2,318.1	3,507.5	3,317.4	190.02	18.458	
13,700.0	7,148.5	7,188.6	7,151.1	177.9	16.0	86.96	1,620.5	-2,318.1	3,607.3	3,414.5	192.80	18.711	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 20VD - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 672-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
13,800.0	7,147.6	7,188.3	7,150.8	180.7	16.0	86.87	1,620.5	-2,318.1	3,707.2	3,511.6	195.57	18.956	
13,900.0	7,146.8	7,188.0	7,150.5	183.5	16.0	86.77	1,620.5	-2,318.1	3,807.0	3,608.7	198.34	19.194	
14,000.0	7,146.0	7,187.6	7,150.1	186.2	16.0	86.67	1,620.5	-2,318.1	3,906.9	3,705.8	201.11	19.426	
14,100.0	7,145.2	7,187.3	7,149.8	189.0	16.0	86.57	1,620.5	-2,318.1	4,006.8	3,802.9	203.89	19.652	
14,200.0	7,144.4	7,187.0	7,149.5	191.8	16.0	86.47	1,620.5	-2,318.1	4,106.7	3,900.0	206.66	19.872	
14,300.0	7,143.6	7,186.7	7,149.2	194.6	16.0	86.37	1,620.6	-2,318.1	4,206.6	3,997.1	209.43	20.086	
14,370.2	7,143.0	7,186.4	7,148.9	196.6	16.0	86.30	1,620.6	-2,318.1	4,276.7	4,065.3	211.37	20.233	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 31-20D - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 546-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	-72.22	1,572.8	-4,905.2	5,151.3				
100.0	100.0	61.6	61.6	0.1	0.1	-72.22	1,572.8	-4,905.2	5,151.2	5,151.0	0.15	N/A	
200.0	200.0	161.8	161.8	0.3	0.1	-72.22	1,572.7	-4,905.2	5,151.2	5,150.7	0.47	N/A	
300.0	300.0	262.0	262.0	0.5	0.2	-72.22	1,572.6	-4,905.2	5,151.2	5,150.4	0.78	6,604.142	
302.0	302.0	264.0	264.0	0.6	0.2	-97.44	1,572.6	-4,905.2	5,151.2	5,150.4	0.79	6,551.354	
400.0	400.0	362.1	362.1	0.8	0.3	-97.45	1,572.4	-4,905.3	5,151.4	5,150.3	1.09	4,715.300	
500.0	499.8	462.1	462.1	1.0	0.4	-97.50	1,572.2	-4,905.4	5,152.0	5,150.6	1.41	3,655.255	
600.0	599.5	546.0	546.0	1.2	0.5	-97.56	1,571.9	-4,905.4	5,153.2	5,151.5	1.73	2,980.167	
700.0	698.7	855.5	855.2	1.5	1.1	-97.90	1,577.3	-4,899.4	5,154.3	5,151.7	2.63	1,958.087	
800.0	797.5	1,133.9	1,131.4	1.8	1.9	-98.11	1,601.4	-4,874.8	5,150.1	5,146.5	3.66	1,407.796	
900.0	895.6	1,243.6	1,239.3	2.2	2.2	-98.23	1,616.4	-4,861.9	5,145.6	5,141.2	4.37	1,176.769	
1,000.0	993.1	1,796.5	1,774.0	2.6	4.8	-98.42	1,712.5	-4,761.8	5,134.9	5,127.8	7.14	719.140	
1,100.0	1,089.6	1,909.7	1,882.0	3.1	5.4	-98.68	1,734.1	-4,736.1	5,122.5	5,114.3	8.14	629.402	
1,127.2	1,115.8	1,958.3	1,928.5	3.2	5.7	-98.76	1,743.3	-4,724.7	5,119.0	5,110.5	8.51	601.663	
1,200.0	1,185.5	2,017.8	1,985.1	3.6	6.1	-98.78	1,755.1	-4,710.7	5,109.7	5,100.5	9.19	555.825	
1,300.0	1,281.4	2,078.8	2,043.1	4.1	6.4	-98.79	1,767.6	-4,696.4	5,097.4	5,087.4	10.03	508.144	
1,400.0	1,377.3	2,136.0	2,097.5	4.7	6.7	-98.80	1,779.3	-4,683.6	5,086.0	5,075.2	10.85	468.577	
1,500.0	1,473.1	2,230.2	2,187.5	5.2	7.2	-98.83	1,798.4	-4,663.1	5,075.1	5,063.3	11.84	428.482	
1,600.0	1,569.0	2,359.7	2,310.9	5.8	8.0	-98.86	1,824.7	-4,634.2	5,063.8	5,050.8	13.05	387.992	
1,700.0	1,664.8	2,511.0	2,455.2	6.4	8.8	-98.90	1,854.6	-4,599.7	5,051.9	5,037.5	14.37	351.460	
1,800.0	1,760.7	2,604.0	2,543.4	6.9	9.4	-98.92	1,874.0	-4,577.7	5,039.4	5,024.0	15.43	326.544	
1,900.0	1,856.6	2,648.8	2,585.8	7.5	9.7	-98.92	1,883.8	-4,567.3	5,027.6	5,011.4	16.23	309.725	
2,000.0	1,952.4	2,708.1	2,642.1	8.1	10.0	-98.92	1,897.1	-4,554.0	5,016.7	4,999.6	17.11	293.213	
2,100.0	2,048.3	2,914.7	2,839.2	8.6	11.2	-98.98	1,938.8	-4,508.2	5,005.9	4,987.2	18.71	267.577	
2,200.0	2,144.1	3,021.3	2,941.0	9.2	11.8	-99.02	1,958.5	-4,483.2	4,992.9	4,973.1	19.80	252.198	
2,300.0	2,240.0	3,095.6	3,011.9	9.8	12.2	-99.06	1,972.1	-4,466.1	4,980.3	4,959.6	20.72	240.422	
2,400.0	2,335.9	3,188.2	3,100.6	10.3	12.7	-99.10	1,988.8	-4,445.2	4,968.1	4,946.4	21.72	228.770	
2,500.0	2,431.7	3,409.9	3,312.2	10.9	14.0	-99.21	2,028.5	-4,392.6	4,954.8	4,931.5	23.38	211.934	
2,600.0	2,527.6	3,447.0	3,347.6	11.5	14.2	-99.23	2,035.2	-4,383.3	4,940.6	4,916.4	24.13	204.715	
2,700.0	2,623.4	3,508.8	3,406.5	12.1	14.6	-99.25	2,046.4	-4,368.4	4,927.1	4,902.1	25.00	197.064	
2,800.0	2,719.3	3,555.9	3,451.5	12.6	14.8	-99.28	2,055.0	-4,357.8	4,915.1	4,889.3	25.80	190.525	
2,900.0	2,815.2	3,648.4	3,540.1	13.2	15.3	-99.32	2,072.1	-4,337.5	4,903.6	4,876.8	26.80	182.949	
3,000.0	2,911.0	3,728.0	3,616.5	13.8	15.8	-99.37	2,086.5	-4,320.1	4,892.2	4,864.5	27.74	176.328	
3,100.0	3,006.9	3,799.5	3,685.1	14.4	16.2	-99.40	2,099.8	-4,304.8	4,881.4	4,852.7	28.65	170.351	
3,200.0	3,102.7	3,873.8	3,756.2	14.9	16.6	-99.43	2,114.5	-4,289.2	4,871.2	4,841.6	29.59	164.607	
3,300.0	3,198.6	3,946.9	3,826.1	15.5	17.0	-99.45	2,129.6	-4,274.0	4,861.4	4,830.9	30.53	159.216	
3,400.0	3,294.5	4,015.4	3,891.6	16.1	17.4	-99.47	2,144.1	-4,260.2	4,852.3	4,820.9	31.45	154.278	
3,500.0	3,390.3	4,103.5	3,976.1	16.7	17.8	-99.50	2,162.1	-4,242.9	4,843.6	4,811.2	32.45	149.258	
3,600.0	3,486.2	4,353.3	4,216.8	17.2	19.2	-99.67	2,205.9	-4,192.4	4,833.8	4,799.6	34.15	141.538	
3,700.0	3,582.0	4,447.5	4,307.1	17.8	19.7	-99.72	2,223.0	-4,171.5	4,822.0	4,786.9	35.17	137.116	
3,800.0	3,677.9	4,510.3	4,367.3	18.4	20.0	-99.76	2,234.1	-4,158.0	4,810.8	4,774.8	36.02	133.544	
3,900.0	3,773.7	4,570.0	4,424.8	19.0	20.3	-99.80	2,244.5	-4,145.8	4,800.5	4,763.7	36.86	130.236	
4,000.0	3,869.6	4,606.1	4,459.8	19.5	20.5	-99.83	2,250.6	-4,138.9	4,791.3	4,753.7	37.58	127.505	
4,100.0	3,965.5	4,663.0	4,515.1	20.1	20.8	-99.89	2,259.4	-4,129.0	4,783.3	4,745.0	38.38	124.642	
4,200.0	4,061.3	4,663.0	4,515.1	20.7	20.8	-99.89	2,259.4	-4,129.0	4,776.6	4,737.7	38.95	122.648	
4,300.0	4,157.2	4,727.5	4,578.1	21.3	21.0	-99.97	2,268.8	-4,119.2	4,771.0	4,731.2	39.75	120.038	
4,400.0	4,253.0	4,757.0	4,607.1	21.8	21.1	-100.01	2,272.9	-4,115.2	4,766.7	4,726.3	40.42	117.932	
4,500.0	4,348.9	4,824.1	4,673.0	22.4	21.4	-100.10	2,282.1	-4,107.0	4,763.4	4,722.2	41.21	115.596	
4,600.0	4,444.8	4,887.9	4,735.8	23.0	21.6	-100.20	2,290.4	-4,099.9	4,761.2	4,719.2	41.98	113.423	
4,700.0	4,540.6	4,965.5	4,812.4	23.6	21.9	-100.33	2,300.0	-4,091.8	4,759.5	4,716.7	42.77	111.275	
4,800.0	4,636.5	5,038.0	4,884.3	24.1	22.1	-100.48	2,307.0	-4,085.2	4,758.2	4,714.7	43.52	109.323	
4,900.0	4,732.3	5,102.9	4,948.8	24.7	22.3	-100.63	2,311.7	-4,080.0	4,757.6	4,713.4	44.22	107.593	

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 SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 546-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,912.5	4,744.3	5,110.2	4,956.1	24.8	22.3	-100.64	2,312.2	-4,079.5	4,757.6	4,713.3	44.30	107.386	
5,000.0	4,828.2	5,160.5	5,006.2	25.3	22.4	-100.77	2,315.2	-4,076.1	4,758.0	4,713.1	44.89	105.995	
5,100.0	4,924.1	5,225.0	5,070.5	25.9	22.5	-100.94	2,318.6	-4,072.5	4,759.3	4,713.7	45.56	104.464	
5,200.0	5,019.9	5,285.8	5,131.2	26.4	22.7	-101.10	2,321.4	-4,069.7	4,761.4	4,715.1	46.21	103.039	
5,300.0	5,115.8	5,319.0	5,164.3	27.0	22.7	-101.19	2,322.9	-4,068.3	4,764.3	4,717.5	46.82	101.754	
5,400.0	5,211.6	5,377.7	5,223.0	27.6	22.8	-101.36	2,324.9	-4,066.6	4,768.3	4,720.9	47.45	100.496	
5,500.0	5,307.5	5,412.0	5,257.2	28.2	22.9	-101.47	2,325.7	-4,066.3	4,773.7	4,725.7	48.05	99.353	
5,600.0	5,403.4	5,487.5	5,332.7	28.7	22.9	-101.71	2,326.9	-4,066.2	4,780.1	4,731.4	48.66	98.228	
5,700.0	5,499.2	5,567.0	5,412.3	29.3	23.0	-101.96	2,327.9	-4,066.7	4,787.1	4,737.8	49.28	97.150	
5,800.0	5,595.1	5,663.7	5,508.9	29.9	23.1	-102.27	2,329.2	-4,067.5	4,794.4	4,744.5	49.90	96.089	
5,840.7	5,634.1	5,708.6	5,553.8	30.1	23.2	-102.42	2,329.9	-4,067.8	4,797.4	4,747.2	50.15	95.660	
5,900.0	5,691.1	5,781.6	5,626.8	30.4	23.3	-102.73	2,330.5	-4,068.2	4,801.5	4,751.0	50.45	95.167	
6,000.0	5,788.0	5,885.2	5,730.4	30.8	23.4	-103.14	2,331.1	-4,068.5	4,807.7	4,756.8	50.86	94.521	
6,100.0	5,885.7	5,987.5	5,832.7	31.2	23.5	-103.50	2,331.2	-4,068.9	4,813.1	4,761.8	51.24	93.931	
6,200.0	5,984.0	6,098.3	5,943.5	31.5	23.6	-103.82	2,331.1	-4,069.1	4,817.6	4,766.0	51.59	93.379	
6,300.0	6,083.0	6,220.6	6,065.8	31.8	23.7	-104.09	2,331.2	-4,068.9	4,821.0	4,769.1	51.93	92.839	
6,400.0	6,182.3	6,334.2	6,179.4	32.0	23.8	-104.27	2,331.4	-4,068.1	4,823.1	4,770.8	52.24	92.330	
6,500.0	6,282.0	6,424.5	6,269.7	32.2	23.9	-104.37	2,331.7	-4,067.4	4,824.3	4,771.8	52.50	91.899	
6,600.0	6,382.0	6,535.0	6,380.2	32.3	24.1	-104.42	2,332.3	-4,066.6	4,824.7	4,771.9	52.75	91.459	
6,668.0	6,449.9	6,587.4	6,432.6	32.4	24.1	-79.20	2,332.8	-4,066.2	4,824.5	4,786.7	37.81	127.596	
6,698.0	6,479.9	6,610.3	6,455.5	32.4	24.2	-79.20	2,333.0	-4,066.1	4,824.4	4,786.5	37.89	127.337	
6,700.0	6,481.9	6,611.9	6,457.1	32.4	24.2	10.80	2,333.1	-4,066.1	4,824.4	4,771.4	52.94	91.124	
6,750.0	6,531.9	6,694.8	6,540.0	32.5	24.3	10.85	2,334.0	-4,065.5	4,822.3	4,769.4	52.88	91.190	
6,800.0	6,581.6	6,759.8	6,604.9	32.5	24.4	10.97	2,334.6	-4,064.6	4,816.4	4,763.8	52.59	91.584	
6,850.0	6,630.8	6,808.3	6,653.4	32.5	24.4	11.14	2,335.0	-4,063.8	4,807.1	4,755.0	52.07	92.319	
6,900.0	6,679.3	6,860.0	6,705.1	32.4	24.5	11.38	2,335.5	-4,063.1	4,794.5	4,743.1	51.36	93.345	
6,950.0	6,726.8	6,909.0	6,754.1	32.4	24.6	11.70	2,335.9	-4,062.3	4,778.5	4,728.0	50.47	94.686	
7,000.0	6,773.1	6,949.5	6,794.6	32.3	24.6	12.08	2,336.2	-4,061.7	4,759.4	4,710.0	49.39	96.368	
7,050.0	6,817.9	6,987.0	6,832.1	32.3	24.7	12.56	2,336.6	-4,061.2	4,737.2	4,689.1	48.15	98.387	
7,100.0	6,861.2	7,020.2	6,865.4	32.2	24.7	13.14	2,337.1	-4,060.7	4,712.1	4,665.3	46.77	100.751	
7,150.0	6,902.5	7,050.0	6,895.1	32.1	24.8	13.83	2,337.5	-4,060.4	4,684.2	4,639.0	45.28	103.459	
7,200.0	6,941.8	7,078.3	6,923.4	32.0	24.8	14.66	2,338.0	-4,060.1	4,653.7	4,610.0	43.70	106.487	
7,250.0	6,978.9	7,106.3	6,951.4	31.9	24.9	15.67	2,338.5	-4,059.9	4,620.7	4,578.6	42.09	109.779	
7,300.0	7,013.5	7,134.8	6,979.9	31.7	24.9	16.91	2,339.0	-4,059.8	4,585.3	4,544.8	40.50	113.229	
7,350.0	7,045.5	7,161.3	7,006.4	31.6	24.9	18.43	2,339.6	-4,059.7	4,547.7	4,508.7	38.98	116.678	
7,400.0	7,074.8	7,190.0	7,035.1	31.5	25.0	20.33	2,340.1	-4,059.6	4,508.0	4,470.3	37.63	119.785	
7,450.0	7,101.1	7,206.5	7,051.6	31.4	25.0	22.65	2,340.5	-4,059.5	4,466.4	4,429.9	36.53	122.278	
7,500.0	7,124.5	7,225.1	7,070.2	31.3	25.0	25.64	2,340.8	-4,059.5	4,423.2	4,387.4	35.85	123.375	
7,550.0	7,144.7	7,241.3	7,086.3	31.1	25.0	29.52	2,341.1	-4,059.5	4,378.6	4,342.8	35.77	122.394	
7,600.0	7,161.6	7,254.9	7,100.0	31.0	25.1	34.67	2,341.3	-4,059.6	4,332.7	4,296.2	36.50	118.704	
7,650.0	7,175.3	7,266.0	7,111.0	30.9	25.1	41.65	2,341.5	-4,059.6	4,285.8	4,247.6	38.20	112.190	
7,700.0	7,185.5	7,274.4	7,119.4	30.8	25.1	51.21	2,341.6	-4,059.6	4,238.0	4,197.2	40.85	103.750	
7,750.0	7,192.3	7,284.0	7,129.1	30.7	25.1	64.27	2,341.7	-4,059.6	4,189.7	4,145.9	43.88	95.492	
7,800.0	7,195.7	7,284.0	7,129.1	30.7	25.1	80.25	2,341.7	-4,059.6	4,141.1	4,095.5	45.63	90.761	
7,828.6	7,196.0	7,284.0	7,129.1	30.6	25.1	90.24	2,341.7	-4,059.6	4,113.2	4,067.8	45.43	90.535	
7,900.0	7,195.4	7,284.0	7,129.1	30.6	25.1	90.24	2,341.7	-4,059.6	4,043.6	3,997.2	46.44	87.067	
8,000.0	7,194.6	7,284.0	7,129.1	30.6	25.1	90.24	2,341.7	-4,059.6	3,946.3	3,898.2	48.05	82.130	
8,100.0	7,193.8	7,284.0	7,129.1	31.0	25.1	90.24	2,341.7	-4,059.6	3,849.0	3,799.2	49.84	77.222	
8,200.0	7,193.0	7,284.0	7,129.1	32.1	25.1	90.24	2,341.7	-4,059.6	3,752.0	3,700.2	51.79	72.441	
8,300.0	7,192.2	7,284.0	7,129.1	33.8	25.1	90.24	2,341.7	-4,059.6	3,655.1	3,601.2	53.87	67.850	
8,400.0	7,191.4	7,284.0	7,129.1	35.8	25.1	90.25	2,341.7	-4,059.6	3,558.3	3,502.3	56.05	63.485	
8,500.0	7,190.6	7,284.0	7,129.1	38.0	25.1	90.25	2,341.7	-4,059.6	3,461.8	3,403.4	58.31	59.363	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 546-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,600.0	7,189.8	7,284.0	7,129.1	40.3	25.1	90.25	2,341.7	-4,059.6	3,365.4	3,304.7	60.65	55.488	
8,700.0	7,189.0	7,284.0	7,129.1	42.7	25.1	90.25	2,341.7	-4,059.6	3,269.3	3,206.2	63.05	51.856	
8,800.0	7,188.2	7,284.0	7,129.1	45.1	25.1	90.25	2,341.7	-4,059.6	3,173.4	3,107.9	65.49	48.456	
8,900.0	7,187.4	7,284.0	7,129.1	47.5	25.1	90.25	2,341.7	-4,059.6	3,077.7	3,009.7	67.97	45.278	
9,000.0	7,186.6	7,284.0	7,129.1	50.0	25.1	90.25	2,341.7	-4,059.6	2,982.4	2,911.9	70.49	42.307	
9,100.0	7,185.7	7,284.0	7,129.1	52.6	25.1	90.25	2,341.7	-4,059.6	2,887.3	2,814.3	73.04	39.529	
9,200.0	7,184.9	7,278.6	7,123.7	55.1	25.1	89.91	2,341.7	-4,059.6	2,792.6	2,717.0	75.64	36.918	
9,300.0	7,184.1	7,278.2	7,123.3	57.7	25.1	89.89	2,341.7	-4,059.6	2,698.3	2,620.1	78.24	34.486	
9,400.0	7,183.3	7,277.8	7,122.9	60.3	25.1	89.86	2,341.7	-4,059.6	2,604.4	2,523.6	80.86	32.209	
9,500.0	7,182.5	7,277.5	7,122.5	62.9	25.1	89.84	2,341.7	-4,059.6	2,511.0	2,427.5	83.50	30.073	
9,600.0	7,181.7	7,277.1	7,122.1	65.5	25.1	89.81	2,341.6	-4,059.6	2,418.1	2,332.0	86.15	28.070	
9,700.0	7,180.9	7,276.7	7,121.7	68.1	25.1	89.79	2,341.6	-4,059.6	2,325.8	2,237.0	88.81	26.189	
9,800.0	7,180.1	7,276.3	7,121.3	70.8	25.1	89.76	2,341.6	-4,059.6	2,234.2	2,142.7	91.48	24.422	
9,900.0	7,179.3	7,275.9	7,120.9	73.5	25.1	89.74	2,341.6	-4,059.6	2,143.3	2,049.1	94.17	22.761	
10,000.0	7,178.5	7,275.4	7,120.5	76.1	25.1	89.71	2,341.6	-4,059.6	2,053.3	1,956.4	96.86	21.198	
10,100.0	7,177.7	7,275.0	7,120.1	78.8	25.1	89.69	2,341.6	-4,059.6	1,964.2	1,864.6	99.56	19.728	
10,200.0	7,176.9	7,274.6	7,119.7	81.5	25.1	89.66	2,341.6	-4,059.6	1,876.2	1,773.9	102.27	18.345	
10,300.0	7,176.0	7,274.2	7,119.2	84.2	25.1	89.63	2,341.6	-4,059.6	1,789.5	1,684.5	104.99	17.045	
10,400.0	7,175.2	7,273.7	7,118.8	86.9	25.1	89.61	2,341.6	-4,059.6	1,704.3	1,596.5	107.71	15.823	
10,500.0	7,174.4	7,273.3	7,118.4	89.6	25.1	89.58	2,341.6	-4,059.6	1,620.7	1,510.2	110.44	14.675	
10,600.0	7,173.6	7,272.8	7,117.9	92.3	25.1	89.55	2,341.6	-4,059.6	1,539.1	1,425.9	113.17	13.600	
10,700.0	7,172.8	7,272.4	7,117.5	95.0	25.1	89.52	2,341.6	-4,059.6	1,459.8	1,343.9	115.91	12.594	
10,800.0	7,172.0	7,271.9	7,117.0	97.8	25.1	89.49	2,341.6	-4,059.6	1,383.1	1,264.5	118.65	11.657	
10,900.0	7,171.2	7,271.4	7,116.5	100.5	25.1	89.46	2,341.6	-4,059.6	1,309.6	1,188.3	121.39	10.789	
11,000.0	7,170.4	7,271.0	7,116.0	103.2	25.1	89.43	2,341.6	-4,059.6	1,239.9	1,115.7	124.14	9.988	
11,100.0	7,169.6	7,270.5	7,115.5	106.0	25.1	89.40	2,341.6	-4,059.6	1,174.5	1,047.6	126.89	9.256	
11,200.0	7,168.8	7,270.0	7,115.1	108.7	25.1	89.37	2,341.5	-4,059.6	1,114.3	984.6	129.65	8.595	
11,300.0	7,168.0	7,269.5	7,114.5	111.5	25.1	89.34	2,341.5	-4,059.6	1,060.1	927.7	132.40	8.006	
11,400.0	7,167.1	7,269.0	7,114.0	114.2	25.1	89.31	2,341.5	-4,059.6	1,012.8	877.7	135.16	7.494	
11,500.0	7,166.3	7,268.4	7,113.5	117.0	25.1	89.27	2,341.5	-4,059.6	973.7	835.7	137.92	7.059	
11,600.0	7,165.5	7,267.9	7,113.0	119.7	25.1	89.24	2,341.5	-4,059.6	943.5	802.8	140.69	6.706	
11,700.0	7,164.7	7,267.4	7,112.5	122.5	25.1	89.21	2,341.5	-4,059.6	923.2	779.7	143.45	6.435	
11,800.0	7,163.9	7,266.8	7,111.9	125.2	25.1	89.17	2,341.5	-4,059.6	913.5	767.2	146.22	6.247	
11,839.3	7,163.6	7,266.6	7,111.7	126.3	25.1	89.16	2,341.5	-4,059.6	912.6	765.3	147.31	6.195 CC, ES	
11,900.0	7,163.1	7,266.3	7,111.4	128.0	25.1	89.14	2,341.5	-4,059.6	914.6	765.6	148.99	6.139	
12,000.0	7,162.3	7,265.7	7,110.8	130.7	25.1	89.10	2,341.5	-4,059.6	926.6	774.9	151.76	6.106 SF	
12,100.0	7,161.5	7,265.1	7,110.2	133.5	25.1	89.07	2,341.5	-4,059.6	949.1	794.6	154.54	6.142	
12,200.0	7,160.7	7,264.6	7,109.6	136.3	25.1	89.03	2,341.5	-4,059.6	981.3	824.0	157.31	6.238	
12,300.0	7,159.8	7,264.0	7,109.0	139.0	25.1	88.99	2,341.5	-4,059.6	1,022.3	862.2	160.09	6.386	
12,400.0	7,159.0	7,263.4	7,108.4	141.8	25.1	88.96	2,341.5	-4,059.6	1,071.1	908.2	162.86	6.577	
12,500.0	7,158.2	7,262.8	7,107.8	144.6	25.1	88.92	2,341.4	-4,059.6	1,126.7	961.0	165.64	6.802	
12,600.0	7,157.4	7,262.1	7,107.2	147.3	25.1	88.88	2,341.4	-4,059.6	1,188.1	1,019.6	168.42	7.054	
12,700.0	7,156.6	7,261.5	7,106.6	150.1	25.1	88.84	2,341.4	-4,059.6	1,254.4	1,083.2	171.20	7.327	
12,800.0	7,155.8	7,260.8	7,105.9	152.9	25.1	88.80	2,341.4	-4,059.6	1,325.0	1,151.1	173.98	7.616	
12,900.0	7,155.0	7,260.2	7,105.3	155.7	25.1	88.76	2,341.4	-4,059.6	1,399.2	1,222.5	176.76	7.916	
13,000.0	7,154.2	7,259.5	7,104.6	158.4	25.1	88.71	2,341.4	-4,059.6	1,476.5	1,296.9	179.54	8.224	
13,100.0	7,153.3	7,258.8	7,103.9	161.2	25.1	88.67	2,341.4	-4,059.6	1,556.3	1,374.0	182.33	8.536	
13,200.0	7,152.5	7,258.1	7,103.2	164.0	25.1	88.63	2,341.4	-4,059.6	1,638.4	1,453.3	185.11	8.851	
13,300.0	7,151.7	7,257.4	7,102.5	166.8	25.1	88.58	2,341.4	-4,059.6	1,722.3	1,534.4	187.89	9.166	
13,400.0	7,150.9	7,256.7	7,101.8	169.5	25.1	88.54	2,341.4	-4,059.6	1,807.9	1,617.2	190.68	9.481	
13,500.0	7,150.1	7,256.0	7,101.1	172.3	25.1	88.49	2,341.3	-4,059.6	1,894.9	1,701.4	193.46	9.795	
13,600.0	7,149.3	7,255.2	7,100.3	175.1	25.1	88.44	2,341.3	-4,059.6	1,983.1	1,786.9	196.25	10.105	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 31-20D - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 546-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
13,700.0	7,148.5	7,254.5	7,099.5	177.9	25.1	88.40	2,341.3	-4,059.5	2,072.4	1,873.4	199.04	10.412	
13,800.0	7,147.6	7,253.7	7,098.8	180.7	25.1	88.35	2,341.3	-4,059.5	2,162.6	1,960.8	201.82	10.715	
13,900.0	7,146.8	7,252.9	7,098.0	183.5	25.1	88.30	2,341.3	-4,059.5	2,253.7	2,049.1	204.61	11.015	
14,000.0	7,146.0	7,252.1	7,097.2	186.2	25.1	88.25	2,341.3	-4,059.5	2,345.5	2,138.1	207.40	11.309	
14,100.0	7,145.2	7,251.3	7,096.3	189.0	25.1	88.19	2,341.3	-4,059.5	2,437.9	2,227.7	210.18	11.599	
14,200.0	7,144.4	7,250.4	7,095.5	191.8	25.1	88.14	2,341.3	-4,059.5	2,530.9	2,317.9	212.97	11.884	
14,300.0	7,143.6	7,249.6	7,094.6	194.6	25.1	88.09	2,341.2	-4,059.5	2,624.4	2,408.7	215.76	12.164	
14,370.2	7,143.0	7,248.9	7,094.0	196.6	25.1	88.05	2,341.2	-4,059.5	2,690.4	2,472.6	217.72	12.357	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 542-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	-72.68	1,548.1	-4,964.6	5,200.5				
100.0	100.0	52.3	52.3	0.1	0.0	-72.68	1,548.1	-4,964.6	5,200.4	5,200.3	0.14	N/A	
200.0	200.0	137.3	137.3	0.3	0.1	-72.68	1,548.3	-4,964.9	5,200.7	5,200.3	0.44	N/A	
300.0	300.0	222.4	222.4	0.5	0.2	-72.68	1,548.6	-4,965.3	5,201.3	5,200.6	0.75	6,980.281	
400.0	400.0	307.4	307.4	0.8	0.3	-97.88	1,549.0	-4,966.0	5,202.5	5,201.4	1.04	4,980.055	
500.0	499.8	392.3	392.3	1.0	0.4	-97.89	1,549.6	-4,966.8	5,204.4	5,203.0	1.35	3,857.608	
600.0	599.5	2,319.0	2,276.4	1.2	7.2	-100.90	1,393.7	-4,704.8	5,200.4	5,194.2	6.20	839.091	
700.0	698.7	2,694.0	2,625.3	1.5	9.8	-102.64	1,317.6	-4,590.9	5,168.9	5,161.0	7.88	656.178	
800.0	797.5	2,727.5	2,656.1	1.8	10.1	-103.47	1,310.6	-4,579.9	5,134.3	5,125.9	8.35	614.868	
900.0	895.6	2,788.0	2,712.2	2.2	10.5	-104.36	1,298.5	-4,560.8	5,101.8	5,092.8	8.97	568.675	
1,000.0	993.1	2,788.0	2,712.2	2.6	10.5	-104.99	1,298.5	-4,560.8	5,070.9	5,061.5	9.41	538.766	
1,100.0	1,089.6	2,847.8	2,768.0	3.1	10.9	-105.83	1,286.9	-4,542.6	5,042.1	5,032.0	10.13	497.741	
1,127.2	1,115.8	2,881.0	2,799.0	3.2	11.1	-106.14	1,280.5	-4,532.8	5,034.6	5,024.2	10.40	484.059	
1,200.0	1,185.5	2,917.4	2,833.1	3.6	11.3	-106.31	1,273.4	-4,522.0	5,014.8	5,003.9	10.92	459.379	
1,300.0	1,281.4	3,012.7	2,922.3	4.1	12.0	-106.75	1,255.9	-4,493.5	4,987.8	4,976.0	11.82	422.088	
1,400.0	1,377.3	3,068.0	2,974.2	4.7	12.3	-107.00	1,246.3	-4,476.7	4,961.2	4,948.6	12.57	394.802	
1,500.0	1,473.1	3,118.1	3,021.3	5.2	12.7	-107.23	1,238.2	-4,461.8	4,935.5	4,922.3	13.29	371.403	
1,600.0	1,569.0	3,161.0	3,061.8	5.8	12.9	-107.42	1,231.8	-4,449.4	4,911.1	4,897.1	13.99	351.079	
1,700.0	1,664.8	3,243.6	3,140.1	6.4	13.4	-107.78	1,219.4	-4,426.0	4,887.5	4,872.7	14.84	329.383	
1,800.0	1,760.7	3,298.0	3,191.6	6.9	13.8	-108.03	1,211.0	-4,410.8	4,864.5	4,848.9	15.59	312.081	
1,900.0	1,856.6	3,349.0	3,240.1	7.5	14.1	-108.26	1,203.2	-4,397.0	4,842.4	4,826.1	16.33	296.610	
2,000.0	1,952.4	3,440.2	3,326.9	8.1	14.6	-108.67	1,189.8	-4,372.5	4,821.0	4,803.8	17.21	280.068	
2,100.0	2,048.3	3,488.8	3,373.3	8.6	14.9	-108.89	1,182.7	-4,359.6	4,800.3	4,782.3	17.94	267.532	
2,200.0	2,144.1	3,538.0	3,420.2	9.2	15.2	-109.11	1,175.4	-4,347.0	4,780.6	4,762.0	18.67	255.991	
2,300.0	2,240.0	3,629.0	3,507.1	9.8	15.7	-109.54	1,161.6	-4,323.8	4,761.3	4,741.7	19.58	243.198	
2,400.0	2,335.9	3,686.8	3,562.4	10.3	16.1	-109.81	1,153.0	-4,309.2	4,742.7	4,722.3	20.35	233.074	
2,500.0	2,431.7	3,838.2	3,707.4	10.9	16.9	-110.52	1,130.3	-4,271.9	4,725.0	4,703.5	21.50	219.817	
2,600.0	2,527.6	3,932.4	3,797.1	11.5	17.5	-110.98	1,114.7	-4,247.9	4,706.3	4,683.9	22.44	209.721	
2,700.0	2,623.4	4,015.0	3,875.7	12.1	18.0	-111.40	1,100.5	-4,227.0	4,688.0	4,664.7	23.34	200.850	
2,800.0	2,719.3	4,097.0	3,953.8	12.6	18.5	-111.81	1,086.2	-4,206.2	4,670.1	4,645.8	24.25	192.600	
2,900.0	2,815.2	4,144.4	3,998.9	13.2	18.8	-112.05	1,078.1	-4,194.5	4,653.0	4,628.0	24.99	186.173	
3,000.0	2,911.0	4,191.0	4,043.6	13.8	19.1	-112.29	1,070.7	-4,183.4	4,637.2	4,611.5	25.73	180.196	
3,100.0	3,006.9	4,228.9	4,080.0	14.4	19.3	-112.47	1,064.8	-4,174.8	4,622.8	4,596.4	26.43	174.926	
3,200.0	3,102.7	4,284.0	4,133.2	14.9	19.5	-112.75	1,056.3	-4,162.7	4,609.6	4,582.4	27.19	169.543	
3,300.0	3,198.6	4,320.3	4,168.2	15.5	19.7	-112.92	1,050.9	-4,155.1	4,597.5	4,569.7	27.87	164.977	
3,400.0	3,294.5	4,378.0	4,224.2	16.1	20.0	-113.20	1,042.9	-4,143.6	4,586.8	4,558.2	28.63	160.221	
3,500.0	3,390.3	4,416.6	4,261.8	16.7	20.2	-113.38	1,038.0	-4,136.2	4,577.3	4,547.9	29.30	156.197	
3,600.0	3,486.2	4,471.0	4,314.8	17.2	20.4	-113.63	1,031.6	-4,126.1	4,568.8	4,538.8	30.03	152.116	
3,700.0	3,582.0	4,540.5	4,382.8	17.8	20.7	-113.94	1,024.2	-4,113.6	4,561.2	4,530.4	30.80	148.076	
3,800.0	3,677.9	4,565.0	4,406.8	18.4	20.8	-114.05	1,021.7	-4,109.2	4,554.7	4,523.3	31.42	144.951	
3,900.0	3,773.7	4,626.9	4,467.5	19.0	21.1	-114.32	1,015.9	-4,098.9	4,549.3	4,517.2	32.15	141.498	
4,000.0	3,869.6	4,658.0	4,498.2	19.5	21.2	-114.46	1,013.2	-4,094.2	4,545.5	4,512.7	32.78	138.650	
4,100.0	3,965.5	4,704.8	4,544.3	20.1	21.3	-114.65	1,009.5	-4,087.6	4,543.0	4,509.5	33.45	135.807	
4,200.0	4,061.3	4,752.0	4,591.0	20.7	21.5	-114.85	1,006.0	-4,081.7	4,541.9	4,507.8	34.12	133.116	
4,226.1	4,086.3	4,752.0	4,591.0	20.8	21.5	-114.85	1,006.0	-4,081.7	4,541.8	4,507.6	34.26	132.570	
4,300.0	4,157.2	4,783.6	4,622.4	21.3	21.6	-114.98	1,003.7	-4,078.1	4,542.1	4,507.4	34.74	130.754	
4,400.0	4,253.0	4,845.0	4,683.3	21.8	21.7	-115.23	999.6	-4,071.9	4,544.0	4,508.5	35.43	128.244	
4,500.0	4,348.9	4,845.0	4,683.3	22.4	21.7	-115.23	999.6	-4,071.9	4,547.0	4,511.0	35.97	126.418	
4,600.0	4,444.8	4,893.2	4,731.2	23.0	21.9	-115.42	996.5	-4,068.0	4,551.4	4,514.8	36.62	124.294	
4,700.0	4,540.6	4,939.0	4,776.9	23.6	22.0	-115.61	993.6	-4,065.2	4,557.5	4,520.2	37.26	122.309	
4,800.0	4,636.5	4,983.1	4,820.8	24.1	22.0	-115.78	991.1	-4,062.9	4,564.8	4,526.9	37.89	120.475	
4,900.0	4,732.3	5,049.6	4,887.2	24.7	22.2	-116.03	988.5	-4,059.8	4,573.0	4,534.4	38.56	118.598	

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 SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 32-20D - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 542-MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,828.2	5,126.0	4,963.5	25.3	22.3	-116.29	986.9	-4,056.9	4,582.0	4,542.8	39.23	116.809	
5,100.0	4,924.1	5,154.7	4,992.2	25.9	22.3	-116.39	986.7	-4,056.1	4,592.0	4,552.2	39.80	115.375	
5,200.0	5,019.9	5,220.0	5,057.5	26.4	22.4	-116.59	986.8	-4,055.3	4,603.6	4,563.2	40.43	113.878	
5,300.0	5,115.8	5,243.6	5,081.1	27.0	22.4	-116.67	987.0	-4,055.3	4,616.1	4,575.1	40.99	112.623	
5,400.0	5,211.6	5,328.8	5,166.4	27.6	22.5	-116.93	987.8	-4,055.3	4,629.4	4,587.8	41.62	111.218	
5,500.0	5,307.5	5,407.0	5,244.5	28.2	22.6	-117.17	988.4	-4,055.8	4,643.3	4,601.0	42.25	109.896	
5,600.0	5,403.4	5,507.8	5,345.3	28.7	22.6	-117.48	988.5	-4,056.4	4,657.4	4,614.5	42.91	108.537	
5,700.0	5,499.2	5,629.0	5,466.5	29.3	22.8	-117.86	988.6	-4,056.6	4,671.2	4,627.6	43.60	107.142	
5,800.0	5,595.1	5,727.9	5,565.4	29.9	22.9	-118.17	988.1	-4,056.3	4,684.8	4,640.6	44.26	105.846	
5,840.7	5,634.1	5,761.9	5,599.4	30.1	22.9	-118.28	987.8	-4,056.2	4,690.4	4,645.9	44.52	105.349	
5,900.0	5,691.1	5,811.1	5,648.6	30.4	23.0	-118.58	987.2	-4,056.2	4,698.4	4,653.5	44.89	104.672	
6,000.0	5,788.0	5,894.6	5,732.1	30.8	23.1	-119.03	986.5	-4,056.3	4,710.9	4,665.5	45.41	103.746	
6,100.0	5,885.7	5,982.2	5,819.7	31.2	23.1	-119.43	986.0	-4,056.7	4,722.0	4,676.2	45.88	102.915	
6,200.0	5,984.0	6,128.7	5,966.2	31.5	23.3	-119.88	984.9	-4,057.0	4,731.4	4,685.0	46.39	101.985	
6,300.0	6,083.0	6,220.5	6,058.0	31.8	23.4	-120.15	984.0	-4,056.5	4,738.2	4,691.4	46.78	101.283	
6,400.0	6,182.3	6,298.9	6,136.4	32.0	23.5	-120.35	983.3	-4,056.4	4,743.8	4,696.7	47.10	100.721	
6,500.0	6,282.0	6,373.5	6,210.9	32.2	23.6	-120.49	983.0	-4,056.6	4,748.0	4,700.6	47.36	100.263	
6,600.0	6,382.0	6,443.0	6,280.5	32.3	23.7	-120.57	982.6	-4,057.3	4,751.1	4,703.6	47.55	99.912	
6,668.0	6,449.9	6,516.7	6,354.2	32.4	23.7	-95.39	982.3	-4,058.2	4,752.4	4,709.1	43.31	109.728	
6,698.0	6,479.9	6,529.0	6,366.5	32.4	23.7	-95.39	982.2	-4,058.4	4,752.8	4,709.4	43.36	109.611	
6,700.0	6,481.9	6,529.0	6,366.5	32.4	23.7	-5.39	982.2	-4,058.4	4,752.8	4,705.1	47.73	99.567	
6,750.0	6,531.9	6,576.6	6,414.1	32.5	23.8	-5.41	982.0	-4,059.0	4,751.7	4,704.1	47.54	99.955	
6,800.0	6,581.6	6,623.0	6,460.4	32.5	23.8	-5.45	981.6	-4,059.9	4,747.3	4,700.1	47.13	100.721	
6,850.0	6,630.8	6,647.4	6,484.9	32.5	23.9	-5.52	981.4	-4,060.4	4,739.5	4,693.0	46.49	101.941	
6,900.0	6,679.3	6,686.7	6,524.1	32.4	23.9	-5.62	981.1	-4,061.3	4,728.5	4,682.8	45.68	103.521	
6,950.0	6,726.8	6,726.2	6,563.6	32.4	23.9	-5.75	981.0	-4,062.3	4,714.2	4,669.5	44.67	105.534	
7,000.0	6,773.1	6,768.0	6,605.4	32.3	24.0	-5.93	980.8	-4,063.4	4,696.7	4,653.2	43.49	108.006	
7,050.0	6,817.9	6,810.0	6,647.4	32.3	24.0	-6.15	980.4	-4,064.6	4,676.0	4,633.9	42.13	110.987	
7,100.0	6,861.2	6,840.4	6,677.7	32.2	24.0	-6.41	980.1	-4,065.4	4,652.3	4,611.7	40.60	114.575	
7,150.0	6,902.5	6,870.8	6,708.1	32.1	24.1	-6.73	979.8	-4,066.4	4,625.7	4,586.8	38.94	118.797	
7,200.0	6,941.8	6,903.0	6,740.3	32.0	24.1	-7.12	979.6	-4,067.5	4,596.3	4,559.2	37.15	123.718	
7,250.0	6,978.9	6,943.2	6,780.5	31.9	24.1	-7.61	979.3	-4,068.9	4,564.3	4,529.0	35.28	129.381	
7,300.0	7,013.5	6,985.8	6,823.1	31.7	24.2	-8.21	979.1	-4,070.4	4,529.6	4,496.3	33.34	135.872	
7,350.0	7,045.5	7,016.1	6,853.3	31.6	24.2	-8.94	979.0	-4,071.4	4,492.5	4,461.2	31.34	143.328	
7,400.0	7,074.8	7,040.6	6,877.9	31.5	24.2	-9.83	978.9	-4,072.2	4,453.2	4,423.9	29.35	151.720	
7,450.0	7,101.1	7,063.0	6,900.2	31.4	24.2	-10.97	978.9	-4,073.0	4,412.0	4,384.5	27.42	160.892	
7,500.0	7,124.5	7,091.0	6,928.2	31.3	24.2	-12.48	978.7	-4,074.1	4,368.9	4,343.3	25.65	170.320	
7,550.0	7,144.7	7,101.5	6,938.7	31.1	24.2	-14.40	978.7	-4,074.5	4,324.2	4,300.1	24.12	179.289	
7,600.0	7,161.6	7,117.9	6,955.0	31.0	24.3	-17.13	978.6	-4,075.1	4,278.2	4,255.1	23.08	185.377	
7,650.0	7,175.3	7,131.4	6,968.6	30.9	24.3	-21.09	978.5	-4,075.7	4,230.9	4,208.0	22.90	184.748	
7,700.0	7,185.5	7,142.0	6,979.2	30.8	24.3	-27.26	978.4	-4,076.1	4,182.7	4,158.4	24.34	171.811	
7,750.0	7,192.3	7,149.7	6,986.9	30.7	24.3	-37.71	978.3	-4,076.4	4,133.8	4,105.0	28.76	143.737	
7,800.0	7,195.7	7,154.4	6,991.5	30.7	24.3	-56.81	978.3	-4,076.6	4,084.4	4,046.9	37.53	108.826	
7,828.6	7,196.0	7,155.7	6,992.8	30.6	24.3	-73.65	978.3	-4,076.6	4,056.0	4,012.6	43.37	93.525	
7,900.0	7,195.4	7,157.7	6,994.8	30.6	24.3	-73.88	978.3	-4,076.7	3,985.1	3,940.7	44.40	89.764	
8,000.0	7,194.6	7,160.5	6,997.6	30.6	24.3	-74.22	978.2	-4,076.8	3,885.8	3,839.8	46.03	84.416	
8,100.0	7,193.8	7,163.3	7,000.4	31.0	24.3	-74.55	978.2	-4,076.9	3,786.6	3,738.7	47.86	79.115	
8,200.0	7,193.0	7,166.1	7,003.3	32.1	24.3	-74.89	978.2	-4,077.0	3,687.3	3,637.5	49.85	73.969	
8,300.0	7,192.2	7,169.0	7,006.1	33.8	24.3	-75.23	978.2	-4,077.1	3,588.2	3,536.2	51.97	69.046	
8,400.0	7,191.4	7,171.9	7,009.0	35.8	24.3	-75.57	978.1	-4,077.3	3,489.0	3,434.8	54.19	64.382	
8,500.0	7,190.6	7,174.8	7,011.9	38.0	24.3	-75.92	978.1	-4,077.4	3,390.0	3,333.5	56.51	59.993	
8,600.0	7,189.8	7,177.7	7,014.8	40.3	24.3	-76.27	978.1	-4,077.5	3,290.9	3,232.0	58.89	55.881	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 542-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,700.0	7,189.0	7,184.0	7,021.1	42.7	24.3	-77.03	978.0	-4,077.8	3,192.0	3,130.5	61.46	51.940	
8,800.0	7,188.2	7,184.0	7,021.1	45.1	24.3	-77.03	978.0	-4,077.8	3,093.1	3,029.2	63.85	48.440	
8,900.0	7,187.4	7,184.0	7,021.1	47.5	24.3	-77.03	978.0	-4,077.8	2,994.2	2,927.9	66.29	45.167	
9,000.0	7,186.6	7,184.0	7,021.1	50.0	24.3	-77.03	978.0	-4,077.8	2,895.5	2,826.7	68.76	42.107	
9,100.0	7,185.7	7,184.0	7,021.1	52.6	24.3	-77.03	978.0	-4,077.8	2,796.8	2,725.5	71.26	39.246	
9,200.0	7,184.9	7,184.0	7,021.1	55.1	24.3	-77.03	978.0	-4,077.8	2,698.2	2,624.4	73.79	36.567	
9,300.0	7,184.1	7,196.4	7,033.5	57.7	24.3	-78.54	977.9	-4,078.3	2,599.7	2,522.9	76.81	33.847	
9,400.0	7,183.3	7,199.1	7,036.2	60.3	24.3	-78.87	977.9	-4,078.4	2,501.4	2,421.9	79.48	31.470	
9,500.0	7,182.5	7,201.8	7,038.9	62.9	24.3	-79.20	977.8	-4,078.5	2,403.1	2,320.9	82.18	29.242	
9,600.0	7,181.7	7,204.6	7,041.7	65.5	24.3	-79.54	977.8	-4,078.6	2,305.0	2,220.2	84.89	27.152	
9,700.0	7,180.9	7,207.4	7,044.5	68.1	24.3	-79.89	977.8	-4,078.7	2,207.1	2,119.5	87.63	25.188	
9,800.0	7,180.1	7,210.2	7,047.3	70.8	24.3	-80.24	977.8	-4,078.9	2,109.4	2,019.0	90.37	23.342	
9,900.0	7,179.3	7,213.1	7,050.2	73.5	24.3	-80.59	977.7	-4,079.0	2,011.9	1,918.8	93.13	21.603	
10,000.0	7,178.5	7,216.0	7,053.1	76.1	24.3	-80.96	977.7	-4,079.1	1,914.7	1,818.8	95.90	19.965	
10,100.0	7,177.7	7,219.0	7,056.1	78.8	24.3	-81.33	977.6	-4,079.2	1,817.7	1,719.0	98.68	18.420	
10,200.0	7,176.9	7,222.0	7,059.1	81.5	24.3	-81.70	977.6	-4,079.4	1,721.1	1,619.6	101.48	16.961	
10,300.0	7,176.0	7,225.1	7,062.2	84.2	24.3	-82.08	977.6	-4,079.5	1,624.9	1,520.6	104.28	15.582	
10,400.0	7,175.2	7,228.2	7,065.3	86.9	24.4	-82.47	977.5	-4,079.6	1,529.2	1,422.1	107.09	14.280	
10,500.0	7,174.4	7,231.4	7,068.4	89.6	24.4	-82.87	977.5	-4,079.8	1,434.0	1,324.1	109.90	13.048	
10,600.0	7,173.6	7,234.6	7,071.7	92.3	24.4	-83.27	977.4	-4,079.9	1,339.5	1,226.8	112.72	11.883	
10,700.0	7,172.8	7,237.9	7,074.9	95.0	24.4	-83.68	977.4	-4,080.1	1,245.9	1,130.4	115.55	10.782	
10,800.0	7,172.0	7,241.2	7,078.3	97.8	24.4	-84.10	977.4	-4,080.2	1,153.4	1,035.0	118.38	9.743	
10,900.0	7,171.2	7,244.6	7,081.6	100.5	24.4	-84.53	977.3	-4,080.4	1,062.2	941.0	121.22	8.763	
11,000.0	7,170.4	7,248.0	7,085.1	103.2	24.4	-84.96	977.3	-4,080.6	972.7	848.6	124.06	7.841	
11,100.0	7,169.6	7,251.5	7,088.6	106.0	24.4	-85.40	977.2	-4,080.7	885.5	758.6	126.90	6.978	
11,200.0	7,168.8	7,255.0	7,092.1	108.7	24.4	-85.85	977.2	-4,080.9	801.2	671.4	129.74	6.175	
11,300.0	7,168.0	7,258.7	7,095.7	111.5	24.4	-86.30	977.1	-4,081.1	720.9	588.3	132.58	5.438	
11,400.0	7,167.1	7,262.3	7,099.4	114.2	24.4	-86.77	977.0	-4,081.2	646.1	510.7	135.42	4.772	
11,500.0	7,166.3	7,266.1	7,103.1	117.0	24.4	-87.24	977.0	-4,081.4	579.0	440.8	138.25	4.188	
11,600.0	7,165.5	7,269.9	7,106.9	119.7	24.4	-87.72	976.9	-4,081.6	522.5	381.4	141.09	3.703	
11,700.0	7,164.7	7,273.8	7,110.8	122.5	24.4	-88.22	976.9	-4,081.8	480.3	336.4	143.92	3.337	
11,800.0	7,163.9	7,278.0	7,115.0	125.2	24.4	-88.75	976.8	-4,082.0	456.5	309.7	146.75	3.111	
11,861.7	7,163.4	7,278.0	7,115.0	126.9	24.4	-88.75	976.8	-4,082.0	452.3	303.8	148.46	3.047 CC, ES	
11,900.0	7,163.1	7,281.6	7,118.6	128.0	24.4	-89.21	976.7	-4,082.2	453.9	304.3	149.56	3.035 SF	
12,000.0	7,162.3	7,285.6	7,122.6	130.7	24.4	-89.71	976.7	-4,082.4	472.9	320.5	152.37	3.104	
12,100.0	7,161.5	7,289.5	7,126.5	133.5	24.4	-90.21	976.6	-4,082.6	511.1	355.9	155.17	3.294	
12,200.0	7,160.7	7,293.5	7,130.5	136.3	24.4	-90.72	976.5	-4,082.8	564.6	406.6	157.96	3.574	
12,300.0	7,159.8	7,297.6	7,134.6	139.0	24.4	-91.23	976.4	-4,083.0	629.5	468.8	160.74	3.916	
12,400.0	7,159.0	7,301.7	7,138.7	141.8	24.4	-91.74	976.4	-4,083.2	702.7	539.2	163.51	4.297	
12,500.0	7,158.2	7,305.8	7,142.8	144.6	24.4	-92.27	976.3	-4,083.4	781.8	615.5	166.26	4.702	
12,600.0	7,157.4	7,310.0	7,147.0	147.3	24.4	-92.79	976.2	-4,083.6	865.2	696.2	169.01	5.119	
12,700.0	7,156.6	7,314.2	7,151.2	150.1	24.4	-93.33	976.1	-4,083.8	951.8	780.1	171.73	5.542	
12,800.0	7,155.8	7,318.5	7,155.5	152.9	24.4	-93.86	976.0	-4,084.1	1,040.8	866.4	174.45	5.966	
12,900.0	7,155.0	7,322.8	7,159.8	155.7	24.4	-94.41	975.9	-4,084.3	1,131.6	954.5	177.14	6.388	
13,000.0	7,154.2	7,327.2	7,164.2	158.4	24.4	-94.95	975.8	-4,084.5	1,223.8	1,044.0	179.82	6.806	
13,100.0	7,153.3	7,331.6	7,168.6	161.2	24.4	-95.50	975.7	-4,084.7	1,317.2	1,134.7	182.48	7.219	
13,200.0	7,152.5	7,336.1	7,173.0	164.0	24.4	-96.06	975.6	-4,085.0	1,411.5	1,226.3	185.11	7.625	
13,300.0	7,151.7	7,340.6	7,177.5	166.8	24.4	-96.62	975.4	-4,085.2	1,506.4	1,318.7	187.73	8.025	
13,400.0	7,150.9	7,345.2	7,182.1	169.5	24.4	-97.19	975.3	-4,085.5	1,602.0	1,411.7	190.32	8.417	
13,500.0	7,150.1	7,349.8	7,186.7	172.3	24.5	-97.76	975.2	-4,085.7	1,698.1	1,505.2	192.89	8.803	
13,600.0	7,149.3	7,354.5	7,191.4	175.1	24.5	-98.33	975.1	-4,086.0	1,794.6	1,599.1	195.43	9.183	
13,700.0	7,148.5	7,359.2	7,196.1	177.9	24.5	-98.91	974.9	-4,086.2	1,891.4	1,693.5	197.95	9.555	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 32-20D - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 542-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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,800.0	7,147.6	7,364.0	7,200.9	180.7	24.5	-99.50	974.8	-4,086.5	1,988.6	1,788.1	200.43	9.921	
13,900.0	7,146.8	7,368.8	7,205.7	183.5	24.5	-100.08	974.6	-4,086.7	2,086.0	1,883.1	202.89	10.281	
14,000.0	7,146.0	7,371.0	7,207.9	186.2	24.5	-100.35	974.6	-4,086.9	2,183.6	1,978.1	205.50	10.626	
14,100.0	7,145.2	7,371.0	7,207.9	189.0	24.5	-100.35	974.6	-4,086.9	2,281.4	2,073.2	208.25	10.955	
14,200.0	7,144.4	7,380.7	7,217.6	191.8	24.5	-101.52	974.3	-4,087.4	2,379.4	2,169.1	210.31	11.314	
14,300.0	7,143.6	7,384.4	7,221.2	194.6	24.5	-101.96	974.2	-4,087.6	2,477.6	2,264.8	212.76	11.645	
14,370.2	7,143.0	7,386.9	7,223.7	196.6	24.5	-102.26	974.1	-4,087.7	2,546.6	2,332.1	214.48	11.873	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 42-20D - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 705-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	-46.77	1,866.1	-1,985.4	2,724.7				
100.0	100.0	87.6	87.6	0.1	0.1	-46.78	1,866.0	-1,985.4	2,724.6	2,724.4	0.18	N/A	
200.0	200.0	192.5	192.5	0.3	0.2	-46.78	1,865.6	-1,985.3	2,724.4	2,723.9	0.50	5,463.089	
300.0	300.0	297.5	297.5	0.5	0.3	-46.79	1,865.1	-1,985.2	2,723.9	2,723.1	0.82	3,322.900	
400.0	400.0	402.4	402.4	0.8	0.4	-72.07	1,864.3	-1,985.1	2,722.8	2,721.7	1.14	2,390.532	
500.0	499.8	507.1	507.1	1.0	0.5	-72.24	1,863.2	-1,985.0	2,720.4	2,718.9	1.46	1,857.157	
600.0	599.5	611.5	611.5	1.2	0.6	-72.51	1,861.9	-1,984.8	2,716.8	2,715.0	1.81	1,503.028	
700.0	698.7	705.0	705.0	1.5	0.6	-72.84	1,860.6	-1,984.6	2,712.0	2,709.9	2.17	1,250.556	
800.0	797.5	769.3	769.3	1.8	0.8	-73.16	1,859.5	-1,985.3	2,707.1	2,704.5	2.61	1,035.731	
900.0	895.6	833.5	833.4	2.2	0.9	-73.55	1,858.2	-1,987.4	2,702.7	2,699.5	3.10	870.788	
1,000.0	993.1	904.2	904.0	2.6	1.1	-74.05	1,855.9	-1,991.5	2,698.5	2,694.8	3.67	735.800	
1,100.0	1,089.6	986.0	985.4	3.1	1.3	-74.71	1,852.0	-1,998.2	2,694.4	2,690.1	4.34	621.480	
1,127.2	1,115.8	1,082.0	1,080.7	3.2	1.6	-75.52	1,844.7	-2,007.0	2,693.0	2,688.2	4.75	567.363	
1,200.0	1,185.5	1,156.3	1,154.2	3.6	1.8	-76.17	1,836.7	-2,014.3	2,688.2	2,682.8	5.36	501.369	
1,300.0	1,281.4	1,266.0	1,262.2	4.1	2.2	-77.20	1,822.1	-2,026.3	2,681.5	2,675.3	6.28	426.819	
1,400.0	1,377.3	1,338.1	1,333.0	4.7	2.5	-77.91	1,811.3	-2,035.1	2,675.6	2,668.5	7.10	376.677	
1,500.0	1,473.1	1,408.1	1,401.5	5.2	2.7	-78.62	1,800.4	-2,044.8	2,671.2	2,663.3	7.94	336.435	
1,600.0	1,569.0	1,483.3	1,474.7	5.8	3.1	-79.40	1,788.0	-2,056.2	2,668.2	2,659.4	8.83	302.169	
1,700.0	1,664.8	1,560.2	1,549.0	6.4	3.5	-80.26	1,773.4	-2,069.5	2,666.4	2,656.6	9.77	272.982	
1,780.5	1,742.0	1,619.3	1,605.9	6.8	3.8	-80.93	1,761.4	-2,080.5	2,665.9	2,655.4	10.54	253.033	
1,800.0	1,760.7	1,633.6	1,619.6	6.9	3.9	-81.10	1,758.5	-2,083.2	2,665.9	2,655.2	10.72	248.652	
1,900.0	1,856.6	1,686.6	1,670.4	7.5	4.1	-81.71	1,747.6	-2,093.6	2,667.2	2,655.7	11.57	230.531	
2,000.0	1,952.4	1,739.0	1,720.6	8.1	4.4	-82.32	1,737.1	-2,104.6	2,670.7	2,658.2	12.42	215.045	
2,100.0	2,048.3	1,822.8	1,800.5	8.6	4.9	-83.31	1,719.8	-2,123.0	2,675.7	2,662.2	13.46	198.806	
2,200.0	2,144.1	1,959.4	1,930.7	9.2	5.7	-84.92	1,690.2	-2,151.5	2,680.4	2,665.6	14.76	181.643	
2,300.0	2,240.0	2,025.6	1,993.7	9.8	6.0	-85.72	1,675.2	-2,165.4	2,686.3	2,670.6	15.68	171.283	
2,400.0	2,335.9	2,093.3	2,058.1	10.3	6.4	-86.52	1,660.1	-2,180.0	2,693.8	2,677.2	16.62	162.127	
2,500.0	2,431.7	2,209.1	2,168.5	10.9	7.0	-87.87	1,635.1	-2,204.3	2,702.3	2,684.5	17.74	152.301	
2,600.0	2,527.6	2,295.0	2,250.6	11.5	7.4	-88.86	1,616.7	-2,221.5	2,711.2	2,692.5	18.72	144.857	
2,700.0	2,623.4	2,360.7	2,313.5	12.1	7.8	-89.62	1,602.8	-2,234.8	2,721.4	2,701.8	19.61	138.776	
2,800.0	2,719.3	2,489.7	2,437.1	12.6	8.5	-91.07	1,576.3	-2,260.4	2,732.7	2,711.9	20.80	131.393	
2,900.0	2,815.2	2,569.4	2,513.4	13.2	8.9	-91.96	1,559.3	-2,275.5	2,743.9	2,722.2	21.75	126.139	
3,000.0	2,911.0	2,668.2	2,607.6	13.8	9.5	-93.10	1,536.5	-2,294.8	2,756.1	2,733.3	22.84	120.685	
3,100.0	3,006.9	2,763.0	2,697.9	14.4	10.0	-94.18	1,514.1	-2,312.8	2,768.9	2,745.0	23.87	116.007	
3,200.0	3,102.7	2,842.8	2,774.2	14.9	10.4	-95.08	1,495.6	-2,327.8	2,782.6	2,757.8	24.79	112.226	
3,300.0	3,198.6	2,904.3	2,832.9	15.5	10.8	-95.77	1,481.7	-2,339.5	2,797.7	2,772.0	25.64	109.111	
3,400.0	3,294.5	3,017.2	2,940.7	16.1	11.4	-97.01	1,456.6	-2,361.4	2,814.3	2,787.6	26.71	105.369	
3,500.0	3,390.3	3,098.8	3,019.0	16.7	11.8	-97.89	1,438.5	-2,376.1	2,830.6	2,803.0	27.62	102.500	
3,600.0	3,486.2	3,161.5	3,079.2	17.2	12.1	-98.55	1,425.6	-2,387.7	2,848.5	2,820.1	28.44	100.164	
3,700.0	3,582.0	3,230.0	3,144.9	17.8	12.5	-99.27	1,411.3	-2,400.9	2,867.9	2,838.6	29.28	97.931	
3,800.0	3,677.9	3,294.5	3,206.7	18.4	12.9	-99.94	1,397.9	-2,413.7	2,888.7	2,858.6	30.11	95.944	
3,900.0	3,773.7	3,379.7	3,288.5	19.0	13.3	-100.80	1,381.2	-2,430.7	2,910.6	2,879.6	30.99	93.907	
4,000.0	3,869.6	3,473.3	3,378.4	19.5	13.8	-101.73	1,363.0	-2,449.1	2,933.1	2,901.2	31.88	91.999	
4,100.0	3,965.5	3,562.4	3,464.5	20.1	14.3	-102.56	1,347.9	-2,466.1	2,956.1	2,923.4	32.73	90.307	
4,200.0	4,061.3	3,645.8	3,545.0	20.7	14.7	-103.36	1,332.5	-2,482.2	2,979.9	2,946.3	33.56	88.785	
4,300.0	4,157.2	3,716.9	3,613.4	21.3	15.1	-104.03	1,319.3	-2,496.1	3,004.5	2,970.2	34.35	87.460	
4,400.0	4,253.0	3,768.4	3,662.9	21.8	15.4	-104.51	1,309.8	-2,506.5	3,030.6	2,995.5	35.08	86.401	
4,500.0	4,348.9	3,837.8	3,729.6	22.4	15.7	-105.15	1,297.0	-2,521.3	3,058.2	3,022.3	35.86	85.292	
4,600.0	4,444.8	3,940.3	3,827.7	23.0	16.3	-106.10	1,277.2	-2,543.1	3,086.4	3,049.7	36.73	84.020	
4,700.0	4,540.6	4,049.7	3,932.2	23.6	16.9	-107.13	1,254.2	-2,565.5	3,114.6	3,077.0	37.63	82.777	
4,800.0	4,636.5	4,146.0	4,024.4	24.1	17.5	-108.03	1,233.8	-2,584.7	3,143.0	3,104.5	38.45	81.735	
4,900.0	4,732.3	4,258.9	4,132.7	24.7	18.1	-109.04	1,210.8	-2,606.5	3,171.5	3,132.3	39.29	80.717	

