

PDC ENERGY

**WELD COUNTY, COLORADO
NW NE SEC 30 T4N R67W 6th P.M.
OLSON 30M-403**

**ORIGINAL WELLBORE
PROPOSAL #2**

Anticollision Report

27 February, 2016



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Reference	PROPOSAL #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 98.4usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 us	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date 27/02/2016				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,848.7	PROPOSAL #2 (ORIGINAL WELLBORE)	MWD	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offet Well - Wellbore - Design						
NW NE SEC 30 T4N R67W 6th P.M.						
ABDN VERT MCCARTY 30-3 - Wellbore #1 - Wellbore #	11,798.2	6,330.0	1,101.2	1,048.7	20.974	CC
ABDN VERT MCCARTY 30-3 - Wellbore #1 - Wellbore #	11,811.0	6,330.0	1,101.3	1,048.7	20.938	ES
ABDN VERT MCCARTY 30-3 - Wellbore #1 - Wellbore #	11,849.6	6,330.0	1,102.4	1,049.6	20.854	SF
EXIST VERT BROWN 30-2 - Wellbore #1 - Wellbore #1	1,825.2	1,814.6	1,734.1	1,729.3	358.837	CC
EXIST VERT BROWN 30-2 - Wellbore #1 - Wellbore #1	1,870.1	1,857.3	1,734.2	1,729.2	349.913	ES
EXIST VERT BROWN 30-2 - Wellbore #1 - Wellbore #1	11,800.0	7,300.0	4,390.5	4,309.0	53.927	SF
EXIST VERT BROWN 30-31 - Wellbore #1 - Wellbore #1	3,376.9	3,337.7	555.2	544.2	50.583	CC
EXIST VERT BROWN 30-31 - Wellbore #1 - Wellbore #1	3,400.0	3,359.2	555.2	544.1	50.160	ES
EXIST VERT BROWN 30-31 - Wellbore #1 - Wellbore #1	7,600.0	7,200.0	674.3	652.6	31.116	SF
EXIST VERT BROWN MCCARTY 30-43 - Wellbore #1 -	10,402.0	7,303.9	1,913.6	1,858.1	34.516	CC
EXIST VERT BROWN MCCARTY 30-43 - Wellbore #1 -	10,433.0	7,304.2	1,913.8	1,857.8	34.177	ES
EXIST VERT BROWN MCCARTY 30-43 - Wellbore #1 -	11,614.1	7,313.9	2,265.1	2,187.5	29.174	SF
EXIST VERT BROWN-MCCARTY 30-5 - Wellbore #1 - V	9,068.1	7,274.8	1,913.0	1,879.6	57.381	CC
EXIST VERT BROWN-MCCARTY 30-5 - Wellbore #1 - V	9,100.0	7,274.9	1,913.2	1,879.4	56.577	ES
EXIST VERT BROWN-MCCARTY 30-5 - Wellbore #1 - V	11,220.4	7,280.3	2,879.6	2,808.8	40.684	SF
EXIST VERT MCCART 30-2 - Wellbore #1 - Wellbore #1	11,704.7	7,300.0	1,924.5	1,845.5	24.387	CC
EXIST VERT MCCART 30-2 - Wellbore #1 - Wellbore #1	11,712.6	7,300.0	1,924.5	1,845.4	24.342	ES
EXIST VERT MCCART 30-2 - Wellbore #1 - Wellbore #1	11,849.6	7,300.0	1,929.9	1,848.5	23.703	SF
EXIST VERT NYGREN 21-30 - Wellbore #1 - Design #1	7,813.8	7,325.8	859.8	694.5	5.203	CC, ES, SF
EXIST VERT SHULTZ 22-30 - Wellbore #1 - Design #1	8,825.9	7,319.6	476.8	303.3	2.749	CC, ES
EXIST VERT SHULTZ 22-30 - Wellbore #1 - Design #1	8,858.2	7,319.5	477.9	304.0	2.748	SF
EXIST VERT SHULTZ 23-30 - Wellbore #1 - Design #1	10,158.9	7,319.6	506.1	311.0	2.594	CC, ES
EXIST VERT SHULTZ 23-30 - Wellbore #1 - Design #1	10,200.0	7,319.6	507.8	311.9	2.593	SF
EXIST VERT SHULTZ FARM 30-32 - Wellbore #1 - Well	9,309.4	7,297.1	285.0	248.0	7.699	CC, ES
EXIST VERT SHULTZ FARM 30-32 - Wellbore #1 - Well	9,350.4	7,297.3	287.9	250.3	7.641	SF
EXIST VERT SHULTZ FARM 30-33 - Wellbore #1 - Well	10,433.9	7,314.9	616.6	560.1	10.911	CC, ES
EXIST VERT SHULTZ FARM 30-33 - Wellbore #1 - Well	10,531.5	7,315.4	624.3	566.0	10.713	SF
OLSON 30M-223 - ORIGINAL WELLBORE - PROPOSA	1,450.0	1,450.0	14.8	8.5	2.370	CC
OLSON 30M-223 - ORIGINAL WELLBORE - PROPOSA	1,500.0	1,500.0	14.9	8.4	2.307	ES, SF
OLSON 30M-323 - ORIGINAL WELLBORE - PROPOSA	1,450.0	1,450.0	29.9	23.6	4.784	CC
OLSON 30M-323 - ORIGINAL WELLBORE - PROPOSA	1,500.0	1,500.0	30.0	23.5	4.637	ES
OLSON 30M-323 - ORIGINAL WELLBORE - PROPOSA	11,849.6	11,731.6	531.3	377.2	3.448	SF
OLSON 30R-203 - ORIGINAL WELLBORE - PROPOSA	1,450.0	1,449.0	74.8	68.6	11.988	CC
OLSON 30R-203 - ORIGINAL WELLBORE - PROPOSA	1,500.0	1,499.0	74.9	68.5	11.591	ES
OLSON 30R-203 - ORIGINAL WELLBORE - PROPOSA	11,849.6	11,713.1	1,262.4	1,111.2	8.351	SF
OLSON 30R-223 - ORIGINAL WELLBORE - PROPOSA	1,450.0	1,449.0	104.9	98.7	16.818	CC
OLSON 30R-223 - ORIGINAL WELLBORE - PROPOSA	1,500.0	1,499.0	105.1	98.6	16.253	ES

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

Anticollision Report



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Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
NW NE SEC 30 T4N R67W 6th P.M.						
OLSON 30R-223 - ORIGINAL WELLBORE - PROPOSA	11,849.6	11,810.9	1,748.2	1,590.7	11.101	SF
OLSON 30R-243 - ORIGINAL WELLBORE - PROPOSA	1,450.0	1,450.0	44.9	38.7	7.200	CC
OLSON 30R-243 - ORIGINAL WELLBORE - PROPOSA	1,500.0	1,500.0	45.1	38.6	6.969	ES
OLSON 30R-243 - ORIGINAL WELLBORE - PROPOSA	11,849.6	11,647.6	783.7	629.1	5.071	SF
OLSON 30R-303 - ORIGINAL WELLBORE - PROPOSA	1,450.0	1,449.0	89.9	83.6	14.403	CC
OLSON 30R-303 - ORIGINAL WELLBORE - PROPOSA	1,500.0	1,499.0	90.0	83.5	13.922	ES
OLSON 30R-303 - ORIGINAL WELLBORE - PROPOSA	11,849.6	11,840.7	1,497.4	1,339.5	9.485	SF
OLSON 30R-343 - ORIGINAL WELLBORE - PROPOSA	1,450.0	1,450.0	60.0	53.8	9.614	CC
OLSON 30R-343 - ORIGINAL WELLBORE - PROPOSA	1,500.0	1,500.0	60.1	53.7	9.299	ES
OLSON 30R-343 - ORIGINAL WELLBORE - PROPOSA	11,849.6	11,762.2	1,011.1	853.7	6.421	SF
OLSON 30U-343 - ORIGINAL WELLBORE - PROPOSA	1,450.0	1,449.0	120.0	113.8	19.233	CC, ES
OLSON 30U-343 - ORIGINAL WELLBORE - PROPOSA	11,849.6	11,983.1	2,055.3	1,897.4	13.013	SF
PROP HZ CHANDLER FARMS HD 20-389HN - Wellbore	6,950.0	7,015.6	218.7	188.1	7.152	SF
PROP HZ CHANDLER FARMS HD 20-389HN - Wellbore	7,000.0	7,062.1	215.5	185.6	7.213	ES
PROP HZ CHANDLER FARMS HD 20-389HN - Wellbore	7,000.7	7,062.7	215.5	185.7	7.215	CC

Offset Design														Offset Site Error:	0.0 usft
NW NE SEC 30 T4N R67W 6th P.M. - ABDN VERT MCCARTY 30-3 - Wellbore #1 - Wellbore #1														Offset Well Error:	0.0 usft
Survey Program: 100-GYD_CT															
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	174.31	-3,764.0	374.7	3,782.6						
98.4	98.4	128.1	128.1	0.1	0.1	174.32	-3,763.3	374.2	3,782.0	3,781.9	0.16	N/A			
100.0	100.0	129.5	129.5	0.1	0.1	174.32	-3,763.3	374.2	3,782.0	3,781.8	0.16	N/A			
196.8	196.8	225.7	225.7	0.3	0.2	174.34	-3,762.8	373.2	3,781.4	3,780.9	0.53	7,144.752			
200.0	200.0	231.2	231.2	0.3	0.2	174.34	-3,762.8	373.2	3,781.4	3,780.8	0.54	6,987.166			
295.3	295.3	359.6	359.5	0.5	0.3	174.37	-3,761.2	370.5	3,780.0	3,779.1	0.86	4,403.067			
300.0	300.0	364.6	364.6	0.5	0.4	174.38	-3,761.2	370.4	3,779.9	3,779.0	0.87	4,331.450			
393.7	393.7	455.5	455.4	0.7	0.4	174.41	-3,759.8	368.0	3,778.3	3,777.2	1.14	3,313.774			
400.0	400.0	461.3	461.2	0.8	0.4	174.41	-3,759.7	367.9	3,778.2	3,777.0	1.16	3,263.611			
492.1	492.1	551.2	551.1	1.0	0.5	174.44	-3,758.6	365.6	3,776.8	3,775.3	1.41	2,672.205			
500.0	500.0	559.3	559.2	1.0	0.5	174.45	-3,758.5	365.4	3,776.6	3,775.2	1.44	2,631.444			
590.5	590.5	646.5	646.4	1.2	0.5	174.47	-3,757.3	363.5	3,775.2	3,773.5	1.68	2,245.733			
600.0	600.0	655.1	655.0	1.2	0.5	174.48	-3,757.2	363.3	3,775.1	3,773.4	1.71	2,212.446			
689.0	689.0	745.6	745.4	1.4	0.6	174.51	-3,756.1	361.3	3,773.8	3,771.9	1.95	1,938.657			
700.0	700.0	758.2	758.0	1.4	0.6	174.51	-3,755.9	361.1	3,773.7	3,771.7	1.98	1,908.950			
787.4	787.4	846.0	845.7	1.6	0.6	174.54	-3,754.7	359.1	3,772.3	3,770.1	2.21	1,707.232			
800.0	800.0	857.3	857.1	1.7	0.6	174.54	-3,754.5	358.9	3,772.1	3,769.8	2.24	1,682.126			
885.8	885.8	935.2	934.9	1.9	0.7	174.56	-3,753.6	357.1	3,770.9	3,768.4	2.47	1,529.426			
900.0	900.0	948.1	947.9	1.9	0.7	174.57	-3,753.5	356.9	3,770.7	3,768.2	2.50	1,506.924			
984.2	984.2	1,026.7	1,026.4	2.1	0.7	174.59	-3,752.7	355.3	3,769.7	3,767.0	2.72	1,385.747			
1,000.0	1,000.0	1,041.9	1,041.6	2.1	0.7	174.60	-3,752.5	355.0	3,769.5	3,766.8	2.76	1,365.222			
1,082.7	1,082.7	1,121.3	1,121.0	2.3	0.7	174.62	-3,751.8	353.4	3,768.6	3,765.7	2.97	1,266.956			
1,100.0	1,100.0	1,137.5	1,137.2	2.3	0.8	174.62	-3,751.7	353.1	3,768.5	3,765.4	3.02	1,248.252			
1,181.1	1,181.1	1,213.0	1,212.7	2.5	0.8	174.64	-3,751.1	352.1	3,767.7	3,764.5	3.23	1,167.768			
1,200.0	1,200.0	1,229.8	1,229.5	2.6	0.8	174.64	-3,751.0	351.9	3,767.6	3,764.3	3.27	1,150.686			
1,279.5	1,279.5	1,300.7	1,300.4	2.7	0.8	174.65	-3,750.6	350.9	3,767.0	3,763.6	3.48	1,083.982			
1,300.0	1,300.0	1,322.3	1,322.0	2.8	0.8	174.66	-3,750.5	350.6	3,766.9	3,763.4	3.53	1,067.812			
1,377.9	1,377.9	1,404.7	1,404.4	3.0	0.9	174.68	-3,750.1	349.3	3,766.4	3,762.7	3.73	1,010.401			

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

Anticollision Report



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Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 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	
1,400.0	1,400.0	1,429.0	1,428.7	3.0	0.9	174.68	-3,749.9	348.9	3,766.2	3,762.5	3.78	995.219	
1,450.0	1,450.0	1,484.1	1,483.8	3.1	0.9	174.70	-3,749.6	348.0	3,765.8	3,761.9	3.91	962.410	
1,475.6	1,475.6	1,509.1	1,508.8	3.2	0.9	-171.00	-3,749.4	347.6	3,765.7	3,761.7	4.00	940.713	
1,476.4	1,476.4	1,509.8	1,509.4	3.2	0.9	-171.00	-3,749.4	347.6	3,765.7	3,761.7	4.01	940.247	
1,500.0	1,500.0	1,529.2	1,528.8	3.2	0.9	-171.00	-3,749.2	347.3	3,765.8	3,761.8	4.06	926.659	
1,574.8	1,574.8	1,590.5	1,590.1	3.4	0.9	-170.99	-3,748.9	346.5	3,767.6	3,763.4	4.25	886.067	
1,600.0	1,599.9	1,615.2	1,614.8	3.5	1.0	-170.98	-3,748.9	346.3	3,768.7	3,764.4	4.32	873.027	
1,673.2	1,673.0	1,697.4	1,697.0	3.6	1.0	-170.97	-3,748.5	345.3	3,773.1	3,768.6	4.51	836.564	
1,700.0	1,699.7	1,724.6	1,724.2	3.7	1.0	-170.96	-3,748.4	345.0	3,775.1	3,770.5	4.58	824.273	
1,771.6	1,771.0	1,796.6	1,796.2	3.9	1.0	-170.95	-3,748.0	344.1	3,781.7	3,776.9	4.77	793.098	
1,800.0	1,799.1	1,820.9	1,820.5	3.9	1.0	-170.94	-3,747.9	343.8	3,784.8	3,779.9	4.84	781.777	
1,870.1	1,868.6	1,879.5	1,879.1	4.1	1.1	-170.92	-3,747.7	343.0	3,793.7	3,788.7	5.02	755.106	
1,900.0	1,898.2	1,905.3	1,904.9	4.2	1.1	-170.91	-3,747.7	342.6	3,798.2	3,793.0	5.10	744.408	
1,968.5	1,965.7	1,973.2	1,972.8	4.3	1.1	-170.89	-3,747.6	341.8	3,809.4	3,804.1	5.29	720.570	
2,000.0	1,996.6	2,004.4	2,004.0	4.4	1.1	-170.88	-3,747.6	341.5	3,815.1	3,809.7	5.37	710.328	
2,049.8	2,045.4	2,054.0	2,053.6	4.6	1.1	-170.86	-3,747.5	341.0	3,824.8	3,819.3	5.51	694.712	
2,066.9	2,062.2	2,071.1	2,070.7	4.6	1.1	-170.87	-3,747.5	340.9	3,828.3	3,822.8	5.55	689.691	
2,100.0	2,094.5	2,104.3	2,103.9	4.7	1.1	-170.88	-3,747.5	340.6	3,835.0	3,829.4	5.64	680.269	
2,165.3	2,158.5	2,174.0	2,173.6	4.9	1.2	-170.91	-3,747.3	340.1	3,848.2	3,842.4	5.81	661.964	
2,200.0	2,192.3	2,210.2	2,209.8	5.1	1.2	-170.92	-3,747.2	339.8	3,855.2	3,849.3	5.90	652.903	
2,263.8	2,254.7	2,273.9	2,273.5	5.3	1.2	-170.95	-3,746.9	339.3	3,868.0	3,861.9	6.07	636.789	
2,300.0	2,290.2	2,300.0	2,299.6	5.4	1.2	-170.96	-3,746.8	339.0	3,875.3	3,869.1	6.17	627.866	
2,362.2	2,351.0	2,354.8	2,354.4	5.6	1.2	-170.97	-3,746.7	338.5	3,887.9	3,881.5	6.34	613.313	
2,400.0	2,388.0	2,383.4	2,383.0	5.8	1.2	-170.98	-3,746.7	338.2	3,895.7	3,889.2	6.44	604.928	
2,460.6	2,447.3	2,440.0	2,439.6	6.0	1.3	-171.00	-3,746.9	337.6	3,908.2	3,901.6	6.60	591.828	
2,500.0	2,485.8	2,480.7	2,480.3	6.1	1.3	-171.02	-3,747.0	337.3	3,916.4	3,909.7	6.71	583.533	
2,559.0	2,543.6	2,543.2	2,542.8	6.3	1.3	-171.04	-3,747.1	336.8	3,928.6	3,921.7	6.87	571.547	
2,600.0	2,583.6	2,587.2	2,586.7	6.5	1.3	-171.06	-3,747.1	336.4	3,937.0	3,930.0	6.99	563.579	
2,657.5	2,639.8	2,636.5	2,636.0	6.7	1.3	-171.07	-3,747.2	335.8	3,948.8	3,941.6	7.14	552.883	
2,700.0	2,681.4	2,670.5	2,670.1	6.9	1.3	-171.08	-3,747.3	335.3	3,957.6	3,950.3	7.26	545.289	
2,755.9	2,736.1	2,725.2	2,724.8	7.1	1.4	-171.09	-3,747.6	334.5	3,969.3	3,961.8	7.41	535.491	
2,800.0	2,779.2	2,783.5	2,783.0	7.3	1.4	-171.11	-3,747.7	333.7	3,978.4	3,970.8	7.54	527.855	
2,854.3	2,832.4	2,845.6	2,845.1	7.5	1.4	-171.12	-3,747.7	332.7	3,989.4	3,981.7	7.69	518.854	
2,900.0	2,877.1	2,895.4	2,895.0	7.7	1.4	-171.13	-3,747.6	331.8	3,998.6	3,990.8	7.82	511.566	
2,952.7	2,928.7	2,963.5	2,963.1	7.9	1.4	-171.15	-3,747.3	330.4	4,009.1	4,001.1	7.97	503.204	
3,000.0	2,974.9	3,024.9	3,024.4	8.1	1.5	-171.16	-3,746.7	329.3	4,018.3	4,010.2	8.10	495.928	
3,051.2	3,024.9	3,090.6	3,090.1	8.3	1.5	-171.18	-3,745.9	328.3	4,028.1	4,019.9	8.25	488.239	
3,100.0	3,072.7	3,137.7	3,137.2	8.5	1.5	-171.19	-3,745.2	327.7	4,037.4	4,029.0	8.39	481.217	
3,149.6	3,121.2	3,182.6	3,182.1	8.7	1.5	-171.21	-3,744.5	327.2	4,046.8	4,038.3	8.53	474.307	
3,200.0	3,170.5	3,222.8	3,222.3	8.9	1.5	-171.22	-3,744.0	327.0	4,056.5	4,047.8	8.68	467.531	
3,248.0	3,217.5	3,257.8	3,257.3	9.1	1.5	-171.23	-3,743.6	326.8	4,065.8	4,057.0	8.81	461.281	
3,300.0	3,268.3	3,300.0	3,299.5	9.3	1.6	-171.25	-3,743.3	326.5	4,076.1	4,067.1	8.96	454.684	
3,346.4	3,313.8	3,326.0	3,325.5	9.5	1.6	-171.26	-3,743.2	326.4	4,085.4	4,076.3	9.09	449.280	
3,400.0	3,366.1	3,360.3	3,359.8	9.7	1.6	-171.27	-3,743.2	326.2	4,096.4	4,087.1	9.24	443.250	
3,444.9	3,410.0	3,400.0	3,399.5	9.9	1.6	-171.29	-3,743.3	326.0	4,105.8	4,096.4	9.37	438.291	
3,500.0	3,464.0	3,430.6	3,430.0	10.2	1.6	-171.30	-3,743.6	325.7	4,117.5	4,107.9	9.52	432.550	
3,543.3	3,506.3	3,465.3	3,464.8	10.3	1.6	-171.31	-3,744.0	325.3	4,126.7	4,117.1	9.64	428.060	
3,600.0	3,561.8	3,515.6	3,515.1	10.6	1.6	-171.32	-3,744.6	324.5	4,139.0	4,129.2	9.80	422.199	
3,641.7	3,602.6	3,564.0	3,563.4	10.8	1.6	-171.32	-3,745.2	323.4	4,148.0	4,138.1	9.92	418.015	
3,700.0	3,659.6	3,637.7	3,637.1	11.0	1.6	-171.33	-3,746.0	321.4	4,160.4	4,150.3	10.09	412.312	
3,740.1	3,698.9	3,693.3	3,692.6	11.2	1.7	-171.33	-3,746.4	319.8	4,168.8	4,158.6	10.21	408.446	
3,800.0	3,757.4	3,754.9	3,754.3	11.4	1.7	-171.33	-3,746.6	317.9	4,181.2	4,170.8	10.38	402.915	