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 SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 42-20D - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 705-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	4,828.2	4,315.5	4,187.0	25.3	18.4	-109.54	1,199.2	-2,617.4	3,200.7	3,160.7	39.99	80.031	
5,100.0	4,924.1	4,389.7	4,258.1	25.9	18.8	-110.20	1,183.5	-2,632.3	3,231.1	3,190.4	40.73	79.322	
5,200.0	5,019.9	4,473.1	4,337.9	26.4	19.2	-110.93	1,165.9	-2,648.8	3,262.0	3,220.5	41.50	78.609	
5,300.0	5,115.8	4,540.0	4,401.7	27.0	19.6	-111.52	1,151.1	-2,662.6	3,294.1	3,251.9	42.21	78.040	
5,400.0	5,211.6	4,608.5	4,466.9	27.6	20.0	-112.11	1,136.2	-2,677.0	3,327.3	3,284.3	42.92	77.521	
5,500.0	5,307.5	4,781.2	4,632.1	28.2	21.0	-113.57	1,098.3	-2,710.3	3,359.3	3,315.5	43.84	76.623	
5,600.0	5,403.4	4,851.9	4,699.7	28.7	21.4	-114.16	1,082.3	-2,723.3	3,391.4	3,346.9	44.54	76.149	
5,700.0	5,499.2	4,915.0	4,759.9	29.3	21.7	-114.69	1,067.7	-2,735.2	3,424.7	3,379.4	45.21	75.746	
5,800.0	5,595.1	5,563.7	5,396.3	29.9	24.2	-118.95	977.9	-2,811.8	3,450.1	3,403.8	46.33	74.472	
5,840.7	5,634.1	5,676.0	5,508.4	30.1	24.4	-119.52	971.1	-2,815.9	3,457.7	3,411.2	46.55	74.288	
5,900.0	5,691.1	5,795.5	5,627.7	30.4	24.6	-120.24	966.2	-2,817.9	3,467.2	3,420.5	46.75	74.159	
6,000.0	5,788.0	5,902.0	5,734.2	30.8	24.7	-120.90	964.0	-2,818.9	3,481.3	3,434.3	47.05	73.994	
6,100.0	5,885.7	5,997.8	5,830.1	31.2	24.8	-121.43	962.8	-2,819.7	3,493.7	3,446.3	47.33	73.813	
6,200.0	5,984.0	6,087.3	5,919.5	31.5	24.9	-121.85	962.0	-2,820.8	3,504.4	3,456.8	47.60	73.621	
6,300.0	6,083.0	6,185.9	6,018.1	31.8	25.0	-122.21	961.5	-2,822.1	3,513.7	3,465.8	47.87	73.408	
6,400.0	6,182.3	6,283.2	6,115.3	32.0	25.2	-122.49	960.8	-2,823.4	3,521.0	3,472.8	48.12	73.173	
6,500.0	6,282.0	6,374.7	6,206.9	32.2	25.3	-122.69	960.3	-2,824.7	3,526.6	3,478.3	48.36	72.931	
6,600.0	6,382.0	6,464.9	6,297.1	32.3	25.4	-122.80	960.1	-2,826.3	3,530.6	3,482.0	48.58	72.679	
6,668.0	6,449.9	6,524.2	6,356.3	32.4	25.5	-97.63	960.1	-2,827.5	3,532.5	3,487.5	44.93	78.625	
6,698.0	6,479.9	6,549.5	6,381.6	32.4	25.5	-97.63	960.1	-2,828.1	3,533.1	3,488.1	45.00	78.512	
6,700.0	6,481.9	6,551.2	6,383.3	32.4	25.5	-7.63	960.1	-2,828.2	3,533.2	3,484.4	48.79	72.420	
6,750.0	6,531.9	6,598.0	6,430.1	32.5	25.5	-7.64	960.1	-2,829.3	3,532.5	3,483.7	48.80	72.387	
6,800.0	6,581.6	6,643.3	6,475.4	32.5	25.6	-7.69	960.3	-2,830.5	3,528.5	3,479.9	48.57	72.644	
6,850.0	6,630.8	6,694.0	6,526.1	32.5	25.7	-7.78	960.6	-2,831.8	3,521.0	3,472.9	48.11	73.181	
6,900.0	6,679.3	6,747.0	6,579.0	32.4	25.7	-7.92	961.2	-2,833.2	3,510.0	3,462.6	47.42	74.017	
6,950.0	6,726.8	6,797.8	6,629.8	32.4	25.8	-8.11	961.8	-2,834.5	3,495.7	3,449.2	46.50	75.176	
7,000.0	6,773.1	6,843.9	6,675.9	32.3	25.9	-8.36	962.2	-2,835.6	3,478.1	3,432.7	45.35	76.688	
7,050.0	6,817.9	6,894.7	6,726.7	32.3	25.9	-8.68	962.4	-2,836.9	3,457.3	3,413.3	44.00	78.575	
7,100.0	6,861.2	6,964.9	6,796.9	32.2	26.0	-9.13	962.1	-2,838.1	3,433.2	3,390.7	42.46	80.854	
7,150.0	6,902.5	7,012.5	6,844.4	32.1	26.1	-9.66	961.3	-2,838.6	3,405.9	3,365.2	40.72	83.649	
7,200.0	6,941.8	7,055.0	6,887.0	32.0	26.1	-10.30	960.4	-2,838.9	3,375.8	3,337.0	38.80	87.013	
7,250.0	6,978.9	7,099.4	6,931.4	31.9	26.2	-11.10	959.2	-2,839.2	3,342.9	3,306.2	36.73	91.015	
7,300.0	7,013.5	7,142.3	6,974.3	31.7	26.3	-12.08	958.1	-2,839.4	3,307.5	3,273.0	34.54	95.745	
7,350.0	7,045.5	7,175.1	7,007.0	31.6	26.3	-13.26	957.3	-2,839.5	3,269.7	3,237.4	32.28	101.278	
7,400.0	7,074.8	7,200.0	7,032.0	31.5	26.3	-14.70	956.7	-2,839.6	3,229.8	3,199.8	30.02	107.606	
7,450.0	7,101.1	7,222.7	7,054.6	31.4	26.4	-16.52	956.2	-2,839.8	3,188.1	3,160.2	27.84	114.513	
7,500.0	7,124.5	7,242.8	7,074.7	31.3	26.4	-18.87	955.8	-2,839.9	3,144.6	3,118.7	25.92	121.308	
7,550.0	7,144.7	7,260.9	7,092.8	31.1	26.4	-22.01	955.4	-2,840.0	3,099.6	3,075.1	24.54	126.312	
7,600.0	7,161.6	7,276.7	7,108.6	31.0	26.4	-26.32	955.1	-2,840.2	3,053.3	3,029.2	24.16	126.383	
7,650.0	7,175.3	7,289.5	7,121.4	30.9	26.5	-32.45	954.8	-2,840.3	3,006.0	2,980.5	25.49	117.943	
7,700.0	7,185.5	7,299.3	7,131.2	30.8	26.5	-41.54	954.6	-2,840.4	2,957.8	2,928.5	29.31	100.920	
7,750.0	7,192.3	7,306.0	7,137.9	30.7	26.5	-55.26	954.5	-2,840.5	2,909.1	2,873.2	35.83	81.194	
7,800.0	7,195.7	7,309.5	7,141.4	30.7	26.5	-74.95	954.4	-2,840.5	2,859.9	2,816.9	43.03	66.463	
7,828.6	7,196.0	7,310.1	7,142.0	30.6	26.5	-88.19	954.4	-2,840.5	2,831.7	2,786.2	45.49	62.250	
7,900.0	7,195.4	7,310.3	7,142.2	30.6	26.5	-88.21	954.4	-2,840.5	2,761.3	2,714.9	46.50	59.384	
8,000.0	7,194.6	7,310.5	7,142.4	30.6	26.5	-88.23	954.4	-2,840.5	2,662.9	2,614.8	48.11	55.353	
8,100.0	7,193.8	7,310.7	7,142.6	31.0	26.5	-88.26	954.4	-2,840.5	2,564.6	2,514.7	49.90	51.390	
8,200.0	7,193.0	7,310.9	7,142.8	32.1	26.5	-88.28	954.4	-2,840.5	2,466.4	2,414.5	51.86	47.562	
8,300.0	7,192.2	7,311.1	7,143.0	33.8	26.5	-88.31	954.4	-2,840.5	2,368.3	2,314.4	53.93	43.911	
8,400.0	7,191.4	7,311.3	7,143.2	35.8	26.5	-88.33	954.4	-2,840.5	2,270.4	2,214.3	56.12	40.458	
8,500.0	7,190.6	7,311.5	7,143.4	38.0	26.5	-88.36	954.4	-2,840.5	2,172.7	2,114.4	58.39	37.213	
8,600.0	7,189.8	7,311.7	7,143.6	40.3	26.5	-88.38	954.4	-2,840.5	2,075.3	2,014.5	60.72	34.175	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 705-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,700.0	7,189.0	7,311.9	7,143.8	42.7	26.5	-88.41	954.4	-2,840.5	1,978.1	1,914.9	63.12	31.337	
8,800.0	7,188.2	7,312.1	7,144.0	45.1	26.5	-88.43	954.4	-2,840.5	1,881.1	1,815.6	65.57	28.689	
8,900.0	7,187.4	7,312.3	7,144.2	47.5	26.5	-88.46	954.4	-2,840.5	1,784.5	1,716.5	68.06	26.222	
9,000.0	7,186.6	7,312.5	7,144.4	50.0	26.5	-88.49	954.4	-2,840.5	1,688.4	1,617.8	70.58	23.922	
9,100.0	7,185.7	7,312.7	7,144.6	52.6	26.5	-88.51	954.4	-2,840.5	1,592.6	1,519.5	73.13	21.778	
9,200.0	7,184.9	7,313.0	7,144.9	55.1	26.5	-88.54	954.4	-2,840.5	1,497.5	1,421.8	75.71	19.779	
9,300.0	7,184.1	7,313.2	7,145.1	57.7	26.5	-88.56	954.4	-2,840.5	1,403.0	1,324.7	78.31	17.916	
9,400.0	7,183.3	7,313.4	7,145.3	60.3	26.5	-88.59	954.4	-2,840.5	1,309.3	1,228.4	80.93	16.179	
9,500.0	7,182.5	7,313.6	7,145.5	62.9	26.5	-88.62	954.4	-2,840.5	1,216.7	1,133.1	83.56	14.560	
9,600.0	7,181.7	7,313.8	7,145.7	65.5	26.5	-88.65	954.4	-2,840.5	1,125.3	1,039.1	86.22	13.052	
9,700.0	7,180.9	7,314.1	7,146.0	68.1	26.5	-88.67	954.3	-2,840.5	1,035.5	946.6	88.88	11.651	
9,800.0	7,180.1	7,314.3	7,146.2	70.8	26.5	-88.70	954.3	-2,840.5	947.7	856.2	91.55	10.352	
9,900.0	7,179.3	7,314.5	7,146.4	73.5	26.5	-88.73	954.3	-2,840.5	862.6	768.4	94.24	9.154	
10,000.0	7,178.5	7,314.7	7,146.6	76.1	26.5	-88.75	954.3	-2,840.5	781.1	684.2	96.93	8.058	
10,100.0	7,177.7	7,315.0	7,146.9	78.8	26.5	-88.78	954.3	-2,840.5	704.3	604.7	99.64	7.069	
10,200.0	7,176.9	7,315.2	7,147.1	81.5	26.5	-88.81	954.3	-2,840.6	634.0	531.7	102.35	6.195	
10,300.0	7,176.0	7,315.4	7,147.3	84.2	26.5	-88.84	954.3	-2,840.6	572.7	467.6	105.06	5.451	
10,400.0	7,175.2	7,315.7	7,147.6	86.9	26.5	-88.87	954.3	-2,840.6	523.4	415.6	107.79	4.856	
10,500.0	7,174.4	7,315.9	7,147.8	89.6	26.5	-88.90	954.3	-2,840.6	489.8	379.2	110.51	4.432	
10,600.0	7,173.6	7,316.1	7,148.0	92.3	26.5	-88.92	954.3	-2,840.6	475.2	362.0	113.25	4.196	
10,620.2	7,173.5	7,316.2	7,148.1	92.9	26.5	-88.93	954.3	-2,840.6	474.8	361.0	113.80	4.172 CC, ES	
10,700.0	7,172.8	7,316.4	7,148.3	95.0	26.5	-88.95	954.3	-2,840.6	481.4	365.4	115.99	4.151 SF	
10,800.0	7,172.0	7,316.6	7,148.5	97.8	26.5	-88.98	954.3	-2,840.6	507.7	388.9	118.73	4.276	
10,900.0	7,171.2	7,316.9	7,148.8	100.5	26.5	-89.01	954.3	-2,840.6	551.1	429.6	121.47	4.537	
11,000.0	7,170.4	7,317.1	7,149.0	103.2	26.5	-89.04	954.3	-2,840.6	608.0	483.7	124.22	4.894	
11,100.0	7,169.6	7,317.4	7,149.3	106.0	26.5	-89.07	954.3	-2,840.6	675.0	548.0	126.98	5.316	
11,200.0	7,168.8	7,317.6	7,149.5	108.7	26.5	-89.10	954.3	-2,840.6	749.4	619.6	129.73	5.776	
11,300.0	7,168.0	7,317.9	7,149.8	111.5	26.5	-89.13	954.3	-2,840.6	829.1	696.7	132.49	6.258	
11,400.0	7,167.1	7,318.1	7,150.0	114.2	26.5	-89.16	954.3	-2,840.6	912.9	777.7	135.25	6.750	
11,500.0	7,166.3	7,318.4	7,150.3	117.0	26.5	-89.19	954.3	-2,840.6	999.7	861.7	138.01	7.243	
11,600.0	7,165.5	7,318.6	7,150.5	119.7	26.5	-89.22	954.3	-2,840.6	1,088.7	948.0	140.78	7.734	
11,700.0	7,164.7	7,318.9	7,150.8	122.5	26.5	-89.25	954.3	-2,840.6	1,179.5	1,036.0	143.55	8.217	
11,800.0	7,163.9	7,319.1	7,151.0	125.2	26.5	-89.29	954.3	-2,840.6	1,271.7	1,125.4	146.32	8.692	
11,900.0	7,163.1	7,319.4	7,151.3	128.0	26.5	-89.32	954.2	-2,840.6	1,365.0	1,215.9	149.09	9.156	
12,000.0	7,162.3	7,319.7	7,151.6	130.7	26.5	-89.35	954.2	-2,840.6	1,459.2	1,307.3	151.86	9.609	
12,100.0	7,161.5	7,319.9	7,151.8	133.5	26.5	-89.38	954.2	-2,840.6	1,554.1	1,399.4	154.63	10.050	
12,200.0	7,160.7	7,320.2	7,152.1	136.3	26.5	-89.41	954.2	-2,840.6	1,649.6	1,492.1	157.41	10.479	
12,300.0	7,159.8	7,320.5	7,152.4	139.0	26.5	-89.44	954.2	-2,840.6	1,745.6	1,585.4	160.19	10.897	
12,400.0	7,159.0	7,320.7	7,152.6	141.8	26.5	-89.48	954.2	-2,840.6	1,842.0	1,679.0	162.97	11.303	
12,500.0	7,158.2	7,321.0	7,152.9	144.6	26.5	-89.51	954.2	-2,840.6	1,938.8	1,773.0	165.75	11.697	
12,600.0	7,157.4	7,321.3	7,153.2	147.3	26.5	-89.54	954.2	-2,840.6	2,035.9	1,867.4	168.53	12.080	
12,700.0	7,156.6	7,321.6	7,153.5	150.1	26.5	-89.58	954.2	-2,840.6	2,133.3	1,961.9	171.31	12.453	
12,800.0	7,155.8	7,321.9	7,153.8	152.9	26.5	-89.61	954.2	-2,840.6	2,230.9	2,056.8	174.09	12.814	
12,900.0	7,155.0	7,322.1	7,154.0	155.7	26.5	-89.64	954.2	-2,840.6	2,328.7	2,151.8	176.88	13.165	
13,000.0	7,154.2	7,322.4	7,154.3	158.4	26.5	-89.68	954.2	-2,840.6	2,426.7	2,247.0	179.66	13.507	
13,100.0	7,153.3	7,322.7	7,154.6	161.2	26.5	-89.71	954.2	-2,840.6	2,524.8	2,342.3	182.45	13.838	
13,200.0	7,152.5	7,323.0	7,154.9	164.0	26.5	-89.75	954.2	-2,840.6	2,623.1	2,437.8	185.24	14.161	
13,300.0	7,151.7	7,323.3	7,155.2	166.8	26.5	-89.78	954.2	-2,840.6	2,721.5	2,533.5	188.02	14.474	
13,400.0	7,150.9	7,323.6	7,155.5	169.5	26.5	-89.82	954.2	-2,840.6	2,820.0	2,629.2	190.81	14.779	
13,500.0	7,150.1	7,323.9	7,155.8	172.3	26.5	-89.85	954.2	-2,840.6	2,918.6	2,725.0	193.60	15.075	
13,600.0	7,149.3	7,324.2	7,156.1	175.1	26.5	-89.89	954.2	-2,840.6	3,017.3	2,820.9	196.39	15.364	
13,700.0	7,148.5	7,324.5	7,156.4	177.9	26.5	-89.92	954.2	-2,840.6	3,116.1	2,917.0	199.18	15.645	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 42-20D - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 705-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
13,800.0	7,147.6	7,324.8	7,156.7	180.7	26.5	-89.96	954.1	-2,840.7	3,215.0	3,013.0	201.97	15.918	
13,900.0	7,146.8	7,325.1	7,157.0	183.5	26.5	-90.00	954.1	-2,840.7	3,313.9	3,109.2	204.76	16.184	
14,000.0	7,146.0	7,325.4	7,157.3	186.2	26.5	-90.03	954.1	-2,840.7	3,412.9	3,205.4	207.55	16.444	
14,100.0	7,145.2	7,325.7	7,157.6	189.0	26.5	-90.07	954.1	-2,840.7	3,512.0	3,301.6	210.35	16.696	
14,200.0	7,144.4	7,326.0	7,157.9	191.8	26.5	-90.11	954.1	-2,840.7	3,611.1	3,398.0	213.14	16.942	
14,300.0	7,143.6	7,326.4	7,158.3	194.6	26.5	-90.15	954.1	-2,840.7	3,710.3	3,494.3	215.93	17.182	
14,370.2	7,143.0	7,326.6	7,158.5	196.6	26.5	-90.17	954.1	-2,840.7	3,779.9	3,562.0	217.89	17.347	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-69.20	2,444.6	-6,437.1	6,885.8				
100.0	100.0	60.5	60.5	0.1	0.0	-69.20	2,444.6	-6,437.1	6,885.7	6,885.6	0.10	N/A	
200.0	200.0	160.5	160.5	0.3	0.7	-69.20	2,444.6	-6,437.1	6,885.7	6,884.6	1.02	6,732.568	
300.0	300.0	260.5	260.5	0.5	2.5	-69.20	2,444.6	-6,437.1	6,885.7	6,882.6	3.10	2,224.292	
400.0	400.0	360.5	360.5	0.8	4.7	-94.43	2,444.6	-6,437.1	6,885.8	6,880.3	5.48	1,255.571	
500.0	499.8	460.3	460.3	1.0	6.8	-94.46	2,444.6	-6,437.1	6,886.2	6,878.4	7.77	886.730	
600.0	599.5	560.0	560.0	1.2	8.8	-94.52	2,444.6	-6,437.1	6,886.9	6,876.8	10.04	686.155	
700.0	698.7	659.2	659.2	1.5	10.8	-94.60	2,444.6	-6,437.1	6,887.9	6,875.5	12.32	559.073	
800.0	797.5	758.0	758.0	1.8	12.8	-94.71	2,444.6	-6,437.1	6,889.1	6,874.5	14.63	470.956	
900.0	895.6	856.1	856.1	2.2	14.8	-94.83	2,444.6	-6,437.1	6,890.8	6,873.8	16.97	406.097	
1,000.0	993.1	953.6	953.6	2.6	16.7	-94.97	2,444.6	-6,437.1	6,892.7	6,873.4	19.35	356.298	
1,100.0	1,089.6	1,050.1	1,050.1	3.1	18.7	-95.13	2,444.6	-6,437.1	6,895.1	6,873.3	21.76	316.848	
1,127.2	1,115.8	1,076.3	1,076.3	3.2	19.2	-95.18	2,444.6	-6,437.1	6,895.8	6,873.4	22.43	307.483	
1,200.0	1,185.5	1,146.0	1,146.0	3.6	20.6	-95.34	2,444.6	-6,437.1	6,897.8	6,873.6	24.21	284.895	
1,300.0	1,281.4	1,241.9	1,241.9	4.1	22.6	-95.57	2,444.6	-6,437.1	6,900.6	6,873.9	26.68	258.683	
1,400.0	1,377.3	1,337.8	1,337.8	4.7	24.5	-95.79	2,444.6	-6,437.1	6,903.5	6,874.4	29.15	236.840	
1,500.0	1,473.1	1,433.6	1,433.6	5.2	26.4	-96.02	2,444.6	-6,437.1	6,906.6	6,875.0	31.63	218.379	
1,600.0	1,569.0	1,529.5	1,529.5	5.8	28.3	-96.24	2,444.6	-6,437.1	6,909.8	6,875.7	34.11	202.583	
1,700.0	1,664.8	1,625.3	1,625.3	6.4	30.3	-96.47	2,444.6	-6,437.1	6,913.1	6,876.5	36.59	188.919	
1,800.0	1,760.7	1,721.2	1,721.2	6.9	32.2	-96.69	2,444.6	-6,437.1	6,916.5	6,877.4	39.08	176.988	
1,900.0	1,856.6	1,817.1	1,817.1	7.5	34.1	-96.92	2,444.6	-6,437.1	6,920.0	6,878.4	41.57	166.482	
2,000.0	1,952.4	1,912.9	1,912.9	8.1	36.1	-97.14	2,444.6	-6,437.1	6,923.6	6,879.6	44.05	157.162	
2,100.0	2,048.3	2,008.8	2,008.8	8.6	38.0	-97.37	2,444.6	-6,437.1	6,927.4	6,880.8	46.54	148.840	
2,200.0	2,144.1	2,104.6	2,104.6	9.2	39.9	-97.59	2,444.6	-6,437.1	6,931.2	6,882.2	49.03	141.364	
2,300.0	2,240.0	2,200.5	2,200.5	9.8	41.8	-97.81	2,444.6	-6,437.1	6,935.2	6,883.7	51.52	134.613	
2,400.0	2,335.9	2,296.4	2,296.4	10.3	43.8	-98.04	2,444.6	-6,437.1	6,939.3	6,885.3	54.01	128.486	
2,500.0	2,431.7	2,392.2	2,392.2	10.9	45.7	-98.26	2,444.6	-6,437.1	6,943.5	6,887.0	56.50	122.902	
2,600.0	2,527.6	2,488.1	2,488.1	11.5	47.6	-98.48	2,444.6	-6,437.1	6,947.8	6,888.8	58.98	117.792	
2,700.0	2,623.4	2,583.9	2,583.9	12.1	49.6	-98.71	2,444.6	-6,437.1	6,952.3	6,890.8	61.47	113.097	
2,800.0	2,719.3	2,679.8	2,679.8	12.6	51.5	-98.93	2,444.6	-6,437.1	6,956.8	6,892.8	63.96	108.771	
2,900.0	2,815.2	2,775.7	2,775.7	13.2	53.4	-99.15	2,444.6	-6,437.1	6,961.5	6,895.0	66.44	104.771	
3,000.0	2,911.0	2,871.5	2,871.5	13.8	55.3	-99.37	2,444.6	-6,437.1	6,966.2	6,897.3	68.93	101.062	
3,100.0	3,006.9	2,967.4	2,967.4	14.4	57.3	-99.59	2,444.6	-6,437.1	6,971.1	6,899.7	71.42	97.614	
3,200.0	3,102.7	3,063.2	3,063.2	14.9	59.2	-99.82	2,444.6	-6,437.1	6,976.1	6,902.2	73.90	94.401	
3,300.0	3,198.6	3,159.1	3,159.1	15.5	61.1	-100.04	2,444.6	-6,437.1	6,981.2	6,904.9	76.38	91.398	
3,400.0	3,294.5	3,255.0	3,255.0	16.1	63.1	-100.26	2,444.6	-6,437.1	6,986.5	6,907.6	78.87	88.588	
3,500.0	3,390.3	3,350.8	3,350.8	16.7	65.0	-100.48	2,444.6	-6,437.1	6,991.8	6,910.5	81.35	85.951	
3,600.0	3,486.2	3,446.7	3,446.7	17.2	66.9	-100.70	2,444.6	-6,437.1	6,997.3	6,913.4	83.83	83.472	
3,700.0	3,582.0	3,542.5	3,542.5	17.8	68.8	-100.92	2,444.6	-6,437.1	7,002.8	6,916.5	86.31	81.138	
3,800.0	3,677.9	3,638.4	3,638.4	18.4	70.8	-101.14	2,444.6	-6,437.1	7,008.5	6,919.7	88.79	78.937	
3,900.0	3,773.7	3,734.2	3,734.2	19.0	72.7	-101.36	2,444.6	-6,437.1	7,014.3	6,923.0	91.26	76.857	
4,000.0	3,869.6	3,830.1	3,830.1	19.5	74.6	-101.58	2,444.6	-6,437.1	7,020.2	6,926.4	93.74	74.889	
4,100.0	3,965.5	3,926.0	3,926.0	20.1	76.6	-101.79	2,444.6	-6,437.1	7,026.2	6,930.0	96.22	73.025	
4,200.0	4,061.3	4,021.8	4,021.8	20.7	78.5	-102.01	2,444.6	-6,437.1	7,032.3	6,933.6	98.69	71.256	
4,300.0	4,157.2	4,117.7	4,117.7	21.3	80.4	-102.23	2,444.6	-6,437.1	7,038.5	6,937.4	101.16	69.575	
4,400.0	4,253.0	4,213.5	4,213.5	21.8	82.3	-102.45	2,444.6	-6,437.1	7,044.9	6,941.2	103.64	67.976	
4,500.0	4,348.9	4,309.4	4,309.4	22.4	84.3	-102.66	2,444.6	-6,437.1	7,051.3	6,945.2	106.11	66.454	
4,600.0	4,444.8	4,405.3	4,405.3	23.0	86.2	-102.88	2,444.6	-6,437.1	7,057.9	6,949.3	108.58	65.002	
4,700.0	4,540.6	4,501.1	4,501.1	23.6	88.1	-103.10	2,444.6	-6,437.1	7,064.5	6,953.5	111.05	63.617	
4,800.0	4,636.5	4,597.0	4,597.0	24.1	90.0	-103.31	2,444.6	-6,437.1	7,071.3	6,957.8	113.51	62.294	
4,900.0	4,732.3	4,692.8	4,692.8	24.7	92.0	-103.53	2,444.6	-6,437.1	7,078.2	6,962.2	115.98	61.029	
5,000.0	4,828.2	4,788.7	4,788.7	25.3	93.9	-103.74	2,444.6	-6,437.1	7,085.2	6,966.7	118.45	59.817	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT BROWN 20-1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	4,924.1	4,884.6	4,884.6	25.9	95.8	-103.96	2,444.6	-6,437.1	7,092.3	6,971.3	120.91	58.657	
5,200.0	5,019.9	4,980.4	4,980.4	26.4	97.8	-104.17	2,444.6	-6,437.1	7,099.5	6,976.1	123.37	57.545	
5,300.0	5,115.8	5,076.3	5,076.3	27.0	99.7	-104.39	2,444.6	-6,437.1	7,106.8	6,980.9	125.83	56.477	
5,400.0	5,211.6	5,172.1	5,172.1	27.6	101.6	-104.60	2,444.6	-6,437.1	7,114.2	6,985.9	128.29	55.452	
5,500.0	5,307.5	5,268.0	5,268.0	28.2	103.5	-104.81	2,444.6	-6,437.1	7,121.7	6,990.9	130.75	54.467	
5,600.0	5,403.4	5,363.9	5,363.9	28.7	105.5	-105.03	2,444.6	-6,437.1	7,129.3	6,996.1	133.21	53.520	
5,700.0	5,499.2	5,459.7	5,459.7	29.3	107.4	-105.24	2,444.6	-6,437.1	7,137.1	7,001.4	135.67	52.608	
5,800.0	5,595.1	5,555.6	5,555.6	29.9	109.3	-105.45	2,444.6	-6,437.1	7,144.9	7,006.8	138.12	51.730	
5,840.7	5,634.1	5,594.6	5,594.6	30.1	110.1	-105.54	2,444.6	-6,437.1	7,148.1	7,009.0	139.12	51.382	
5,900.0	5,691.1	5,651.6	5,651.6	30.4	111.3	-105.75	2,444.6	-6,437.1	7,152.7	7,012.1	140.57	50.885	
6,000.0	5,788.0	5,748.5	5,748.5	30.8	113.2	-106.07	2,444.6	-6,437.1	7,159.7	7,016.7	142.93	50.092	
6,100.0	5,885.7	5,846.2	5,846.2	31.2	115.2	-106.35	2,444.6	-6,437.1	7,165.8	7,020.5	145.27	49.328	
6,200.0	5,984.0	5,944.5	5,944.5	31.5	117.1	-106.58	2,444.6	-6,437.1	7,171.0	7,023.4	147.58	48.590	
6,300.0	6,083.0	6,043.5	6,043.5	31.8	119.1	-106.77	2,444.6	-6,437.1	7,175.2	7,025.3	149.86	47.880	
6,400.0	6,182.3	6,142.8	6,142.8	32.0	121.1	-106.92	2,444.6	-6,437.1	7,178.4	7,026.3	152.10	47.196	
6,500.0	6,282.0	6,242.5	6,242.5	32.2	123.1	-107.02	2,444.6	-6,437.1	7,180.6	7,026.3	154.29	46.539	
6,600.0	6,382.0	6,342.5	6,342.5	32.3	125.1	-107.07	2,444.6	-6,437.1	7,181.8	7,025.4	156.44	45.907	
6,668.0	6,449.9	6,410.4	6,410.4	32.4	126.5	-81.87	2,444.6	-6,437.1	7,182.1	7,036.1	145.97	49.201	
6,698.0	6,479.9	6,440.4	6,440.4	32.4	127.1	-81.87	2,444.6	-6,437.1	7,182.1	7,035.4	146.62	48.984	
6,700.0	6,481.9	6,442.4	6,442.4	32.4	127.2	8.13	2,444.6	-6,437.1	7,182.1	7,023.5	158.55	45.300	
6,750.0	6,531.9	6,492.4	6,492.4	32.5	128.2	8.15	2,444.6	-6,437.1	7,180.2	7,021.0	159.15	45.117	
6,800.0	6,581.6	6,542.1	6,542.1	32.5	129.2	8.22	2,444.6	-6,437.1	7,174.9	7,015.9	158.98	45.130	
6,850.0	6,630.8	6,591.3	6,591.3	32.5	130.2	8.33	2,444.6	-6,437.1	7,166.1	7,008.1	158.05	45.340	
6,900.0	6,679.3	6,639.8	6,639.8	32.4	131.1	8.49	2,444.6	-6,437.1	7,154.0	6,997.7	156.35	45.758	
6,950.0	6,726.8	6,687.3	6,687.3	32.4	132.1	8.71	2,444.6	-6,437.1	7,138.6	6,984.7	153.87	46.394	
7,000.0	6,773.1	6,733.6	6,733.6	32.3	133.0	8.98	2,444.6	-6,437.1	7,119.9	6,969.3	150.63	47.266	
7,050.0	6,817.9	6,778.4	6,778.4	32.3	133.9	9.31	2,444.6	-6,437.1	7,098.1	6,951.5	146.66	48.398	
7,100.0	6,861.2	6,821.7	6,821.7	32.2	134.8	9.73	2,444.6	-6,437.1	7,073.3	6,931.3	141.98	49.818	
7,150.0	6,902.5	6,863.0	6,863.0	32.1	135.6	10.23	2,444.6	-6,437.1	7,045.5	6,908.8	136.64	51.561	
7,200.0	6,941.8	6,902.3	6,902.3	32.0	136.4	10.84	2,444.6	-6,437.1	7,014.9	6,884.2	130.71	53.667	
7,250.0	6,978.9	6,939.4	6,939.4	31.9	137.2	11.58	2,444.6	-6,437.1	6,981.7	6,857.4	124.28	56.176	
7,300.0	7,013.5	6,974.0	6,974.0	31.7	137.8	12.50	2,444.6	-6,437.1	6,946.0	6,828.5	117.49	59.120	
7,350.0	7,045.5	7,006.0	7,006.0	31.6	138.5	13.62	2,444.6	-6,437.1	6,908.0	6,797.5	110.53	62.498	
7,400.0	7,074.8	7,035.3	7,035.3	31.5	139.1	15.03	2,444.6	-6,437.1	6,868.0	6,764.2	103.71	66.220	
7,450.0	7,101.1	7,061.6	7,061.6	31.4	139.6	16.83	2,444.6	-6,437.1	6,826.0	6,728.4	97.51	70.001	
7,500.0	7,124.5	7,085.0	7,085.0	31.3	140.1	19.17	2,444.6	-6,437.1	6,782.2	6,689.6	92.68	73.178	
7,550.0	7,144.7	7,105.2	7,105.2	31.1	140.5	22.30	2,444.6	-6,437.1	6,737.0	6,646.6	90.41	74.519	
7,600.0	7,161.6	7,122.1	7,122.1	31.0	140.8	26.64	2,444.6	-6,437.1	6,690.6	6,598.2	92.40	72.411	
7,650.0	7,175.3	7,135.8	7,135.8	30.9	141.1	32.91	2,444.6	-6,437.1	6,643.0	6,542.3	100.77	65.923	
7,700.0	7,185.5	7,146.0	7,146.0	30.8	141.3	42.40	2,444.6	-6,437.1	6,594.7	6,477.2	117.43	56.158	
7,750.0	7,192.3	7,152.8	7,152.8	30.7	141.4	57.12	2,444.6	-6,437.1	6,545.7	6,404.1	141.69	46.198	
7,800.0	7,195.7	7,156.2	7,156.2	30.7	141.5	78.61	2,444.6	-6,437.1	6,496.5	6,333.6	162.83	39.898	
7,828.6	7,196.0	7,156.5	7,156.5	30.6	141.5	92.90	2,444.6	-6,437.1	6,468.2	6,303.3	164.97	39.209	
7,900.0	7,195.4	7,155.9	7,155.9	30.6	141.5	92.87	2,444.6	-6,437.1	6,397.7	6,231.8	165.97	38.548	
8,000.0	7,194.6	7,155.1	7,155.1	30.6	141.5	92.82	2,444.6	-6,437.1	6,299.0	6,131.5	167.57	37.591	
8,100.0	7,193.8	7,154.3	7,154.3	31.0	141.5	92.78	2,444.6	-6,437.1	6,200.4	6,031.0	169.35	36.612	
8,200.0	7,193.0	7,153.5	7,153.5	32.1	141.5	92.73	2,444.6	-6,437.1	6,101.7	5,930.4	171.30	35.621	
8,300.0	7,192.2	7,152.7	7,152.7	33.8	141.4	92.69	2,444.6	-6,437.1	6,003.1	5,829.8	173.37	34.627	
8,400.0	7,191.4	7,151.9	7,151.9	35.8	141.4	92.64	2,444.6	-6,437.1	5,904.6	5,729.1	175.54	33.637	
8,500.0	7,190.6	7,151.1	7,151.1	38.0	141.4	92.60	2,444.6	-6,437.1	5,806.1	5,628.3	177.80	32.655	
8,600.0	7,189.8	7,150.3	7,150.3	40.3	141.4	92.55	2,444.6	-6,437.1	5,707.7	5,527.6	180.13	31.686	
8,700.0	7,189.0	7,149.5	7,149.5	42.7	141.4	92.51	2,444.6	-6,437.1	5,609.3	5,426.8	182.52	30.733	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT BROWN 20-1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,800.0	7,188.2	7,148.7	7,148.7	45.1	141.4	92.46	2,444.6	-6,437.1	5,511.0	5,326.1	184.96	29.796	
8,900.0	7,187.4	7,147.9	7,147.9	47.5	141.3	92.42	2,444.6	-6,437.1	5,412.8	5,225.3	187.43	28.878	
9,000.0	7,186.6	7,147.1	7,147.1	50.0	141.3	92.37	2,444.6	-6,437.1	5,314.6	5,124.6	189.95	27.979	
9,100.0	7,185.7	7,146.2	7,146.2	52.6	141.3	92.33	2,444.6	-6,437.1	5,216.5	5,024.0	192.49	27.100	
9,200.0	7,184.9	7,145.4	7,145.4	55.1	141.3	92.28	2,444.6	-6,437.1	5,118.4	4,923.4	195.06	26.240	
9,300.0	7,184.1	7,144.6	7,144.6	57.7	141.3	92.24	2,444.6	-6,437.1	5,020.4	4,822.8	197.65	25.401	
9,400.0	7,183.3	7,143.8	7,143.8	60.3	141.3	92.19	2,444.6	-6,437.1	4,922.6	4,722.3	200.26	24.581	
9,500.0	7,182.5	7,143.0	7,143.0	62.9	141.2	92.15	2,444.6	-6,437.1	4,824.8	4,621.9	202.88	23.781	
9,600.0	7,181.7	7,142.2	7,142.2	65.5	141.2	92.10	2,444.6	-6,437.1	4,727.0	4,521.5	205.52	23.000	
9,700.0	7,180.9	7,141.4	7,141.4	68.1	141.2	92.06	2,444.6	-6,437.1	4,629.4	4,421.3	208.18	22.238	
9,800.0	7,180.1	7,140.6	7,140.6	70.8	141.2	92.01	2,444.6	-6,437.1	4,531.9	4,321.1	210.84	21.494	
9,900.0	7,179.3	7,139.8	7,139.8	73.5	141.2	91.97	2,444.6	-6,437.1	4,434.5	4,221.0	213.52	20.769	
10,000.0	7,178.5	7,139.0	7,139.0	76.1	141.2	91.92	2,444.6	-6,437.1	4,337.3	4,121.1	216.20	20.061	
10,100.0	7,177.7	7,138.2	7,138.2	78.8	141.1	91.88	2,444.6	-6,437.1	4,240.1	4,021.2	218.89	19.371	
10,200.0	7,176.9	7,137.4	7,137.4	81.5	141.1	91.83	2,444.6	-6,437.1	4,143.1	3,921.5	221.59	18.697	
10,300.0	7,176.0	7,136.5	7,136.5	84.2	141.1	91.79	2,444.6	-6,437.1	4,046.2	3,821.9	224.30	18.039	
10,400.0	7,175.2	7,135.7	7,135.7	86.9	141.1	91.74	2,444.6	-6,437.1	3,949.5	3,722.5	227.01	17.398	
10,500.0	7,174.4	7,134.9	7,134.9	89.6	141.1	91.70	2,444.6	-6,437.1	3,853.0	3,623.2	229.73	16.772	
10,600.0	7,173.6	7,134.1	7,134.1	92.3	141.1	91.65	2,444.6	-6,437.1	3,756.6	3,524.1	232.45	16.161	
10,700.0	7,172.8	7,133.3	7,133.3	95.0	141.1	91.61	2,444.6	-6,437.1	3,660.4	3,425.2	235.18	15.564	
10,800.0	7,172.0	7,132.5	7,132.5	97.8	141.0	91.56	2,444.6	-6,437.1	3,564.4	3,326.5	237.91	14.982	
10,900.0	7,171.2	7,131.7	7,131.7	100.5	141.0	91.52	2,444.6	-6,437.1	3,468.7	3,228.1	240.64	14.414	
11,000.0	7,170.4	7,130.9	7,130.9	103.2	141.0	91.47	2,444.6	-6,437.1	3,373.2	3,129.8	243.38	13.860	
11,100.0	7,169.6	7,130.1	7,130.1	106.0	141.0	91.42	2,444.6	-6,437.1	3,278.0	3,031.9	246.12	13.319	
11,200.0	7,168.8	7,129.3	7,129.3	108.7	141.0	91.38	2,444.6	-6,437.1	3,183.1	2,934.2	248.87	12.790	
11,300.0	7,168.0	7,128.5	7,128.5	111.5	141.0	91.33	2,444.6	-6,437.1	3,088.5	2,836.9	251.61	12.275	
11,400.0	7,167.1	7,127.6	7,127.6	114.2	140.9	91.29	2,444.6	-6,437.1	2,994.2	2,739.9	254.36	11.771	
11,500.0	7,166.3	7,126.8	7,126.8	117.0	140.9	91.24	2,444.6	-6,437.1	2,900.4	2,643.2	257.11	11.280	
11,600.0	7,165.5	7,126.0	7,126.0	119.7	140.9	91.20	2,444.6	-6,437.1	2,806.9	2,547.0	259.87	10.801	
11,700.0	7,164.7	7,125.2	7,125.2	122.5	140.9	91.15	2,444.6	-6,437.1	2,713.9	2,451.3	262.62	10.334	
11,800.0	7,163.9	7,124.4	7,124.4	125.2	140.9	91.11	2,444.6	-6,437.1	2,621.5	2,356.1	265.38	9.878	
11,900.0	7,163.1	7,123.6	7,123.6	128.0	140.9	91.06	2,444.6	-6,437.1	2,529.6	2,261.4	268.14	9.434	
12,000.0	7,162.3	7,122.8	7,122.8	130.7	140.8	91.01	2,444.6	-6,437.1	2,438.3	2,167.4	270.90	9.001	
12,100.0	7,161.5	7,122.0	7,122.0	133.5	140.8	90.97	2,444.6	-6,437.1	2,347.8	2,074.1	273.66	8.579	
12,200.0	7,160.7	7,121.2	7,121.2	136.3	140.8	90.92	2,444.6	-6,437.1	2,258.0	1,981.6	276.43	8.169	
12,300.0	7,159.8	7,120.3	7,120.3	139.0	140.8	90.88	2,444.6	-6,437.1	2,169.2	1,890.0	279.19	7.770	
12,400.0	7,159.0	7,119.5	7,119.5	141.8	140.8	90.83	2,444.6	-6,437.1	2,081.4	1,799.4	281.96	7.382	
12,500.0	7,158.2	7,118.7	7,118.7	144.6	140.8	90.79	2,444.6	-6,437.1	1,994.7	1,709.9	284.72	7.006	
12,600.0	7,157.4	7,117.9	7,117.9	147.3	140.7	90.74	2,444.6	-6,437.1	1,909.3	1,621.8	287.49	6.641	
12,700.0	7,156.6	7,117.1	7,117.1	150.1	140.7	90.70	2,444.6	-6,437.1	1,825.4	1,535.1	290.26	6.289	
12,800.0	7,155.8	7,116.3	7,116.3	152.9	140.7	90.65	2,444.6	-6,437.1	1,743.2	1,450.2	293.03	5.949	
12,900.0	7,155.0	7,115.5	7,115.5	155.7	140.7	90.60	2,444.6	-6,437.1	1,662.9	1,367.1	295.80	5.622	
13,000.0	7,154.2	7,114.7	7,114.7	158.4	140.7	90.56	2,444.6	-6,437.1	1,584.9	1,286.4	298.57	5.308	
13,100.0	7,153.3	7,113.8	7,113.8	161.2	140.7	90.51	2,444.6	-6,437.1	1,509.5	1,208.2	301.35	5.009	
13,200.0	7,152.5	7,113.0	7,113.0	164.0	140.6	90.47	2,444.6	-6,437.1	1,437.1	1,133.0	304.12	4.726	
13,300.0	7,151.7	7,112.2	7,112.2	166.8	140.6	90.42	2,444.6	-6,437.1	1,368.2	1,061.3	306.89	4.458	
13,400.0	7,150.9	7,111.4	7,111.4	169.5	140.6	90.37	2,444.6	-6,437.1	1,303.3	993.6	309.67	4.209	
13,500.0	7,150.1	7,110.6	7,110.6	172.3	140.6	90.33	2,444.6	-6,437.1	1,243.1	930.6	312.44	3.979	
13,600.0	7,149.3	7,109.8	7,109.8	175.1	140.6	90.28	2,444.6	-6,437.1	1,188.2	873.0	315.22	3.770	
13,700.0	7,148.5	7,109.0	7,109.0	177.9	140.6	90.24	2,444.6	-6,437.1	1,139.6	821.6	317.99	3.584	
13,800.0	7,147.6	7,108.1	7,108.1	180.7	140.5	90.19	2,444.6	-6,437.1	1,097.8	777.1	320.77	3.422	
13,900.0	7,146.8	7,107.3	7,107.3	183.5	140.5	90.15	2,444.6	-6,437.1	1,063.9	740.3	323.55	3.288	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT BROWN 20-1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,000.0	7,146.0	7,106.5	7,106.5	186.2	140.5	90.10	2,444.6	-6,437.1	1,038.5	712.2	326.32	3.182	
14,100.0	7,145.2	7,105.7	7,105.7	189.0	140.5	90.05	2,444.6	-6,437.1	1,022.3	693.2	329.10	3.106	
14,200.0	7,144.4	7,104.9	7,104.9	191.8	140.5	90.01	2,444.6	-6,437.1	1,015.8	683.9	331.88	3.061	
14,216.8	7,144.2	7,104.7	7,104.7	192.3	140.5	90.00	2,444.6	-6,437.1	1,015.6	683.3	332.35	3.056 CC, ES	
14,300.0	7,143.6	7,104.1	7,104.1	194.6	140.5	89.96	2,444.6	-6,437.1	1,019.0	684.4	334.66	3.045 SF	
14,370.2	7,143.0	7,103.5	7,103.5	196.6	140.5	89.93	2,444.6	-6,437.1	1,027.2	690.5	336.61	3.051	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT BROWN 22-20 - 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	-79.83	955.4	-5,325.1	5,410.4				
100.0	100.0	48.5	48.5	0.1	0.0	-79.83	955.4	-5,325.1	5,410.1	5,410.0	0.10	N/A	
200.0	200.0	148.5	148.5	0.3	0.6	-79.83	955.4	-5,325.1	5,410.1	5,409.2	0.96	5,628.344	
300.0	300.0	248.5	248.5	0.5	2.4	-79.83	955.4	-5,325.1	5,410.1	5,407.2	2.96	1,826.015	
400.0	400.0	348.5	348.5	0.8	4.6	-105.05	955.4	-5,325.1	5,410.6	5,405.2	5.36	1,009.772	
500.0	499.8	448.3	448.3	1.0	6.6	-105.08	955.4	-5,325.1	5,411.9	5,404.3	7.64	708.274	
600.0	599.5	548.0	548.0	1.2	8.7	-105.12	955.4	-5,325.1	5,414.2	5,404.3	9.91	546.359	
700.0	698.7	647.2	647.2	1.5	10.7	-105.18	955.4	-5,325.1	5,417.4	5,405.2	12.19	444.537	
800.0	797.5	746.0	746.0	1.8	12.7	-105.26	955.4	-5,325.1	5,421.6	5,407.1	14.48	374.316	
900.0	895.6	844.1	844.1	2.2	14.7	-105.35	955.4	-5,325.1	5,426.7	5,409.9	16.81	322.851	
1,000.0	993.1	941.6	941.6	2.6	16.6	-105.46	955.4	-5,325.1	5,432.8	5,413.7	19.16	283.480	
1,100.0	1,089.6	1,038.1	1,038.1	3.1	18.6	-105.57	955.4	-5,325.1	5,440.0	5,418.4	21.55	252.390	
1,127.2	1,115.8	1,064.3	1,064.3	3.2	19.1	-105.61	955.4	-5,325.1	5,442.1	5,419.9	22.21	245.024	
1,200.0	1,185.5	1,134.0	1,134.0	3.6	20.5	-105.81	955.4	-5,325.1	5,447.9	5,424.0	23.98	227.191	
1,300.0	1,281.4	1,229.9	1,229.9	4.1	22.4	-106.09	955.4	-5,325.1	5,456.1	5,429.7	26.42	206.507	
1,400.0	1,377.3	1,325.8	1,325.8	4.7	24.4	-106.36	955.4	-5,325.1	5,464.4	5,435.5	28.87	189.279	
1,500.0	1,473.1	1,421.6	1,421.6	5.2	26.3	-106.64	955.4	-5,325.1	5,472.8	5,441.4	31.32	174.726	
1,600.0	1,569.0	1,517.5	1,517.5	5.8	28.2	-106.91	955.4	-5,325.1	5,481.3	5,447.5	33.78	162.277	
1,700.0	1,664.8	1,613.3	1,613.3	6.4	30.2	-107.18	955.4	-5,325.1	5,490.0	5,453.7	36.23	151.514	
1,800.0	1,760.7	1,709.2	1,709.2	6.9	32.1	-107.46	955.4	-5,325.1	5,498.8	5,460.1	38.69	142.118	
1,900.0	1,856.6	1,805.1	1,805.1	7.5	34.0	-107.73	955.4	-5,325.1	5,507.7	5,466.6	41.15	133.848	
2,000.0	1,952.4	1,900.9	1,900.9	8.1	35.9	-108.00	955.4	-5,325.1	5,516.8	5,473.2	43.61	126.514	
2,100.0	2,048.3	1,996.8	1,996.8	8.6	37.9	-108.27	955.4	-5,325.1	5,526.0	5,480.0	46.06	119.966	
2,200.0	2,144.1	2,092.6	2,092.6	9.2	39.8	-108.54	955.4	-5,325.1	5,535.4	5,486.8	48.52	114.087	
2,300.0	2,240.0	2,188.5	2,188.5	9.8	41.7	-108.81	955.4	-5,325.1	5,544.8	5,493.8	50.97	108.779	
2,400.0	2,335.9	2,284.4	2,284.4	10.3	43.7	-109.08	955.4	-5,325.1	5,554.4	5,501.0	53.43	103.963	
2,500.0	2,431.7	2,380.2	2,380.2	10.9	45.6	-109.34	955.4	-5,325.1	5,564.1	5,508.3	55.88	99.575	
2,600.0	2,527.6	2,476.1	2,476.1	11.5	47.5	-109.61	955.4	-5,325.1	5,574.0	5,515.7	58.33	95.561	
2,700.0	2,623.4	2,571.9	2,571.9	12.1	49.4	-109.88	955.4	-5,325.1	5,584.0	5,523.2	60.78	91.874	
2,800.0	2,719.3	2,667.8	2,667.8	12.6	51.4	-110.14	955.4	-5,325.1	5,594.1	5,530.9	63.23	88.478	
2,900.0	2,815.2	2,763.7	2,763.7	13.2	53.3	-110.40	955.4	-5,325.1	5,604.3	5,538.7	65.67	85.338	
3,000.0	2,911.0	2,859.5	2,859.5	13.8	55.2	-110.67	955.4	-5,325.1	5,614.7	5,546.6	68.12	82.428	
3,100.0	3,006.9	2,955.4	2,955.4	14.4	57.1	-110.93	955.4	-5,325.1	5,625.2	5,554.6	70.56	79.724	
3,200.0	3,102.7	3,051.2	3,051.2	14.9	59.1	-111.19	955.4	-5,325.1	5,635.8	5,562.8	73.00	77.204	
3,300.0	3,198.6	3,147.1	3,147.1	15.5	61.0	-111.45	955.4	-5,325.1	5,646.5	5,571.1	75.44	74.850	
3,400.0	3,294.5	3,243.0	3,243.0	16.1	62.9	-111.71	955.4	-5,325.1	5,657.4	5,579.5	77.87	72.648	
3,500.0	3,390.3	3,338.8	3,338.8	16.7	64.9	-111.96	955.4	-5,325.1	5,668.4	5,588.1	80.31	70.582	
3,600.0	3,486.2	3,434.7	3,434.7	17.2	66.8	-112.22	955.4	-5,325.1	5,679.5	5,596.7	82.74	68.640	
3,700.0	3,582.0	3,530.5	3,530.5	17.8	68.7	-112.48	955.4	-5,325.1	5,690.7	5,605.5	85.17	66.813	
3,800.0	3,677.9	3,626.4	3,626.4	18.4	70.6	-112.73	955.4	-5,325.1	5,702.1	5,614.5	87.60	65.090	
3,900.0	3,773.7	3,722.2	3,722.2	19.0	72.6	-112.99	955.4	-5,325.1	5,713.5	5,623.5	90.03	63.463	
4,000.0	3,869.6	3,818.1	3,818.1	19.5	74.5	-113.24	955.4	-5,325.1	5,725.1	5,632.7	92.45	61.923	
4,100.0	3,965.5	3,914.0	3,914.0	20.1	76.4	-113.49	955.4	-5,325.1	5,736.8	5,641.9	94.88	60.465	
4,200.0	4,061.3	4,009.8	4,009.8	20.7	78.4	-113.74	955.4	-5,325.1	5,748.6	5,651.3	97.30	59.082	
4,300.0	4,157.2	4,105.7	4,105.7	21.3	80.3	-113.99	955.4	-5,325.1	5,760.6	5,660.8	99.72	57.769	
4,400.0	4,253.0	4,201.5	4,201.5	21.8	82.2	-114.24	955.4	-5,325.1	5,772.6	5,670.5	102.13	56.520	
4,500.0	4,348.9	4,297.4	4,297.4	22.4	84.1	-114.49	955.4	-5,325.1	5,784.8	5,680.2	104.55	55.331	
4,600.0	4,444.8	4,393.3	4,393.3	23.0	86.1	-114.74	955.4	-5,325.1	5,797.1	5,690.1	106.96	54.197	
4,700.0	4,540.6	4,489.1	4,489.1	23.6	88.0	-114.99	955.4	-5,325.1	5,809.5	5,700.1	109.37	53.116	
4,800.0	4,636.5	4,585.0	4,585.0	24.1	89.9	-115.23	955.4	-5,325.1	5,822.0	5,710.2	111.78	52.084	
4,900.0	4,732.3	4,680.8	4,680.8	24.7	91.9	-115.48	955.4	-5,325.1	5,834.6	5,720.4	114.19	51.097	
5,000.0	4,828.2	4,776.7	4,776.7	25.3	93.8	-115.72	955.4	-5,325.1	5,847.3	5,730.7	116.59	50.152	