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 OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 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	
3,838.6	3,795.1	3,793.4	3,792.8	11.6	1.7	-171.33	-3,746.7	316.8	4,189.1	4,178.6	10.49	399.433	
3,900.0	3,855.2	3,851.0	3,850.3	11.9	1.7	-171.33	-3,747.0	314.9	4,201.8	4,191.1	10.66	394.012	
3,937.0	3,891.4	3,885.3	3,884.6	12.0	1.7	-171.33	-3,747.1	313.8	4,209.5	4,198.7	10.77	390.825	
4,000.0	3,953.0	3,937.8	3,937.0	12.3	1.7	-171.33	-3,747.5	312.1	4,222.6	4,211.6	10.95	385.579	
4,035.4	3,987.7	3,966.1	3,965.4	12.4	1.7	-171.32	-3,747.7	311.1	4,230.0	4,219.0	11.05	382.708	
4,100.0	4,050.9	4,021.8	4,021.0	12.7	1.8	-171.32	-3,748.2	309.2	4,243.7	4,232.5	11.24	377.587	
4,133.8	4,084.0	4,055.0	4,054.1	12.9	1.8	-171.32	-3,748.6	307.9	4,250.9	4,239.5	11.34	374.940	
4,200.0	4,148.7	4,124.9	4,124.0	13.2	1.8	-171.31	-3,749.3	305.3	4,264.9	4,253.4	11.53	369.878	
4,232.3	4,180.2	4,164.6	4,163.7	13.3	1.8	-171.31	-3,749.7	303.7	4,271.7	4,260.1	11.63	367.441	
4,300.0	4,246.5	4,240.5	4,239.5	13.6	1.8	-171.29	-3,750.2	300.5	4,285.8	4,274.0	11.82	362.483	
4,330.7	4,276.5	4,272.4	4,271.4	13.7	1.8	-171.29	-3,750.4	299.1	4,292.1	4,280.2	11.91	360.297	
4,400.0	4,344.3	4,343.3	4,342.3	14.0	1.9	-171.28	-3,750.8	296.0	4,306.4	4,294.3	12.12	355.460	
4,429.1	4,372.8	4,372.8	4,371.7	14.1	1.9	-171.27	-3,750.9	294.7	4,312.4	4,300.2	12.20	353.468	
4,500.0	4,442.1	4,444.0	4,442.9	14.5	1.9	-171.26	-3,751.2	291.6	4,327.0	4,314.6	12.41	348.727	
4,527.5	4,469.1	4,471.6	4,470.4	14.6	1.9	-171.26	-3,751.3	290.5	4,332.7	4,320.2	12.49	346.923	
4,600.0	4,539.9	4,543.0	4,541.7	14.9	1.9	-171.25	-3,751.6	287.4	4,347.5	4,334.8	12.70	342.289	
4,626.0	4,565.4	4,568.3	4,567.0	15.0	1.9	-171.24	-3,751.7	286.4	4,352.8	4,340.1	12.78	340.662	
4,700.0	4,637.8	4,638.8	4,637.5	15.3	2.0	-171.23	-3,752.0	283.4	4,368.0	4,355.0	12.99	336.137	
4,724.4	4,661.6	4,661.7	4,660.3	15.4	2.0	-171.23	-3,752.1	282.4	4,373.1	4,360.0	13.07	334.678	
4,800.0	4,735.6	4,730.8	4,729.4	15.8	2.0	-171.22	-3,752.4	279.4	4,388.6	4,375.4	13.29	330.265	
4,822.8	4,757.9	4,751.1	4,749.6	15.9	2.0	-171.21	-3,752.6	278.5	4,393.4	4,380.0	13.36	328.963	
4,900.0	4,833.4	4,820.4	4,818.8	16.2	2.0	-171.20	-3,753.0	275.5	4,409.4	4,395.9	13.58	324.653	
4,921.2	4,854.2	4,840.0	4,838.4	16.3	2.0	-171.20	-3,753.2	274.6	4,413.9	4,400.2	13.64	323.488	
5,000.0	4,931.2	4,914.4	4,912.8	16.6	2.1	-171.18	-3,753.8	271.1	4,430.4	4,416.5	13.88	319.253	
5,019.7	4,950.5	4,935.2	4,933.6	16.7	2.1	-171.18	-3,754.0	270.2	4,434.5	4,420.5	13.94	318.206	
5,100.0	5,029.0	5,015.8	5,014.1	17.1	2.1	-171.16	-3,754.7	266.4	4,451.2	4,437.1	14.17	314.038	
5,118.1	5,046.7	5,030.8	5,029.1	17.1	2.1	-171.16	-3,754.8	265.8	4,455.0	4,440.8	14.23	313.134	
5,200.0	5,126.8	5,100.0	5,098.2	17.5	2.1	-171.15	-3,755.4	263.0	4,472.3	4,457.8	14.47	309.131	
5,216.5	5,143.0	5,116.1	5,114.3	17.6	2.1	-171.15	-3,755.6	262.4	4,475.8	4,461.3	14.52	308.328	
5,300.0	5,224.7	5,206.8	5,204.9	17.9	2.2	-171.15	-3,756.4	259.3	4,493.4	4,478.6	14.77	304.303	
5,314.9	5,239.3	5,223.6	5,221.7	18.0	2.2	-171.15	-3,756.5	258.8	4,496.5	4,481.7	14.81	303.597	
5,400.0	5,322.5	5,316.9	5,315.0	18.4	2.2	-171.15	-3,757.0	256.1	4,514.2	4,499.1	15.06	299.659	
5,413.4	5,335.6	5,330.1	5,328.1	18.4	2.2	-171.15	-3,757.1	255.8	4,517.0	4,501.9	15.10	299.056	
5,500.0	5,420.3	5,418.8	5,416.8	18.8	2.2	-171.16	-3,757.4	253.5	4,534.9	4,519.5	15.36	295.207	
5,511.8	5,431.8	5,433.2	5,431.2	18.9	2.2	-171.16	-3,757.5	253.1	4,537.3	4,521.9	15.40	294.680	
5,600.0	5,518.1	5,541.1	5,539.1	19.3	2.3	-171.18	-3,757.5	250.8	4,555.3	4,539.6	15.66	290.802	
5,610.2	5,528.1	5,553.7	5,551.8	19.3	2.3	-171.18	-3,757.4	250.6	4,557.3	4,541.6	15.70	290.359	
5,700.0	5,615.9	5,668.2	5,666.2	19.7	2.3	-171.20	-3,756.7	248.7	4,575.1	4,559.1	15.97	286.489	
5,708.6	5,624.4	5,679.5	5,677.5	19.7	2.3	-171.20	-3,756.6	248.5	4,576.7	4,560.7	16.00	286.114	
5,800.0	5,713.7	5,800.0	5,798.0	20.1	2.4	-171.23	-3,755.0	246.3	4,594.1	4,577.9	16.28	282.231	
5,807.1	5,720.7	5,800.0	5,798.0	20.2	2.4	-171.23	-3,755.0	246.3	4,595.5	4,579.2	16.30	281.980	
5,900.0	5,811.6	5,861.1	5,859.0	20.6	2.4	-171.24	-3,754.2	245.2	4,613.3	4,596.7	16.57	278.420	
5,905.5	5,816.9	5,864.4	5,862.3	20.6	2.4	-171.24	-3,754.2	245.1	4,614.4	4,597.8	16.59	278.216	
6,000.0	5,909.4	5,930.5	5,928.5	21.0	2.4	-171.25	-3,753.8	244.3	4,633.2	4,616.3	16.87	274.716	
6,003.9	5,913.2	5,934.0	5,931.9	21.0	2.4	-171.25	-3,753.8	244.2	4,634.0	4,617.1	16.88	274.570	
6,053.2	5,961.4	5,977.3	5,975.2	21.3	2.4	-171.27	-3,753.7	243.7	4,643.9	4,626.9	17.03	272.768	
6,100.0	6,007.3	6,018.0	6,016.0	21.4	2.4	-171.30	-3,753.7	243.3	4,653.1	4,636.0	17.11	272.012	
6,102.3	6,009.6	6,020.0	6,018.0	21.5	2.4	-171.31	-3,753.7	243.3	4,653.5	4,636.4	17.11	271.987	
6,200.0	6,105.7	6,100.0	6,097.9	21.8	2.5	-171.38	-3,753.7	242.6	4,670.3	4,653.1	17.24	270.963	
6,200.8	6,106.5	6,100.0	6,097.9	21.8	2.5	-171.38	-3,753.7	242.6	4,670.4	4,653.2	17.24	270.959	
6,299.2	6,203.9	6,187.0	6,184.9	22.0	2.5	-171.43	-3,754.0	242.0	4,684.3	4,667.0	17.35	270.030	
6,300.0	6,204.7	6,187.7	6,185.6	22.0	2.5	-171.43	-3,754.0	242.0	4,684.4	4,667.1	17.35	270.022	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
6,397.6	6,301.8	6,301.5	6,299.5	22.3	2.5	-171.48	-3,754.3	241.7	4,694.9	4,677.5	17.45	269.083	
6,400.0	6,304.2	6,304.9	6,302.8	22.3	2.5	-171.48	-3,754.3	241.7	4,695.1	4,677.7	17.45	269.061	
6,496.0	6,400.0	6,330.0	6,327.9	22.4	2.5	-171.51	-3,754.3	241.5	4,702.4	4,684.9	17.53	268.250	
6,500.0	6,403.9	6,330.0	6,327.9	22.5	2.5	-171.51	-3,754.3	241.5	4,702.7	4,685.2	17.53	268.213	
6,594.5	6,498.3	6,330.0	6,327.9	22.6	2.5	-171.53	-3,754.3	241.5	4,708.6	4,691.0	17.61	267.350	
6,600.0	6,503.8	6,330.0	6,327.9	22.6	2.5	-171.53	-3,754.3	241.5	4,708.9	4,691.3	17.62	267.293	
6,653.0	6,556.8	6,330.0	6,327.9	22.7	2.5	174.17	-3,754.3	241.5	4,711.7	4,694.0	17.66	266.764	
6,692.9	6,596.7	6,330.0	6,327.9	22.7	2.5	174.17	-3,754.3	241.5	4,713.8	4,696.1	17.73	265.825	
6,706.0	6,609.8	6,330.0	6,327.9	22.7	2.5	174.17	-3,754.3	241.5	4,714.6	4,696.8	17.76	265.523	
6,750.0	6,653.8	6,330.0	6,327.9	22.8	2.5	-5.82	-3,754.3	241.5	4,716.1	4,698.3	17.73	265.986	
6,791.3	6,695.0	6,330.0	6,327.9	22.8	2.5	-5.82	-3,754.3	241.5	4,715.4	4,697.7	17.72	266.119	
6,800.0	6,703.6	6,330.0	6,327.9	22.8	2.5	-5.82	-3,754.3	241.5	4,715.0	4,697.3	17.72	266.097	
6,850.0	6,752.9	6,330.0	6,327.9	22.8	2.5	-5.86	-3,754.3	241.5	4,711.0	4,693.3	17.72	265.925	
6,889.7	6,791.6	6,330.0	6,327.9	22.7	2.5	-5.90	-3,754.3	241.5	4,705.7	4,688.0	17.70	265.837	
6,900.0	6,801.5	6,330.0	6,327.9	22.7	2.5	-5.91	-3,754.3	241.5	4,704.0	4,686.4	17.70	265.826	
6,950.0	6,849.1	6,330.0	6,327.9	22.6	2.5	-6.00	-3,754.3	241.5	4,694.2	4,676.6	17.64	266.061	
6,988.2	6,884.8	6,330.0	6,327.9	22.5	2.5	-6.08	-3,754.3	241.5	4,684.8	4,667.2	17.57	266.578	
7,000.0	6,895.7	6,330.0	6,327.9	22.5	2.5	-6.11	-3,754.3	241.5	4,681.5	4,663.9	17.55	266.790	
7,050.0	6,940.8	6,330.0	6,327.9	22.3	2.5	-6.25	-3,754.3	241.5	4,665.9	4,648.5	17.40	268.096	
7,086.6	6,972.8	6,330.0	6,327.9	22.1	2.5	-6.37	-3,754.3	241.5	4,652.8	4,635.5	17.27	269.445	
7,100.0	6,984.3	6,330.0	6,327.9	22.1	2.5	-6.42	-3,754.3	241.5	4,647.6	4,630.4	17.21	270.006	
7,150.0	7,025.9	6,330.0	6,327.9	21.9	2.5	-6.64	-3,754.3	241.5	4,626.5	4,609.5	16.98	272.502	
7,185.0	7,053.9	6,330.0	6,327.9	21.7	2.5	-6.81	-3,754.3	241.5	4,610.2	4,593.4	16.79	274.573	
7,200.0	7,065.6	6,330.0	6,327.9	21.7	2.5	-6.89	-3,754.3	241.5	4,602.8	4,586.1	16.71	275.520	
7,250.0	7,103.0	6,330.0	6,327.9	21.4	2.5	-7.19	-3,754.3	241.5	4,576.4	4,560.0	16.41	278.940	
7,283.4	7,126.7	6,330.0	6,327.9	21.2	2.5	-7.43	-3,754.3	241.5	4,557.4	4,541.2	16.20	281.363	
7,300.0	7,138.0	6,330.0	6,327.9	21.2	2.5	-7.56	-3,754.3	241.5	4,547.6	4,531.5	16.09	282.574	
7,350.0	7,170.5	6,330.0	6,327.9	20.9	2.5	-7.99	-3,754.3	241.5	4,516.3	4,500.5	15.78	286.141	
7,381.9	7,189.8	6,330.0	6,327.9	20.8	2.5	-8.31	-3,754.3	241.5	4,495.2	4,479.6	15.60	288.197	
7,400.0	7,200.2	6,330.0	6,327.9	20.7	2.5	-8.51	-3,754.3	241.5	4,482.8	4,467.3	15.50	289.250	
7,450.0	7,227.0	6,330.0	6,327.9	20.4	2.5	-9.14	-3,754.3	241.5	4,447.0	4,431.7	15.26	291.393	
7,480.3	7,241.9	6,330.0	6,327.9	20.3	2.5	-9.58	-3,754.3	241.5	4,424.3	4,409.2	15.15	291.953	
7,500.0	7,250.9	6,330.0	6,327.9	20.2	2.5	-9.90	-3,754.3	241.5	4,409.2	4,394.1	15.10	291.978	
7,550.0	7,271.6	6,330.0	6,327.9	20.0	2.5	-10.85	-3,754.3	241.5	4,369.4	4,354.3	15.05	290.402	
7,578.7	7,282.0	6,330.0	6,327.9	19.9	2.5	-11.50	-3,754.3	241.5	4,345.7	4,330.6	15.07	288.294	
7,600.0	7,289.1	6,330.0	6,327.9	19.8	2.5	-12.04	-3,754.3	241.5	4,327.8	4,312.7	15.12	286.188	
7,650.0	7,303.3	6,330.0	6,327.9	19.6	2.5	-13.56	-3,754.3	241.5	4,284.6	4,269.3	15.35	279.119	
7,677.1	7,309.5	6,330.0	6,327.9	19.5	2.5	-14.58	-3,754.3	241.5	4,260.5	4,245.0	15.55	274.073	
7,700.0	7,314.1	6,330.0	6,327.9	19.5	2.5	-15.57	-3,754.3	241.5	4,239.9	4,224.2	15.74	269.291	
7,750.0	7,321.4	6,330.0	6,327.9	19.4	2.5	-18.31	-3,754.3	241.5	4,193.9	4,177.6	16.32	257.028	
7,775.6	7,323.9	6,330.0	6,327.9	19.3	2.5	-20.13	-3,754.3	241.5	4,169.9	4,153.2	16.69	249.898	
7,800.0	7,325.3	6,330.0	6,327.9	19.3	2.5	-22.23	-3,754.3	241.5	4,146.8	4,129.7	17.09	242.678	
7,832.0	7,326.0	6,330.0	6,327.9	19.3	2.5	-25.71	-3,754.3	241.5	4,116.2	4,098.4	17.70	232.499	
7,874.0	7,325.9	6,330.0	6,327.9	19.3	2.5	-25.71	-3,754.3	241.5	4,075.7	4,057.8	17.83	228.646	
7,900.0	7,325.9	6,330.0	6,327.9	19.3	2.5	-25.71	-3,754.3	241.5	4,050.6	4,032.7	17.90	226.285	
7,972.4	7,325.8	6,330.0	6,327.9	19.4	2.5	-25.71	-3,754.3	241.5	3,981.0	3,962.8	18.16	219.192	
8,000.0	7,325.8	6,330.0	6,327.9	19.5	2.5	-25.71	-3,754.3	241.5	3,954.5	3,936.2	18.26	216.540	
8,070.8	7,325.7	6,330.0	6,327.9	19.8	2.5	-25.71	-3,754.3	241.5	3,886.5	3,867.9	18.57	209.238	
8,100.0	7,325.6	6,330.0	6,327.9	19.9	2.5	-25.71	-3,754.3	241.5	3,858.6	3,839.8	18.70	206.303	
8,169.3	7,325.5	6,330.0	6,327.9	20.3	2.5	-25.71	-3,754.3	241.5	3,792.2	3,773.2	19.06	198.979	
8,200.0	7,325.5	6,330.0	6,327.9	20.5	2.5	-25.71	-3,754.3	241.5	3,762.8	3,743.6	19.22	195.816	
8,267.7	7,325.4	6,330.0	6,327.9	21.1	2.5	-25.71	-3,754.3	241.5	3,698.1	3,678.5	19.61	188.621	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 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	
8,300.0	7,325.3	6,330.0	6,327.9	21.3	2.5	-25.71	-3,754.3	241.5	3,667.3	3,647.5	19.79	185.289	
8,366.1	7,325.2	6,330.0	6,327.9	21.9	2.5	-25.71	-3,754.3	241.5	3,604.3	3,584.1	20.21	178.339	
8,400.0	7,325.2	6,330.0	6,327.9	22.3	2.5	-25.71	-3,754.3	241.5	3,572.1	3,551.6	20.42	174.890	
8,464.5	7,325.1	6,330.0	6,327.9	22.9	2.5	-25.71	-3,754.3	241.5	3,510.7	3,489.9	20.86	168.265	
8,500.0	7,325.1	6,330.0	6,327.9	23.3	2.5	-25.71	-3,754.3	241.5	3,477.1	3,456.0	21.11	164.746	
8,563.0	7,325.0	6,330.0	6,327.9	24.0	2.5	-25.71	-3,754.3	241.5	3,417.4	3,395.8	21.56	158.496	
8,600.0	7,324.9	6,330.0	6,327.9	24.5	2.5	-25.71	-3,754.3	241.5	3,382.4	3,360.5	21.83	154.946	
8,661.4	7,324.8	6,330.0	6,327.9	25.2	2.5	-25.71	-3,754.3	241.5	3,324.4	3,302.1	22.30	149.100	
8,700.0	7,324.8	6,330.0	6,327.9	25.7	2.5	-25.71	-3,754.3	241.5	3,288.0	3,265.4	22.59	145.551	
8,759.8	7,324.7	6,330.0	6,327.9	26.5	2.5	-25.71	-3,754.3	241.5	3,231.7	3,208.6	23.06	140.118	
8,800.0	7,324.6	6,330.0	6,327.9	27.1	2.5	-25.71	-3,754.3	241.5	3,193.9	3,170.6	23.38	136.595	
8,858.2	7,324.5	6,330.0	6,327.9	27.9	2.5	-25.71	-3,754.3	241.5	3,139.3	3,115.5	23.86	131.571	
8,900.0	7,324.5	6,330.0	6,327.9	28.4	2.5	-25.71	-3,754.3	241.5	3,100.3	3,076.1	24.20	128.095	
8,956.7	7,324.4	6,330.0	6,327.9	29.3	2.5	-25.71	-3,754.3	241.5	3,047.4	3,022.7	24.68	123.466	
9,000.0	7,324.3	6,330.0	6,327.9	29.9	2.5	-25.71	-3,754.3	241.5	3,007.0	2,981.9	25.05	120.051	
9,055.1	7,324.3	6,330.0	6,327.9	30.7	2.5	-25.71	-3,754.3	241.5	2,955.8	2,930.3	25.52	115.801	
9,100.0	7,324.2	6,330.0	6,327.9	31.4	2.5	-25.71	-3,754.3	241.5	2,914.2	2,888.3	25.91	112.458	
9,153.5	7,324.1	6,330.0	6,327.9	32.2	2.5	-25.71	-3,754.3	241.5	2,864.7	2,838.3	26.39	108.565	
9,200.0	7,324.0	6,330.0	6,327.9	33.0	2.5	-25.71	-3,754.3	241.5	2,821.8	2,795.0	26.80	105.301	
9,251.9	7,324.0	6,330.0	6,327.9	33.8	2.5	-25.71	-3,754.3	241.5	2,774.1	2,746.8	27.27	101.743	
9,300.0	7,323.9	6,330.0	6,327.9	34.5	2.5	-25.71	-3,754.3	241.5	2,730.1	2,702.4	27.70	98.563	
9,350.4	7,323.8	6,330.0	6,327.9	35.4	2.5	-25.71	-3,754.3	241.5	2,684.0	2,655.9	28.16	95.316	
9,400.0	7,323.7	6,330.0	6,327.9	36.2	2.5	-25.71	-3,754.3	241.5	2,638.9	2,610.2	28.61	92.225	
9,448.8	7,323.7	6,330.0	6,327.9	37.0	2.5	-25.71	-3,754.3	241.5	2,594.6	2,565.5	29.07	89.266	
9,500.0	7,323.6	6,330.0	6,327.9	37.8	2.5	-25.71	-3,754.3	241.5	2,548.3	2,518.8	29.54	86.264	
9,547.2	7,323.5	6,330.0	6,327.9	38.6	2.5	-25.71	-3,754.3	241.5	2,505.8	2,475.8	29.98	83.572	
9,600.0	7,323.5	6,330.0	6,327.9	39.5	2.5	-25.71	-3,754.3	241.5	2,458.5	2,428.1	30.48	80.661	
9,645.6	7,323.4	6,330.0	6,327.9	40.2	2.5	-25.71	-3,754.3	241.5	2,417.8	2,386.9	30.91	78.214	
9,700.0	7,323.3	6,330.0	6,327.9	41.2	2.5	-25.71	-3,754.3	241.5	2,369.5	2,338.1	31.43	75.395	
9,744.1	7,323.2	6,330.0	6,327.9	41.9	2.5	-25.71	-3,754.3	241.5	2,330.6	2,298.8	31.85	73.174	
9,800.0	7,323.2	6,330.0	6,327.9	42.9	2.5	-25.71	-3,754.3	241.5	2,281.5	2,249.1	32.39	70.447	
9,842.5	7,323.1	6,330.0	6,327.9	43.6	2.5	-25.71	-3,754.3	241.5	2,244.4	2,211.6	32.80	68.434	
9,900.0	7,323.0	6,330.0	6,327.9	44.6	2.5	-25.71	-3,754.3	241.5	2,194.4	2,161.1	33.35	65.798	
9,940.9	7,322.9	6,330.0	6,327.9	45.3	2.5	-25.71	-3,754.3	241.5	2,159.1	2,125.4	33.75	63.976	
10,000.0	7,322.9	6,330.0	6,327.9	46.3	2.5	-25.71	-3,754.3	241.5	2,108.5	2,074.2	34.32	61.431	
10,039.3	7,322.8	6,330.0	6,327.9	47.0	2.5	-25.71	-3,754.3	241.5	2,075.1	2,040.4	34.71	59.785	
10,100.0	7,322.7	6,330.0	6,327.9	48.1	2.5	-25.71	-3,754.3	241.5	2,023.9	1,988.6	35.30	57.331	
10,137.8	7,322.6	6,330.0	6,327.9	48.8	2.5	-25.71	-3,754.3	241.5	1,992.3	1,956.7	35.67	55.848	
10,200.0	7,322.6	6,330.0	6,327.9	49.9	2.5	-25.72	-3,754.3	241.5	1,940.8	1,904.5	36.29	53.484	
10,236.2	7,322.5	6,330.0	6,327.9	50.5	2.5	-25.72	-3,754.3	241.5	1,911.1	1,874.5	36.65	52.151	
10,300.0	7,322.4	6,330.0	6,327.9	51.6	2.5	-25.72	-3,754.3	241.5	1,859.3	1,822.0	37.28	49.878	
10,334.6	7,322.4	6,330.0	6,327.9	52.3	2.5	-25.72	-3,754.3	241.5	1,831.5	1,793.9	37.62	48.683	
10,400.0	7,322.3	6,330.0	6,327.9	53.4	2.5	-25.72	-3,754.3	241.5	1,779.7	1,741.5	38.27	46.502	
10,433.0	7,322.2	6,330.0	6,327.9	54.0	2.5	-25.72	-3,754.3	241.5	1,753.9	1,715.3	38.60	45.435	
10,500.0	7,322.1	6,330.0	6,327.9	55.2	2.5	-25.72	-3,754.3	241.5	1,702.3	1,663.0	39.27	43.347	
10,531.5	7,322.1	6,330.0	6,327.9	55.8	2.5	-25.72	-3,754.3	241.5	1,678.4	1,638.8	39.59	42.399	
10,600.0	7,321.9	6,330.0	6,327.9	57.0	2.5	-25.72	-3,754.3	241.5	1,627.3	1,587.1	40.27	40.406	
10,629.9	7,321.9	6,330.0	6,327.9	57.6	2.5	-25.72	-3,754.3	241.5	1,605.5	1,564.9	40.58	39.567	
10,700.0	7,321.8	6,330.0	6,327.9	58.8	2.5	-25.72	-3,754.3	241.5	1,555.2	1,513.9	41.28	37.673	
10,728.3	7,321.8	6,330.0	6,327.9	59.4	2.5	-25.72	-3,754.3	241.5	1,535.3	1,493.8	41.57	36.936	