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 SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT BROWN 22-20 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	4,924.1	4,872.6	4,872.6	25.9	95.7	-115.96	955.4	-5,325.1	5,860.1	5,741.2	118.99	49.248	
5,200.0	5,019.9	4,968.4	4,968.4	26.4	97.6	-116.20	955.4	-5,325.1	5,873.1	5,751.7	121.39	48.381	
5,300.0	5,115.8	5,064.3	5,064.3	27.0	99.6	-116.44	955.4	-5,325.1	5,886.2	5,762.4	123.79	47.549	
5,400.0	5,211.6	5,160.1	5,160.1	27.6	101.5	-116.68	955.4	-5,325.1	5,899.3	5,773.1	126.19	46.751	
5,500.0	5,307.5	5,256.0	5,256.0	28.2	103.4	-116.92	955.4	-5,325.1	5,912.6	5,784.0	128.58	45.984	
5,600.0	5,403.4	5,351.9	5,351.9	28.7	105.3	-117.16	955.4	-5,325.1	5,926.0	5,795.0	130.97	45.247	
5,700.0	5,499.2	5,447.7	5,447.7	29.3	107.3	-117.40	955.4	-5,325.1	5,939.5	5,806.1	133.36	44.537	
5,800.0	5,595.1	5,543.6	5,543.6	29.9	109.2	-117.63	955.4	-5,325.1	5,953.1	5,817.3	135.75	43.855	
5,840.7	5,634.1	5,582.6	5,582.6	30.1	110.0	-117.73	955.4	-5,325.1	5,958.6	5,821.9	136.72	43.584	
5,900.0	5,691.1	5,639.6	5,639.6	30.4	111.1	-118.00	955.4	-5,325.1	5,966.5	5,828.3	138.20	43.174	
6,000.0	5,788.0	5,736.5	5,736.5	30.8	113.1	-118.42	955.4	-5,325.1	5,978.5	5,837.9	140.62	42.514	
6,100.0	5,885.7	5,834.2	5,834.2	31.2	115.0	-118.78	955.4	-5,325.1	5,988.9	5,845.9	143.02	41.874	
6,200.0	5,984.0	5,932.5	5,932.5	31.5	117.0	-119.08	955.4	-5,325.1	5,997.7	5,852.4	145.39	41.253	
6,300.0	6,083.0	6,031.5	6,031.5	31.8	119.0	-119.33	955.4	-5,325.1	6,004.9	5,857.2	147.72	40.652	
6,400.0	6,182.3	6,130.8	6,130.8	32.0	121.0	-119.52	955.4	-5,325.1	6,010.4	5,860.4	149.99	40.071	
6,500.0	6,282.0	6,230.5	6,230.5	32.2	123.0	-119.64	955.4	-5,325.1	6,014.1	5,861.9	152.21	39.512	
6,600.0	6,382.0	6,330.5	6,330.5	32.3	125.0	-119.71	955.4	-5,325.1	6,016.2	5,861.8	154.37	38.972	
6,668.0	6,449.9	6,398.4	6,398.4	32.4	126.4	-94.51	955.4	-5,325.1	6,016.6	5,867.9	148.70	40.462	
6,698.0	6,479.9	6,428.4	6,428.4	32.4	127.0	-94.51	955.4	-5,325.1	6,016.6	5,867.2	149.34	40.289	
6,700.0	6,481.9	6,430.4	6,430.4	32.4	127.0	-4.51	955.4	-5,325.1	6,016.6	5,860.1	156.47	38.451	
6,750.0	6,531.9	6,480.4	6,480.4	32.5	128.0	-4.53	955.4	-5,325.1	6,014.7	5,857.6	157.03	38.303	
6,800.0	6,581.6	6,530.1	6,530.1	32.5	129.0	-4.57	955.4	-5,325.1	6,009.3	5,852.5	156.82	38.321	
6,850.0	6,630.8	6,579.3	6,579.3	32.5	130.0	-4.63	955.4	-5,325.1	6,000.5	5,844.7	155.82	38.510	
6,900.0	6,679.3	6,627.8	6,627.8	32.4	131.0	-4.72	955.4	-5,325.1	5,988.3	5,834.3	154.03	38.879	
6,950.0	6,726.8	6,675.3	6,675.3	32.4	132.0	-4.84	955.4	-5,325.1	5,972.8	5,821.4	151.44	39.439	
7,000.0	6,773.1	6,721.6	6,721.6	32.3	132.9	-5.00	955.4	-5,325.1	5,954.0	5,805.9	148.07	40.210	
7,050.0	6,817.9	6,766.4	6,766.4	32.3	133.8	-5.19	955.4	-5,325.1	5,932.0	5,788.1	143.92	41.217	
7,100.0	6,861.2	6,809.7	6,809.7	32.2	134.7	-5.43	955.4	-5,325.1	5,907.0	5,768.0	139.02	42.492	
7,150.0	6,902.5	6,851.0	6,851.0	32.1	135.5	-5.72	955.4	-5,325.1	5,879.0	5,745.6	133.38	44.078	
7,200.0	6,941.8	6,890.3	6,890.3	32.0	136.3	-6.07	955.4	-5,325.1	5,848.2	5,721.2	127.05	46.031	
7,250.0	6,978.9	6,927.4	6,927.4	31.9	137.0	-6.50	955.4	-5,325.1	5,814.8	5,694.7	120.08	48.425	
7,300.0	7,013.5	6,962.0	6,962.0	31.7	137.7	-7.03	955.4	-5,325.1	5,778.8	5,666.3	112.53	51.353	
7,350.0	7,045.5	6,994.0	6,994.0	31.6	138.4	-7.69	955.4	-5,325.1	5,740.6	5,636.0	104.51	54.927	
7,400.0	7,074.8	7,023.3	7,023.3	31.5	139.0	-8.52	955.4	-5,325.1	5,700.2	5,604.0	96.16	59.277	
7,450.0	7,101.1	7,049.6	7,049.6	31.4	139.5	-9.58	955.4	-5,325.1	5,657.8	5,570.1	87.71	64.508	
7,500.0	7,124.5	7,073.0	7,073.0	31.3	140.0	-11.00	955.4	-5,325.1	5,613.8	5,534.3	79.54	70.576	
7,550.0	7,144.7	7,093.2	7,093.2	31.1	140.4	-12.93	955.4	-5,325.1	5,568.2	5,495.8	72.40	76.909	
7,600.0	7,161.6	7,110.1	7,110.1	31.0	140.7	-15.71	955.4	-5,325.1	5,521.4	5,453.7	67.71	81.547	
7,650.0	7,175.3	7,123.8	7,123.8	30.9	141.0	-19.97	955.4	-5,325.1	5,473.5	5,405.3	68.21	80.248	
7,700.0	7,185.5	7,134.0	7,134.0	30.8	141.2	-27.18	955.4	-5,325.1	5,424.7	5,346.0	78.74	68.892	
7,750.0	7,192.3	7,140.8	7,140.8	30.7	141.3	-41.06	955.4	-5,325.1	5,375.4	5,268.3	107.09	50.193	
7,800.0	7,195.7	7,144.2	7,144.2	30.7	141.4	-70.35	955.4	-5,325.1	5,325.7	5,171.7	153.99	34.585	
7,828.6	7,196.0	7,144.5	7,144.5	30.6	141.4	-95.13	955.4	-5,325.1	5,297.2	5,132.1	165.07	32.090	
7,900.0	7,195.4	7,143.9	7,143.9	30.6	141.4	-95.06	955.4	-5,325.1	5,226.1	5,060.0	166.08	31.467	
8,000.0	7,194.6	7,143.1	7,143.1	30.6	141.4	-94.96	955.4	-5,325.1	5,126.5	4,958.8	167.69	30.572	
8,100.0	7,193.8	7,142.3	7,142.3	31.0	141.4	-94.87	955.4	-5,325.1	5,027.0	4,857.5	169.47	29.663	
8,200.0	7,193.0	7,141.5	7,141.5	32.1	141.3	-94.77	955.4	-5,325.1	4,927.4	4,756.0	171.41	28.746	
8,300.0	7,192.2	7,140.7	7,140.7	33.8	141.3	-94.68	955.4	-5,325.1	4,827.9	4,654.4	173.47	27.831	
8,400.0	7,191.4	7,139.9	7,139.9	35.8	141.3	-94.58	955.4	-5,325.1	4,728.4	4,552.8	175.64	26.921	
8,500.0	7,190.6	7,139.1	7,139.1	38.0	141.3	-94.48	955.4	-5,325.1	4,628.9	4,451.0	177.89	26.021	
8,600.0	7,189.8	7,138.3	7,138.3	40.3	141.3	-94.39	955.4	-5,325.1	4,529.5	4,349.2	180.22	25.133	
8,700.0	7,189.0	7,137.5	7,137.5	42.7	141.3	-94.29	955.4	-5,325.1	4,430.0	4,247.4	182.60	24.261	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT BROWN 22-20 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,800.0	7,188.2	7,136.7	7,136.7	45.1	141.2	-94.19	955.4	-5,325.1	4,330.6	4,145.6	185.03	23.405	
8,900.0	7,187.4	7,135.9	7,135.9	47.5	141.2	-94.10	955.4	-5,325.1	4,231.2	4,043.7	187.50	22.566	
9,000.0	7,186.6	7,135.1	7,135.1	50.0	141.2	-94.00	955.4	-5,325.1	4,131.9	3,941.9	190.01	21.745	
9,100.0	7,185.7	7,134.2	7,134.2	52.6	141.2	-93.91	955.4	-5,325.1	4,032.6	3,840.0	192.55	20.943	
9,200.0	7,184.9	7,133.4	7,133.4	55.1	141.2	-93.81	955.4	-5,325.1	3,933.3	3,738.2	195.11	20.159	
9,300.0	7,184.1	7,132.6	7,132.6	57.7	141.2	-93.71	955.4	-5,325.1	3,834.0	3,636.3	197.70	19.393	
9,400.0	7,183.3	7,131.8	7,131.8	60.3	141.1	-93.62	955.4	-5,325.1	3,734.8	3,534.5	200.31	18.645	
9,500.0	7,182.5	7,131.0	7,131.0	62.9	141.1	-93.52	955.4	-5,325.1	3,635.6	3,432.7	202.93	17.915	
9,600.0	7,181.7	7,130.2	7,130.2	65.5	141.1	-93.42	955.4	-5,325.1	3,536.5	3,330.9	205.57	17.203	
9,700.0	7,180.9	7,129.4	7,129.4	68.1	141.1	-93.33	955.4	-5,325.1	3,437.4	3,229.2	208.22	16.508	
9,800.0	7,180.1	7,128.6	7,128.6	70.8	141.1	-93.23	955.4	-5,325.1	3,338.4	3,127.5	210.89	15.830	
9,900.0	7,179.3	7,127.8	7,127.8	73.5	141.1	-93.13	955.4	-5,325.1	3,239.5	3,025.9	213.56	15.169	
10,000.0	7,178.5	7,127.0	7,127.0	76.1	141.0	-93.03	955.4	-5,325.1	3,140.6	2,924.3	216.24	14.523	
10,100.0	7,177.7	7,126.2	7,126.2	78.8	141.0	-92.94	955.4	-5,325.1	3,041.8	2,822.8	218.94	13.893	
10,200.0	7,176.9	7,125.4	7,125.4	81.5	141.0	-92.84	955.4	-5,325.1	2,943.0	2,721.4	221.63	13.279	
10,300.0	7,176.0	7,124.5	7,124.5	84.2	141.0	-92.74	955.4	-5,325.1	2,844.4	2,620.0	224.34	12.679	
10,400.0	7,175.2	7,123.7	7,123.7	86.9	141.0	-92.65	955.4	-5,325.1	2,745.8	2,518.8	227.05	12.094	
10,500.0	7,174.4	7,122.9	7,122.9	89.6	141.0	-92.55	955.4	-5,325.1	2,647.4	2,417.6	229.77	11.522	
10,600.0	7,173.6	7,122.1	7,122.1	92.3	140.9	-92.45	955.4	-5,325.1	2,549.1	2,316.6	232.49	10.964	
10,700.0	7,172.8	7,121.3	7,121.3	95.0	140.9	-92.35	955.4	-5,325.1	2,450.9	2,215.7	235.21	10.420	
10,800.0	7,172.0	7,120.5	7,120.5	97.8	140.9	-92.26	955.4	-5,325.1	2,352.9	2,114.9	237.94	9.888	
10,900.0	7,171.2	7,119.7	7,119.7	100.5	140.9	-92.16	955.4	-5,325.1	2,255.0	2,014.3	240.68	9.369	
11,000.0	7,170.4	7,118.9	7,118.9	103.2	140.9	-92.06	955.4	-5,325.1	2,157.3	1,913.9	243.41	8.863	
11,100.0	7,169.6	7,118.1	7,118.1	106.0	140.9	-91.96	955.4	-5,325.1	2,059.9	1,813.7	246.15	8.368	
11,200.0	7,168.8	7,117.3	7,117.3	108.7	140.8	-91.87	955.4	-5,325.1	1,962.7	1,713.8	248.90	7.886	
11,300.0	7,168.0	7,116.5	7,116.5	111.5	140.8	-91.77	955.4	-5,325.1	1,865.8	1,614.2	251.64	7.415	
11,400.0	7,167.1	7,115.6	7,115.6	114.2	140.8	-91.67	955.4	-5,325.1	1,769.3	1,514.9	254.39	6.955	
11,500.0	7,166.3	7,114.8	7,114.8	117.0	140.8	-91.57	955.4	-5,325.1	1,673.1	1,416.0	257.14	6.507	
11,600.0	7,165.5	7,114.0	7,114.0	119.7	140.8	-91.48	955.4	-5,325.1	1,577.5	1,317.6	259.89	6.070	
11,700.0	7,164.7	7,113.2	7,113.2	122.5	140.8	-91.38	955.4	-5,325.1	1,482.4	1,219.8	262.64	5.644	
11,800.0	7,163.9	7,112.4	7,112.4	125.2	140.8	-91.28	955.4	-5,325.1	1,388.0	1,122.6	265.39	5.230	
11,900.0	7,163.1	7,111.6	7,111.6	128.0	140.7	-91.18	955.4	-5,325.1	1,294.5	1,026.3	268.15	4.827	
12,000.0	7,162.3	7,110.8	7,110.8	130.7	140.7	-91.08	955.4	-5,325.1	1,202.0	931.1	270.91	4.437	
12,100.0	7,161.5	7,110.0	7,110.0	133.5	140.7	-90.99	955.4	-5,325.1	1,110.8	837.1	273.66	4.059	
12,200.0	7,160.7	7,109.2	7,109.2	136.3	140.7	-90.89	955.4	-5,325.1	1,021.2	744.8	276.42	3.694	
12,300.0	7,159.8	7,108.3	7,108.3	139.0	140.7	-90.79	955.4	-5,325.1	933.8	654.6	279.18	3.345	
12,400.0	7,159.0	7,107.5	7,107.5	141.8	140.7	-90.69	955.4	-5,325.1	849.1	567.1	281.94	3.012	
12,500.0	7,158.2	7,106.7	7,106.7	144.6	140.6	-90.59	955.4	-5,325.1	768.1	483.4	284.70	2.698	
12,600.0	7,157.4	7,105.9	7,105.9	147.3	140.6	-90.50	955.4	-5,325.1	692.1	404.7	287.46	2.408	
12,700.0	7,156.6	7,105.1	7,105.1	150.1	140.6	-90.40	955.4	-5,325.1	623.0	332.8	290.22	2.147	
12,800.0	7,155.8	7,104.3	7,104.3	152.9	140.6	-90.30	955.4	-5,325.1	563.2	270.2	292.98	1.922	
12,900.0	7,155.0	7,103.5	7,103.5	155.7	140.6	-90.20	955.4	-5,325.1	515.9	220.2	295.75	1.745	
13,000.0	7,154.2	7,102.7	7,102.7	158.4	140.6	-90.10	955.4	-5,325.1	485.0	186.5	298.51	1.625	
13,100.0	7,153.3	7,101.8	7,101.8	161.2	140.5	-90.00	955.4	-5,325.1	473.6	172.3	301.27	1.572	
13,104.8	7,153.3	7,101.8	7,101.8	161.3	140.5	-90.00	955.4	-5,325.1	473.6	172.2	301.40	1.571 CC, ES, SF	
13,200.0	7,152.5	7,101.0	7,101.0	164.0	140.5	-89.91	955.4	-5,325.1	483.0	179.0	304.03	1.589	
13,300.0	7,151.7	7,100.2	7,100.2	166.8	140.5	-89.81	955.4	-5,325.1	512.2	205.4	306.79	1.670	
13,400.0	7,150.9	7,099.4	7,099.4	169.5	140.5	-89.71	955.4	-5,325.1	558.0	248.5	309.55	1.803	
13,500.0	7,150.1	7,098.6	7,098.6	172.3	140.5	-89.61	955.4	-5,325.1	616.8	304.5	312.32	1.975	
13,600.0	7,149.3	7,097.8	7,097.8	175.1	140.5	-89.51	955.4	-5,325.1	685.2	370.1	315.08	2.175	
13,700.0	7,148.5	7,097.0	7,097.0	177.9	140.4	-89.41	955.4	-5,325.1	760.6	442.8	317.84	2.393	
13,800.0	7,147.6	7,096.1	7,096.1	180.7	140.4	-89.32	955.4	-5,325.1	841.2	520.6	320.60	2.624	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT BROWN 22-20 - 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	
13,900.0	7,146.8	7,095.3	7,095.3	183.5	140.4	-89.22	955.4	-5,325.1	925.5	602.2	323.36	2.862	
14,000.0	7,146.0	7,094.5	7,094.5	186.2	140.4	-89.12	955.4	-5,325.1	1,012.7	686.6	326.12	3.105	
14,100.0	7,145.2	7,093.7	7,093.7	189.0	140.4	-89.02	955.4	-5,325.1	1,102.1	773.2	328.88	3.351	
14,200.0	7,144.4	7,092.9	7,092.9	191.8	140.4	-88.92	955.4	-5,325.1	1,193.2	861.5	331.64	3.598	
14,300.0	7,143.6	7,092.1	7,092.1	194.6	140.3	-88.82	955.4	-5,325.1	1,285.6	951.2	334.39	3.844	
14,370.2	7,143.0	7,091.5	7,091.5	196.6	140.3	-88.75	955.4	-5,325.1	1,351.1	1,014.8	336.33	4.017	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT CYPRUS 1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												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	-65.79	2,327.7	-5,177.0	5,676.4				
100.0	100.0	55.5	55.5	0.1	0.0	-65.79	2,327.7	-5,177.0	5,676.2	5,676.1	0.10	N/A	
200.0	200.0	155.5	155.5	0.3	0.7	-65.79	2,327.7	-5,177.0	5,676.2	5,675.2	1.00	5,666.188	
300.0	300.0	255.5	255.5	0.5	2.5	-65.79	2,327.7	-5,177.0	5,676.2	5,673.2	3.04	1,867.725	
400.0	400.0	355.5	355.5	0.8	4.7	-91.02	2,327.7	-5,177.0	5,676.2	5,670.8	5.43	1,045.073	
500.0	499.8	455.3	455.3	1.0	6.7	-91.07	2,327.7	-5,177.0	5,676.3	5,668.6	7.71	735.810	
600.0	599.5	555.0	555.0	1.2	8.7	-91.15	2,327.7	-5,177.0	5,676.5	5,666.5	9.99	568.424	
700.0	698.7	654.2	654.2	1.5	10.8	-91.27	2,327.7	-5,177.0	5,676.8	5,664.5	12.27	462.630	
800.0	797.5	753.0	753.0	1.8	12.7	-91.42	2,327.7	-5,177.0	5,677.1	5,662.6	14.58	389.382	
900.0	895.6	851.1	851.1	2.2	14.7	-91.60	2,327.7	-5,177.0	5,677.6	5,660.7	16.92	335.519	
1,000.0	993.1	948.6	948.6	2.6	16.7	-91.81	2,327.7	-5,177.0	5,678.3	5,659.0	19.30	294.190	
1,100.0	1,089.6	1,045.1	1,045.1	3.1	18.6	-92.04	2,327.7	-5,177.0	5,679.2	5,657.5	21.72	261.465	
1,127.2	1,115.8	1,071.3	1,071.3	3.2	19.2	-92.11	2,327.7	-5,177.0	5,679.5	5,657.1	22.39	253.698	
1,200.0	1,185.5	1,141.0	1,141.0	3.6	20.6	-92.31	2,327.7	-5,177.0	5,680.4	5,656.2	24.17	234.979	
1,300.0	1,281.4	1,236.9	1,236.9	4.1	22.5	-92.58	2,327.7	-5,177.0	5,681.6	5,655.0	26.64	213.266	
1,400.0	1,377.3	1,332.8	1,332.8	4.7	24.4	-92.86	2,327.7	-5,177.0	5,683.0	5,653.9	29.12	195.181	
1,500.0	1,473.1	1,428.6	1,428.6	5.2	26.4	-93.13	2,327.7	-5,177.0	5,684.6	5,653.0	31.60	179.904	
1,600.0	1,569.0	1,524.5	1,524.5	5.8	28.3	-93.41	2,327.7	-5,177.0	5,686.3	5,652.2	34.08	166.837	
1,700.0	1,664.8	1,620.3	1,620.3	6.4	30.2	-93.68	2,327.7	-5,177.0	5,688.1	5,651.5	36.57	155.538	
1,800.0	1,760.7	1,716.2	1,716.2	6.9	32.2	-93.96	2,327.7	-5,177.0	5,690.1	5,651.0	39.06	145.675	
1,900.0	1,856.6	1,812.1	1,812.1	7.5	34.1	-94.23	2,327.7	-5,177.0	5,692.2	5,650.7	41.55	136.994	
2,000.0	1,952.4	1,907.9	1,907.9	8.1	36.0	-94.50	2,327.7	-5,177.0	5,694.5	5,650.4	44.04	129.295	
2,100.0	2,048.3	2,003.8	2,003.8	8.6	37.9	-94.78	2,327.7	-5,177.0	5,696.9	5,650.3	46.53	122.423	
2,200.0	2,144.1	2,099.6	2,099.6	9.2	39.9	-95.05	2,327.7	-5,177.0	5,699.4	5,650.4	49.03	116.251	
2,300.0	2,240.0	2,195.5	2,195.5	9.8	41.8	-95.32	2,327.7	-5,177.0	5,702.1	5,650.6	51.52	110.679	
2,400.0	2,335.9	2,291.4	2,291.4	10.3	43.7	-95.60	2,327.7	-5,177.0	5,704.9	5,650.9	54.01	105.625	
2,500.0	2,431.7	2,387.2	2,387.2	10.9	45.7	-95.87	2,327.7	-5,177.0	5,707.9	5,651.4	56.50	101.019	
2,600.0	2,527.6	2,483.1	2,483.1	11.5	47.6	-96.14	2,327.7	-5,177.0	5,711.0	5,652.0	58.99	96.805	
2,700.0	2,623.4	2,578.9	2,578.9	12.1	49.5	-96.42	2,327.7	-5,177.0	5,714.3	5,652.8	61.49	92.936	
2,800.0	2,719.3	2,674.8	2,674.8	12.6	51.4	-96.69	2,327.7	-5,177.0	5,717.6	5,653.7	63.98	89.371	
2,900.0	2,815.2	2,770.7	2,770.7	13.2	53.4	-96.96	2,327.7	-5,177.0	5,721.2	5,654.7	66.47	86.076	
3,000.0	2,911.0	2,866.5	2,866.5	13.8	55.3	-97.23	2,327.7	-5,177.0	5,724.8	5,655.9	68.96	83.022	
3,100.0	3,006.9	2,962.4	2,962.4	14.4	57.2	-97.50	2,327.7	-5,177.0	5,728.6	5,657.2	71.44	80.183	
3,200.0	3,102.7	3,058.2	3,058.2	14.9	59.1	-97.77	2,327.7	-5,177.0	5,732.6	5,658.7	73.93	77.539	
3,300.0	3,198.6	3,154.1	3,154.1	15.5	61.1	-98.04	2,327.7	-5,177.0	5,736.7	5,660.3	76.42	75.069	
3,400.0	3,294.5	3,250.0	3,250.0	16.1	63.0	-98.31	2,327.7	-5,177.0	5,740.9	5,662.0	78.90	72.757	
3,500.0	3,390.3	3,345.8	3,345.8	16.7	64.9	-98.58	2,327.7	-5,177.0	5,745.3	5,663.9	81.39	70.590	
3,600.0	3,486.2	3,441.7	3,441.7	17.2	66.9	-98.85	2,327.7	-5,177.0	5,749.8	5,665.9	83.87	68.553	
3,700.0	3,582.0	3,537.5	3,537.5	17.8	68.8	-99.12	2,327.7	-5,177.0	5,754.4	5,668.0	86.36	66.636	
3,800.0	3,677.9	3,633.4	3,633.4	18.4	70.7	-99.39	2,327.7	-5,177.0	5,759.2	5,670.3	88.84	64.828	
3,900.0	3,773.7	3,729.2	3,729.2	19.0	72.6	-99.66	2,327.7	-5,177.0	5,764.1	5,672.7	91.32	63.121	
4,000.0	3,869.6	3,825.1	3,825.1	19.5	74.6	-99.92	2,327.7	-5,177.0	5,769.1	5,675.3	93.80	61.507	
4,100.0	3,965.5	3,921.0	3,921.0	20.1	76.5	-100.19	2,327.7	-5,177.0	5,774.3	5,678.0	96.27	59.977	
4,200.0	4,061.3	4,016.8	4,016.8	20.7	78.4	-100.46	2,327.7	-5,177.0	5,779.6	5,680.9	98.75	58.527	
4,300.0	4,157.2	4,112.7	4,112.7	21.3	80.4	-100.72	2,327.7	-5,177.0	5,785.1	5,683.8	101.23	57.150	
4,400.0	4,253.0	4,208.5	4,208.5	21.8	82.3	-100.99	2,327.7	-5,177.0	5,790.6	5,686.9	103.70	55.840	
4,500.0	4,348.9	4,304.4	4,304.4	22.4	84.2	-101.26	2,327.7	-5,177.0	5,796.4	5,690.2	106.17	54.594	
4,600.0	4,444.8	4,400.3	4,400.3	23.0	86.1	-101.52	2,327.7	-5,177.0	5,802.2	5,693.6	108.64	53.406	
4,700.0	4,540.6	4,496.1	4,496.1	23.6	88.1	-101.79	2,327.7	-5,177.0	5,808.2	5,697.1	111.11	52.273	
4,800.0	4,636.5	4,592.0	4,592.0	24.1	90.0	-102.05	2,327.7	-5,177.0	5,814.3	5,700.8	113.58	51.191	
4,900.0	4,732.3	4,687.8	4,687.8	24.7	91.9	-102.31	2,327.7	-5,177.0	5,820.6	5,704.5	116.05	50.156	
5,000.0	4,828.2	4,783.7	4,783.7	25.3	93.9	-102.58	2,327.7	-5,177.0	5,827.0	5,708.5	118.51	49.167	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT CYPRUS 1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	4,924.1	4,879.6	4,879.6	25.9	95.8	-102.84	2,327.7	-5,177.0	5,833.5	5,712.5	120.98	48.220	
5,200.0	5,019.9	4,975.4	4,975.4	26.4	97.7	-103.10	2,327.7	-5,177.0	5,840.2	5,716.7	123.44	47.312	
5,300.0	5,115.8	5,071.3	5,071.3	27.0	99.6	-103.36	2,327.7	-5,177.0	5,846.9	5,721.0	125.90	46.441	
5,400.0	5,211.6	5,167.1	5,167.1	27.6	101.6	-103.62	2,327.7	-5,177.0	5,853.9	5,725.5	128.36	45.605	
5,500.0	5,307.5	5,263.0	5,263.0	28.2	103.5	-103.88	2,327.7	-5,177.0	5,860.9	5,730.1	130.82	44.803	
5,600.0	5,403.4	5,358.9	5,358.9	28.7	105.4	-104.14	2,327.7	-5,177.0	5,868.1	5,734.8	133.27	44.031	
5,700.0	5,499.2	5,454.7	5,454.7	29.3	107.3	-104.40	2,327.7	-5,177.0	5,875.4	5,739.6	135.72	43.289	
5,800.0	5,595.1	5,550.6	5,550.6	29.9	109.3	-104.66	2,327.7	-5,177.0	5,882.8	5,744.6	138.18	42.574	
5,840.7	5,634.1	5,589.6	5,589.6	30.1	110.1	-104.76	2,327.7	-5,177.0	5,885.9	5,746.7	139.17	42.291	
5,900.0	5,691.1	5,646.6	5,646.6	30.4	111.2	-104.99	2,327.7	-5,177.0	5,890.2	5,749.6	140.62	41.888	
6,000.0	5,788.0	5,743.5	5,743.5	30.8	113.2	-105.35	2,327.7	-5,177.0	5,896.9	5,753.9	142.97	41.245	
6,100.0	5,885.7	5,841.2	5,841.2	31.2	115.1	-105.66	2,327.7	-5,177.0	5,902.7	5,757.4	145.31	40.623	
6,200.0	5,984.0	5,939.5	5,939.5	31.5	117.1	-105.92	2,327.7	-5,177.0	5,907.7	5,760.1	147.61	40.022	
6,300.0	6,083.0	6,038.5	6,038.5	31.8	119.1	-106.13	2,327.7	-5,177.0	5,911.8	5,761.9	149.88	39.442	
6,400.0	6,182.3	6,137.8	6,137.8	32.0	121.1	-106.29	2,327.7	-5,177.0	5,914.9	5,762.7	152.12	38.883	
6,500.0	6,282.0	6,237.5	6,237.5	32.2	123.1	-106.41	2,327.7	-5,177.0	5,917.0	5,762.7	154.31	38.344	
6,600.0	6,382.0	6,337.5	6,337.5	32.3	125.1	-106.47	2,327.7	-5,177.0	5,918.2	5,761.7	156.46	37.825	
6,668.0	6,449.9	6,405.4	6,405.4	32.4	126.5	-81.27	2,327.7	-5,177.0	5,918.4	5,772.6	145.81	40.590	
6,698.0	6,479.9	6,435.4	6,435.4	32.4	127.1	-81.27	2,327.7	-5,177.0	5,918.4	5,772.0	146.46	40.411	
6,700.0	6,481.9	6,437.4	6,437.4	32.4	127.1	8.73	2,327.7	-5,177.0	5,918.4	5,759.8	158.56	37.325	
6,750.0	6,531.9	6,487.4	6,487.4	32.5	128.1	8.76	2,327.7	-5,177.0	5,916.5	5,757.4	159.17	37.172	
6,800.0	6,581.6	6,537.1	6,537.1	32.5	129.1	8.83	2,327.7	-5,177.0	5,911.2	5,752.2	159.01	37.175	
6,850.0	6,630.8	6,586.3	6,586.3	32.5	130.1	8.96	2,327.7	-5,177.0	5,902.5	5,744.4	158.09	37.337	
6,900.0	6,679.3	6,634.8	6,634.8	32.4	131.1	9.13	2,327.7	-5,177.0	5,890.4	5,734.0	156.39	37.664	
6,950.0	6,726.8	6,682.3	6,682.3	32.4	132.0	9.36	2,327.7	-5,177.0	5,875.0	5,721.1	153.93	38.166	
7,000.0	6,773.1	6,728.6	6,728.6	32.3	133.0	9.66	2,327.7	-5,177.0	5,856.4	5,705.7	150.72	38.856	
7,050.0	6,817.9	6,773.4	6,773.4	32.3	133.9	10.03	2,327.7	-5,177.0	5,834.6	5,687.8	146.77	39.752	
7,100.0	6,861.2	6,816.7	6,816.7	32.2	134.7	10.48	2,327.7	-5,177.0	5,809.8	5,667.6	142.13	40.875	
7,150.0	6,902.5	6,858.0	6,858.0	32.1	135.6	11.03	2,327.7	-5,177.0	5,782.0	5,645.2	136.85	42.251	
7,200.0	6,941.8	6,897.3	6,897.3	32.0	136.4	11.70	2,327.7	-5,177.0	5,751.5	5,620.5	130.99	43.908	
7,250.0	6,978.9	6,934.4	6,934.4	31.9	137.1	12.51	2,327.7	-5,177.0	5,718.4	5,593.7	124.67	45.870	
7,300.0	7,013.5	6,969.0	6,969.0	31.7	137.8	13.50	2,327.7	-5,177.0	5,682.8	5,564.8	118.02	48.152	
7,350.0	7,045.5	7,001.0	7,001.0	31.6	138.4	14.73	2,327.7	-5,177.0	5,644.9	5,533.6	111.27	50.732	
7,400.0	7,074.8	7,030.3	7,030.3	31.5	139.0	16.27	2,327.7	-5,177.0	5,604.9	5,500.1	104.75	53.505	
7,450.0	7,101.1	7,056.6	7,056.6	31.4	139.6	18.22	2,327.7	-5,177.0	5,562.9	5,464.0	98.99	56.197	
7,500.0	7,124.5	7,080.0	7,080.0	31.3	140.0	20.75	2,327.7	-5,177.0	5,519.3	5,424.5	94.78	58.231	
7,550.0	7,144.7	7,100.2	7,100.2	31.1	140.4	24.11	2,327.7	-5,177.0	5,474.2	5,380.9	93.34	58.646	
7,600.0	7,161.6	7,117.1	7,117.1	31.0	140.8	28.74	2,327.7	-5,177.0	5,427.8	5,331.5	96.31	56.356	
7,650.0	7,175.3	7,130.8	7,130.8	30.9	141.1	35.33	2,327.7	-5,177.0	5,380.4	5,274.9	105.54	50.979	
7,700.0	7,185.5	7,141.0	7,141.0	30.8	141.3	45.05	2,327.7	-5,177.0	5,332.2	5,209.8	122.32	43.591	
7,750.0	7,192.3	7,147.8	7,147.8	30.7	141.4	59.54	2,327.7	-5,177.0	5,283.4	5,138.4	144.97	36.444	
7,800.0	7,195.7	7,151.2	7,151.2	30.7	141.5	79.63	2,327.7	-5,177.0	5,234.2	5,071.0	163.23	32.066	
7,828.6	7,196.0	7,151.5	7,151.5	30.6	141.5	92.63	2,327.7	-5,177.0	5,206.0	5,041.1	164.97	31.557	
7,900.0	7,195.4	7,150.9	7,150.9	30.6	141.5	92.60	2,327.7	-5,177.0	5,135.7	4,969.8	165.98	30.942	
8,000.0	7,194.6	7,150.1	7,150.1	30.6	141.4	92.54	2,327.7	-5,177.0	5,037.3	4,869.7	167.58	30.060	
8,100.0	7,193.8	7,149.3	7,149.3	31.0	141.4	92.49	2,327.7	-5,177.0	4,939.0	4,769.6	169.37	29.161	
8,200.0	7,193.0	7,148.5	7,148.5	32.1	141.4	92.44	2,327.7	-5,177.0	4,840.7	4,669.3	171.31	28.257	
8,300.0	7,192.2	7,147.7	7,147.7	33.8	141.4	92.39	2,327.7	-5,177.0	4,742.4	4,569.1	173.38	27.353	
8,400.0	7,191.4	7,146.9	7,146.9	35.8	141.4	92.34	2,327.7	-5,177.0	4,644.3	4,468.7	175.56	26.455	
8,500.0	7,190.6	7,146.1	7,146.1	38.0	141.4	92.29	2,327.7	-5,177.0	4,546.2	4,368.4	177.82	25.567	
8,600.0	7,189.8	7,145.3	7,145.3	40.3	141.3	92.24	2,327.7	-5,177.0	4,448.2	4,268.1	180.15	24.692	
8,700.0	7,189.0	7,144.5	7,144.5	42.7	141.3	92.19	2,327.7	-5,177.0	4,350.4	4,167.8	182.53	23.833	

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 SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT CYPRUS 1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,800.0	7,188.2	7,143.7	7,143.7	45.1	141.3	92.14	2,327.7	-5,177.0	4,252.6	4,067.6	184.97	22.990	
8,900.0	7,187.4	7,142.9	7,142.9	47.5	141.3	92.09	2,327.7	-5,177.0	4,154.9	3,967.4	187.45	22.165	
9,000.0	7,186.6	7,142.1	7,142.1	50.0	141.3	92.04	2,327.7	-5,177.0	4,057.3	3,867.3	189.96	21.358	
9,100.0	7,185.7	7,141.2	7,141.2	52.6	141.3	91.98	2,327.7	-5,177.0	3,959.9	3,767.4	192.51	20.570	
9,200.0	7,184.9	7,140.4	7,140.4	55.1	141.2	91.93	2,327.7	-5,177.0	3,862.5	3,667.5	195.08	19.800	
9,300.0	7,184.1	7,139.6	7,139.6	57.7	141.2	91.88	2,327.7	-5,177.0	3,765.4	3,567.7	197.67	19.049	
9,400.0	7,183.3	7,138.8	7,138.8	60.3	141.2	91.83	2,327.7	-5,177.0	3,668.3	3,468.1	200.28	18.316	
9,500.0	7,182.5	7,138.0	7,138.0	62.9	141.2	91.78	2,327.7	-5,177.0	3,571.5	3,368.6	202.90	17.602	
9,600.0	7,181.7	7,137.2	7,137.2	65.5	141.2	91.73	2,327.7	-5,177.0	3,474.8	3,269.2	205.54	16.905	
9,700.0	7,180.9	7,136.4	7,136.4	68.1	141.2	91.68	2,327.7	-5,177.0	3,378.3	3,170.1	208.20	16.226	
9,800.0	7,180.1	7,135.6	7,135.6	70.8	141.1	91.63	2,327.7	-5,177.0	3,282.0	3,071.1	210.86	15.565	
9,900.0	7,179.3	7,134.8	7,134.8	73.5	141.1	91.57	2,327.7	-5,177.0	3,185.9	2,972.4	213.54	14.920	
10,000.0	7,178.5	7,134.0	7,134.0	76.1	141.1	91.52	2,327.7	-5,177.0	3,090.1	2,873.9	216.22	14.291	
10,100.0	7,177.7	7,133.2	7,133.2	78.8	141.1	91.47	2,327.7	-5,177.0	2,994.6	2,775.7	218.91	13.679	
10,200.0	7,176.9	7,132.4	7,132.4	81.5	141.1	91.42	2,327.7	-5,177.0	2,899.4	2,677.8	221.61	13.083	
10,300.0	7,176.0	7,131.5	7,131.5	84.2	141.1	91.37	2,327.7	-5,177.0	2,804.5	2,580.2	224.32	12.502	
10,400.0	7,175.2	7,130.7	7,130.7	86.9	141.1	91.32	2,327.7	-5,177.0	2,709.9	2,482.9	227.03	11.936	
10,500.0	7,174.4	7,129.9	7,129.9	89.6	141.0	91.27	2,327.7	-5,177.0	2,615.8	2,386.1	229.75	11.385	
10,600.0	7,173.6	7,129.1	7,129.1	92.3	141.0	91.22	2,327.7	-5,177.0	2,522.1	2,289.7	232.47	10.849	
10,700.0	7,172.8	7,128.3	7,128.3	95.0	141.0	91.16	2,327.7	-5,177.0	2,429.0	2,193.8	235.20	10.327	
10,800.0	7,172.0	7,127.5	7,127.5	97.8	141.0	91.11	2,327.7	-5,177.0	2,336.4	2,098.4	237.93	9.820	
10,900.0	7,171.2	7,126.7	7,126.7	100.5	141.0	91.06	2,327.7	-5,177.0	2,244.4	2,003.7	240.66	9.326	
11,000.0	7,170.4	7,125.9	7,125.9	103.2	141.0	91.01	2,327.7	-5,177.0	2,153.1	1,909.7	243.40	8.846	
11,100.0	7,169.6	7,125.1	7,125.1	106.0	140.9	90.96	2,327.7	-5,177.0	2,062.7	1,816.5	246.14	8.380	
11,200.0	7,168.8	7,124.3	7,124.3	108.7	140.9	90.91	2,327.7	-5,177.0	1,973.2	1,724.3	248.89	7.928	
11,300.0	7,168.0	7,123.5	7,123.5	111.5	140.9	90.86	2,327.7	-5,177.0	1,884.7	1,633.1	251.63	7.490	
11,400.0	7,167.1	7,122.6	7,122.6	114.2	140.9	90.80	2,327.7	-5,177.0	1,797.4	1,543.0	254.38	7.066	
11,500.0	7,166.3	7,121.8	7,121.8	117.0	140.9	90.75	2,327.7	-5,177.0	1,711.6	1,454.4	257.13	6.656	
11,600.0	7,165.5	7,121.0	7,121.0	119.7	140.9	90.70	2,327.7	-5,177.0	1,627.3	1,367.4	259.88	6.262	
11,700.0	7,164.7	7,120.2	7,120.2	122.5	140.8	90.65	2,327.7	-5,177.0	1,544.9	1,282.3	262.64	5.882	
11,800.0	7,163.9	7,119.4	7,119.4	125.2	140.8	90.60	2,327.7	-5,177.0	1,464.7	1,199.4	265.40	5.519	
11,900.0	7,163.1	7,118.6	7,118.6	128.0	140.8	90.55	2,327.7	-5,177.0	1,387.1	1,119.0	268.15	5.173	
12,000.0	7,162.3	7,117.8	7,117.8	130.7	140.8	90.49	2,327.7	-5,177.0	1,312.6	1,041.7	270.91	4.845	
12,100.0	7,161.5	7,117.0	7,117.0	133.5	140.8	90.44	2,327.7	-5,177.0	1,241.6	967.9	273.67	4.537	
12,200.0	7,160.7	7,116.2	7,116.2	136.3	140.8	90.39	2,327.7	-5,177.0	1,174.8	898.4	276.44	4.250	
12,300.0	7,159.8	7,115.3	7,115.3	139.0	140.7	90.34	2,327.7	-5,177.0	1,113.1	833.9	279.20	3.987	
12,400.0	7,159.0	7,114.5	7,114.5	141.8	140.7	90.29	2,327.7	-5,177.0	1,057.2	775.2	281.97	3.749	
12,500.0	7,158.2	7,113.7	7,113.7	144.6	140.7	90.24	2,327.7	-5,177.0	1,008.1	723.4	284.73	3.541	
12,600.0	7,157.4	7,112.9	7,112.9	147.3	140.7	90.18	2,327.7	-5,177.0	966.9	679.4	287.50	3.363	
12,700.0	7,156.6	7,112.1	7,112.1	150.1	140.7	90.13	2,327.7	-5,177.0	934.7	644.4	290.27	3.220	
12,800.0	7,155.8	7,111.3	7,111.3	152.9	140.7	90.08	2,327.7	-5,177.0	912.3	619.3	293.03	3.113	
12,900.0	7,155.0	7,110.5	7,110.5	155.7	140.6	90.03	2,327.7	-5,177.0	900.5	604.7	295.80	3.044	
12,956.6	7,154.5	7,110.0	7,110.0	157.2	140.6	90.00	2,327.7	-5,177.0	898.7	601.4	297.37	3.022 CC	
13,000.0	7,154.2	7,109.7	7,109.7	158.4	140.6	89.98	2,327.7	-5,177.0	899.8	601.2	298.57	3.014 ES, SF	
13,100.0	7,153.3	7,108.8	7,108.8	161.2	140.6	89.93	2,327.7	-5,177.0	910.1	608.8	301.34	3.020	
13,200.0	7,152.5	7,108.0	7,108.0	164.0	140.6	89.87	2,327.7	-5,177.0	931.1	627.0	304.12	3.062	
13,300.0	7,151.7	7,107.2	7,107.2	166.8	140.6	89.82	2,327.7	-5,177.0	962.1	655.2	306.89	3.135	
13,400.0	7,150.9	7,106.4	7,106.4	169.5	140.6	89.77	2,327.7	-5,177.0	1,002.1	692.5	309.66	3.236	
13,500.0	7,150.1	7,105.6	7,105.6	172.3	140.5	89.72	2,327.7	-5,177.0	1,050.2	737.8	312.43	3.361	
13,600.0	7,149.3	7,104.8	7,104.8	175.1	140.5	89.67	2,327.7	-5,177.0	1,105.3	790.1	315.20	3.507	
13,700.0	7,148.5	7,104.0	7,104.0	177.9	140.5	89.61	2,327.7	-5,177.0	1,166.3	848.3	317.98	3.668	
13,800.0	7,147.6	7,103.1	7,103.1	180.7	140.5	89.56	2,327.7	-5,177.0	1,232.5	911.7	320.75	3.842	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT CYPRUS 1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
13,900.0	7,146.8	7,102.3	7,102.3	183.5	140.5	89.51	2,327.7	-5,177.0	1,302.9	979.4	323.53	4.027	
14,000.0	7,146.0	7,101.5	7,101.5	186.2	140.5	89.46	2,327.7	-5,177.0	1,377.0	1,050.7	326.30	4.220	
14,100.0	7,145.2	7,100.7	7,100.7	189.0	140.4	89.41	2,327.7	-5,177.0	1,454.3	1,125.2	329.08	4.419	
14,200.0	7,144.4	7,099.9	7,099.9	191.8	140.4	89.35	2,327.7	-5,177.0	1,534.1	1,202.3	331.85	4.623	
14,300.0	7,143.6	7,099.1	7,099.1	194.6	140.4	89.30	2,327.7	-5,177.0	1,616.2	1,281.6	334.63	4.830	
14,370.2	7,143.0	7,098.5	7,098.5	196.6	140.4	89.27	2,327.7	-5,177.0	1,675.0	1,338.5	336.57	4.977	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-178.93	-14.9	-0.3	15.0				
100.0	100.0	99.0	99.0	0.1	0.1	-178.93	-14.9	-0.3	14.9	14.7	0.19	77.224	
200.0	200.0	199.0	199.0	0.3	0.3	-178.93	-14.9	-0.3	14.9	14.3	0.64	23.280	
300.0	300.0	299.0	299.0	0.5	0.5	-178.93	-14.9	-0.3	14.9	13.8	1.09	13.690 CC	
400.0	400.0	399.0	399.0	0.8	0.8	158.32	-14.9	-0.3	16.5	15.0	1.54	10.714	
500.0	499.8	499.5	499.5	1.0	1.0	161.81	-13.4	0.5	19.9	17.9	2.00	9.956	
600.0	599.5	600.2	600.0	1.2	1.2	163.83	-8.8	3.0	23.3	20.9	2.45	9.518	
700.0	698.7	700.9	700.4	1.5	1.5	164.91	-1.0	7.2	26.8	23.9	2.91	9.213	
800.0	797.5	801.8	800.5	1.8	1.7	165.38	9.8	13.1	30.3	26.9	3.38	8.970	
900.0	895.6	902.8	900.3	2.2	2.0	165.43	23.8	20.6	33.9	30.0	3.87	8.753	
1,000.0	993.1	1,004.0	999.5	2.6	2.4	165.16	40.9	29.8	37.4	33.0	4.38	8.544	
1,100.0	1,089.6	1,105.2	1,098.1	3.1	2.8	164.67	61.1	40.7	41.0	36.1	4.92	8.329	
1,127.2	1,115.8	1,132.8	1,124.9	3.2	2.9	164.50	67.1	44.0	42.0	36.9	5.07	8.268	
1,200.0	1,185.5	1,206.0	1,195.5	3.6	3.3	163.82	83.9	53.1	44.0	38.5	5.52	7.972	
1,300.0	1,281.4	1,306.0	1,291.9	4.1	3.8	162.89	107.1	65.6	46.5	40.4	6.15	7.570	
1,400.0	1,377.3	1,405.9	1,388.3	4.7	4.3	162.05	130.3	78.1	49.1	42.3	6.79	7.226	
1,500.0	1,473.1	1,505.9	1,484.8	5.2	4.8	161.29	153.5	90.6	51.7	44.2	7.46	6.925	
1,600.0	1,569.0	1,605.9	1,581.2	5.8	5.3	160.61	176.7	103.1	54.3	46.1	8.14	6.663	
1,700.0	1,664.8	1,705.8	1,677.6	6.4	5.8	159.99	199.9	115.6	56.9	48.0	8.84	6.434	
1,800.0	1,760.7	1,805.8	1,774.1	6.9	6.3	159.43	223.1	128.1	59.5	49.9	9.54	6.232	
1,900.0	1,856.6	1,905.7	1,870.5	7.5	6.9	158.91	246.3	140.6	62.1	51.8	10.25	6.053	
2,000.0	1,952.4	2,005.7	1,966.9	8.1	7.4	158.43	269.5	153.1	64.7	53.7	10.97	5.893	
2,100.0	2,048.3	2,105.7	2,063.3	8.6	7.9	157.99	292.7	165.6	67.3	55.6	11.70	5.750	
2,200.0	2,144.1	2,205.6	2,159.8	9.2	8.5	157.58	315.9	178.2	69.9	57.5	12.43	5.621	
2,300.0	2,240.0	2,305.6	2,256.2	9.8	9.0	157.21	339.0	190.7	72.5	59.3	13.17	5.505	
2,400.0	2,335.9	2,405.6	2,352.6	10.3	9.5	156.86	362.2	203.2	75.1	61.2	13.92	5.399	
2,500.0	2,431.7	2,505.5	2,449.1	10.9	10.1	156.53	385.4	215.7	77.8	63.1	14.66	5.303	
2,600.0	2,527.6	2,605.5	2,545.5	11.5	10.6	156.22	408.6	228.2	80.4	65.0	15.42	5.215	
2,700.0	2,623.4	2,705.5	2,641.9	12.1	11.1	155.94	431.8	240.7	83.0	66.9	16.17	5.134	
2,800.0	2,719.3	2,805.4	2,738.3	12.6	11.7	155.67	455.0	253.2	85.7	68.7	16.93	5.060	
2,900.0	2,815.2	2,905.4	2,834.8	13.2	12.2	155.41	478.2	265.7	88.3	70.6	17.69	4.991	
3,000.0	2,911.0	3,005.4	2,931.2	13.8	12.7	155.18	501.4	278.2	90.9	72.5	18.45	4.928	
3,100.0	3,006.9	3,105.3	3,027.6	14.4	13.3	154.95	524.6	290.8	93.6	74.3	19.22	4.869	
3,200.0	3,102.7	3,205.3	3,124.1	14.9	13.8	154.74	547.8	303.3	96.2	76.2	19.99	4.814	
3,300.0	3,198.6	3,305.3	3,220.5	15.5	14.3	154.54	571.0	315.8	98.8	78.1	20.76	4.762	
3,400.0	3,294.5	3,405.2	3,316.9	16.1	14.9	154.35	594.2	328.3	101.5	80.0	21.53	4.714	
3,500.0	3,390.3	3,505.2	3,413.4	16.7	15.4	154.17	617.3	340.8	104.1	81.8	22.30	4.669	
3,600.0	3,486.2	3,605.1	3,509.8	17.2	16.0	153.99	640.5	353.3	106.8	83.7	23.08	4.627	
3,700.0	3,582.0	3,705.1	3,606.2	17.8	16.5	153.83	663.7	365.8	109.4	85.6	23.85	4.587	
3,800.0	3,677.9	3,805.1	3,702.6	18.4	17.0	153.67	686.9	378.3	112.1	87.4	24.63	4.550	
3,900.0	3,773.7	3,905.0	3,799.1	19.0	17.6	153.52	710.1	390.8	114.7	89.3	25.41	4.515	
4,000.0	3,869.6	4,005.0	3,895.5	19.5	18.1	153.38	733.3	403.3	117.4	91.2	26.19	4.481	
4,100.0	3,965.5	4,105.0	3,991.9	20.1	18.7	153.25	756.5	415.9	120.0	93.0	26.97	4.450	
4,200.0	4,061.3	4,204.9	4,088.4	20.7	19.2	153.12	779.7	428.4	122.6	94.9	27.75	4.420	
4,300.0	4,157.2	4,304.9	4,184.8	21.3	19.7	152.99	802.9	440.9	125.3	96.8	28.53	4.392	
4,400.0	4,253.0	4,404.9	4,281.2	21.8	20.3	152.87	826.1	453.4	127.9	98.6	29.31	4.365	
4,500.0	4,348.9	4,504.8	4,377.6	22.4	20.8	152.76	849.3	465.9	130.6	100.5	30.10	4.339	
4,600.0	4,444.8	4,604.8	4,474.1	23.0	21.4	152.65	872.5	478.4	133.2	102.4	30.88	4.314	
4,700.0	4,540.6	4,704.8	4,570.5	23.6	21.9	152.54	895.6	490.9	135.9	104.2	31.67	4.291	
4,800.0	4,636.5	4,804.7	4,666.9	24.1	22.4	152.44	918.8	503.4	138.5	106.1	32.45	4.269	
4,900.0	4,732.3	4,904.7	4,763.4	24.7	23.0	152.34	942.0	515.9	141.2	108.0	33.24	4.248	
5,000.0	4,828.2	5,004.6	4,859.8	25.3	23.5	152.25	965.2	528.4	143.8	109.8	34.03	4.227	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21N-234 - 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	
5,100.0	4,924.1	5,104.6	4,956.2	25.9	24.0	152.16	988.4	541.0	146.5	111.7	34.82	4.208	
5,200.0	5,019.9	5,204.6	5,052.6	26.4	24.6	152.07	1,011.6	553.5	149.2	113.5	35.60	4.189	
5,300.0	5,115.8	5,304.5	5,149.1	27.0	25.1	151.99	1,034.8	566.0	151.8	115.4	36.39	4.171	
5,400.0	5,211.6	5,404.5	5,245.5	27.6	25.7	151.90	1,058.0	578.5	154.5	117.3	37.18	4.154	
5,500.0	5,307.5	5,504.5	5,341.9	28.2	26.2	151.83	1,081.2	591.0	157.1	119.1	37.97	4.137	
5,600.0	5,403.4	5,604.4	5,438.4	28.7	26.7	151.75	1,104.4	603.5	159.8	121.0	38.76	4.122	
5,700.0	5,499.2	5,704.4	5,534.8	29.3	27.3	151.68	1,127.6	616.0	162.4	122.9	39.55	4.106	
5,800.0	5,595.1	5,800.0	5,627.1	29.9	27.8	151.67	1,149.5	627.8	165.4	125.1	40.28	4.106	
5,840.7	5,634.1	5,840.9	5,666.8	30.1	27.9	151.80	1,158.2	632.5	167.3	126.8	40.50	4.130	
5,900.0	5,691.1	5,897.3	5,721.7	30.4	28.1	152.08	1,169.4	638.6	170.3	129.5	40.75	4.179	
6,000.0	5,788.0	5,992.2	5,814.7	30.8	28.5	152.55	1,186.1	647.6	175.2	134.1	41.07	4.265	
6,100.0	5,885.7	6,087.0	5,908.2	31.2	28.8	153.01	1,200.0	655.1	179.8	138.5	41.33	4.351	
6,200.0	5,984.0	6,181.7	6,002.0	31.5	29.0	153.47	1,211.3	661.2	184.3	142.8	41.51	4.439	
6,300.0	6,083.0	6,276.2	6,096.0	31.8	29.2	153.93	1,219.7	665.7	188.5	146.8	41.63	4.527	
6,400.0	6,182.3	6,370.6	6,190.2	32.0	29.4	154.39	1,225.5	668.8	192.4	150.7	41.67	4.617	
6,500.0	6,282.0	6,464.9	6,284.4	32.2	29.5	154.85	1,228.5	670.5	196.1	154.5	41.65	4.709	
6,600.0	6,382.0	6,561.4	6,380.9	32.3	29.6	155.30	1,229.0	670.6	199.3	157.8	41.56	4.795	
6,668.0	6,449.9	6,628.9	6,448.2	32.4	29.6	-178.20	1,229.0	666.5	200.1	142.1	58.04	3.449	
6,698.0	6,479.9	6,658.3	6,477.4	32.4	29.6	-177.12	1,229.0	662.7	200.3	141.9	58.41	3.429	
6,700.0	6,481.9	6,660.3	6,479.4	32.4	29.6	-87.04	1,229.0	662.4	200.3	159.7	40.58	4.937	
6,750.0	6,531.9	6,708.8	6,527.0	32.5	29.6	-84.95	1,229.0	653.5	200.8	161.1	39.73	5.054	
6,800.0	6,581.6	6,756.8	6,573.5	32.5	29.6	-82.91	1,229.0	641.4	201.6	162.7	38.90	5.182	
6,850.0	6,630.8	6,804.4	6,618.7	32.5	29.6	-80.93	1,229.0	626.5	202.6	164.5	38.11	5.317	
6,900.0	6,679.3	6,851.6	6,662.3	32.4	29.5	-79.02	1,229.0	608.7	203.8	166.5	37.36	5.457	
6,950.0	6,726.8	6,898.3	6,704.4	32.4	29.4	-77.19	1,229.0	588.3	205.2	168.6	36.66	5.598	
7,000.0	6,773.1	6,944.7	6,744.7	32.3	29.3	-75.44	1,229.0	565.4	206.8	170.8	36.03	5.739	
7,050.0	6,817.9	6,990.8	6,783.2	32.3	29.2	-73.78	1,229.0	540.1	208.4	173.0	35.46	5.879	
7,100.0	6,861.2	7,036.5	6,819.7	32.2	29.1	-72.23	1,229.0	512.6	210.2	175.3	34.94	6.015	
7,150.0	6,902.5	7,081.9	6,854.2	32.1	29.0	-70.78	1,229.0	483.0	212.0	177.5	34.49	6.147	
7,200.0	6,941.8	7,127.0	6,886.5	32.0	28.9	-69.43	1,229.0	451.5	213.8	179.7	34.09	6.272	
7,250.0	6,978.9	7,171.9	6,916.6	31.9	28.8	-68.19	1,229.0	418.3	215.6	181.8	33.75	6.387	
7,300.0	7,013.5	7,216.5	6,944.4	31.7	28.7	-67.05	1,229.0	383.4	217.4	183.9	33.49	6.490	
7,350.0	7,045.5	7,260.9	6,969.9	31.6	28.6	-66.03	1,229.0	347.0	219.0	185.7	33.31	6.576	
7,400.0	7,074.8	7,305.2	6,993.0	31.5	28.5	-65.12	1,229.0	309.3	220.6	187.4	33.23	6.640	
7,450.0	7,101.1	7,350.0	7,013.9	31.4	28.4	-64.30	1,229.0	269.7	222.1	188.8	33.26	6.677	
7,500.0	7,124.5	7,393.1	7,031.7	31.3	28.3	-63.61	1,229.0	230.4	223.4	189.9	33.43	6.682	
7,550.0	7,144.7	7,436.9	7,047.4	31.1	28.1	-63.02	1,229.0	189.5	224.5	190.8	33.75	6.653	
7,600.0	7,161.6	7,480.6	7,060.4	31.0	28.0	-62.53	1,229.0	147.8	225.5	191.3	34.23	6.588	
7,650.0	7,175.3	7,524.1	7,070.9	30.9	27.9	-62.15	1,229.0	105.5	226.3	191.4	34.87	6.488	
7,700.0	7,185.5	7,567.7	7,078.8	30.8	27.9	-61.87	1,229.0	62.7	226.8	191.2	35.69	6.356	
7,750.0	7,192.3	7,611.1	7,084.0	30.7	27.8	-61.70	1,229.0	19.6	227.2	190.5	36.66	6.197	
7,800.0	7,195.7	7,654.6	7,086.7	30.7	27.7	-61.63	1,229.0	-23.8	227.3	189.6	37.79	6.016	
7,828.6	7,196.0	7,679.7	7,087.0	30.6	27.6	-61.63	1,229.0	-48.9	227.3	188.8	38.51	5.903	
7,900.0	7,195.4	7,751.1	7,086.9	30.6	27.5	-61.73	1,229.0	-120.3	227.1	186.7	40.38	5.625	
8,000.0	7,194.6	7,851.1	7,086.7	30.6	27.6	-61.87	1,229.0	-220.3	226.8	183.5	43.34	5.234	
8,100.0	7,193.8	7,951.1	7,086.5	31.0	28.6	-62.00	1,229.0	-320.3	226.5	179.9	46.66	4.856	
8,200.0	7,193.0	8,051.1	7,086.3	32.1	30.5	-62.14	1,229.0	-420.3	226.3	176.0	50.27	4.501	
8,300.0	7,192.2	8,151.1	7,086.1	33.8	32.6	-62.28	1,229.0	-520.3	226.0	171.8	54.13	4.175	
8,400.0	7,191.4	8,251.1	7,085.9	35.8	34.9	-62.42	1,229.0	-620.3	225.7	167.5	58.18	3.879	
8,500.0	7,190.6	8,351.1	7,085.7	38.0	37.2	-62.55	1,229.0	-720.3	225.4	163.0	62.39	3.613	
8,600.0	7,189.8	8,451.1	7,085.5	40.3	39.5	-62.69	1,229.0	-820.3	225.1	158.4	66.73	3.374	
8,700.0	7,189.0	8,551.1	7,085.3	42.7	41.9	-62.83	1,229.0	-920.3	224.8	153.7	71.18	3.159	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21N-234 - 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	
8,800.0	7,188.2	8,651.1	7,085.1	45.1	44.4	-62.97	1,229.0	-1,020.3	224.6	148.8	75.73	2.965	
8,900.0	7,187.4	8,751.1	7,084.9	47.5	46.9	-63.11	1,229.0	-1,120.3	224.3	143.9	80.36	2.791	
9,000.0	7,186.6	8,851.1	7,084.7	50.0	49.4	-63.25	1,229.0	-1,220.3	224.0	139.0	85.05	2.634	
9,100.0	7,185.7	8,951.1	7,084.5	52.6	52.0	-63.39	1,229.0	-1,320.3	223.7	133.9	89.81	2.491	
9,200.0	7,184.9	9,051.1	7,084.3	55.1	54.6	-63.53	1,229.0	-1,420.2	223.5	128.8	94.62	2.362	
9,300.0	7,184.1	9,151.1	7,084.1	57.7	57.2	-63.67	1,229.0	-1,520.2	223.2	123.7	99.47	2.244	
9,400.0	7,183.3	9,251.1	7,083.9	60.3	59.8	-63.81	1,229.0	-1,620.2	222.9	118.6	104.37	2.136	
9,500.0	7,182.5	9,351.1	7,083.7	62.9	62.4	-63.95	1,229.0	-1,720.2	222.6	113.3	109.30	2.037	
9,600.0	7,181.7	9,451.1	7,083.6	65.5	65.0	-64.09	1,229.0	-1,820.2	222.4	108.1	114.27	1.946	
9,700.0	7,180.9	9,551.1	7,083.4	68.1	67.7	-64.24	1,229.0	-1,920.2	222.1	102.8	119.27	1.862	
9,800.0	7,180.1	9,651.1	7,083.2	70.8	70.4	-64.38	1,229.0	-2,020.2	221.8	97.6	124.29	1.785	
9,900.0	7,179.3	9,751.1	7,083.0	73.5	73.0	-64.52	1,229.0	-2,120.2	221.6	92.2	129.35	1.713	
10,000.0	7,178.5	9,851.1	7,082.8	76.1	75.7	-64.66	1,229.0	-2,220.2	221.3	86.9	134.43	1.646	
10,100.0	7,177.7	9,951.1	7,082.6	78.8	78.4	-64.81	1,229.0	-2,320.2	221.1	81.5	139.53	1.584	
10,200.0	7,176.9	10,051.1	7,082.4	81.5	81.1	-64.95	1,229.0	-2,420.2	220.8	76.1	144.66	1.526	
10,300.0	7,176.0	10,151.1	7,082.2	84.2	83.8	-65.10	1,229.0	-2,520.2	220.5	70.7	149.80	1.472	Level 3
10,400.0	7,175.2	10,251.1	7,082.0	86.9	86.6	-65.24	1,229.0	-2,620.2	220.3	65.3	154.97	1.421	Level 3
10,500.0	7,174.4	10,351.1	7,081.8	89.6	89.3	-65.38	1,229.0	-2,720.2	220.0	59.9	160.16	1.374	Level 3
10,600.0	7,173.6	10,451.1	7,081.6	92.3	92.0	-65.53	1,229.0	-2,820.2	219.8	54.4	165.36	1.329	Level 3
10,700.0	7,172.8	10,551.1	7,081.4	95.0	94.7	-65.67	1,229.0	-2,920.2	219.5	48.9	170.58	1.287	Level 3
10,800.0	7,172.0	10,651.0	7,081.2	97.8	97.5	-65.82	1,229.0	-3,020.2	219.3	43.4	175.82	1.247	Level 2
10,900.0	7,171.2	10,751.0	7,081.0	100.5	100.2	-65.97	1,229.0	-3,120.2	219.0	37.9	181.07	1.210	Level 2
11,000.0	7,170.4	10,851.0	7,080.8	103.2	102.9	-66.11	1,229.0	-3,220.2	218.8	32.4	186.34	1.174	Level 2
11,100.0	7,169.6	10,951.0	7,080.6	106.0	105.7	-66.26	1,229.0	-3,320.2	218.5	26.9	191.63	1.140	Level 2
11,200.0	7,168.8	11,051.0	7,080.4	108.7	108.4	-66.41	1,229.0	-3,420.2	218.3	21.3	196.93	1.108	Level 2
11,300.0	7,168.0	11,151.0	7,080.2	111.5	111.2	-66.55	1,229.0	-3,520.2	218.0	15.8	202.24	1.078	Level 2
11,400.0	7,167.1	11,251.0	7,080.0	114.2	113.9	-66.70	1,229.0	-3,620.2	217.8	10.2	207.57	1.049	Level 2
11,500.0	7,166.3	11,351.0	7,079.8	117.0	116.7	-66.85	1,229.0	-3,720.2	217.5	4.6	212.91	1.022	Level 2
11,600.0	7,165.5	11,451.0	7,079.6	119.7	119.5	-67.00	1,229.0	-3,820.2	217.3	-1.0	218.26	0.996	Level 1
11,700.0	7,164.7	11,551.0	7,079.4	122.5	122.2	-67.15	1,229.0	-3,920.2	217.1	-6.6	223.63	0.971	Level 1
11,800.0	7,163.9	11,651.0	7,079.2	125.2	125.0	-67.29	1,229.0	-4,020.2	216.8	-12.2	229.01	0.947	Level 1
11,900.0	7,163.1	11,751.0	7,079.0	128.0	127.7	-67.44	1,229.0	-4,120.2	216.6	-17.8	234.40	0.924	Level 1
12,000.0	7,162.3	11,851.0	7,078.8	130.7	130.5	-67.59	1,229.0	-4,220.2	216.4	-23.4	239.80	0.902	Level 1
12,100.0	7,161.5	11,951.0	7,078.6	133.5	133.3	-67.74	1,229.0	-4,320.2	216.1	-29.1	245.22	0.881	Level 1
12,200.0	7,160.7	12,051.0	7,078.4	136.3	136.0	-67.89	1,229.0	-4,420.2	215.9	-34.8	250.65	0.861	Level 1
12,300.0	7,159.8	12,151.0	7,078.2	139.0	138.8	-68.04	1,229.0	-4,520.2	215.7	-40.4	256.09	0.842	Level 1
12,400.0	7,159.0	12,251.0	7,078.0	141.8	141.6	-68.19	1,229.0	-4,620.2	215.4	-46.1	261.54	0.824	Level 1
12,500.0	7,158.2	12,351.0	7,077.8	144.6	144.4	-68.34	1,229.0	-4,720.2	215.2	-51.8	267.00	0.806	Level 1
12,600.0	7,157.4	12,451.0	7,077.6	147.3	147.1	-68.50	1,229.0	-4,820.2	215.0	-57.5	272.47	0.789	Level 1
12,700.0	7,156.6	12,551.0	7,077.4	150.1	149.9	-68.65	1,229.0	-4,920.2	214.8	-63.2	277.95	0.773	Level 1
12,800.0	7,155.8	12,651.0	7,077.2	152.9	152.7	-68.80	1,229.0	-5,020.2	214.5	-68.9	283.45	0.757	Level 1
12,900.0	7,155.0	12,751.0	7,077.0	155.7	155.5	-68.95	1,229.0	-5,120.2	214.3	-74.6	288.95	0.742	Level 1
13,000.0	7,154.2	12,851.0	7,076.8	158.4	158.2	-69.10	1,229.0	-5,220.2	214.1	-80.4	294.46	0.727	Level 1
13,100.0	7,153.3	12,951.0	7,076.6	161.2	161.0	-69.26	1,229.0	-5,320.2	213.9	-86.1	299.99	0.713	Level 1
13,200.0	7,152.5	13,051.0	7,076.4	164.0	163.8	-69.41	1,229.0	-5,420.2	213.7	-91.9	305.52	0.699	Level 1
13,300.0	7,151.7	13,151.0	7,076.2	166.8	166.6	-69.56	1,229.0	-5,520.2	213.4	-97.6	311.06	0.686	Level 1
13,400.0	7,150.9	13,251.0	7,076.0	169.5	169.4	-69.72	1,229.0	-5,620.2	213.2	-103.4	316.62	0.673	Level 1
13,500.0	7,150.1	13,351.0	7,075.8	172.3	172.2	-69.87	1,229.0	-5,720.2	213.0	-109.2	322.18	0.661	Level 1
13,600.0	7,149.3	13,451.0	7,075.6	175.1	174.9	-70.02	1,229.0	-5,820.2	212.8	-114.9	327.75	0.649	Level 1
13,700.0	7,148.5	13,551.0	7,075.4	177.9	177.7	-70.18	1,229.0	-5,920.1	212.6	-120.7	333.33	0.638	Level 1
13,800.0	7,147.6	13,651.0	7,075.2	180.7	180.5	-70.33	1,229.0	-6,020.1	212.4	-126.5	338.92	0.627	Level 1
13,900.0	7,146.8	13,751.0	7,075.0	183.5	183.3	-70.49	1,229.0	-6,120.1	212.2	-132.3	344.52	0.616	Level 1

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21N-234 - 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
14,000.0	7,146.0	13,851.0	7,074.8	186.2	186.1	-70.64	1,229.0	-6,220.1	212.0	-138.1	350.12	0.605	Level 1
14,100.0	7,145.2	13,951.0	7,074.6	189.0	188.9	-70.80	1,229.0	-6,320.1	211.8	-144.0	355.74	0.595	Level 1
14,200.0	7,144.4	14,051.0	7,074.3	191.8	191.7	-70.96	1,229.0	-6,420.1	211.6	-149.8	361.36	0.586	Level 1
14,300.0	7,143.6	14,151.0	7,074.1	194.6	194.5	-71.11	1,229.0	-6,520.1	211.4	-155.6	366.99	0.576	Level 1
14,370.2	7,143.0	14,221.2	7,074.0	196.6	196.4	-71.22	1,229.0	-6,590.3	211.2	-159.7	370.95	0.569	Level 1, ES, SF