10,800.0	7,321.6	6,330.0	6,327.9	60.7	2.5	-25.72	-3,754.3	241.5	1,486.3	1,444.0	42.29	35.144	
10,826.7	7,321.6	6,330.0	6,327.9	61.1	2.5	-25.72	-3,754.3	241.5	1,468.4	1,425.9	42.56	34.501	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - ABDN VERT MCCARTY 30-3 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,900.0	7,321.5	6,330.0	6,327.9	62.5	2.5	-25.72	-3,754.3	241.5	1,421.0	1,377.7	43.30	32.816	
10,925.2	7,321.4	6,330.0	6,327.9	62.9	2.5	-25.72	-3,754.3	241.5	1,405.3	1,361.7	43.56	32.261	
11,000.0	7,321.3	6,330.0	6,327.9	64.3	2.5	-25.72	-3,754.3	241.5	1,360.1	1,315.7	44.32	30.688	
11,023.6	7,321.3	6,330.0	6,327.9	64.7	2.5	-25.72	-3,754.3	241.5	1,346.3	1,301.8	44.56	30.214	
11,100.0	7,321.2	6,330.0	6,327.9	66.1	2.5	-25.72	-3,754.3	241.5	1,303.9	1,258.5	45.34	28.759	
11,122.0	7,321.1	6,330.0	6,327.9	66.5	2.5	-25.72	-3,754.3	241.5	1,292.2	1,246.7	45.56	28.362	
11,200.0	7,321.0	6,330.0	6,327.9	68.0	2.5	-25.72	-3,754.3	241.5	1,253.2	1,206.8	46.36	27.033	
11,220.4	7,321.0	6,330.0	6,327.9	68.4	2.5	-25.72	-3,754.3	241.5	1,243.6	1,197.0	46.57	26.704	
11,300.0	7,320.9	6,330.0	6,327.9	69.8	2.5	-25.72	-3,754.3	241.5	1,208.7	1,161.3	47.38	25.509	
11,318.9	7,320.8	6,330.0	6,327.9	70.2	2.5	-25.72	-3,754.3	241.5	1,201.0	1,153.4	47.57	25.245	
11,400.0	7,320.7	6,330.0	6,327.9	71.7	2.5	-25.72	-3,754.3	241.5	1,171.0	1,122.6	48.41	24.191	
11,417.3	7,320.7	6,330.0	6,327.9	72.0	2.5	-25.72	-3,754.3	241.5	1,165.2	1,116.6	48.58	23.984	
11,500.0	7,320.6	6,330.0	6,327.9	73.5	2.5	-25.72	-3,754.3	241.5	1,140.9	1,091.5	49.43	23.079	
11,515.7	7,320.5	6,330.0	6,327.9	73.8	2.5	-25.72	-3,754.3	241.5	1,136.9	1,087.3	49.59	22.923	
11,600.0	7,320.4	6,330.0	6,327.9	75.4	2.5	-25.72	-3,754.3	241.5	1,118.9	1,068.5	50.46	22.174	
11,614.1	7,320.4	6,330.0	6,327.9	75.6	2.5	-25.72	-3,754.3	241.5	1,116.5	1,065.9	50.61	22.062	
11,700.0	7,320.2	6,330.0	6,327.9	77.2	2.5	-25.72	-3,754.3	241.5	1,105.6	1,054.1	51.49	21.471	
11,712.6	7,320.2	6,330.0	6,327.9	77.5	2.5	-25.72	-3,754.3	241.5	1,104.6	1,052.9	51.62	21.397	
11,798.2	7,320.1	6,330.0	6,327.9	79.1	2.5	-25.72	-3,754.3	241.5	1,101.2	1,048.7	52.50	20.974 CC	
11,800.0	7,320.1	6,330.0	6,327.9	79.1	2.5	-25.72	-3,754.3	241.5	1,101.2	1,048.7	52.52	20.967	
11,811.0	7,320.1	6,330.0	6,327.9	79.3	2.5	-25.72	-3,754.3	241.5	1,101.3	1,048.7	52.60	20.938 ES	
11,849.2	7,320.0	6,330.0	6,327.9	79.8	2.5	-25.72	-3,754.3	241.5	1,102.4	1,049.6	52.86	20.854	
11,849.6	7,320.0	6,330.0	6,327.9	79.8	2.5	-25.72	-3,754.3	241.5	1,102.4	1,049.6	52.87	20.854 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 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	84.95	153.8	1,741.9	1,749.3				
98.4	98.4	54.7	54.7	0.1	0.0	84.95	153.8	1,741.9	1,748.7	1,748.6	0.12	N/A	
100.0	100.0	56.3	56.3	0.1	0.0	84.95	153.8	1,741.9	1,748.7	1,748.6	0.12	N/A	
171.7	171.7	126.7	126.7	0.2	0.1	84.95	153.8	1,741.8	1,748.6	1,748.3	0.31	5,704.825	
196.8	196.8	149.8	149.8	0.3	0.1	84.95	153.8	1,741.9	1,748.6	1,748.3	0.36	4,809.401	
200.0	200.0	152.7	152.7	0.3	0.1	84.95	153.8	1,741.9	1,748.6	1,748.3	0.37	4,716.705	
295.3	295.3	250.4	250.4	0.5	0.1	84.95	154.0	1,742.1	1,748.8	1,748.2	0.64	2,751.402	
300.0	300.0	255.8	255.8	0.5	0.1	84.95	154.1	1,742.0	1,748.8	1,748.2	0.65	2,683.922	
393.7	393.7	358.0	358.0	0.7	0.2	84.92	154.9	1,741.6	1,748.5	1,747.5	0.97	1,807.696	
400.0	400.0	364.6	364.6	0.8	0.2	84.91	155.0	1,741.6	1,748.5	1,747.5	0.99	1,768.941	
492.1	492.1	455.4	455.4	1.0	0.3	84.87	156.1	1,740.9	1,748.0	1,746.7	1.27	1,372.086	
500.0	500.0	462.9	462.9	1.0	0.3	84.87	156.3	1,740.9	1,747.9	1,746.6	1.30	1,347.506	
590.5	590.5	555.8	555.8	1.2	0.4	84.82	157.8	1,740.4	1,747.5	1,746.0	1.56	1,118.530	
600.0	600.0	566.1	566.1	1.2	0.4	84.81	157.9	1,740.3	1,747.5	1,745.9	1.59	1,099.117	
689.0	689.0	657.5	657.5	1.4	0.4	84.76	159.4	1,739.5	1,746.8	1,745.0	1.84	948.071	
700.0	700.0	668.5	668.4	1.4	0.5	84.76	159.5	1,739.4	1,746.7	1,744.8	1.87	932.413	
787.4	787.4	755.2	755.2	1.6	0.5	84.71	160.9	1,738.6	1,746.1	1,743.9	2.11	825.724	
800.0	800.0	767.7	767.7	1.7	0.5	84.71	161.1	1,738.5	1,746.0	1,743.8	2.15	812.422	
885.8	885.8	853.4	853.3	1.9	0.6	84.65	162.8	1,737.7	1,745.3	1,743.0	2.38	732.612	
900.0	900.0	867.6	867.5	1.9	0.6	84.64	163.1	1,737.6	1,745.2	1,742.8	2.42	720.964	
984.2	984.2	955.4	955.3	2.1	0.6	84.57	165.1	1,736.7	1,744.6	1,741.9	2.65	658.641	
1,000.0	1,000.0	972.2	972.1	2.1	0.6	84.55	165.6	1,736.5	1,744.4	1,741.7	2.69	648.149	
1,082.7	1,082.7	1,060.8	1,060.6	2.3	0.7	84.47	168.1	1,735.2	1,743.5	1,740.6	2.91	598.210	
1,100.0	1,100.0	1,079.4	1,079.2	2.3	0.7	84.45	168.6	1,734.9	1,743.3	1,740.3	2.96	588.700	
1,181.1	1,181.1	1,166.2	1,166.0	2.5	0.7	84.35	171.3	1,733.3	1,742.0	1,738.8	3.18	548.024	
1,200.0	1,200.0	1,186.4	1,186.2	2.6	0.7	84.33	172.0	1,732.9	1,741.7	1,738.4	3.23	539.333	
1,279.5	1,279.5	1,264.4	1,264.1	2.7	0.8	84.24	174.5	1,731.2	1,740.3	1,736.8	3.44	506.173	
1,300.0	1,300.0	1,284.2	1,283.8	2.8	0.8	84.22	175.1	1,730.8	1,739.9	1,736.4	3.49	498.313	
1,377.9	1,377.9	1,360.2	1,359.9	3.0	0.8	84.14	177.6	1,729.4	1,738.7	1,735.0	3.69	470.599	
1,400.0	1,400.0	1,381.8	1,381.5	3.0	0.8	84.11	178.3	1,729.0	1,738.3	1,734.6	3.75	463.316	
1,450.0	1,450.0	1,432.0	1,431.6	3.1	0.8	84.05	180.0	1,728.0	1,737.6	1,733.7	3.88	447.586	
1,476.4	1,476.4	1,458.8	1,458.4	3.2	0.8	98.33	180.9	1,727.5	1,737.2	1,733.3	3.93	442.284	
1,500.0	1,500.0	1,482.9	1,482.4	3.2	0.9	98.32	181.7	1,727.0	1,736.9	1,732.9	3.99	435.484	
1,574.8	1,574.8	1,561.4	1,560.9	3.4	0.9	98.32	184.4	1,725.4	1,735.9	1,731.8	4.18	415.335	
1,600.0	1,599.9	1,588.1	1,587.5	3.5	0.9	98.34	185.2	1,724.9	1,735.6	1,731.4	4.24	408.956	
1,673.2	1,673.0	1,664.3	1,663.7	3.6	0.9	98.43	187.5	1,723.1	1,734.9	1,730.5	4.43	391.434	
1,700.0	1,699.7	1,692.0	1,691.4	3.7	0.9	98.48	188.3	1,722.5	1,734.7	1,730.2	4.50	385.404	
1,771.6	1,771.0	1,762.6	1,761.9	3.9	1.0	98.66	190.0	1,720.8	1,734.2	1,729.5	4.69	369.867	
1,800.0	1,799.1	1,790.3	1,789.6	3.9	1.0	98.74	190.7	1,720.1	1,734.1	1,729.4	4.76	364.078	
1,825.2	1,824.1	1,814.6	1,813.9	4.0	1.0	98.83	191.2	1,719.6	1,734.1	1,729.3	4.83	358.837 CC	
1,870.1	1,868.6	1,857.3	1,856.6	4.1	1.0	98.98	192.2	1,718.7	1,734.2	1,729.2	4.96	349.913 ES	
1,900.0	1,898.2	1,885.8	1,885.0	4.2	1.0	99.09	192.9	1,718.1	1,734.3	1,729.3	5.04	344.218	
1,968.5	1,965.7	1,952.1	1,951.3	4.3	1.0	99.39	194.5	1,716.7	1,735.0	1,729.7	5.24	330.928	
2,000.0	1,996.6	1,982.6	1,981.8	4.4	1.1	99.54	195.2	1,716.1	1,735.4	1,730.1	5.34	325.175	
2,049.8	2,045.4	2,031.0	2,030.2	4.6	1.1	99.80	196.4	1,715.2	1,736.2	1,730.7	5.50	315.891	
2,066.9	2,062.2	2,047.7	2,046.9	4.6	1.1	99.90	196.8	1,714.9	1,736.5	1,731.0	5.55	312.682	
2,100.0	2,094.5	2,079.8	2,079.0	4.7	1.1	100.09	197.6	1,714.3	1,737.2	1,731.5	5.66	306.686	
2,165.3	2,158.5	2,144.5	2,143.7	4.9	1.1	100.47	199.3	1,713.0	1,738.5	1,732.6	5.89	295.027	
2,200.0	2,192.3	2,179.1	2,178.2	5.1	1.1	100.67	200.2	1,712.4	1,739.2	1,733.2	6.01	289.207	
2,263.8	2,254.7	2,243.5	2,242.6	5.3	1.2	101.04	201.9	1,711.1	1,740.6	1,734.4	6.25	278.608	
2,300.0	2,290.2	2,280.3	2,279.4	5.4	1.2	101.26	202.9	1,710.3	1,741.4	1,735.0	6.38	272.940	
2,362.2	2,351.0	2,342.9	2,341.9	5.6	1.2	101.62	204.5	1,709.0	1,742.7	1,736.1	6.62	263.404	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,400.0	2,388.0	2,380.7	2,379.8	5.8	1.2	101.84	205.5	1,708.2	1,743.5	1,736.8	6.76	257.939	
2,460.6	2,447.3	2,442.3	2,441.3	6.0	1.2	102.20	207.0	1,706.8	1,744.9	1,737.9	7.00	249.393	
2,500.0	2,485.8	2,482.6	2,481.6	6.1	1.2	102.44	207.9	1,705.8	1,745.8	1,738.6	7.15	244.147	
2,559.0	2,543.6	2,540.6	2,539.5	6.3	1.3	102.79	209.2	1,704.4	1,747.1	1,739.7	7.39	236.534	
2,600.0	2,583.6	2,580.1	2,579.0	6.5	1.3	103.02	210.0	1,703.5	1,748.0	1,740.5	7.55	231.550	
2,657.5	2,639.8	2,636.4	2,635.3	6.7	1.3	103.36	211.2	1,702.1	1,749.5	1,741.7	7.78	224.788	
2,700.0	2,681.4	2,678.5	2,677.3	6.9	1.3	103.61	212.1	1,701.2	1,750.6	1,742.6	7.96	220.049	
2,755.9	2,736.1	2,731.8	2,730.7	7.1	1.3	103.92	213.3	1,699.9	1,752.1	1,743.9	8.19	214.054	
2,800.0	2,779.2	2,773.0	2,771.8	7.3	1.3	104.17	214.1	1,699.0	1,753.3	1,745.0	8.37	209.580	
2,854.3	2,832.4	2,824.5	2,823.3	7.5	1.4	104.47	215.0	1,697.9	1,755.0	1,746.4	8.59	204.271	
2,900.0	2,877.1	2,868.6	2,867.4	7.7	1.4	104.74	215.8	1,697.0	1,756.5	1,747.8	8.78	200.026	
2,952.7	2,928.7	2,920.0	2,918.8	7.9	1.4	105.05	216.7	1,696.0	1,758.3	1,749.3	9.00	195.305	
3,000.0	2,974.9	2,966.8	2,965.6	8.1	1.4	105.33	217.4	1,695.1	1,760.0	1,750.8	9.20	191.276	
3,051.2	3,024.9	3,016.4	3,015.1	8.3	1.4	105.63	218.2	1,694.1	1,761.8	1,752.4	9.42	187.076	
3,100.0	3,072.7	3,061.7	3,060.4	8.5	1.5	105.91	218.7	1,693.2	1,763.7	1,754.1	9.62	183.266	
3,149.6	3,121.2	3,107.4	3,106.1	8.7	1.5	106.19	219.1	1,692.4	1,765.7	1,755.9	9.83	179.545	
3,200.0	3,170.5	3,152.1	3,150.8	8.9	1.5	106.48	219.3	1,691.8	1,767.9	1,757.9	10.05	175.941	
3,248.0	3,217.5	3,194.7	3,193.4	9.1	1.5	106.75	219.4	1,691.2	1,770.2	1,759.9	10.25	172.645	
3,300.0	3,268.3	3,242.9	3,241.6	9.3	1.5	107.06	219.5	1,690.7	1,772.8	1,762.3	10.48	169.233	
3,346.4	3,313.8	3,286.3	3,285.0	9.5	1.5	107.34	219.5	1,690.3	1,775.3	1,764.6	10.68	166.299	
3,400.0	3,366.1	3,338.4	3,337.1	9.7	1.5	107.67	219.6	1,689.8	1,778.2	1,767.3	10.90	163.062	
3,444.9	3,410.0	3,382.8	3,381.5	9.9	1.6	107.95	219.7	1,689.4	1,780.7	1,769.6	11.10	160.445	
3,500.0	3,464.0	3,437.8	3,436.5	10.2	1.6	108.30	219.8	1,688.9	1,783.8	1,772.4	11.34	157.363	
3,543.3	3,506.3	3,481.2	3,479.9	10.3	1.6	108.57	219.9	1,688.4	1,786.2	1,774.7	11.52	155.027	
3,600.0	3,561.8	3,534.1	3,532.8	10.6	1.6	108.91	219.9	1,687.9	1,789.5	1,777.8	11.76	152.120	
3,641.7	3,602.6	3,571.5	3,570.2	10.8	1.6	109.15	219.8	1,687.6	1,792.1	1,780.1	11.94	150.073	
3,700.0	3,659.6	3,622.4	3,621.0	11.0	1.6	109.47	219.6	1,687.3	1,795.8	1,783.6	12.19	147.372	
3,740.1	3,698.9	3,656.2	3,654.8	11.2	1.6	109.69	219.3	1,687.2	1,798.6	1,786.2	12.35	145.615	
3,800.0	3,757.4	3,707.2	3,705.9	11.4	1.6	110.03	218.8	1,687.2	1,803.0	1,790.4	12.60	143.118	
3,838.6	3,795.1	3,743.3	3,742.0	11.6	1.6	110.27	218.3	1,687.3	1,806.0	1,793.2	12.75	141.594	
3,900.0	3,855.2	3,801.0	3,799.6	11.9	1.6	110.64	217.8	1,687.6	1,810.8	1,797.8	13.00	139.264	
3,937.0	3,891.4	3,839.2	3,837.9	12.0	1.6	110.89	217.4	1,687.7	1,813.8	1,800.7	13.15	137.914	
4,000.0	3,953.0	3,904.3	3,903.0	12.3	1.6	111.30	216.8	1,687.9	1,818.9	1,805.5	13.40	135.690	
4,035.4	3,987.7	3,940.3	3,939.0	12.4	1.6	111.53	216.5	1,687.9	1,821.7	1,808.1	13.55	134.464	
4,100.0	4,050.9	4,005.8	4,004.5	12.7	1.6	111.95	215.9	1,687.9	1,826.9	1,813.0	13.81	132.304	
4,133.8	4,084.0	4,039.9	4,038.5	12.9	1.6	112.17	215.5	1,687.9	1,829.6	1,815.6	13.95	131.194	
4,200.0	4,148.7	4,106.1	4,104.8	13.2	1.6	112.59	214.8	1,687.8	1,834.9	1,820.7	14.21	129.099	
4,232.3	4,180.2	4,137.3	4,136.0	13.3	1.6	112.79	214.5	1,687.7	1,837.5	1,823.2	14.34	128.105	
4,300.0	4,246.5	4,202.8	4,201.5	13.6	1.6	113.20	213.7	1,687.6	1,843.1	1,828.5	14.62	126.091	
4,330.7	4,276.5	4,233.6	4,232.3	13.7	1.6	113.40	213.4	1,687.5	1,845.7	1,830.9	14.74	125.206	
4,400.0	4,344.3	4,303.1	4,301.7	14.0	1.6	113.83	212.7	1,687.3	1,851.5	1,836.5	15.02	123.270	
4,429.1	4,372.8	4,331.9	4,330.6	14.1	1.6	114.01	212.4	1,687.3	1,853.9	1,838.8	15.14	122.475	
4,500.0	4,442.1	4,402.3	4,400.9	14.5	1.6	114.44	211.8	1,687.0	1,860.0	1,844.5	15.42	120.602	
4,527.5	4,469.1	4,429.9	4,428.6	14.6	1.6	114.61	211.6	1,686.9	1,862.3	1,846.8	15.53	119.889	
4,600.0	4,539.9	4,502.8	4,501.4	14.9	1.6	115.04	211.2	1,686.6	1,868.5	1,852.7	15.83	118.068	
4,626.0	4,565.4	4,528.6	4,527.2	15.0	1.6	115.20	211.1	1,686.5	1,870.8	1,854.8	15.93	117.426	
4,700.0	4,637.8	4,602.1	4,600.8	15.3	1.7	115.63	210.9	1,686.2	1,877.2	1,861.0	16.23	115.650	
4,724.4	4,661.6	4,626.5	4,625.1	15.4	1.7	115.77	210.8	1,686.0	1,879.3	1,863.0	16.33	115.075	
4,800.0	4,735.6	4,702.1	4,700.7	15.8	1.7	116.21	210.6	1,685.6	1,886.0	1,869.3	16.64	113.348	
4,822.8	4,757.9	4,724.5	4,723.1	15.9	1.7	116.34	210.6	1,685.5	1,888.0	1,871.2	16.73	112.839	
4,900.0	4,833.4	4,800.0	4,798.6	16.2	1.7	116.78	210.4	1,685.0	1,894.8	1,877.8	17.04	111.169	
4,921.2	4,854.2	4,820.7	4,819.3	16.3	1.7	116.89	210.4	1,684.9	1,896.8	1,879.6	17.13	110.725	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 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	4,931.2	4,896.2	4,894.8	16.6	1.7	117.33	210.1	1,684.5	1,904.0	1,886.5	17.45	109.130	
5,019.7	4,950.5	4,914.9	4,913.5	16.7	1.7	117.44	210.1	1,684.4	1,905.8	1,888.3	17.53	108.745	
5,100.0	5,029.0	4,991.4	4,990.0	17.1	1.7	117.87	209.8	1,684.0	1,913.4	1,895.5	17.84	107.223	
5,118.1	5,046.7	5,009.0	5,007.6	17.1	1.7	117.97	209.7	1,683.9	1,915.1	1,897.2	17.92	106.890	
5,200.0	5,126.8	5,090.0	5,088.6	17.5	1.8	118.42	209.5	1,683.6	1,923.0	1,904.8	18.24	105.425	
5,216.5	5,143.0	5,106.5	5,105.1	17.6	1.8	118.52	209.4	1,683.5	1,924.6	1,906.3	18.31	105.136	
5,300.0	5,224.7	5,192.0	5,190.6	17.9	1.8	118.99	209.3	1,683.1	1,932.7	1,914.1	18.64	103.706	
5,314.9	5,239.3	5,207.2	5,205.8	18.0	1.8	119.07	209.3	1,683.0	1,934.2	1,915.5	18.70	103.454	
5,400.0	5,322.5	5,293.4	5,292.0	18.4	1.8	119.54	209.3	1,682.4	1,942.4	1,923.3	19.03	102.054	
5,413.4	5,335.6	5,307.0	5,305.6	18.4	1.8	119.61	209.3	1,682.3	1,943.7	1,924.6	19.09	101.838	
5,500.0	5,420.3	5,395.6	5,394.2	18.8	1.9	120.09	209.4	1,681.5	1,952.0	1,932.6	19.43	100.474	
5,511.8	5,431.8	5,408.1	5,406.7	18.9	1.9	120.16	209.4	1,681.4	1,953.1	1,933.7	19.47	100.293	
5,600.0	5,518.1	5,503.3	5,501.9	19.3	1.9	120.67	209.4	1,680.1	1,961.5	1,941.6	19.82	98.968	
5,610.2	5,528.1	5,513.6	5,512.2	19.3	1.9	120.72	209.4	1,680.0	1,962.4	1,942.5	19.86	98.817	
5,700.0	5,615.9	5,603.7	5,602.3	19.7	1.9	121.21	209.3	1,678.5	1,970.8	1,950.6	20.21	97.527	
5,708.6	5,624.4	5,611.9	5,610.5	19.7	1.9	121.25	209.2	1,678.3	1,971.6	1,951.3	20.24	97.406	
5,800.0	5,713.7	5,700.0	5,698.6	20.1	1.9	121.73	208.8	1,676.8	1,980.3	1,959.7	20.59	96.164	
5,807.1	5,720.7	5,705.2	5,703.8	20.2	1.9	121.76	208.8	1,676.7	1,980.9	1,960.3	20.62	96.070	
5,900.0	5,811.6	5,789.7	5,788.3	20.6	2.0	122.22	208.1	1,675.4	1,990.2	1,969.2	20.97	94.887	
5,905.5	5,816.9	5,794.7	5,793.3	20.6	2.0	122.25	208.1	1,675.3	1,990.7	1,969.7	20.99	94.819	
6,000.0	5,909.4	5,882.7	5,881.2	21.0	2.0	122.73	207.3	1,674.2	2,000.5	1,979.2	21.35	93.697	
6,003.9	5,913.2	5,886.3	5,884.9	21.0	2.0	122.75	207.3	1,674.1	2,000.9	1,979.6	21.37	93.652	
6,053.2	5,961.4	5,932.4	5,930.9	21.3	2.0	122.99	206.9	1,673.6	2,006.2	1,984.6	21.55	93.093	
6,100.0	6,007.3	5,976.2	5,974.8	21.4	2.0	123.30	206.5	1,673.2	2,011.1	1,989.4	21.68	92.740	
6,102.3	6,009.6	5,978.4	5,977.0	21.5	2.0	123.31	206.5	1,673.2	2,011.3	1,989.6	21.69	92.728	
6,200.0	6,105.7	6,071.4	6,069.9	21.8	2.0	123.87	206.0	1,672.4	2,020.3	1,998.4	21.92	92.180	
6,200.8	6,106.5	6,072.2	6,070.7	21.8	2.0	123.87	206.0	1,672.4	2,020.4	1,998.4	21.92	92.177	
6,299.2	6,203.9	6,171.1	6,169.6	22.0	2.1	124.33	205.8	1,671.9	2,027.7	2,005.6	22.13	91.642	
6,300.0	6,204.7	6,171.9	6,170.4	22.0	2.1	124.34	205.8	1,671.9	2,027.7	2,005.6	22.13	91.637	
6,397.6	6,301.8	6,270.0	6,268.5	22.3	2.1	124.68	205.6	1,671.2	2,033.1	2,010.8	22.32	91.107	
6,400.0	6,304.2	6,272.4	6,270.9	22.3	2.1	124.68	205.6	1,671.2	2,033.2	2,010.9	22.32	91.092	
6,496.0	6,400.0	6,370.6	6,369.1	22.4	2.1	124.91	205.4	1,670.5	2,036.5	2,014.0	22.49	90.567	
6,500.0	6,403.9	6,374.7	6,373.2	22.5	2.1	124.92	205.4	1,670.4	2,036.6	2,014.1	22.49	90.542	
6,594.5	6,498.3	6,469.3	6,467.8	22.6	2.1	125.04	205.1	1,669.6	2,037.9	2,015.3	22.64	90.019	
6,600.0	6,503.8	6,474.7	6,473.3	22.6	2.1	125.04	205.1	1,669.6	2,037.9	2,015.3	22.65	89.985	
6,653.0	6,556.8	6,527.2	6,525.8	22.7	2.2	110.77	204.9	1,669.1	2,037.9	2,015.1	22.72	89.687	
6,692.9	6,596.7	6,566.9	6,565.4	22.7	2.2	110.78	204.7	1,668.7	2,037.6	2,014.8	22.79	89.425	
6,706.0	6,609.8	6,579.8	6,578.3	22.7	2.2	110.78	204.6	1,668.6	2,037.5	2,014.7	22.81	89.340	
6,750.0	6,653.8	6,622.0	6,620.5	22.8	2.2	-69.30	204.3	1,668.2	2,036.7	2,013.9	22.86	89.092	
6,791.3	6,695.0	6,660.1	6,658.6	22.8	2.2	-69.49	204.1	1,667.9	2,035.2	2,012.3	22.90	88.869	
6,800.0	6,703.6	6,668.1	6,666.6	22.8	2.2	-69.55	204.1	1,667.9	2,034.8	2,011.9	22.91	88.808	
6,850.0	6,752.9	6,715.9	6,714.4	22.8	2.2	-69.98	203.8	1,667.6	2,031.7	2,008.8	22.96	88.489	
6,889.7	6,791.6	6,757.2	6,755.8	22.7	2.2	-70.47	203.7	1,667.4	2,028.5	2,005.5	23.00	88.211	
6,900.0	6,801.5	6,767.8	6,766.3	22.7	2.2	-70.62	203.7	1,667.3	2,027.5	2,004.5	23.01	88.125	
6,950.0	6,849.1	6,817.8	6,816.3	22.6	2.2	-71.43	203.5	1,667.0	2,022.1	1,999.0	23.04	87.746	
6,988.2	6,884.8	6,854.1	6,852.6	22.5	2.2	-72.15	203.4	1,666.7	2,017.3	1,994.2	23.06	87.472	
7,000.0	6,895.7	6,865.2	6,863.7	22.5	2.2	-72.39	203.4	1,666.6	2,015.7	1,992.6	23.07	87.378	
7,050.0	6,940.8	6,911.2	6,909.7	22.3	2.3	-73.49	203.2	1,666.2	2,008.4	1,985.3	23.07	87.040	
7,086.6	6,972.8	6,943.8	6,942.3	22.1	2.3	-74.38	203.1	1,665.9	2,002.5	1,979.5	23.06	86.833	
7,100.0	6,984.3	6,955.5	6,954.0	22.1	2.3	-74.72	203.0	1,665.8	2,000.3	1,977.2	23.06	86.755	
7,150.0	7,025.9	6,998.0	6,996.5	21.9	2.3	-76.05	202.9	1,665.4	1,991.6	1,968.6	23.01	86.539	
7,185.0	7,053.9	7,027.4	7,026.0	21.7	2.3	-77.06	202.7	1,665.2	1,985.2	1,962.3	22.97	86.436	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,200.0	7,065.6	7,039.7	7,038.2	21.7	2.3	-77.50	202.7	1,665.0	1,982.5	1,959.5	22.95	86.397	
7,250.0	7,103.0	7,079.2	7,077.7	21.4	2.3	-79.00	202.5	1,664.6	1,973.0	1,950.1	22.85	86.349	
7,283.4	7,126.7	7,103.8	7,102.3	21.2	2.3	-80.02	202.5	1,664.3	1,966.6	1,943.8	22.77	86.373	
7,300.0	7,138.0	7,114.7	7,113.2	21.2	2.3	-80.51	202.4	1,664.2	1,963.4	1,940.6	22.72	86.404	
7,350.0	7,170.5	7,146.0	7,144.5	20.9	2.3	-81.97	202.3	1,663.8	1,953.9	1,931.3	22.57	86.558	
7,381.9	7,189.8	7,164.6	7,163.1	20.8	2.3	-82.89	202.2	1,663.6	1,947.9	1,925.4	22.47	86.692	
7,400.0	7,200.2	7,174.8	7,173.3	20.7	2.3	-83.40	202.1	1,663.5	1,944.6	1,922.2	22.41	86.787	
7,450.0	7,227.0	7,200.9	7,199.4	20.4	2.3	-84.76	201.9	1,663.2	1,935.8	1,913.6	22.23	87.071	
7,480.3	7,241.9	7,215.8	7,214.3	20.3	2.3	-85.56	201.8	1,663.1	1,930.8	1,908.6	22.13	87.250	
7,500.0	7,250.9	7,224.9	7,223.4	20.2	2.3	-86.06	201.8	1,663.0	1,927.6	1,905.6	22.06	87.385	
7,550.0	7,271.6	7,245.9	7,244.4	20.0	2.4	-87.23	201.6	1,662.8	1,920.2	1,898.3	21.89	87.701	
7,578.7	7,282.0	7,256.5	7,255.0	19.9	2.4	-87.84	201.5	1,662.6	1,916.3	1,894.5	21.81	87.857	
7,600.0	7,289.1	7,263.8	7,262.2	19.8	2.4	-88.26	201.4	1,662.6	1,913.7	1,891.9	21.75	87.991	
7,650.0	7,303.3	7,278.5	7,276.9	19.6	2.4	-89.12	201.2	1,662.4	1,908.2	1,886.6	21.63	88.231	
7,677.1	7,309.5	7,285.1	7,283.5	19.5	2.4	-89.51	201.1	1,662.3	1,905.7	1,884.1	21.58	88.315	
7,700.0	7,314.1	7,289.8	7,288.3	19.5	2.4	-89.80	201.1	1,662.3	1,903.9	1,882.3	21.54	88.402	
7,750.0	7,321.4	7,297.9	7,296.3	19.4	2.4	-90.29	201.0	1,662.2	1,900.8	1,879.3	21.48	88.490	
7,775.6	7,323.9	7,300.0	7,298.5	19.3	2.4	-90.44	201.0	1,662.2	1,899.7	1,878.2	21.47	88.480	
7,800.0	7,325.3	7,300.0	7,298.5	19.3	2.4	-90.49	201.0	1,662.2	1,899.0	1,877.5	21.46	88.492	
7,832.0	7,326.0	7,300.0	7,298.5	19.3	2.4	-90.53	201.0	1,662.2	1,898.6	1,877.1	21.47	88.441	
7,841.3	7,326.0	7,300.0	7,298.5	19.3	2.4	-90.53	201.0	1,662.2	1,898.5	1,877.1	21.48	88.395	
7,874.0	7,325.9	7,300.0	7,298.5	19.3	2.4	-90.53	201.0	1,662.2	1,898.8	1,877.3	21.52	88.252	
7,900.0	7,325.9	7,300.0	7,298.5	19.3	2.4	-90.53	201.0	1,662.2	1,899.4	1,877.9	21.55	88.157	
7,972.4	7,325.8	7,300.0	7,298.5	19.4	2.4	-90.53	201.0	1,662.2	1,903.1	1,881.3	21.75	87.514	
8,000.0	7,325.8	7,300.0	7,298.5	19.5	2.4	-90.53	201.0	1,662.2	1,905.2	1,883.3	21.82	87.306	
8,070.8	7,325.7	7,300.0	7,298.5	19.8	2.4	-90.53	201.0	1,662.2	1,912.4	1,890.2	22.15	86.352	
8,100.0	7,325.6	7,300.0	7,298.5	19.9	2.4	-90.53	201.0	1,662.2	1,916.1	1,893.8	22.28	86.002	
8,169.3	7,325.5	7,300.0	7,298.5	20.3	2.4	-90.53	201.0	1,662.2	1,926.7	1,904.0	22.71	84.821	
8,200.0	7,325.5	7,300.0	7,298.5	20.5	2.4	-90.53	201.0	1,662.2	1,932.1	1,909.2	22.91	84.345	
8,267.7	7,325.4	7,300.0	7,298.5	21.1	2.4	-90.53	201.0	1,662.2	1,945.8	1,922.4	23.44	83.023	
8,300.0	7,325.3	7,300.0	7,298.5	21.3	2.4	-90.53	201.0	1,662.2	1,953.2	1,929.5	23.69	82.446	
8,366.1	7,325.2	7,300.0	7,298.5	21.9	2.4	-90.53	201.0	1,662.2	1,969.8	1,945.5	24.30	81.061	
8,400.0	7,325.2	7,300.0	7,298.5	22.3	2.4	-90.53	201.0	1,662.2	1,979.0	1,954.4	24.61	80.411	
8,464.5	7,325.1	7,300.0	7,298.5	22.9	2.4	-90.53	201.0	1,662.2	1,998.2	1,972.9	25.29	79.027	
8,500.0	7,325.1	7,300.0	7,298.5	23.3	2.4	-90.53	201.0	1,662.2	2,009.6	1,983.9	25.66	78.329	
8,563.0	7,325.0	7,300.0	7,298.5	24.0	2.4	-90.53	201.0	1,662.2	2,031.1	2,004.7	26.38	76.994	
8,600.0	7,324.9	7,300.0	7,298.5	24.5	2.4	-90.53	201.0	1,662.2	2,044.5	2,017.7	26.81	76.273	
8,661.4	7,324.8	7,300.0	7,298.5	25.2	2.4	-90.53	201.0	1,662.2	2,068.1	2,040.5	27.57	75.017	
8,700.0	7,324.8	7,300.0	7,298.5	25.7	2.4	-90.53	201.0	1,662.2	2,083.7	2,055.7	28.05	74.291	
8,759.8	7,324.7	7,300.0	7,298.5	26.5	2.4	-90.53	201.0	1,662.2	2,109.1	2,080.2	28.84	73.133	
8,800.0	7,324.6	7,300.0	7,298.5	27.1	2.4	-90.53	201.0	1,662.2	2,126.9	2,097.5	29.37	72.416	
8,858.2	7,324.5	7,300.0	7,298.5	27.9	2.4	-90.53	201.0	1,662.2	2,153.8	2,123.6	30.18	71.364	
8,900.0	7,324.5	7,300.0	7,298.5	28.4	2.4	-90.53	201.0	1,662.2	2,173.8	2,143.0	30.76	70.668	
8,956.7	7,324.4	7,300.0	7,298.5	29.3	2.4	-90.53	201.0	1,662.2	2,202.0	2,170.4	31.58	69.722	
9,000.0	7,324.3	7,300.0	7,298.5	29.9	2.4	-90.53	201.0	1,662.2	2,224.2	2,192.0	32.21	69.054	
9,055.1	7,324.3	7,300.0	7,298.5	30.7	2.4	-90.53	201.0	1,662.2	2,253.4	2,220.4	33.04	68.210	
9,100.0	7,324.2	7,300.0	7,298.5	31.4	2.4	-90.53	201.0	1,662.2	2,277.9	2,244.2	33.71	67.574	
9,153.5	7,324.1	7,300.0	7,298.5	32.2	2.4	-90.53	201.0	1,662.2	2,307.9	2,273.4	34.54	66.826	
9,200.0	7,324.0	7,300.0	7,298.5	33.0	2.4	-90.53	201.0	1,662.2	2,334.7	2,299.4	35.25	66.225	
9,251.9	7,324.0	7,300.0	7,298.5	33.8	2.4	-90.53	201.0	1,662.2	2,365.3	2,329.2	36.08	65.565	
9,300.0	7,323.9	7,300.0	7,298.5	34.5	2.4	-90.53	201.0	1,662.2	2,394.2	2,357.4	36.83	64.999	
9,350.4	7,323.8	7,300.0	7,298.5	35.4	2.4	-90.53	201.0	1,662.2	2,425.3	2,387.6	37.65	64.419	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,400.0	7,323.7	7,300.0	7,298.5	36.2	2.4	-90.53	201.0	1,662.2	2,456.4	2,418.0	38.45	63.888	
9,448.8	7,323.7	7,300.0	7,298.5	37.0	2.4	-90.53	201.0	1,662.2	2,487.7	2,448.4	39.25	63.379	
9,500.0	7,323.6	7,300.0	7,298.5	37.8	2.4	-90.53	201.0	1,662.2	2,521.1	2,481.0	40.09	62.881	
9,547.2	7,323.5	7,300.0	7,298.5	38.6	2.4	-90.53	201.0	1,662.2	2,552.4	2,511.5	40.88	62.436	
9,600.0	7,323.5	7,300.0	7,298.5	39.5	2.4	-90.53	201.0	1,662.2	2,588.0	2,546.2	41.76	61.971	
9,645.6	7,323.4	7,300.0	7,298.5	40.2	2.4	-90.53	201.0	1,662.2	2,619.2	2,576.7	42.53	61.581	
9,700.0	7,323.3	7,300.0	7,298.5	41.2	2.4	-90.53	201.0	1,662.2	2,656.9	2,613.5	43.45	61.148	
9,744.1	7,323.2	7,300.0	7,298.5	41.9	2.4	-90.53	201.0	1,662.2	2,688.0	2,643.8	44.20	60.807	
9,800.0	7,323.2	7,300.0	7,298.5	42.9	2.4	-90.53	201.0	1,662.2	2,727.8	2,682.7	45.16	60.403	
9,842.5	7,323.1	7,300.0	7,298.5	43.6	2.4	-90.53	201.0	1,662.2	2,758.5	2,712.6	45.89	60.105	
9,900.0	7,323.0	7,300.0	7,298.5	44.6	2.4	-90.52	201.0	1,662.2	2,800.5	2,753.6	46.89	59.728	
9,940.9	7,322.9	7,300.0	7,298.5	45.3	2.4	-90.52	201.0	1,662.2	2,830.7	2,783.1	47.60	59.468	
10,000.0	7,322.9	7,300.0	7,298.5	46.3	2.4	-90.52	201.0	1,662.2	2,874.8	2,826.2	48.63	59.116	
10,039.3	7,322.8	7,300.0	7,298.5	47.0	2.4	-90.52	201.0	1,662.2	2,904.5	2,855.2	49.32	58.890	
10,100.0	7,322.7	7,300.0	7,298.5	48.1	2.4	-90.52	201.0	1,662.2	2,950.7	2,900.3	50.39	58.561	
10,137.8	7,322.6	7,300.0	7,298.5	48.8	2.4	-90.52	201.0	1,662.2	2,979.7	2,928.6	51.05	58.364	
10,200.0	7,322.6	7,300.0	7,298.5	49.9	2.4	-90.52	201.0	1,662.2	3,027.9	2,975.7	52.15	58.057	
10,236.2	7,322.5	7,300.0	7,298.5	50.5	2.4	-90.52	201.0	1,662.2	3,056.2	3,003.4	52.80	57.885	
10,300.0	7,322.4	7,300.0	7,298.5	51.6	2.4	-90.52	201.0	1,662.2	3,106.4	3,052.5	53.93	57.598	
10,334.6	7,322.4	7,300.0	7,298.5	52.3	2.4	-90.52	201.0	1,662.2	3,133.9	3,079.3	54.55	57.448	
10,400.0	7,322.3	7,300.0	7,298.5	53.4	2.4	-90.52	201.0	1,662.2	3,186.2	3,130.4	55.72	57.181	
10,433.0	7,322.2	7,300.0	7,298.5	54.0	2.4	-90.52	201.0	1,662.2	3,212.8	3,156.4	56.32	57.050	
10,500.0	7,322.1	7,300.0	7,298.5	55.2	2.4	-90.52	201.0	1,662.2	3,267.0	3,209.5	57.52	56.799	
10,531.5	7,322.1	7,300.0	7,298.5	55.8	2.4	-90.52	201.0	1,662.2	3,292.7	3,234.6	58.09	56.685	
10,600.0	7,321.9	7,300.0	7,298.5	57.0	2.4	-90.52	201.0	1,662.2	3,348.9	3,289.6	59.32	56.451	
10,629.9	7,321.9	7,300.0	7,298.5	57.6	2.4	-90.52	201.0	1,662.2	3,373.6	3,313.7	59.87	56.352	
10,700.0	7,321.8	7,300.0	7,298.5	58.8	2.4	-90.52	201.0	1,662.2	3,431.7	3,370.6	61.14	56.132	
10,728.3	7,321.8	7,300.0	7,298.5	59.4	2.4	-90.52	201.0	1,662.2	3,455.4	3,393.7	61.65	56.046	
10,800.0	7,321.6	7,300.0	7,298.5	60.7	2.4	-90.52	201.0	1,662.2	3,515.5	3,452.5	62.96	55.840	
10,826.7	7,321.6	7,300.0	7,298.5	61.1	2.4	-90.52	201.0	1,662.2	3,538.0	3,474.6	63.44	55.766	
10,900.0	7,321.5	7,300.0	7,298.5	62.5	2.4	-90.52	201.0	1,662.2	3,600.0	3,535.3	64.78	55.572	
10,925.2	7,321.4	7,300.0	7,298.5	62.9	2.4	-90.52	201.0	1,662.2	3,621.5	3,556.2	65.24	55.507	
11,000.0	7,321.3	7,300.0	7,298.5	64.3	2.4	-90.52	201.0	1,662.2	3,685.4	3,618.8	66.61	55.325	
11,023.6	7,321.3	7,300.0	7,298.5	64.7	2.4	-90.52	201.0	1,662.2	3,705.6	3,638.6	67.05	55.270	
11,100.0	7,321.2	7,300.0	7,298.5	66.1	2.4	-90.52	201.0	1,662.2	3,771.5	3,703.0	68.45	55.099	
11,122.0	7,321.1	7,300.0	7,298.5	66.5	2.4	-90.52	201.0	1,662.2	3,790.5	3,721.6	68.85	55.051	
11,200.0	7,321.0	7,300.0	7,298.5	68.0	2.4	-90.52	201.0	1,662.2	3,858.2	3,787.9	70.29	54.890	
11,220.4	7,321.0	7,300.0	7,298.5	68.4	2.4	-90.52	201.0	1,662.2	3,876.0	3,805.3	70.67	54.849	
11,300.0	7,320.9	7,300.0	7,298.5	69.8	2.4	-90.52	201.0	1,662.2	3,945.5	3,873.4	72.13	54.697	
11,318.9	7,320.8	7,300.0	7,298.5	70.2	2.4	-90.52	201.0	1,662.2	3,962.1	3,889.6	72.48	54.662	
11,400.0	7,320.7	7,300.0	7,298.5	71.7	2.4	-90.52	201.0	1,662.2	4,033.5	3,959.5	73.98	54.519	
11,417.3	7,320.7	7,300.0	7,298.5	72.0	2.4	-90.52	201.0	1,662.2	4,048.8	3,974.5	74.30	54.489	
11,500.0	7,320.6	7,300.0	7,298.5	73.5	2.4	-90.52	201.0	1,662.2	4,122.0	4,046.2	75.84	54.354	
11,515.7	7,320.5	7,300.0	7,298.5	73.8	2.4	-90.52	201.0	1,662.2	4,136.0	4,059.8	76.13	54.329	
11,600.0	7,320.4	7,300.0	7,298.5	75.4	2.4	-90.52	201.0	1,662.2	4,211.0	4,133.3	77.69	54.201	
11,614.1	7,320.4	7,300.0	7,298.5	75.6	2.4	-90.52	201.0	1,662.2	4,223.6	4,145.7	77.96	54.180	
11,700.0	7,320.2	7,300.0	7,298.5	77.2	2.4	-90.52	201.0	1,662.2	4,300.5	4,221.0	79.55	54.059	
11,712.6	7,320.2	7,300.0	7,298.5	77.5	2.4	-90.52	201.0	1,662.2	4,311.8	4,232.0	79.79	54.042	
11,800.0	7,320.1	7,300.0	7,298.5	79.1	2.4	-90.52	201.0	1,662.2	4,390.5	4,309.0	81.41	53.927 SF	
11,811.0	7,320.1	7,300.0	7,298.5	79.3	2.4	-90.52	201.0	1,662.2	4,400.4	4,318.8	81.58	53.942	
11,849.2	7,320.0	7,300.0	7,298.5	79.8	2.4	-90.52	201.0	1,662.2	4,434.9	4,352.8	82.14	53.991	
11,849.6	7,320.0	7,300.0	7,298.5	79.8	2.4	-90.52	201.0	1,662.2	4,435.2	4,353.1	82.15	53.992	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT BROWN 30-31 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	52.28	405.8	524.7	664.1				
98.4	98.4	76.1	76.1	0.1	0.0	52.31	405.4	524.6	663.0	662.9	0.12	5,370.300	
100.0	100.0	77.8	77.8	0.1	0.0	52.31	405.3	524.6	663.0	662.8	0.13	5,256.875	
196.8	196.8	178.8	178.8	0.3	0.2	52.39	403.6	523.9	661.4	660.9	0.49	1,360.015	
200.0	200.0	182.0	182.0	0.3	0.2	52.39	403.5	523.8	661.4	660.9	0.50	1,325.736	
295.3	295.3	281.6	281.6	0.5	0.3	52.49	401.4	522.8	659.3	658.5	0.82	807.609	
300.0	300.0	286.6	286.5	0.5	0.3	52.49	401.3	522.8	659.2	658.4	0.83	792.841	
393.7	393.7	383.7	383.6	0.7	0.4	52.63	398.4	521.6	656.6	655.5	1.11	589.796	
400.0	400.0	390.2	390.1	0.8	0.4	52.64	398.2	521.5	656.4	655.3	1.13	579.847	
492.1	492.1	481.2	481.0	1.0	0.4	52.80	395.0	520.4	653.7	652.3	1.39	469.004	
500.0	500.0	488.9	488.7	1.0	0.4	52.82	394.8	520.4	653.4	652.0	1.42	461.479	
590.5	590.5	579.8	579.5	1.2	0.5	53.01	391.4	519.6	650.8	649.2	1.67	390.257	
600.0	600.0	589.3	589.1	1.2	0.5	53.03	391.1	519.5	650.6	648.9	1.69	384.055	
689.0	689.0	677.6	677.3	1.4	0.5	53.21	387.9	518.7	648.0	646.0	1.94	334.563	
700.0	700.0	688.5	688.2	1.4	0.6	53.23	387.5	518.6	647.7	645.7	1.97	329.297	
787.4	787.4	774.5	774.2	1.6	0.6	53.41	384.5	518.0	645.3	643.1	2.20	293.072	
800.0	800.0	786.9	786.6	1.7	0.6	53.44	384.1	517.9	645.0	642.7	2.24	288.494	
885.8	885.8	872.2	871.8	1.9	0.6	53.59	381.4	517.2	642.8	640.4	2.46	260.811	
900.0	900.0	886.3	885.9	1.9	0.7	53.62	381.0	517.1	642.5	640.0	2.50	256.733	
984.2	984.2	970.0	969.5	2.1	0.7	53.77	378.4	516.4	640.4	637.7	2.73	234.977	
1,000.0	1,000.0	985.6	985.1	2.1	0.7	53.80	378.0	516.3	640.0	637.3	2.77	231.307	
1,082.7	1,082.7	1,068.2	1,067.7	2.3	0.7	53.94	375.5	515.7	638.1	635.1	2.98	213.796	
1,100.0	1,100.0	1,085.6	1,085.0	2.3	0.7	53.97	375.0	515.6	637.7	634.7	3.03	210.448	
1,181.1	1,181.1	1,166.0	1,165.4	2.5	0.8	54.11	372.7	515.0	635.8	632.6	3.24	196.106	
1,200.0	1,200.0	1,184.7	1,184.2	2.6	0.8	54.14	372.1	514.8	635.4	632.1	3.29	193.037	
1,279.5	1,279.5	1,261.8	1,261.2	2.7	0.8	54.25	370.2	514.2	633.8	630.3	3.50	181.190	
1,300.0	1,300.0	1,281.6	1,281.0	2.8	0.8	54.27	369.8	514.1	633.4	629.8	3.55	178.383	
1,377.9	1,377.9	1,358.8	1,358.2	3.0	0.9	54.35	368.3	513.6	632.1	628.4	3.75	168.431	
1,400.0	1,400.0	1,380.8	1,380.2	3.0	0.9	54.37	368.0	513.4	631.8	627.9	3.81	165.807	
1,450.0	1,450.0	1,431.0	1,430.4	3.1	0.9	54.40	367.2	513.0	630.9	627.0	3.94	160.119	
1,476.4	1,476.4	1,457.5	1,456.9	3.2	0.9	68.73	366.8	512.7	630.5	626.4	4.04	156.080	
1,500.0	1,500.0	1,481.3	1,480.7	3.2	0.9	68.78	366.5	512.4	629.9	625.8	4.10	153.580	
1,574.8	1,574.8	1,556.7	1,556.0	3.4	0.9	69.03	365.5	511.5	627.8	623.5	4.30	146.055	
1,600.0	1,599.9	1,582.1	1,581.4	3.5	0.9	69.15	365.3	511.1	626.9	622.6	4.36	143.635	
1,673.2	1,673.0	1,655.9	1,655.2	3.6	1.0	69.60	364.7	509.9	623.9	619.3	4.56	136.867	
1,700.0	1,699.7	1,682.8	1,682.2	3.7	1.0	69.80	364.5	509.3	622.6	617.9	4.63	134.496	
1,771.6	1,771.0	1,754.5	1,753.8	3.9	1.0	70.43	364.3	507.7	618.7	613.8	4.82	128.313	
1,800.0	1,799.1	1,782.8	1,782.1	3.9	1.0	70.72	364.2	507.0	616.9	612.0	4.90	125.967	
1,870.1	1,868.6	1,851.7	1,851.0	4.1	1.0	71.53	364.3	505.2	612.4	607.3	5.09	120.226	
1,900.0	1,898.2	1,881.0	1,880.3	4.2	1.0	71.92	364.4	504.5	610.4	605.2	5.18	117.885	