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-179.57	-75.0	-0.6	75.1				
100.0	100.0	98.0	98.0	0.1	0.1	-179.57	-75.0	-0.6	75.0	74.9	0.19	389.908	
200.0	200.0	198.0	198.0	0.3	0.3	-179.57	-75.0	-0.6	75.0	74.4	0.64	117.363	
300.0	300.0	298.0	298.0	0.5	0.5	-179.57	-75.0	-0.6	75.0	74.0	1.09	68.916 CC, ES	
400.0	400.0	398.0	398.0	0.8	0.8	155.75	-75.0	-0.6	76.6	75.1	1.54	49.697	
500.0	499.8	497.8	497.8	1.0	1.0	157.22	-75.0	-0.6	81.4	79.4	2.00	40.738	
600.0	599.5	597.5	597.5	1.2	1.2	159.32	-75.0	-0.6	89.5	87.1	2.46	36.417	
700.0	698.7	696.7	696.7	1.5	1.4	161.69	-75.0	-0.6	101.0	98.1	2.92	34.595	
800.0	797.5	795.5	795.5	1.8	1.7	164.03	-75.0	-0.6	116.0	112.6	3.38	34.281	
900.0	895.6	896.8	896.7	2.2	1.9	165.74	-74.2	0.8	133.4	129.5	3.85	34.685	
1,000.0	993.1	998.6	998.4	2.6	2.1	166.36	-71.3	5.2	151.7	147.4	4.31	35.228	
1,100.0	1,089.6	1,100.7	1,100.2	3.1	2.3	166.24	-66.6	12.7	171.0	166.2	4.79	35.698	
1,127.2	1,115.8	1,128.6	1,127.9	3.2	2.4	166.11	-64.9	15.3	176.4	171.4	4.93	35.790	
1,200.0	1,185.5	1,203.4	1,202.0	3.6	2.6	165.58	-59.8	23.3	190.2	184.9	5.31	35.786	
1,300.0	1,281.4	1,306.7	1,304.1	4.1	2.9	164.32	-51.0	37.1	207.2	201.3	5.89	35.156	
1,400.0	1,377.3	1,410.1	1,405.5	4.7	3.2	162.53	-40.2	54.0	221.9	215.3	6.53	33.977	
1,500.0	1,473.1	1,508.9	1,502.1	5.2	3.6	160.77	-29.2	71.3	235.8	228.6	7.20	32.733	
1,600.0	1,569.0	1,607.6	1,598.7	5.8	4.0	159.21	-18.1	88.6	250.0	242.1	7.91	31.588	
1,700.0	1,664.8	1,706.4	1,695.3	6.4	4.4	157.81	-7.1	105.9	264.3	255.7	8.65	30.562	
1,800.0	1,760.7	1,805.2	1,792.0	6.9	4.8	156.56	4.0	123.2	278.8	269.4	9.41	29.639	
1,900.0	1,856.6	1,904.0	1,888.6	7.5	5.2	155.43	15.1	140.5	293.4	283.2	10.18	28.813	
2,000.0	1,952.4	2,002.7	1,985.2	8.1	5.6	154.40	26.1	157.8	308.0	297.1	10.97	28.074	
2,100.0	2,048.3	2,101.5	2,081.8	8.6	6.0	153.47	37.2	175.1	322.8	311.0	11.78	27.411	
2,200.0	2,144.1	2,200.3	2,178.4	9.2	6.4	152.62	48.2	192.4	337.6	325.1	12.59	26.816	
2,300.0	2,240.0	2,299.0	2,275.0	9.8	6.8	151.85	59.3	209.7	352.5	339.1	13.42	26.280	
2,400.0	2,335.9	2,397.8	2,371.6	10.3	7.3	151.13	70.3	227.0	367.5	353.3	14.25	25.795	
2,500.0	2,431.7	2,496.6	2,468.3	10.9	7.7	150.48	81.4	244.3	382.5	367.4	15.09	25.356	
2,600.0	2,527.6	2,595.4	2,564.9	11.5	8.1	149.87	92.4	261.6	397.6	381.7	15.93	24.957	
2,700.0	2,623.4	2,694.1	2,661.5	12.1	8.6	149.30	103.5	278.9	412.7	395.9	16.78	24.593	
2,800.0	2,719.3	2,792.9	2,758.1	12.6	9.0	148.78	114.5	296.2	427.8	410.2	17.64	24.260	
2,900.0	2,815.2	2,891.7	2,854.7	13.2	9.4	148.29	125.6	313.5	443.0	424.5	18.49	23.954	
3,000.0	2,911.0	2,990.5	2,951.3	13.8	9.9	147.84	136.6	330.8	458.2	438.9	19.36	23.672	
3,100.0	3,006.9	3,089.2	3,048.0	14.4	10.3	147.41	147.7	348.1	473.5	453.2	20.22	23.413	
3,200.0	3,102.7	3,188.0	3,144.6	14.9	10.8	147.01	158.8	365.4	488.7	467.6	21.09	23.172	
3,300.0	3,198.6	3,286.8	3,241.2	15.5	11.2	146.63	169.8	382.7	504.0	482.0	21.96	22.950	
3,400.0	3,294.5	3,385.6	3,337.8	16.1	11.6	146.28	180.9	400.0	519.3	496.4	22.83	22.742	
3,500.0	3,390.3	3,484.3	3,434.4	16.7	12.1	145.95	191.9	417.3	534.6	510.9	23.71	22.550	
3,600.0	3,486.2	3,583.1	3,531.0	17.2	12.5	145.63	203.0	434.6	549.9	525.3	24.58	22.369	
3,700.0	3,582.0	3,681.9	3,627.7	17.8	13.0	145.33	214.0	451.9	565.3	539.8	25.46	22.201	
3,800.0	3,677.9	3,780.7	3,724.3	18.4	13.4	145.05	225.1	469.2	580.6	554.3	26.34	22.043	
3,900.0	3,773.7	3,879.4	3,820.9	19.0	13.9	144.78	236.1	486.6	596.0	568.8	27.22	21.894	
4,000.0	3,869.6	3,978.2	3,917.5	19.5	14.3	144.53	247.2	503.9	611.4	583.3	28.10	21.755	
4,100.0	3,965.5	4,077.0	4,014.1	20.1	14.7	144.29	258.2	521.2	626.8	597.8	28.99	21.623	
4,200.0	4,061.3	4,175.8	4,110.7	20.7	15.2	144.06	269.3	538.5	642.2	612.3	29.87	21.499	
4,300.0	4,157.2	4,274.5	4,207.4	21.3	15.6	143.84	280.3	555.8	657.6	626.9	30.76	21.382	
4,400.0	4,253.0	4,373.3	4,304.0	21.8	16.1	143.63	291.4	573.1	673.0	641.4	31.64	21.271	
4,500.0	4,348.9	4,472.1	4,400.6	22.4	16.5	143.43	302.5	590.4	688.5	655.9	32.53	21.165	
4,600.0	4,444.8	4,570.8	4,497.2	23.0	17.0	143.24	313.5	607.7	703.9	670.5	33.42	21.065	
4,700.0	4,540.6	4,669.6	4,593.8	23.6	17.4	143.05	324.6	625.0	719.4	685.1	34.30	20.970	
4,800.0	4,636.5	4,761.4	4,683.8	24.1	17.7	142.96	334.3	640.3	735.2	700.1	35.06	20.969	
4,900.0	4,732.3	4,851.4	4,772.5	24.7	18.0	143.08	342.4	652.9	752.2	716.5	35.71	21.061	
5,000.0	4,828.2	4,940.8	4,861.1	25.3	18.2	143.38	349.0	663.2	770.3	734.0	36.28	21.229	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-204 - 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	
5,100.0	4,924.1	5,029.5	4,949.3	25.9	18.5	143.86	354.0	671.1	789.6	752.8	36.78	21.470	
5,200.0	5,019.9	5,117.3	5,036.9	26.4	18.6	144.49	357.5	676.6	810.1	772.9	37.19	21.783	
5,300.0	5,115.8	5,200.0	5,119.4	27.0	18.8	145.22	359.5	679.7	832.0	794.5	37.54	22.164	
5,400.0	5,211.6	5,290.2	5,209.6	27.6	18.9	146.15	360.3	680.8	855.3	817.5	37.80	22.624	
5,500.0	5,307.5	5,386.1	5,305.5	28.2	19.0	147.17	360.3	680.8	879.3	841.3	38.05	23.112	
5,600.0	5,403.4	5,481.9	5,401.4	28.7	19.1	148.14	360.3	680.8	903.7	865.4	38.30	23.597	
5,700.0	5,499.2	5,577.8	5,497.2	29.3	19.3	149.06	360.3	680.8	928.3	889.7	38.56	24.076	
5,800.0	5,595.1	5,673.7	5,593.1	29.9	19.4	149.93	360.3	680.8	953.1	914.2	38.82	24.550	
5,840.7	5,634.1	5,712.7	5,632.1	30.1	19.4	150.27	360.3	680.8	963.2	924.3	38.93	24.741	
5,900.0	5,691.1	5,769.7	5,689.1	30.4	19.5	150.88	360.3	680.8	977.5	938.5	39.08	25.013	
6,000.0	5,788.0	5,866.6	5,786.0	30.8	19.7	151.78	360.3	680.8	999.5	960.2	39.30	25.432	
6,100.0	5,885.7	5,964.2	5,883.7	31.2	19.8	152.53	360.3	680.8	1,018.5	979.0	39.52	25.772	
6,200.0	5,984.0	6,062.6	5,982.0	31.5	19.9	153.13	360.3	680.8	1,034.5	994.8	39.73	26.036	
6,300.0	6,083.0	6,161.5	6,081.0	31.8	20.1	153.61	360.3	680.8	1,047.6	1,007.6	39.94	26.226	
6,400.0	6,182.3	6,260.9	6,180.3	32.0	20.2	153.96	360.3	680.8	1,057.5	1,017.4	40.14	26.345	
6,500.0	6,282.0	6,360.6	6,280.0	32.2	20.4	154.20	360.3	680.8	1,064.3	1,024.0	40.33	26.393	
6,600.0	6,382.0	6,460.5	6,380.0	32.3	20.5	154.33	360.3	680.8	1,068.1	1,027.6	40.50	26.373	
6,668.0	6,449.9	6,529.0	6,448.4	32.4	20.6	179.75	360.3	677.5	1,068.8	1,022.0	46.79	22.840	
6,698.0	6,479.9	6,558.9	6,478.1	32.4	20.6	179.94	360.3	673.9	1,068.7	1,021.8	46.91	22.782	
6,700.0	6,481.9	6,561.0	6,480.1	32.4	20.6	-90.05	360.3	673.6	1,068.7	1,028.3	40.49	26.394	
6,706.2	6,488.1	6,567.1	6,486.1	32.4	20.6	-90.00	360.3	672.8	1,068.7	1,028.3	40.48	26.400	
6,750.0	6,531.9	6,610.3	6,528.6	32.5	20.6	-89.68	360.3	665.0	1,068.8	1,028.3	40.42	26.445	
6,800.0	6,581.6	6,659.2	6,576.1	32.5	20.5	-89.32	360.3	653.1	1,068.8	1,028.5	40.29	26.532	
6,850.0	6,630.8	6,707.6	6,622.1	32.5	20.5	-88.96	360.3	638.2	1,068.9	1,028.8	40.11	26.650	
6,900.0	6,679.3	6,755.7	6,666.7	32.4	20.4	-88.60	360.3	620.4	1,069.1	1,029.2	39.90	26.793	
6,950.0	6,726.8	6,803.3	6,709.6	32.4	20.3	-88.26	360.3	599.8	1,069.2	1,029.6	39.67	26.955	
7,000.0	6,773.1	6,850.0	6,750.4	32.3	20.2	-87.93	360.3	576.9	1,069.5	1,030.0	39.42	27.128	
7,050.0	6,817.9	6,897.4	6,790.0	32.3	20.1	-87.60	360.3	551.0	1,069.7	1,030.5	39.17	27.306	
7,100.0	6,861.2	6,943.9	6,827.2	32.2	20.1	-87.29	360.3	523.1	1,070.0	1,031.0	38.95	27.474	
7,150.0	6,902.5	6,990.1	6,862.3	32.1	20.0	-86.99	360.3	493.0	1,070.2	1,031.5	38.75	27.622	
7,200.0	6,941.8	7,036.0	6,895.1	32.0	19.9	-86.70	360.3	461.0	1,070.5	1,031.9	38.60	27.737	
7,250.0	6,978.9	7,081.7	6,925.7	31.9	19.8	-86.43	360.3	427.1	1,070.8	1,032.3	38.51	27.807	
7,300.0	7,013.5	7,127.0	6,953.9	31.7	19.8	-86.18	360.3	391.5	1,071.2	1,032.6	38.51	27.818	
7,350.0	7,045.5	7,172.2	6,979.6	31.6	19.8	-85.94	360.3	354.4	1,071.5	1,032.9	38.60	27.760	
7,400.0	7,074.8	7,217.1	7,002.9	31.5	19.8	-85.72	360.3	316.0	1,071.8	1,033.0	38.80	27.622	
7,450.0	7,101.1	7,261.8	7,023.6	31.4	19.9	-85.52	360.3	276.4	1,072.0	1,032.9	39.13	27.398	
7,500.0	7,124.5	7,306.4	7,041.7	31.3	20.0	-85.34	360.3	235.7	1,072.3	1,032.7	39.59	27.088	
7,550.0	7,144.7	7,350.0	7,057.0	31.1	20.2	-85.19	360.3	194.9	1,072.5	1,032.4	40.18	26.697	
7,600.0	7,161.6	7,395.1	7,070.1	31.0	20.5	-85.05	360.3	151.7	1,072.8	1,031.8	40.92	26.213	
7,650.0	7,175.3	7,439.3	7,080.4	30.9	20.9	-84.93	360.3	108.8	1,072.9	1,031.1	41.80	25.667	
7,700.0	7,185.5	7,483.3	7,087.9	30.8	21.4	-84.84	360.3	65.3	1,073.1	1,030.3	42.81	25.068	
7,750.0	7,192.3	7,527.4	7,092.7	30.7	21.9	-84.77	360.3	21.6	1,073.2	1,029.3	43.93	24.431	
7,800.0	7,195.7	7,571.3	7,094.9	30.7	22.4	-84.72	360.3	-22.3	1,073.3	1,028.2	45.15	23.771	
7,828.6	7,196.0	7,597.9	7,095.0	30.6	22.8	-84.71	360.3	-48.9	1,073.3	1,027.4	45.91	23.377	
7,900.0	7,195.4	7,669.3	7,094.8	30.6	23.9	-84.73	360.3	-120.2	1,073.3	1,025.2	48.07	22.327	
8,000.0	7,194.6	7,769.3	7,094.6	30.6	25.7	-84.76	360.3	-220.2	1,073.2	1,021.8	51.43	20.869	
8,100.0	7,193.8	7,869.3	7,094.3	31.0	27.6	-84.79	360.3	-320.2	1,073.2	1,018.0	55.15	19.459	
8,200.0	7,193.0	7,969.3	7,094.1	32.1	29.7	-84.82	360.3	-420.2	1,073.1	1,014.0	59.17	18.137	
8,300.0	7,192.2	8,069.3	7,093.8	33.8	31.9	-84.85	360.3	-520.2	1,073.1	1,009.7	63.43	16.918	
8,400.0	7,191.4	8,169.3	7,093.6	35.8	34.2	-84.88	360.3	-620.2	1,073.0	1,005.2	67.88	15.807	
8,500.0	7,190.6	8,269.3	7,093.3	38.0	36.5	-84.91	360.3	-720.2	1,073.0	1,000.5	72.50	14.801	
8,600.0	7,189.8	8,369.3	7,093.1	40.3	38.9	-84.94	360.3	-820.2	1,072.9	995.7	77.24	13.891	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-204 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,700.0	7,189.0	8,469.2	7,092.9	42.7	41.4	-84.97	360.3	-920.2	1,072.9	990.8	82.09	13.069	
8,800.0	7,188.2	8,569.2	7,092.6	45.1	43.9	-85.00	360.3	-1,020.2	1,072.8	985.8	87.04	12.326	
8,900.0	7,187.4	8,669.2	7,092.4	47.5	46.5	-85.03	360.3	-1,120.2	1,072.8	980.7	92.06	11.654	
9,000.0	7,186.6	8,769.2	7,092.1	50.0	49.0	-85.06	360.3	-1,220.2	1,072.7	975.6	97.14	11.043	
9,100.0	7,185.7	8,869.2	7,091.9	52.6	51.6	-85.09	360.3	-1,320.2	1,072.7	970.4	102.28	10.488	
9,200.0	7,184.9	8,969.2	7,091.6	55.1	54.2	-85.12	360.3	-1,420.2	1,072.6	965.2	107.46	9.982	
9,300.0	7,184.1	9,069.2	7,091.4	57.7	56.9	-85.15	360.3	-1,520.2	1,072.6	959.9	112.69	9.518	
9,400.0	7,183.3	9,169.2	7,091.2	60.3	59.5	-85.18	360.3	-1,620.2	1,072.5	954.6	117.95	9.093	
9,500.0	7,182.5	9,269.2	7,090.9	62.9	62.2	-85.21	360.3	-1,720.2	1,072.5	949.3	123.24	8.703	
9,600.0	7,181.7	9,369.2	7,090.7	65.5	64.9	-85.24	360.3	-1,820.2	1,072.4	943.9	128.56	8.342	
9,700.0	7,180.9	9,469.2	7,090.4	68.1	67.6	-85.27	360.3	-1,920.2	1,072.4	938.5	133.90	8.009	
9,800.0	7,180.1	9,569.2	7,090.2	70.8	70.3	-85.30	360.3	-2,020.2	1,072.4	933.1	139.26	7.700	
9,900.0	7,179.3	9,669.2	7,089.9	73.5	73.0	-85.33	360.3	-2,120.2	1,072.3	927.7	144.64	7.413	
10,000.0	7,178.5	9,769.2	7,089.7	76.1	75.7	-85.36	360.3	-2,220.2	1,072.3	922.2	150.04	7.146	
10,100.0	7,177.7	9,869.2	7,089.5	78.8	78.4	-85.39	360.3	-2,320.2	1,072.2	916.8	155.46	6.897	
10,200.0	7,176.9	9,969.2	7,089.2	81.5	81.1	-85.42	360.3	-2,420.2	1,072.2	911.3	160.88	6.664	
10,300.0	7,176.0	10,069.2	7,089.0	84.2	83.8	-85.45	360.3	-2,520.2	1,072.1	905.8	166.32	6.446	
10,400.0	7,175.2	10,169.2	7,088.7	86.9	86.6	-85.48	360.3	-2,620.2	1,072.1	900.3	171.78	6.241	
10,500.0	7,174.4	10,269.2	7,088.5	89.6	89.3	-85.51	360.3	-2,720.2	1,072.0	894.8	177.24	6.049	
10,600.0	7,173.6	10,369.2	7,088.2	92.3	92.1	-85.54	360.3	-2,820.2	1,072.0	889.3	182.71	5.867	
10,700.0	7,172.8	10,469.2	7,088.0	95.0	94.8	-85.57	360.3	-2,920.2	1,071.9	883.8	188.19	5.696	
10,800.0	7,172.0	10,569.2	7,087.8	97.8	97.6	-85.60	360.3	-3,020.2	1,071.9	878.2	193.67	5.535	
10,900.0	7,171.2	10,669.2	7,087.5	100.5	100.3	-85.63	360.3	-3,120.2	1,071.9	872.7	199.17	5.382	
11,000.0	7,170.4	10,769.2	7,087.3	103.2	103.1	-85.66	360.3	-3,220.2	1,071.8	867.1	204.67	5.237	
11,100.0	7,169.6	10,869.2	7,087.0	106.0	105.8	-85.69	360.3	-3,320.2	1,071.8	861.6	210.18	5.099	
11,200.0	7,168.8	10,969.2	7,086.8	108.7	108.6	-85.72	360.3	-3,420.2	1,071.7	856.0	215.69	4.969	
11,300.0	7,168.0	11,069.2	7,086.5	111.5	111.4	-85.75	360.3	-3,520.2	1,071.7	850.5	221.21	4.845	
11,400.0	7,167.1	11,169.2	7,086.3	114.2	114.1	-85.78	360.3	-3,620.2	1,071.6	844.9	226.73	4.727	
11,500.0	7,166.3	11,269.2	7,086.1	117.0	116.9	-85.81	360.3	-3,720.2	1,071.6	839.3	232.26	4.614	
11,600.0	7,165.5	11,369.2	7,085.8	119.7	119.7	-85.84	360.3	-3,820.2	1,071.6	833.8	237.79	4.506	
11,700.0	7,164.7	11,469.2	7,085.6	122.5	122.4	-85.87	360.3	-3,920.2	1,071.5	828.2	243.33	4.404	
11,800.0	7,163.9	11,569.2	7,085.3	125.2	125.2	-85.90	360.3	-4,020.2	1,071.5	822.6	248.87	4.305	
11,900.0	7,163.1	11,669.2	7,085.1	128.0	128.0	-85.93	360.3	-4,120.2	1,071.4	817.0	254.42	4.211	
11,915.4	7,163.0	11,685.0	7,085.0	128.4	128.4	-85.94	360.3	-4,136.0	1,071.4	816.1	255.27	4.197	
12,000.0	7,162.3	11,702.4	7,085.0	130.7	128.9	-85.94	360.3	-4,153.4	1,073.4	815.3	258.10	4.159	
12,100.0	7,161.5	11,702.4	7,085.0	133.5	128.9	-85.94	360.3	-4,153.4	1,084.2	823.4	260.86	4.156 SF	
12,200.0	7,160.7	11,702.4	7,085.0	136.3	128.9	-85.94	360.3	-4,153.4	1,104.0	840.4	263.63	4.188	
12,300.0	7,159.8	11,702.4	7,085.0	139.0	128.9	-85.94	360.3	-4,153.4	1,132.3	865.9	266.40	4.250	
12,400.0	7,159.0	11,702.4	7,085.0	141.8	128.9	-85.94	360.3	-4,153.4	1,168.5	899.3	269.17	4.341	
12,500.0	7,158.2	11,702.4	7,085.0	144.6	128.9	-85.94	360.3	-4,153.4	1,211.9	939.9	271.94	4.456	
12,600.0	7,157.4	11,702.4	7,085.0	147.3	128.9	-85.94	360.3	-4,153.4	1,261.7	987.0	274.72	4.593	
12,700.0	7,156.6	11,702.4	7,085.0	150.1	128.9	-85.94	360.3	-4,153.4	1,317.2	1,039.7	277.49	4.747	
12,800.0	7,155.8	11,702.4	7,085.0	152.9	128.9	-85.94	360.3	-4,153.4	1,377.8	1,097.6	280.26	4.916	
12,900.0	7,155.0	11,702.4	7,085.0	155.7	128.9	-85.94	360.3	-4,153.4	1,442.8	1,159.8	283.04	5.097	
13,000.0	7,154.2	11,702.4	7,085.0	158.4	128.9	-85.94	360.3	-4,153.4	1,511.6	1,225.8	285.82	5.289	
13,100.0	7,153.3	11,702.4	7,085.0	161.2	128.9	-85.94	360.3	-4,153.4	1,583.7	1,295.1	288.59	5.488	
13,200.0	7,152.5	11,702.4	7,085.0	164.0	128.9	-85.94	360.3	-4,153.4	1,658.7	1,367.4	291.37	5.693	
13,300.0	7,151.7	11,702.4	7,085.0	166.8	128.9	-85.94	360.3	-4,153.4	1,736.3	1,442.1	294.15	5.903	
13,400.0	7,150.9	11,702.4	7,085.0	169.5	128.9	-85.94	360.3	-4,153.4	1,816.0	1,519.1	296.93	6.116	
13,500.0	7,150.1	11,702.4	7,085.0	172.3	128.9	-85.94	360.3	-4,153.4	1,897.7	1,598.0	299.71	6.332	
13,600.0	7,149.3	11,702.4	7,085.0	175.1	128.9	-85.94	360.3	-4,153.4	1,981.0	1,678.5	302.49	6.549	
13,700.0	7,148.5	11,702.4	7,085.0	177.9	128.9	-85.94	360.3	-4,153.4	2,065.9	1,760.6	305.27	6.767	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-204 - 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
13,800.0	7,147.6	11,702.4	7,085.0	180.7	128.9	-85.94	360.3	-4,153.4	2,152.0	1,843.9	308.06	6.986	
13,900.0	7,146.8	11,702.4	7,085.0	183.5	128.9	-85.94	360.3	-4,153.4	2,239.3	1,928.4	310.84	7.204	
14,000.0	7,146.0	11,702.4	7,085.0	186.2	128.9	-85.94	360.3	-4,153.4	2,327.6	2,013.9	313.62	7.422	
14,100.0	7,145.2	11,702.4	7,085.0	189.0	128.9	-85.94	360.3	-4,153.4	2,416.8	2,100.4	316.41	7.638	
14,200.0	7,144.4	11,702.4	7,085.0	191.8	128.9	-85.94	360.3	-4,153.4	2,506.8	2,187.6	319.19	7.854	
14,300.0	7,143.6	11,702.4	7,085.0	194.6	128.9	-85.94	360.3	-4,153.4	2,597.6	2,275.6	321.98	8.068	
14,370.2	7,143.0	11,702.4	7,085.0	196.6	128.9	-85.94	360.3	-4,153.4	2,661.7	2,337.8	323.93	8.217	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-179.29	-45.2	-0.6	45.2				
100.0	100.0	99.0	99.0	0.1	0.1	-179.29	-45.2	-0.6	45.2	45.0	0.19	233.534	
200.0	200.0	199.0	199.0	0.3	0.3	-179.29	-45.2	-0.6	45.2	44.5	0.64	70.402	
300.0	300.0	299.0	299.0	0.5	0.5	-179.29	-45.2	-0.6	45.2	44.1	1.09	41.400 CC, ES	
400.0	400.0	399.0	399.0	0.8	0.8	156.37	-45.2	-0.6	46.8	45.2	1.54	30.285	
500.0	499.8	498.8	498.8	1.0	1.0	158.66	-45.2	-0.6	51.6	49.6	2.00	25.786	
600.0	599.5	598.5	598.5	1.2	1.2	161.65	-45.2	-0.6	59.8	57.4	2.46	24.307	
700.0	698.7	699.8	699.8	1.5	1.4	164.03	-43.8	0.5	70.0	67.1	2.92	23.993	
800.0	797.5	801.6	801.4	1.8	1.7	165.22	-39.7	3.9	80.5	77.2	3.37	23.874	
900.0	895.6	903.7	903.2	2.2	1.9	165.60	-32.7	9.6	91.3	87.5	3.84	23.770	
1,000.0	993.1	1,006.2	1,004.8	2.6	2.2	165.42	-22.8	17.5	102.4	98.0	4.33	23.634	
1,100.0	1,089.6	1,108.9	1,106.3	3.1	2.5	164.85	-10.2	27.8	113.6	108.8	4.85	23.433	
1,127.2	1,115.8	1,137.0	1,133.8	3.2	2.6	164.63	-6.2	31.0	116.7	111.7	5.00	23.356	
1,200.0	1,185.5	1,211.6	1,207.0	3.6	2.8	163.91	5.3	40.4	124.3	118.8	5.42	22.927	
1,300.0	1,281.4	1,311.2	1,304.4	4.1	3.2	162.88	21.4	53.4	133.8	127.8	6.02	22.214	
1,400.0	1,377.3	1,410.7	1,401.7	4.7	3.6	161.98	37.5	66.5	143.4	136.8	6.65	21.558	
1,500.0	1,473.1	1,510.2	1,499.0	5.2	4.0	161.19	53.6	79.5	153.0	145.8	7.30	20.971	
1,600.0	1,569.0	1,609.7	1,596.4	5.8	4.4	160.50	69.6	92.5	162.7	154.7	7.96	20.447	
1,700.0	1,664.8	1,709.2	1,693.7	6.4	4.8	159.89	85.7	105.6	172.4	163.8	8.63	19.975	
1,800.0	1,760.7	1,808.7	1,791.0	6.9	5.2	159.34	101.8	118.6	182.1	172.8	9.31	19.554	
1,900.0	1,856.6	1,908.2	1,888.4	7.5	5.7	158.84	117.9	131.6	191.8	181.8	10.00	19.175	
2,000.0	1,952.4	2,007.8	1,985.7	8.1	6.1	158.40	133.9	144.7	201.5	190.8	10.70	18.834	
2,100.0	2,048.3	2,107.3	2,083.1	8.6	6.5	157.99	150.0	157.7	211.2	199.8	11.40	18.525	
2,200.0	2,144.1	2,206.8	2,180.4	9.2	7.0	157.62	166.1	170.7	221.0	208.9	12.11	18.246	
2,300.0	2,240.0	2,306.3	2,277.7	9.8	7.4	157.29	182.2	183.8	230.7	217.9	12.83	17.991	
2,400.0	2,335.9	2,405.8	2,375.1	10.3	7.8	156.98	198.2	196.8	240.5	227.0	13.54	17.759	
2,500.0	2,431.7	2,505.3	2,472.4	10.9	8.3	156.69	214.3	209.8	250.3	236.0	14.26	17.547	
2,600.0	2,527.6	2,604.8	2,569.8	11.5	8.7	156.43	230.4	222.9	260.0	245.1	14.99	17.351	
2,700.0	2,623.4	2,704.4	2,667.1	12.1	9.1	156.18	246.5	235.9	269.8	254.1	15.71	17.171	
2,800.0	2,719.3	2,803.9	2,764.4	12.6	9.6	155.95	262.5	248.9	279.6	263.2	16.44	17.005	
2,900.0	2,815.2	2,903.4	2,861.8	13.2	10.0	155.74	278.6	262.0	289.4	272.2	17.17	16.851	
3,000.0	2,911.0	3,002.9	2,959.1	13.8	10.5	155.54	294.7	275.0	299.2	281.3	17.91	16.708	
3,100.0	3,006.9	3,102.4	3,056.4	14.4	10.9	155.35	310.8	288.1	309.0	290.3	18.64	16.575	
3,200.0	3,102.7	3,201.9	3,153.8	14.9	11.3	155.18	326.9	301.1	318.8	299.4	19.38	16.451	
3,300.0	3,198.6	3,301.5	3,251.1	15.5	11.8	155.01	342.9	314.1	328.6	308.4	20.11	16.335	
3,400.0	3,294.5	3,401.0	3,348.5	16.1	12.2	154.86	359.0	327.2	338.4	317.5	20.85	16.226	
3,500.0	3,390.3	3,500.5	3,445.8	16.7	12.7	154.71	375.1	340.2	348.2	326.6	21.59	16.124	
3,600.0	3,486.2	3,600.0	3,543.1	17.2	13.1	154.57	391.2	353.2	358.0	335.6	22.33	16.028	
3,700.0	3,582.0	3,699.5	3,640.5	17.8	13.6	154.44	407.2	366.3	367.8	344.7	23.08	15.938	
3,800.0	3,677.9	3,799.0	3,737.8	18.4	14.0	154.32	423.3	379.3	377.6	353.8	23.82	15.852	
3,900.0	3,773.7	3,898.5	3,835.2	19.0	14.4	154.20	439.4	392.3	387.4	362.8	24.56	15.772	
4,000.0	3,869.6	3,998.1	3,932.5	19.5	14.9	154.09	455.5	405.4	397.2	371.9	25.31	15.695	
4,100.0	3,965.5	4,097.6	4,029.8	20.1	15.3	153.98	471.5	418.4	407.0	381.0	26.05	15.623	
4,200.0	4,061.3	4,197.1	4,127.2	20.7	15.8	153.88	487.6	431.4	416.8	390.0	26.80	15.554	
4,300.0	4,157.2	4,296.6	4,224.5	21.3	16.2	153.78	503.7	444.5	426.7	399.1	27.55	15.489	
4,400.0	4,253.0	4,396.1	4,321.8	21.8	16.7	153.69	519.8	457.5	436.5	408.2	28.29	15.427	
4,500.0	4,348.9	4,495.6	4,419.2	22.4	17.1	153.60	535.8	470.5	446.3	417.3	29.04	15.368	
4,600.0	4,444.8	4,595.1	4,516.5	23.0	17.6	153.52	551.9	483.6	456.1	426.3	29.79	15.312	
4,700.0	4,540.6	4,694.7	4,613.9	23.6	18.0	153.44	568.0	496.6	465.9	435.4	30.54	15.258	
4,800.0	4,636.5	4,794.2	4,711.2	24.1	18.4	153.36	584.1	509.6	475.8	444.5	31.29	15.207	
4,900.0	4,732.3	4,893.7	4,808.5	24.7	18.9	153.28	600.1	522.7	485.6	453.5	32.04	15.157	
5,000.0	4,828.2	4,993.2	4,905.9	25.3	19.3	153.21	616.2	535.7	495.4	462.6	32.79	15.110	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-214 - 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	
5,100.0	4,924.1	5,092.7	5,003.2	25.9	19.8	153.14	632.3	548.7	505.2	471.7	33.54	15.065	
5,200.0	5,019.9	5,192.2	5,100.6	26.4	20.2	153.08	648.4	561.8	515.0	480.8	34.29	15.022	
5,300.0	5,115.8	5,291.7	5,197.9	27.0	20.7	153.01	664.4	574.8	524.9	489.8	35.04	14.980	
5,400.0	5,211.6	5,391.3	5,295.2	27.6	21.1	152.95	680.5	587.8	534.7	498.9	35.79	14.941	
5,500.0	5,307.5	5,490.8	5,392.6	28.2	21.6	152.89	696.6	600.9	544.5	508.0	36.54	14.902	
5,600.0	5,403.4	5,590.3	5,489.9	28.7	22.0	152.84	712.7	613.9	554.4	517.1	37.29	14.865	
5,700.0	5,499.2	5,689.8	5,587.3	29.3	22.5	152.78	728.8	627.0	564.2	526.1	38.04	14.830	
5,800.0	5,595.1	5,785.6	5,681.0	29.9	22.9	152.74	744.1	639.4	574.1	535.3	38.77	14.809	
5,840.7	5,634.1	5,820.7	5,715.4	30.1	23.0	152.75	749.4	643.7	578.5	539.5	39.01	14.829	
5,900.0	5,691.1	5,871.8	5,765.6	30.4	23.2	152.86	756.5	649.5	585.2	545.8	39.34	14.875	
6,000.0	5,788.0	5,957.7	5,850.6	30.8	23.4	153.06	766.9	657.9	595.7	555.9	39.79	14.970	
6,100.0	5,885.7	6,043.6	5,935.7	31.2	23.6	153.27	775.3	664.7	605.3	565.2	40.17	15.070	
6,200.0	5,984.0	6,129.2	6,021.0	31.5	23.8	153.50	781.6	669.8	614.2	573.7	40.47	15.175	
6,300.0	6,083.0	6,214.8	6,106.3	31.8	24.0	153.75	786.0	673.4	622.2	581.5	40.70	15.286	
6,400.0	6,182.3	6,300.0	6,191.5	32.0	24.1	154.01	788.4	675.3	629.4	588.5	40.86	15.404	
6,500.0	6,282.0	6,389.5	6,281.0	32.2	24.2	154.30	788.9	675.7	635.6	594.7	40.95	15.524	
6,600.0	6,382.0	6,489.5	6,381.0	32.3	24.3	154.49	788.9	675.7	639.4	598.3	41.05	15.575	
6,668.0	6,449.9	6,557.4	6,448.8	32.4	24.4	-179.88	788.9	671.5	640.1	588.5	51.55	12.417	
6,698.0	6,479.9	6,587.0	6,478.1	32.4	24.4	-179.54	788.9	667.7	640.1	588.4	51.71	12.379	
6,700.0	6,481.9	6,589.0	6,480.1	32.4	24.4	-89.51	788.9	667.4	640.1	599.3	40.84	15.673	
6,750.0	6,531.9	6,637.8	6,528.1	32.5	24.3	-88.85	788.9	658.3	640.2	599.6	40.62	15.761	
6,800.0	6,581.6	6,686.2	6,574.8	32.5	24.3	-88.20	788.9	646.1	640.4	600.0	40.35	15.871	
6,850.0	6,630.8	6,734.0	6,620.2	32.5	24.3	-87.56	788.9	630.9	640.7	600.6	40.05	15.998	
6,900.0	6,679.3	6,781.5	6,664.1	32.4	24.2	-86.94	788.9	612.9	641.0	601.3	39.72	16.139	
6,950.0	6,726.8	6,828.5	6,706.4	32.4	24.1	-86.33	788.9	592.3	641.4	602.0	39.38	16.290	
7,000.0	6,773.1	6,875.2	6,746.8	32.3	24.0	-85.74	788.9	569.1	641.9	602.8	39.03	16.444	
7,050.0	6,817.9	6,921.4	6,785.4	32.3	23.9	-85.17	788.9	543.5	642.4	603.7	38.70	16.597	
7,100.0	6,861.2	6,967.4	6,822.0	32.2	23.8	-84.63	788.9	515.8	642.9	604.5	38.40	16.742	
7,150.0	6,902.5	7,013.0	6,856.4	32.1	23.7	-84.11	788.9	485.9	643.5	605.4	38.14	16.871	
7,200.0	6,941.8	7,058.3	6,888.8	32.0	23.5	-83.62	788.9	454.2	644.1	606.2	37.94	16.977	
7,250.0	6,978.9	7,103.3	6,918.8	31.9	23.4	-83.16	788.9	420.7	644.7	606.9	37.81	17.053	
7,300.0	7,013.5	7,150.0	6,947.7	31.7	23.3	-82.71	788.9	384.0	645.3	607.5	37.76	17.089	
7,350.0	7,045.5	7,192.7	6,971.9	31.6	23.2	-82.33	788.9	348.9	645.9	608.1	37.83	17.074	
7,400.0	7,074.8	7,237.0	6,994.9	31.5	23.1	-81.97	788.9	310.9	646.4	608.4	38.01	17.008	
7,450.0	7,101.1	7,281.2	7,015.3	31.4	23.0	-81.65	788.9	271.8	647.0	608.7	38.31	16.886	
7,500.0	7,124.5	7,325.2	7,033.3	31.3	22.9	-81.36	788.9	231.6	647.5	608.7	38.75	16.708	
7,550.0	7,144.7	7,369.0	7,048.7	31.1	22.8	-81.10	788.9	190.6	647.9	608.6	39.33	16.475	
7,600.0	7,161.6	7,412.8	7,061.5	31.0	22.7	-80.89	788.9	148.8	648.3	608.2	40.04	16.192	
7,650.0	7,175.3	7,456.4	7,071.8	30.9	22.7	-80.72	788.9	106.4	648.6	607.7	40.88	15.865	
7,700.0	7,185.5	7,500.0	7,079.4	30.8	22.7	-80.58	788.9	63.5	648.8	607.0	41.85	15.502	
7,750.0	7,192.3	7,543.5	7,084.4	30.7	22.7	-80.49	788.9	20.3	649.0	606.1	42.95	15.110	
7,800.0	7,195.7	7,586.9	7,086.8	30.7	22.9	-80.43	788.9	-23.1	649.1	605.0	44.15	14.702	
7,828.6	7,196.0	7,612.7	7,087.0	30.6	23.1	-80.42	788.9	-48.9	649.1	604.2	44.89	14.459	
7,900.0	7,195.4	7,684.1	7,086.8	30.6	23.9	-80.46	788.9	-120.3	649.1	602.1	46.97	13.820	
8,000.0	7,194.6	7,784.1	7,086.7	30.6	25.6	-80.51	788.9	-220.3	648.9	598.7	50.24	12.916	
8,100.0	7,193.8	7,884.1	7,086.5	31.0	27.5	-80.57	788.9	-320.3	648.8	595.0	53.89	12.040	
8,200.0	7,193.0	7,984.1	7,086.3	32.1	29.6	-80.62	788.9	-420.3	648.7	590.9	57.85	11.215	
8,300.0	7,192.2	8,084.1	7,086.1	33.8	31.8	-80.67	788.9	-520.3	648.6	586.6	62.05	10.454	
8,400.0	7,191.4	8,184.1	7,085.9	35.8	34.0	-80.73	788.9	-620.3	648.6	582.1	66.45	9.760	
8,500.0	7,190.6	8,284.1	7,085.7	38.0	36.4	-80.78	788.9	-720.3	648.5	577.4	71.02	9.131	
8,600.0	7,189.8	8,384.1	7,085.5	40.3	38.8	-80.83	788.9	-820.3	648.4	572.6	75.72	8.563	
8,700.0	7,189.0	8,484.1	7,085.3	42.7	41.3	-80.89	788.9	-920.3	648.3	567.7	80.53	8.050	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-214 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,800.0	7,188.2	8,584.1	7,085.1	45.1	43.8	-80.94	788.9	-1,020.3	648.2	562.7	85.43	7.587	
8,900.0	7,187.4	8,684.1	7,084.9	47.5	46.3	-80.99	788.9	-1,120.3	648.1	557.7	90.41	7.168	
9,000.0	7,186.6	8,784.1	7,084.7	50.0	48.9	-81.05	788.9	-1,220.3	648.0	552.5	95.46	6.788	
9,100.0	7,185.7	8,884.1	7,084.5	52.6	51.4	-81.10	788.9	-1,320.3	647.9	547.3	100.56	6.442	
9,200.0	7,184.9	8,984.1	7,084.3	55.1	54.0	-81.15	788.9	-1,420.2	647.8	542.1	105.72	6.128	
9,300.0	7,184.1	9,084.1	7,084.1	57.7	56.7	-81.21	788.9	-1,520.2	647.7	536.8	110.91	5.840	
9,400.0	7,183.3	9,184.1	7,083.9	60.3	59.3	-81.26	788.9	-1,620.2	647.6	531.5	116.14	5.576	
9,500.0	7,182.5	9,284.1	7,083.7	62.9	62.0	-81.31	788.9	-1,720.2	647.5	526.1	121.40	5.334	
9,600.0	7,181.7	9,384.1	7,083.5	65.5	64.6	-81.37	788.9	-1,820.2	647.4	520.7	126.69	5.110	
9,700.0	7,180.9	9,484.1	7,083.3	68.1	67.3	-81.42	788.9	-1,920.2	647.3	515.3	132.01	4.904	
9,800.0	7,180.1	9,584.1	7,083.2	70.8	70.0	-81.48	788.9	-2,020.2	647.2	509.9	137.34	4.712	
9,900.0	7,179.3	9,684.1	7,083.0	73.5	72.7	-81.53	788.9	-2,120.2	647.1	504.4	142.70	4.535	
10,000.0	7,178.5	9,784.1	7,082.8	76.1	75.4	-81.58	788.9	-2,220.2	647.0	499.0	148.07	4.370	
10,100.0	7,177.7	9,884.1	7,082.6	78.8	78.1	-81.64	788.9	-2,320.2	647.0	493.5	153.46	4.216	
10,200.0	7,176.9	9,984.1	7,082.4	81.5	80.8	-81.69	788.9	-2,420.2	646.9	488.0	158.87	4.072	
10,300.0	7,176.0	10,084.1	7,082.2	84.2	83.5	-81.74	788.9	-2,520.2	646.8	482.5	164.29	3.937	
10,400.0	7,175.2	10,184.1	7,082.0	86.9	86.3	-81.80	788.9	-2,620.2	646.7	477.0	169.72	3.810	
10,500.0	7,174.4	10,284.1	7,081.8	89.6	89.0	-81.85	788.9	-2,720.2	646.6	471.4	175.16	3.692	
10,600.0	7,173.6	10,384.1	7,081.6	92.3	91.7	-81.90	788.9	-2,820.2	646.5	465.9	180.61	3.580	
10,700.0	7,172.8	10,484.1	7,081.4	95.0	94.5	-81.96	788.9	-2,920.2	646.4	460.4	186.07	3.474	
10,800.0	7,172.0	10,584.1	7,081.2	97.8	97.2	-82.01	788.9	-3,020.2	646.3	454.8	191.54	3.374	
10,900.0	7,171.2	10,684.0	7,081.0	100.5	100.0	-82.07	788.9	-3,120.2	646.3	449.2	197.02	3.280	
11,000.0	7,170.4	10,784.0	7,080.8	103.2	102.7	-82.12	788.9	-3,220.2	646.2	443.7	202.50	3.191	
11,100.0	7,169.6	10,884.0	7,080.6	106.0	105.5	-82.17	788.9	-3,320.2	646.1	438.1	207.99	3.106	
11,200.0	7,168.8	10,984.0	7,080.4	108.7	108.2	-82.23	788.9	-3,420.2	646.0	432.5	213.49	3.026	
11,300.0	7,168.0	11,084.0	7,080.2	111.5	111.0	-82.28	788.9	-3,520.2	645.9	426.9	219.00	2.949	
11,400.0	7,167.1	11,184.0	7,080.0	114.2	113.8	-82.33	788.9	-3,620.2	645.8	421.3	224.51	2.877	
11,500.0	7,166.3	11,284.0	7,079.8	117.0	116.5	-82.39	788.9	-3,720.2	645.8	415.7	230.02	2.807	
11,600.0	7,165.5	11,384.0	7,079.6	119.7	119.3	-82.44	788.9	-3,820.2	645.7	410.1	235.54	2.741	
11,700.0	7,164.7	11,484.0	7,079.4	122.5	122.1	-82.50	788.9	-3,920.2	645.6	404.5	241.07	2.678	
11,800.0	7,163.9	11,584.0	7,079.2	125.2	124.8	-82.55	788.9	-4,020.2	645.5	398.9	246.60	2.618	
11,900.0	7,163.1	11,684.0	7,079.0	128.0	127.6	-82.60	788.9	-4,120.2	645.4	393.3	252.13	2.560	
12,000.0	7,162.3	11,784.0	7,078.8	130.7	130.4	-82.66	788.9	-4,220.2	645.4	387.7	257.67	2.505	
12,100.0	7,161.5	11,884.0	7,078.6	133.5	133.2	-82.71	788.9	-4,320.2	645.3	382.1	263.21	2.452	
12,200.0	7,160.7	11,984.0	7,078.4	136.3	135.9	-82.76	788.9	-4,420.2	645.2	376.5	268.76	2.401	
12,300.0	7,159.8	12,084.0	7,078.2	139.0	138.7	-82.82	788.9	-4,520.2	645.1	370.8	274.31	2.352	
12,400.0	7,159.0	12,184.0	7,078.0	141.8	141.5	-82.87	788.9	-4,620.2	645.1	365.2	279.86	2.305	
12,500.0	7,158.2	12,284.0	7,077.8	144.6	144.3	-82.93	788.9	-4,720.2	645.0	359.6	285.42	2.260	
12,600.0	7,157.4	12,384.0	7,077.6	147.3	147.0	-82.98	788.9	-4,820.2	644.9	353.9	290.98	2.216	
12,700.0	7,156.6	12,484.0	7,077.4	150.1	149.8	-83.03	788.9	-4,920.2	644.8	348.3	296.54	2.175	
12,800.0	7,155.8	12,584.0	7,077.2	152.9	152.6	-83.09	788.9	-5,020.2	644.8	342.7	302.11	2.134	
12,900.0	7,155.0	12,684.0	7,077.0	155.7	155.4	-83.14	788.9	-5,120.2	644.7	337.0	307.67	2.095	
13,000.0	7,154.2	12,784.0	7,076.8	158.4	158.2	-83.20	788.9	-5,220.2	644.6	331.4	313.24	2.058	
13,100.0	7,153.3	12,884.0	7,076.6	161.2	161.0	-83.25	788.9	-5,320.2	644.5	325.7	318.82	2.022	
13,200.0	7,152.5	12,984.0	7,076.4	164.0	163.7	-83.30	788.9	-5,420.2	644.5	320.1	324.39	1.987	
13,300.0	7,151.7	13,084.0	7,076.2	166.8	166.5	-83.36	788.9	-5,520.2	644.4	314.4	329.97	1.953	
13,400.0	7,150.9	13,184.0	7,076.0	169.5	169.3	-83.41	788.9	-5,620.1	644.3	308.8	335.55	1.920	
13,500.0	7,150.1	13,284.0	7,075.8	172.3	172.1	-83.47	788.9	-5,720.1	644.3	303.1	341.13	1.889	
13,600.0	7,149.3	13,384.0	7,075.6	175.1	174.9	-83.52	788.9	-5,820.1	644.2	297.5	346.72	1.858	
13,700.0	7,148.5	13,484.0	7,075.4	177.9	177.7	-83.57	788.9	-5,920.1	644.1	291.8	352.30	1.828	
13,800.0	7,147.6	13,584.0	7,075.2	180.7	180.5	-83.63	788.9	-6,020.1	644.1	286.2	357.89	1.800	
13,900.0	7,146.8	13,684.0	7,075.0	183.5	183.3	-83.68	788.9	-6,120.1	644.0	280.5	363.48	1.772	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-214 - 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	
14,000.0	7,146.0	13,784.0	7,074.8	186.2	186.1	-83.74	788.9	-6,220.1	643.9	274.9	369.07	1.745	
14,100.0	7,145.2	13,884.0	7,074.6	189.0	188.9	-83.79	788.9	-6,320.1	643.9	269.2	374.66	1.719	
14,200.0	7,144.4	13,984.0	7,074.3	191.8	191.6	-83.84	788.9	-6,420.1	643.8	263.5	380.26	1.693	
14,300.0	7,143.6	14,084.0	7,074.1	194.6	194.4	-83.90	788.9	-6,520.1	643.7	257.9	385.86	1.668	
14,370.2	7,143.0	14,154.2	7,074.0	196.6	196.4	-83.94	788.9	-6,590.3	643.7	253.9	389.79	1.651 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-234 - 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		
0.0	0.0	0.0	0.0	0.0	0.0	-179.54	-104.9	-0.8	104.9					
100.0	100.0	98.0	98.0	0.1	0.1	-179.54	-104.9	-0.8	104.9	104.7	0.19	545.073		
200.0	200.0	198.0	198.0	0.3	0.3	-179.54	-104.9	-0.8	104.9	104.3	0.64	164.068		
300.0	300.0	298.0	298.0	0.5	0.5	-179.54	-104.9	-0.8	104.9	103.8	1.09	96.341 CC, ES		
400.0	400.0	398.0	398.0	0.8	0.8	155.63	-104.9	-0.8	106.5	105.0	1.54	69.065		
500.0	499.8	497.8	497.8	1.0	1.0	156.70	-104.9	-0.8	111.3	109.3	2.00	55.673		
600.0	599.5	597.3	597.3	1.2	1.2	157.49	-105.1	0.8	119.4	117.0	2.45	48.817		
700.0	698.7	696.4	696.2	1.5	1.4	157.21	-105.6	5.9	130.9	128.0	2.90	45.193		
800.0	797.5	795.0	794.4	1.8	1.6	156.12	-106.4	14.3	145.8	142.4	3.38	43.182		
900.0	895.6	892.8	891.5	2.2	1.9	154.50	-107.5	25.9	164.2	160.3	3.90	42.105		
1,000.0	993.1	989.6	987.2	2.6	2.2	152.58	-109.0	40.7	186.0	181.6	4.48	41.557		
1,100.0	1,089.6	1,085.2	1,081.1	3.1	2.5	150.56	-110.7	58.4	211.5	206.4	5.12	41.295		
1,127.2	1,115.8	1,111.1	1,106.5	3.2	2.6	150.01	-111.2	63.8	219.0	213.7	5.31	41.271		
1,200.0	1,185.5	1,180.8	1,174.6	3.6	2.9	148.90	-112.6	78.2	239.6	233.7	5.83	41.075		
1,300.0	1,281.4	1,276.5	1,268.3	4.1	3.3	147.65	-114.5	98.0	267.9	261.3	6.58	40.719		
1,400.0	1,377.3	1,372.3	1,362.0	4.7	3.7	146.65	-116.5	117.8	296.3	289.0	7.35	40.326		
1,500.0	1,473.1	1,468.0	1,455.6	5.2	4.1	145.81	-118.4	137.6	324.8	316.7	8.13	39.934		
1,600.0	1,569.0	1,563.8	1,549.3	5.8	4.5	145.12	-120.3	157.4	353.4	344.5	8.93	39.560		
1,700.0	1,664.8	1,659.6	1,643.0	6.4	4.9	144.52	-122.3	177.2	382.0	372.2	9.74	39.216		
1,800.0	1,760.7	1,755.3	1,736.6	6.9	5.3	144.01	-124.2	197.0	410.6	400.0	10.56	38.901		
1,900.0	1,856.6	1,851.1	1,830.3	7.5	5.8	143.57	-126.1	216.8	439.2	427.9	11.38	38.613		
2,000.0	1,952.4	1,946.8	1,924.0	8.1	6.2	143.18	-128.1	236.7	467.9	455.7	12.20	38.351		
2,100.0	2,048.3	2,042.6	2,017.6	8.6	6.6	142.83	-130.0	256.5	496.6	483.6	13.03	38.113		
2,200.0	2,144.1	2,138.3	2,111.3	9.2	7.1	142.53	-131.9	276.3	525.3	511.4	13.86	37.896		
2,300.0	2,240.0	2,234.1	2,205.0	9.8	7.5	142.25	-133.8	296.1	554.0	539.3	14.70	37.698		
2,400.0	2,335.9	2,329.9	2,298.6	10.3	7.9	142.00	-135.8	315.9	582.8	567.2	15.53	37.516		
2,500.0	2,431.7	2,425.6	2,392.3	10.9	8.4	141.78	-137.7	335.7	611.5	595.1	16.37	37.350		
2,600.0	2,527.6	2,521.4	2,485.9	11.5	8.8	141.57	-139.6	355.5	640.2	623.0	17.21	37.197		
2,700.0	2,623.4	2,617.1	2,579.6	12.1	9.2	141.39	-141.6	375.3	669.0	650.9	18.05	37.055		
2,800.0	2,719.3	2,712.9	2,673.3	12.6	9.7	141.21	-143.5	395.1	697.7	678.8	18.90	36.924		
2,900.0	2,815.2	2,808.6	2,766.9	13.2	10.1	141.06	-145.4	414.9	726.5	706.8	19.74	36.803		
3,000.0	2,911.0	2,904.4	2,860.6	13.8	10.6	140.91	-147.4	434.7	755.3	734.7	20.58	36.690		
3,100.0	3,006.9	3,000.1	2,954.3	14.4	11.0	140.77	-149.3	454.6	784.0	762.6	21.43	36.585		
3,200.0	3,102.7	3,095.9	3,047.9	14.9	11.4	140.65	-151.2	474.4	812.8	790.5	22.28	36.487		
3,300.0	3,198.6	3,191.7	3,141.6	15.5	11.9	140.53	-153.2	494.2	841.6	818.5	23.12	36.395		
3,400.0	3,294.5	3,287.4	3,235.3	16.1	12.3	140.42	-155.1	514.0	870.4	846.4	23.97	36.309		
3,500.0	3,390.3	3,383.2	3,328.9	16.7	12.8	140.32	-157.0	533.8	899.2	874.3	24.82	36.228		
3,600.0	3,486.2	3,478.9	3,422.6	17.2	13.2	140.22	-158.9	553.6	927.9	902.3	25.67	36.152		
3,700.0	3,582.0	3,574.7	3,516.3	17.8	13.6	140.13	-160.9	573.4	956.7	930.2	26.52	36.080		
3,800.0	3,677.9	3,670.4	3,609.9	18.4	14.1	140.05	-162.8	593.2	985.5	958.1	27.37	36.013		
3,900.0	3,773.7	3,766.2	3,703.6	19.0	14.5	139.97	-164.7	613.0	1,014.3	986.1	28.22	35.948		
4,000.0	3,869.6	3,867.4	3,802.7	19.5	14.9	139.91	-166.7	633.6	1,043.0	1,013.9	29.06	35.894		
4,100.0	3,965.5	3,976.5	3,910.1	20.1	15.3	140.03	-168.6	652.4	1,070.7	1,040.9	29.81	35.911		
4,200.0	4,061.3	4,086.1	4,018.6	20.7	15.6	140.36	-170.0	667.2	1,097.2	1,066.7	30.49	35.983		
4,300.0	4,157.2	4,195.7	4,127.8	21.3	15.8	140.88	-171.1	677.9	1,122.6	1,091.5	31.10	36.094		
4,400.0	4,253.0	4,305.3	4,237.1	21.8	16.0	141.57	-171.7	684.3	1,147.0	1,115.4	31.64	36.251		
4,500.0	4,348.9	4,414.3	4,346.1	22.4	16.2	142.43	-171.9	686.7	1,170.4	1,138.3	32.11	36.454		
4,600.0	4,444.8	4,510.9	4,442.8	23.0	16.3	143.26	-171.9	686.7	1,193.4	1,160.9	32.54	36.677		
4,700.0	4,540.6	4,606.8	4,538.6	23.6	16.4	144.05	-171.9	686.7	1,216.7	1,183.7	32.97	36.899		
4,800.0	4,636.5	4,702.7	4,634.5	24.1	16.5	144.81	-171.9	686.7	1,240.2	1,206.8	33.41	37.125		
4,900.0	4,732.3	4,798.5	4,730.3	24.7	16.6	145.55	-171.9	686.7	1,263.9	1,230.1	33.84	37.355		
5,000.0	4,828.2	4,894.4	4,826.2	25.3	16.8	146.26	-171.9	686.7	1,287.8	1,253.5	34.26	37.587		