1,968.5	1,965.7	1,947.3	1,946.6	4.3	1.1	72.93	364.5	502.9	605.5	600.1	5.38	112.499	
2,000.0	1,996.6	1,977.6	1,976.9	4.4	1.1	73.45	364.5	502.3	603.3	597.8	5.48	110.141	
2,049.8	2,045.4	2,025.5	2,024.7	4.6	1.1	74.34	364.6	501.3	599.6	594.0	5.64	106.380	
2,066.9	2,062.2	2,042.0	2,041.2	4.6	1.1	74.64	364.6	501.0	598.4	592.7	5.69	105.095	
2,100.0	2,094.5	2,073.8	2,073.0	4.7	1.1	75.23	364.7	500.5	596.1	590.3	5.80	102.693	
2,165.3	2,158.5	2,137.4	2,136.7	4.9	1.1	76.42	364.7	499.5	591.8	585.7	6.03	98.088	
2,200.0	2,192.3	2,171.5	2,170.7	5.1	1.1	77.06	364.7	498.9	589.6	583.4	6.16	95.786	
2,263.8	2,254.7	2,234.3	2,233.5	5.3	1.1	78.25	364.8	497.8	585.7	579.3	6.39	91.659	
2,300.0	2,290.2	2,270.0	2,269.2	5.4	1.2	78.94	364.8	497.2	583.6	577.1	6.53	89.445	
2,362.2	2,351.0	2,331.3	2,330.5	5.6	1.2	80.15	364.7	496.2	580.2	573.5	6.76	85.771	
2,400.0	2,388.0	2,368.5	2,367.7	5.8	1.2	80.89	364.6	495.6	578.3	571.4	6.91	83.669	
2,460.6	2,447.3	2,428.0	2,427.2	6.0	1.2	82.08	364.4	494.5	575.3	568.2	7.15	80.429	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,485.8	2,466.5	2,465.7	6.1	1.2	82.85	364.3	493.9	573.5	566.2	7.31	78.456	
2,559.0	2,543.6	2,524.4	2,523.6	6.3	1.2	84.03	364.1	492.9	571.0	563.5	7.55	75.624	
2,600.0	2,583.6	2,564.8	2,563.9	6.5	1.3	84.86	364.0	492.1	569.5	561.7	7.72	73.778	
2,657.5	2,639.8	2,621.3	2,620.5	6.7	1.3	86.03	363.8	491.1	567.4	559.4	7.96	71.304	
2,700.0	2,681.4	2,663.0	2,662.1	6.9	1.3	86.89	363.6	490.3	566.0	557.9	8.13	69.586	
2,755.9	2,736.1	2,718.5	2,717.6	7.1	1.3	88.05	363.4	489.3	564.4	556.0	8.37	67.433	
2,800.0	2,779.2	2,763.5	2,762.6	7.3	1.3	88.99	363.2	488.3	563.2	554.6	8.56	65.824	
2,854.3	2,832.4	2,818.2	2,817.3	7.5	1.3	90.16	362.8	487.0	561.7	552.9	8.79	63.923	
2,900.0	2,877.1	2,863.1	2,862.2	7.7	1.4	91.12	362.4	485.8	560.5	551.5	8.98	62.422	
2,952.7	2,928.7	2,915.2	2,914.3	7.9	1.4	92.24	362.0	484.5	559.4	550.2	9.20	60.775	
3,000.0	2,974.9	2,962.1	2,961.2	8.1	1.4	93.25	361.6	483.2	558.5	549.1	9.40	59.388	
3,051.2	3,024.9	3,012.9	3,011.9	8.3	1.4	94.35	361.2	481.7	557.6	548.0	9.62	57.960	
3,100.0	3,072.7	3,061.1	3,060.1	8.5	1.4	95.40	360.7	480.3	557.0	547.2	9.83	56.681	
3,149.6	3,121.2	3,110.2	3,109.2	8.7	1.4	96.48	360.1	478.8	556.5	546.4	10.04	55.449	
3,200.0	3,170.5	3,160.4	3,159.4	8.9	1.5	97.58	359.5	477.2	556.1	545.8	10.25	54.271	
3,248.0	3,217.5	3,208.6	3,207.5	9.1	1.5	98.65	359.0	475.6	555.8	545.4	10.45	53.206	
3,300.0	3,268.3	3,262.4	3,261.3	9.3	1.5	99.83	358.3	473.6	555.5	544.9	10.66	52.109	
3,346.4	3,313.8	3,309.4	3,308.3	9.5	1.5	100.87	357.7	471.6	555.2	544.4	10.85	51.167	
3,376.9	3,343.5	3,337.7	3,336.5	9.6	1.5	101.50	357.3	470.4	555.2	544.2	10.98	50.583 CC	
3,400.0	3,366.1	3,359.2	3,358.0	9.7	1.5	101.98	357.0	469.5	555.2	544.1	11.07	50.160 ES	
3,444.9	3,410.0	3,400.0	3,398.7	9.9	1.5	102.90	356.3	468.0	555.5	544.3	11.25	49.385	
3,500.0	3,464.0	3,452.8	3,451.5	10.2	1.6	104.09	355.3	466.3	556.4	544.9	11.47	48.516	
3,543.3	3,506.3	3,493.6	3,492.3	10.3	1.6	105.01	354.6	465.0	557.4	545.7	11.64	47.888	
3,600.0	3,561.8	3,547.1	3,545.8	10.6	1.6	106.20	353.7	463.6	559.1	547.2	11.86	47.139	
3,641.7	3,602.6	3,586.5	3,585.2	10.8	1.6	107.07	353.1	462.6	560.6	548.6	12.02	46.634	
3,700.0	3,659.6	3,643.3	3,641.9	11.0	1.6	108.30	352.4	461.3	563.0	550.8	12.24	45.991	
3,740.1	3,698.9	3,682.8	3,681.5	11.2	1.6	109.15	351.9	460.4	564.9	552.5	12.39	45.578	
3,800.0	3,757.4	3,741.6	3,740.1	11.4	1.7	110.40	351.1	459.0	567.8	555.2	12.61	45.010	
3,838.6	3,795.1	3,779.4	3,777.9	11.6	1.7	111.20	350.6	458.1	569.8	557.1	12.76	44.671	
3,900.0	3,855.2	3,839.5	3,838.1	11.9	1.7	112.47	349.8	456.6	573.3	560.3	12.98	44.174	
3,937.0	3,891.4	3,875.7	3,874.3	12.0	1.7	113.22	349.3	455.7	575.5	562.3	13.11	43.898	
4,000.0	3,953.0	3,936.8	3,935.3	12.3	1.7	114.47	348.6	454.2	579.4	566.1	13.33	43.469	
4,035.4	3,987.7	3,970.9	3,969.4	12.4	1.7	115.16	348.1	453.4	581.8	568.4	13.45	43.249	
4,100.0	4,050.9	4,032.5	4,031.0	12.7	1.8	116.38	347.5	452.1	586.5	572.9	13.68	42.890	
4,133.8	4,084.0	4,064.4	4,062.9	12.9	1.8	117.00	347.2	451.5	589.2	575.4	13.79	42.722	
4,200.0	4,148.7	4,128.3	4,126.7	13.2	1.8	118.20	346.8	450.5	594.8	580.8	14.02	42.438	
4,232.3	4,180.2	4,160.3	4,158.8	13.3	1.8	118.79	346.7	450.0	597.6	583.4	14.12	42.313	
4,300.0	4,246.5	4,227.0	4,225.5	13.6	1.8	120.00	346.4	448.9	603.6	589.2	14.35	42.074	
4,330.7	4,276.5	4,257.0	4,255.4	13.7	1.8	120.53	346.4	448.5	606.4	591.9	14.45	41.975	
4,400.0	4,344.3	4,324.8	4,323.2	14.0	1.9	121.70	346.3	447.4	612.9	598.3	14.67	41.779	
4,429.1	4,372.8	4,353.4	4,351.9	14.1	1.9	122.19	346.3	447.0	615.8	601.0	14.76	41.705	
4,500.0	4,442.1	4,422.9	4,421.3	14.5	1.9	123.34	346.4	445.9	622.8	607.8	14.99	41.546	
4,527.5	4,469.1	4,449.8	4,448.2	14.6	1.9	123.78	346.5	445.5	625.6	610.5	15.08	41.491	
4,600.0	4,539.9	4,520.7	4,519.1	14.9	1.9	124.89	346.8	444.5	633.2	617.9	15.31	41.368	
4,626.0	4,565.4	4,546.3	4,544.7	15.0	1.9	125.29	346.9	444.2	635.9	620.5	15.39	41.330	
4,700.0	4,637.8	4,618.7	4,617.1	15.3	1.9	126.38	347.4	443.2	644.0	628.3	15.62	41.237	
4,724.4	4,661.6	4,642.2	4,640.6	15.4	1.9	126.72	347.6	442.9	646.7	631.0	15.69	41.211	
4,800.0	4,735.6	4,715.3	4,713.7	15.8	1.9	127.77	348.3	442.2	655.3	639.4	15.92	41.154	
4,822.8	4,757.9	4,737.7	4,736.1	15.9	2.0	128.08	348.5	442.0	658.0	642.0	15.99	41.142	
4,900.0	4,833.4	4,813.4	4,811.8	16.2	2.0	129.13	349.2	441.3	667.2	650.9	16.23	41.116	
4,921.2	4,854.2	4,834.0	4,832.4	16.3	2.0	129.40	349.4	441.1	669.7	653.4	16.29	41.113	
5,000.0	4,931.2	4,910.2	4,908.6	16.6	2.0	130.42	350.0	440.4	679.5	662.9	16.53	41.116	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,019.7	4,950.5	4,929.4	4,927.8	16.7	2.0	130.67	350.2	440.3	681.9	665.3	16.58	41.121		
5,100.0	5,029.0	5,007.5	5,005.8	17.1	2.0	131.68	350.8	439.7	692.2	675.4	16.82	41.154		
5,118.1	5,046.7	5,024.9	5,023.3	17.1	2.0	131.90	350.9	439.5	694.6	677.7	16.87	41.165		
5,200.0	5,126.8	5,103.9	5,102.3	17.5	2.0	132.89	351.3	439.0	705.5	688.4	17.11	41.230		
5,216.5	5,143.0	5,120.1	5,118.5	17.6	2.0	133.09	351.3	438.9	707.7	690.6	17.16	41.246		
5,300.0	5,224.7	5,202.2	5,200.5	17.9	2.0	134.10	351.6	438.3	719.2	701.8	17.40	41.339		
5,314.9	5,239.3	5,216.8	5,215.1	18.0	2.0	134.27	351.7	438.2	721.2	703.8	17.44	41.357		
5,400.0	5,322.5	5,299.9	5,298.2	18.4	2.1	135.26	351.9	437.5	733.2	715.5	17.68	41.470		
5,413.4	5,335.6	5,312.9	5,311.3	18.4	2.1	135.41	351.9	437.4	735.0	717.3	17.72	41.490		
5,500.0	5,420.3	5,397.2	5,395.6	18.8	2.1	136.40	351.9	436.7	747.5	729.5	17.96	41.629		
5,511.8	5,431.8	5,408.7	5,407.0	18.9	2.1	136.53	351.9	436.6	749.2	731.2	17.99	41.650		
5,600.0	5,518.1	5,494.2	5,492.5	19.3	2.1	137.51	351.7	435.8	762.2	743.9	18.22	41.821		
5,610.2	5,528.1	5,504.1	5,502.5	19.3	2.1	137.62	351.6	435.7	763.7	745.4	18.25	41.842		
5,700.0	5,615.9	5,591.5	5,589.8	19.7	2.2	138.61	351.0	434.7	777.2	758.8	18.49	42.047		
5,708.6	5,624.4	5,600.0	5,598.3	19.7	2.2	138.71	350.9	434.5	778.6	760.1	18.51	42.068		
5,800.0	5,713.7	5,688.1	5,686.4	20.1	2.2	139.72	349.7	433.2	792.7	774.0	18.74	42.307		
5,807.1	5,720.7	5,694.9	5,693.2	20.2	2.2	139.80	349.6	433.1	793.8	775.0	18.75	42.327		
5,900.0	5,811.6	5,784.5	5,782.8	20.6	2.2	140.79	348.2	431.9	808.6	789.6	18.99	42.588		
5,905.5	5,816.9	5,789.8	5,788.1	20.6	2.2	140.85	348.2	431.8	809.5	790.5	19.00	42.604		
6,000.0	5,909.4	5,881.0	5,879.4	21.0	2.3	141.76	347.5	431.2	824.9	805.6	19.24	42.870		
6,003.9	5,913.2	5,884.8	5,883.1	21.0	2.3	141.79	347.4	431.2	825.5	806.3	19.25	42.881		
6,053.2	5,961.4	5,932.5	5,930.8	21.3	2.3	142.23	347.3	431.1	833.7	814.3	19.38	43.026		
6,100.0	6,007.3	5,977.8	5,976.1	21.4	2.3	142.72	347.2	431.0	841.2	821.7	19.44	43.274		
6,102.3	6,009.6	5,980.1	5,978.4	21.5	2.3	142.74	347.2	431.0	841.5	822.1	19.44	43.288		
6,200.0	6,105.7	6,076.3	6,074.6	21.8	2.3	143.59	347.1	431.1	855.4	835.9	19.53	43.791		
6,200.8	6,106.5	6,077.1	6,075.4	21.8	2.3	143.60	347.1	431.1	855.5	836.0	19.53	43.795		
6,299.2	6,203.9	6,174.3	6,172.6	22.0	2.3	144.27	347.0	431.3	866.8	847.2	19.62	44.173		
6,300.0	6,204.7	6,175.1	6,173.4	22.0	2.3	144.27	347.0	431.3	866.9	847.3	19.62	44.175		
6,397.6	6,301.8	6,271.4	6,269.7	22.3	2.3	144.76	346.9	431.4	875.5	855.8	19.71	44.418		
6,400.0	6,304.2	6,273.8	6,272.1	22.3	2.3	144.77	346.9	431.5	875.7	856.0	19.71	44.421		
6,496.0	6,400.0	6,371.4	6,369.7	22.4	2.3	145.09	346.9	431.6	881.5	861.7	19.80	44.519		
6,500.0	6,403.9	6,375.5	6,373.8	22.5	2.3	145.10	346.9	431.6	881.7	861.9	19.80	44.519		
6,594.5	6,498.3	6,470.6	6,468.9	22.6	2.3	145.26	347.0	431.7	884.5	864.6	19.91	44.433		
6,600.0	6,503.8	6,476.1	6,474.4	22.6	2.3	145.26	347.0	431.7	884.6	864.6	19.91	44.422		
6,653.0	6,556.8	6,529.2	6,527.5	22.7	2.3	130.99	347.1	431.7	884.9	865.0	19.97	44.306		
6,692.9	6,596.7	6,569.2	6,567.5	22.7	2.3	130.99	347.1	431.7	884.9	864.9	20.04	44.159		
6,706.0	6,609.8	6,582.3	6,580.6	22.7	2.3	130.99	347.1	431.6	884.9	864.8	20.06	44.112		
6,750.0	6,653.8	6,627.2	6,625.5	22.8	2.3	-49.13	347.1	431.6	883.9	863.8	20.10	43.967		
6,791.3	6,695.0	6,669.7	6,668.0	22.8	2.3	-49.47	347.1	431.4	881.4	861.2	20.18	43.680		
6,800.0	6,703.6	6,678.5	6,676.8	22.8	2.3	-49.57	347.1	431.4	880.7	860.5	20.20	43.596		
6,850.0	6,752.9	6,727.8	6,726.1	22.8	2.3	-50.32	347.2	431.2	875.1	854.7	20.34	43.018		
6,889.7	6,791.6	6,765.6	6,763.9	22.7	2.3	-51.12	347.2	431.0	869.2	848.7	20.48	42.442		
6,900.0	6,801.5	6,775.2	6,773.5	22.7	2.3	-51.36	347.2	431.0	867.4	846.9	20.52	42.272		
6,950.0	6,849.1	6,822.8	6,821.1	22.6	2.3	-52.73	347.1	430.8	857.8	837.1	20.73	41.382		
6,988.2	6,884.8	6,859.1	6,857.4	22.5	2.3	-54.02	347.1	430.6	849.1	828.2	20.90	40.624		
7,000.0	6,895.7	6,870.3	6,868.5	22.5	2.3	-54.45	347.0	430.6	846.2	825.3	20.96	40.372		
7,050.0	6,940.8	6,915.7	6,914.0	22.3	2.3	-56.49	347.0	430.3	833.0	811.8	21.20	39.284		
7,086.6	6,972.8	6,947.2	6,945.4	22.1	2.4	-58.15	346.9	430.1	822.4	801.0	21.38	38.464		
7,100.0	6,984.3	6,958.4	6,956.7	22.1	2.4	-58.80	346.9	430.1	818.3	796.8	21.45	38.157		
7,150.0	7,025.9	7,000.0	6,998.3	21.9	2.4	-61.43	346.8	429.9	802.5	780.8	21.68	37.017		
7,185.0	7,053.9	7,028.3	7,026.6	21.7	2.4	-63.45	346.8	429.8	790.9	769.0	21.83	36.232		
7,200.0	7,065.6	7,040.3	7,038.6	21.7	2.4	-64.36	346.8	429.7	785.8	763.9	21.89	35.898		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT BROWN 30-31 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,250.0	7,103.0	7,078.8	7,077.1	21.4	2.4	-67.52	346.8	429.5	768.5	746.5	22.06	34.839	
7,283.4	7,126.7	7,103.0	7,101.3	21.2	2.4	-69.72	346.8	429.4	756.9	734.8	22.14	34.186	
7,300.0	7,138.0	7,114.0	7,112.3	21.2	2.4	-70.79	346.8	429.3	751.2	729.0	22.17	33.884	
7,350.0	7,170.5	7,145.4	7,143.7	20.9	2.4	-74.03	346.8	429.1	734.1	711.9	22.21	33.058	
7,381.9	7,189.8	7,164.0	7,162.3	20.8	2.4	-76.08	346.9	429.1	723.7	701.5	22.20	32.600	
7,400.0	7,200.2	7,174.2	7,172.5	20.7	2.4	-77.22	346.9	429.0	718.0	695.8	22.18	32.367	
7,450.0	7,227.0	7,200.0	7,198.3	20.4	2.4	-80.24	346.9	429.0	703.1	681.0	22.10	31.811	
7,480.3	7,241.9	7,200.0	7,198.3	20.3	2.4	-80.90	346.9	429.0	695.2	673.2	22.01	31.580	
7,500.0	7,250.9	7,200.0	7,198.3	20.2	2.4	-81.27	346.9	429.0	690.5	668.6	21.95	31.459	
7,550.0	7,271.6	7,200.0	7,198.3	20.0	2.4	-82.05	346.9	429.0	680.9	659.0	21.80	31.229	
7,578.7	7,282.0	7,200.0	7,198.3	19.9	2.4	-82.39	346.9	429.0	676.7	654.9	21.73	31.144	
7,600.0	7,289.1	7,200.0	7,198.3	19.8	2.4	-82.58	346.9	429.0	674.3	652.6	21.67	31.116 SF	
7,650.0	7,303.3	7,200.0	7,198.3	19.6	2.4	-82.85	346.9	429.0	670.9	649.3	21.56	31.117	
7,676.4	7,309.4	7,200.0	7,198.3	19.5	2.4	-82.89	346.9	429.0	670.4	648.9	21.52	31.154	
7,677.1	7,309.5	7,200.0	7,198.3	19.5	2.4	-82.89	346.9	429.0	670.4	648.9	21.52	31.155	
7,700.0	7,314.1	7,200.0	7,198.3	19.5	2.4	-82.86	346.9	429.0	670.8	649.3	21.48	31.224	
7,750.0	7,321.4	7,200.0	7,198.3	19.4	2.4	-82.60	346.9	429.0	674.0	652.5	21.44	31.431	
7,775.6	7,323.9	7,200.0	7,198.3	19.3	2.4	-82.37	346.9	429.0	676.9	655.4	21.44	31.564	
7,800.0	7,325.3	7,200.0	7,198.3	19.3	2.4	-82.09	346.9	429.0	680.4	659.0	21.45	31.726	
7,832.0	7,326.0	7,200.0	7,198.3	19.3	2.4	-81.63	346.9	429.0	686.1	664.7	21.47	31.956	
7,874.0	7,325.9	7,200.0	7,198.3	19.3	2.4	-81.63	346.9	429.0	695.7	674.2	21.52	32.333	
7,900.0	7,325.9	7,200.0	7,198.3	19.3	2.4	-81.63	346.9	429.0	702.8	681.3	21.55	32.620	
7,972.4	7,325.8	7,200.0	7,198.3	19.4	2.4	-81.63	346.9	429.0	727.2	705.5	21.74	33.449	
8,000.0	7,325.8	7,200.0	7,198.3	19.5	2.4	-81.63	346.9	429.0	738.2	716.3	21.82	33.836	
8,070.8	7,325.7	7,200.0	7,198.3	19.8	2.4	-81.63	346.9	429.0	770.1	748.0	22.13	34.791	
8,100.0	7,325.6	7,200.0	7,198.3	19.9	2.4	-81.63	346.9	429.0	784.7	762.4	22.27	35.242	
8,169.3	7,325.5	7,200.0	7,198.3	20.3	2.4	-81.63	346.9	429.0	822.6	799.9	22.70	36.243	
8,200.0	7,325.5	7,200.0	7,198.3	20.5	2.4	-81.63	346.9	429.0	840.6	817.7	22.89	36.731	
8,267.7	7,325.4	7,200.0	7,198.3	21.1	2.4	-81.63	346.9	429.0	882.9	859.5	23.41	37.714	
8,300.0	7,325.3	7,200.0	7,198.3	21.3	2.4	-81.63	346.9	429.0	904.2	880.5	23.66	38.214	
8,366.1	7,325.2	7,200.0	7,198.3	21.9	2.4	-81.63	346.9	429.0	949.7	925.4	24.27	39.137	
8,400.0	7,325.2	7,200.0	7,198.3	22.3	2.4	-81.63	346.9	429.0	973.9	949.3	24.57	39.630	
8,464.5	7,325.1	7,200.0	7,198.3	22.9	2.4	-81.63	346.9	429.0	1,021.6	996.3	25.24	40.470	
8,500.0	7,325.1	7,200.0	7,198.3	23.3	2.4	-81.63	346.9	429.0	1,048.5	1,022.9	25.61	40.943	
8,563.0	7,325.0	7,200.0	7,198.3	24.0	2.4	-81.63	346.9	429.0	1,097.6	1,071.2	26.33	41.689	
8,600.0	7,324.9	7,200.0	7,198.3	24.5	2.4	-81.63	346.9	429.0	1,127.1	1,100.3	26.75	42.133	
8,661.4	7,324.8	7,200.0	7,198.3	25.2	2.4	-81.63	346.9	429.0	1,176.9	1,149.4	27.51	42.786	
8,700.0	7,324.8	7,200.0	7,198.3	25.7	2.4	-81.63	346.9	429.0	1,208.8	1,180.8	27.98	43.198	
8,759.8	7,324.7	7,200.0	7,198.3	26.5	2.4	-81.63	346.9	429.0	1,258.9	1,230.2	28.77	43.763	
8,800.0	7,324.6	7,200.0	7,198.3	27.1	2.4	-81.63	346.9	429.0	1,293.1	1,263.8	29.29	44.142	
8,858.2	7,324.5	7,200.0	7,198.3	27.9	2.4	-81.63	346.9	429.0	1,343.2	1,313.1	30.10	44.628	
8,900.0	7,324.5	7,200.0	7,198.3	28.4	2.4	-81.63	346.9	429.0	1,379.5	1,348.8	30.67	44.973	
8,956.7	7,324.4	7,200.0	7,198.3	29.3	2.4	-81.63	346.9	429.0	1,429.2	1,397.7	31.49	45.390	
9,000.0	7,324.3	7,200.0	7,198.3	29.9	2.4	-81.63	346.9	429.0	1,467.6	1,435.5	32.11	45.704	
9,055.1	7,324.3	7,200.0	7,198.3	30.7	2.4	-81.63	346.9	429.0	1,516.8	1,483.8	32.93	46.060	
9,100.0	7,324.2	7,200.0	7,198.3	31.4	2.4	-81.63	346.9	429.0	1,557.2	1,523.6	33.60	46.346	
9,153.5	7,324.1	7,200.0	7,198.3	32.2	2.4	-81.63	346.9	429.0	1,605.6	1,571.2	34.42	46.649	
9,200.0	7,324.0	7,200.0	7,198.3	33.0	2.4	-81.62	346.9	429.0	1,647.9	1,612.8	35.13	46.909	
9,251.9	7,324.0	7,200.0	7,198.3	33.8	2.4	-81.62	346.9	429.0	1,695.5	1,659.5	35.95	47.168	
9,300.0	7,323.9	7,200.0	7,198.3	34.5	2.4	-81.62	346.9	429.0	1,739.7	1,703.0	36.70	47.404	
9,350.4	7,323.8	7,200.0	7,198.3	35.4	2.4	-81.62	346.9	429.0	1,786.3	1,748.8	37.51	47.626	
9,400.0	7,323.7	7,200.0	7,198.3	36.2	2.4	-81.62	346.9	429.0	1,832.3	1,794.0	38.30	47.841	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT BROWN 30-31 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,448.8	7,323.7	7,200.0	7,198.3	37.0	2.4	-81.62	346.9	429.0	1,877.8	1,838.7	39.10	48.031	
9,500.0	7,323.6	7,200.0	7,198.3	37.8	2.4	-81.62	346.9	429.0	1,925.7	1,885.8	39.93	48.227	
9,547.2	7,323.5	7,200.0	7,198.3	38.6	2.4	-81.62	346.9	429.0	1,970.0	1,929.3	40.71	48.390	
9,600.0	7,323.5	7,200.0	7,198.3	39.5	2.4	-81.62	346.9	429.0	2,019.7	1,978.1	41.58	48.568	
9,645.6	7,323.4	7,200.0	7,198.3	40.2	2.4	-81.62	346.9	429.0	2,062.8	2,020.5	42.35	48.708	
9,700.0	7,323.3	7,200.0	7,198.3	41.2	2.4	-81.62	346.9	429.0	2,114.3	2,071.0	43.26	48.872	
9,744.1	7,323.2	7,200.0	7,198.3	41.9	2.4	-81.62	346.9	429.0	2,156.1	2,112.1	44.01	48.993	
9,800.0	7,323.2	7,200.0	7,198.3	42.9	2.4	-81.62	346.9	429.0	2,209.3	2,164.3	44.96	49.143	
9,842.5	7,323.1	7,200.0	7,198.3	43.6	2.4	-81.62	346.9	429.0	2,249.8	2,204.1	45.68	49.247	
9,900.0	7,323.0	7,200.0	7,198.3	44.6	2.4	-81.62	346.9	429.0	2,304.8	2,258.1	46.67	49.385	
9,940.9	7,322.9	7,200.0	7,198.3	45.3	2.4	-81.62	346.9	429.0	2,343.9	2,296.6	47.38	49.475	
10,000.0	7,322.9	7,200.0	7,198.3	46.3	2.4	-81.62	346.9	429.0	2,400.6	2,352.2	48.40	49.602	
10,039.3	7,322.8	7,200.0	7,198.3	47.0	2.4	-81.62	346.9	429.0	2,438.4	2,389.3	49.08	49.680	
10,100.0	7,322.7	7,200.0	7,198.3	48.1	2.4	-81.62	346.9	429.0	2,496.7	2,446.6	50.14	49.797	
10,137.8	7,322.6	7,200.0	7,198.3	48.8	2.4	-81.62	346.9	429.0	2,533.1	2,482.3	50.80	49.865	
10,200.0	7,322.6	7,200.0	7,198.3	49.9	2.4	-81.62	346.9	429.0	2,593.2	2,541.3	51.89	49.974	
10,236.2	7,322.5	7,200.0	7,198.3	50.5	2.4	-81.62	346.9	429.0	2,628.2	2,575.6	52.53	50.032	
10,300.0	7,322.4	7,200.0	7,198.3	51.6	2.4	-81.62	346.9	429.0	2,689.9	2,636.2	53.65	50.133	
10,334.6	7,322.4	7,200.0	7,198.3	52.3	2.4	-81.62	346.9	429.0	2,723.4	2,669.2	54.27	50.184	
10,400.0	7,322.3	7,200.0	7,198.3	53.4	2.4	-81.61	346.9	429.0	2,786.8	2,731.4	55.43	50.278	
10,433.0	7,322.2	7,200.0	7,198.3	54.0	2.4	-81.61	346.9	429.0	2,818.9	2,762.9	56.02	50.322	
10,500.0	7,322.1	7,200.0	7,198.3	55.2	2.4	-81.61	346.9	429.0	2,884.0	2,826.8	57.21	50.410	
10,531.5	7,322.1	7,200.0	7,198.3	55.8	2.4	-81.61	346.9	429.0	2,914.6	2,856.8	57.77	50.449	
10,600.0	7,321.9	7,200.0	7,198.3	57.0	2.4	-81.61	346.9	429.0	2,981.3	2,922.3	59.00	50.531	
10,629.9	7,321.9	7,200.0	7,198.3	57.6	2.4	-81.61	346.9	429.0	3,010.4	2,950.9	59.54	50.564	
10,700.0	7,321.8	7,200.0	7,198.3	58.8	2.4	-81.61	346.9	429.0	3,078.8	3,018.0	60.80	50.641	
10,728.3	7,321.8	7,200.0	7,198.3	59.4	2.4	-81.61	346.9	429.0	3,106.5	3,045.1	61.31	50.670	
10,800.0	7,321.6	7,200.0	7,198.3	60.7	2.4	-81.61	346.9	429.0	3,176.5	3,113.9	62.60	50.742	
10,826.7	7,321.6	7,200.0	7,198.3	61.1	2.4	-81.61	346.9	429.0	3,202.6	3,139.5	63.09	50.767	
10,900.0	7,321.5	7,200.0	7,198.3	62.5	2.4	-81.61	346.9	429.0	3,274.3	3,209.9	64.41	50.834	
10,925.2	7,321.4	7,200.0	7,198.3	62.9	2.4	-81.61	346.9	429.0	3,298.9	3,234.0	64.87	50.856	
11,000.0	7,321.3	7,200.0	7,198.3	64.3	2.4	-81.61	346.9	429.0	3,372.2	3,306.0	66.23	50.920	
11,023.6	7,321.3	7,200.0	7,198.3	64.7	2.4	-81.61	346.9	429.0	3,395.3	3,328.7	66.66	50.939	
11,100.0	7,321.2	7,200.0	7,198.3	66.1	2.4	-81.61	346.9	429.0	3,470.3	3,402.2	68.05	50.999	
11,122.0	7,321.1	7,200.0	7,198.3	66.5	2.4	-81.61	346.9	429.0	3,491.9	3,423.4	68.45	51.015	
11,200.0	7,321.0	7,200.0	7,198.3	68.0	2.4	-81.60	346.9	429.0	3,568.4	3,498.5	69.87	51.072	
11,220.4	7,321.0	7,200.0	7,198.3	68.4	2.4	-81.60	346.9	429.0	3,588.5	3,518.2	70.24	51.086	
11,300.0	7,320.9	7,200.0	7,198.3	69.8	2.4	-81.60	346.9	429.0	3,666.7	3,595.0	71.70	51.139	
11,318.9	7,320.8	7,200.0	7,198.3	70.2	2.4	-81.60	346.9	429.0	3,685.2	3,613.2	72.05	51.151	
11,400.0	7,320.7	7,200.0	7,198.3	71.7	2.4	-81.60	346.9	429.0	3,765.0	3,691.5	73.53	51.202	
11,417.3	7,320.7	7,200.0	7,198.3	72.0	2.4	-81.60	346.9	429.0	3,782.0	3,708.2	73.85	51.213	
11,500.0	7,320.6	7,200.0	7,198.3	73.5	2.4	-81.60	346.9	429.0	3,863.4	3,788.1	75.37	51.261	
11,515.7	7,320.5	7,200.0	7,198.3	73.8	2.4	-81.60	346.9	429.0	3,878.9	3,803.3	75.66	51.269	
11,600.0	7,320.4	7,200.0	7,198.3	75.4	2.4	-81.60	346.9	429.0	3,962.0	3,884.8	77.21	51.315	
11,614.1	7,320.4	7,200.0	7,198.3	75.6	2.4	-81.60	346.9	429.0	3,975.9	3,898.4	77.47	51.323	
11,700.0	7,320.2	7,200.0	7,198.3	77.2	2.4	-81.60	346.9	429.0	4,060.5	3,981.5	79.05	51.366	
11,712.6	7,320.2	7,200.0	7,198.3	77.5	2.4	-81.60	346.9	429.0	4,072.9	3,993.7	79.28	51.372	
11,800.0	7,320.1	7,200.0	7,198.3	79.1	2.4	-81.59	346.9	429.0	4,159.2	4,078.3	80.90	51.414	
11,811.0	7,320.1	7,200.0	7,198.3	79.3	2.4	-81.59	346.9	429.0	4,170.1	4,089.0	81.06	51.446	
11,849.2	7,320.0	7,200.0	7,198.3	79.8	2.4	-81.59	346.9	429.0	4,207.8	4,126.2	81.62	51.555	
11,849.6	7,320.0	7,200.0	7,198.3	79.8	2.4	-81.59	346.9	429.0	4,208.2	4,126.5	81.62	51.557	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 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	143.85	-2,382.1	1,740.2	2,950.1				
98.4	98.4	149.7	149.6	0.1	0.1	143.86	-2,380.6	1,738.5	2,948.7	2,948.5	0.22	N/A	
100.0	100.0	151.5	151.5	0.1	0.1	143.86	-2,380.6	1,738.4	2,948.6	2,948.4	0.22	N/A	
196.8	196.8	257.1	257.1	0.3	0.3	143.87	-2,378.7	1,736.5	2,946.1	2,945.5	0.58	5,117.247	
200.0	200.0	260.4	260.3	0.3	0.3	143.87	-2,378.6	1,736.4	2,946.0	2,945.5	0.59	5,029.776	
295.3	295.3	355.8	355.7	0.5	0.4	143.88	-2,376.8	1,734.4	2,943.4	2,942.6	0.87	3,364.610	
300.0	300.0	360.5	360.4	0.5	0.4	143.88	-2,376.8	1,734.3	2,943.3	2,942.4	0.89	3,311.858	
393.7	393.7	447.8	447.7	0.7	0.4	143.89	-2,375.1	1,732.7	2,940.9	2,939.7	1.16	2,543.293	
400.0	400.0	453.4	453.3	0.8	0.4	143.89	-2,375.0	1,732.5	2,940.7	2,939.5	1.17	2,505.052	
492.1	492.1	539.6	539.4	1.0	0.5	143.90	-2,373.7	1,731.0	2,938.6	2,937.1	1.43	2,053.449	
500.0	500.0	547.3	547.2	1.0	0.5	143.90	-2,373.6	1,730.9	2,938.4	2,936.9	1.45	2,022.277	
590.5	590.5	635.0	634.9	1.2	0.5	143.91	-2,372.4	1,729.2	2,936.4	2,934.7	1.70	1,724.324	
600.0	600.0	644.0	643.8	1.2	0.5	143.91	-2,372.3	1,729.1	2,936.2	2,934.4	1.73	1,698.600	
689.0	689.0	728.2	728.0	1.4	0.6	143.93	-2,371.4	1,727.3	2,934.4	2,932.4	1.97	1,489.829	
700.0	700.0	738.7	738.5	1.4	0.6	143.93	-2,371.3	1,727.1	2,934.1	2,932.1	2.00	1,467.598	
787.4	787.4	823.9	823.7	1.6	0.6	143.95	-2,370.4	1,725.5	2,932.5	2,930.2	2.24	1,311.973	
800.0	800.0	837.0	836.8	1.7	0.6	143.95	-2,370.3	1,725.3	2,932.2	2,930.0	2.27	1,292.085	
885.8	885.8	925.8	925.5	1.9	0.7	143.97	-2,369.3	1,723.6	2,930.6	2,928.1	2.50	1,171.502	
900.0	900.0	940.2	940.0	1.9	0.7	143.97	-2,369.2	1,723.3	2,930.3	2,927.7	2.54	1,153.876	
984.2	984.2	1,026.1	1,025.8	2.1	0.7	143.99	-2,368.4	1,721.4	2,928.6	2,925.8	2.76	1,059.280	
1,000.0	1,000.0	1,042.1	1,041.9	2.1	0.7	143.99	-2,368.3	1,721.1	2,928.2	2,925.4	2.81	1,043.358	
1,082.7	1,082.7	1,124.3	1,124.0	2.3	0.8	144.01	-2,367.5	1,719.3	2,926.5	2,923.5	3.03	967.383	
1,100.0	1,100.0	1,140.6	1,140.3	2.3	0.8	144.02	-2,367.3	1,718.9	2,926.1	2,923.1	3.07	953.008	
1,181.1	1,181.1	1,216.1	1,215.8	2.5	0.8	144.04	-2,366.7	1,717.3	2,924.6	2,921.3	3.28	891.232	
1,200.0	1,200.0	1,233.1	1,232.7	2.6	0.8	144.04	-2,366.6	1,716.9	2,924.2	2,920.9	3.33	878.144	
1,279.5	1,279.5	1,304.9	1,304.5	2.7	0.8	144.06	-2,366.2	1,715.4	2,922.9	2,919.4	3.53	827.019	
1,300.0	1,300.0	1,325.5	1,325.1	2.8	0.8	144.07	-2,366.2	1,715.0	2,922.6	2,919.0	3.59	814.692	
1,377.9	1,377.9	1,404.1	1,403.7	3.0	0.9	144.09	-2,365.8	1,713.4	2,921.4	2,917.6	3.79	770.899	
1,400.0	1,400.0	1,427.6	1,427.3	3.0	0.9	144.09	-2,365.7	1,712.9	2,921.1	2,917.2	3.85	759.242	
1,450.0	1,450.0	1,481.1	1,480.7	3.1	0.9	144.11	-2,365.4	1,711.9	2,920.3	2,916.3	3.98	734.049	
1,476.4	1,476.4	1,509.0	1,508.6	3.2	0.9	158.41	-2,365.2	1,711.3	2,919.9	2,915.9	4.07	716.841	
1,500.0	1,500.0	1,533.3	1,532.9	3.2	0.9	158.42	-2,365.0	1,710.8	2,919.8	2,915.7	4.13	706.167	
1,505.0	1,505.0	1,538.5	1,538.1	3.2	0.9	158.42	-2,365.0	1,710.7	2,919.8	2,915.7	4.15	703.962	
1,574.8	1,574.8	1,611.1	1,610.6	3.4	1.0	158.45	-2,364.6	1,709.0	2,920.6	2,916.2	4.33	674.534	
1,600.0	1,599.9	1,638.4	1,638.0	3.5	1.0	158.47	-2,364.5	1,708.3	2,921.2	2,916.8	4.40	664.573	
1,673.2	1,673.0	1,716.6	1,716.2	3.6	1.0	158.51	-2,364.0	1,706.2	2,924.1	2,919.6	4.59	637.363	
1,700.0	1,699.7	1,743.8	1,743.3	3.7	1.0	158.53	-2,363.8	1,705.4	2,925.6	2,921.0	4.66	628.170	
1,771.6	1,771.0	1,814.3	1,813.8	3.9	1.0	158.57	-2,363.4	1,703.5	2,930.7	2,925.9	4.85	604.885	
1,800.0	1,799.1	1,839.5	1,839.0	3.9	1.0	158.58	-2,363.2	1,702.8	2,933.2	2,928.3	4.92	596.398	
1,870.1	1,868.6	1,901.9	1,901.4	4.1	1.1	158.60	-2,362.9	1,701.3	2,940.7	2,935.6	5.10	576.261	
1,900.0	1,898.2	1,933.5	1,933.0	4.2	1.1	158.62	-2,362.7	1,700.5	2,944.4	2,939.2	5.18	568.093	
1,968.5	1,965.7	2,000.0	1,999.4	4.3	1.1	158.65	-2,362.3	1,698.9	2,953.8	2,948.5	5.37	550.162	
2,000.0	1,996.6	2,030.8	2,030.2	4.4	1.1	158.67	-2,362.1	1,698.2	2,958.7	2,953.3	5.45	542.490	
2,049.8	2,045.4	2,072.1	2,071.5	4.6	1.1	158.67	-2,361.9	1,697.3	2,967.2	2,961.6	5.59	530.881	
2,066.9	2,062.2	2,086.3	2,085.7	4.6	1.1	158.70	-2,361.8	1,697.0	2,970.2	2,964.6	5.64	527.038	
2,100.0	2,094.5	2,117.4	2,116.8	4.7	1.2	158.75	-2,361.7	1,696.4	2,976.2	2,970.5	5.73	519.764	
2,165.3	2,158.5	2,186.4	2,185.8	4.9	1.2	158.87	-2,361.4	1,695.1	2,988.0	2,982.1	5.91	505.437	
2,200.0	2,192.3	2,219.3	2,218.7	5.1	1.2	158.93	-2,361.2	1,694.5	2,994.2	2,988.2	6.01	498.505	
2,263.8	2,254.7	2,275.7	2,275.1	5.3	1.2	159.02	-2,361.0	1,693.4	3,005.7	2,999.5	6.18	486.122	
2,300.0	2,290.2	2,309.4	2,308.7	5.4	1.2	159.08	-2,361.0	1,692.7	3,012.3	3,006.0	6.29	479.185	
2,362.2	2,351.0	2,376.2	2,375.5	5.6	1.2	159.20	-2,360.8	1,691.5	3,023.6	3,017.1	6.47	467.623	
2,400.0	2,388.0	2,413.9	2,413.3	5.8	1.3	159.26	-2,360.6	1,690.7	3,030.4	3,023.8	6.57	460.947	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,460.6	2,447.3	2,467.8	2,467.2	6.0	1.3	159.35	-2,360.4	1,689.7	3,041.4	3,034.7	6.75	450.705		
2,500.0	2,485.8	2,503.5	2,502.8	6.1	1.3	159.41	-2,360.3	1,689.0	3,048.6	3,041.8	6.86	444.338		
2,559.0	2,543.6	2,567.3	2,566.6	6.3	1.3	159.51	-2,360.2	1,687.8	3,059.4	3,052.4	7.04	434.880		
2,600.0	2,583.6	2,610.0	2,609.3	6.5	1.3	159.59	-2,360.0	1,686.9	3,066.8	3,059.7	7.15	428.628		
2,657.5	2,639.8	2,663.3	2,662.6	6.7	1.4	159.67	-2,359.9	1,685.8	3,077.2	3,069.9	7.32	420.222		
2,700.0	2,681.4	2,700.0	2,699.3	6.9	1.4	159.74	-2,359.8	1,685.1	3,085.0	3,077.6	7.45	414.309		
2,755.9	2,736.1	2,749.8	2,749.1	7.1	1.4	159.82	-2,359.7	1,684.2	3,095.3	3,087.7	7.61	406.692		
2,800.0	2,779.2	2,787.0	2,786.3	7.3	1.4	159.88	-2,359.7	1,683.6	3,103.5	3,095.8	7.74	400.970		
2,854.3	2,832.4	2,840.2	2,839.5	7.5	1.4	159.96	-2,359.7	1,682.9	3,113.7	3,105.8	7.90	394.039		
2,900.0	2,877.1	2,887.4	2,886.7	7.7	1.4	160.03	-2,359.6	1,682.2	3,122.3	3,114.2	8.04	388.409		
2,952.7	2,928.7	2,939.8	2,939.0	7.9	1.5	160.11	-2,359.5	1,681.5	3,132.1	3,123.9	8.20	382.145		
3,000.0	2,974.9	2,986.1	2,985.3	8.1	1.5	160.18	-2,359.4	1,680.8	3,140.9	3,132.6	8.34	376.763		
3,051.2	3,024.9	3,035.3	3,034.5	8.3	1.5	160.26	-2,359.4	1,680.0	3,150.5	3,142.0	8.49	371.099		
3,100.0	3,072.7	3,081.8	3,081.1	8.5	1.5	160.33	-2,359.3	1,679.4	3,159.6	3,151.0	8.64	365.896		
3,149.6	3,121.2	3,133.3	3,132.6	8.7	1.5	160.40	-2,359.2	1,678.7	3,168.9	3,160.2	8.79	360.694		
3,200.0	3,170.5	3,188.3	3,187.6	8.9	1.5	160.48	-2,358.9	1,678.2	3,178.3	3,169.4	8.94	355.558		
3,248.0	3,217.5	3,236.7	3,235.9	9.1	1.6	160.54	-2,358.5	1,677.8	3,187.2	3,178.1	9.09	350.776		
3,300.0	3,268.3	3,287.8	3,287.0	9.3	1.6	160.60	-2,358.0	1,677.5	3,196.8	3,187.6	9.25	345.776		
3,346.4	3,313.8	3,338.9	3,338.1	9.5	1.6	160.66	-2,357.4	1,677.2	3,205.4	3,196.0	9.39	341.374		
3,400.0	3,366.1	3,400.2	3,399.4	9.7	1.6	160.74	-2,356.4	1,677.0	3,215.1	3,205.6	9.56	336.435		
3,444.9	3,410.0	3,449.6	3,448.8	9.9	1.6	160.79	-2,355.5	1,676.9	3,223.2	3,213.5	9.69	332.465		
3,500.0	3,464.0	3,509.5	3,508.7	10.2	1.6	160.85	-2,354.1	1,677.0	3,233.0	3,223.1	9.86	327.748		
3,543.3	3,506.3	3,553.5	3,552.6	10.3	1.6	160.89	-2,352.9	1,677.2	3,240.7	3,230.7	10.00	324.166		
3,600.0	3,561.8	3,609.4	3,608.6	10.6	1.6	160.93	-2,351.3	1,677.6	3,250.7	3,240.5	10.17	319.630		
3,641.7	3,602.6	3,645.7	3,644.9	10.8	1.7	160.97	-2,350.3	1,677.7	3,258.1	3,247.8	10.30	316.400		
3,700.0	3,659.6	3,700.0	3,699.1	11.0	1.7	161.02	-2,349.1	1,677.9	3,268.6	3,258.1	10.48	312.007		
3,740.1	3,698.9	3,733.8	3,732.9	11.2	1.7	161.05	-2,348.4	1,678.0	3,275.8	3,265.2	10.60	309.071		
3,800.0	3,757.4	3,790.0	3,789.1	11.4	1.7	161.11	-2,347.3	1,678.0	3,286.7	3,275.9	10.78	304.781		
3,838.6	3,795.1	3,823.4	3,822.5	11.6	1.7	161.14	-2,346.7	1,678.0	3,293.7	3,282.8	10.90	302.112		
3,900.0	3,855.2	3,874.8	3,873.9	11.9	1.7	161.19	-2,345.9	1,678.0	3,305.1	3,294.0	11.09	298.009		
3,937.0	3,891.4	3,906.8	3,905.8	12.0	1.7	161.23	-2,345.5	1,678.0	3,312.0	3,300.8	11.20	295.598		
4,000.0	3,953.0	3,968.2	3,967.3	12.3	1.7	161.29	-2,344.7	1,678.1	3,323.8	3,312.4	11.40	291.561		
4,035.4	3,987.7	4,002.7	4,001.8	12.4	1.7	161.33	-2,344.3	1,678.1	3,330.4	3,318.9	11.51	289.348		
4,100.0	4,050.9	4,064.5	4,063.6	12.7	1.7	161.39	-2,343.6	1,678.1	3,342.5	3,330.8	11.71	285.432		
4,133.8	4,084.0	4,096.9	4,096.0	12.9	1.8	161.43	-2,343.3	1,678.0	3,348.9	3,337.1	11.82	283.430		
4,200.0	4,148.7	4,170.5	4,169.6	13.2	1.8	161.51	-2,342.5	1,677.8	3,361.3	3,349.3	12.02	279.542		
4,232.3	4,180.2	4,205.3	4,204.4	13.3	1.8	161.54	-2,342.0	1,677.8	3,367.3	3,355.2	12.13	277.692		
4,300.0	4,246.5	4,266.0	4,265.1	13.6	1.8	161.61	-2,341.3	1,677.5	3,379.9	3,367.5	12.34	273.998		
4,330.7	4,276.5	4,293.5	4,292.6	13.7	1.8	161.64	-2,341.1	1,677.4	3,385.6	3,373.2	12.43	272.367		
4,400.0	4,344.3	4,352.8	4,351.9	14.0	1.8	161.71	-2,340.7	1,677.0	3,398.7	3,386.0	12.64	268.794		
4,429.1	4,372.8	4,377.6	4,376.7	14.1	1.8	161.74	-2,340.6	1,676.8	3,404.2	3,391.5	12.73	267.332		
4,500.0	4,442.1	4,437.7	4,436.8	14.5	1.9	161.81	-2,340.4	1,676.4	3,417.9	3,404.9	12.95	263.927		
4,527.5	4,469.1	4,461.1	4,460.1	14.6	1.9	161.84	-2,340.4	1,676.2	3,423.2	3,410.2	13.03	262.648		
4,600.0	4,539.9	4,500.0	4,499.1	14.9	1.9	161.88	-2,340.5	1,676.0	3,437.6	3,424.3	13.25	259.489		
4,626.0	4,565.4	4,532.9	4,531.9	15.0	1.9	161.92	-2,340.6	1,675.9	3,442.7	3,429.4	13.32	258.379		
4,700.0	4,637.8	4,579.1	4,578.2	15.3	1.9	161.98	-2,341.1	1,675.8	3,457.9	3,444.4	13.54	255.432		
4,724.4	4,661.6	4,600.0	4,599.1	15.4	1.9	162.01	-2,341.4	1,675.8	3,463.1	3,449.5	13.61	254.483		
4,800.0	4,735.6	4,666.5	4,665.6	15.8	1.9	162.09	-2,342.6	1,675.9	3,479.2	3,465.3	13.82	251.693		
4,822.8	4,757.9	4,689.4	4,688.4	15.9	1.9	162.11	-2,342.9	1,675.9	3,484.0	3,470.1	13.89	250.865		
4,900.0	4,833.4	4,779.1	4,778.1	16.2	1.9	162.22	-2,344.2	1,676.0	3,500.3	3,486.2	14.10	248.161		
4,921.2	4,854.2	4,803.8	4,802.9	16.3	1.9	162.25	-2,344.5	1,675.9	3,504.7	3,490.5	14.16	247.427		
5,000.0	4,931.2	4,886.7	4,885.7	16.6	1.9	162.35	-2,345.6	1,675.6	3,521.0	3,506.6	14.39	244.710		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,950.5	4,907.4	4,906.4	16.7	1.9	162.38	-2,345.8	1,675.5	3,525.0	3,510.6	14.44	244.039	
5,100.0	5,029.0	4,991.2	4,990.2	17.1	1.9	162.48	-2,346.7	1,675.0	3,541.5	3,526.8	14.68	241.313	
5,118.1	5,046.7	5,009.7	5,008.7	17.1	1.9	162.50	-2,346.9	1,674.9	3,545.1	3,530.4	14.73	240.707	