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 SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-234 - 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	
5,100.0	4,924.1	4,990.2	4,922.1	25.9	16.9	146.94	-171.9	686.7	1,311.9	1,277.2	34.69	37.821	
5,200.0	5,019.9	5,086.1	5,017.9	26.4	17.0	147.60	-171.9	686.7	1,336.1	1,301.0	35.11	38.056	
5,300.0	5,115.8	5,182.0	5,113.8	27.0	17.1	148.23	-171.9	686.7	1,360.5	1,325.0	35.53	38.292	
5,400.0	5,211.6	5,277.8	5,209.6	27.6	17.3	148.85	-171.9	686.7	1,385.1	1,349.1	35.95	38.527	
5,500.0	5,307.5	5,373.7	5,305.5	28.2	17.4	149.44	-171.9	686.7	1,409.8	1,373.4	36.37	38.762	
5,600.0	5,403.4	5,469.5	5,401.4	28.7	17.6	150.01	-171.9	686.7	1,434.6	1,397.9	36.79	38.996	
5,700.0	5,499.2	5,565.4	5,497.2	29.3	17.7	150.56	-171.9	686.7	1,459.6	1,422.4	37.21	39.229	
5,800.0	5,595.1	5,661.3	5,593.1	29.9	17.8	151.10	-171.9	686.7	1,484.7	1,447.1	37.63	39.460	
5,840.7	5,634.1	5,700.3	5,632.1	30.1	17.9	151.31	-171.9	686.7	1,495.0	1,457.2	37.80	39.554	
5,900.0	5,691.1	5,757.3	5,689.1	30.4	18.0	151.75	-171.9	686.7	1,509.4	1,471.4	38.07	39.650	
6,000.0	5,788.0	5,854.2	5,786.0	30.8	18.1	152.39	-171.9	686.7	1,531.5	1,493.0	38.47	39.808	
6,100.0	5,885.7	5,951.8	5,883.7	31.2	18.3	152.94	-171.9	686.7	1,550.6	1,511.8	38.85	39.915	
6,200.0	5,984.0	6,050.2	5,982.0	31.5	18.4	153.38	-171.9	686.7	1,566.7	1,527.5	39.19	39.972	
6,300.0	6,083.0	6,149.1	6,081.0	31.8	18.6	153.73	-171.9	686.7	1,579.7	1,540.2	39.51	39.982	
6,400.0	6,182.3	6,248.5	6,180.3	32.0	18.7	154.00	-171.9	686.7	1,589.7	1,549.9	39.80	39.947	
6,500.0	6,282.0	6,348.2	6,280.0	32.2	18.9	154.18	-171.9	686.7	1,596.5	1,556.5	40.05	39.867	
6,600.0	6,382.0	6,448.2	6,380.0	32.3	19.0	154.27	-171.9	686.7	1,600.2	1,560.0	40.26	39.743	
6,668.0	6,449.9	6,517.2	6,448.9	32.4	19.1	179.63	-171.9	683.2	1,600.9	1,556.3	44.67	35.841	
6,698.0	6,479.9	6,547.4	6,478.9	32.4	19.1	179.76	-171.9	679.6	1,600.9	1,556.2	44.76	35.766	
6,700.0	6,481.9	6,549.4	6,480.9	32.4	19.1	-90.23	-171.9	679.3	1,600.9	1,560.6	40.34	39.683	
6,747.4	6,529.3	6,596.6	6,527.3	32.5	19.1	-90.00	-171.9	671.1	1,600.9	1,560.6	40.33	39.696	
6,750.0	6,531.9	6,599.1	6,529.8	32.5	19.1	-89.99	-171.9	670.6	1,600.9	1,560.6	40.33	39.697	
6,800.0	6,581.6	6,648.4	6,577.6	32.5	19.1	-89.74	-171.9	658.5	1,600.9	1,560.7	40.26	39.764	
6,850.0	6,630.8	6,697.2	6,624.0	32.5	19.0	-89.50	-171.9	643.4	1,601.0	1,560.8	40.15	39.877	
6,900.0	6,679.3	6,745.5	6,668.8	32.4	19.0	-89.26	-171.9	625.3	1,601.0	1,561.1	40.00	40.029	
6,950.0	6,726.8	6,793.5	6,711.9	32.4	18.9	-89.02	-171.9	604.5	1,601.1	1,561.3	39.82	40.209	
7,000.0	6,773.1	6,841.0	6,753.2	32.3	18.8	-88.79	-171.9	581.0	1,601.3	1,561.6	39.63	40.406	
7,050.0	6,817.9	6,888.2	6,792.6	32.3	18.7	-88.57	-171.9	555.0	1,601.4	1,562.0	39.44	40.607	
7,100.0	6,861.2	6,934.9	6,829.9	32.2	18.7	-88.35	-171.9	526.8	1,601.6	1,562.3	39.26	40.798	
7,150.0	6,902.5	6,981.4	6,865.0	32.1	18.7	-88.14	-171.9	496.4	1,601.8	1,562.7	39.10	40.962	
7,200.0	6,941.8	7,027.5	6,897.8	32.0	18.7	-87.94	-171.9	464.0	1,602.0	1,563.0	39.00	41.081	
7,250.0	6,978.9	7,073.4	6,928.3	31.9	18.7	-87.75	-171.9	429.8	1,602.2	1,563.2	38.95	41.137	
7,300.0	7,013.5	7,118.9	6,956.4	31.7	18.8	-87.57	-171.9	393.9	1,602.4	1,563.4	38.98	41.110	
7,350.0	7,045.5	7,164.2	6,982.0	31.6	18.9	-87.40	-171.9	356.5	1,602.6	1,563.5	39.10	40.986	
7,400.0	7,074.8	7,209.3	7,005.1	31.5	19.1	-87.24	-171.9	317.8	1,602.8	1,563.4	39.33	40.749	
7,450.0	7,101.1	7,254.2	7,025.6	31.4	19.3	-87.10	-171.9	278.0	1,603.0	1,563.3	39.68	40.393	
7,500.0	7,124.5	7,300.0	7,044.0	31.3	19.6	-86.96	-171.9	236.0	1,603.2	1,563.0	40.18	39.905	
7,550.0	7,144.7	7,343.3	7,058.8	31.1	20.0	-86.85	-171.9	195.2	1,603.3	1,562.6	40.79	39.305	
7,600.0	7,161.6	7,387.7	7,071.4	31.0	20.4	-86.74	-171.9	152.7	1,603.5	1,562.0	41.55	38.590	
7,650.0	7,175.3	7,431.9	7,081.4	30.9	20.9	-86.65	-171.9	109.6	1,603.7	1,561.2	42.45	37.781	
7,700.0	7,185.5	7,476.0	7,088.6	30.8	21.5	-86.58	-171.9	66.1	1,603.8	1,560.3	43.46	36.898	
7,750.0	7,192.3	7,520.1	7,093.1	30.7	22.1	-86.52	-171.9	22.3	1,603.9	1,559.3	44.60	35.962	
7,800.0	7,195.7	7,564.0	7,095.0	30.7	22.7	-86.47	-171.9	-21.6	1,604.0	1,558.1	45.83	34.997	
7,828.6	7,196.0	7,591.3	7,095.0	30.6	23.1	-86.46	-171.9	-48.9	1,604.0	1,557.4	46.62	34.408	
7,900.0	7,195.4	7,662.7	7,094.8	30.6	24.3	-86.47	-171.9	-120.3	1,603.9	1,555.1	48.81	32.863	
8,000.0	7,194.6	7,762.7	7,094.5	30.6	26.1	-86.49	-171.9	-220.2	1,603.9	1,551.7	52.20	30.724	
8,100.0	7,193.8	7,862.7	7,094.3	31.0	28.0	-86.51	-171.9	-320.2	1,603.9	1,547.9	55.96	28.662	
8,200.0	7,193.0	7,962.7	7,094.1	32.1	30.1	-86.54	-171.9	-420.2	1,603.8	1,543.8	60.00	26.730	
8,300.0	7,192.2	8,062.7	7,093.8	33.8	32.3	-86.56	-171.9	-520.2	1,603.8	1,539.5	64.28	24.949	
8,400.0	7,191.4	8,162.7	7,093.6	35.8	34.6	-86.58	-171.9	-620.2	1,603.8	1,535.0	68.75	23.326	
8,500.0	7,190.6	8,262.7	7,093.4	38.0	37.0	-86.60	-171.9	-720.2	1,603.7	1,530.4	73.38	21.855	
8,600.0	7,189.8	8,362.7	7,093.1	40.3	39.4	-86.62	-171.9	-820.2	1,603.7	1,525.6	78.14	20.524	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-234 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,700.0	7,189.0	8,462.7	7,092.9	42.7	41.9	-86.64	-171.9	-920.2	1,603.7	1,520.7	83.00	19.321	
8,800.0	7,188.2	8,562.7	7,092.6	45.1	44.4	-86.66	-171.9	-1,020.2	1,603.6	1,515.7	87.96	18.232	
8,900.0	7,187.4	8,662.7	7,092.4	47.5	46.9	-86.68	-171.9	-1,120.2	1,603.6	1,510.6	92.99	17.246	
9,000.0	7,186.6	8,762.7	7,092.2	50.0	49.5	-86.70	-171.9	-1,220.2	1,603.6	1,505.5	98.08	16.350	
9,100.0	7,185.7	8,862.7	7,091.9	52.6	52.1	-86.72	-171.9	-1,320.2	1,603.5	1,500.3	103.22	15.535	
9,200.0	7,184.9	8,962.7	7,091.7	55.1	54.7	-86.74	-171.9	-1,420.2	1,603.5	1,495.1	108.41	14.791	
9,300.0	7,184.1	9,062.7	7,091.4	57.7	57.4	-86.76	-171.9	-1,520.2	1,603.5	1,489.8	113.65	14.109	
9,400.0	7,183.3	9,162.7	7,091.2	60.3	60.0	-86.78	-171.9	-1,620.2	1,603.5	1,484.5	118.91	13.484	
9,500.0	7,182.5	9,262.7	7,090.9	62.9	62.7	-86.80	-171.9	-1,720.2	1,603.4	1,479.2	124.21	12.909	
9,600.0	7,181.7	9,362.7	7,090.7	65.5	65.4	-86.82	-171.9	-1,820.2	1,603.4	1,473.9	129.53	12.378	
9,700.0	7,180.9	9,462.6	7,090.5	68.1	68.1	-86.84	-171.9	-1,920.2	1,603.4	1,468.5	134.88	11.887	
9,800.0	7,180.1	9,562.6	7,090.2	70.8	70.8	-86.86	-171.9	-2,020.2	1,603.3	1,463.1	140.25	11.432	
9,900.0	7,179.3	9,662.6	7,090.0	73.5	73.5	-86.88	-171.9	-2,120.2	1,603.3	1,457.7	145.64	11.009	
10,000.0	7,178.5	9,762.6	7,089.7	76.1	76.2	-86.90	-171.9	-2,220.2	1,603.3	1,452.2	151.04	10.615	
10,100.0	7,177.7	9,862.6	7,089.5	78.8	78.9	-86.92	-171.9	-2,320.2	1,603.2	1,446.8	156.46	10.247	
10,200.0	7,176.9	9,962.6	7,089.3	81.5	81.6	-86.94	-171.9	-2,420.2	1,603.2	1,441.3	161.89	9.903	
10,300.0	7,176.0	10,062.6	7,089.0	84.2	84.3	-86.96	-171.9	-2,520.2	1,603.2	1,435.8	167.33	9.581	
10,400.0	7,175.2	10,162.6	7,088.8	86.9	87.1	-86.98	-171.9	-2,620.2	1,603.2	1,430.4	172.79	9.278	
10,500.0	7,174.4	10,262.6	7,088.5	89.6	89.8	-87.00	-171.9	-2,720.2	1,603.1	1,424.9	178.25	8.994	
10,600.0	7,173.6	10,362.6	7,088.3	92.3	92.6	-87.02	-171.9	-2,820.2	1,603.1	1,419.4	183.73	8.725	
10,700.0	7,172.8	10,462.6	7,088.0	95.0	95.3	-87.04	-171.9	-2,920.2	1,603.1	1,413.9	189.21	8.472	
10,800.0	7,172.0	10,562.6	7,087.8	97.8	98.1	-87.06	-171.9	-3,020.2	1,603.0	1,408.3	194.70	8.233	
10,900.0	7,171.2	10,662.6	7,087.5	100.5	100.8	-87.08	-171.9	-3,120.2	1,603.0	1,402.8	200.20	8.007	
11,000.0	7,170.4	10,762.6	7,087.3	103.2	103.6	-87.10	-171.9	-3,220.2	1,603.0	1,397.3	205.70	7.793	
11,100.0	7,169.6	10,862.6	7,087.0	106.0	106.3	-87.12	-171.9	-3,320.2	1,603.0	1,391.7	211.21	7.589	
11,200.0	7,168.8	10,962.6	7,086.8	108.7	109.1	-87.14	-171.9	-3,420.2	1,602.9	1,386.2	216.72	7.396	
11,300.0	7,168.0	11,062.6	7,086.6	111.5	111.9	-87.16	-171.9	-3,520.1	1,602.9	1,380.7	222.24	7.212	
11,400.0	7,167.1	11,162.6	7,086.3	114.2	114.6	-87.18	-171.9	-3,620.1	1,602.9	1,375.1	227.77	7.037	
11,500.0	7,166.3	11,262.6	7,086.1	117.0	117.4	-87.20	-172.0	-3,720.1	1,602.9	1,369.6	233.30	6.870	
11,600.0	7,165.5	11,362.6	7,085.8	119.7	120.2	-87.22	-172.0	-3,820.1	1,602.8	1,364.0	238.83	6.711	
11,700.0	7,164.7	11,462.6	7,085.6	122.5	123.0	-87.24	-172.0	-3,920.1	1,602.8	1,358.4	244.37	6.559	
11,800.0	7,163.9	11,562.6	7,085.3	125.2	125.7	-87.26	-172.0	-4,020.1	1,602.8	1,352.9	249.91	6.413	
11,900.0	7,163.1	11,662.6	7,085.1	128.0	128.5	-87.28	-172.0	-4,120.1	1,602.7	1,347.3	255.46	6.274	
11,909.2	7,163.0	11,671.8	7,085.1	128.2	128.8	-87.28	-172.0	-4,129.3	1,602.7	1,346.8	255.96	6.262	
12,000.0	7,162.3	11,692.6	7,085.0	130.7	129.3	-87.29	-172.0	-4,150.1	1,604.3	1,345.2	259.06	6.193	
12,100.0	7,161.5	11,692.6	7,085.0	133.5	129.3	-87.29	-172.0	-4,150.1	1,611.7	1,349.9	261.83	6.156	
12,200.0	7,160.7	11,692.6	7,085.0	136.3	129.3	-87.29	-172.0	-4,150.1	1,625.3	1,360.7	264.60	6.142 SF	
12,300.0	7,159.8	11,692.6	7,085.0	139.0	129.3	-87.29	-172.0	-4,150.1	1,644.8	1,377.4	267.37	6.152	
12,400.0	7,159.0	11,692.6	7,085.0	141.8	129.3	-87.29	-172.0	-4,150.1	1,670.1	1,400.0	270.14	6.182	
12,500.0	7,158.2	11,692.6	7,085.0	144.6	129.3	-87.29	-172.0	-4,150.1	1,700.9	1,428.0	272.92	6.232	
12,600.0	7,157.4	11,692.6	7,085.0	147.3	129.3	-87.29	-172.0	-4,150.1	1,737.0	1,461.3	275.70	6.300	
12,700.0	7,156.6	11,692.6	7,085.0	150.1	129.3	-87.29	-172.0	-4,150.1	1,777.9	1,499.5	278.47	6.385	
12,800.0	7,155.8	11,692.6	7,085.0	152.9	129.3	-87.29	-172.0	-4,150.1	1,823.4	1,542.2	281.25	6.483	
12,900.0	7,155.0	11,692.6	7,085.0	155.7	129.3	-87.29	-172.0	-4,150.1	1,873.2	1,589.2	284.03	6.595	
13,000.0	7,154.2	11,692.6	7,085.0	158.4	129.3	-87.29	-172.0	-4,150.1	1,926.9	1,640.0	286.81	6.718	
13,100.0	7,153.3	11,692.6	7,085.0	161.2	129.3	-87.29	-172.0	-4,150.1	1,984.1	1,694.5	289.59	6.851	
13,200.0	7,152.5	11,692.6	7,085.0	164.0	129.3	-87.29	-172.0	-4,150.1	2,044.7	1,752.3	292.37	6.993	
13,300.0	7,151.7	11,692.6	7,085.0	166.8	129.3	-87.29	-172.0	-4,150.1	2,108.2	1,813.0	295.16	7.143	
13,400.0	7,150.9	11,692.6	7,085.0	169.5	129.3	-87.29	-172.0	-4,150.1	2,174.5	1,876.6	297.94	7.298	
13,500.0	7,150.1	11,692.6	7,085.0	172.3	129.3	-87.29	-172.0	-4,150.1	2,243.3	1,942.6	300.72	7.460	
13,600.0	7,149.3	11,692.6	7,085.0	175.1	129.3	-87.29	-172.0	-4,150.1	2,314.4	2,010.9	303.51	7.625	
13,700.0	7,148.5	11,692.6	7,085.0	177.9	129.3	-87.29	-172.0	-4,150.1	2,387.5	2,081.2	306.30	7.795	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-234 - 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
13,800.0	7,147.6	11,692.6	7,085.0	180.7	129.3	-87.29	-172.0	-4,150.1	2,462.5	2,153.5	309.08	7.967	
13,900.0	7,146.8	11,692.6	7,085.0	183.5	129.3	-87.29	-172.0	-4,150.1	2,539.3	2,227.4	311.87	8.142	
14,000.0	7,146.0	11,692.6	7,085.0	186.2	129.3	-87.29	-172.0	-4,150.1	2,617.6	2,303.0	314.66	8.319	
14,100.0	7,145.2	11,692.6	7,085.0	189.0	129.3	-87.29	-172.0	-4,150.1	2,697.4	2,379.9	317.44	8.497	
14,200.0	7,144.4	11,692.6	7,085.0	191.8	129.3	-87.29	-172.0	-4,150.1	2,778.4	2,458.2	320.23	8.676	
14,300.0	7,143.6	11,692.6	7,085.0	194.6	129.3	-87.29	-172.0	-4,150.1	2,860.7	2,537.7	323.02	8.856	
14,370.2	7,143.0	11,692.6	7,085.0	196.6	129.3	-87.29	-172.0	-4,150.1	2,919.1	2,594.2	324.98	8.983	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-179.47	-60.1	-0.6	60.1				
100.0	100.0	98.0	98.0	0.1	0.1	-179.47	-60.1	-0.6	60.1	59.9	0.19	312.309	
200.0	200.0	198.0	198.0	0.3	0.3	-179.47	-60.1	-0.6	60.1	59.5	0.64	94.006	
300.0	300.0	298.0	298.0	0.5	0.5	-179.47	-60.1	-0.6	60.1	59.0	1.09	55.201 CC, ES	
400.0	400.0	398.0	398.0	0.8	0.8	155.98	-60.1	-0.6	61.7	60.2	1.54	40.013	
500.0	499.8	497.8	497.8	1.0	1.0	157.78	-60.1	-0.6	66.5	64.5	2.00	33.274	
600.0	599.5	597.5	597.5	1.2	1.2	160.26	-60.1	-0.6	74.7	72.2	2.46	30.367	
700.0	698.7	696.7	696.7	1.5	1.4	162.92	-60.1	-0.6	86.2	83.3	2.92	29.533	
800.0	797.5	798.3	798.2	1.8	1.7	164.95	-58.9	0.7	100.0	96.6	3.38	29.585	
900.0	895.6	900.3	900.2	2.2	1.9	165.86	-55.3	4.5	114.3	110.4	3.84	29.775	
1,000.0	993.1	1,002.8	1,002.2	2.6	2.1	166.00	-49.1	11.0	129.1	124.7	4.31	29.920	
1,100.0	1,089.6	1,105.6	1,104.3	3.1	2.4	165.60	-40.3	20.2	144.3	139.5	4.81	29.973	
1,127.2	1,115.8	1,133.7	1,132.1	3.2	2.5	165.42	-37.5	23.2	148.5	143.5	4.96	29.956	
1,200.0	1,185.5	1,209.0	1,206.3	3.6	2.7	164.78	-29.0	32.1	159.1	153.7	5.36	29.659	
1,300.0	1,281.4	1,312.4	1,307.7	4.1	3.0	163.40	-15.1	46.6	171.2	165.2	5.97	28.683	
1,400.0	1,377.3	1,411.6	1,404.8	4.7	3.4	161.97	-0.9	61.5	182.2	175.6	6.60	27.600	
1,500.0	1,473.1	1,510.9	1,501.9	5.2	3.8	160.71	13.4	76.5	193.4	186.2	7.27	26.611	
1,600.0	1,569.0	1,610.2	1,599.1	5.8	4.2	159.59	27.6	91.4	204.7	196.8	7.95	25.737	
1,700.0	1,664.8	1,709.5	1,696.2	6.4	4.6	158.58	41.9	106.3	216.1	207.4	8.66	24.948	
1,800.0	1,760.7	1,808.8	1,793.3	6.9	5.0	157.68	56.1	121.3	227.5	218.1	9.38	24.243	
1,900.0	1,856.6	1,908.1	1,890.4	7.5	5.4	156.86	70.3	136.2	238.9	228.8	10.12	23.614	
2,000.0	1,952.4	2,007.4	1,987.5	8.1	5.8	156.12	84.6	151.1	250.4	239.5	10.86	23.049	
2,100.0	2,048.3	2,106.7	2,084.7	8.6	6.3	155.44	98.8	166.1	261.9	250.3	11.62	22.541	
2,200.0	2,144.1	2,205.9	2,181.8	9.2	6.7	154.82	113.1	181.0	273.5	261.1	12.39	22.083	
2,300.0	2,240.0	2,305.2	2,278.9	9.8	7.1	154.25	127.3	195.9	285.1	271.9	13.16	21.668	
2,400.0	2,335.9	2,404.5	2,376.0	10.3	7.6	153.72	141.6	210.9	296.7	282.8	13.94	21.291	
2,500.0	2,431.7	2,503.8	2,473.1	10.9	8.0	153.23	155.8	225.8	308.4	293.7	14.72	20.948	
2,600.0	2,527.6	2,603.1	2,570.2	11.5	8.4	152.78	170.1	240.7	320.0	304.5	15.51	20.634	
2,700.0	2,623.4	2,702.4	2,667.4	12.1	8.9	152.36	184.3	255.7	331.7	315.4	16.30	20.347	
2,800.0	2,719.3	2,801.7	2,764.5	12.6	9.3	151.97	198.5	270.6	343.4	326.3	17.10	20.082	
2,900.0	2,815.2	2,900.9	2,861.6	13.2	9.7	151.61	212.8	285.5	355.1	337.2	17.90	19.838	
3,000.0	2,911.0	3,000.2	2,958.7	13.8	10.2	151.27	227.0	300.5	366.9	348.2	18.71	19.613	
3,100.0	3,006.9	3,099.5	3,055.8	14.4	10.6	150.95	241.3	315.4	378.6	359.1	19.51	19.404	
3,200.0	3,102.7	3,198.8	3,153.0	14.9	11.1	150.65	255.5	330.3	390.4	370.0	20.32	19.210	
3,300.0	3,198.6	3,298.1	3,250.1	15.5	11.5	150.36	269.8	345.3	402.1	381.0	21.13	19.029	
3,400.0	3,294.5	3,397.4	3,347.2	16.1	11.9	150.09	284.0	360.2	413.9	392.0	21.95	18.860	
3,500.0	3,390.3	3,496.7	3,444.3	16.7	12.4	149.84	298.3	375.1	425.7	402.9	22.76	18.702	
3,600.0	3,486.2	3,596.0	3,541.4	17.2	12.8	149.60	312.5	390.1	437.5	413.9	23.58	18.554	
3,700.0	3,582.0	3,695.2	3,638.5	17.8	13.3	149.38	326.7	405.0	449.3	424.9	24.40	18.415	
3,800.0	3,677.9	3,794.5	3,735.7	18.4	13.7	149.16	341.0	420.0	461.1	435.8	25.22	18.284	
3,900.0	3,773.7	3,893.8	3,832.8	19.0	14.2	148.96	355.2	434.9	472.9	446.8	26.04	18.161	
4,000.0	3,869.6	3,993.1	3,929.9	19.5	14.6	148.76	369.5	449.8	484.7	457.8	26.86	18.045	
4,100.0	3,965.5	4,092.4	4,027.0	20.1	15.0	148.58	383.7	464.8	496.5	468.8	27.68	17.935	
4,200.0	4,061.3	4,191.7	4,124.1	20.7	15.5	148.40	398.0	479.7	508.3	479.8	28.51	17.831	
4,300.0	4,157.2	4,291.0	4,221.3	21.3	15.9	148.23	412.2	494.6	520.1	490.8	29.33	17.733	
4,400.0	4,253.0	4,390.2	4,318.4	21.8	16.4	148.07	426.5	509.6	532.0	501.8	30.16	17.639	
4,500.0	4,348.9	4,489.5	4,415.5	22.4	16.8	147.92	440.7	524.5	543.8	512.8	30.99	17.550	
4,600.0	4,444.8	4,588.8	4,512.6	23.0	17.3	147.77	455.0	539.4	555.7	523.8	31.81	17.466	
4,700.0	4,540.6	4,688.1	4,609.7	23.6	17.7	147.63	469.2	554.4	567.5	534.9	32.64	17.386	
4,800.0	4,636.5	4,787.4	4,706.8	24.1	18.2	147.50	483.4	569.3	579.3	545.9	33.47	17.309	
4,900.0	4,732.3	4,886.7	4,804.0	24.7	18.6	147.37	497.7	584.2	591.2	556.9	34.30	17.236	
5,000.0	4,828.2	4,986.0	4,901.1	25.3	19.0	147.24	511.9	599.2	603.0	567.9	35.13	17.166	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-304 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	4,924.1	5,085.3	4,998.2	25.9	19.5	147.12	526.2	614.1	614.9	578.9	35.96	17.099	
5,200.0	5,019.9	5,184.5	5,095.3	26.4	19.9	147.00	540.4	629.0	626.8	590.0	36.79	17.035	
5,300.0	5,115.8	5,276.5	5,185.4	27.0	20.3	146.94	553.3	642.5	639.0	601.4	37.55	17.017	
5,400.0	5,211.6	5,363.9	5,271.4	27.6	20.6	147.06	563.7	653.5	652.9	614.7	38.16	17.108	
5,500.0	5,307.5	5,450.6	5,357.2	28.2	20.8	147.36	572.4	662.5	668.6	629.9	38.68	17.284	
5,600.0	5,403.4	5,536.6	5,442.7	28.7	21.0	147.82	579.1	669.6	686.1	647.0	39.12	17.539	
5,700.0	5,499.2	5,621.7	5,527.5	29.3	21.2	148.42	584.1	674.8	705.4	666.0	39.48	17.870	
5,800.0	5,595.1	5,700.0	5,605.6	29.9	21.4	149.09	587.1	678.0	726.7	687.0	39.77	18.271	
5,840.7	5,634.1	5,739.7	5,645.3	30.1	21.4	149.47	588.1	679.0	735.9	696.0	39.86	18.464	
5,900.0	5,691.1	5,788.9	5,694.5	30.4	21.5	150.09	588.8	679.7	749.4	709.4	39.96	18.756	
6,000.0	5,788.0	5,880.4	5,786.0	30.8	21.6	151.15	588.9	679.8	771.0	731.0	40.04	19.256	
6,100.0	5,885.7	5,978.1	5,883.7	31.2	21.7	152.08	588.9	679.8	789.9	749.8	40.14	19.678	
6,200.0	5,984.0	6,076.4	5,982.0	31.5	21.8	152.82	588.9	679.8	805.9	765.7	40.27	20.014	
6,300.0	6,083.0	6,175.4	6,081.0	31.8	22.0	153.40	588.9	679.8	818.9	778.5	40.40	20.269	
6,400.0	6,182.3	6,274.7	6,180.3	32.0	22.1	153.83	588.9	679.8	828.9	788.3	40.55	20.443	
6,500.0	6,282.0	6,374.4	6,280.0	32.2	22.2	154.12	588.9	679.8	835.7	795.0	40.69	20.539	
6,600.0	6,382.0	6,474.4	6,380.0	32.3	22.4	154.28	588.9	679.8	839.4	798.6	40.83	20.559	
6,668.0	6,449.9	6,542.3	6,447.9	32.4	22.5	179.52	588.9	679.8	840.1	791.1	49.03	17.137	
6,698.0	6,479.9	6,572.3	6,477.9	32.4	22.5	179.52	588.9	679.8	840.1	791.0	49.10	17.111	
6,700.0	6,481.9	6,574.4	6,480.0	32.4	22.5	-90.48	588.9	679.8	840.1	799.1	41.02	20.482	
6,750.0	6,531.9	6,624.9	6,530.4	32.5	22.5	-90.49	588.9	678.1	840.1	799.0	41.12	20.431	
6,800.0	6,581.6	6,675.4	6,580.6	32.5	22.6	-90.49	588.9	672.7	840.1	799.0	41.16	20.411	
6,850.0	6,630.8	6,725.9	6,630.3	32.5	22.6	-90.50	588.9	663.8	840.1	799.0	41.14	20.420	
6,900.0	6,679.3	6,776.4	6,679.3	32.4	22.5	-90.50	588.9	651.5	840.1	799.1	41.07	20.456	
6,950.0	6,726.8	6,826.9	6,727.3	32.4	22.5	-90.50	588.9	635.7	840.1	799.2	40.95	20.516	
7,000.0	6,773.1	6,877.4	6,774.0	32.3	22.4	-90.49	588.9	616.6	840.1	799.3	40.79	20.596	
7,050.0	6,817.9	6,927.9	6,819.3	32.3	22.3	-90.49	588.9	594.3	840.1	799.5	40.61	20.690	
7,100.0	6,861.2	6,978.4	6,862.9	32.2	22.2	-90.48	588.9	568.8	840.1	799.7	40.41	20.792	
7,150.0	6,902.5	7,028.9	6,904.6	32.1	22.1	-90.46	588.9	540.3	840.1	799.9	40.21	20.894	
7,200.0	6,941.8	7,079.4	6,944.1	32.0	22.0	-90.45	588.9	508.9	840.1	800.1	40.03	20.986	
7,250.0	6,978.9	7,129.8	6,981.3	31.9	21.8	-90.44	588.9	474.9	840.1	800.2	39.90	21.058	
7,300.0	7,013.5	7,180.3	7,016.1	31.7	21.7	-90.42	588.9	438.3	840.1	800.3	39.82	21.098	
7,350.0	7,045.5	7,230.7	7,048.1	31.6	21.6	-90.40	588.9	399.4	840.1	800.3	39.83	21.093	
7,400.0	7,074.8	7,281.1	7,077.4	31.5	21.5	-90.38	588.9	358.4	840.1	800.2	39.94	21.032	
7,450.0	7,101.1	7,331.5	7,103.6	31.4	21.4	-90.35	588.9	315.4	840.1	799.9	40.18	20.907	
7,500.0	7,124.5	7,381.8	7,126.8	31.3	21.4	-90.33	588.9	270.7	840.1	799.6	40.56	20.712	
7,550.0	7,144.7	7,432.1	7,146.8	31.1	21.4	-90.30	588.9	224.6	840.1	799.0	41.09	20.444	
7,600.0	7,161.6	7,482.4	7,163.4	31.0	21.4	-90.27	588.9	177.1	840.1	798.3	41.78	20.107	
7,650.0	7,175.3	7,532.7	7,176.7	30.9	21.6	-90.24	588.9	128.7	840.1	797.5	42.63	19.707	
7,700.0	7,185.5	7,582.9	7,186.6	30.8	21.8	-90.21	588.9	79.4	840.1	796.5	43.63	19.255	
7,750.0	7,192.3	7,633.1	7,193.0	30.7	22.2	-90.18	588.9	29.6	840.1	795.3	44.77	18.765	
7,800.0	7,195.7	7,683.3	7,195.8	30.7	22.7	-90.15	588.9	-20.4	840.1	794.1	46.04	18.248	
7,825.8	7,196.0	7,709.2	7,196.0	30.6	23.0	-90.13	588.9	-46.3	840.1	793.4	46.74	17.974	
7,828.6	7,196.0	7,712.0	7,196.0	30.6	23.0	-90.13	588.9	-49.1	840.1	793.3	46.82	17.944	
7,900.0	7,195.4	7,783.3	7,195.7	30.6	24.0	-90.15	588.9	-120.5	840.1	791.2	48.94	17.167	
8,000.0	7,194.6	7,883.3	7,195.2	30.6	25.7	-90.18	588.9	-220.5	840.1	787.9	52.26	16.076	
8,100.0	7,193.8	7,983.3	7,194.8	31.0	27.6	-90.21	588.9	-320.5	840.1	784.2	55.94	15.017	
8,200.0	7,193.0	8,083.3	7,194.4	32.1	29.7	-90.23	588.9	-420.5	840.1	780.2	59.94	14.016	
8,300.0	7,192.2	8,183.3	7,194.0	33.8	31.9	-90.26	588.9	-520.5	840.1	775.9	64.18	13.090	
8,400.0	7,191.4	8,283.3	7,193.6	35.8	34.2	-90.29	588.9	-620.5	840.1	771.5	68.62	12.243	
8,500.0	7,190.6	8,383.3	7,193.2	38.0	36.5	-90.31	588.9	-720.5	840.1	766.9	73.22	11.473	
8,600.0	7,189.8	8,483.3	7,192.8	40.3	38.9	-90.34	588.9	-820.5	840.1	762.2	77.96	10.777	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
8,700.0	7,189.0	8,583.3	7,192.4	42.7	41.4	-90.37	588.9	-920.5	840.1	757.3	82.80	10.146	
8,800.0	7,188.2	8,683.3	7,191.9	45.1	43.9	-90.39	588.9	-1,020.5	840.1	752.4	87.74	9.575	
8,900.0	7,187.4	8,783.3	7,191.5	47.5	46.4	-90.42	588.9	-1,120.5	840.1	747.4	92.76	9.057	
9,000.0	7,186.6	8,883.3	7,191.1	50.0	49.0	-90.45	588.9	-1,220.5	840.1	742.3	97.84	8.587	
9,100.0	7,185.7	8,983.3	7,190.7	52.6	51.6	-90.47	588.9	-1,320.5	840.1	737.2	102.98	8.159	
9,200.0	7,184.9	9,083.3	7,190.3	55.1	54.2	-90.50	588.9	-1,420.5	840.1	732.0	108.16	7.767	
9,300.0	7,184.1	9,183.3	7,189.9	57.7	56.8	-90.53	588.9	-1,520.5	840.1	726.8	113.39	7.409	
9,400.0	7,183.3	9,283.3	7,189.5	60.3	59.4	-90.55	588.9	-1,620.5	840.1	721.5	118.65	7.081	
9,500.0	7,182.5	9,383.3	7,189.0	62.9	62.1	-90.58	588.9	-1,720.5	840.2	716.2	123.94	6.779	
9,600.0	7,181.7	9,483.3	7,188.6	65.5	64.8	-90.61	588.9	-1,820.5	840.2	710.9	129.26	6.500	
9,700.0	7,180.9	9,583.3	7,188.2	68.1	67.4	-90.64	588.9	-1,920.5	840.2	705.6	134.61	6.242	
9,800.0	7,180.1	9,683.3	7,187.8	70.8	70.1	-90.66	588.9	-2,020.5	840.2	700.2	139.97	6.002	
9,900.0	7,179.3	9,783.3	7,187.4	73.5	72.8	-90.69	588.9	-2,120.5	840.2	694.8	145.36	5.780	
10,000.0	7,178.5	9,883.3	7,187.0	76.1	75.5	-90.72	588.9	-2,220.5	840.2	689.4	150.76	5.573	
10,100.0	7,177.7	9,983.3	7,186.6	78.8	78.3	-90.74	588.9	-2,320.5	840.2	684.0	156.18	5.380	
10,200.0	7,176.9	10,083.3	7,186.2	81.5	81.0	-90.77	588.9	-2,420.5	840.2	678.6	161.61	5.199	
10,300.0	7,176.0	10,183.3	7,185.7	84.2	83.7	-90.80	588.9	-2,520.5	840.2	673.1	167.05	5.029	
10,400.0	7,175.2	10,283.3	7,185.3	86.9	86.4	-90.82	588.9	-2,620.5	840.2	667.7	172.51	4.870	
10,500.0	7,174.4	10,383.3	7,184.9	89.6	89.2	-90.85	588.9	-2,720.5	840.2	662.2	177.97	4.721	
10,600.0	7,173.6	10,483.3	7,184.5	92.3	91.9	-90.88	588.9	-2,820.5	840.2	656.8	183.45	4.580	
10,700.0	7,172.8	10,583.3	7,184.1	95.0	94.7	-90.91	588.9	-2,920.4	840.2	651.3	188.93	4.447	
10,800.0	7,172.0	10,683.3	7,183.7	97.8	97.4	-90.93	588.9	-3,020.4	840.2	645.8	194.42	4.322	
10,900.0	7,171.2	10,783.3	7,183.3	100.5	100.2	-90.96	588.9	-3,120.4	840.2	640.3	199.91	4.203	
11,000.0	7,170.4	10,883.3	7,182.9	103.2	102.9	-90.99	588.9	-3,220.4	840.2	634.8	205.42	4.090	
11,100.0	7,169.6	10,983.3	7,182.4	106.0	105.7	-91.01	588.9	-3,320.4	840.2	629.3	210.93	3.984	
11,200.0	7,168.8	11,083.3	7,182.0	108.7	108.4	-91.04	588.9	-3,420.4	840.2	623.8	216.44	3.882	
11,300.0	7,168.0	11,183.3	7,181.6	111.5	111.2	-91.07	588.9	-3,520.4	840.2	618.3	221.96	3.786	
11,400.0	7,167.1	11,283.3	7,181.2	114.2	114.0	-91.10	588.9	-3,620.4	840.3	612.8	227.48	3.694	
11,500.0	7,166.3	11,383.3	7,180.8	117.0	116.7	-91.12	588.9	-3,720.4	840.3	607.3	233.01	3.606	
11,600.0	7,165.5	11,483.3	7,180.4	119.7	119.5	-91.15	588.9	-3,820.4	840.3	601.7	238.54	3.523	
11,700.0	7,164.7	11,583.3	7,180.0	122.5	122.3	-91.18	588.9	-3,920.4	840.3	596.2	244.08	3.443	
11,800.0	7,163.9	11,683.3	7,179.6	125.2	125.0	-91.20	588.9	-4,020.4	840.3	590.7	249.62	3.366	
11,900.0	7,163.1	11,783.3	7,179.1	128.0	127.8	-91.23	588.9	-4,120.4	840.3	585.1	255.16	3.293	
12,000.0	7,162.3	11,883.3	7,178.7	130.7	130.6	-91.26	588.9	-4,220.4	840.3	579.6	260.71	3.223	
12,100.0	7,161.5	11,983.3	7,178.3	133.5	133.4	-91.29	588.9	-4,320.4	840.3	574.1	266.26	3.156	
12,200.0	7,160.7	12,083.3	7,177.9	136.3	136.1	-91.31	588.9	-4,420.4	840.3	568.5	271.81	3.092	
12,300.0	7,159.8	12,183.3	7,177.5	139.0	138.9	-91.34	588.9	-4,520.4	840.3	563.0	277.36	3.030	
12,400.0	7,159.0	12,283.3	7,177.1	141.8	141.7	-91.37	588.9	-4,620.4	840.3	557.4	282.92	2.970	
12,500.0	7,158.2	12,383.3	7,176.7	144.6	144.5	-91.40	588.9	-4,720.4	840.3	551.9	288.47	2.913	
12,600.0	7,157.4	12,483.3	7,176.3	147.3	147.3	-91.42	588.9	-4,820.4	840.4	546.3	294.03	2.858	
12,700.0	7,156.6	12,583.3	7,175.9	150.1	150.0	-91.45	588.9	-4,920.4	840.4	540.8	299.60	2.805	
12,800.0	7,155.8	12,683.3	7,175.4	152.9	152.8	-91.48	588.9	-5,020.4	840.4	535.2	305.16	2.754	
12,900.0	7,155.0	12,783.3	7,175.0	155.7	155.6	-91.50	588.9	-5,120.4	840.4	529.7	310.73	2.705	
13,000.0	7,154.2	12,883.3	7,174.6	158.4	158.4	-91.53	588.9	-5,220.4	840.4	524.1	316.29	2.657	
13,100.0	7,153.3	12,983.3	7,174.2	161.2	161.2	-91.56	588.9	-5,320.4	840.4	518.5	321.86	2.611	
13,200.0	7,152.5	13,083.3	7,173.8	164.0	164.0	-91.59	588.9	-5,420.4	840.4	513.0	327.43	2.567	
13,300.0	7,151.7	13,183.3	7,173.4	166.8	166.8	-91.61	588.9	-5,520.4	840.4	507.4	333.00	2.524	
13,400.0	7,150.9	13,283.3	7,173.0	169.5	169.5	-91.64	588.9	-5,620.4	840.4	501.9	338.57	2.482	
13,500.0	7,150.1	13,383.3	7,172.6	172.3	172.3	-91.67	588.9	-5,720.4	840.4	496.3	344.15	2.442	
13,600.0	7,149.3	13,483.3	7,172.2	175.1	175.1	-91.70	588.9	-5,820.4	840.5	490.7	349.72	2.403	
13,700.0	7,148.5	13,583.3	7,171.8	177.9	177.9	-91.72	588.9	-5,920.4	840.5	485.2	355.30	2.366	
13,800.0	7,147.6	13,683.3	7,171.3	180.7	180.7	-91.75	588.9	-6,020.4	840.5	479.6	360.87	2.329	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-304 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis			Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
13,900.0	7,146.8	13,783.3	7,170.9	183.5	183.5	-91.78	588.9	-6,120.4	840.5	474.0	366.45	2.294	
14,000.0	7,146.0	13,883.3	7,170.5	186.2	186.3	-91.81	588.9	-6,220.4	840.5	468.5	372.03	2.259	
14,100.0	7,145.2	13,983.3	7,170.1	189.0	189.1	-91.83	588.9	-6,320.4	840.5	462.9	377.61	2.226	
14,200.0	7,144.4	14,083.3	7,169.7	191.8	191.9	-91.86	588.9	-6,420.4	840.5	457.3	383.18	2.194	
14,300.0	7,143.6	14,183.3	7,169.3	194.6	194.7	-91.89	588.9	-6,520.4	840.5	451.8	388.77	2.162	
14,370.2	7,143.0	14,253.5	7,169.0	196.6	196.6	-91.91	588.9	-6,590.6	840.6	447.9	392.68	2.141 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-314 - 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		
0.0	0.0	0.0	0.0	0.0	0.0	-179.47	-29.9	-0.3	29.9					
100.0	100.0	99.0	99.0	0.1	0.1	-179.47	-29.9	-0.3	29.9	29.7	0.19	154.428		
200.0	200.0	199.0	199.0	0.3	0.3	-179.47	-29.9	-0.3	29.9	29.2	0.64	46.554		
300.0	300.0	299.0	299.0	0.5	0.5	-179.47	-29.9	-0.3	29.9	28.8	1.09	27.376 CC		
400.0	400.0	399.0	399.0	0.8	0.8	156.64	-29.9	-0.3	31.5	29.9	1.54	20.376		
500.0	499.8	498.8	498.8	1.0	1.0	159.88	-29.9	-0.3	36.3	34.3	2.00	18.153		
600.0	599.5	599.8	599.8	1.2	1.2	162.81	-28.4	0.7	43.1	40.6	2.46	17.525		
700.0	698.7	701.1	700.9	1.5	1.5	164.44	-23.9	3.5	50.0	47.0	2.91	17.166		
800.0	797.5	802.6	802.0	1.8	1.7	165.22	-16.4	8.3	57.0	53.6	3.37	16.892		
900.0	895.6	904.3	903.0	2.2	2.0	165.43	-5.8	15.0	64.1	60.3	3.85	16.644		
1,000.0	993.1	1,006.3	1,003.7	2.6	2.3	165.22	7.8	23.7	71.3	67.0	4.35	16.387		
1,100.0	1,089.6	1,108.5	1,104.0	3.1	2.6	164.72	24.4	34.3	78.6	73.7	4.88	16.102		
1,127.2	1,115.8	1,136.4	1,131.2	3.2	2.7	164.54	29.5	37.6	80.6	75.5	5.03	16.016		
1,200.0	1,185.5	1,209.9	1,202.7	3.6	3.0	163.94	43.7	46.6	85.3	79.9	5.46	15.628		
1,300.0	1,281.4	1,309.7	1,299.8	4.1	3.4	163.16	63.2	59.0	91.6	85.5	6.07	15.093		
1,400.0	1,377.3	1,409.5	1,396.9	4.7	3.9	162.48	82.6	71.4	97.9	91.2	6.70	14.615		
1,500.0	1,473.1	1,509.3	1,494.0	5.2	4.3	161.88	102.1	83.8	104.2	96.9	7.34	14.202		
1,600.0	1,569.0	1,609.0	1,591.0	5.8	4.8	161.35	121.6	96.3	110.6	102.6	8.00	13.830		
1,700.0	1,664.8	1,708.8	1,688.1	6.4	5.2	160.88	141.1	108.7	116.9	108.3	8.66	13.500		
1,800.0	1,760.7	1,808.6	1,785.2	6.9	5.7	160.46	160.5	121.1	123.3	113.9	9.33	13.207		
1,900.0	1,856.6	1,908.4	1,882.3	7.5	6.2	160.07	180.0	133.5	129.6	119.6	10.01	12.945		
2,000.0	1,952.4	2,008.2	1,979.4	8.1	6.6	159.73	199.5	145.9	136.0	125.3	10.70	12.710		
2,100.0	2,048.3	2,108.0	2,076.5	8.6	7.1	159.41	219.0	158.3	142.4	131.0	11.39	12.498		
2,200.0	2,144.1	2,207.8	2,173.5	9.2	7.6	159.12	238.4	170.7	148.7	136.6	12.09	12.306		
2,300.0	2,240.0	2,307.6	2,270.6	9.8	8.1	158.86	257.9	183.1	155.1	142.3	12.78	12.132		
2,400.0	2,335.9	2,407.4	2,367.7	10.3	8.5	158.61	277.4	195.6	161.5	148.0	13.49	11.973		
2,500.0	2,431.7	2,507.2	2,464.8	10.9	9.0	158.39	296.9	208.0	167.9	153.7	14.19	11.828		
2,600.0	2,527.6	2,607.0	2,561.9	11.5	9.5	158.18	316.4	220.4	174.2	159.3	14.90	11.694		
2,700.0	2,623.4	2,706.8	2,659.0	12.1	10.0	157.99	335.8	232.8	180.6	165.0	15.61	11.571		
2,800.0	2,719.3	2,806.6	2,756.1	12.6	10.5	157.81	355.3	245.2	187.0	170.7	16.32	11.458		
2,900.0	2,815.2	2,906.4	2,853.1	13.2	10.9	157.64	374.8	257.6	193.4	176.4	17.04	11.352		
3,000.0	2,911.0	3,006.2	2,950.2	13.8	11.4	157.48	394.3	270.0	199.8	182.0	17.75	11.255		
3,100.0	3,006.9	3,106.0	3,047.3	14.4	11.9	157.33	413.7	282.4	206.2	187.7	18.47	11.164		
3,200.0	3,102.7	3,205.8	3,144.4	14.9	12.4	157.19	433.2	294.9	212.6	193.4	19.19	11.079		
3,300.0	3,198.6	3,305.5	3,241.5	15.5	12.9	157.06	452.7	307.3	219.0	199.0	19.91	11.000		
3,400.0	3,294.5	3,405.3	3,338.6	16.1	13.4	156.94	472.2	319.7	225.3	204.7	20.63	10.925		
3,500.0	3,390.3	3,505.1	3,435.6	16.7	13.8	156.82	491.7	332.1	231.7	210.4	21.35	10.855		
3,600.0	3,486.2	3,604.9	3,532.7	17.2	14.3	156.71	511.1	344.5	238.1	216.1	22.07	10.790		
3,700.0	3,582.0	3,704.7	3,629.8	17.8	14.8	156.60	530.6	356.9	244.5	221.7	22.79	10.728		
3,800.0	3,677.9	3,804.5	3,726.9	18.4	15.3	156.50	550.1	369.3	250.9	227.4	23.52	10.670		
3,900.0	3,773.7	3,904.3	3,824.0	19.0	15.8	156.41	569.6	381.8	257.3	233.1	24.24	10.614		
4,000.0	3,869.6	4,004.1	3,921.1	19.5	16.3	156.32	589.0	394.2	263.7	238.8	24.97	10.562		
4,100.0	3,965.5	4,103.9	4,018.2	20.1	16.7	156.23	608.5	406.6	270.1	244.4	25.69	10.513		
4,200.0	4,061.3	4,203.7	4,115.2	20.7	17.2	156.15	628.0	419.0	276.5	250.1	26.42	10.466		
4,300.0	4,157.2	4,303.5	4,212.3	21.3	17.7	156.07	647.5	431.4	282.9	255.8	27.15	10.421		
4,400.0	4,253.0	4,403.3	4,309.4	21.8	18.2	156.00	666.9	443.8	289.3	261.4	27.88	10.379		
4,500.0	4,348.9	4,503.1	4,406.5	22.4	18.7	155.93	686.4	456.2	295.7	267.1	28.61	10.338		
4,600.0	4,444.8	4,602.9	4,503.6	23.0	19.2	155.86	705.9	468.6	302.1	272.8	29.33	10.300		
4,700.0	4,540.6	4,702.7	4,600.7	23.6	19.6	155.79	725.4	481.1	308.5	278.5	30.06	10.263		
4,800.0	4,636.5	4,802.5	4,697.7	24.1	20.1	155.73	744.9	493.5	314.9	284.1	30.79	10.228		
4,900.0	4,732.3	4,902.3	4,794.8	24.7	20.6	155.67	764.3	505.9	321.3	289.8	31.52	10.194		
5,000.0	4,828.2	5,002.1	4,891.9	25.3	21.1	155.61	783.8	518.3	327.7	295.5	32.25	10.162		

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 SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,924.1	5,101.8	4,989.0	25.9	21.6	155.56	803.3	530.7	334.1	301.2	32.98	10.131	
5,200.0	5,019.9	5,201.6	5,086.1	26.4	22.1	155.50	822.8	543.1	340.5	306.8	33.71	10.101	
5,300.0	5,115.8	5,301.4	5,183.2	27.0	22.5	155.45	842.2	555.5	346.9	312.5	34.44	10.073	
5,400.0	5,211.6	5,401.2	5,280.3	27.6	23.0	155.40	861.7	568.0	353.4	318.2	35.18	10.045	
5,500.0	5,307.5	5,501.0	5,377.3	28.2	23.5	155.35	881.2	580.4	359.8	323.8	35.91	10.019	
5,600.0	5,403.4	5,600.8	5,474.4	28.7	24.0	155.31	900.7	592.8	366.2	329.5	36.64	9.994	
5,700.0	5,499.2	5,700.6	5,571.5	29.3	24.5	155.26	920.1	605.2	372.6	335.2	37.37	9.969	
5,800.0	5,595.1	5,800.4	5,668.6	29.9	25.0	155.22	939.6	617.6	379.0	340.9	38.10	9.946	
5,840.7	5,634.1	5,841.0	5,708.1	30.1	25.2	155.20	947.6	622.7	381.6	343.2	38.40	9.936	
5,900.0	5,691.1	5,900.2	5,765.7	30.4	25.5	155.17	959.1	630.0	384.8	346.0	38.84	9.907	
6,000.0	5,788.0	5,992.1	5,855.3	30.8	25.9	155.01	976.3	641.0	388.6	349.1	39.49	9.840	
6,100.0	5,885.7	6,081.7	5,943.2	31.2	26.2	154.88	990.9	650.3	391.8	351.8	40.02	9.789	
6,200.0	5,984.0	6,171.3	6,031.6	31.5	26.4	154.77	1,003.0	658.0	394.5	354.0	40.48	9.745	
6,300.0	6,083.0	6,260.8	6,120.4	31.8	26.6	154.68	1,012.9	664.3	396.6	355.8	40.86	9.707	
6,400.0	6,182.3	6,350.4	6,209.5	32.0	26.8	154.62	1,020.4	669.1	398.3	357.1	41.16	9.675	
6,500.0	6,282.0	6,439.9	6,298.8	32.2	27.0	154.57	1,025.6	672.4	399.4	358.0	41.39	9.649	
6,600.0	6,382.0	6,529.4	6,388.2	32.3	27.1	154.55	1,028.4	674.2	400.0	358.4	41.54	9.627	
6,668.0	6,449.9	6,591.0	6,449.8	32.4	27.2	179.75	1,028.9	674.5	400.1	345.4	54.64	7.321	
6,678.3	6,460.2	6,600.4	6,459.2	32.4	27.2	179.75	1,028.9	674.5	400.1	345.4	54.67	7.319	
6,698.0	6,479.9	6,620.1	6,478.9	32.4	27.2	179.75	1,028.9	674.5	400.1	345.4	54.71	7.313	
6,700.0	6,481.9	6,622.1	6,481.0	32.4	27.2	-90.25	1,028.9	674.5	400.1	358.4	41.70	9.595	
6,750.0	6,531.9	6,672.3	6,531.0	32.5	27.3	-90.26	1,028.9	672.7	400.1	358.3	41.80	9.572	
6,800.0	6,581.6	6,722.4	6,580.9	32.5	27.3	-90.26	1,028.9	667.4	400.1	358.2	41.84	9.563	
6,850.0	6,630.8	6,772.5	6,630.2	32.5	27.3	-90.27	1,028.9	658.6	400.1	358.3	41.82	9.567	
6,900.0	6,679.3	6,822.6	6,678.8	32.4	27.3	-90.27	1,028.9	646.3	400.1	358.3	41.75	9.584	
6,950.0	6,726.8	6,872.8	6,726.4	32.4	27.2	-90.28	1,028.9	630.7	400.1	358.5	41.63	9.611	
7,000.0	6,773.1	6,922.9	6,772.9	32.3	27.1	-90.28	1,028.9	611.8	400.1	358.6	41.47	9.647	
7,050.0	6,817.9	6,973.0	6,817.9	32.3	27.1	-90.28	1,028.9	589.7	400.1	358.8	41.29	9.690	
7,100.0	6,861.2	7,023.2	6,861.2	32.2	27.0	-90.28	1,028.9	564.5	400.1	359.0	41.09	9.737	
7,150.0	6,902.5	7,073.3	6,902.7	32.1	26.8	-90.28	1,028.9	536.4	400.1	359.2	40.89	9.785	
7,200.0	6,941.8	7,123.5	6,942.1	32.0	26.7	-90.27	1,028.9	505.4	400.1	359.4	40.71	9.828	
7,250.0	6,978.9	7,173.6	6,979.2	31.9	26.6	-90.27	1,028.9	471.7	400.1	359.5	40.56	9.863	
7,300.0	7,013.5	7,223.7	7,013.9	31.7	26.5	-90.26	1,028.9	435.5	400.1	359.6	40.48	9.884	
7,350.0	7,045.5	7,273.8	7,045.9	31.6	26.3	-90.26	1,028.9	397.0	400.1	359.6	40.47	9.886	
7,400.0	7,074.8	7,324.0	7,075.2	31.5	26.2	-90.25	1,028.9	356.3	400.1	359.5	40.57	9.863	
7,450.0	7,101.1	7,374.1	7,101.6	31.4	26.1	-90.24	1,028.9	313.7	400.1	359.3	40.78	9.811	
7,500.0	7,124.5	7,424.2	7,124.9	31.3	25.9	-90.23	1,028.9	269.4	400.1	358.9	41.13	9.727	
7,550.0	7,144.7	7,474.3	7,145.1	31.1	25.8	-90.22	1,028.9	223.5	400.1	358.4	41.63	9.611	
7,600.0	7,161.6	7,524.4	7,162.0	31.0	25.7	-90.21	1,028.9	176.4	400.1	357.8	42.28	9.462	
7,650.0	7,175.3	7,574.5	7,175.6	30.9	25.6	-90.19	1,028.9	128.2	400.1	357.0	43.09	9.284	
7,700.0	7,185.5	7,624.6	7,185.7	30.8	25.4	-90.18	1,028.9	79.1	400.1	356.0	44.05	9.082	
7,750.0	7,192.3	7,674.7	7,192.5	30.7	25.3	-90.16	1,028.9	29.5	400.1	354.9	45.16	8.860	
7,800.0	7,195.7	7,724.8	7,195.7	30.7	25.2	-90.15	1,028.9	-20.5	400.1	353.7	46.39	8.625	
7,825.8	7,196.0	7,750.6	7,196.0	30.6	25.2	-90.14	1,028.9	-46.3	400.1	353.0	47.06	8.501	
7,828.6	7,196.0	7,753.4	7,196.0	30.6	25.2	-90.14	1,028.9	-49.1	400.1	352.9	47.14	8.487	
7,900.0	7,195.4	7,824.8	7,195.7	30.6	25.0	-90.18	1,028.9	-120.5	400.1	350.8	49.23	8.127	
8,000.0	7,194.6	7,924.8	7,195.3	30.6	26.0	-90.24	1,028.9	-220.5	400.1	347.6	52.50	7.621	
8,100.0	7,193.8	8,024.8	7,194.9	31.0	28.0	-90.29	1,028.9	-320.5	400.1	343.9	56.14	7.126	
8,200.0	7,193.0	8,124.8	7,194.5	32.1	30.1	-90.35	1,028.9	-420.5	400.1	340.0	60.10	6.657	
8,300.0	7,192.2	8,224.8	7,194.0	33.8	32.3	-90.41	1,028.9	-520.5	400.1	335.8	64.30	6.222	
8,400.0	7,191.4	8,324.8	7,193.6	35.8	34.5	-90.46	1,028.9	-620.5	400.1	331.4	68.70	5.824	
8,500.0	7,190.6	8,424.8	7,193.2	38.0	36.9	-90.52	1,028.9	-720.5	400.1	326.8	73.27	5.460	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-314 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,600.0	7,189.8	8,524.8	7,192.8	40.3	39.2	-90.58	1,028.9	-820.5	400.1	322.1	77.98	5.131	
8,700.0	7,189.0	8,624.8	7,192.4	42.7	41.7	-90.63	1,028.9	-920.5	400.1	317.3	82.80	4.832	
8,800.0	7,188.2	8,724.8	7,192.0	45.1	44.2	-90.69	1,028.9	-1,020.5	400.1	312.4	87.72	4.561	
8,900.0	7,187.4	8,824.8	7,191.6	47.5	46.7	-90.75	1,028.9	-1,120.5	400.1	307.4	92.72	4.315	
9,000.0	7,186.6	8,924.8	7,191.2	50.0	49.2	-90.80	1,028.9	-1,220.5	400.1	302.3	97.78	4.092	
9,100.0	7,185.7	9,024.8	7,190.8	52.6	51.8	-90.86	1,028.9	-1,320.5	400.1	297.2	102.90	3.888	
9,200.0	7,184.9	9,124.8	7,190.3	55.1	54.4	-90.92	1,028.9	-1,420.5	400.1	292.0	108.08	3.702	
9,300.0	7,184.1	9,224.8	7,189.9	57.7	57.0	-90.97	1,028.9	-1,520.5	400.1	286.8	113.29	3.532	
9,400.0	7,183.3	9,324.8	7,189.5	60.3	59.6	-91.03	1,028.9	-1,620.5	400.1	281.6	118.54	3.375	
9,500.0	7,182.5	9,424.8	7,189.1	62.9	62.2	-91.09	1,028.9	-1,720.5	400.1	276.3	123.83	3.231	
9,600.0	7,181.7	9,524.8	7,188.7	65.5	64.9	-91.14	1,028.9	-1,820.5	400.1	271.0	129.14	3.099	
9,700.0	7,180.9	9,624.8	7,188.3	68.1	67.6	-91.20	1,028.9	-1,920.5	400.2	265.7	134.47	2.976	
9,800.0	7,180.1	9,724.8	7,187.9	70.8	70.2	-91.26	1,028.9	-2,020.5	400.2	260.3	139.83	2.862	
9,900.0	7,179.3	9,824.8	7,187.5	73.5	72.9	-91.31	1,028.9	-2,120.5	400.2	255.0	145.21	2.756	
10,000.0	7,178.5	9,924.8	7,187.0	76.1	75.6	-91.37	1,028.9	-2,220.5	400.2	249.6	150.60	2.657	
10,100.0	7,177.7	10,024.8	7,186.6	78.8	78.3	-91.43	1,028.9	-2,320.5	400.2	244.2	156.01	2.565	
10,200.0	7,176.9	10,124.8	7,186.2	81.5	81.0	-91.48	1,028.9	-2,420.5	400.2	238.8	161.44	2.479	
10,300.0	7,176.0	10,224.8	7,185.8	84.2	83.7	-91.54	1,028.9	-2,520.5	400.2	233.3	166.87	2.398	
10,400.0	7,175.2	10,324.8	7,185.4	86.9	86.5	-91.60	1,028.9	-2,620.5	400.2	227.9	172.32	2.323	
10,500.0	7,174.4	10,424.8	7,185.0	89.6	89.2	-91.65	1,028.9	-2,720.5	400.2	222.5	177.78	2.251	
10,600.0	7,173.6	10,524.8	7,184.6	92.3	91.9	-91.71	1,028.9	-2,820.4	400.2	217.0	183.25	2.184	
10,700.0	7,172.8	10,624.8	7,184.2	95.0	94.6	-91.77	1,028.9	-2,920.4	400.3	211.5	188.72	2.121	
10,800.0	7,172.0	10,724.8	7,183.7	97.8	97.4	-91.82	1,028.9	-3,020.4	400.3	206.1	194.20	2.061	
10,900.0	7,171.2	10,824.8	7,183.3	100.5	100.1	-91.88	1,028.9	-3,120.4	400.3	200.6	199.69	2.004	
11,000.0	7,170.4	10,924.8	7,182.9	103.2	102.9	-91.94	1,028.9	-3,220.4	400.3	195.1	205.19	1.951	
11,100.0	7,169.6	11,024.8	7,182.5	106.0	105.6	-92.00	1,028.9	-3,320.4	400.3	189.6	210.69	1.900	
11,200.0	7,168.8	11,124.8	7,182.1	108.7	108.4	-92.05	1,028.9	-3,420.4	400.3	184.1	216.20	1.852	
11,300.0	7,168.0	11,224.8	7,181.7	111.5	111.1	-92.11	1,028.9	-3,520.4	400.3	178.6	221.71	1.806	
11,400.0	7,167.1	11,324.8	7,181.3	114.2	113.9	-92.17	1,028.9	-3,620.4	400.3	173.1	227.22	1.762	
11,500.0	7,166.3	11,424.8	7,180.9	117.0	116.6	-92.22	1,028.9	-3,720.4	400.4	167.6	232.74	1.720	
11,600.0	7,165.5	11,524.8	7,180.4	119.7	119.4	-92.28	1,028.9	-3,820.4	400.4	162.1	238.27	1.680	
11,700.0	7,164.7	11,624.8	7,180.0	122.5	122.2	-92.34	1,028.9	-3,920.4	400.4	156.6	243.79	1.642	
11,800.0	7,163.9	11,724.8	7,179.6	125.2	124.9	-92.39	1,028.9	-4,020.4	400.4	151.1	249.32	1.606	
11,900.0	7,163.1	11,824.8	7,179.2	128.0	127.7	-92.45	1,028.9	-4,120.4	400.4	145.6	254.86	1.571	
12,000.0	7,162.3	11,924.8	7,178.8	130.7	130.5	-92.51	1,028.9	-4,220.4	400.4	140.0	260.39	1.538	
12,100.0	7,161.5	12,024.8	7,178.4	133.5	133.2	-92.56	1,028.9	-4,320.4	400.4	134.5	265.93	1.506	
12,200.0	7,160.7	12,124.8	7,178.0	136.3	136.0	-92.62	1,028.9	-4,420.4	400.5	129.0	271.47	1.475 Level 3	
12,300.0	7,159.8	12,224.8	7,177.6	139.0	138.8	-92.68	1,028.9	-4,520.4	400.5	123.5	277.01	1.446 Level 3	
12,400.0	7,159.0	12,324.8	7,177.1	141.8	141.6	-92.74	1,028.9	-4,620.4	400.5	117.9	282.56	1.417 Level 3	
12,500.0	7,158.2	12,424.8	7,176.7	144.6	144.3	-92.79	1,028.9	-4,720.4	400.5	112.4	288.10	1.390 Level 3	
12,600.0	7,157.4	12,524.8	7,176.3	147.3	147.1	-92.85	1,028.9	-4,820.4	400.5	106.9	293.65	1.364 Level 3	
12,700.0	7,156.6	12,624.8	7,175.9	150.1	149.9	-92.91	1,028.9	-4,920.4	400.6	101.4	299.20	1.339 Level 3	
12,800.0	7,155.8	12,724.8	7,175.5	152.9	152.7	-92.96	1,028.9	-5,020.4	400.6	95.8	304.75	1.314 Level 3	
12,900.0	7,155.0	12,824.8	7,175.1	155.7	155.5	-93.02	1,028.9	-5,120.4	400.6	90.3	310.30	1.291 Level 3	
13,000.0	7,154.2	12,924.8	7,174.7	158.4	158.2	-93.08	1,028.9	-5,220.4	400.6	84.8	315.85	1.268 Level 3	
13,100.0	7,153.3	13,024.8	7,174.3	161.2	161.0	-93.14	1,028.9	-5,320.4	400.6	79.2	321.40	1.247 Level 2	
13,200.0	7,152.5	13,124.8	7,173.8	164.0	163.8	-93.19	1,028.9	-5,420.4	400.7	73.7	326.96	1.225 Level 2	
13,300.0	7,151.7	13,224.8	7,173.4	166.8	166.6	-93.25	1,028.9	-5,520.4	400.7	68.2	332.51	1.205 Level 2	
13,400.0	7,150.9	13,324.8	7,173.0	169.5	169.4	-93.31	1,028.9	-5,620.4	400.7	62.6	338.06	1.185 Level 2	
13,500.0	7,150.1	13,424.8	7,172.6	172.3	172.2	-93.36	1,028.9	-5,720.4	400.7	57.1	343.62	1.166 Level 2	
13,600.0	7,149.3	13,524.8	7,172.2	175.1	174.9	-93.42	1,028.9	-5,820.4	400.7	51.6	349.17	1.148 Level 2	
13,700.0	7,148.5	13,624.8	7,171.8	177.9	177.7	-93.48	1,028.9	-5,920.4	400.8	46.0	354.73	1.130 Level 2	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-314 - 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	
13,800.0	7,147.6	13,724.8	7,171.4	180.7	180.5	-93.54	1,029.0	-6,020.4	400.8	40.5	360.29	1.112	Level 2
13,900.0	7,146.8	13,824.8	7,170.9	183.5	183.3	-93.59	1,029.0	-6,120.4	400.8	35.0	365.84	1.096	Level 2
14,000.0	7,146.0	13,924.8	7,170.5	186.2	186.1	-93.65	1,029.0	-6,220.4	400.8	29.4	371.40	1.079	Level 2
14,100.0	7,145.2	14,024.8	7,170.1	189.0	188.9	-93.71	1,029.0	-6,320.4	400.9	23.9	376.95	1.063	Level 2
14,200.0	7,144.4	14,124.8	7,169.7	191.8	191.7	-93.76	1,029.0	-6,420.4	400.9	18.4	382.51	1.048	Level 2
14,300.0	7,143.6	14,224.8	7,169.3	194.6	194.5	-93.82	1,029.0	-6,520.4	400.9	12.8	388.07	1.033	Level 2
14,370.2	7,143.0	14,295.0	7,169.0	196.6	196.4	-93.86	1,029.0	-6,590.6	400.9	8.9	391.97	1.023	Level 2, ES, SF

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-179.47	-90.0	-0.8	90.0				
100.0	100.0	98.0	98.0	0.1	0.1	-179.47	-90.0	-0.8	90.0	89.8	0.19	467.518	
200.0	200.0	198.0	198.0	0.3	0.3	-179.47	-90.0	-0.8	90.0	89.3	0.64	140.724	
300.0	300.0	298.0	298.0	0.5	0.5	-179.47	-90.0	-0.8	90.0	88.9	1.09	82.634 CC, ES	
400.0	400.0	398.0	398.0	0.8	0.8	155.76	-90.0	-0.8	91.6	90.0	1.54	59.385	
500.0	499.8	497.8	497.8	1.0	1.0	157.00	-90.0	-0.8	96.4	94.4	2.00	48.209	
600.0	599.5	597.5	597.5	1.2	1.2	158.81	-90.0	-0.8	104.5	102.0	2.46	42.482	
700.0	698.7	696.7	696.7	1.5	1.4	160.91	-90.0	-0.8	115.9	113.0	2.92	39.679	
800.0	797.5	795.5	795.5	1.8	1.7	163.06	-90.0	-0.8	130.8	127.4	3.39	38.639	
900.0	895.6	893.6	893.6	2.2	1.9	165.10	-90.0	-0.8	149.2	145.3	3.85	38.742	
1,000.0	993.1	993.6	993.6	2.6	2.1	166.52	-89.6	0.6	170.4	166.0	4.31	39.507	
1,100.0	1,089.6	1,093.9	1,093.8	3.1	2.3	166.90	-88.3	5.5	193.3	188.5	4.77	40.489	
1,127.2	1,115.8	1,121.2	1,121.0	3.2	2.4	166.86	-87.7	7.4	199.9	195.0	4.91	40.748	
1,200.0	1,185.5	1,194.4	1,193.9	3.6	2.5	166.57	-86.0	13.7	217.1	211.9	5.27	41.188	
1,300.0	1,281.4	1,295.4	1,294.2	4.1	2.8	165.57	-82.8	25.4	239.5	233.7	5.81	41.210	
1,400.0	1,377.3	1,396.9	1,394.4	4.7	3.1	164.02	-78.6	40.6	260.5	254.1	6.40	40.671	
1,500.0	1,473.1	1,498.4	1,494.1	5.2	3.4	162.02	-73.5	59.2	280.2	273.2	7.06	39.668	
1,600.0	1,569.0	1,596.1	1,589.6	5.8	3.7	160.03	-68.2	78.8	299.6	291.8	7.77	38.551	
1,700.0	1,664.8	1,693.7	1,685.1	6.4	4.1	158.28	-62.8	98.4	319.2	310.7	8.51	37.500	
1,800.0	1,760.7	1,791.3	1,780.6	6.9	4.5	156.74	-57.4	118.0	339.1	329.8	9.28	36.539	
1,900.0	1,856.6	1,888.9	1,876.1	7.5	4.9	155.37	-52.1	137.5	359.2	349.1	10.07	35.669	
2,000.0	1,952.4	1,986.6	1,971.5	8.1	5.3	154.14	-46.7	157.1	379.5	368.6	10.88	34.886	
2,100.0	2,048.3	2,084.2	2,067.0	8.6	5.7	153.04	-41.3	176.7	399.9	388.2	11.70	34.183	
2,200.0	2,144.1	2,181.8	2,162.5	9.2	6.1	152.04	-36.0	196.3	420.5	407.9	12.53	33.551	
2,300.0	2,240.0	2,279.4	2,258.0	9.8	6.5	151.13	-30.6	215.9	441.1	427.8	13.38	32.982	
2,400.0	2,335.9	2,377.0	2,353.5	10.3	6.9	150.31	-25.3	235.4	461.9	447.7	14.23	32.470	
2,500.0	2,431.7	2,474.6	2,448.9	10.9	7.4	149.56	-19.9	255.0	482.8	467.7	15.08	32.007	
2,600.0	2,527.6	2,572.2	2,544.4	11.5	7.8	148.87	-14.5	274.6	503.7	487.7	15.95	31.587	
2,700.0	2,623.4	2,669.8	2,639.9	12.1	8.2	148.23	-9.2	294.2	524.7	507.9	16.81	31.205	
2,800.0	2,719.3	2,767.5	2,735.4	12.6	8.6	147.65	-3.8	313.7	545.7	528.0	17.69	30.857	
2,900.0	2,815.2	2,865.1	2,830.9	13.2	9.1	147.10	1.6	333.3	566.8	548.3	18.56	30.538	
3,000.0	2,911.0	2,962.7	2,926.3	13.8	9.5	146.60	6.9	352.9	588.0	568.5	19.44	30.246	
3,100.0	3,006.9	3,060.3	3,021.8	14.4	9.9	146.13	12.3	372.5	609.2	588.8	20.32	29.978	
3,200.0	3,102.7	3,157.9	3,117.3	14.9	10.4	145.69	17.6	392.1	630.4	609.2	21.20	29.730	
3,300.0	3,198.6	3,255.5	3,212.8	15.5	10.8	145.28	23.0	411.6	651.6	629.6	22.09	29.501	
3,400.0	3,294.5	3,353.1	3,308.2	16.1	11.3	144.90	28.4	431.2	672.9	650.0	22.98	29.288	
3,500.0	3,390.3	3,450.7	3,403.7	16.7	11.7	144.54	33.7	450.8	694.2	670.4	23.86	29.091	
3,600.0	3,486.2	3,548.4	3,499.2	17.2	12.1	144.20	39.1	470.4	715.6	690.8	24.75	28.907	
3,700.0	3,582.0	3,646.0	3,594.7	17.8	12.6	143.88	44.5	489.9	736.9	711.3	25.65	28.735	
3,800.0	3,677.9	3,743.6	3,690.2	18.4	13.0	143.58	49.8	509.5	758.3	731.8	26.54	28.575	
3,900.0	3,773.7	3,841.2	3,785.6	19.0	13.5	143.30	55.2	529.1	779.7	752.3	27.43	28.424	
4,000.0	3,869.6	3,938.8	3,881.1	19.5	13.9	143.03	60.5	548.7	801.1	772.8	28.33	28.283	
4,100.0	3,965.5	4,036.4	3,976.6	20.1	14.3	142.77	65.9	568.2	822.6	793.3	29.22	28.150	
4,200.0	4,061.3	4,134.0	4,072.1	20.7	14.8	142.53	71.3	587.8	844.0	813.9	30.12	28.025	
4,300.0	4,157.2	4,231.6	4,167.6	21.3	15.2	142.30	76.6	607.4	865.5	834.5	31.01	27.907	
4,400.0	4,253.0	4,329.2	4,263.0	21.8	15.7	142.08	82.0	627.0	886.9	855.0	31.91	27.798	
4,500.0	4,348.9	4,424.9	4,356.9	22.4	16.0	141.99	86.8	644.5	908.5	875.8	32.69	27.792	
4,600.0	4,444.8	4,520.5	4,451.3	23.0	16.3	142.10	90.8	659.0	930.3	897.0	33.37	27.880	
4,700.0	4,540.6	4,615.8	4,545.9	23.6	16.5	142.40	93.9	670.5	952.4	918.4	33.98	28.030	
4,800.0	4,636.5	4,710.6	4,640.2	24.1	16.7	142.88	96.2	678.8	974.7	940.2	34.51	28.243	
4,900.0	4,732.3	4,804.6	4,734.1	24.7	16.9	143.51	97.6	684.1	997.3	962.4	34.97	28.518	
5,000.0	4,828.2	4,897.7	4,827.2	25.3	17.0	144.29	98.3	686.4	1,020.4	985.1	35.36	28.857	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-334 - 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	
5,100.0	4,924.1	4,992.6	4,922.1	25.9	17.1	145.17	98.3	686.6	1,044.0	1,008.3	35.70	29.240	
5,200.0	5,019.9	5,088.4	5,017.9	26.4	17.3	146.03	98.3	686.6	1,067.8	1,031.7	36.05	29.616	
5,300.0	5,115.8	5,184.3	5,113.8	27.0	17.4	146.86	98.3	686.6	1,091.8	1,055.4	36.41	29.990	
5,400.0	5,211.6	5,280.2	5,209.6	27.6	17.5	147.65	98.3	686.6	1,116.1	1,079.3	36.76	30.362	
5,500.0	5,307.5	5,376.0	5,305.5	28.2	17.7	148.40	98.3	686.6	1,140.5	1,103.4	37.11	30.730	
5,600.0	5,403.4	5,471.9	5,401.4	28.7	17.8	149.13	98.3	686.6	1,165.1	1,127.6	37.47	31.096	
5,700.0	5,499.2	5,567.7	5,497.2	29.3	18.0	149.83	98.3	686.6	1,189.9	1,152.1	37.83	31.457	
5,800.0	5,595.1	5,663.6	5,593.1	29.9	18.1	150.49	98.3	686.6	1,214.9	1,176.7	38.19	31.814	
5,840.7	5,634.1	5,702.6	5,632.1	30.1	18.2	150.76	98.3	686.6	1,225.1	1,186.7	38.33	31.958	
5,900.0	5,691.1	5,759.6	5,689.1	30.4	18.2	151.27	98.3	686.6	1,239.4	1,200.9	38.55	32.149	
6,000.0	5,788.0	5,856.5	5,786.0	30.8	18.4	152.02	98.3	686.6	1,261.4	1,222.5	38.87	32.448	
6,100.0	5,885.7	5,954.2	5,883.7	31.2	18.5	152.64	98.3	686.6	1,280.5	1,241.3	39.18	32.680	
6,200.0	5,984.0	6,052.5	5,982.0	31.5	18.7	153.15	98.3	686.6	1,296.5	1,257.1	39.47	32.848	
6,300.0	6,083.0	6,151.5	6,081.0	31.8	18.8	153.56	98.3	686.6	1,309.6	1,269.8	39.74	32.954	
6,400.0	6,182.3	6,250.9	6,180.3	32.0	19.0	153.86	98.3	686.6	1,319.5	1,279.5	39.98	33.000	
6,500.0	6,282.0	6,350.6	6,280.0	32.2	19.1	154.06	98.3	686.6	1,326.3	1,286.1	40.21	32.988	
6,600.0	6,382.0	6,450.5	6,380.0	32.3	19.3	154.17	98.3	686.6	1,330.0	1,289.6	40.40	32.918	
6,668.0	6,449.9	6,518.4	6,447.9	32.4	19.4	179.41	98.3	686.6	1,330.8	1,285.7	45.03	29.554	
6,698.0	6,479.9	6,548.4	6,477.9	32.4	19.4	179.41	98.3	686.6	1,330.8	1,285.6	45.12	29.496	
6,700.0	6,481.9	6,550.5	6,480.0	32.4	19.5	-90.59	98.3	686.6	1,330.8	1,290.1	40.62	32.764	
6,750.0	6,531.9	6,601.5	6,530.9	32.5	19.5	-90.60	98.3	684.7	1,330.8	1,290.0	40.73	32.676	
6,800.0	6,581.6	6,652.4	6,581.6	32.5	19.5	-90.60	98.3	679.3	1,330.8	1,290.0	40.77	32.644	
6,850.0	6,630.8	6,703.4	6,631.7	32.5	19.5	-90.60	98.3	670.3	1,330.8	1,290.0	40.75	32.658	
6,900.0	6,679.3	6,754.4	6,681.1	32.4	19.5	-90.59	98.3	657.7	1,330.8	1,290.1	40.68	32.716	
6,950.0	6,726.8	6,805.4	6,729.5	32.4	19.4	-90.58	98.3	641.6	1,330.8	1,290.2	40.56	32.809	
7,000.0	6,773.1	6,856.3	6,776.6	32.3	19.4	-90.57	98.3	622.2	1,330.8	1,290.3	40.41	32.932	
7,050.0	6,817.9	6,907.3	6,822.2	32.3	19.3	-90.56	98.3	599.4	1,330.7	1,290.5	40.23	33.075	
7,100.0	6,861.2	6,958.2	6,866.0	32.2	19.2	-90.54	98.3	573.5	1,330.7	1,290.7	40.05	33.228	
7,150.0	6,902.5	7,009.1	6,907.8	32.1	19.1	-90.53	98.3	544.6	1,330.7	1,290.9	39.87	33.376	
7,200.0	6,941.8	7,059.9	6,947.5	32.0	19.1	-90.50	98.3	512.8	1,330.7	1,291.0	39.72	33.503	
7,250.0	6,978.9	7,110.7	6,984.8	31.9	19.0	-90.48	98.3	478.3	1,330.7	1,291.1	39.61	33.593	
7,300.0	7,013.5	7,161.5	7,019.5	31.7	19.0	-90.46	98.3	441.2	1,330.7	1,291.1	39.58	33.625	
7,350.0	7,045.5	7,212.2	7,051.4	31.6	19.1	-90.43	98.3	401.9	1,330.7	1,291.1	39.63	33.581	
7,400.0	7,074.8	7,262.9	7,080.5	31.5	19.2	-90.40	98.3	360.4	1,330.7	1,290.9	39.79	33.445	
7,450.0	7,101.1	7,313.5	7,106.5	31.4	19.4	-90.36	98.3	317.0	1,330.7	1,290.6	40.08	33.204	
7,500.0	7,124.5	7,364.1	7,129.4	31.3	19.6	-90.33	98.3	271.9	1,330.7	1,290.2	40.51	32.849	
7,550.0	7,144.7	7,414.6	7,149.1	31.1	19.9	-90.29	98.3	225.4	1,330.7	1,289.6	41.10	32.381	
7,600.0	7,161.6	7,465.0	7,165.4	31.0	20.3	-90.26	98.3	177.7	1,330.7	1,288.9	41.84	31.806	
7,650.0	7,175.3	7,515.4	7,178.2	30.9	20.8	-90.22	98.3	129.0	1,330.7	1,288.0	42.74	31.137	
7,700.0	7,185.5	7,565.7	7,187.6	30.8	21.4	-90.18	98.3	79.5	1,330.7	1,286.9	43.78	30.392	
7,750.0	7,192.3	7,616.0	7,193.6	30.7	22.1	-90.14	98.3	29.7	1,330.7	1,285.7	44.97	29.591	
7,800.0	7,195.7	7,666.2	7,196.0	30.7	22.7	-90.10	98.3	-20.5	1,330.7	1,284.4	46.27	28.758	
7,827.5	7,196.0	7,693.7	7,195.9	30.6	23.2	-90.08	98.3	-48.0	1,330.7	1,283.6	47.04	28.290	
7,828.6	7,196.0	7,694.8	7,195.9	30.6	23.2	-90.08	98.3	-49.1	1,330.7	1,283.6	47.07	28.272	
7,900.0	7,195.4	7,766.2	7,195.4	30.6	24.3	-90.09	98.3	-120.5	1,330.7	1,281.4	49.25	27.020	
8,000.0	7,194.6	7,866.2	7,194.8	30.6	26.1	-90.09	98.3	-220.5	1,330.7	1,278.1	52.63	25.283	
8,100.0	7,193.8	7,966.2	7,194.1	31.0	28.1	-90.10	98.3	-320.5	1,330.7	1,274.3	56.37	23.605	
8,200.0	7,193.0	8,066.2	7,193.5	32.1	30.1	-90.11	98.3	-420.5	1,330.7	1,270.3	60.40	22.030	
8,300.0	7,192.2	8,166.2	7,192.8	33.8	32.3	-90.11	98.3	-520.5	1,330.7	1,266.0	64.67	20.575	
8,400.0	7,191.4	8,266.2	7,192.2	35.8	34.6	-90.12	98.3	-620.5	1,330.7	1,261.5	69.14	19.247	
8,500.0	7,190.6	8,366.2	7,191.5	38.0	37.0	-90.13	98.3	-720.5	1,330.7	1,256.9	73.76	18.042	
8,600.0	7,189.8	8,466.2	7,190.9	40.3	39.4	-90.13	98.3	-820.5	1,330.7	1,252.2	78.51	16.950	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-334 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,700.0	7,189.0	8,566.2	7,190.2	42.7	41.9	-90.14	98.3	-920.5	1,330.7	1,247.3	83.37	15.962	
8,800.0	7,188.2	8,666.2	7,189.6	45.1	44.4	-90.15	98.3	-1,020.5	1,330.7	1,242.4	88.31	15.068	
8,900.0	7,187.4	8,766.2	7,188.9	47.5	46.9	-90.15	98.3	-1,120.5	1,330.7	1,237.3	93.34	14.256	
9,000.0	7,186.6	8,866.2	7,188.3	50.0	49.5	-90.16	98.3	-1,220.5	1,330.7	1,232.3	98.43	13.519	
9,100.0	7,185.7	8,966.2	7,187.6	52.6	52.1	-90.17	98.3	-1,320.5	1,330.7	1,227.1	103.57	12.848	
9,200.0	7,184.9	9,066.2	7,187.0	55.1	54.7	-90.17	98.3	-1,420.5	1,330.7	1,221.9	108.76	12.235	
9,300.0	7,184.1	9,166.2	7,186.3	57.7	57.3	-90.18	98.3	-1,520.5	1,330.7	1,216.7	113.99	11.673	
9,400.0	7,183.3	9,266.2	7,185.7	60.3	60.0	-90.19	98.3	-1,620.5	1,330.7	1,211.4	119.26	11.158	
9,500.0	7,182.5	9,366.2	7,185.0	62.9	62.6	-90.19	98.3	-1,720.5	1,330.7	1,206.1	124.56	10.683	
9,600.0	7,181.7	9,466.2	7,184.3	65.5	65.3	-90.20	98.3	-1,820.5	1,330.7	1,200.8	129.88	10.246	
9,700.0	7,180.9	9,566.2	7,183.7	68.1	68.0	-90.21	98.3	-1,920.5	1,330.7	1,195.5	135.23	9.840	
9,800.0	7,180.1	9,666.2	7,183.0	70.8	70.7	-90.21	98.3	-2,020.5	1,330.7	1,190.1	140.60	9.465	
9,900.0	7,179.3	9,766.2	7,182.4	73.5	73.4	-90.22	98.3	-2,120.5	1,330.7	1,184.7	145.98	9.115	
10,000.0	7,178.5	9,866.2	7,181.7	76.1	76.1	-90.23	98.3	-2,220.5	1,330.7	1,179.3	151.39	8.790	
10,100.0	7,177.7	9,966.2	7,181.1	78.8	78.8	-90.23	98.3	-2,320.5	1,330.7	1,173.9	156.81	8.486	
10,200.0	7,176.9	10,066.2	7,180.4	81.5	81.5	-90.24	98.3	-2,420.5	1,330.7	1,168.4	162.24	8.202	
10,300.0	7,176.0	10,166.2	7,179.7	84.2	84.3	-90.25	98.3	-2,520.5	1,330.7	1,163.0	167.68	7.936	
10,400.0	7,175.2	10,266.2	7,179.1	86.9	87.0	-90.25	98.3	-2,620.5	1,330.7	1,157.5	173.14	7.686	
10,500.0	7,174.4	10,366.2	7,178.4	89.6	89.7	-90.26	98.3	-2,720.5	1,330.7	1,152.1	178.61	7.450	
10,600.0	7,173.6	10,466.2	7,177.8	92.3	92.5	-90.27	98.3	-2,820.5	1,330.7	1,146.6	184.08	7.229	
10,700.0	7,172.8	10,566.2	7,177.1	95.0	95.2	-90.27	98.3	-2,920.5	1,330.7	1,141.1	189.56	7.020	
10,800.0	7,172.0	10,666.2	7,176.5	97.8	98.0	-90.28	98.3	-3,020.5	1,330.7	1,135.6	195.05	6.822	
10,900.0	7,171.2	10,766.2	7,175.8	100.5	100.7	-90.28	98.3	-3,120.5	1,330.7	1,130.1	200.55	6.635	
11,000.0	7,170.4	10,866.2	7,175.1	103.2	103.5	-90.29	98.3	-3,220.4	1,330.7	1,124.6	206.06	6.458	
11,100.0	7,169.6	10,966.2	7,174.5	106.0	106.3	-90.30	98.3	-3,320.4	1,330.7	1,119.1	211.57	6.290	
11,200.0	7,168.8	11,066.2	7,173.8	108.7	109.0	-90.30	98.3	-3,420.4	1,330.7	1,113.6	217.08	6.130	
11,300.0	7,168.0	11,166.2	7,173.2	111.5	111.8	-90.31	98.3	-3,520.4	1,330.7	1,108.1	222.60	5.978	
11,400.0	7,167.1	11,266.2	7,172.5	114.2	114.5	-90.32	98.3	-3,620.4	1,330.7	1,102.5	228.13	5.833	
11,500.0	7,166.3	11,366.2	7,171.8	117.0	117.3	-90.32	98.3	-3,720.4	1,330.7	1,097.0	233.66	5.695	
11,600.0	7,165.5	11,466.2	7,171.2	119.7	120.1	-90.33	98.3	-3,820.4	1,330.7	1,091.5	239.19	5.563	
11,700.0	7,164.7	11,566.2	7,170.5	122.5	122.9	-90.34	98.4	-3,920.4	1,330.7	1,085.9	244.73	5.437	
11,800.0	7,163.9	11,666.2	7,169.9	125.2	125.6	-90.34	98.4	-4,020.4	1,330.7	1,080.4	250.27	5.317	
11,900.0	7,163.1	11,766.2	7,169.2	128.0	128.4	-90.35	98.4	-4,120.4	1,330.7	1,074.8	255.82	5.202	
11,905.5	7,163.0	11,771.7	7,169.2	128.1	128.6	-90.35	98.4	-4,125.9	1,330.7	1,074.5	256.12	5.195	
12,000.0	7,162.3	11,797.6	7,169.0	130.7	129.3	-90.35	98.4	-4,151.8	1,332.4	1,073.0	259.46	5.135	
12,100.0	7,161.5	11,797.6	7,169.0	133.5	129.3	-90.35	98.4	-4,151.8	1,341.3	1,079.1	262.23	5.115 SF	
12,200.0	7,160.7	11,797.6	7,169.0	136.3	129.3	-90.35	98.4	-4,151.8	1,357.5	1,092.5	265.00	5.123	
12,300.0	7,159.8	11,797.6	7,169.0	139.0	129.3	-90.35	98.4	-4,151.8	1,380.8	1,113.0	267.78	5.156	
12,400.0	7,159.0	11,797.6	7,169.0	141.8	129.3	-90.35	98.4	-4,151.8	1,410.8	1,140.2	270.56	5.214	
12,500.0	7,158.2	11,797.6	7,169.0	144.6	129.3	-90.35	98.4	-4,151.8	1,447.1	1,173.7	273.33	5.294	
12,600.0	7,157.4	11,797.6	7,169.0	147.3	129.3	-90.35	98.4	-4,151.8	1,489.2	1,213.1	276.11	5.393	
12,700.0	7,156.6	11,797.6	7,169.0	150.1	129.3	-90.35	98.4	-4,151.8	1,536.7	1,257.8	278.89	5.510	
12,800.0	7,155.8	11,797.6	7,169.0	152.9	129.3	-90.35	98.4	-4,151.8	1,589.1	1,307.4	281.67	5.642	
12,900.0	7,155.0	11,797.6	7,169.0	155.7	129.3	-90.35	98.4	-4,151.8	1,645.9	1,361.4	284.46	5.786	
13,000.0	7,154.2	11,797.6	7,169.0	158.4	129.3	-90.35	98.4	-4,151.8	1,706.6	1,419.4	287.24	5.942	
13,100.0	7,153.3	11,797.6	7,169.0	161.2	129.3	-90.35	98.4	-4,151.8	1,771.0	1,481.0	290.02	6.106	
13,200.0	7,152.5	11,797.6	7,169.0	164.0	129.3	-90.35	98.4	-4,151.8	1,838.5	1,545.7	292.81	6.279	
13,300.0	7,151.7	11,797.6	7,169.0	166.8	129.3	-90.35	98.4	-4,151.8	1,908.9	1,613.3	295.59	6.458	
13,400.0	7,150.9	11,797.6	7,169.0	169.5	129.3	-90.35	98.4	-4,151.8	1,981.8	1,683.4	298.38	6.642	
13,500.0	7,150.1	11,797.6	7,169.0	172.3	129.3	-90.35	98.4	-4,151.8	2,057.0	1,755.8	301.17	6.830	
13,600.0	7,149.3	11,797.6	7,169.0	175.1	129.3	-90.35	98.4	-4,151.8	2,134.2	1,830.3	303.95	7.022	
13,700.0	7,148.5	11,797.6	7,169.0	177.9	129.3	-90.35	98.4	-4,151.8	2,213.3	1,906.6	306.74	7.216	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design NE SW SEC. 21 T4N R67W 6th P.M. - SHARON 21O-334 - 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	
13,800.0	7,147.6	11,797.6	7,169.0	180.7	129.3	-90.35	98.4	-4,151.8	2,294.0	1,984.5	309.53	7.411	
13,900.0	7,146.8	11,797.6	7,169.0	183.5	129.3	-90.35	98.4	-4,151.8	2,376.2	2,063.8	312.32	7.608	
14,000.0	7,146.0	11,797.6	7,169.0	186.2	129.3	-90.35	98.4	-4,151.8	2,459.7	2,144.5	315.11	7.806	
14,100.0	7,145.2	11,797.6	7,169.0	189.0	129.3	-90.35	98.4	-4,151.8	2,544.3	2,226.4	317.90	8.004	
14,200.0	7,144.4	11,797.6	7,169.0	191.8	129.3	-90.35	98.4	-4,151.8	2,630.1	2,309.4	320.69	8.201	
14,300.0	7,143.6	11,797.6	7,169.0	194.6	129.3	-90.35	98.4	-4,151.8	2,716.8	2,393.3	323.48	8.399	
14,370.2	7,143.0	11,797.6	7,169.0	196.6	129.3	-90.35	98.4	-4,151.8	2,778.2	2,452.8	325.44	8.537	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 568-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	-106.81	-1,198.6	-3,968.2	4,145.4				
100.0	100.0	55.4	55.4	0.1	0.1	-106.81	-1,198.6	-3,968.2	4,145.2	4,145.1	0.16	N/A	
200.0	200.0	151.7	151.7	0.3	0.2	-106.81	-1,198.6	-3,968.3	4,145.3	4,144.9	0.49	8,469.046	
300.0	300.0	248.0	248.0	0.5	0.3	-106.81	-1,198.7	-3,968.4	4,145.5	4,144.7	0.82	5,051.947	
400.0	400.0	344.3	344.3	0.8	0.4	-132.02	-1,198.8	-3,968.7	4,147.0	4,145.8	1.15	3,597.506	
500.0	499.8	440.5	440.5	1.0	0.5	-132.01	-1,198.9	-3,969.0	4,150.8	4,149.3	1.49	2,783.728	
600.0	599.5	536.4	536.4	1.2	0.6	-132.00	-1,199.0	-3,969.4	4,157.1	4,155.3	1.84	2,253.249	
700.0	698.7	641.2	641.2	1.5	0.8	-132.00	-1,199.1	-3,969.9	4,165.8	4,163.5	2.29	1,818.534	
800.0	797.5	750.8	750.8	1.8	1.0	-132.01	-1,198.8	-3,970.2	4,176.6	4,173.8	2.78	1,501.122	
900.0	895.6	829.1	829.1	2.2	1.2	-131.97	-1,198.8	-3,970.5	4,189.8	4,186.5	3.26	1,286.488	
1,000.0	993.1	925.1	925.1	2.6	1.4	-131.95	-1,198.9	-3,971.2	4,205.7	4,201.9	3.80	1,105.558	
1,100.0	1,089.6	1,024.8	1,024.8	3.1	1.6	-131.93	-1,198.8	-3,971.8	4,223.9	4,219.5	4.39	962.291	
1,127.2	1,115.8	1,049.3	1,049.3	3.2	1.6	-131.92	-1,198.8	-3,971.9	4,229.2	4,224.7	4.55	929.205	
1,200.0	1,185.5	1,110.3	1,110.3	3.6	1.7	-132.10	-1,198.9	-3,972.3	4,243.9	4,238.9	4.98	852.061	
1,300.0	1,281.4	1,204.2	1,204.2	4.1	1.9	-132.37	-1,198.7	-3,973.2	4,264.3	4,258.7	5.60	761.232	
1,400.0	1,377.3	1,301.1	1,301.1	4.7	2.1	-132.64	-1,198.3	-3,974.1	4,284.8	4,278.6	6.23	687.706	
1,500.0	1,473.1	1,410.0	1,410.0	5.2	2.4	-132.94	-1,198.0	-3,974.9	4,305.2	4,298.3	6.88	625.693	
1,600.0	1,569.0	1,503.0	1,503.0	5.8	2.6	-133.19	-1,197.5	-3,975.6	4,325.6	4,318.1	7.51	576.070	
1,700.0	1,664.8	1,597.0	1,597.0	6.4	2.8	-133.44	-1,196.8	-3,976.4	4,346.1	4,338.0	8.14	533.636	
1,800.0	1,760.7	1,674.2	1,674.1	6.9	2.9	-133.65	-1,196.4	-3,977.2	4,366.9	4,358.2	8.75	499.297	
1,900.0	1,856.6	2,065.0	2,064.3	7.5	3.8	-134.53	-1,179.7	-3,973.1	4,384.4	4,374.5	9.95	440.472	
2,000.0	1,952.4	2,112.5	2,111.4	8.1	3.9	-134.59	-1,174.0	-3,972.5	4,399.7	4,389.1	10.51	418.451	
2,100.0	2,048.3	2,159.1	2,157.6	8.6	4.0	-134.63	-1,167.8	-3,972.8	4,416.1	4,405.0	11.07	398.809	
2,200.0	2,144.1	2,394.5	2,389.3	9.2	4.6	-134.74	-1,126.5	-3,975.3	4,431.2	4,419.0	12.15	364.637	
2,300.0	2,240.0	2,471.8	2,464.4	9.8	4.9	-134.72	-1,108.6	-3,976.9	4,445.4	4,432.6	12.86	345.729	
2,400.0	2,335.9	2,580.7	2,569.0	10.3	5.3	-134.61	-1,078.4	-3,981.2	4,459.8	4,446.1	13.73	324.745	
2,500.0	2,431.7	2,670.3	2,654.2	10.9	5.7	-134.49	-1,051.1	-3,985.3	4,474.0	4,459.4	14.57	307.104	
2,600.0	2,527.6	2,744.2	2,724.6	11.5	6.0	-134.40	-1,028.8	-3,989.2	4,488.7	4,473.4	15.34	292.587	
2,700.0	2,623.4	2,888.3	2,862.6	12.1	6.6	-134.25	-987.8	-3,995.7	4,503.6	4,487.2	16.40	274.540	
2,800.0	2,719.3	3,005.5	2,975.3	12.6	7.1	-134.15	-956.0	-3,999.1	4,517.3	4,499.9	17.36	260.190	
2,900.0	2,815.2	3,122.3	3,088.2	13.2	7.6	-134.09	-926.2	-4,001.4	4,530.7	4,512.4	18.32	247.351	
3,000.0	2,911.0	3,216.8	3,179.6	13.8	8.0	-134.04	-902.0	-4,003.0	4,543.9	4,524.7	19.19	236.810	
3,100.0	3,006.9	3,285.7	3,246.3	14.4	8.4	-134.00	-884.8	-4,004.4	4,557.5	4,537.6	19.95	228.453	
3,200.0	3,102.7	3,401.3	3,358.3	14.9	8.9	-133.95	-856.5	-4,006.9	4,571.5	4,550.6	20.91	218.651	
3,300.0	3,198.6	3,562.0	3,514.0	15.5	9.6	-133.89	-816.6	-4,008.5	4,584.1	4,562.1	22.07	207.665	
3,400.0	3,294.5	3,634.6	3,584.1	16.1	9.9	-133.85	-798.0	-4,009.2	4,596.7	4,573.8	22.87	201.021	
3,500.0	3,390.3	3,718.0	3,664.7	16.7	10.3	-133.80	-776.3	-4,010.8	4,609.7	4,586.0	23.72	194.332	
3,600.0	3,486.2	3,802.4	3,745.8	17.2	10.7	-133.73	-753.1	-4,012.9	4,623.1	4,598.5	24.60	187.934	
3,700.0	3,582.0	3,883.7	3,823.7	17.8	11.2	-133.66	-730.3	-4,015.5	4,636.8	4,611.3	25.48	182.001	
3,800.0	3,677.9	3,965.7	3,902.4	18.4	11.6	-133.58	-707.0	-4,018.5	4,650.9	4,624.6	26.36	176.414	
3,900.0	3,773.7	4,060.3	3,993.1	19.0	12.1	-133.50	-680.6	-4,022.2	4,665.3	4,638.0	27.31	170.850	
4,000.0	3,869.6	4,294.1	4,217.7	19.5	13.2	-133.31	-615.7	-4,026.3	4,677.2	4,648.3	28.94	161.615	
4,100.0	3,965.5	4,439.3	4,356.4	20.1	14.0	-133.18	-572.9	-4,027.3	4,688.1	4,658.0	30.18	155.331	
4,200.0	4,061.3	4,516.7	4,429.9	20.7	14.5	-133.09	-548.6	-4,028.2	4,698.9	4,667.8	31.08	151.177	
4,300.0	4,157.2	4,593.0	4,502.3	21.3	14.9	-132.99	-524.7	-4,029.6	4,710.3	4,678.3	31.98	147.282	
4,400.0	4,253.0	4,668.2	4,573.7	21.8	15.3	-132.90	-501.2	-4,031.3	4,722.2	4,689.4	32.88	143.628	
4,500.0	4,348.9	4,734.7	4,636.8	22.4	15.7	-132.82	-480.3	-4,033.2	4,734.6	4,700.9	33.73	140.379	
4,600.0	4,444.8	4,781.0	4,680.9	23.0	15.9	-132.77	-466.1	-4,034.7	4,747.8	4,713.3	34.46	137.776	
4,700.0	4,540.6	4,853.4	4,750.0	23.6	16.3	-132.69	-444.7	-4,037.4	4,761.7	4,726.4	35.33	134.797	
4,800.0	4,636.5	4,925.2	4,818.9	24.1	16.7	-132.63	-424.7	-4,040.4	4,776.5	4,740.3	36.16	132.078	
4,900.0	4,732.3	5,001.3	4,892.6	24.7	17.1	-132.60	-406.2	-4,042.9	4,791.7	4,754.7	36.99	129.549	
5,000.0	4,828.2	5,061.0	4,951.0	25.3	17.3	-132.60	-393.7	-4,044.6	4,807.4	4,769.7	37.71	127.492	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 568-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	4,924.1	5,120.0	5,009.0	25.9	17.5	-132.62	-382.9	-4,046.1	4,824.0	4,785.6	38.39	125.666	
5,200.0	5,019.9	5,180.3	5,068.5	26.4	17.7	-132.66	-373.4	-4,047.9	4,841.5	4,802.5	39.06	123.960	
5,300.0	5,115.8	5,272.8	5,160.0	27.0	18.0	-132.74	-360.5	-4,050.6	4,859.5	4,819.7	39.80	122.096	
5,400.0	5,211.6	5,435.0	5,321.3	27.6	18.5	-132.94	-342.9	-4,052.5	4,877.0	4,836.3	40.66	119.946	
5,500.0	5,307.5	5,521.5	5,407.5	28.2	18.7	-133.07	-335.8	-4,052.1	4,893.8	4,852.5	41.29	118.520	
5,600.0	5,403.4	5,590.9	5,476.7	28.7	18.8	-133.19	-330.9	-4,051.8	4,911.1	4,869.2	41.88	117.276	
5,700.0	5,499.2	5,661.0	5,546.7	29.3	19.0	-133.32	-326.6	-4,051.8	4,928.9	4,886.5	42.45	116.101	
5,800.0	5,595.1	5,715.0	5,600.6	29.9	19.1	-133.42	-323.6	-4,051.9	4,947.4	4,904.4	43.00	115.053	
5,840.7	5,634.1	5,751.2	5,636.8	30.1	19.2	-133.48	-321.9	-4,052.0	4,955.0	4,911.8	43.24	114.603	
5,900.0	5,691.1	5,783.8	5,669.3	30.4	19.2	-133.71	-320.7	-4,052.2	4,966.1	4,922.6	43.51	114.127	
6,000.0	5,788.0	5,843.8	5,729.3	30.8	19.3	-134.07	-319.1	-4,052.8	4,983.6	4,939.7	43.91	113.504	
6,100.0	5,885.7	5,913.1	5,798.6	31.2	19.4	-134.40	-317.6	-4,053.8	4,999.3	4,955.1	44.27	112.934	
6,200.0	5,984.0	6,021.0	5,906.5	31.5	19.6	-134.75	-317.5	-4,054.7	5,012.8	4,968.2	44.61	112.370	
6,300.0	6,083.0	6,125.2	6,010.6	31.8	19.7	-135.04	-318.4	-4,055.2	5,023.9	4,979.0	44.90	111.891	
6,400.0	6,182.3	6,228.3	6,113.8	32.0	19.8	-135.25	-318.8	-4,055.5	5,032.1	4,986.9	45.17	111.412	
6,500.0	6,282.0	6,299.1	6,184.6	32.2	19.9	-135.38	-319.0	-4,056.0	5,038.3	4,992.9	45.37	111.049	
6,600.0	6,382.0	6,368.0	6,253.4	32.3	20.0	-135.47	-319.4	-4,056.9	5,042.7	4,997.1	45.54	110.739	
6,668.0	6,449.9	6,429.4	6,314.9	32.4	20.1	-110.29	-319.8	-4,057.9	5,044.5	5,003.7	40.72	123.887	
6,698.0	6,479.9	6,457.3	6,342.7	32.4	20.1	-110.29	-319.9	-4,058.4	5,045.0	5,004.2	40.80	123.659	
6,700.0	6,481.9	6,462.0	6,347.4	32.4	20.1	-20.29	-319.9	-4,058.5	5,045.0	4,999.3	45.72	110.336	
6,750.0	6,531.9	6,535.4	6,420.8	32.5	20.2	-20.32	-320.2	-4,059.7	5,044.1	4,998.5	45.61	110.592	
6,800.0	6,581.6	6,595.0	6,480.4	32.5	20.3	-20.47	-320.4	-4,060.4	5,039.7	4,994.4	45.25	111.369	
6,850.0	6,630.8	6,647.9	6,533.3	32.5	20.4	-20.73	-320.4	-4,061.0	5,031.9	4,987.3	44.66	112.666	
6,900.0	6,679.3	6,682.0	6,567.4	32.4	20.4	-21.08	-320.4	-4,061.5	5,021.1	4,977.2	43.84	114.543	
6,950.0	6,726.8	6,715.1	6,600.5	32.4	20.5	-21.54	-320.5	-4,062.0	5,007.2	4,964.4	42.80	116.995	
7,000.0	6,773.1	6,755.2	6,640.6	32.3	20.5	-22.14	-320.7	-4,062.7	4,990.4	4,948.8	41.57	120.056	
7,050.0	6,817.9	6,836.0	6,721.4	32.3	20.6	-22.98	-321.1	-4,063.7	4,970.4	4,930.2	40.18	123.706	
7,100.0	6,861.2	6,877.9	6,763.3	32.2	20.7	-23.92	-321.3	-4,064.2	4,947.3	4,908.7	38.59	128.210	
7,150.0	6,902.5	6,916.2	6,801.6	32.1	20.7	-25.04	-321.5	-4,064.6	4,921.6	4,884.7	36.85	133.557	
7,200.0	6,941.8	6,968.7	6,854.1	32.0	20.8	-26.44	-321.8	-4,065.1	4,893.1	4,858.1	35.01	139.758	
7,250.0	6,978.9	7,025.6	6,911.0	31.9	20.9	-28.16	-322.0	-4,065.4	4,862.1	4,829.0	33.12	146.815	
7,300.0	7,013.5	7,061.0	6,946.3	31.7	20.9	-30.11	-322.0	-4,065.6	4,828.6	4,797.4	31.23	154.638	
7,350.0	7,045.5	7,093.7	6,979.1	31.6	21.0	-32.43	-321.9	-4,065.8	4,793.0	4,763.6	29.45	162.753	
7,400.0	7,074.8	7,126.5	7,011.9	31.5	21.0	-35.24	-321.7	-4,066.1	4,755.5	4,727.5	27.94	170.193	
7,450.0	7,101.1	7,164.3	7,049.7	31.4	21.1	-38.68	-321.4	-4,066.3	4,716.1	4,689.2	26.92	175.215	
7,500.0	7,124.5	7,197.6	7,082.9	31.3	21.1	-42.83	-321.2	-4,066.4	4,675.1	4,648.5	26.59	175.832	
7,550.0	7,144.7	7,249.7	7,135.1	31.1	21.2	-48.20	-320.9	-4,066.4	4,632.7	4,605.4	27.29	169.786	
7,600.0	7,161.6	7,304.6	7,190.0	31.0	21.3	-54.87	-320.6	-4,065.8	4,589.0	4,559.9	29.07	157.862	
7,650.0	7,175.3	7,319.2	7,204.6	30.9	21.3	-61.94	-320.6	-4,065.6	4,544.3	4,512.9	31.39	144.749	
7,700.0	7,185.5	7,329.9	7,215.3	30.8	21.3	-70.02	-320.6	-4,065.4	4,499.1	4,464.9	34.14	131.788	
7,750.0	7,192.3	7,336.7	7,222.0	30.7	21.3	-78.88	-320.6	-4,065.3	4,453.4	4,416.5	36.84	120.889	
7,800.0	7,195.7	7,339.5	7,224.8	30.7	21.3	-88.12	-320.6	-4,065.2	4,407.5	4,368.5	39.05	112.869	
7,828.6	7,196.0	7,339.3	7,224.7	30.6	21.3	-93.39	-320.6	-4,065.2	4,381.3	4,341.3	39.99	109.570	
7,900.0	7,195.4	7,337.3	7,222.7	30.6	21.3	-93.32	-320.6	-4,065.3	4,315.9	4,274.9	40.99	105.297	
8,000.0	7,194.6	7,334.6	7,219.9	30.6	21.3	-93.23	-320.6	-4,065.3	4,224.7	4,182.2	42.58	99.218	
8,100.0	7,193.8	7,331.8	7,217.2	31.0	21.3	-93.14	-320.6	-4,065.4	4,134.0	4,089.6	44.36	93.193	
8,200.0	7,193.0	7,329.1	7,214.5	32.1	21.3	-93.05	-320.6	-4,065.4	4,043.6	3,997.3	46.29	87.352	
8,300.0	7,192.2	7,326.4	7,211.8	33.8	21.3	-92.97	-320.6	-4,065.5	3,953.7	3,905.4	48.35	81.773	
8,400.0	7,191.4	7,323.8	7,209.1	35.8	21.3	-92.88	-320.6	-4,065.5	3,864.3	3,813.8	50.51	76.503	
8,500.0	7,190.6	7,321.1	7,206.5	38.0	21.3	-92.79	-320.6	-4,065.5	3,775.5	3,722.7	52.76	71.559	
8,600.0	7,189.8	7,318.5	7,203.9	40.3	21.3	-92.71	-320.6	-4,065.6	3,687.2	3,632.1	55.08	66.943	
8,700.0	7,189.0	7,315.9	7,201.3	42.7	21.3	-92.62	-320.6	-4,065.6	3,599.5	3,542.0	57.46	62.646	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 568-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,800.0	7,188.2	7,313.3	7,198.7	45.1	21.3	-92.54	-320.6	-4,065.7	3,512.5	3,452.6	59.89	58.653	
8,900.0	7,187.4	7,310.8	7,196.2	47.5	21.3	-92.46	-320.6	-4,065.7	3,426.1	3,363.8	62.35	54.946	
9,000.0	7,186.6	7,308.3	7,193.6	50.0	21.3	-92.37	-320.6	-4,065.8	3,340.6	3,275.7	64.86	51.505	
9,100.0	7,185.7	7,305.8	7,191.1	52.6	21.3	-92.29	-320.6	-4,065.8	3,255.8	3,188.4	67.40	48.309	
9,200.0	7,184.9	7,302.8	7,188.2	55.1	21.3	-92.20	-320.7	-4,065.8	3,172.0	3,102.0	69.96	45.343	
9,300.0	7,184.1	7,299.0	7,184.3	57.7	21.3	-92.07	-320.7	-4,065.9	3,089.1	3,016.6	72.53	42.588	
9,400.0	7,183.3	7,295.4	7,180.7	60.3	21.3	-91.95	-320.7	-4,065.9	3,007.2	2,932.1	75.13	40.025	
9,500.0	7,182.5	7,291.9	7,177.3	62.9	21.3	-91.84	-320.7	-4,066.0	2,926.5	2,848.8	77.75	37.640	
9,600.0	7,181.7	7,288.7	7,174.1	65.5	21.2	-91.74	-320.7	-4,066.0	2,847.0	2,766.6	80.38	35.418	
9,700.0	7,180.9	7,285.7	7,171.0	68.1	21.2	-91.64	-320.7	-4,066.1	2,768.8	2,685.8	83.03	33.347	
9,800.0	7,180.1	7,282.8	7,168.1	70.8	21.2	-91.54	-320.7	-4,066.1	2,692.1	2,606.4	85.69	31.416	
9,900.0	7,179.3	7,280.0	7,165.4	73.5	21.2	-91.45	-320.7	-4,066.1	2,616.9	2,528.5	88.36	29.616	
10,000.0	7,178.5	7,277.4	7,162.8	76.1	21.2	-91.37	-320.7	-4,066.2	2,543.4	2,452.4	91.04	27.937	
10,100.0	7,177.7	7,274.9	7,160.3	78.8	21.2	-91.29	-320.8	-4,066.2	2,471.8	2,378.1	93.73	26.372	
10,200.0	7,176.9	7,272.6	7,157.9	81.5	21.2	-91.21	-320.8	-4,066.2	2,402.3	2,305.8	96.43	24.913	
10,300.0	7,176.0	7,270.3	7,155.7	84.2	21.2	-91.13	-320.8	-4,066.2	2,334.9	2,235.8	99.13	23.554	
10,400.0	7,175.2	7,268.1	7,153.5	86.9	21.2	-91.06	-320.8	-4,066.3	2,269.9	2,168.1	101.84	22.289	
10,500.0	7,174.4	7,266.1	7,151.5	89.6	21.2	-91.00	-320.8	-4,066.3	2,207.6	2,103.0	104.56	21.114	
10,600.0	7,173.6	7,264.1	7,149.5	92.3	21.2	-90.93	-320.8	-4,066.3	2,148.1	2,040.8	107.28	20.023	
10,700.0	7,172.8	7,262.2	7,147.6	95.0	21.2	-90.87	-320.8	-4,066.3	2,091.7	1,981.7	110.01	19.014	
10,800.0	7,172.0	7,260.4	7,145.8	97.8	21.2	-90.81	-320.8	-4,066.3	2,038.6	1,925.9	112.74	18.083	
10,900.0	7,171.2	7,258.7	7,144.0	100.5	21.2	-90.75	-320.8	-4,066.3	1,989.2	1,873.7	115.47	17.226	
11,000.0	7,170.4	7,257.0	7,142.4	103.2	21.2	-90.70	-320.8	-4,066.3	1,943.6	1,825.4	118.21	16.442	
11,100.0	7,169.6	7,255.4	7,140.8	106.0	21.2	-90.65	-320.8	-4,066.4	1,902.3	1,781.3	120.96	15.727	
11,200.0	7,168.8	7,253.9	7,139.2	108.7	21.2	-90.60	-320.9	-4,066.4	1,865.3	1,741.6	123.70	15.079	
11,300.0	7,168.0	7,252.4	7,137.7	111.5	21.2	-90.55	-320.9	-4,066.4	1,833.1	1,706.6	126.45	14.496	
11,400.0	7,167.1	7,250.9	7,136.3	114.2	21.2	-90.50	-320.9	-4,066.4	1,805.8	1,676.6	129.20	13.977	
11,500.0	7,166.3	7,249.6	7,134.9	117.0	21.2	-90.46	-320.9	-4,066.4	1,783.8	1,651.8	131.96	13.518	
11,600.0	7,165.5	7,248.2	7,133.6	119.7	21.2	-90.41	-320.9	-4,066.4	1,767.1	1,632.4	134.72	13.117	
11,700.0	7,164.7	7,246.9	7,132.3	122.5	21.2	-90.37	-320.9	-4,066.4	1,756.0	1,618.5	137.48	12.773	
11,800.0	7,163.9	7,245.7	7,131.1	125.2	21.2	-90.33	-320.9	-4,066.4	1,750.5	1,610.3	140.24	12.483	
11,846.0	7,163.5	7,245.1	7,130.5	126.5	21.2	-90.31	-320.9	-4,066.4	1,749.9	1,608.4	141.51	12.366 CC	
11,900.0	7,163.1	7,244.5	7,129.9	128.0	21.2	-90.29	-320.9	-4,066.4	1,750.7	1,607.7	143.00	12.243 ES	
12,000.0	7,162.3	7,243.3	7,128.7	130.7	21.2	-90.25	-320.9	-4,066.4	1,756.7	1,610.9	145.77	12.051	
12,100.0	7,161.5	7,242.2	7,127.6	133.5	21.2	-90.22	-320.9	-4,066.4	1,768.3	1,619.7	148.53	11.905	
12,200.0	7,160.7	7,241.1	7,126.5	136.3	21.2	-90.18	-320.9	-4,066.4	1,785.4	1,634.1	151.30	11.800	
12,300.0	7,159.8	7,240.1	7,125.5	139.0	21.2	-90.15	-320.9	-4,066.4	1,807.8	1,653.8	154.07	11.734	
12,400.0	7,159.0	7,239.1	7,124.4	141.8	21.2	-90.11	-320.9	-4,066.4	1,835.5	1,678.7	156.84	11.703 SF	
12,500.0	7,158.2	7,238.1	7,123.4	144.6	21.2	-90.08	-320.9	-4,066.4	1,868.1	1,708.5	159.62	11.704	
12,600.0	7,157.4	7,237.1	7,122.5	147.3	21.2	-90.05	-320.9	-4,066.4	1,905.4	1,743.0	162.39	11.734	
12,700.0	7,156.6	7,236.2	7,121.6	150.1	21.2	-90.02	-321.0	-4,066.4	1,947.2	1,782.0	165.17	11.789	
12,800.0	7,155.8	7,235.3	7,120.7	152.9	21.2	-89.99	-321.0	-4,066.4	1,993.0	1,825.1	167.94	11.867	
12,900.0	7,155.0	7,234.4	7,119.8	155.7	21.2	-89.96	-321.0	-4,066.4	2,042.8	1,872.1	170.72	11.966	
13,000.0	7,154.2	7,233.6	7,118.9	158.4	21.2	-89.93	-321.0	-4,066.5	2,096.1	1,922.6	173.50	12.082	
13,100.0	7,153.3	7,232.7	7,118.1	161.2	21.2	-89.90	-321.0	-4,066.5	2,152.8	1,976.5	176.28	12.212	
13,200.0	7,152.5	7,231.9	7,117.3	164.0	21.2	-89.88	-321.0	-4,066.5	2,212.5	2,033.5	179.06	12.356	
13,300.0	7,151.7	7,231.1	7,116.5	166.8	21.2	-89.85	-321.0	-4,066.5	2,275.1	2,093.3	181.84	12.511	
13,400.0	7,150.9	7,230.4	7,115.7	169.5	21.2	-89.83	-321.0	-4,066.5	2,340.3	2,155.6	184.62	12.676	
13,500.0	7,150.1	7,229.6	7,115.0	172.3	21.2	-89.80	-321.0	-4,066.5	2,407.8	2,220.4	187.41	12.848	
13,600.0	7,149.3	7,228.9	7,114.3	175.1	21.2	-89.78	-321.0	-4,066.5	2,477.6	2,287.4	190.19	13.027	
13,700.0	7,148.5	7,228.2	7,113.6	177.9	21.2	-89.76	-321.0	-4,066.5	2,549.3	2,356.4	192.97	13.211	
13,800.0	7,147.6	7,227.5	7,112.9	180.7	21.2	-89.73	-321.0	-4,066.5	2,623.0	2,427.2	195.76	13.399	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 33-20D - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 568-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	
13,900.0	7,146.8	7,226.8	7,112.2	183.5	21.2	-89.71	-321.0	-4,066.5	2,698.3	2,499.7	198.55	13.590	
14,000.0	7,146.0	7,226.2	7,111.6	186.2	21.2	-89.69	-321.0	-4,066.5	2,775.1	2,573.8	201.33	13.784	
14,100.0	7,145.2	7,225.6	7,110.9	189.0	21.2	-89.67	-321.0	-4,066.5	2,853.5	2,649.3	204.12	13.979	
14,200.0	7,144.4	7,210.0	7,095.4	191.8	21.1	-89.16	-321.1	-4,066.5	2,933.1	2,726.3	206.82	14.182	
14,300.0	7,143.6	7,210.0	7,095.4	194.6	21.1	-89.16	-321.1	-4,066.5	3,014.0	2,804.4	209.61	14.379	
14,370.2	7,143.0	7,210.0	7,095.4	196.6	21.1	-89.16	-321.1	-4,066.5	3,071.4	2,859.8	211.57	14.517	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 599-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	-107.11	-1,220.5	-3,965.9	4,149.7				
100.0	100.0	58.1	58.1	0.1	0.1	-107.11	-1,220.5	-3,965.9	4,149.5	4,149.3	0.16	N/A	
200.0	200.0	159.2	159.2	0.3	0.2	-107.10	-1,220.4	-3,965.9	4,149.4	4,148.9	0.50	8,333.896	
300.0	300.0	260.3	260.3	0.5	0.3	-107.10	-1,220.4	-3,965.9	4,149.4	4,148.6	0.83	4,973.128	
302.9	302.9	263.2	263.2	0.6	0.3	-132.32	-1,220.4	-3,965.9	4,149.4	4,148.5	0.84	4,916.730	
400.0	400.0	361.3	361.3	0.8	0.4	-132.32	-1,220.3	-3,965.8	4,150.5	4,149.3	1.17	3,544.818	
500.0	499.8	462.3	462.3	1.0	0.5	-132.32	-1,220.2	-3,965.7	4,153.9	4,152.4	1.51	2,745.262	
600.0	599.5	1,834.0	1,809.7	1.2	5.1	-132.95	-1,112.1	-3,793.7	4,157.0	4,152.0	5.00	831.041	
700.0	698.7	1,929.6	1,900.2	1.5	5.6	-133.24	-1,092.7	-3,769.8	4,135.0	4,129.4	5.55	745.122	
800.0	797.5	2,032.1	1,997.0	1.8	6.3	-133.52	-1,071.2	-3,743.8	4,114.8	4,108.6	6.15	668.943	
900.0	895.6	2,096.0	2,057.5	2.2	6.6	-133.78	-1,057.7	-3,728.3	4,097.8	4,091.2	6.66	615.663	
1,000.0	993.1	2,154.4	2,113.0	2.6	6.9	-134.02	-1,045.7	-3,714.6	4,084.1	4,077.0	7.17	569.897	
1,100.0	1,089.6	2,349.2	2,298.0	3.1	8.0	-134.43	-1,008.9	-3,666.3	4,072.6	4,064.4	8.15	499.925	
1,127.2	1,115.8	2,376.0	2,323.4	3.2	8.2	-134.51	-1,003.7	-3,659.3	4,069.4	4,061.0	8.34	487.845	
1,200.0	1,185.5	2,439.8	2,383.7	3.6	8.6	-134.60	-991.1	-3,642.6	4,061.1	4,052.2	8.85	458.781	
1,300.0	1,281.4	2,615.0	2,548.9	4.1	9.7	-134.84	-955.5	-3,596.4	4,049.2	4,039.3	9.87	410.387	
1,400.0	1,377.3	2,696.1	2,625.0	4.7	10.2	-134.94	-938.2	-3,574.5	4,036.2	4,025.6	10.58	381.478	
1,500.0	1,473.1	2,751.0	2,676.7	5.2	10.6	-135.01	-926.3	-3,560.1	4,024.2	4,013.0	11.21	359.122	
1,600.0	1,569.0	2,794.2	2,717.5	5.8	10.8	-135.06	-917.1	-3,549.4	4,013.4	4,001.6	11.79	340.516	
1,700.0	1,664.8	2,844.0	2,764.8	6.4	11.1	-135.12	-906.8	-3,537.7	4,004.2	3,991.8	12.39	323.169	
1,800.0	1,760.7	2,988.2	2,901.6	6.9	12.0	-135.29	-876.5	-3,503.5	3,994.6	3,981.3	13.32	299.880	
1,900.0	1,856.6	3,061.8	2,971.3	7.5	12.4	-135.38	-860.9	-3,485.9	3,985.0	3,971.0	14.01	284.394	
2,000.0	1,952.4	3,125.0	3,031.4	8.1	12.8	-135.45	-847.7	-3,471.3	3,976.2	3,961.5	14.66	271.140	
2,100.0	2,048.3	3,203.8	3,106.4	8.6	13.2	-135.55	-831.6	-3,453.6	3,968.1	3,952.8	15.37	258.232	
2,200.0	2,144.1	3,305.1	3,203.1	9.2	13.8	-135.69	-811.9	-3,430.7	3,960.4	3,944.2	16.13	245.517	
2,300.0	2,240.0	3,397.4	3,291.4	9.8	14.3	-135.84	-795.4	-3,409.3	3,952.6	3,935.8	16.85	234.527	
2,400.0	2,335.9	3,550.4	3,437.4	10.3	15.2	-136.07	-766.7	-3,373.6	3,944.6	3,926.8	17.78	221.864	
2,500.0	2,431.7	3,653.4	3,535.3	10.9	15.8	-136.22	-746.8	-3,348.7	3,935.3	3,916.8	18.55	212.110	
2,600.0	2,527.6	3,754.0	3,631.1	11.5	16.4	-136.38	-727.7	-3,324.5	3,926.4	3,907.1	19.31	203.330	
2,700.0	2,623.4	3,889.6	3,760.0	12.1	17.2	-136.59	-702.2	-3,290.9	3,916.9	3,896.7	20.18	194.141	
2,800.0	2,719.3	3,967.0	3,833.4	12.6	17.7	-136.71	-687.4	-3,271.6	3,907.2	3,886.3	20.86	187.286	
2,900.0	2,815.2	4,037.2	3,900.2	13.2	18.1	-136.82	-673.8	-3,254.7	3,898.2	3,876.7	21.52	181.108	
3,000.0	2,911.0	4,110.7	3,970.2	13.8	18.5	-136.93	-659.8	-3,237.5	3,890.0	3,867.8	22.19	175.300	
3,100.0	3,006.9	4,341.0	4,189.5	14.4	19.9	-137.31	-617.0	-3,181.5	3,882.0	3,858.7	23.32	166.433	
3,200.0	3,102.7	4,397.3	4,242.7	14.9	20.2	-137.40	-606.2	-3,166.8	3,871.3	3,847.4	23.94	161.719	
3,300.0	3,198.6	4,512.6	4,352.2	15.5	20.9	-137.59	-584.3	-3,137.8	3,861.6	3,836.9	24.73	156.160	
3,400.0	3,294.5	4,624.0	4,457.4	16.1	21.7	-137.76	-561.8	-3,109.0	3,850.7	3,825.2	25.52	150.900	
3,500.0	3,390.3	4,703.1	4,532.2	16.7	22.1	-137.88	-546.0	-3,088.6	3,840.1	3,813.9	26.20	146.567	
3,600.0	3,486.2	4,808.0	4,631.5	17.2	22.8	-138.05	-525.3	-3,062.0	3,829.9	3,802.9	26.96	142.065	
3,700.0	3,582.0	4,882.6	4,702.2	17.8	23.3	-138.16	-510.3	-3,043.2	3,819.8	3,792.2	27.63	138.252	
3,800.0	3,677.9	4,947.9	4,764.0	18.4	23.7	-138.25	-496.9	-3,027.4	3,810.5	3,782.2	28.27	134.794	
3,900.0	3,773.7	5,012.5	4,825.5	19.0	24.0	-138.34	-483.9	-3,012.3	3,802.2	3,773.3	28.90	131.546	
4,000.0	3,869.6	5,092.0	4,901.3	19.5	24.5	-138.46	-468.3	-2,994.1	3,794.6	3,765.0	29.57	128.303	
4,100.0	3,965.5	5,174.8	4,980.5	20.1	25.0	-138.60	-453.1	-2,975.2	3,787.4	3,757.2	30.24	125.238	
4,200.0	4,061.3	5,339.2	5,137.3	20.7	25.9	-138.88	-422.9	-2,936.3	3,779.6	3,748.4	31.14	121.381	
4,300.0	4,157.2	5,401.4	5,196.5	21.3	26.3	-138.98	-410.9	-2,921.4	3,771.3	3,739.5	31.75	118.774	
4,400.0	4,253.0	5,466.0	5,258.4	21.8	26.7	-139.09	-399.3	-2,907.0	3,764.7	3,732.4	32.36	116.323	
4,500.0	4,348.9	5,466.0	5,258.4	22.4	26.7	-139.09	-399.3	-2,907.0	3,759.4	3,726.6	32.80	114.606	
4,600.0	4,444.8	5,522.6	5,313.0	23.0	26.9	-139.19	-390.0	-2,895.5	3,755.8	3,722.4	33.38	112.529	
4,700.0	4,540.6	5,560.0	5,349.3	23.6	27.1	-139.26	-384.3	-2,888.3	3,753.7	3,719.8	33.90	110.723	
4,779.8	4,617.1	5,597.0	5,385.3	24.0	27.3	-139.33	-378.9	-2,881.6	3,753.2	3,718.9	34.33	109.328	
4,800.0	4,636.5	5,605.2	5,393.3	24.1	27.3	-139.35	-377.8	-2,880.2	3,753.2	3,718.8	34.44	108.994	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 599-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,900.0	4,732.3	5,653.0	5,440.0	24.7	27.5	-139.45	-371.4	-2,872.4	3,754.4	3,719.4	34.97	107.353	
5,000.0	4,828.2	5,695.4	5,481.6	25.3	27.7	-139.54	-366.2	-2,865.8	3,757.0	3,721.5	35.49	105.873	
5,100.0	4,924.1	5,746.0	5,531.3	25.9	27.9	-139.65	-361.0	-2,858.2	3,760.9	3,724.9	36.01	104.443	
5,200.0	5,019.9	5,806.2	5,590.6	26.4	28.1	-139.80	-355.3	-2,849.7	3,766.0	3,729.5	36.54	103.076	
5,300.0	5,115.8	5,865.0	5,648.7	27.0	28.3	-139.94	-349.9	-2,842.0	3,772.2	3,735.2	37.06	101.787	
5,400.0	5,211.6	5,933.0	5,715.9	27.6	28.5	-140.10	-343.7	-2,833.8	3,779.6	3,742.0	37.60	100.532	
5,500.0	5,307.5	5,996.7	5,778.9	28.2	28.7	-140.24	-338.0	-2,826.8	3,787.8	3,749.7	38.12	99.355	
5,600.0	5,403.4	6,055.4	5,837.1	28.7	28.9	-140.37	-332.7	-2,820.7	3,796.9	3,758.2	38.64	98.255	
5,700.0	5,499.2	6,119.0	5,900.2	29.3	29.1	-140.51	-327.5	-2,814.9	3,807.3	3,768.2	39.17	97.212	
5,800.0	5,595.1	6,154.5	5,935.5	29.9	29.2	-140.60	-324.9	-2,812.1	3,818.9	3,779.3	39.64	96.339	
5,840.7	5,634.1	6,175.8	5,956.7	30.1	29.2	-140.64	-323.4	-2,810.5	3,824.1	3,784.2	39.84	95.980	
5,900.0	5,691.1	6,212.0	5,992.7	30.4	29.3	-140.82	-321.2	-2,807.9	3,831.4	3,791.4	40.05	95.657	
6,000.0	5,788.0	6,252.2	6,032.8	30.8	29.4	-141.04	-318.9	-2,805.3	3,842.7	3,802.4	40.31	95.324	
6,100.0	5,885.7	6,306.0	6,086.5	31.2	29.5	-141.26	-316.6	-2,802.5	3,852.8	3,812.2	40.55	95.002	
6,200.0	5,984.0	6,341.8	6,122.2	31.5	29.6	-141.43	-315.5	-2,801.0	3,861.5	3,820.8	40.73	94.800	
6,300.0	6,083.0	6,399.0	6,179.4	31.8	29.6	-141.60	-314.6	-2,799.0	3,869.0	3,828.1	40.90	94.594	
6,400.0	6,182.3	6,449.9	6,230.3	32.0	29.7	-141.72	-314.3	-2,797.7	3,874.9	3,833.9	41.02	94.459	
6,500.0	6,282.0	6,522.6	6,302.9	32.2	29.8	-141.83	-314.0	-2,796.2	3,878.9	3,837.8	41.14	94.285	
6,600.0	6,382.0	6,586.0	6,366.3	32.3	29.9	-141.88	-313.8	-2,795.3	3,880.9	3,839.7	41.22	94.156	
6,668.0	6,449.9	6,639.9	6,420.2	32.4	29.9	-116.69	-314.0	-2,794.8	3,881.1	3,823.7	57.33	67.697	
6,698.0	6,479.9	6,659.1	6,439.4	32.4	29.9	-116.69	-314.1	-2,794.7	3,881.0	3,823.6	57.38	67.638	
6,700.0	6,481.9	6,660.4	6,440.7	32.4	29.9	-26.69	-314.1	-2,794.7	3,881.0	3,839.7	41.32	93.928	
6,750.0	6,531.9	6,698.0	6,478.4	32.5	30.0	-26.76	-314.4	-2,794.7	3,879.4	3,838.4	40.95	94.734	
6,800.0	6,581.6	6,744.3	6,524.7	32.5	30.0	-26.97	-314.7	-2,794.6	3,874.8	3,834.4	40.38	95.965	
6,850.0	6,630.8	6,790.2	6,570.5	32.5	30.0	-27.31	-315.1	-2,794.7	3,867.1	3,827.5	39.59	97.668	
6,900.0	6,679.3	6,835.4	6,615.8	32.4	30.1	-27.80	-315.4	-2,794.8	3,856.4	3,817.8	38.62	99.864	
6,950.0	6,726.8	6,878.3	6,658.6	32.4	30.1	-28.43	-315.6	-2,795.0	3,842.8	3,805.3	37.46	102.576	
7,000.0	6,773.1	6,916.5	6,696.8	32.3	30.1	-29.21	-315.9	-2,795.1	3,826.4	3,790.2	36.16	105.813	
7,050.0	6,817.9	6,961.0	6,741.3	32.3	30.2	-30.20	-316.4	-2,795.4	3,807.2	3,772.5	34.76	109.520	
7,100.0	6,861.2	6,988.5	6,768.8	32.2	30.2	-31.32	-316.7	-2,795.6	3,785.4	3,752.1	33.31	113.654	
7,150.0	6,902.5	7,022.0	6,802.3	32.1	30.2	-32.67	-317.1	-2,796.0	3,761.1	3,729.2	31.88	117.967	
7,200.0	6,941.8	7,054.0	6,834.3	32.0	30.2	-34.26	-317.3	-2,796.4	3,734.4	3,703.9	30.58	122.120	
7,250.0	6,978.9	7,081.9	6,862.2	31.9	30.3	-36.10	-317.5	-2,796.9	3,705.5	3,676.0	29.51	125.582	
7,300.0	7,013.5	7,108.2	6,888.5	31.7	30.3	-38.24	-317.8	-2,797.4	3,674.5	3,645.7	28.79	127.619	
7,350.0	7,045.5	7,132.6	6,912.9	31.6	30.3	-40.72	-318.0	-2,797.9	3,641.5	3,613.0	28.57	127.463	
7,400.0	7,074.8	7,158.2	6,938.5	31.5	30.3	-43.62	-318.3	-2,798.5	3,606.8	3,577.8	28.97	124.484	
7,450.0	7,101.1	7,187.3	6,967.5	31.4	30.3	-47.05	-318.8	-2,799.1	3,570.4	3,540.3	30.13	118.518	
7,500.0	7,124.5	7,213.0	6,993.2	31.3	30.3	-50.98	-319.2	-2,799.6	3,532.5	3,500.5	32.01	110.355	
7,550.0	7,144.7	7,235.2	7,015.5	31.1	30.4	-55.44	-319.6	-2,800.0	3,493.4	3,458.8	34.55	101.113	
7,600.0	7,161.6	7,258.5	7,038.7	31.0	30.4	-60.54	-320.0	-2,800.4	3,453.2	3,415.5	37.62	91.797	
7,650.0	7,175.3	7,278.9	7,059.2	30.9	30.4	-66.20	-320.4	-2,800.7	3,412.1	3,371.2	40.91	83.397	
7,700.0	7,185.5	7,294.4	7,074.6	30.8	30.4	-72.28	-320.7	-2,801.0	3,370.4	3,326.3	44.11	76.412	
7,750.0	7,192.3	7,305.0	7,085.2	30.7	30.4	-78.64	-320.8	-2,801.1	3,328.3	3,281.4	46.91	70.947	
7,800.0	7,195.7	7,310.6	7,090.8	30.7	30.4	-85.07	-320.9	-2,801.2	3,286.1	3,237.0	49.12	66.901	
7,828.6	7,196.0	7,311.6	7,091.8	30.6	30.4	-88.71	-320.9	-2,801.2	3,261.9	3,211.9	50.07	65.146	
7,900.0	7,195.4	7,312.1	7,092.3	30.6	30.4	-88.72	-320.9	-2,801.2	3,201.9	3,150.8	51.08	62.680	
8,000.0	7,194.6	7,312.8	7,093.0	30.6	30.4	-88.75	-320.9	-2,801.2	3,118.7	3,066.0	52.69	59.186	
8,100.0	7,193.8	7,313.5	7,093.7	31.0	30.4	-88.77	-320.9	-2,801.2	3,036.4	2,981.9	54.49	55.724	
8,200.0	7,193.0	7,314.1	7,094.4	32.1	30.4	-88.79	-321.0	-2,801.2	2,955.3	2,898.8	56.44	52.358	
8,300.0	7,192.2	7,314.8	7,095.1	33.8	30.4	-88.81	-321.0	-2,801.2	2,875.3	2,816.8	58.52	49.130	
8,400.0	7,191.4	7,315.5	7,095.7	35.8	30.4	-88.83	-321.0	-2,801.3	2,796.6	2,735.9	60.71	46.067	
8,500.0	7,190.6	7,316.1	7,096.4	38.0	30.4	-88.86	-321.0	-2,801.3	2,719.3	2,656.4	62.98	43.180	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 599-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,600.0	7,189.8	7,316.7	7,097.0	40.3	30.4	-88.88	-321.0	-2,801.3	2,643.6	2,578.3	65.32	40.474	
8,700.0	7,189.0	7,317.4	7,097.6	42.7	30.4	-88.90	-321.0	-2,801.3	2,569.5	2,501.8	67.71	37.946	
8,800.0	7,188.2	7,318.0	7,098.2	45.1	30.4	-88.92	-321.0	-2,801.3	2,497.2	2,427.1	70.16	35.593	
8,900.0	7,187.4	7,318.6	7,098.8	47.5	30.4	-88.94	-321.0	-2,801.3	2,426.9	2,354.3	72.65	33.406	
9,000.0	7,186.6	7,319.2	7,099.4	50.0	30.4	-88.96	-321.0	-2,801.3	2,358.7	2,283.6	75.17	31.378	
9,100.0	7,185.7	7,319.8	7,100.0	52.6	30.4	-88.98	-321.0	-2,801.3	2,292.9	2,215.2	77.73	29.500	
9,200.0	7,184.9	7,320.4	7,100.6	55.1	30.4	-89.00	-321.0	-2,801.3	2,229.6	2,149.3	80.30	27.765	
9,300.0	7,184.1	7,320.9	7,101.2	57.7	30.4	-89.01	-321.1	-2,801.3	2,169.1	2,086.2	82.91	26.164	
9,400.0	7,183.3	7,321.5	7,101.7	60.3	30.4	-89.03	-321.1	-2,801.3	2,111.6	2,026.0	85.52	24.690	
9,500.0	7,182.5	7,322.1	7,102.3	62.9	30.4	-89.05	-321.1	-2,801.3	2,057.3	1,969.1	88.16	23.336	
9,600.0	7,181.7	7,322.6	7,102.8	65.5	30.4	-89.07	-321.1	-2,801.3	2,006.6	1,915.7	90.81	22.096	
9,700.0	7,180.9	7,323.1	7,103.4	68.1	30.4	-89.09	-321.1	-2,801.4	1,959.6	1,866.1	93.48	20.964	
9,800.0	7,180.1	7,323.7	7,103.9	70.8	30.4	-89.10	-321.1	-2,801.4	1,916.7	1,820.6	96.15	19.934	
9,900.0	7,179.3	7,324.2	7,104.4	73.5	30.4	-89.12	-321.1	-2,801.4	1,878.2	1,779.3	98.84	19.003	
10,000.0	7,178.5	7,324.7	7,105.0	76.1	30.4	-89.14	-321.1	-2,801.4	1,844.3	1,742.7	101.53	18.164	
10,100.0	7,177.7	7,325.2	7,105.5	78.8	30.4	-89.16	-321.1	-2,801.4	1,815.2	1,711.0	104.24	17.415	
10,200.0	7,176.9	7,325.7	7,106.0	81.5	30.4	-89.17	-321.1	-2,801.4	1,791.3	1,684.4	106.95	16.750	
10,300.0	7,176.0	7,326.2	7,106.5	84.2	30.4	-89.19	-321.1	-2,801.4	1,772.7	1,663.1	109.66	16.165	
10,400.0	7,175.2	7,326.7	7,107.0	86.9	30.4	-89.20	-321.1	-2,801.4	1,759.6	1,647.3	112.39	15.657	
10,500.0	7,174.4	7,327.2	7,107.4	89.6	30.4	-89.22	-321.1	-2,801.4	1,752.2	1,637.1	115.11	15.221	
10,581.2	7,173.8	7,327.6	7,107.8	91.8	30.4	-89.23	-321.1	-2,801.4	1,750.3	1,633.0	117.33	14.917 CC	
10,600.0	7,173.6	7,327.7	7,107.9	92.3	30.4	-89.24	-321.1	-2,801.4	1,750.4	1,632.5	117.85	14.853 ES	
10,700.0	7,172.8	7,328.2	7,108.4	95.0	30.4	-89.25	-321.2	-2,801.4	1,754.3	1,633.7	120.58	14.549	
10,800.0	7,172.0	7,328.6	7,108.9	97.8	30.4	-89.27	-321.2	-2,801.4	1,763.9	1,640.6	123.33	14.303	
10,900.0	7,171.2	7,329.1	7,109.3	100.5	30.4	-89.28	-321.2	-2,801.4	1,779.1	1,653.0	126.07	14.112	
11,000.0	7,170.4	7,329.5	7,109.8	103.2	30.4	-89.30	-321.2	-2,801.4	1,799.7	1,670.9	128.82	13.971	
11,100.0	7,169.6	7,330.0	7,110.2	106.0	30.4	-89.31	-321.2	-2,801.4	1,825.6	1,694.0	131.57	13.875	
11,200.0	7,168.8	7,330.4	7,110.7	108.7	30.4	-89.32	-321.2	-2,801.4	1,856.5	1,722.1	134.33	13.820	
11,300.0	7,168.0	7,330.9	7,111.1	111.5	30.4	-89.34	-321.2	-2,801.4	1,892.1	1,755.1	137.09	13.803 SF	
11,400.0	7,167.1	7,331.3	7,111.5	114.2	30.4	-89.35	-321.2	-2,801.5	1,932.3	1,792.5	139.85	13.818	
11,500.0	7,166.3	7,331.7	7,111.9	117.0	30.4	-89.37	-321.2	-2,801.5	1,976.8	1,834.2	142.61	13.862	
11,600.0	7,165.5	7,332.1	7,112.4	119.7	30.4	-89.38	-321.2	-2,801.5	2,025.2	1,879.8	145.37	13.931	
11,700.0	7,164.7	7,332.5	7,112.8	122.5	30.4	-89.39	-321.2	-2,801.5	2,077.3	1,929.2	148.14	14.022	
11,800.0	7,163.9	7,333.0	7,113.2	125.2	30.4	-89.41	-321.2	-2,801.5	2,132.8	1,981.9	150.91	14.133	
11,900.0	7,163.1	7,333.4	7,113.6	128.0	30.4	-89.42	-321.2	-2,801.5	2,191.5	2,037.8	153.68	14.260	
12,000.0	7,162.3	7,333.8	7,114.0	130.7	30.4	-89.43	-321.2	-2,801.5	2,253.1	2,096.6	156.45	14.401	
12,100.0	7,161.5	7,334.2	7,114.4	133.5	30.4	-89.45	-321.2	-2,801.5	2,317.4	2,158.1	159.23	14.554	
12,200.0	7,160.7	7,334.5	7,114.8	136.3	30.4	-89.46	-321.2	-2,801.5	2,384.1	2,222.1	162.00	14.716	
12,300.0	7,159.8	7,334.9	7,115.2	139.0	30.4	-89.47	-321.2	-2,801.5	2,453.1	2,288.3	164.78	14.887	
12,400.0	7,159.0	7,335.3	7,115.5	141.8	30.4	-89.48	-321.2	-2,801.5	2,524.2	2,356.6	167.56	15.064	
12,500.0	7,158.2	7,335.7	7,115.9	144.6	30.4	-89.50	-321.3	-2,801.5	2,597.2	2,426.8	170.34	15.247	
12,600.0	7,157.4	7,336.1	7,116.3	147.3	30.4	-89.51	-321.3	-2,801.5	2,671.9	2,498.8	173.12	15.434	
12,700.0	7,156.6	7,336.4	7,116.7	150.1	30.4	-89.52	-321.3	-2,801.5	2,748.2	2,572.3	175.90	15.624	
12,800.0	7,155.8	7,336.8	7,117.1	152.9	30.4	-89.53	-321.3	-2,801.5	2,826.0	2,647.4	178.68	15.816	
12,900.0	7,155.0	7,337.2	7,117.4	155.7	30.4	-89.55	-321.3	-2,801.5	2,905.2	2,723.7	181.47	16.010	
13,000.0	7,154.2	7,337.6	7,117.8	158.4	30.4	-89.56	-321.3	-2,801.5	2,985.6	2,801.4	184.25	16.204	
13,100.0	7,153.3	7,338.0	7,118.2	161.2	30.4	-89.57	-321.3	-2,801.5	3,067.2	2,880.2	187.04	16.399	
13,200.0	7,152.5	7,338.4	7,118.6	164.0	30.4	-89.58	-321.3	-2,801.5	3,149.8	2,960.0	189.82	16.593	
13,300.0	7,151.7	7,338.8	7,119.0	166.8	30.4	-89.60	-321.3	-2,801.5	3,233.5	3,040.8	192.61	16.787	
13,400.0	7,150.9	7,339.1	7,119.4	169.5	30.4	-89.61	-321.3	-2,801.5	3,318.0	3,122.6	195.40	16.981	
13,500.0	7,150.1	7,339.5	7,119.8	172.3	30.4	-89.62	-321.3	-2,801.6	3,403.3	3,205.2	198.19	17.172	
13,600.0	7,149.3	7,339.9	7,120.2	175.1	30.4	-89.63	-321.3	-2,801.6	3,489.5	3,288.5	200.98	17.363	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 43-20D - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 599-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
13,700.0	7,148.5	7,340.3	7,120.6	177.9	30.4	-89.65	-321.3	-2,801.6	3,576.3	3,372.6	203.77	17.551	
13,800.0	7,147.6	7,340.7	7,121.0	180.7	30.4	-89.66	-321.3	-2,801.6	3,663.9	3,457.3	206.56	17.738	
13,900.0	7,146.8	7,341.2	7,121.4	183.5	30.4	-89.67	-321.3	-2,801.6	3,752.0	3,542.7	209.35	17.922	
14,000.0	7,146.0	7,341.6	7,121.8	186.2	30.4	-89.69	-321.3	-2,801.6	3,840.8	3,628.6	212.14	18.105	
14,100.0	7,145.2	7,342.0	7,122.2	189.0	30.4	-89.70	-321.3	-2,801.6	3,930.0	3,715.1	214.93	18.285	
14,200.0	7,144.4	7,342.4	7,122.6	191.8	30.4	-89.71	-321.3	-2,801.6	4,019.8	3,802.1	217.73	18.463	
14,300.0	7,143.6	7,342.8	7,123.0	194.6	30.4	-89.73	-321.3	-2,801.6	4,110.1	3,889.6	220.52	18.638	
14,370.2	7,143.0	7,343.1	7,123.3	196.6	30.4	-89.74	-321.3	-2,801.6	4,173.7	3,951.2	222.48	18.760	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 703-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	-145.12	-763.6	-532.2	930.8				
100.0	100.0	100.6	100.6	0.1	0.1	-145.13	-763.7	-532.2	930.8	930.6	0.20	4,612.472	
200.0	200.0	199.7	199.6	0.3	0.2	-145.14	-763.9	-532.1	931.0	930.4	0.53	1,757.812	
300.0	300.0	298.7	298.7	0.5	0.3	-145.16	-764.3	-532.0	931.2	930.4	0.86	1,086.057 ES	
400.0	400.0	397.8	397.8	0.8	0.4	-170.41	-764.9	-531.8	933.3	932.1	1.19	784.340	
500.0	499.8	496.7	496.7	1.0	0.5	-170.49	-765.6	-531.5	938.9	937.4	1.53	614.284	
600.0	599.5	595.3	595.3	1.2	0.6	-170.59	-766.5	-531.2	948.0	946.2	1.88	504.912	
700.0	698.7	693.5	693.5	1.5	0.7	-170.72	-767.5	-530.8	960.7	958.5	2.24	428.556	
800.0	797.5	840.2	840.1	1.8	1.0	-171.00	-766.5	-528.0	974.6	971.9	2.75	354.770	
900.0	895.6	998.6	998.0	2.2	1.4	-171.53	-759.8	-517.5	986.4	983.1	3.29	300.060	
1,000.0	993.1	1,175.9	1,173.5	2.6	1.8	-172.15	-742.7	-499.6	995.5	991.6	3.90	254.996	
1,100.0	1,089.6	1,295.0	1,290.4	3.1	2.2	-172.53	-725.1	-485.1	1,002.3	997.8	4.43	226.256	
1,127.2	1,115.8	1,325.8	1,320.6	3.2	2.4	-172.63	-720.3	-481.1	1,004.4	999.9	4.57	219.611	
1,200.0	1,185.5	1,413.3	1,406.1	3.6	2.7	-172.95	-706.2	-469.2	1,010.0	1,005.0	4.99	202.347	
1,300.0	1,281.4	1,561.0	1,549.5	4.1	3.4	-173.48	-678.8	-447.0	1,014.8	1,009.2	5.66	179.422	
1,400.0	1,377.3	1,699.0	1,681.6	4.7	4.1	-174.11	-648.9	-420.6	1,014.3	1,008.0	6.34	159.956	
1,500.0	1,473.1	1,819.9	1,796.4	5.2	4.8	-174.79	-621.5	-394.1	1,011.8	1,004.8	7.00	144.494	
1,600.0	1,569.0	1,905.6	1,877.5	5.8	5.3	-175.27	-601.7	-375.2	1,009.0	1,001.4	7.55	133.597	
1,700.0	1,664.8	2,011.3	1,978.0	6.4	5.9	-175.87	-577.8	-352.1	1,006.6	998.5	8.18	123.135	
1,800.0	1,760.7	2,101.0	2,062.9	6.9	6.4	-176.41	-557.4	-332.0	1,004.1	995.4	8.77	114.521	
1,900.0	1,856.6	2,194.0	2,151.3	7.5	6.9	-176.96	-537.0	-311.7	1,002.6	993.3	9.36	107.114	
2,000.0	1,952.4	2,293.9	2,246.6	8.1	7.5	-177.50	-515.3	-291.0	1,002.0	992.0	9.97	100.505	
2,100.0	2,048.3	2,397.5	2,345.2	8.6	8.0	-178.11	-492.6	-268.4	1,000.7	990.1	10.62	94.241	
2,146.4	2,092.7	2,433.1	2,379.0	8.9	8.3	-178.33	-485.1	-260.5	1,000.5	989.6	10.88	91.962	
2,200.0	2,144.1	2,474.4	2,418.6	9.2	8.5	-178.58	-476.6	-251.8	1,000.8	989.6	11.18	89.506	
2,300.0	2,240.0	2,601.0	2,539.2	9.8	9.2	-179.31	-449.4	-224.9	1,000.4	988.5	11.92	83.933	
2,400.0	2,335.9	2,702.2	2,635.4	10.3	9.8	-179.84	-426.2	-203.8	998.9	986.4	12.57	79.470	
2,500.0	2,431.7	2,793.8	2,722.6	10.9	10.3	179.75	-404.8	-185.7	997.8	984.6	13.17	75.734	
2,532.1	2,462.4	2,820.8	2,748.4	11.1	10.5	179.64	-398.6	-180.8	997.7	984.3	13.36	74.689	
2,600.0	2,527.6	2,890.1	2,814.7	11.5	10.8	179.42	-382.5	-168.8	997.8	984.0	13.79	72.380	
2,700.0	2,623.4	2,991.0	2,911.1	12.1	11.4	179.00	-359.1	-149.9	997.3	982.9	14.43	69.096	
2,800.0	2,719.3	3,094.9	3,010.1	12.6	12.0	178.42	-336.5	-128.0	997.2	982.1	15.13	65.926	
2,900.0	2,815.2	3,199.0	3,109.1	13.2	12.6	177.85	-312.9	-106.0	996.3	980.5	15.83	62.953	
3,000.0	2,911.0	3,301.1	3,206.1	13.8	13.2	177.29	-289.6	-84.3	995.3	978.8	16.53	60.210	
3,100.0	3,006.9	3,399.6	3,299.4	14.4	13.8	176.66	-267.7	-62.0	994.3	977.0	17.25	57.635	
3,200.0	3,102.7	3,512.1	3,405.9	14.9	14.5	175.92	-242.1	-36.0	992.8	974.7	18.05	54.987	
3,300.0	3,198.6	3,611.1	3,499.3	15.5	15.2	175.23	-219.3	-12.3	990.8	972.0	18.82	52.632	
3,400.0	3,294.5	3,711.9	3,594.1	16.1	15.8	174.45	-196.6	13.2	988.9	969.3	19.64	50.356	
3,500.0	3,390.3	3,853.3	3,726.6	16.7	16.8	173.39	-162.6	48.7	986.2	965.5	20.68	47.689	
3,600.0	3,486.2	3,961.6	3,826.8	17.2	17.5	172.58	-132.8	77.0	979.4	957.8	21.58	45.394	
3,700.0	3,582.0	4,058.0	3,916.1	17.8	18.2	171.96	-104.9	100.6	972.1	949.7	22.38	43.427	
3,800.0	3,677.9	4,151.0	4,002.6	18.4	18.9	171.38	-78.7	122.6	965.9	942.8	23.18	41.679	
3,900.0	3,773.7	4,216.5	4,064.0	19.0	19.3	170.96	-62.1	137.8	962.5	938.7	23.82	40.401	
4,000.0	3,869.6	4,309.1	4,151.4	19.5	19.8	170.32	-40.4	159.6	961.3	936.7	24.65	39.000	
4,100.0	3,965.5	4,416.8	4,252.5	20.1	20.6	169.45	-15.4	187.0	959.9	934.3	25.63	37.446	
4,200.0	4,061.3	4,500.6	4,331.3	20.7	21.1	168.78	4.0	208.0	958.8	932.3	26.47	36.222	
4,300.0	4,157.2	4,611.9	4,436.6	21.3	21.8	168.06	29.8	233.2	958.7	931.2	27.42	34.958	
4,351.1	4,206.2	4,651.9	4,474.5	21.6	22.0	167.83	39.4	241.8	958.3	930.5	27.80	34.471	
4,400.0	4,253.0	4,687.8	4,508.6	21.8	22.2	167.65	47.7	249.1	958.6	930.5	28.14	34.062	
4,500.0	4,348.9	4,764.0	4,581.5	22.4	22.7	167.27	63.9	264.0	961.3	932.5	28.85	33.319	
4,600.0	4,444.8	4,838.5	4,653.2	23.0	23.0	166.87	77.9	278.9	966.4	936.9	29.56	32.690	
4,700.0	4,540.6	4,916.4	4,728.6	23.6	23.4	166.45	90.5	293.9	974.4	944.1	30.29	32.164	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 703-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,800.0	4,636.5	5,017.6	4,826.6	24.1	23.9	165.93	106.5	313.2	982.9	951.7	31.15	31.556	
4,900.0	4,732.3	5,100.0	4,906.8	24.7	24.3	165.56	118.9	328.0	992.4	960.5	31.88	31.131	
5,000.0	4,828.2	5,177.0	4,982.0	25.3	24.6	165.30	129.3	340.2	1,003.9	971.4	32.54	30.853	
5,100.0	4,924.1	5,257.4	5,061.1	25.9	24.9	165.12	138.8	351.2	1,017.5	984.4	33.16	30.686	
5,200.0	5,019.9	5,339.1	5,141.8	26.4	25.2	165.02	147.4	360.6	1,032.9	999.1	33.74	30.617	
5,300.0	5,115.8	5,422.0	5,223.9	27.0	25.4	164.99	155.0	368.9	1,049.8	1,015.5	34.28	30.625	
5,400.0	5,211.6	5,503.7	5,305.1	27.6	25.6	165.00	161.5	376.0	1,068.2	1,033.4	34.79	30.703	
5,500.0	5,307.5	5,583.1	5,384.1	28.2	25.8	165.05	166.7	381.9	1,088.2	1,052.9	35.27	30.855	
5,600.0	5,403.4	5,664.1	5,464.8	28.7	26.0	165.16	170.8	386.6	1,109.9	1,074.2	35.72	31.076	
5,700.0	5,499.2	5,756.3	5,556.8	29.3	26.2	165.32	174.8	391.1	1,132.5	1,096.4	36.15	31.326	
5,800.0	5,595.1	5,849.8	5,650.2	29.9	26.3	165.54	178.7	394.4	1,155.5	1,118.9	36.56	31.608	
5,840.7	5,634.1	5,887.6	5,687.9	30.1	26.4	165.65	180.3	395.2	1,164.9	1,128.2	36.71	31.735	
5,900.0	5,691.1	5,939.6	5,739.9	30.4	26.5	165.88	182.5	395.9	1,178.3	1,141.4	36.91	31.925	
6,000.0	5,788.0	6,019.2	5,819.4	30.8	26.6	166.24	185.0	396.1	1,199.2	1,162.1	37.17	32.259	
6,100.0	5,885.7	6,108.0	5,908.2	31.2	26.7	166.57	187.1	395.9	1,217.9	1,180.5	37.41	32.558	
6,200.0	5,984.0	6,201.0	6,001.2	31.5	26.8	166.86	188.5	395.5	1,234.0	1,196.4	37.61	32.814	
6,300.0	6,083.0	6,291.1	6,091.3	31.8	26.9	167.09	189.2	395.0	1,247.6	1,209.8	37.77	33.028	
6,400.0	6,182.3	6,389.4	6,189.6	32.0	27.0	167.27	189.8	394.6	1,257.9	1,219.9	37.92	33.175	
6,500.0	6,282.0	6,486.2	6,286.4	32.2	27.1	167.39	190.2	394.3	1,264.9	1,226.9	38.03	33.260	
6,600.0	6,382.0	6,586.6	6,386.8	32.3	27.2	167.47	190.5	394.0	1,268.7	1,230.6	38.12	33.282	
6,668.0	6,449.9	6,650.5	6,450.7	32.4	27.2	-167.30	190.7	393.7	1,269.4	1,213.0	56.40	22.505	
6,698.0	6,479.9	6,679.2	6,479.4	32.4	27.2	-167.29	190.7	393.5	1,269.4	1,213.0	56.46	22.482 SF	
6,700.0	6,481.9	6,681.2	6,481.4	32.4	27.2	-77.29	190.7	393.4	1,269.4	1,231.2	38.23	33.204	
6,750.0	6,531.9	6,730.0	6,530.2	32.5	27.3	-77.38	190.7	393.1	1,269.1	1,230.8	38.30	33.136	
6,800.0	6,581.6	6,778.1	6,578.3	32.5	27.3	-77.67	190.6	392.8	1,268.1	1,229.7	38.44	32.991	
6,850.0	6,630.8	6,825.1	6,625.3	32.5	27.4	-78.15	190.4	392.4	1,266.5	1,227.8	38.64	32.773	
6,900.0	6,679.3	6,872.5	6,672.7	32.4	27.4	-78.82	190.2	392.0	1,264.3	1,225.3	38.92	32.480	
6,950.0	6,726.8	6,920.5	6,720.7	32.4	27.5	-79.69	190.0	391.5	1,261.5	1,222.3	39.29	32.111	
7,000.0	6,773.1	6,967.2	6,767.4	32.3	27.5	-80.71	189.8	391.1	1,258.4	1,218.7	39.72	31.685	
7,050.0	6,817.9	7,012.3	6,812.5	32.3	27.5	-81.86	189.6	390.6	1,255.0	1,214.8	40.20	31.221	
7,100.0	6,861.2	7,055.5	6,855.7	32.2	27.6	-83.11	189.5	390.2	1,251.5	1,210.8	40.71	30.739	
7,150.0	6,902.5	7,096.2	6,896.4	32.1	27.6	-84.40	189.3	389.9	1,248.2	1,207.0	41.24	30.264	
7,200.0	6,941.8	7,135.0	6,935.2	32.0	27.6	-85.73	189.0	389.6	1,245.2	1,203.5	41.77	29.811	
7,250.0	6,978.9	7,173.3	6,973.5	31.9	27.7	-87.10	188.8	389.4	1,242.8	1,200.5	42.30	29.384	
7,300.0	7,013.5	7,209.2	7,009.3	31.7	27.7	-88.42	188.7	389.2	1,241.2	1,198.4	42.78	29.012	
7,350.0	7,045.5	7,242.0	7,042.2	31.6	27.7	-89.63	188.5	389.0	1,240.5	1,197.3	43.22	28.705	
7,354.1	7,048.0	7,244.5	7,044.7	31.6	27.7	-89.72	188.5	389.0	1,240.5	1,197.2	43.25	28.682	
7,400.0	7,074.8	7,271.6	7,071.8	31.5	27.8	-90.69	188.4	388.9	1,241.0	1,197.4	43.59	28.468	
7,450.0	7,101.1	7,298.1	7,098.3	31.4	27.8	-91.57	188.3	388.8	1,243.0	1,199.1	43.93	28.295	
7,500.0	7,124.5	7,321.5	7,121.7	31.3	27.8	-92.24	188.2	388.8	1,246.6	1,202.3	44.24	28.179	
7,550.0	7,144.7	7,341.9	7,142.1	31.1	27.8	-92.67	188.2	388.9	1,251.9	1,207.3	44.54	28.108	
7,600.0	7,161.6	7,358.9	7,159.1	31.0	27.9	-92.83	188.1	388.9	1,259.0	1,214.2	44.85	28.073	
7,650.0	7,175.3	7,372.6	7,172.8	30.9	27.9	-92.70	188.1	388.9	1,268.1	1,222.9	45.19	28.064	
7,700.0	7,185.5	7,382.9	7,183.1	30.8	27.9	-92.26	188.1	388.9	1,279.1	1,233.5	45.56	28.073	
7,750.0	7,192.3	7,389.6	7,189.8	30.7	27.9	-91.50	188.0	388.9	1,292.0	1,246.0	45.99	28.096	
7,800.0	7,195.7	7,392.9	7,193.1	30.7	27.9	-90.41	188.0	388.9	1,306.8	1,260.3	46.45	28.132	
7,828.6	7,196.0	7,393.1	7,193.3	30.6	27.9	-89.64	188.0	388.9	1,316.0	1,269.3	46.73	28.159	
7,900.0	7,195.4	7,392.4	7,192.6	30.6	27.9	-89.61	188.0	388.9	1,341.5	1,293.7	47.74	28.099	
8,000.0	7,194.6	7,391.4	7,191.6	30.6	27.9	-89.56	188.0	388.9	1,382.5	1,333.2	49.34	28.021	
8,100.0	7,193.8	7,390.4	7,190.5	31.0	27.9	-89.52	188.0	388.9	1,429.4	1,378.3	51.13	27.958	
8,200.0	7,193.0	7,389.3	7,189.5	32.1	27.9	-89.47	188.0	388.9	1,481.6	1,428.5	53.07	27.918	
8,300.0	7,192.2	7,388.3	7,188.5	33.8	27.9	-89.42	188.0	388.9	1,538.5	1,483.4	55.14	27.902	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 703-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,400.0	7,191.4	7,387.3	7,187.5	35.8	27.9	-89.37	188.0	388.9	1,599.7	1,542.3	57.31	27.911	
8,500.0	7,190.6	7,386.3	7,186.5	38.0	27.9	-89.33	188.0	388.9	1,664.6	1,605.0	59.57	27.942	
8,600.0	7,189.8	7,385.3	7,185.5	40.3	27.9	-89.28	188.1	388.9	1,732.8	1,670.9	61.90	27.993	
8,700.0	7,189.0	7,384.3	7,184.5	42.7	27.9	-89.24	188.1	388.9	1,804.0	1,739.7	64.29	28.061	
8,800.0	7,188.2	7,383.3	7,183.5	45.1	27.9	-89.19	188.1	388.9	1,877.9	1,811.1	66.73	28.142	
8,900.0	7,187.4	7,382.3	7,182.5	47.5	27.9	-89.14	188.1	388.9	1,954.0	1,884.8	69.21	28.235	
9,000.0	7,186.6	7,381.3	7,181.5	50.0	27.9	-89.10	188.1	388.9	2,032.3	1,960.5	71.72	28.336	
9,100.0	7,185.7	7,380.3	7,180.5	52.6	27.9	-89.05	188.1	388.9	2,112.3	2,038.1	74.26	28.444	
9,200.0	7,184.9	7,379.3	7,179.5	55.1	27.9	-89.01	188.1	388.9	2,194.0	2,117.2	76.83	28.556	
9,300.0	7,184.1	7,378.3	7,178.5	57.7	27.9	-88.96	188.1	388.9	2,277.2	2,197.8	79.42	28.672	
9,400.0	7,183.3	7,377.4	7,177.5	60.3	27.9	-88.91	188.1	388.9	2,361.7	2,279.6	82.03	28.789	
9,500.0	7,182.5	7,376.4	7,176.6	62.9	27.9	-88.87	188.1	388.9	2,447.3	2,362.6	84.66	28.908	
9,600.0	7,181.7	7,375.4	7,175.6	65.5	27.9	-88.82	188.1	388.9	2,534.0	2,446.7	87.30	29.026	
9,700.0	7,180.9	7,374.4	7,174.6	68.1	27.9	-88.78	188.1	388.9	2,621.6	2,531.7	89.96	29.144	
9,800.0	7,180.1	7,373.5	7,173.7	70.8	27.9	-88.74	188.1	388.9	2,710.1	2,617.5	92.62	29.260	
9,900.0	7,179.3	7,372.5	7,172.7	73.5	27.9	-88.69	188.1	388.9	2,799.4	2,704.1	95.30	29.375	
10,000.0	7,178.5	7,371.6	7,171.7	76.1	27.9	-88.65	188.1	388.9	2,889.4	2,791.4	97.98	29.489	
10,100.0	7,177.7	7,370.6	7,170.8	78.8	27.9	-88.60	188.1	388.9	2,980.0	2,879.3	100.68	29.600	
10,200.0	7,176.9	7,369.6	7,169.8	81.5	27.9	-88.56	188.1	388.9	3,071.2	2,967.8	103.38	29.709	
10,300.0	7,176.0	7,368.7	7,168.9	84.2	27.9	-88.51	188.1	388.9	3,162.9	3,056.8	106.08	29.815	
10,400.0	7,175.2	7,367.8	7,167.9	86.9	27.9	-88.47	188.1	388.9	3,255.1	3,146.3	108.80	29.919	
10,500.0	7,174.4	7,366.8	7,167.0	89.6	27.9	-88.43	188.1	388.9	3,347.8	3,236.3	111.51	30.021	
10,600.0	7,173.6	7,365.9	7,166.1	92.3	27.9	-88.38	188.1	388.9	3,440.9	3,326.6	114.24	30.120	
10,700.0	7,172.8	7,364.9	7,165.1	95.0	27.9	-88.34	188.1	388.9	3,534.3	3,417.3	116.96	30.217	
10,800.0	7,172.0	7,364.0	7,164.2	97.8	27.9	-88.30	188.1	388.9	3,628.1	3,508.4	119.70	30.311	
10,900.0	7,171.2	7,363.1	7,163.3	100.5	27.9	-88.25	188.1	388.9	3,722.2	3,599.8	122.43	30.403	
11,000.0	7,170.4	7,362.1	7,162.3	103.2	27.9	-88.21	188.1	388.9	3,816.6	3,691.5	125.17	30.492	
11,100.0	7,169.6	7,361.2	7,161.4	106.0	27.9	-88.17	188.1	388.9	3,911.3	3,783.4	127.91	30.579	
11,200.0	7,168.8	7,360.3	7,160.5	108.7	27.9	-88.12	188.1	388.9	4,006.3	3,875.6	130.66	30.663	
11,300.0	7,168.0	7,359.4	7,159.6	111.5	27.9	-88.08	188.1	388.9	4,101.5	3,968.1	133.40	30.745	
11,400.0	7,167.1	7,358.5	7,158.7	114.2	27.9	-88.04	188.1	388.9	4,196.9	4,060.7	136.15	30.825	
11,500.0	7,166.3	7,357.6	7,157.8	117.0	27.9	-88.00	188.1	388.9	4,292.5	4,153.6	138.90	30.903	
11,600.0	7,165.5	7,356.7	7,156.8	119.7	27.9	-87.95	188.1	388.9	4,388.3	4,246.7	141.66	30.979	
11,700.0	7,164.7	7,355.7	7,155.9	122.5	27.9	-87.91	188.1	388.9	4,484.3	4,339.9	144.41	31.052	
11,800.0	7,163.9	7,354.8	7,155.0	125.2	27.9	-87.87	188.1	388.9	4,580.5	4,433.4	147.17	31.124	
11,900.0	7,163.1	7,353.9	7,154.1	128.0	27.9	-87.83	188.1	388.9	4,676.9	4,526.9	149.93	31.194	
12,000.0	7,162.3	7,353.0	7,153.2	130.7	27.9	-87.79	188.1	388.9	4,773.3	4,620.7	152.69	31.262	
12,100.0	7,161.5	7,352.2	7,152.3	133.5	27.9	-87.75	188.1	388.9	4,870.0	4,714.5	155.45	31.328	
12,200.0	7,160.7	7,351.3	7,151.5	136.3	27.9	-87.70	188.1	388.9	4,966.7	4,808.5	158.21	31.393	
12,300.0	7,159.8	7,350.4	7,150.6	139.0	27.9	-87.66	188.2	388.9	5,063.6	4,902.6	160.98	31.455	
12,400.0	7,159.0	7,349.5	7,149.7	141.8	27.9	-87.62	188.2	388.9	5,160.6	4,996.9	163.74	31.517	
12,500.0	7,158.2	7,348.6	7,148.8	144.6	27.9	-87.58	188.2	388.9	5,257.7	5,091.2	166.51	31.576	
12,600.0	7,157.4	7,347.7	7,147.9	147.3	27.8	-87.54	188.2	388.9	5,355.0	5,185.7	169.28	31.634	
12,700.0	7,156.6	7,346.9	7,147.0	150.1	27.8	-87.50	188.2	388.9	5,452.3	5,280.2	172.04	31.691	
12,800.0	7,155.8	7,346.0	7,146.2	152.9	27.8	-87.46	188.2	388.9	5,549.7	5,374.9	174.81	31.746	
12,900.0	7,155.0	7,345.1	7,145.3	155.7	27.8	-87.42	188.2	388.9	5,647.2	5,469.6	177.58	31.800	
13,000.0	7,154.2	7,344.2	7,144.4	158.4	27.8	-87.38	188.2	388.9	5,744.8	5,564.4	180.35	31.853	
13,100.0	7,153.3	7,343.4	7,143.6	161.2	27.8	-87.34	188.2	388.9	5,842.5	5,659.3	183.13	31.904	
13,200.0	7,152.5	7,342.5	7,142.7	164.0	27.8	-87.30	188.2	388.9	5,940.2	5,754.3	185.90	31.954	
13,300.0	7,151.7	7,341.7	7,141.9	166.8	27.8	-87.26	188.2	388.9	6,038.0	5,849.4	188.67	32.003	
13,400.0	7,150.9	7,340.8	7,141.0	169.5	27.8	-87.22	188.2	388.9	6,135.9	5,944.5	191.44	32.051	
13,500.0	7,150.1	7,339.9	7,140.1	172.3	27.8	-87.18	188.2	388.9	6,233.9	6,039.7	194.22	32.098	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS #21ODU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 703-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
13,600.0	7,149.3	7,339.1	7,139.3	175.1	27.8	-87.14	188.2	388.9	6,331.9	6,134.9	196.99	32.143	
13,700.0	7,148.5	7,338.3	7,138.4	177.9	27.8	-87.10	188.2	388.9	6,430.0	6,230.2	199.76	32.188	
13,800.0	7,147.6	7,337.4	7,137.6	180.7	27.8	-87.06	188.2	388.9	6,528.2	6,325.6	202.54	32.232	
13,900.0	7,146.8	7,336.6	7,136.8	183.5	27.8	-87.02	188.2	388.9	6,626.4	6,421.0	205.31	32.274	
14,000.0	7,146.0	7,335.7	7,135.9	186.2	27.8	-86.98	188.2	388.9	6,724.6	6,516.5	208.09	32.316	
14,100.0	7,145.2	7,334.9	7,135.1	189.0	27.8	-86.94	188.2	388.9	6,822.9	6,612.0	210.86	32.357	
14,200.0	7,144.4	7,334.1	7,134.2	191.8	27.8	-86.90	188.2	388.9	6,921.3	6,707.6	213.64	32.397	
14,300.0	7,143.6	7,333.2	7,133.4	194.6	27.8	-86.87	188.2	388.8	7,019.7	6,803.2	216.42	32.436	
14,370.2	7,143.0	7,332.6	7,132.8	196.6	27.8	-86.84	188.2	388.8	7,088.8	6,870.4	218.37	32.463	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 704-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	1.5	1.5	0.0	0.0	-145.74	-802.2	-546.5	970.6				
100.0	100.0	101.5	101.5	0.1	0.1	-145.73	-802.2	-546.5	970.6	970.4	0.20	4,786.567	
200.0	200.0	201.5	201.5	0.3	0.2	-145.72	-802.0	-546.7	970.6	970.1	0.53	1,826.009	
300.0	300.0	301.5	301.5	0.5	0.3	-145.70	-801.9	-546.9	970.6	969.8	0.86	1,128.200	
300.1	300.1	301.6	301.6	0.5	0.3	-145.70	-801.9	-546.9	970.6	969.8	0.86	1,127.787 CC, ES	
400.0	400.0	401.5	401.5	0.8	0.4	-170.90	-801.6	-547.3	972.4	971.2	1.19	816.156	
500.0	499.8	501.4	501.4	1.0	0.5	-170.90	-801.3	-547.7	977.5	976.0	1.53	639.172	
600.0	599.5	601.0	601.0	1.2	0.6	-170.91	-800.9	-548.3	986.1	984.2	1.88	525.158	
700.0	698.7	700.3	700.3	1.5	0.7	-170.94	-800.5	-549.0	998.1	995.9	2.24	445.408	
800.0	797.5	800.0	800.0	1.8	0.9	-170.97	-799.8	-549.8	1,013.5	1,010.8	2.70	375.009	
900.0	895.6	896.9	896.8	2.2	1.2	-171.01	-799.1	-550.7	1,032.3	1,029.2	3.16	327.195	
1,000.0	993.1	990.8	990.8	2.6	1.4	-171.05	-798.5	-551.9	1,054.8	1,051.2	3.61	292.262	
1,100.0	1,089.6	1,086.4	1,086.4	3.1	1.6	-171.10	-798.2	-553.4	1,080.9	1,076.8	4.07	265.729	
1,127.2	1,115.8	1,128.3	1,128.2	3.2	1.6	-171.16	-797.9	-553.6	1,088.4	1,084.2	4.21	258.380	
1,200.0	1,185.5	1,265.8	1,265.6	3.6	1.9	-171.50	-793.8	-550.3	1,106.3	1,101.7	4.63	238.878	
1,300.0	1,281.4	1,415.8	1,414.9	4.1	2.2	-171.96	-783.3	-540.2	1,125.2	1,120.0	5.19	216.945	
1,400.0	1,377.3	1,588.5	1,585.6	4.7	2.7	-172.37	-762.4	-525.1	1,138.7	1,132.9	5.83	195.429	
1,500.0	1,473.1	1,716.4	1,711.1	5.2	3.1	-172.72	-742.4	-509.7	1,147.5	1,141.1	6.40	179.398	
1,600.0	1,569.0	1,848.5	1,839.7	5.8	3.6	-173.11	-719.1	-491.3	1,153.5	1,146.5	7.00	164.872	
1,700.0	1,664.8	1,935.3	1,924.2	6.4	3.9	-173.37	-703.7	-478.9	1,159.3	1,151.8	7.50	154.624	
1,800.0	1,760.7	2,050.7	2,036.5	6.9	4.4	-173.81	-684.1	-460.8	1,165.2	1,157.1	8.06	144.484	
1,900.0	1,856.6	2,159.0	2,141.6	7.5	4.9	-174.15	-663.6	-444.0	1,169.3	1,160.7	8.63	135.494	
2,000.0	1,952.4	2,254.7	2,234.4	8.1	5.3	-174.46	-645.7	-429.2	1,173.8	1,164.6	9.17	128.053	
2,100.0	2,048.3	2,359.7	2,336.2	8.6	5.7	-174.81	-626.3	-412.5	1,178.3	1,168.6	9.73	121.064	
2,200.0	2,144.1	2,459.0	2,432.4	9.2	6.2	-175.17	-607.9	-396.2	1,182.5	1,172.2	10.29	114.898	
2,300.0	2,240.0	2,582.6	2,551.7	9.8	6.8	-175.68	-584.8	-374.1	1,185.8	1,174.9	10.93	108.539	
2,400.0	2,335.9	2,680.2	2,645.7	10.3	7.3	-176.10	-565.8	-355.8	1,188.1	1,176.6	11.50	103.323	
2,500.0	2,431.7	2,754.0	2,717.0	10.9	7.6	-176.37	-551.6	-342.9	1,191.4	1,179.4	12.00	99.269	
2,600.0	2,527.6	2,847.0	2,807.3	11.5	8.0	-176.68	-534.6	-328.2	1,196.3	1,183.8	12.55	95.316	
2,700.0	2,623.4	2,955.3	2,912.4	12.1	8.5	-177.02	-514.9	-311.3	1,201.4	1,188.3	13.15	91.377	
2,800.0	2,719.3	3,034.0	2,988.8	12.6	8.9	-177.28	-500.6	-298.8	1,206.7	1,193.0	13.67	88.298	
2,900.0	2,815.2	3,127.0	3,079.4	13.2	9.3	-177.55	-484.7	-285.4	1,213.5	1,199.2	14.22	85.358	
3,000.0	2,911.0	3,220.0	3,170.2	13.8	9.7	-177.78	-468.9	-272.8	1,220.8	1,206.0	14.77	82.676	
3,100.0	3,006.9	3,294.5	3,243.0	14.4	10.0	-177.98	-456.9	-262.8	1,229.1	1,213.8	15.27	80.513	
3,200.0	3,102.7	3,374.4	3,321.5	14.9	10.3	-178.24	-446.2	-252.0	1,239.7	1,223.9	15.78	78.562	
3,300.0	3,198.6	3,467.0	3,412.6	15.5	10.7	-178.55	-434.8	-239.5	1,251.3	1,235.0	16.33	76.636	
3,400.0	3,294.5	3,570.2	3,513.9	16.1	11.1	-178.94	-422.6	-224.6	1,263.0	1,246.1	16.92	74.667	
3,500.0	3,390.3	3,663.6	3,605.5	16.7	11.4	-179.37	-412.3	-209.4	1,274.7	1,257.2	17.49	72.888	
3,600.0	3,486.2	3,763.2	3,703.3	17.2	11.8	-179.78	-401.2	-194.4	1,286.7	1,268.7	18.07	71.193	
3,700.0	3,582.0	3,894.5	3,832.3	17.8	12.3	-179.85	-383.7	-176.8	1,297.8	1,279.0	18.74	69.251	
3,800.0	3,677.9	4,007.6	3,942.8	18.4	12.8	-179.57	-365.7	-161.4	1,306.2	1,286.8	19.36	67.477	
3,900.0	3,773.7	4,090.0	4,023.5	19.0	13.1	-179.39	-352.9	-150.7	1,315.4	1,295.6	19.89	66.146	
4,000.0	3,869.6	4,181.1	4,113.0	19.5	13.5	-179.19	-339.8	-139.3	1,325.8	1,305.4	20.44	64.867	
4,100.0	3,965.5	4,287.8	4,217.6	20.1	13.9	-178.95	-324.2	-125.8	1,336.0	1,315.0	21.04	63.512	
4,200.0	4,061.3	4,384.1	4,312.1	20.7	14.3	-178.72	-310.2	-112.9	1,346.0	1,324.4	21.61	62.282	
4,300.0	4,157.2	4,467.8	4,394.2	21.3	14.6	-178.53	-298.4	-102.3	1,356.7	1,334.6	22.15	61.261	
4,400.0	4,253.0	4,542.1	4,467.4	21.8	14.9	-178.37	-288.8	-93.4	1,368.9	1,346.2	22.65	60.435	
4,500.0	4,348.9	4,617.0	4,541.5	22.4	15.2	-178.26	-280.6	-86.3	1,383.5	1,360.4	23.14	59.779	
4,600.0	4,444.8	4,676.7	4,600.8	23.0	15.3	-178.21	-274.9	-81.7	1,400.3	1,376.7	23.59	59.369	
4,700.0	4,540.6	4,750.5	4,674.1	23.6	15.5	-178.14	-268.9	-76.7	1,418.9	1,394.8	24.06	58.978	
4,800.0	4,636.5	4,822.9	4,746.2	24.1	15.7	-178.10	-264.0	-72.8	1,439.2	1,414.7	24.52	58.700	
4,900.0	4,732.3	4,896.0	4,819.1	24.7	15.9	-178.07	-260.1	-69.5	1,461.2	1,436.2	24.97	58.509	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 704-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	4,828.2	4,963.0	4,886.1	25.3	16.0	178.05	-257.6	-67.1	1,485.0	1,459.5	25.41	58.439	
5,100.0	4,924.1	5,035.2	4,958.2	25.9	16.1	178.04	-256.1	-65.4	1,510.6	1,484.8	25.85	58.437	
5,200.0	5,019.9	5,116.2	5,039.2	26.4	16.3	178.05	-255.1	-64.5	1,537.6	1,511.3	26.30	58.464	
5,300.0	5,115.8	5,206.7	5,129.7	27.0	16.4	178.07	-254.4	-63.9	1,565.2	1,538.4	26.76	58.489	
5,400.0	5,211.6	5,300.1	5,223.1	27.6	16.5	178.10	-253.8	-63.6	1,592.9	1,565.7	27.22	58.512	
5,500.0	5,307.5	5,393.8	5,316.8	28.2	16.6	178.14	-253.3	-63.5	1,620.9	1,593.2	27.69	58.540	
5,600.0	5,403.4	5,488.2	5,411.2	28.7	16.8	178.18	-252.9	-63.5	1,648.9	1,620.8	28.15	58.568	
5,700.0	5,499.2	5,580.6	5,503.6	29.3	16.9	178.22	-252.5	-63.7	1,677.1	1,648.5	28.62	58.608	
5,800.0	5,595.1	5,669.7	5,592.7	29.9	17.0	178.26	-252.4	-63.9	1,705.6	1,676.5	29.07	58.668	
5,840.7	5,634.1	5,705.8	5,628.8	30.1	17.1	178.27	-252.5	-64.0	1,717.3	1,688.0	29.26	58.696	
5,900.0	5,691.1	5,759.8	5,682.8	30.4	17.1	178.30	-252.7	-64.2	1,733.9	1,704.3	29.55	58.680	
6,000.0	5,788.0	5,853.4	5,776.4	30.8	17.3	178.34	-253.3	-64.4	1,759.3	1,729.3	29.99	58.667	
6,100.0	5,885.7	5,949.3	5,872.2	31.2	17.4	178.37	-254.0	-64.6	1,781.5	1,751.1	30.39	58.625	
6,200.0	5,984.0	6,049.3	5,972.2	31.5	17.5	178.39	-254.8	-64.8	1,800.2	1,769.5	30.75	58.545	
6,300.0	6,083.0	6,149.5	6,072.5	31.8	17.7	178.41	-255.5	-65.0	1,815.4	1,784.4	31.07	58.437	
6,400.0	6,182.3	6,249.8	6,172.8	32.0	17.8	178.43	-256.0	-65.4	1,827.1	1,795.8	31.34	58.304	
6,500.0	6,282.0	6,352.3	6,275.3	32.2	17.9	178.45	-256.4	-65.9	1,835.3	1,803.7	31.57	58.136	
6,600.0	6,382.0	6,456.6	6,379.5	32.3	18.1	178.47	-256.6	-66.4	1,839.7	1,808.0	31.76	57.929	
6,668.0	6,449.9	6,523.9	6,446.8	32.4	18.2	-156.31	-256.6	-66.6	1,840.7	1,790.5	50.17	36.686	
6,698.0	6,479.9	6,552.8	6,475.7	32.4	18.2	-156.31	-256.6	-66.8	1,840.8	1,790.5	50.24	36.637	
6,700.0	6,481.9	6,554.7	6,477.7	32.4	18.2	-66.31	-256.7	-66.8	1,840.8	1,808.8	31.96	57.603	
6,750.0	6,531.9	6,602.8	6,525.8	32.5	18.3	-66.40	-256.7	-67.0	1,840.2	1,808.2	31.96	57.571	
6,800.0	6,581.6	6,650.7	6,573.7	32.5	18.3	-66.68	-256.9	-67.3	1,838.3	1,806.3	31.97	57.496	
6,850.0	6,630.8	6,698.6	6,621.6	32.5	18.4	-67.16	-257.0	-67.6	1,835.0	1,803.1	31.99	57.357	
6,900.0	6,679.3	6,746.1	6,669.1	32.4	18.5	-67.82	-257.2	-67.9	1,830.5	1,798.5	32.04	57.134	
6,950.0	6,726.8	6,792.6	6,715.6	32.4	18.5	-68.66	-257.4	-68.2	1,824.9	1,792.7	32.12	56.808	
7,000.0	6,773.1	6,838.0	6,761.0	32.3	18.6	-69.68	-257.6	-68.5	1,818.1	1,785.8	32.26	56.360	
7,050.0	6,817.9	6,883.1	6,806.1	32.3	18.7	-70.86	-257.9	-68.8	1,810.3	1,777.8	32.46	55.768	
7,100.0	6,861.2	6,927.0	6,850.0	32.2	18.7	-72.20	-258.1	-69.1	1,801.6	1,768.9	32.74	55.031	
7,150.0	6,902.5	6,969.0	6,891.9	32.1	18.8	-73.66	-258.3	-69.3	1,792.3	1,759.2	33.09	54.160	
7,200.0	6,941.8	7,008.9	6,931.8	32.0	18.9	-75.21	-258.5	-69.5	1,782.4	1,748.8	33.52	53.178	
7,250.0	6,978.9	7,046.6	6,969.5	31.9	18.9	-76.83	-258.7	-69.7	1,772.1	1,738.1	34.00	52.114	
7,300.0	7,013.5	7,081.8	7,004.8	31.7	19.0	-78.49	-258.9	-69.9	1,761.6	1,727.1	34.54	51.002	
7,350.0	7,045.5	7,114.4	7,037.4	31.6	19.0	-80.14	-259.1	-70.0	1,751.2	1,716.1	35.11	49.879	
7,400.0	7,074.8	7,144.1	7,067.1	31.5	19.1	-81.76	-259.2	-70.0	1,741.0	1,705.3	35.69	48.776	
7,450.0	7,101.1	7,170.8	7,093.8	31.4	19.1	-83.31	-259.4	-70.0	1,731.3	1,695.0	36.29	47.713	
7,500.0	7,124.5	7,194.4	7,117.4	31.3	19.1	-84.74	-259.5	-70.0	1,722.1	1,685.3	36.87	46.702	
7,550.0	7,144.7	7,214.8	7,137.7	31.1	19.2	-86.04	-259.6	-70.0	1,713.8	1,676.4	37.46	45.749	
7,600.0	7,161.6	7,231.8	7,154.8	31.0	19.2	-87.18	-259.7	-70.0	1,706.5	1,668.5	38.05	44.850	
7,650.0	7,175.3	7,245.6	7,168.5	30.9	19.2	-88.12	-259.7	-70.0	1,700.3	1,661.7	38.64	44.000	
7,700.0	7,185.5	7,255.8	7,178.8	30.8	19.2	-88.86	-259.8	-70.0	1,695.4	1,656.1	39.25	43.195	
7,750.0	7,192.3	7,262.6	7,185.6	30.7	19.2	-89.38	-259.8	-70.0	1,691.8	1,651.9	39.87	42.428	
7,800.0	7,195.7	7,265.9	7,188.8	30.7	19.2	-89.66	-259.8	-70.0	1,689.6	1,649.1	40.52	41.699	
7,828.6	7,196.0	7,266.2	7,189.1	30.6	19.2	-89.72	-259.8	-70.0	1,689.0	1,648.1	40.90	41.299	
7,849.5	7,195.8	7,266.0	7,188.9	30.6	19.2	-89.71	-259.8	-70.0	1,688.9	1,647.7	41.19	40.999	
7,900.0	7,195.4	7,265.4	7,188.4	30.6	19.2	-89.70	-259.8	-70.0	1,689.6	1,647.7	41.90	40.321	
8,000.0	7,194.6	7,264.4	7,187.4	30.6	19.2	-89.66	-259.8	-70.0	1,695.6	1,652.0	43.51	38.974	
8,100.0	7,193.8	7,263.4	7,186.4	31.0	19.2	-89.63	-259.8	-70.0	1,707.3	1,662.0	45.29	37.694	
8,200.0	7,193.0	7,262.4	7,185.4	32.1	19.2	-89.59	-259.8	-70.0	1,724.8	1,677.6	47.24	36.513	
8,300.0	7,192.2	7,261.4	7,184.4	33.8	19.2	-89.56	-259.8	-70.0	1,747.9	1,698.6	49.31	35.447	
8,400.0	7,191.4	7,260.4	7,183.4	35.8	19.2	-89.53	-259.8	-70.0	1,776.3	1,724.8	51.48	34.501	
8,500.0	7,190.6	7,259.5	7,182.4	38.0	19.2	-89.49	-259.8	-70.0	1,809.8	1,756.0	53.75	33.673	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 704-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,600.0	7,189.8	7,258.5	7,181.4	40.3	19.2	-89.46	-259.8	-70.0	1,848.1	1,792.0	56.08	32.956	
8,700.0	7,189.0	7,257.5	7,180.5	42.7	19.2	-89.43	-259.8	-70.0	1,890.9	1,832.4	58.47	32.342	
8,800.0	7,188.2	7,256.5	7,179.5	45.1	19.2	-89.39	-259.8	-70.0	1,937.9	1,877.0	60.90	31.819	
8,900.0	7,187.4	7,255.6	7,178.5	47.5	19.2	-89.36	-259.8	-70.0	1,988.9	1,925.5	63.39	31.378	
9,000.0	7,186.6	7,254.6	7,177.6	50.0	19.2	-89.33	-259.8	-70.0	2,043.4	1,977.5	65.90	31.008	
9,100.0	7,185.7	7,253.6	7,176.6	52.6	19.2	-89.30	-259.8	-70.0	2,101.4	2,032.9	68.45	30.701	
9,200.0	7,184.9	7,252.7	7,175.6	55.1	19.2	-89.26	-259.8	-70.0	2,162.4	2,091.3	71.02	30.449	
9,300.0	7,184.1	7,251.7	7,174.7	57.7	19.2	-89.23	-259.8	-70.0	2,226.2	2,152.6	73.61	30.243	
9,400.0	7,183.3	7,250.8	7,173.7	60.3	19.2	-89.20	-259.8	-70.0	2,292.6	2,216.4	76.22	30.078	
9,500.0	7,182.5	7,249.8	7,172.8	62.9	19.2	-89.17	-259.8	-70.0	2,361.4	2,282.5	78.85	29.947	
9,600.0	7,181.7	7,248.9	7,171.9	65.5	19.2	-89.14	-259.8	-70.0	2,432.3	2,350.8	81.49	29.847	
9,700.0	7,180.9	7,248.0	7,170.9	68.1	19.2	-89.10	-259.8	-70.0	2,505.2	2,421.1	84.15	29.771	
9,800.0	7,180.1	7,247.0	7,170.0	70.8	19.2	-89.07	-259.7	-70.0	2,580.0	2,493.1	86.82	29.717	
9,900.0	7,179.3	7,246.1	7,169.1	73.5	19.2	-89.04	-259.7	-70.0	2,656.4	2,566.9	89.50	29.681	
10,000.0	7,178.5	7,245.2	7,168.1	76.1	19.2	-89.01	-259.7	-70.0	2,734.3	2,642.1	92.18	29.661	
10,100.0	7,177.7	7,244.3	7,167.2	78.8	19.2	-88.98	-259.7	-70.0	2,813.6	2,718.7	94.88	29.655 SF	
10,200.0	7,176.9	7,243.4	7,166.3	81.5	19.2	-88.95	-259.7	-70.0	2,894.2	2,796.6	97.58	29.659	
10,300.0	7,176.0	7,242.4	7,165.4	84.2	19.2	-88.92	-259.7	-70.0	2,976.0	2,875.7	100.29	29.673	
10,400.0	7,175.2	7,241.5	7,164.5	86.9	19.2	-88.88	-259.7	-70.0	3,058.8	2,955.8	103.01	29.696	
10,500.0	7,174.4	7,240.6	7,163.6	89.6	19.2	-88.85	-259.7	-70.0	3,142.7	3,037.0	105.73	29.725	
10,600.0	7,173.6	7,239.7	7,162.7	92.3	19.2	-88.82	-259.7	-70.0	3,227.5	3,119.0	108.45	29.759	
10,700.0	7,172.8	7,238.8	7,161.8	95.0	19.2	-88.79	-259.7	-70.0	3,313.1	3,201.9	111.18	29.799	
10,800.0	7,172.0	7,238.0	7,160.9	97.8	19.2	-88.76	-259.7	-70.0	3,399.5	3,285.6	113.92	29.842	
10,900.0	7,171.2	7,237.1	7,160.0	100.5	19.2	-88.73	-259.7	-70.0	3,486.6	3,370.0	116.66	29.888	
11,000.0	7,170.4	7,236.2	7,159.1	103.2	19.2	-88.70	-259.7	-70.0	3,574.4	3,455.0	119.40	29.938	
11,100.0	7,169.6	7,235.3	7,158.3	106.0	19.2	-88.67	-259.7	-70.0	3,662.9	3,540.7	122.14	29.989	
11,200.0	7,168.8	7,234.4	7,157.4	108.7	19.2	-88.64	-259.7	-70.0	3,751.9	3,627.0	124.89	30.042	
11,300.0	7,168.0	7,233.6	7,156.5	111.5	19.2	-88.61	-259.7	-70.0	3,841.5	3,713.8	127.64	30.096	
11,400.0	7,167.1	7,232.7	7,155.6	114.2	19.2	-88.58	-259.7	-70.0	3,931.5	3,801.1	130.39	30.151	
11,500.0	7,166.3	7,231.8	7,154.8	117.0	19.2	-88.55	-259.7	-70.0	4,022.0	3,888.9	133.15	30.207	
11,600.0	7,165.5	7,231.0	7,153.9	119.7	19.2	-88.52	-259.7	-70.0	4,113.0	3,977.1	135.90	30.264	
11,700.0	7,164.7	7,230.1	7,153.0	122.5	19.2	-88.49	-259.6	-70.0	4,204.4	4,065.8	138.62	30.331	
11,800.0	7,163.9	7,229.2	7,152.1	125.2	19.2	-88.46	-259.6	-70.0	4,296.1	4,154.8	141.38	30.387	
11,900.0	7,163.1	7,228.3	7,151.2	128.0	19.2	-88.43	-259.6	-70.0	4,388.3	4,244.1	144.15	30.442	
12,000.0	7,162.3	7,227.4	7,150.3	130.7	19.2	-88.40	-259.6	-70.0	4,480.7	4,333.8	146.92	30.498	
12,100.0	7,161.5	7,226.5	7,149.4	133.5	19.2	-88.37	-259.6	-70.0	4,573.5	4,423.8	149.69	30.553	
12,200.0	7,160.7	7,225.6	7,148.5	136.3	19.2	-88.34	-259.6	-70.0	4,666.6	4,514.1	152.47	30.607	
12,300.0	7,159.8	7,224.7	7,147.6	139.0	19.2	-88.31	-259.6	-70.0	4,759.9	4,604.7	155.24	30.662	
12,400.0	7,159.0	7,223.8	7,146.7	141.8	19.2	-88.28	-259.6	-70.0	4,853.5	4,695.5	158.01	30.716	
12,500.0	7,158.2	7,222.9	7,145.8	144.6	19.2	-88.25	-259.6	-70.0	4,947.4	4,786.6	160.79	30.769	
12,600.0	7,157.4	7,222.0	7,144.9	147.3	19.2	-88.22	-259.6	-70.0	5,041.5	4,878.0	163.57	30.822	
12,700.0	7,156.6	7,221.1	7,144.0	150.1	19.2	-88.19	-259.6	-70.0	5,135.8	4,969.5	166.35	30.874	
12,800.0	7,155.8	7,220.2	7,143.1	152.9	19.2	-88.16	-259.6	-70.0	5,230.4	5,061.3	169.13	30.926	
12,900.0	7,155.0	7,219.3	7,142.2	155.7	19.2	-88.13	-259.6	-70.0	5,325.1	5,153.2	171.91	30.976	
13,000.0	7,154.2	7,218.4	7,141.3	158.4	19.2	-88.10	-259.6	-70.0	5,420.1	5,245.4	174.69	31.027	
13,100.0	7,153.3	7,217.5	7,140.4	161.2	19.2	-88.07	-259.6	-70.0	5,515.2	5,337.7	177.47	31.076	
13,200.0	7,152.5	7,216.6	7,139.5	164.0	19.2	-88.04	-259.6	-70.0	5,610.4	5,430.2	180.26	31.125	
13,300.0	7,151.7	7,215.7	7,138.6	166.8	19.2	-88.01	-259.6	-70.0	5,705.9	5,522.8	183.04	31.173	
13,400.0	7,150.9	7,214.8	7,137.7	169.5	19.2	-87.98	-259.6	-70.0	5,801.5	5,615.6	185.83	31.220	
13,500.0	7,150.1	7,213.9	7,136.8	172.3	19.2	-87.95	-259.6	-70.0	5,897.2	5,708.6	188.61	31.266	
13,600.0	7,149.3	7,213.0	7,135.9	175.1	19.2	-87.92	-259.6	-70.0	5,993.1	5,801.7	191.40	31.312	
13,700.0	7,148.5	7,212.1	7,135.0	177.9	19.2	-87.89	-259.6	-70.0	6,089.1	5,894.9	194.19	31.357	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS 23-21DU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 704-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
13,800.0	7,147.6	7,223.0	7,146.0	180.7	19.2	-88.25	-259.6	-70.0	6,185.2	5,988.3	196.97	31.401	
13,900.0	7,146.8	7,223.0	7,146.0	183.5	19.2	-88.25	-259.6	-70.0	6,281.5	6,081.7	199.76	31.445	
14,000.0	7,146.0	7,223.0	7,146.0	186.2	19.2	-88.25	-259.6	-70.0	6,377.9	6,175.3	202.55	31.488	
14,100.0	7,145.2	7,223.0	7,146.0	189.0	19.2	-88.25	-259.6	-70.0	6,474.3	6,269.0	205.34	31.530	
14,200.0	7,144.4	7,223.0	7,146.0	191.8	19.2	-88.25	-259.6	-70.0	6,570.9	6,362.8	208.13	31.571	
14,300.0	7,143.6	7,223.0	7,146.0	194.6	19.2	-88.25	-259.6	-70.0	6,667.6	6,456.7	210.92	31.612	
14,370.2	7,143.0	7,223.0	7,146.0	196.6	19.2	-88.25	-259.6	-70.0	6,735.6	6,522.7	212.88	31.640	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 705-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	-145.44	-783.2	-539.5	951.1				
100.0	100.0	99.7	99.7	0.1	0.1	-145.44	-783.3	-539.6	951.2	951.0	0.20	4,729.134	
200.0	200.0	198.0	198.0	0.3	0.2	-145.43	-783.5	-539.8	951.4	950.9	0.53	1,801.038 ES	
300.0	300.0	296.2	296.2	0.5	0.3	-145.42	-783.8	-540.2	951.9	951.1	0.86	1,112.797	
400.0	400.0	394.4	394.4	0.8	0.4	-170.63	-784.2	-540.7	954.3	953.1	1.19	804.778	
500.0	499.8	492.5	492.4	1.0	0.5	-170.65	-784.7	-541.4	960.3	958.8	1.52	630.055	
600.0	599.5	590.2	590.2	1.2	0.6	-170.68	-785.3	-542.2	969.9	968.0	1.87	517.752	
700.0	698.7	687.5	687.5	1.5	0.7	-170.73	-786.1	-543.2	983.1	980.9	2.24	439.400	
800.0	797.5	786.2	786.1	1.8	0.9	-170.79	-786.9	-544.3	999.8	997.2	2.67	373.811	
900.0	895.6	882.4	882.4	2.2	1.1	-170.86	-787.6	-545.5	1,020.0	1,016.9	3.13	326.339	
1,000.0	993.1	1,008.2	1,008.1	2.6	1.4	-170.95	-786.8	-547.0	1,042.3	1,038.7	3.62	288.139	
1,100.0	1,089.6	1,109.7	1,109.5	3.1	1.6	-170.85	-782.7	-549.7	1,066.1	1,062.0	4.08	261.560	
1,127.2	1,115.8	1,131.4	1,131.1	3.2	1.6	-170.80	-781.6	-550.7	1,073.2	1,069.0	4.20	255.670	
1,200.0	1,185.5	1,190.3	1,189.8	3.6	1.8	-170.65	-778.2	-554.9	1,093.2	1,088.7	4.53	241.085	
1,300.0	1,281.4	1,275.3	1,274.1	4.1	2.0	-170.30	-772.5	-563.7	1,121.5	1,116.5	5.03	222.837	
1,400.0	1,377.3	1,359.0	1,356.8	4.7	2.2	-169.83	-766.1	-575.1	1,151.0	1,145.5	5.56	207.016	
1,500.0	1,473.1	1,425.0	1,421.8	5.2	2.5	-169.41	-761.3	-585.7	1,182.2	1,176.2	6.07	194.855	
1,600.0	1,569.0	1,504.3	1,499.6	5.8	2.7	-168.86	-756.0	-600.4	1,215.3	1,208.7	6.64	183.006	
1,700.0	1,664.8	1,588.5	1,581.3	6.4	3.1	-168.15	-748.9	-618.9	1,249.3	1,242.0	7.27	171.849	
1,800.0	1,760.7	1,667.0	1,657.1	6.9	3.4	-167.41	-741.5	-638.2	1,284.2	1,276.3	7.92	162.156	
1,900.0	1,856.6	1,741.4	1,728.3	7.5	3.8	-166.66	-734.2	-658.5	1,320.6	1,312.0	8.59	153.739	
2,000.0	1,952.4	1,830.4	1,813.0	8.1	4.3	-165.73	-724.9	-684.3	1,357.9	1,348.6	9.37	144.920	
2,100.0	2,048.3	1,918.0	1,896.1	8.6	4.8	-164.83	-715.4	-710.1	1,395.6	1,385.4	10.16	137.309	
2,200.0	2,144.1	1,987.0	1,961.6	9.2	5.2	-164.17	-708.6	-730.6	1,434.3	1,423.5	10.85	132.212	
2,300.0	2,240.0	2,089.9	2,059.5	9.8	5.8	-163.27	-699.5	-761.2	1,474.1	1,462.4	11.71	125.924	
2,400.0	2,335.9	2,169.2	2,134.8	10.3	6.3	-162.57	-691.6	-784.9	1,513.4	1,501.0	12.46	121.511	
2,500.0	2,431.7	2,253.9	2,215.1	10.9	6.8	-161.89	-684.1	-810.3	1,553.8	1,540.6	13.23	117.471	
2,600.0	2,527.6	2,349.9	2,306.4	11.5	7.3	-161.15	-675.5	-839.0	1,594.2	1,580.1	14.05	113.447	
2,700.0	2,623.4	2,482.3	2,432.3	12.1	8.1	-160.19	-662.2	-877.6	1,633.7	1,618.6	15.08	108.325	
2,800.0	2,719.3	2,570.0	2,515.5	12.6	8.6	-159.53	-651.5	-903.3	1,672.1	1,656.1	15.92	105.007	
2,900.0	2,815.2	2,659.4	2,599.6	13.2	9.2	-158.81	-639.3	-930.9	1,710.8	1,693.9	16.83	101.656	
3,000.0	2,911.0	2,769.7	2,703.2	13.8	10.0	-157.93	-622.8	-965.4	1,749.1	1,731.2	17.87	97.858	
3,100.0	3,006.9	2,870.1	2,798.0	14.4	10.6	-157.22	-608.3	-994.9	1,786.8	1,768.0	18.82	94.967	
3,200.0	3,102.7	2,956.0	2,879.3	14.9	11.1	-156.65	-596.3	-1,019.9	1,824.7	1,805.1	19.67	92.776	
3,300.0	3,198.6	3,051.0	2,969.3	15.5	11.7	-156.06	-583.2	-1,047.3	1,862.8	1,842.2	20.57	90.559	
3,400.0	3,294.5	3,149.7	3,063.1	16.1	12.3	-155.50	-570.0	-1,075.0	1,900.6	1,879.2	21.47	88.544	
3,500.0	3,390.3	3,232.1	3,141.7	16.7	12.8	-155.08	-559.8	-1,097.5	1,938.7	1,916.5	22.27	87.068	
3,600.0	3,486.2	3,314.0	3,219.8	17.2	13.3	-154.67	-549.6	-1,120.1	1,977.1	1,954.0	23.08	85.673	
3,700.0	3,582.0	3,393.5	3,295.5	17.8	13.8	-154.28	-539.9	-1,142.5	2,016.1	1,992.2	23.88	84.416	
3,800.0	3,677.9	3,488.8	3,386.0	18.4	14.4	-153.83	-528.4	-1,169.8	2,055.6	2,030.8	24.78	82.946	
3,900.0	3,773.7	3,580.0	3,472.5	19.0	14.9	-153.38	-516.5	-1,196.4	2,095.0	2,069.4	25.67	81.614	
4,000.0	3,869.6	3,726.2	3,611.6	19.5	15.8	-152.73	-497.2	-1,236.8	2,133.4	2,106.6	26.82	79.532	
4,100.0	3,965.5	3,836.7	3,717.9	20.1	16.4	-152.37	-484.0	-1,263.7	2,170.1	2,142.3	27.75	78.209	
4,200.0	4,061.3	3,944.1	3,821.1	20.7	17.0	-151.98	-469.8	-1,290.2	2,206.3	2,177.7	28.68	76.937	
4,300.0	4,157.2	4,028.9	3,902.3	21.3	17.5	-151.67	-457.6	-1,311.4	2,242.3	2,212.8	29.51	75.986	
4,400.0	4,253.0	4,127.7	3,996.8	21.8	18.1	-151.31	-443.7	-1,336.4	2,278.7	2,248.3	30.41	74.932	
4,500.0	4,348.9	4,195.9	4,062.3	22.4	18.4	-151.10	-434.7	-1,353.1	2,315.1	2,284.0	31.13	74.367	
4,600.0	4,444.8	4,252.1	4,116.4	23.0	18.7	-150.95	-428.6	-1,367.0	2,353.0	2,321.2	31.78	74.035	
4,700.0	4,540.6	4,348.4	4,209.3	23.6	19.3	-150.72	-419.2	-1,390.9	2,391.5	2,358.9	32.61	73.332	
4,800.0	4,636.5	4,462.6	4,319.7	24.1	19.8	-150.49	-408.6	-1,418.0	2,429.6	2,396.1	33.50	72.531	
4,900.0	4,732.3	4,582.2	4,436.1	24.7	20.4	-150.33	-399.0	-1,443.9	2,466.7	2,432.4	34.36	71.800	
5,000.0	4,828.2	4,730.9	4,581.9	25.3	21.0	-150.25	-389.5	-1,471.4	2,502.4	2,467.2	35.25	70.994	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 705-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	4,924.1	4,873.3	4,722.6	25.9	21.5	-150.30	-382.6	-1,492.2	2,535.9	2,499.9	36.03	70.378	
5,200.0	5,019.9	5,042.4	4,890.5	26.4	21.9	-150.49	-376.4	-1,510.4	2,567.1	2,530.3	36.80	69.759	
5,300.0	5,115.8	5,188.7	5,036.4	27.0	22.2	-150.77	-373.2	-1,520.4	2,596.3	2,558.8	37.43	69.358	
5,400.0	5,211.6	5,313.6	5,161.2	27.6	22.4	-151.09	-372.4	-1,524.7	2,623.6	2,585.7	37.97	69.105	
5,500.0	5,307.5	5,408.5	5,256.1	28.2	22.5	-151.35	-372.2	-1,527.2	2,650.8	2,612.3	38.45	68.944	
5,600.0	5,403.4	5,499.7	5,347.3	28.7	22.6	-151.60	-372.3	-1,529.4	2,678.0	2,639.1	38.92	68.805	
5,700.0	5,499.2	5,590.4	5,437.9	29.3	22.7	-151.85	-372.7	-1,531.7	2,705.5	2,666.1	39.39	68.684	
5,800.0	5,595.1	5,692.5	5,540.0	29.9	22.9	-152.13	-373.5	-1,534.0	2,733.1	2,693.2	39.86	68.560	
5,840.7	5,634.1	5,737.7	5,585.3	30.1	22.9	-152.25	-373.8	-1,534.9	2,744.2	2,704.1	40.06	68.505	
5,900.0	5,691.1	5,794.7	5,642.2	30.4	23.0	-152.55	-374.2	-1,535.9	2,759.8	2,719.4	40.42	68.286	
6,000.0	5,788.0	5,905.0	5,752.5	30.8	23.1	-153.03	-375.0	-1,537.6	2,783.7	2,742.7	40.96	67.961	
6,100.0	5,885.7	6,011.3	5,858.8	31.2	23.2	-153.43	-375.8	-1,538.5	2,804.0	2,762.5	41.45	67.655	
6,200.0	5,984.0	6,115.8	5,963.3	31.5	23.4	-153.77	-376.7	-1,539.0	2,821.0	2,779.1	41.88	67.367	
6,300.0	6,083.0	6,211.1	6,058.6	31.8	23.5	-154.03	-377.5	-1,539.4	2,834.9	2,792.7	42.24	67.108	
6,400.0	6,182.3	6,312.5	6,160.0	32.0	23.6	-154.23	-378.4	-1,539.8	2,845.8	2,803.2	42.57	66.852	
6,500.0	6,282.0	6,405.7	6,253.2	32.2	23.7	-154.37	-379.3	-1,540.2	2,853.6	2,810.8	42.83	66.624	
6,600.0	6,382.0	6,508.6	6,356.1	32.3	23.8	-154.46	-380.5	-1,540.5	2,858.3	2,815.3	43.05	66.392	
6,668.0	6,449.9	6,577.3	6,424.8	32.4	23.9	-129.28	-381.4	-1,540.7	2,859.7	2,812.2	47.48	60.234	
6,698.0	6,479.9	6,607.3	6,454.8	32.4	23.9	-129.28	-381.7	-1,540.8	2,860.0	2,812.4	47.55	60.144	
6,700.0	6,481.9	6,609.3	6,456.8	32.4	23.9	-39.28	-381.7	-1,540.8	2,860.0	2,816.7	43.24	66.135	
6,750.0	6,531.9	6,659.3	6,506.8	32.5	23.9	-39.37	-382.3	-1,540.9	2,859.0	2,815.8	43.17	66.225	
6,800.0	6,581.6	6,714.9	6,562.3	32.5	24.0	-39.64	-383.0	-1,541.0	2,855.2	2,812.3	42.97	66.452	
6,850.0	6,630.8	6,761.0	6,608.5	32.5	24.1	-40.08	-383.3	-1,541.1	2,848.7	2,806.1	42.62	66.835	
6,900.0	6,679.3	6,808.8	6,656.2	32.4	24.1	-40.72	-383.7	-1,541.2	2,839.7	2,797.5	42.16	67.351	
6,950.0	6,726.8	6,854.0	6,701.4	32.4	24.2	-41.54	-384.3	-1,541.3	2,828.2	2,786.6	41.59	67.993	
7,000.0	6,773.1	6,893.3	6,740.7	32.3	24.2	-42.54	-384.8	-1,541.5	2,814.3	2,773.3	40.94	68.737	
7,050.0	6,817.9	6,937.7	6,785.1	32.3	24.3	-43.77	-385.4	-1,541.7	2,798.0	2,757.7	40.25	69.523	
7,100.0	6,861.2	6,977.5	6,824.9	32.2	24.3	-45.21	-385.9	-1,541.9	2,779.5	2,739.9	39.54	70.301	
7,150.0	6,902.5	7,014.8	6,862.3	32.1	24.3	-46.86	-386.5	-1,542.1	2,758.9	2,720.0	38.87	70.983	
7,200.0	6,941.8	7,050.3	6,897.8	32.0	24.4	-48.74	-387.1	-1,542.3	2,736.3	2,698.0	38.29	71.456	
7,250.0	6,978.9	7,083.9	6,931.3	31.9	24.4	-50.87	-387.8	-1,542.5	2,712.0	2,674.1	37.88	71.590	
7,300.0	7,013.5	7,115.4	6,962.8	31.7	24.5	-53.24	-388.3	-1,542.8	2,685.9	2,648.3	37.69	71.264	
7,350.0	7,045.5	7,146.7	6,994.1	31.6	24.5	-55.89	-388.9	-1,543.1	2,658.5	2,620.7	37.78	70.372	
7,400.0	7,074.8	7,178.2	7,025.6	31.5	24.5	-58.85	-389.4	-1,543.5	2,629.6	2,591.4	38.18	68.880	
7,450.0	7,101.1	7,206.5	7,053.9	31.4	24.6	-62.03	-389.9	-1,543.7	2,599.6	2,560.7	38.87	66.884	
7,500.0	7,124.5	7,231.2	7,078.6	31.3	24.6	-65.41	-390.3	-1,544.0	2,568.7	2,528.9	39.80	64.533	
7,550.0	7,144.7	7,251.0	7,098.4	31.1	24.6	-68.92	-390.7	-1,544.2	2,537.0	2,496.1	40.91	62.012	
7,600.0	7,161.6	7,267.8	7,115.2	31.0	24.7	-72.54	-391.0	-1,544.3	2,504.8	2,462.6	42.13	59.454	
7,650.0	7,175.3	7,281.3	7,128.7	30.9	24.7	-76.22	-391.2	-1,544.4	2,472.2	2,428.9	43.39	56.981	
7,700.0	7,185.5	7,291.6	7,139.0	30.8	24.7	-79.90	-391.4	-1,544.5	2,439.6	2,395.0	44.63	54.667	
7,750.0	7,192.3	7,298.6	7,146.0	30.7	24.7	-83.50	-391.5	-1,544.6	2,407.1	2,361.3	45.81	52.548	
7,800.0	7,195.7	7,302.3	7,149.7	30.7	24.7	-86.98	-391.6	-1,544.6	2,374.8	2,327.9	46.91	50.627	
7,828.6	7,196.0	7,302.9	7,150.2	30.6	24.7	-88.89	-391.6	-1,544.6	2,356.6	2,309.1	47.50	49.611	
7,900.0	7,195.4	7,302.9	7,150.3	30.6	24.7	-88.89	-391.6	-1,544.6	2,311.9	2,263.4	48.51	47.657	
8,000.0	7,194.6	7,303.0	7,150.4	30.6	24.7	-88.90	-391.6	-1,544.6	2,251.7	2,201.6	50.12	44.928	
8,100.0	7,193.8	7,303.1	7,150.5	31.0	24.7	-88.90	-391.6	-1,544.6	2,194.4	2,142.4	51.91	42.270	
8,200.0	7,193.0	7,303.2	7,150.6	32.1	24.7	-88.90	-391.6	-1,544.6	2,140.2	2,086.3	53.86	39.734	
8,300.0	7,192.2	7,303.3	7,150.7	33.8	24.7	-88.91	-391.6	-1,544.6	2,089.4	2,033.4	55.94	37.350	
8,400.0	7,191.4	7,303.4	7,150.8	35.8	24.7	-88.91	-391.6	-1,544.6	2,042.2	1,984.1	58.12	35.137	
8,500.0	7,190.6	7,303.5	7,150.9	38.0	24.7	-88.91	-391.6	-1,544.6	1,998.9	1,938.5	60.39	33.101	
8,600.0	7,189.8	7,303.6	7,151.0	40.3	24.7	-88.92	-391.6	-1,544.6	1,959.8	1,897.1	62.72	31.244	
8,700.0	7,189.0	7,303.7	7,151.1	42.7	24.7	-88.92	-391.6	-1,544.6	1,925.1	1,859.9	65.12	29.562	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 705-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
8,800.0	7,188.2	7,303.8	7,151.1	45.1	24.7	-88.92	-391.6	-1,544.6	1,895.0	1,827.4	67.56	28.047		
8,900.0	7,187.4	7,303.9	7,151.2	47.5	24.7	-88.92	-391.6	-1,544.6	1,869.8	1,799.7	70.05	26.692		
9,000.0	7,186.6	7,304.0	7,151.3	50.0	24.7	-88.93	-391.6	-1,544.6	1,849.6	1,777.1	72.57	25.487		
9,100.0	7,185.7	7,304.1	7,151.4	52.6	24.7	-88.93	-391.6	-1,544.6	1,834.7	1,759.6	75.12	24.423		
9,200.0	7,184.9	7,304.1	7,151.5	55.1	24.7	-88.93	-391.6	-1,544.6	1,825.2	1,747.5	77.70	23.491		
9,300.0	7,184.1	7,304.2	7,151.6	57.7	24.7	-88.94	-391.6	-1,544.6	1,821.1	1,740.8	80.30	22.680		
9,324.5	7,183.9	7,304.3	7,151.6	58.3	24.7	-88.94	-391.6	-1,544.6	1,821.0	1,740.0	80.94	22.498		
9,400.0	7,183.3	7,304.3	7,151.7	60.3	24.7	-88.94	-391.6	-1,544.6	1,822.5	1,739.6	82.91	21.981		
9,500.0	7,182.5	7,304.4	7,151.8	62.9	24.7	-88.94	-391.6	-1,544.6	1,829.4	1,743.8	85.55	21.384		
9,600.0	7,181.7	7,304.5	7,151.9	65.5	24.7	-88.94	-391.6	-1,544.6	1,841.7	1,753.5	88.20	20.881		
9,700.0	7,180.9	7,304.6	7,152.0	68.1	24.7	-88.95	-391.6	-1,544.6	1,859.3	1,768.4	90.86	20.463		
9,800.0	7,180.1	7,304.7	7,152.1	70.8	24.7	-88.95	-391.7	-1,544.6	1,882.0	1,788.5	93.53	20.122		
9,900.0	7,179.3	7,304.8	7,152.2	73.5	24.7	-88.95	-391.7	-1,544.6	1,909.7	1,813.5	96.22	19.848		
10,000.0	7,178.5	7,304.9	7,152.3	76.1	24.7	-88.96	-391.7	-1,544.6	1,942.2	1,843.3	98.91	19.636		
10,100.0	7,177.7	7,305.0	7,152.3	78.8	24.7	-88.96	-391.7	-1,544.6	1,979.2	1,877.6	101.61	19.479		
10,200.0	7,176.9	7,305.1	7,152.4	81.5	24.7	-88.96	-391.7	-1,544.6	2,020.5	1,916.2	104.32	19.369		
10,300.0	7,176.0	7,305.1	7,152.5	84.2	24.7	-88.96	-391.7	-1,544.6	2,065.8	1,958.8	107.03	19.301		
10,400.0	7,175.2	7,305.2	7,152.6	86.9	24.7	-88.97	-391.7	-1,544.6	2,114.9	2,005.1	109.75	19.269 SF		
10,500.0	7,174.4	7,305.3	7,152.7	89.6	24.7	-88.97	-391.7	-1,544.6	2,167.4	2,054.9	112.48	19.269		
10,600.0	7,173.6	7,305.4	7,152.8	92.3	24.7	-88.97	-391.7	-1,544.6	2,223.2	2,108.0	115.21	19.297		
10,700.0	7,172.8	7,305.5	7,152.9	95.0	24.7	-88.98	-391.7	-1,544.6	2,282.1	2,164.1	117.95	19.348		
10,800.0	7,172.0	7,305.6	7,153.0	97.8	24.7	-88.98	-391.7	-1,544.7	2,343.7	2,223.0	120.69	19.420		
10,900.0	7,171.2	7,305.7	7,153.1	100.5	24.7	-88.98	-391.7	-1,544.7	2,407.9	2,284.5	123.43	19.508		
11,000.0	7,170.4	7,305.8	7,153.2	103.2	24.7	-88.98	-391.7	-1,544.7	2,474.5	2,348.3	126.18	19.611		
11,100.0	7,169.6	7,305.9	7,153.2	106.0	24.7	-88.99	-391.7	-1,544.7	2,543.3	2,414.4	128.93	19.726		
11,200.0	7,168.8	7,306.0	7,153.3	108.7	24.7	-88.99	-391.7	-1,544.7	2,614.1	2,482.4	131.68	19.852		
11,300.0	7,168.0	7,306.0	7,153.4	111.5	24.7	-88.99	-391.7	-1,544.7	2,686.7	2,552.3	134.44	19.985		
11,400.0	7,167.1	7,306.1	7,153.5	114.2	24.7	-88.99	-391.7	-1,544.7	2,761.1	2,623.9	137.20	20.125		
11,500.0	7,166.3	7,306.2	7,153.6	117.0	24.7	-89.00	-391.7	-1,544.7	2,837.0	2,697.1	139.96	20.271		
11,600.0	7,165.5	7,306.3	7,153.7	119.7	24.7	-89.00	-391.7	-1,544.7	2,914.4	2,771.7	142.72	20.420		
11,700.0	7,164.7	7,306.4	7,153.8	122.5	24.7	-89.00	-391.7	-1,544.7	2,993.2	2,847.7	145.49	20.573		
11,800.0	7,163.9	7,306.5	7,153.9	125.2	24.7	-89.01	-391.7	-1,544.7	3,073.1	2,924.9	148.25	20.729		
11,900.0	7,163.1	7,306.6	7,153.9	128.0	24.7	-89.01	-391.7	-1,544.7	3,154.2	3,003.2	151.02	20.886		
12,000.0	7,162.3	7,306.7	7,154.0	130.7	24.7	-89.01	-391.7	-1,544.7	3,236.4	3,082.6	153.79	21.044		
12,100.0	7,161.5	7,306.8	7,154.1	133.5	24.7	-89.01	-391.7	-1,544.7	3,319.5	3,163.0	156.57	21.202		
12,200.0	7,160.7	7,306.8	7,154.2	136.3	24.7	-89.02	-391.7	-1,544.7	3,403.6	3,244.3	159.34	21.360		
12,300.0	7,159.8	7,306.9	7,154.3	139.0	24.7	-89.02	-391.7	-1,544.7	3,488.5	3,326.4	162.12	21.518		
12,400.0	7,159.0	7,307.0	7,154.4	141.8	24.7	-89.02	-391.7	-1,544.7	3,574.2	3,409.3	164.89	21.676		
12,500.0	7,158.2	7,307.1	7,154.5	144.6	24.7	-89.02	-391.7	-1,544.7	3,660.6	3,492.9	167.67	21.832		
12,600.0	7,157.4	7,307.2	7,154.6	147.3	24.7	-89.03	-391.7	-1,544.7	3,747.7	3,577.2	170.45	21.987		
12,700.0	7,156.6	7,307.3	7,154.6	150.1	24.7	-89.03	-391.7	-1,544.7	3,835.4	3,662.1	173.23	22.140		
12,800.0	7,155.8	7,307.4	7,154.7	152.9	24.7	-89.03	-391.7	-1,544.7	3,923.7	3,747.6	176.01	22.292		
12,900.0	7,155.0	7,307.4	7,154.8	155.7	24.7	-89.03	-391.7	-1,544.7	4,012.5	3,833.7	178.79	22.442		
13,000.0	7,154.2	7,307.5	7,154.9	158.4	24.7	-89.04	-391.7	-1,544.7	4,101.9	3,920.3	181.58	22.590		
13,100.0	7,153.3	7,307.6	7,155.0	161.2	24.7	-89.04	-391.7	-1,544.7	4,191.7	4,007.3	184.36	22.736		
13,200.0	7,152.5	7,307.7	7,155.1	164.0	24.7	-89.04	-391.7	-1,544.7	4,282.0	4,094.9	187.15	22.881		
13,300.0	7,151.7	7,307.8	7,155.2	166.8	24.7	-89.04	-391.7	-1,544.7	4,372.7	4,182.8	189.93	23.023		
13,400.0	7,150.9	7,307.9	7,155.3	169.5	24.7	-89.05	-391.7	-1,544.7	4,463.8	4,271.1	192.72	23.162		
13,500.0	7,150.1	7,308.0	7,155.3	172.3	24.7	-89.05	-391.7	-1,544.7	4,555.3	4,359.8	195.50	23.300		
13,600.0	7,149.3	7,308.0	7,155.4	175.1	24.7	-89.05	-391.7	-1,544.7	4,647.1	4,448.8	198.29	23.436		
13,700.0	7,148.5	7,308.1	7,155.5	177.9	24.7	-89.05	-391.7	-1,544.7	4,739.3	4,538.2	201.08	23.569		
13,800.0	7,147.6	7,308.2	7,155.6	180.7	24.7	-89.06	-391.7	-1,544.7	4,831.8	4,627.9	203.87	23.700		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WEDCO #13-21DU - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 705-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
13,900.0	7,146.8	7,308.3	7,155.7	183.5	24.7	-89.06	-391.7	-1,544.7	4,924.6	4,717.9	206.66	23.829	
14,000.0	7,146.0	7,308.4	7,155.8	186.2	24.7	-89.06	-391.7	-1,544.7	5,017.6	4,808.1	209.45	23.956	
14,100.0	7,145.2	7,308.5	7,155.8	189.0	24.7	-89.06	-391.7	-1,544.7	5,110.9	4,898.7	212.24	24.081	
14,200.0	7,144.4	7,308.6	7,155.9	191.8	24.7	-89.07	-391.7	-1,544.7	5,204.5	4,989.4	215.03	24.203	
14,300.0	7,143.6	7,308.6	7,156.0	194.6	24.7	-89.07	-391.7	-1,544.7	5,298.3	5,080.4	217.82	24.324	
14,370.2	7,143.0	7,308.7	7,156.1	196.6	24.7	-89.07	-391.7	-1,544.7	5,364.3	5,144.5	219.78	24.407	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-139.20	-604.0	-521.4	798.0				
100.0	100.0	87.0	87.0	0.1	0.1	-139.20	-604.0	-521.4	797.9	797.7	0.15	5,208.240	
119.9	119.9	106.5	106.5	0.1	0.1	-139.19	-603.9	-521.4	797.9	797.7	0.21	3,756.555 CC	
200.0	200.0	182.1	182.1	0.3	0.1	-139.18	-604.0	-521.7	798.1	797.6	0.46	1,718.593 ES	
300.0	300.0	285.0	285.0	0.5	0.2	-139.17	-604.3	-522.1	798.6	797.8	0.77	1,031.732	
400.0	400.0	379.2	379.2	0.8	0.3	-164.40	-604.5	-522.4	800.7	799.6	1.08	744.472	
500.0	499.8	479.5	479.5	1.0	0.4	-164.45	-605.1	-523.2	806.7	805.3	1.40	578.042	
600.0	599.5	576.6	576.6	1.2	0.4	-164.54	-605.6	-524.0	816.0	814.3	1.71	476.552	
700.0	698.7	678.1	678.1	1.5	0.5	-164.65	-606.0	-525.4	828.9	826.9	2.03	407.994	
800.0	797.5	776.9	776.9	1.8	0.5	-164.80	-606.2	-526.3	844.8	842.4	2.35	359.834	
900.0	895.6	870.3	870.3	2.2	0.6	-165.01	-606.9	-527.0	864.3	861.6	2.68	322.544	
1,000.0	993.1	965.9	965.9	2.6	0.6	-165.24	-607.8	-528.2	887.5	884.5	3.03	293.331	
1,100.0	1,089.6	1,062.4	1,062.4	3.1	0.7	-165.51	-608.9	-529.2	914.1	910.7	3.38	270.466	
1,127.2	1,115.8	1,088.5	1,088.5	3.2	0.7	-165.59	-609.2	-529.4	921.9	918.4	3.48	265.095	
1,200.0	1,185.5	1,161.3	1,161.2	3.6	0.7	-165.90	-609.8	-530.2	943.0	939.3	3.71	254.249	
1,300.0	1,281.4	1,255.4	1,255.3	4.1	0.7	-166.26	-610.2	-531.4	971.7	967.7	4.03	240.986	
1,400.0	1,377.3	1,351.2	1,351.1	4.7	0.8	-166.62	-610.9	-532.7	1,000.9	996.5	4.36	229.496	
1,500.0	1,473.1	1,447.9	1,447.8	5.2	0.8	-166.95	-611.3	-533.9	1,029.7	1,025.0	4.69	219.513	
1,600.0	1,569.0	1,540.1	1,540.0	5.8	0.9	-167.27	-612.1	-534.8	1,058.8	1,053.7	5.02	210.812	
1,700.0	1,664.8	1,634.2	1,634.1	6.4	0.9	-167.56	-612.9	-536.2	1,088.1	1,082.7	5.36	203.032	
1,800.0	1,760.7	1,733.1	1,733.0	6.9	0.9	-167.84	-613.6	-537.7	1,117.4	1,111.7	5.69	196.301	
1,900.0	1,856.6	1,835.6	1,835.4	7.5	1.0	-168.11	-613.7	-539.1	1,146.1	1,140.1	6.02	190.419	
2,000.0	1,952.4	1,927.5	1,927.3	8.1	1.0	-168.34	-613.7	-540.2	1,174.8	1,168.4	6.35	185.022	
2,100.0	2,048.3	2,015.7	2,015.5	8.6	1.0	-168.55	-614.2	-541.6	1,204.1	1,197.4	6.69	179.995	
2,200.0	2,144.1	2,115.5	2,115.3	9.2	1.1	-168.79	-614.9	-543.0	1,233.4	1,226.3	7.04	175.139	
2,300.0	2,240.0	2,214.5	2,214.3	9.8	1.2	-169.03	-615.5	-544.0	1,262.4	1,255.0	7.39	170.729	
2,400.0	2,335.9	2,307.6	2,307.4	10.3	1.2	-169.24	-616.0	-545.1	1,291.4	1,283.7	7.74	166.857	
2,500.0	2,431.7	2,400.6	2,400.4	10.9	1.3	-169.42	-616.4	-546.5	1,320.6	1,312.6	8.09	163.324	
2,600.0	2,527.6	2,496.9	2,496.6	11.5	1.3	-169.59	-616.8	-548.2	1,349.9	1,341.5	8.43	160.055	
2,700.0	2,623.4	2,593.1	2,592.9	12.1	1.4	-169.77	-617.3	-549.5	1,379.2	1,370.4	8.78	157.049	
2,800.0	2,719.3	2,688.6	2,688.4	12.6	1.4	-169.94	-617.8	-550.8	1,408.5	1,399.3	9.13	154.310	
2,900.0	2,815.2	2,784.1	2,783.8	13.2	1.4	-170.10	-618.2	-552.4	1,437.7	1,428.3	9.47	151.769	
3,000.0	2,911.0	2,881.8	2,881.6	13.8	1.5	-170.24	-618.4	-554.1	1,467.0	1,457.1	9.82	149.444	
3,100.0	3,006.9	2,980.2	2,979.9	14.4	1.5	-170.36	-618.3	-556.0	1,496.0	1,485.8	10.16	147.249	
3,200.0	3,102.7	3,074.5	3,074.2	14.9	1.6	-170.48	-618.1	-557.9	1,525.0	1,514.5	10.50	145.207	
3,300.0	3,198.6	3,167.7	3,167.4	15.5	1.6	-170.59	-618.1	-559.6	1,554.1	1,543.3	10.84	143.322	
3,400.0	3,294.5	3,267.6	3,267.3	16.1	1.7	-170.71	-618.2	-561.4	1,583.3	1,572.1	11.18	141.566	
3,500.0	3,390.3	3,371.5	3,371.1	16.7	1.7	-170.81	-617.5	-563.4	1,612.0	1,600.5	11.52	139.881	
3,600.0	3,486.2	3,468.7	3,468.4	17.2	1.7	-170.89	-616.4	-565.6	1,640.4	1,628.5	11.86	138.289	
3,700.0	3,582.0	3,563.4	3,563.0	17.8	1.8	-170.94	-615.1	-568.0	1,668.8	1,656.6	12.20	136.794	
3,800.0	3,677.9	3,662.8	3,662.4	18.4	1.8	-170.99	-613.6	-570.7	1,697.3	1,684.7	12.54	135.366	
3,900.0	3,773.7	3,765.4	3,764.9	19.0	1.9	-171.03	-611.7	-573.4	1,725.3	1,712.5	12.88	133.975	
4,000.0	3,869.6	3,857.8	3,857.2	19.5	1.9	-171.07	-609.8	-575.9	1,753.2	1,740.0	13.22	132.655	
4,100.0	3,965.5	3,944.8	3,944.2	20.1	1.9	-171.10	-608.3	-578.3	1,781.6	1,768.0	13.55	131.441	
4,200.0	4,061.3	4,038.5	4,037.8	20.7	2.0	-171.14	-607.1	-581.2	1,810.3	1,796.4	13.89	130.299	
4,300.0	4,157.2	4,144.3	4,143.6	21.3	2.0	-171.20	-605.8	-583.6	1,838.8	1,824.5	14.24	129.171	
4,400.0	4,253.0	4,244.9	4,244.2	21.8	2.0	-171.28	-604.6	-585.1	1,866.7	1,852.2	14.57	128.104	
4,500.0	4,348.9	4,339.4	4,338.7	22.4	2.1	-171.35	-603.5	-586.4	1,894.7	1,879.8	14.91	127.111	
4,600.0	4,444.8	4,435.0	4,434.2	23.0	2.1	-171.43	-602.5	-587.8	1,922.8	1,907.5	15.24	126.158	
4,700.0	4,540.6	4,532.4	4,531.6	23.6	2.1	-171.51	-601.5	-588.9	1,950.8	1,935.2	15.58	125.241	
4,800.0	4,636.5	4,626.7	4,625.9	24.1	2.2	-171.60	-600.7	-589.6	1,978.7	1,962.8	15.91	124.365	
4,900.0	4,732.3	4,713.8	4,713.0	24.7	2.2	-171.67	-600.2	-590.5	2,007.0	1,990.7	16.25	123.544	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,828.2	4,800.9	4,800.1	25.3	2.2	-171.74	-599.8	-591.9	2,035.7	2,019.1	16.58	122.776	
5,100.0	4,924.1	4,908.5	4,907.7	25.9	2.2	-171.82	-599.3	-593.5	2,064.3	2,047.4	16.92	122.000	
5,200.0	5,019.9	5,013.3	5,012.5	26.4	2.3	-171.90	-598.5	-594.5	2,092.4	2,075.1	17.26	121.231	
5,300.0	5,115.8	5,100.8	5,100.0	27.0	2.3	-171.98	-597.9	-595.3	2,120.5	2,102.9	17.59	120.529	
5,400.0	5,211.6	5,188.2	5,187.3	27.6	2.3	-172.04	-597.6	-596.3	2,149.0	2,131.1	17.93	119.871	
5,500.0	5,307.5	5,287.5	5,286.6	28.2	2.3	-172.12	-597.4	-597.4	2,177.7	2,159.4	18.26	119.271	
5,600.0	5,403.4	5,388.8	5,388.0	28.7	2.3	-172.22	-597.5	-597.7	2,206.1	2,187.5	18.59	118.692	
5,700.0	5,499.2	5,489.8	5,489.0	29.3	2.3	-172.33	-597.5	-597.6	2,234.3	2,215.4	18.91	118.161	
5,800.0	5,595.1	5,590.9	5,590.1	29.9	2.3	-172.43	-597.3	-597.5	2,262.3	2,243.1	19.23	117.635	
5,840.7	5,634.1	5,626.0	5,625.1	30.1	2.3	-172.47	-597.2	-597.4	2,273.7	2,254.3	19.36	117.421	
5,900.0	5,691.1	5,674.6	5,673.7	30.4	2.3	-172.55	-597.1	-597.5	2,289.9	2,270.4	19.48	117.540	
6,000.0	5,788.0	5,756.9	5,756.1	30.8	2.3	-172.68	-597.4	-597.9	2,314.9	2,295.3	19.63	117.903	
6,100.0	5,885.7	5,852.1	5,851.2	31.2	2.4	-172.80	-598.0	-598.6	2,337.1	2,317.4	19.77	118.223	
6,200.0	5,984.0	5,961.5	5,960.6	31.5	2.4	-172.89	-598.3	-599.5	2,355.6	2,335.7	19.89	118.440	
6,300.0	6,083.0	6,065.2	6,064.3	31.8	2.4	-172.96	-598.2	-600.2	2,370.3	2,350.4	19.97	118.703	
6,400.0	6,182.3	6,165.9	6,165.0	32.0	2.4	-173.02	-598.4	-600.2	2,381.5	2,361.5	20.02	118.982	
6,500.0	6,282.0	6,269.4	6,268.5	32.2	2.4	-173.08	-598.9	-599.6	2,389.1	2,369.1	20.04	119.227	
6,600.0	6,382.0	6,374.4	6,373.5	32.3	2.4	-173.10	-598.9	-599.4	2,393.1	2,373.1	20.05	119.384	
6,668.0	6,449.9	6,440.1	6,439.2	32.4	2.4	-147.89	-598.7	-599.5	2,393.8	2,359.3	34.51	69.359	
6,698.0	6,479.9	6,467.7	6,466.8	32.4	2.4	-147.89	-598.6	-599.5	2,393.8	2,359.2	34.54	69.306	
6,700.0	6,481.9	6,469.6	6,468.7	32.4	2.4	-57.89	-598.6	-599.5	2,393.8	2,373.7	20.09	119.160	
6,750.0	6,531.9	6,515.5	6,514.7	32.5	2.4	-57.99	-598.7	-599.5	2,392.8	2,372.8	20.00	119.620	
6,800.0	6,581.6	6,561.3	6,560.4	32.5	2.4	-58.28	-598.8	-599.4	2,390.1	2,370.2	19.90	120.079	
6,850.0	6,630.8	6,606.8	6,605.9	32.5	2.4	-58.76	-599.1	-599.4	2,385.6	2,365.8	19.80	120.493	
6,900.0	6,679.3	6,653.2	6,652.3	32.4	2.4	-59.43	-599.4	-599.3	2,379.4	2,359.7	19.70	120.769	
6,950.0	6,726.8	6,698.7	6,697.8	32.4	2.4	-60.28	-599.8	-599.2	2,371.6	2,352.0	19.61	120.916	
7,000.0	6,773.1	6,743.0	6,742.1	32.3	2.4	-61.31	-600.2	-599.2	2,362.2	2,342.7	19.54	120.866	
7,050.0	6,817.9	6,786.0	6,785.1	32.3	2.4	-62.52	-600.6	-599.1	2,351.4	2,331.9	19.51	120.543	
7,100.0	6,861.2	6,827.5	6,826.6	32.2	2.5	-63.89	-601.0	-599.1	2,339.2	2,319.7	19.51	119.879	
7,150.0	6,902.5	6,867.4	6,866.5	32.1	2.5	-65.42	-601.4	-599.2	2,325.7	2,306.2	19.58	118.808	
7,200.0	6,941.8	6,905.4	6,904.5	32.0	2.5	-67.09	-601.8	-599.3	2,311.2	2,291.5	19.70	117.296	
7,250.0	6,978.9	6,941.4	6,940.6	31.9	2.5	-68.88	-602.1	-599.6	2,295.8	2,275.9	19.90	115.352	
7,300.0	7,013.5	6,975.2	6,974.4	31.7	2.5	-70.76	-602.4	-599.9	2,279.6	2,259.4	20.17	113.020	
7,350.0	7,045.5	7,008.4	7,007.5	31.6	2.5	-72.76	-602.6	-600.2	2,262.8	2,242.3	20.50	110.360	
7,400.0	7,074.8	7,044.3	7,043.5	31.5	2.5	-74.93	-602.8	-600.5	2,245.5	2,224.6	20.90	107.420	
7,450.0	7,101.1	7,076.6	7,075.8	31.4	2.5	-77.12	-603.0	-600.8	2,227.9	2,206.6	21.35	104.351	
7,500.0	7,124.5	7,105.1	7,104.2	31.3	2.5	-79.27	-603.0	-600.9	2,210.3	2,188.4	21.83	101.228	
7,550.0	7,144.7	7,129.6	7,128.7	31.1	2.5	-81.36	-603.0	-601.0	2,192.7	2,170.4	22.35	98.099	
7,600.0	7,161.6	7,150.1	7,149.2	31.0	2.5	-83.35	-603.0	-601.1	2,175.5	2,152.6	22.90	94.985	
7,650.0	7,175.3	7,166.5	7,165.6	30.9	2.5	-85.20	-603.0	-601.1	2,158.8	2,135.3	23.49	91.894	
7,700.0	7,185.5	7,178.8	7,177.9	30.8	2.5	-86.89	-603.0	-601.1	2,142.7	2,118.6	24.12	88.831	
7,750.0	7,192.3	7,186.9	7,186.0	30.7	2.5	-88.40	-602.9	-601.1	2,127.5	2,102.7	24.79	85.811	
7,800.0	7,195.7	7,190.8	7,189.9	30.7	2.5	-89.70	-602.9	-601.1	2,113.2	2,087.7	25.51	82.854	
7,828.6	7,196.0	7,191.2	7,190.3	30.6	2.5	-90.35	-602.9	-601.1	2,105.6	2,079.6	25.93	81.200	
7,900.0	7,195.4	7,190.5	7,189.6	30.6	2.5	-90.33	-602.9	-601.1	2,088.0	2,061.1	26.94	77.506	
8,000.0	7,194.6	7,189.5	7,188.6	30.6	2.5	-90.30	-602.9	-601.1	2,067.3	2,038.7	28.54	72.424	
8,100.0	7,193.8	7,188.6	7,187.7	31.0	2.5	-90.27	-602.9	-601.1	2,051.2	2,020.9	30.34	67.616	
8,200.0	7,193.0	7,187.6	7,186.8	32.1	2.5	-90.25	-602.9	-601.1	2,039.9	2,007.7	32.28	63.189	
8,300.0	7,192.2	7,186.7	7,185.8	33.8	2.5	-90.22	-602.9	-601.1	2,033.5	1,999.2	34.36	59.189	
8,380.6	7,191.6	7,186.0	7,185.1	35.4	2.5	-90.20	-602.9	-601.1	2,031.9	1,995.8	36.11	56.269	
8,400.0	7,191.4	7,185.8	7,184.9	35.8	2.5	-90.19	-602.9	-601.1	2,032.0	1,995.5	36.53	55.620	
8,500.0	7,190.6	7,184.9	7,184.0	38.0	2.5	-90.17	-602.9	-601.1	2,035.4	1,996.6	38.80	52.464	