5,200.0	5,126.8	5,092.1	5,091.1	17.5	1.9	162.60	-2,347.7	1,674.4	3,561.8	3,546.9	14.97	238.008	
5,216.5	5,143.0	5,109.5	5,108.5	17.6	1.9	162.62	-2,347.8	1,674.3	3,565.2	3,550.2	15.01	237.469	
5,300.0	5,224.7	5,200.0	5,199.0	17.9	1.9	162.72	-2,348.4	1,673.9	3,582.0	3,566.8	15.26	234.777	
5,314.9	5,239.3	5,214.5	5,213.5	18.0	1.9	162.74	-2,348.5	1,673.8	3,585.0	3,569.7	15.30	234.302	
5,400.0	5,322.5	5,293.1	5,292.1	18.4	1.9	162.83	-2,349.0	1,673.4	3,602.1	3,586.6	15.55	231.660	
5,413.4	5,335.6	5,305.5	5,304.5	18.4	1.9	162.84	-2,349.0	1,673.4	3,604.8	3,589.3	15.59	231.254	
5,500.0	5,420.3	5,386.8	5,385.8	18.8	2.0	162.93	-2,349.5	1,673.1	3,622.4	3,606.6	15.84	228.693	
5,511.8	5,431.8	5,397.9	5,396.9	18.9	2.0	162.94	-2,349.6	1,673.1	3,624.8	3,608.9	15.87	228.350	
5,600.0	5,518.1	5,494.4	5,493.4	19.3	2.0	163.04	-2,350.0	1,673.0	3,642.6	3,626.5	16.13	225.865	
5,610.2	5,528.1	5,505.8	5,504.8	19.3	2.0	163.05	-2,350.0	1,673.1	3,644.7	3,628.5	16.16	225.579	
5,700.0	5,615.9	5,605.2	5,604.2	19.7	2.0	163.14	-2,349.9	1,673.1	3,662.5	3,646.1	16.42	223.094	
5,708.6	5,624.4	5,612.9	5,611.9	19.7	2.0	163.15	-2,349.9	1,673.0	3,664.2	3,647.8	16.44	222.849	
5,800.0	5,713.7	5,694.3	5,693.3	20.1	2.0	163.23	-2,350.0	1,672.8	3,682.4	3,665.7	16.71	220.323	
5,807.1	5,720.7	5,700.0	5,699.0	20.2	2.0	163.24	-2,350.0	1,672.7	3,683.8	3,667.0	16.73	220.133	
5,900.0	5,811.6	5,779.0	5,778.0	20.6	2.0	163.33	-2,350.5	1,672.3	3,702.5	3,685.5	17.01	217.681	
5,905.5	5,816.9	5,783.6	5,782.6	20.6	2.0	163.33	-2,350.6	1,672.3	3,703.6	3,686.6	17.03	217.539	
6,000.0	5,909.4	5,871.6	5,870.6	21.0	2.0	163.42	-2,351.2	1,672.0	3,722.9	3,705.6	17.30	215.187	
6,003.9	5,913.2	5,875.3	5,874.3	21.0	2.0	163.43	-2,351.3	1,672.0	3,723.7	3,706.4	17.31	215.091	
6,053.2	5,961.4	5,923.5	5,922.5	21.3	2.0	163.47	-2,351.6	1,672.0	3,733.8	3,716.4	17.46	213.909	
6,100.0	6,007.3	5,970.7	5,969.7	21.4	2.0	163.57	-2,351.8	1,672.1	3,743.1	3,725.5	17.54	213.459	
6,102.3	6,009.6	5,973.0	5,972.0	21.5	2.0	163.57	-2,351.8	1,672.1	3,743.5	3,726.0	17.54	213.445	
6,200.0	6,105.7	6,067.1	6,066.1	21.8	2.0	163.74	-2,352.1	1,672.5	3,760.3	3,742.7	17.67	212.829	
6,200.8	6,106.5	6,067.8	6,066.8	21.8	2.0	163.74	-2,352.1	1,672.5	3,760.5	3,742.8	17.67	212.824	
6,299.2	6,203.9	6,162.2	6,161.2	22.0	2.0	163.86	-2,352.2	1,673.4	3,774.3	3,756.5	17.79	212.191	
6,300.0	6,204.7	6,163.0	6,162.0	22.0	2.0	163.86	-2,352.2	1,673.4	3,774.4	3,756.6	17.79	212.186	
6,397.6	6,301.8	6,252.6	6,251.6	22.3	2.0	163.95	-2,352.3	1,674.5	3,785.0	3,767.1	17.89	211.525	
6,400.0	6,304.2	6,254.7	6,253.7	22.3	2.0	163.95	-2,352.3	1,674.5	3,785.2	3,767.4	17.90	211.506	
6,496.0	6,400.0	6,346.2	6,345.2	22.4	2.0	164.00	-2,352.4	1,676.0	3,792.7	3,774.7	17.99	210.786	
6,500.0	6,403.9	6,350.3	6,349.2	22.5	2.0	164.00	-2,352.4	1,676.1	3,793.0	3,775.0	18.00	210.751	
6,594.5	6,498.3	6,444.4	6,443.4	22.6	2.0	164.01	-2,352.2	1,678.3	3,797.2	3,779.1	18.09	209.896	
6,600.0	6,503.8	6,449.7	6,448.7	22.6	2.0	164.01	-2,352.2	1,678.4	3,797.4	3,779.3	18.10	209.836	
6,653.0	6,556.8	6,500.0	6,498.9	22.7	2.0	149.70	-2,351.8	1,679.9	3,798.3	3,780.2	18.15	209.274	
6,692.9	6,596.7	6,537.8	6,536.7	22.7	2.0	149.69	-2,351.7	1,681.0	3,798.8	3,780.5	18.22	208.476	
6,706.0	6,609.8	6,549.9	6,548.8	22.7	2.0	149.68	-2,351.6	1,681.3	3,798.9	3,780.7	18.24	208.218	
6,750.0	6,653.8	6,590.8	6,589.7	22.8	2.0	-30.37	-2,351.7	1,682.1	3,798.2	3,780.0	18.24	208.204	
6,791.3	6,695.0	6,627.9	6,626.8	22.8	2.0	-30.51	-2,351.9	1,682.7	3,795.5	3,777.3	18.26	207.862	
6,800.0	6,703.6	6,635.6	6,634.5	22.8	2.0	-30.55	-2,352.0	1,682.8	3,794.7	3,776.4	18.27	207.725	
6,850.0	6,752.9	6,679.8	6,678.7	22.8	2.0	-30.87	-2,352.5	1,683.1	3,788.3	3,769.9	18.33	206.704	
6,889.7	6,791.6	6,738.0	6,736.9	22.7	2.0	-31.28	-2,353.4	1,683.0	3,781.0	3,762.6	18.40	205.488	
6,900.0	6,801.5	6,761.2	6,760.1	22.7	2.0	-31.41	-2,353.7	1,682.9	3,778.8	3,760.4	18.43	205.062	
6,950.0	6,849.1	6,830.3	6,829.1	22.6	2.0	-32.13	-2,354.4	1,681.9	3,765.9	3,747.4	18.55	203.061	
6,988.2	6,884.8	6,864.9	6,863.8	22.5	2.0	-32.75	-2,354.8	1,681.4	3,754.1	3,735.5	18.63	201.501	
7,000.0	6,895.7	6,875.5	6,874.4	22.5	2.0	-32.97	-2,354.9	1,681.2	3,750.1	3,731.5	18.66	200.981	
7,050.0	6,940.8	6,917.8	6,916.6	22.3	2.0	-34.00	-2,355.4	1,680.4	3,731.7	3,712.9	18.77	198.766	
7,086.6	6,972.8	6,946.2	6,945.0	22.1	2.0	-34.87	-2,355.7	1,680.0	3,716.5	3,697.7	18.86	197.069	
7,100.0	6,984.3	6,956.4	6,955.2	22.1	2.0	-35.22	-2,355.8	1,679.8	3,710.7	3,691.8	18.89	196.404	
7,150.0	7,025.9	6,993.5	6,992.3	21.9	2.0	-36.67	-2,356.3	1,679.3	3,687.2	3,668.2	19.03	193.801	
7,185.0	7,053.9	7,019.1	7,017.9	21.7	2.0	-37.84	-2,356.6	1,679.0	3,669.3	3,650.2	19.13	191.793	
7,200.0	7,065.6	7,029.8	7,028.6	21.7	2.0	-38.38	-2,356.7	1,678.9	3,661.4	3,642.2	19.18	190.872	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,250.0	7,103.0	7,064.4	7,063.2	21.4	2.0	-40.36	-2,357.2	1,678.5	3,633.4	3,614.0	19.37	187.566		
7,283.4	7,126.7	7,086.3	7,085.2	21.2	2.0	-41.85	-2,357.5	1,678.3	3,613.5	3,594.0	19.52	185.131		
7,300.0	7,138.0	7,100.0	7,098.8	21.2	2.0	-42.68	-2,357.6	1,678.2	3,603.3	3,583.7	19.60	183.802		
7,350.0	7,170.5	7,131.8	7,130.6	20.9	2.0	-45.33	-2,358.0	1,677.9	3,571.4	3,551.5	19.88	179.690		
7,381.9	7,189.8	7,152.8	7,151.6	20.8	2.0	-47.24	-2,358.3	1,677.8	3,550.1	3,530.0	20.07	176.869		
7,400.0	7,200.2	7,164.2	7,163.0	20.7	2.0	-48.40	-2,358.4	1,677.7	3,537.7	3,517.5	20.19	175.249		
7,450.0	7,227.0	7,193.5	7,192.3	20.4	2.0	-51.89	-2,358.7	1,677.5	3,502.4	3,481.9	20.51	170.737		
7,480.3	7,241.9	7,200.0	7,198.8	20.3	2.0	-54.04	-2,358.7	1,677.5	3,480.4	3,459.7	20.69	168.232		
7,500.0	7,250.9	7,215.1	7,213.9	20.2	2.0	-55.72	-2,358.9	1,677.4	3,465.8	3,445.0	20.82	166.476		
7,550.0	7,271.6	7,232.8	7,231.6	20.0	2.0	-59.96	-2,359.0	1,677.4	3,428.1	3,407.0	21.08	162.634		
7,578.7	7,282.0	7,241.7	7,240.5	19.9	2.0	-62.57	-2,359.1	1,677.3	3,406.0	3,384.8	21.20	160.669		
7,600.0	7,289.1	7,247.8	7,246.6	19.8	2.0	-64.60	-2,359.2	1,677.3	3,389.4	3,368.2	21.26	159.414		
7,650.0	7,303.3	7,260.1	7,258.9	19.6	2.1	-69.59	-2,359.3	1,677.3	3,350.1	3,328.7	21.34	156.969		
7,677.1	7,309.5	7,265.6	7,264.4	19.5	2.1	-72.43	-2,359.4	1,677.3	3,328.5	3,307.1	21.34	155.942		
7,700.0	7,314.1	7,269.6	7,268.4	19.5	2.1	-74.87	-2,359.4	1,677.3	3,310.2	3,288.9	21.32	155.300		
7,750.0	7,321.4	7,276.2	7,275.0	19.4	2.1	-80.32	-2,359.5	1,677.3	3,270.1	3,248.8	21.22	154.135		
7,775.6	7,323.9	7,278.5	7,277.3	19.3	2.1	-83.14	-2,359.5	1,677.3	3,249.5	3,228.3	21.17	153.504		
7,800.0	7,325.3	7,280.0	7,278.7	19.3	2.1	-85.82	-2,359.5	1,677.3	3,229.8	3,208.7	21.13	152.841		
7,832.0	7,326.0	7,280.8	7,279.6	19.3	2.1	-89.29	-2,359.5	1,677.3	3,204.1	3,183.0	21.14	151.568		
7,874.0	7,325.9	7,281.2	7,280.0	19.3	2.1	-89.30	-2,359.5	1,677.3	3,170.5	3,149.3	21.19	149.634		
7,900.0	7,325.9	7,281.4	7,280.2	19.3	2.1	-89.30	-2,359.5	1,677.3	3,149.8	3,128.6	21.22	148.447		
7,972.4	7,325.8	7,282.0	7,280.8	19.4	2.1	-89.32	-2,359.5	1,677.3	3,092.6	3,071.2	21.42	144.396		
8,000.0	7,325.8	7,282.2	7,281.0	19.5	2.1	-89.33	-2,359.5	1,677.3	3,071.0	3,049.5	21.49	142.881		
8,070.8	7,325.7	7,282.8	7,281.6	19.8	2.1	-89.35	-2,359.6	1,677.3	3,015.9	2,994.1	21.82	138.234		
8,100.0	7,325.6	7,283.0	7,281.8	19.9	2.1	-89.36	-2,359.6	1,677.3	2,993.4	2,971.5	21.95	136.371		
8,169.3	7,325.5	7,283.6	7,282.4	20.3	2.1	-89.37	-2,359.6	1,677.3	2,940.5	2,918.1	22.39	131.358		
8,200.0	7,325.5	7,283.9	7,282.7	20.5	2.1	-89.38	-2,359.6	1,677.3	2,917.2	2,894.7	22.58	129.206		
8,267.7	7,325.4	7,284.5	7,283.3	21.1	2.1	-89.40	-2,359.6	1,677.3	2,866.5	2,843.4	23.11	124.046		
8,300.0	7,325.3	7,284.7	7,283.5	21.3	2.1	-89.41	-2,359.6	1,677.3	2,842.5	2,819.2	23.36	121.678		
8,366.1	7,325.2	7,285.3	7,284.1	21.9	2.1	-89.42	-2,359.6	1,677.3	2,794.0	2,770.0	23.97	116.559		
8,400.0	7,325.2	7,285.6	7,284.4	22.3	2.1	-89.43	-2,359.6	1,677.3	2,769.4	2,745.1	24.28	114.048		
8,464.5	7,325.1	7,286.1	7,284.9	22.9	2.1	-89.45	-2,359.6	1,677.3	2,723.1	2,698.1	24.96	109.114		
8,500.0	7,325.1	7,286.4	7,285.2	23.3	2.1	-89.46	-2,359.6	1,677.3	2,698.0	2,672.7	25.33	106.528		
8,563.0	7,325.0	7,287.0	7,285.8	24.0	2.1	-89.47	-2,359.6	1,677.3	2,654.0	2,627.9	26.05	101.875		
8,600.0	7,324.9	7,287.3	7,286.1	24.5	2.1	-89.48	-2,359.6	1,677.3	2,628.5	2,602.0	26.48	99.272		
8,661.4	7,324.8	7,287.8	7,286.6	25.2	2.1	-89.50	-2,359.6	1,677.3	2,586.8	2,559.5	27.24	94.960		
8,700.0	7,324.8	7,288.2	7,287.0	25.7	2.1	-89.51	-2,359.6	1,677.3	2,560.9	2,533.2	27.72	92.385		
8,759.8	7,324.7	7,288.7	7,287.5	26.5	2.1	-89.53	-2,359.6	1,677.3	2,521.6	2,493.1	28.51	88.441		
8,800.0	7,324.6	7,289.0	7,287.8	27.1	2.1	-89.54	-2,359.6	1,677.3	2,495.6	2,466.6	29.04	85.929		
8,858.2	7,324.5	7,289.5	7,288.3	27.9	2.1	-89.55	-2,359.6	1,677.3	2,458.6	2,428.8	29.85	82.358		
8,900.0	7,324.5	7,289.9	7,288.7	28.4	2.1	-89.56	-2,359.6	1,677.3	2,432.6	2,402.2	30.43	79.932		
8,956.7	7,324.4	7,290.4	7,289.2	29.3	2.1	-89.58	-2,359.6	1,677.3	2,398.0	2,366.8	31.26	76.724		
9,000.0	7,324.3	7,290.8	7,289.6	29.9	2.1	-89.59	-2,359.6	1,677.3	2,372.2	2,340.3	31.88	74.402		
9,055.1	7,324.3	7,291.3	7,290.1	30.7	2.1	-89.60	-2,359.7	1,677.3	2,340.0	2,307.3	32.71	71.538		
9,100.0	7,324.2	7,291.7	7,290.5	31.4	2.1	-89.62	-2,359.7	1,677.3	2,314.5	2,281.1	33.38	69.329		
9,153.5	7,324.1	7,292.1	7,290.9	32.2	2.1	-89.63	-2,359.7	1,677.3	2,284.8	2,250.6	34.21	66.787		
9,200.0	7,324.0	7,292.5	7,291.3	33.0	2.1	-89.64	-2,359.7	1,677.3	2,259.8	2,224.8	34.93	64.697		
9,251.9	7,324.0	7,293.0	7,291.8	33.8	2.1	-89.66	-2,359.7	1,677.3	2,232.6	2,196.8	35.75	62.448		
9,300.0	7,323.9	7,293.4	7,292.2	34.5	2.1	-89.67	-2,359.7	1,677.3	2,208.2	2,171.7	36.51	60.481		
9,350.4	7,323.8	7,293.9	7,292.7	35.4	2.1	-89.68	-2,359.7	1,677.3	2,183.5	2,146.2	37.32	58.500		
9,400.0	7,323.7	7,300.0	7,298.8	36.2	2.1	-89.67	-2,359.8	1,677.3	2,160.0	2,121.9	38.13	56.651		
9,448.8	7,323.7	7,300.0	7,298.8	37.0	2.1	-89.67	-2,359.8	1,677.3	2,137.8	2,098.9	38.93	54.914		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	7,323.6	7,300.0	7,298.8	37.8	2.1	-89.87	-2,359.8	1,677.3	2,115.5	2,075.7	39.77	53.190	
9,547.2	7,323.5	7,300.0	7,298.8	38.6	2.1	-89.87	-2,359.8	1,677.3	2,095.8	2,055.2	40.56	51.671	
9,600.0	7,323.5	7,300.0	7,298.8	39.5	2.1	-89.87	-2,359.8	1,677.3	2,074.8	2,033.4	41.44	50.068	
9,645.6	7,323.4	7,300.0	7,298.8	40.2	2.1	-89.87	-2,359.8	1,677.3	2,057.6	2,015.4	42.21	48.745	
9,700.0	7,323.3	7,300.0	7,298.8	41.2	2.1	-89.87	-2,359.8	1,677.3	2,038.3	1,995.1	43.13	47.258	
9,744.1	7,323.2	7,300.0	7,298.8	41.9	2.1	-89.87	-2,359.8	1,677.3	2,023.5	1,979.6	43.88	46.110	
9,800.0	7,323.2	7,300.0	7,298.8	42.9	2.1	-89.87	-2,359.8	1,677.3	2,006.0	1,961.2	44.84	44.737	
9,842.5	7,323.1	7,300.0	7,298.8	43.6	2.1	-89.87	-2,359.8	1,677.3	1,993.7	1,948.1	45.58	43.745	
9,900.0	7,323.0	7,300.0	7,298.8	44.6	2.1	-89.87	-2,359.8	1,677.3	1,978.3	1,931.8	46.57	42.482	
9,940.9	7,322.9	7,300.0	7,298.8	45.3	2.1	-89.87	-2,359.8	1,677.3	1,968.3	1,921.1	47.28	41.630	
10,000.0	7,322.9	7,300.0	7,298.8	46.3	2.1	-89.87	-2,359.8	1,677.3	1,955.3	1,907.0	48.31	40.475	
10,039.3	7,322.8	7,300.2	7,299.0	47.0	2.1	-89.87	-2,359.8	1,677.3	1,947.6	1,898.6	49.00	39.746	
10,100.0	7,322.7	7,300.9	7,299.6	48.1	2.1	-89.89	-2,359.8	1,677.3	1,937.3	1,887.2	50.07	38.694	
10,137.8	7,322.6	7,301.2	7,300.0	48.8	2.1	-89.90	-2,359.8	1,677.3	1,931.7	1,881.0	50.73	38.075	
10,200.0	7,322.6	7,301.9	7,300.7	49.9	2.1	-89.92	-2,359.8	1,677.3	1,924.2	1,872.4	51.84	37.122	
10,236.2	7,322.5	7,302.2	7,301.0	50.5	2.1	-89.93	-2,359.8	1,677.3	1,920.7	1,868.3	52.48	36.600	
10,300.0	7,322.4	7,302.9	7,301.7	51.6	2.1	-89.95	-2,359.8	1,677.3	1,916.3	1,862.7	53.61	35.742	
10,334.6	7,322.4	7,303.2	7,302.0	52.3	2.1	-89.96	-2,359.8	1,677.3	1,914.8	1,860.5	54.23	35.305	
10,400.0	7,322.3	7,303.8	7,302.6	53.4	2.1	-89.98	-2,359.8	1,677.3	1,913.6	1,858.2	55.40	34.539	
10,402.0	7,322.2	7,303.9	7,302.7	53.5	2.1	-89.98	-2,359.8	1,677.3	1,913.6	1,858.1	55.44	34.516 CC	
10,433.0	7,322.2	7,304.2	7,302.9	54.0	2.1	-89.99	-2,359.8	1,677.3	1,913.8	1,857.8	56.00	34.177 ES	
10,500.0	7,322.1	7,304.8	7,303.6	55.2	2.1	-90.01	-2,359.8	1,677.3	1,916.1	1,858.9	57.20	33.497	
10,531.5	7,322.1	7,305.1	7,303.9	55.8	2.1	-90.02	-2,359.8	1,677.3	1,917.9	1,860.2	57.77	33.199	
10,600.0	7,321.9	7,305.7	7,304.5	57.0	2.1	-90.04	-2,359.8	1,677.3	1,923.8	1,864.8	59.01	32.602	
10,629.9	7,321.9	7,306.0	7,304.8	57.6	2.1	-90.05	-2,359.8	1,677.3	1,927.1	1,867.5	59.55	32.361	
10,700.0	7,321.8	7,306.6	7,305.4	58.8	2.1	-90.06	-2,359.8	1,677.3	1,936.6	1,875.8	60.82	31.841	
10,728.3	7,321.8	7,306.9	7,305.7	59.4	2.1	-90.07	-2,359.8	1,677.3	1,941.2	1,879.8	61.34	31.648	
10,800.0	7,321.6	7,307.5	7,306.3	60.7	2.1	-90.09	-2,359.8	1,677.3	1,954.5	1,891.9	62.64	31.202	
10,826.7	7,321.6	7,307.7	7,306.5	61.1	2.1	-90.10	-2,359.8	1,677.3	1,960.1	1,897.0	63.13	31.049	
10,900.0	7,321.5	7,308.3	7,307.1	62.5	2.1	-90.12	-2,359.8	1,677.3	1,977.3	1,912.8	64.47	30.671	
10,925.2	7,321.4	7,308.5	7,307.3	62.9	2.1	-90.12	-2,359.8	1,677.3	1,983.8	1,918.9	64.93	30.554	
11,000.0	7,321.3	7,309.2	7,308.0	64.3	2.1	-90.14	-2,359.9	1,677.3	2,004.8	1,938.5	66.30	30.239	
11,023.6	7,321.3	7,309.4	7,308.2	64.7	2.1	-90.15	-2,359.9	1,677.3	2,012.0	1,945.2	66.73	30.150	
11,100.0	7,321.2	7,310.0	7,308.8	66.1	2.1	-90.17	-2,359.9	1,677.3	2,036.9	1,968.7	68.13	29.895	
11,122.0	7,321.1	7,310.2	7,309.0	66.5	2.1	-90.17	-2,359.9	1,677.3	2,044.5	1,976.0	68.54	29.829	
11,200.0	7,321.0	7,310.8	7,309.6	68.0	2.1	-90.19	-2,359.9	1,677.3	2,073.3	2,003.3	69.98	29.628	
11,220.4	7,321.0	7,310.9	7,309.7	68.4	2.1	-90.19	-2,359.9	1,677.3	2,081.2	2,010.9	70.35	29.582	
11,300.0	7,320.9	7,311.6	7,310.4	69.8	2.1	-90.21	-2,359.9	1,677.3	2,113.8	2,041.9	71.82	29.431	
11,318.9	7,320.8	7,311.7	7,310.5	70.2	2.1	-90.22	-2,359.9	1,677.3	2,121.9	2,049.7	72.17	29.401	
11,400.0	7,320.7	7,312.3	7,311.1	71.7	2.1	-90.24	-2,359.9	1,677.3	2,158.1	2,084.5	73.67	29.294	
11,417.3	7,320.7	7,312.5	7,311.3	72.0	2.1	-90.24	-2,359.9	1,677.3	2,166.2	2,092.2	73.99	29.276	
11,500.0	7,320.6	7,313.1	7,311.9	73.5	2.1	-90.26	-2,359.9	1,677.3	2,206.2	2,130.6	75.52	29.212	
11,515.7	7,320.5	7,313.2	7,312.0	73.8	2.1	-90.26	-2,359.9	1,677.3	2,214.0	2,138.2	75.82	29.203	
11,600.0	7,320.4	7,313.8	7,312.6	75.4	2.1	-90.28	-2,359.9	1,677.3	2,257.6	2,180.2	77.38	29.175	
11,614.1	7,320.4	7,313.9	7,312.7	75.6	2.1	-90.28	-2,359.9	1,677.3	2,265.1	2,187.5	77.64	29.174 SF	
11,700.0	7,320.2	7,314.5	7,313.3	77.2	2.1	-90.30	-2,359.9	1,677.3	2,312.2	2,233.0	79.24	29.180	
11,712.6	7,320.2	7,314.6	7,313.4	77.5	2.1	-90.30	-2,359.9	1,677.3	2,319.3	2,239.8	79.47	29.183	
11,800.0	7,320.1	7,315.2	7,314.0	79.1	2.1	-90.32	-2,359.9	1,677.3	2,369.8	2,288.7	81.10	29.220	
11,811.0	7,320.1	7,315.3	7,314.1	79.3	2.1	-90.32	-2,359.9	1,677.3	2,376.3	2,295.0	81.26	29.241	
11,849.2	7,320.0	7,315.6	7,314.4	79.8	2.1	-90.33	-2,359.9	1,677.3	2,399.2	2,317.3	81.83	29.319	
11,849.6	7,320.0	7,315.6	7,314.4	79.8	2.1	-90.33	-2,359.9	1,677.3	2,399.4	2,317.5	81.83	29.320	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 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	120.44	-1,017.8	1,732.2	2,009.6				
98.4	98.4	53.4	53.4	0.1	0.0	120.44	-1,017.8	1,732.3	2,009.1	2,009.0	0.12	N/A	