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 SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
8,600.0	7,189.8	7,184.0	7,183.1	40.3	2.5	-90.14	-602.9	-601.1	2,043.8	2,002.6	41.13	49.689	
8,700.0	7,189.0	7,183.1	7,182.3	42.7	2.5	-90.12	-602.9	-601.1	2,056.9	2,013.4	43.52	47.260	
8,800.0	7,188.2	7,182.3	7,181.4	45.1	2.5	-90.09	-602.9	-601.1	2,074.8	2,028.8	45.96	45.139	
8,900.0	7,187.4	7,181.4	7,180.5	47.5	2.5	-90.07	-602.9	-601.1	2,097.3	2,048.8	48.45	43.290	
9,000.0	7,186.6	7,180.6	7,179.7	50.0	2.5	-90.05	-602.9	-601.1	2,124.3	2,073.3	50.96	41.681	
9,100.0	7,185.7	7,179.7	7,178.8	52.6	2.5	-90.02	-602.9	-601.1	2,155.5	2,102.0	53.51	40.281	
9,200.0	7,184.9	7,178.9	7,178.0	55.1	2.5	-90.00	-603.0	-601.1	2,190.9	2,134.8	56.09	39.064	
9,300.0	7,184.1	7,178.1	7,177.2	57.7	2.5	-89.98	-603.0	-601.1	2,230.3	2,171.6	58.68	38.006	
9,400.0	7,183.3	7,177.3	7,176.4	60.3	2.5	-89.95	-603.0	-601.1	2,273.3	2,212.0	61.30	37.087	
9,500.0	7,182.5	7,176.5	7,175.6	62.9	2.5	-89.93	-603.0	-601.1	2,319.9	2,255.9	63.93	36.288	
9,600.0	7,181.7	7,175.7	7,174.8	65.5	2.5	-89.91	-603.0	-601.1	2,369.7	2,303.2	66.58	35.595	
9,700.0	7,180.9	7,174.9	7,174.0	68.1	2.5	-89.89	-603.0	-601.1	2,422.7	2,353.5	69.24	34.992	
9,800.0	7,180.1	7,174.2	7,173.3	70.8	2.5	-89.86	-603.0	-601.1	2,478.6	2,406.7	71.91	34.469	
9,900.0	7,179.3	7,173.4	7,172.5	73.5	2.5	-89.84	-603.0	-601.1	2,537.2	2,462.6	74.59	34.016	
10,000.0	7,178.5	7,172.6	7,171.8	76.1	2.5	-89.82	-603.0	-601.1	2,598.3	2,521.0	77.28	33.622	
10,100.0	7,177.7	7,171.9	7,171.0	78.8	2.5	-89.80	-603.0	-601.1	2,661.8	2,581.8	79.98	33.281	
10,200.0	7,176.9	7,171.2	7,170.3	81.5	2.5	-89.78	-603.0	-601.1	2,727.4	2,644.7	82.68	32.986	
10,300.0	7,176.0	7,170.4	7,169.6	84.2	2.5	-89.76	-603.0	-601.1	2,795.1	2,709.7	85.40	32.731	
10,400.0	7,175.2	7,169.7	7,168.8	86.9	2.5	-89.74	-603.0	-601.1	2,864.7	2,776.6	88.12	32.510	
10,500.0	7,174.4	7,169.0	7,168.1	89.6	2.5	-89.72	-603.0	-601.1	2,936.1	2,845.2	90.84	32.321	
10,600.0	7,173.6	7,168.3	7,167.4	92.3	2.5	-89.70	-603.0	-601.1	3,009.0	2,915.5	93.57	32.158	
10,700.0	7,172.8	7,167.6	7,166.7	95.0	2.5	-89.68	-603.0	-601.1	3,083.5	2,987.2	96.31	32.018	
10,800.0	7,172.0	7,166.9	7,166.0	97.8	2.5	-89.66	-603.0	-601.1	3,159.4	3,060.4	99.04	31.899	
10,900.0	7,171.2	7,166.3	7,165.4	100.5	2.5	-89.64	-603.0	-601.1	3,236.6	3,134.9	101.79	31.799	
11,000.0	7,170.4	7,165.6	7,164.7	103.2	2.5	-89.62	-603.0	-601.1	3,315.1	3,210.5	104.53	31.714	
11,100.0	7,169.6	7,164.9	7,164.0	106.0	2.5	-89.60	-603.0	-601.1	3,394.6	3,287.4	107.28	31.643	
11,200.0	7,168.8	7,164.3	7,163.4	108.7	2.5	-89.58	-603.0	-601.1	3,475.3	3,365.2	110.03	31.584	
11,300.0	7,168.0	7,163.6	7,162.7	111.5	2.5	-89.57	-603.0	-601.1	3,556.9	3,444.1	112.79	31.536	
11,400.0	7,167.1	7,163.0	7,162.1	114.2	2.5	-89.55	-603.0	-601.1	3,639.4	3,523.8	115.54	31.498	
11,500.0	7,166.3	7,162.3	7,161.4	117.0	2.5	-89.53	-603.0	-601.1	3,722.8	3,604.5	118.30	31.468	
11,600.0	7,165.5	7,161.7	7,160.8	119.7	2.5	-89.51	-603.0	-601.1	3,806.9	3,685.9	121.07	31.445	
11,700.0	7,164.7	7,161.1	7,160.2	122.5	2.5	-89.49	-603.0	-601.1	3,891.9	3,768.0	123.83	31.429	
11,800.0	7,163.9	7,160.5	7,159.6	125.2	2.5	-89.48	-603.0	-601.1	3,977.5	3,850.9	126.60	31.419	
11,900.0	7,163.1	7,159.9	7,159.0	128.0	2.5	-89.46	-603.0	-601.1	4,063.8	3,934.4	129.36	31.414	
12,000.0	7,162.3	7,159.3	7,158.4	130.7	2.5	-89.44	-603.0	-601.1	4,150.7	4,018.6	132.13	31.413 SF	
12,100.0	7,161.5	7,158.7	7,157.8	133.5	2.5	-89.43	-603.0	-601.1	4,238.2	4,103.3	134.90	31.416	
12,200.0	7,160.7	7,158.1	7,157.2	136.3	2.5	-89.41	-603.0	-601.1	4,326.2	4,188.5	137.68	31.423	
12,300.0	7,159.8	7,157.5	7,156.6	139.0	2.5	-89.39	-603.0	-601.1	4,414.7	4,274.3	140.45	31.433	
12,400.0	7,159.0	7,156.9	7,156.0	141.8	2.5	-89.38	-603.0	-601.1	4,503.7	4,360.5	143.22	31.445	
12,500.0	7,158.2	7,156.3	7,155.4	144.6	2.5	-89.36	-603.0	-601.1	4,593.2	4,447.2	146.00	31.460	
12,600.0	7,157.4	7,155.8	7,154.9	147.3	2.5	-89.34	-603.0	-601.1	4,683.1	4,534.3	148.78	31.477	
12,700.0	7,156.6	7,155.2	7,154.3	150.1	2.5	-89.33	-603.0	-601.1	4,773.4	4,621.8	151.56	31.496	
12,800.0	7,155.8	7,154.6	7,153.8	152.9	2.5	-89.31	-603.0	-601.1	4,864.0	4,709.7	154.34	31.516	
12,900.0	7,155.0	7,154.1	7,153.2	155.7	2.5	-89.30	-603.0	-601.1	4,955.1	4,798.0	157.12	31.537	
13,000.0	7,154.2	7,153.5	7,152.7	158.4	2.5	-89.28	-603.0	-601.1	5,046.4	4,886.5	159.90	31.560	
13,100.0	7,153.3	7,153.0	7,152.1	161.2	2.5	-89.26	-603.0	-601.1	5,138.1	4,975.5	162.68	31.584	
13,200.0	7,152.5	7,152.5	7,151.6	164.0	2.5	-89.25	-603.0	-601.1	5,230.1	5,064.7	165.46	31.609	
13,300.0	7,151.7	7,151.9	7,151.0	166.8	2.5	-89.23	-603.0	-601.1	5,322.4	5,154.2	168.25	31.634	
13,400.0	7,150.9	7,151.4	7,150.5	169.5	2.5	-89.22	-603.0	-601.1	5,415.0	5,243.9	171.03	31.660	
13,500.0	7,150.1	7,150.9	7,150.0	172.3	2.5	-89.20	-603.0	-601.1	5,507.8	5,334.0	173.82	31.687	
13,600.0	7,149.3	7,150.4	7,149.5	175.1	2.5	-89.19	-603.0	-601.1	5,600.9	5,424.3	176.60	31.714	
13,700.0	7,148.5	7,149.9	7,149.0	177.9	2.5	-89.17	-603.0	-601.1	5,694.2	5,514.8	179.39	31.742	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT BUNYAN #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	
13,800.0	7,147.6	7,149.4	7,148.5	180.7	2.5	-89.16	-603.0	-601.1	5,787.7	5,605.5	182.18	31.769	
13,900.0	7,146.8	7,148.9	7,148.0	183.5	2.5	-89.15	-603.0	-601.1	5,881.4	5,696.5	184.97	31.797	
14,000.0	7,146.0	7,148.4	7,147.5	186.2	2.5	-89.13	-603.0	-601.1	5,975.4	5,787.6	187.75	31.825	
14,100.0	7,145.2	7,147.9	7,147.0	189.0	2.5	-89.12	-603.0	-601.1	6,069.5	5,878.9	190.54	31.854	
14,200.0	7,144.4	7,147.4	7,146.5	191.8	2.5	-89.10	-603.0	-601.1	6,163.8	5,970.5	193.33	31.882	
14,300.0	7,143.6	7,146.9	7,146.0	194.6	2.5	-89.09	-603.0	-601.1	6,258.3	6,062.2	196.12	31.910	
14,370.2	7,143.0	7,146.6	7,145.7	196.6	2.5	-89.08	-603.0	-601.1	6,324.8	6,126.7	198.08	31.930	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

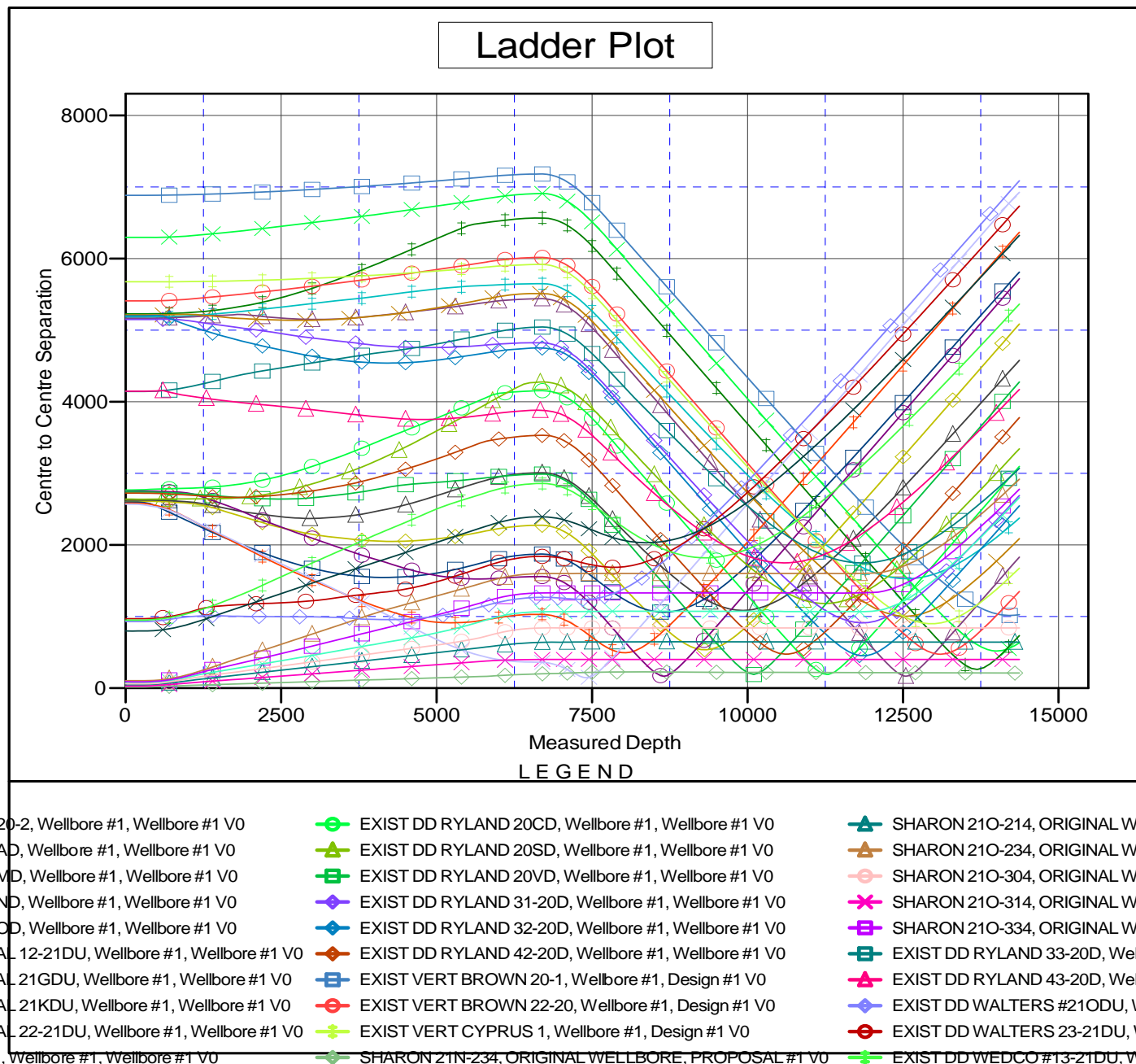
Reference Depths are relative to KB-EST @ 4952.5usft (Original Well ECoordinates are relative to: SHARON 21N-334

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: 0.39°



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



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SHARON 21N-334
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	NE SW SEC. 21 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SHARON 21N-334	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are 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 @ 4952.5usft (Original Well Elev) Coordinates are relative to: SHARON 21N-334

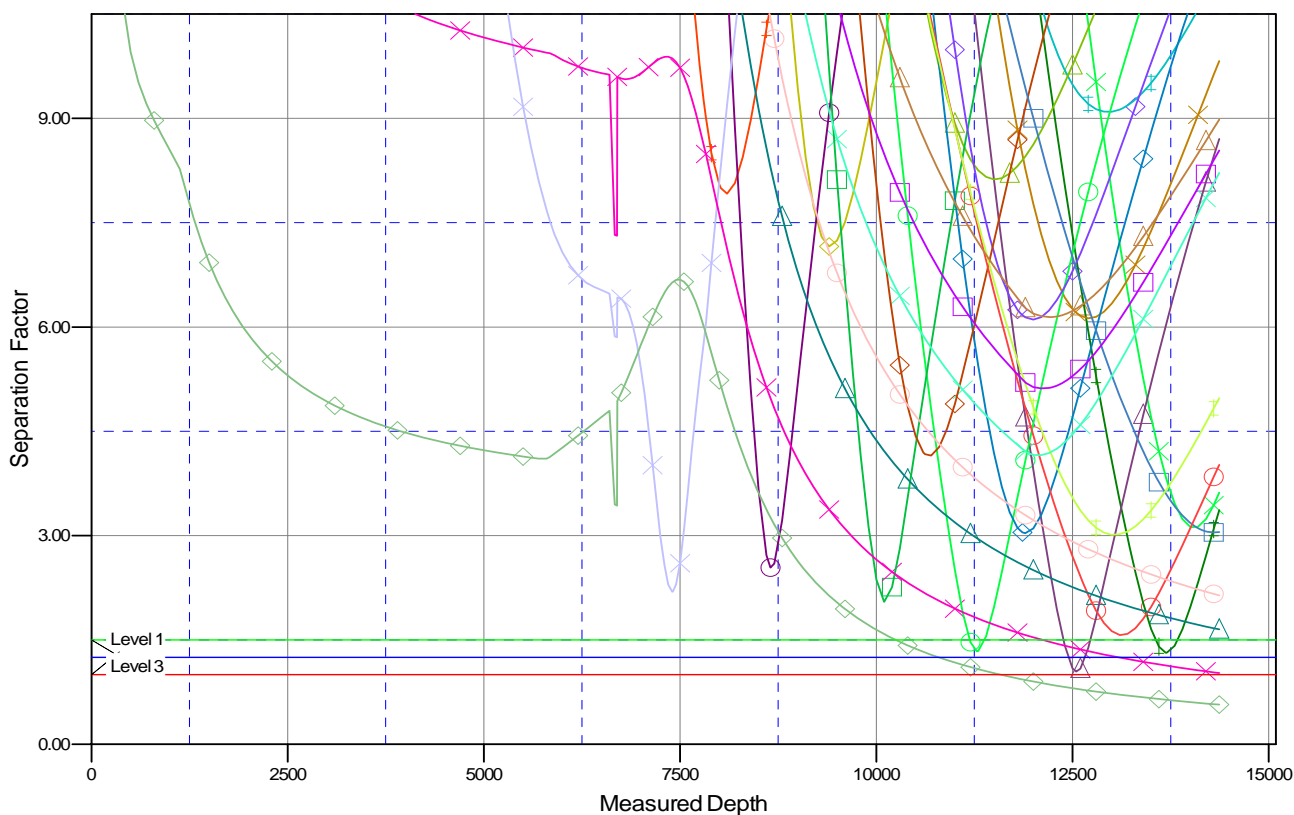
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.500000

Grid Convergence at Surface is: 0.39°

Separation Factor Plot



LEGEND

20-2, Wellbore #1, Wellbore #1 V0	EXIST DD RYLAND 20CD, Wellbore #1, Wellbore #1 V0	SHARON 21O-214, ORIGINAL WEL
AD, Wellbore #1, Wellbore #1 V0	EXIST DD RYLAND 20SD, Wellbore #1, Wellbore #1 V0	SHARON 21O-234, ORIGINAL WEL
MD, Wellbore #1, Wellbore #1 V0	EXIST DD RYLAND 20VD, Wellbore #1, Wellbore #1 V0	SHARON 21O-304, ORIGINAL WEL
ND, Wellbore #1, Wellbore #1 V0	EXIST DD RYLAND 31-20D, Wellbore #1, Wellbore #1 V0	SHARON 21O-314, ORIGINAL WEL
OD, Wellbore #1, Wellbore #1 V0	EXIST DD RYLAND 32-20D, Wellbore #1, Wellbore #1 V0	SHARON 21O-334, ORIGINAL WEL
IAL 12-21DU, Wellbore #1, Wellbore #1 V0	EXIST DD RYLAND 42-20D, Wellbore #1, Wellbore #1 V0	EXIST DD RYLAND 33-20D, Wellbo
IAL 21GDU, Wellbore #1, Wellbore #1 V0	EXIST VERT BROWN 20-1, Wellbore #1, Design #1 V0	EXIST DD RYLAND 43-20D, Wellbo
IAL 21KDU, Wellbore #1, Wellbore #1 V0	EXIST VERT BROWN 22-20, Wellbore #1, Design #1 V0	EXIST DD WALTERS #21ODU, We
IAL 22-21DU, Wellbore #1, Wellbore #1 V0	EXIST VERT CYPRUS 1, Wellbore #1, Design #1 V0	EXIST DD WALTERS 23-21DU, We
J, Wellbore #1, Wellbore #1 V0	SHARON 21N-234, ORIGINAL WELLBORE, PROPOSAL #1 V0	EXIST DD WEDCO #13-21DU, Well