100.0	100.0	55.0	55.0	0.1	0.0	120.44	-1,017.7	1,732.3	2,009.1	2,009.0	0.12	N/A	
196.8	196.8	153.2	153.2	0.3	0.1	120.42	-1,017.4	1,732.4	2,009.1	2,008.7	0.44	4,519.013	
200.0	200.0	156.4	156.4	0.3	0.1	120.42	-1,017.4	1,732.5	2,009.1	2,008.7	0.46	4,399.243	
295.3	295.3	255.9	255.9	0.5	0.3	120.42	-1,017.1	1,732.5	2,009.0	2,008.2	0.78	2,571.203	
300.0	300.0	260.9	260.9	0.5	0.3	120.42	-1,017.1	1,732.4	2,009.0	2,008.2	0.80	2,524.547	
393.7	393.7	356.6	356.6	0.7	0.3	120.41	-1,016.9	1,732.2	2,008.6	2,007.5	1.07	1,877.609	
400.0	400.0	362.9	362.9	0.8	0.3	120.41	-1,016.9	1,732.1	2,008.6	2,007.5	1.09	1,846.546	
492.1	492.1	451.6	451.6	1.0	0.4	120.42	-1,016.9	1,731.8	2,008.3	2,006.9	1.34	1,493.840	
500.0	500.0	459.0	459.0	1.0	0.4	120.42	-1,016.9	1,731.7	2,008.2	2,006.9	1.37	1,470.350	
590.5	590.5	550.4	550.4	1.2	0.4	120.43	-1,017.1	1,731.5	2,008.1	2,006.5	1.61	1,244.767	
600.0	600.0	560.6	560.6	1.2	0.4	120.43	-1,017.2	1,731.4	2,008.1	2,006.4	1.64	1,225.101	
689.0	689.0	653.0	653.0	1.4	0.5	120.44	-1,017.2	1,731.0	2,007.7	2,005.8	1.88	1,065.610	
700.0	700.0	664.2	664.2	1.4	0.5	120.44	-1,017.2	1,730.9	2,007.7	2,005.8	1.91	1,048.620	
787.4	787.4	754.8	754.8	1.6	0.5	120.44	-1,017.1	1,730.4	2,007.2	2,005.1	2.16	930.962	
800.0	800.0	768.1	768.1	1.7	0.5	120.45	-1,017.0	1,730.4	2,007.2	2,005.0	2.19	916.134	
885.8	885.8	853.5	853.5	1.9	0.6	120.45	-1,016.8	1,729.8	2,006.6	2,004.1	2.42	827.534	
900.0	900.0	867.1	867.1	1.9	0.6	120.45	-1,016.7	1,729.8	2,006.5	2,004.0	2.46	814.617	
984.2	984.2	952.1	952.1	2.1	0.6	120.45	-1,016.5	1,729.3	2,006.0	2,003.3	2.69	745.219	
1,000.0	1,000.0	968.5	968.5	2.1	0.6	120.45	-1,016.4	1,729.2	2,005.9	2,003.1	2.73	733.499	
1,082.7	1,082.7	1,053.1	1,053.1	2.3	0.7	120.45	-1,016.1	1,728.7	2,005.3	2,002.3	2.96	677.867	
1,100.0	1,100.0	1,070.7	1,070.7	2.3	0.7	120.45	-1,016.1	1,728.6	2,005.1	2,002.1	3.00	667.294	
1,181.1	1,181.1	1,153.1	1,153.1	2.5	0.7	120.45	-1,015.7	1,728.0	2,004.5	2,001.3	3.22	621.978	
1,200.0	1,200.0	1,172.4	1,172.3	2.6	0.7	120.45	-1,015.7	1,727.8	2,004.3	2,001.0	3.27	612.294	
1,279.5	1,279.5	1,248.2	1,248.1	2.7	0.8	120.45	-1,015.4	1,727.3	2,003.7	2,000.2	3.48	575.268	
1,300.0	1,300.0	1,267.0	1,267.0	2.8	0.8	120.45	-1,015.3	1,727.2	2,003.5	2,000.0	3.54	566.536	
1,377.9	1,377.9	1,342.7	1,342.6	3.0	0.8	120.45	-1,015.2	1,726.8	2,003.2	1,999.4	3.74	535.615	
1,400.0	1,400.0	1,365.0	1,365.0	3.0	0.8	120.45	-1,015.1	1,726.7	2,003.0	1,999.2	3.80	527.470	
1,450.0	1,450.0	1,416.6	1,416.6	3.1	0.8	120.45	-1,014.9	1,726.5	2,002.8	1,998.9	3.93	509.803	
1,476.4	1,476.4	1,444.7	1,444.7	3.2	0.8	134.74	-1,014.8	1,726.4	2,002.7	1,998.7	4.01	500.019	
1,477.2	1,477.2	1,445.6	1,445.6	3.2	0.8	134.74	-1,014.8	1,726.4	2,002.7	1,998.7	4.01	499.751	
1,500.0	1,500.0	1,469.9	1,469.9	3.2	0.8	134.75	-1,014.7	1,726.2	2,002.8	1,998.7	4.07	492.362	
1,574.8	1,574.8	1,546.1	1,546.0	3.4	0.9	134.79	-1,014.5	1,725.7	2,003.8	1,999.5	4.26	469.849	
1,600.0	1,599.9	1,571.0	1,571.0	3.5	0.9	134.80	-1,014.4	1,725.5	2,004.4	2,000.1	4.33	462.802	
1,673.2	1,673.0	1,642.0	1,641.9	3.6	0.9	134.86	-1,014.2	1,725.0	2,007.2	2,002.7	4.52	443.707	
1,700.0	1,699.7	1,667.5	1,667.5	3.7	0.9	134.88	-1,014.2	1,724.8	2,008.6	2,004.0	4.59	437.241	
1,771.6	1,771.0	1,740.0	1,739.9	3.9	0.9	134.97	-1,014.1	1,724.3	2,013.2	2,008.4	4.79	420.639	
1,800.0	1,799.1	1,770.0	1,770.0	3.9	1.0	135.01	-1,014.1	1,724.1	2,015.4	2,010.5	4.86	414.496	
1,870.1	1,868.6	1,840.5	1,840.5	4.1	1.0	135.13	-1,014.1	1,723.4	2,021.4	2,016.4	5.06	399.874	
1,900.0	1,898.2	1,869.5	1,869.5	4.2	1.0	135.17	-1,014.0	1,723.1	2,024.4	2,019.3	5.14	394.115	
1,968.5	1,965.7	1,937.4	1,937.4	4.3	1.0	135.30	-1,013.9	1,722.6	2,032.1	2,026.8	5.33	381.004	
2,000.0	1,996.6	1,969.2	1,969.2	4.4	1.0	135.36	-1,013.8	1,722.3	2,036.0	2,030.6	5.42	375.397	
2,049.8	2,045.4	2,018.7	2,018.6	4.6	1.0	135.47	-1,013.8	1,721.8	2,042.7	2,037.2	5.57	366.564	
2,066.9	2,062.2	2,035.4	2,035.3	4.6	1.1	135.54	-1,013.8	1,721.6	2,045.1	2,039.5	5.62	363.608	
2,100.0	2,094.5	2,067.6	2,067.5	4.7	1.1	135.68	-1,013.8	1,721.3	2,049.8	2,044.1	5.72	358.107	
2,165.3	2,158.5	2,130.1	2,130.1	4.9	1.1	135.94	-1,013.8	1,720.7	2,059.1	2,053.2	5.93	347.376	
2,200.0	2,192.3	2,162.8	2,162.7	5.1	1.1	136.08	-1,013.7	1,720.4	2,064.1	2,058.0	6.03	342.079	
2,263.8	2,254.7	2,225.6	2,225.6	5.3	1.1	136.33	-1,013.5	1,720.0	2,073.3	2,067.0	6.24	332.359	
2,300.0	2,290.2	2,263.9	2,263.9	5.4	1.1	136.49	-1,013.4	1,719.7	2,078.5	2,072.1	6.36	327.033	
2,362.2	2,351.0	2,326.0	2,325.9	5.6	1.2	136.73	-1,013.0	1,719.2	2,087.4	2,080.8	6.56	318.194	
2,400.0	2,388.0	2,360.8	2,360.8	5.8	1.2	136.87	-1,012.9	1,719.0	2,092.8	2,086.1	6.68	313.149	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,460.6	2,447.3	2,419.1	2,419.0	6.0	1.2	137.10	-1,012.7	1,718.5	2,101.7	2,094.8	6.89	305.233	
2,500.0	2,485.8	2,460.5	2,460.5	6.1	1.2	137.26	-1,012.6	1,718.2	2,107.4	2,100.4	7.02	300.301	
2,559.0	2,543.6	2,519.9	2,519.8	6.3	1.2	137.50	-1,012.3	1,717.7	2,115.9	2,108.7	7.22	293.136	
2,600.0	2,583.6	2,557.7	2,557.6	6.5	1.2	137.64	-1,012.1	1,717.4	2,121.9	2,114.5	7.36	288.470	
2,657.5	2,639.8	2,611.6	2,611.6	6.7	1.3	137.84	-1,011.7	1,717.1	2,130.3	2,122.8	7.55	282.099	
2,700.0	2,681.4	2,654.0	2,653.9	6.9	1.3	138.00	-1,011.5	1,716.8	2,136.6	2,128.9	7.70	277.579	
2,755.9	2,736.1	2,708.9	2,708.8	7.1	1.3	138.21	-1,011.2	1,716.5	2,144.9	2,137.0	7.89	271.819	
2,800.0	2,779.2	2,749.0	2,748.9	7.3	1.3	138.36	-1,011.0	1,716.2	2,151.4	2,143.4	8.04	267.514	
2,854.3	2,832.4	2,800.0	2,799.9	7.5	1.3	138.55	-1,010.9	1,715.9	2,159.6	2,151.4	8.23	262.369	
2,900.0	2,877.1	2,843.9	2,843.8	7.7	1.3	138.71	-1,010.7	1,715.7	2,166.6	2,158.2	8.39	258.259	
2,952.7	2,928.7	2,896.6	2,896.5	7.9	1.4	138.90	-1,010.5	1,715.6	2,174.6	2,166.1	8.57	253.640	
3,000.0	2,974.9	2,941.9	2,941.8	8.1	1.4	139.06	-1,010.3	1,715.4	2,181.8	2,173.1	8.74	249.722	
3,051.2	3,024.9	2,990.8	2,990.7	8.3	1.4	139.24	-1,010.2	1,715.2	2,189.7	2,180.8	8.92	245.617	
3,100.0	3,072.7	3,038.3	3,038.2	8.5	1.4	139.41	-1,010.1	1,714.9	2,197.2	2,188.1	9.08	241.883	
3,149.6	3,121.2	3,086.7	3,086.6	8.7	1.4	139.59	-1,010.2	1,714.6	2,204.9	2,195.6	9.26	238.221	
3,200.0	3,170.5	3,135.6	3,135.5	8.9	1.4	139.77	-1,010.3	1,714.2	2,212.7	2,203.3	9.43	234.685	
3,248.0	3,217.5	3,182.1	3,182.0	9.1	1.5	139.94	-1,010.4	1,713.9	2,220.2	2,210.6	9.59	231.423	
3,300.0	3,268.3	3,235.8	3,235.7	9.3	1.5	140.14	-1,010.6	1,713.5	2,228.3	2,218.6	9.77	228.020	
3,346.4	3,313.8	3,285.3	3,285.3	9.5	1.5	140.32	-1,010.7	1,713.0	2,235.5	2,225.6	9.93	225.066	
3,400.0	3,366.1	3,341.5	3,341.4	9.7	1.5	140.52	-1,010.9	1,712.3	2,243.7	2,233.6	10.12	221.777	
3,444.9	3,410.0	3,388.2	3,388.1	9.9	1.5	140.69	-1,010.9	1,711.6	2,250.6	2,240.3	10.27	219.098	
3,500.0	3,464.0	3,441.7	3,441.6	10.2	1.5	140.89	-1,011.0	1,710.9	2,259.0	2,248.5	10.46	215.927	
3,543.3	3,506.3	3,482.8	3,482.7	10.3	1.5	141.04	-1,011.1	1,710.3	2,265.6	2,255.0	10.61	213.514	
3,600.0	3,561.8	3,536.1	3,536.0	10.6	1.6	141.23	-1,011.3	1,709.6	2,274.3	2,263.5	10.81	210.474	
3,641.7	3,602.6	3,575.2	3,575.0	10.8	1.6	141.37	-1,011.4	1,709.1	2,280.8	2,269.9	10.95	208.307	
3,700.0	3,659.6	3,627.9	3,627.8	11.0	1.6	141.55	-1,011.6	1,708.5	2,290.0	2,278.8	11.15	205.415	
3,740.1	3,698.9	3,663.1	3,663.0	11.2	1.6	141.68	-1,011.7	1,708.2	2,296.4	2,285.1	11.28	203.501	
3,800.0	3,757.4	3,717.6	3,717.5	11.4	1.6	141.87	-1,012.0	1,707.7	2,306.1	2,294.6	11.49	200.755	
3,838.6	3,795.1	3,755.7	3,755.6	11.6	1.6	142.00	-1,012.2	1,707.5	2,312.3	2,300.7	11.62	199.038	
3,900.0	3,855.2	3,815.4	3,815.3	11.9	1.6	142.20	-1,012.4	1,707.2	2,322.4	2,310.5	11.82	196.401	
3,937.0	3,891.4	3,849.7	3,849.6	12.0	1.7	142.31	-1,012.5	1,707.0	2,328.4	2,316.5	11.95	194.873	
4,000.0	3,953.0	3,909.0	3,908.9	12.3	1.7	142.51	-1,013.0	1,706.5	2,338.8	2,326.7	12.16	192.366	
4,035.4	3,987.7	3,945.3	3,945.2	12.4	1.7	142.64	-1,013.3	1,706.3	2,344.7	2,332.4	12.28	191.002	
4,100.0	4,050.9	4,010.4	4,010.2	12.7	1.7	142.86	-1,013.7	1,705.8	2,355.4	2,342.9	12.49	188.587	
4,133.8	4,084.0	4,041.5	4,041.3	12.9	1.7	142.96	-1,014.0	1,705.5	2,361.0	2,348.4	12.60	187.359	
4,200.0	4,148.7	4,102.4	4,102.3	13.2	1.7	143.17	-1,014.7	1,704.9	2,372.0	2,359.2	12.82	185.040	
4,232.3	4,180.2	4,135.8	4,135.6	13.3	1.7	143.29	-1,015.1	1,704.6	2,377.5	2,364.5	12.92	183.947	
4,300.0	4,246.5	4,205.3	4,205.1	13.6	1.7	143.53	-1,016.2	1,703.6	2,388.8	2,375.6	13.15	181.715	
4,330.7	4,276.5	4,233.8	4,233.6	13.7	1.7	143.63	-1,016.6	1,703.2	2,393.9	2,380.7	13.25	180.729	
4,400.0	4,344.3	4,300.0	4,299.8	14.0	1.8	143.86	-1,017.7	1,702.2	2,405.6	2,392.1	13.47	178.572	
4,429.1	4,372.8	4,330.7	4,330.5	14.1	1.8	143.97	-1,018.3	1,701.8	2,410.5	2,397.0	13.57	177.689	
4,500.0	4,442.1	4,409.7	4,409.5	14.5	1.8	144.24	-1,019.5	1,700.4	2,422.3	2,408.5	13.80	175.583	
4,527.5	4,469.1	4,437.6	4,437.4	14.6	1.8	144.34	-1,019.8	1,699.9	2,426.9	2,413.0	13.89	174.773	
4,600.0	4,539.9	4,510.9	4,510.7	14.9	1.8	144.59	-1,020.8	1,698.5	2,438.8	2,424.7	14.12	172.694	
4,626.0	4,565.4	4,537.2	4,536.9	15.0	1.8	144.68	-1,021.1	1,698.0	2,443.0	2,428.8	14.21	171.960	
4,700.0	4,637.8	4,612.0	4,611.7	15.3	1.8	144.93	-1,021.9	1,696.6	2,455.2	2,440.7	14.45	169.919	
4,724.4	4,661.6	4,636.9	4,636.6	15.4	1.9	145.01	-1,022.2	1,696.1	2,459.2	2,444.6	14.53	169.261	
4,800.0	4,735.6	4,711.1	4,710.8	15.8	1.9	145.26	-1,023.0	1,694.5	2,471.5	2,456.7	14.78	167.271	
4,822.8	4,757.9	4,729.5	4,729.3	15.9	1.9	145.32	-1,023.2	1,694.1	2,475.3	2,460.4	14.85	166.687	
4,900.0	4,833.4	4,800.0	4,799.7	16.2	1.9	145.54	-1,023.9	1,693.2	2,488.3	2,473.2	15.10	164.773	
4,921.2	4,854.2	4,811.2	4,810.9	16.3	1.9	145.57	-1,024.1	1,693.0	2,491.9	2,476.7	15.17	164.262	
5,000.0	4,931.2	4,889.7	4,889.4	16.6	1.9	145.81	-1,024.9	1,692.2	2,505.4	2,490.0	15.43	162.427	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,019.7	4,950.5	4,909.8	4,909.4	16.7	1.9	145.88	-1,025.1	1,692.0	2,508.8	2,493.3	15.49	161.979		
5,100.0	5,029.0	4,993.5	4,993.2	17.1	2.0	146.13	-1,025.9	1,690.9	2,522.5	2,506.8	15.75	160.193		
5,118.1	5,046.7	5,011.1	5,010.7	17.1	2.0	146.18	-1,026.0	1,690.7	2,525.6	2,509.8	15.81	159.796		
5,200.0	5,126.8	5,087.3	5,086.9	17.5	2.0	146.41	-1,026.6	1,690.0	2,539.7	2,523.6	16.07	158.035		
5,216.5	5,143.0	5,102.9	5,102.5	17.6	2.0	146.45	-1,026.6	1,689.8	2,542.5	2,526.4	16.12	157.687		
5,300.0	5,224.7	5,186.2	5,185.9	17.9	2.0	146.68	-1,027.1	1,689.2	2,556.9	2,540.5	16.39	155.967		
5,314.9	5,239.3	5,200.0	5,199.7	18.0	2.0	146.72	-1,027.1	1,689.1	2,559.5	2,543.0	16.44	155.661		
5,400.0	5,322.5	5,281.9	5,281.6	18.4	2.0	146.95	-1,027.6	1,688.4	2,574.2	2,557.5	16.72	153.979		
5,413.4	5,335.6	5,294.7	5,294.3	18.4	2.0	146.99	-1,027.7	1,688.3	2,576.5	2,559.8	16.76	153.730		
5,500.0	5,420.3	5,402.1	5,401.7	18.8	2.1	147.29	-1,028.3	1,686.9	2,591.3	2,574.2	17.04	152.099		
5,511.8	5,431.8	5,413.5	5,413.1	18.9	2.1	147.32	-1,028.4	1,686.7	2,593.2	2,576.1	17.08	151.870		
5,600.0	5,518.1	5,498.8	5,498.5	19.3	2.1	147.56	-1,028.4	1,685.5	2,607.9	2,590.5	17.36	150.196		
5,610.2	5,528.1	5,510.8	5,510.5	19.3	2.1	147.59	-1,028.4	1,685.4	2,609.6	2,592.2	17.40	150.002		
5,700.0	5,615.9	5,620.6	5,620.2	19.7	2.1	147.87	-1,027.6	1,683.9	2,624.2	2,606.5	17.70	148.299		
5,708.6	5,624.4	5,631.9	5,631.5	19.7	2.2	147.90	-1,027.5	1,683.7	2,625.6	2,607.8	17.72	148.134		
5,800.0	5,713.7	5,728.3	5,727.9	20.1	2.2	148.14	-1,026.3	1,681.7	2,639.6	2,621.6	18.02	146.447		
5,807.1	5,720.7	5,733.4	5,733.0	20.2	2.2	148.16	-1,026.3	1,681.6	2,640.7	2,622.7	18.05	146.321		
5,900.0	5,811.6	5,800.0	5,799.6	20.6	2.2	148.33	-1,025.9	1,680.3	2,655.7	2,637.3	18.35	144.708		
5,905.5	5,816.9	5,800.0	5,799.6	20.6	2.2	148.33	-1,025.9	1,680.3	2,656.6	2,638.2	18.37	144.619		
6,000.0	5,909.4	5,887.2	5,886.7	21.0	2.2	148.55	-1,025.5	1,679.4	2,672.4	2,653.8	18.68	143.058		
6,003.9	5,913.2	5,890.6	5,890.1	21.0	2.2	148.55	-1,025.5	1,679.4	2,673.1	2,654.4	18.69	142.994		
6,053.2	5,961.4	5,932.1	5,931.7	21.3	2.2	148.65	-1,025.2	1,679.3	2,681.6	2,662.7	18.85	142.224		
6,100.0	6,007.3	5,971.3	5,970.8	21.4	2.2	148.81	-1,024.9	1,679.3	2,689.4	2,670.4	18.95	141.897		
6,102.3	6,009.6	5,973.2	5,972.8	21.5	2.2	148.82	-1,024.9	1,679.3	2,689.8	2,670.8	18.96	141.888		
6,200.0	6,105.7	6,064.2	6,063.8	21.8	2.2	149.14	-1,024.4	1,679.6	2,704.3	2,685.1	19.11	141.477		
6,200.8	6,106.5	6,065.0	6,064.5	21.8	2.2	149.14	-1,024.4	1,679.6	2,704.4	2,685.2	19.12	141.475		
6,299.2	6,203.9	6,157.2	6,156.7	22.0	2.2	149.40	-1,024.5	1,679.5	2,716.2	2,697.0	19.25	141.079		
6,300.0	6,204.7	6,157.9	6,157.5	22.0	2.2	149.41	-1,024.5	1,679.5	2,716.3	2,697.0	19.25	141.075		
6,397.6	6,301.8	6,285.1	6,284.7	22.3	2.3	149.64	-1,024.4	1,679.2	2,725.1	2,705.7	19.37	140.653		
6,400.0	6,304.2	6,289.1	6,288.6	22.3	2.3	149.64	-1,024.4	1,679.2	2,725.2	2,705.9	19.38	140.640		
6,496.0	6,400.0	6,373.3	6,372.9	22.4	2.3	149.75	-1,023.6	1,678.8	2,730.3	2,710.7	19.50	139.994		
6,500.0	6,403.9	6,376.6	6,376.1	22.5	2.3	149.76	-1,023.6	1,678.8	2,730.4	2,710.9	19.51	139.963		
6,594.5	6,498.3	6,461.9	6,461.5	22.6	2.3	149.82	-1,023.5	1,678.3	2,733.0	2,713.4	19.63	139.259		
6,600.0	6,503.8	6,467.1	6,466.7	22.6	2.3	149.82	-1,023.5	1,678.3	2,733.1	2,713.5	19.63	139.211		
6,653.0	6,556.8	6,517.8	6,517.4	22.7	2.3	135.54	-1,023.5	1,678.1	2,733.4	2,713.7	19.70	138.774		
6,692.9	6,596.7	6,557.4	6,556.9	22.7	2.3	135.55	-1,023.6	1,677.9	2,733.3	2,713.6	19.77	138.269		
6,706.0	6,609.8	6,570.3	6,569.9	22.7	2.3	135.55	-1,023.6	1,677.9	2,733.3	2,713.5	19.79	138.105		
6,750.0	6,653.8	6,613.4	6,613.0	22.8	2.4	-44.53	-1,023.7	1,677.7	2,732.3	2,712.4	19.82	137.850		
6,791.3	6,695.0	6,652.8	6,652.4	22.8	2.4	-44.73	-1,023.7	1,677.6	2,729.5	2,709.7	19.86	137.423		
6,800.0	6,703.6	6,661.1	6,660.6	22.8	2.4	-44.79	-1,023.8	1,677.5	2,728.8	2,708.9	19.88	137.288		
6,850.0	6,752.9	6,708.3	6,707.9	22.8	2.4	-45.24	-1,023.9	1,677.4	2,722.9	2,702.9	19.96	136.398		
6,889.7	6,791.6	6,745.4	6,744.9	22.7	2.4	-45.73	-1,024.0	1,677.3	2,716.5	2,696.4	20.04	135.520		
6,900.0	6,801.5	6,754.9	6,754.4	22.7	2.4	-45.88	-1,024.0	1,677.2	2,714.6	2,694.5	20.07	135.251		
6,950.0	6,849.1	6,800.6	6,800.1	22.6	2.4	-46.72	-1,024.2	1,677.2	2,704.0	2,683.8	20.20	133.855		
6,988.2	6,884.8	6,838.4	6,837.9	22.5	2.4	-47.52	-1,024.3	1,677.2	2,694.3	2,674.0	20.31	132.634		
7,000.0	6,895.7	6,849.9	6,849.5	22.5	2.4	-47.79	-1,024.3	1,677.2	2,691.1	2,670.7	20.35	132.220		
7,050.0	6,940.8	6,897.8	6,897.4	22.3	2.4	-49.09	-1,024.3	1,677.1	2,676.0	2,655.5	20.52	130.439		
7,086.6	6,972.8	6,932.1	6,931.6	22.1	2.4	-50.18	-1,024.3	1,677.0	2,663.6	2,642.9	20.64	129.026		
7,100.0	6,984.3	6,944.4	6,943.9	22.1	2.4	-50.61	-1,024.4	1,677.0	2,658.8	2,638.1	20.69	128.479		
7,150.0	7,025.9	6,989.0	6,988.6	21.9	2.4	-52.36	-1,024.4	1,676.8	2,639.6	2,618.7	20.88	126.414		
7,185.0	7,053.9	7,015.4	7,015.0	21.7	2.5	-53.68	-1,024.5	1,676.7	2,625.0	2,604.0	21.00	124.979		
7,200.0	7,065.6	7,025.6	7,025.1	21.7	2.5	-54.26	-1,024.5	1,676.6	2,618.6	2,597.5	21.06	124.363		

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 OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT BROWN-MCCARTY 30-5 - Wellbore #1 - Wellbore												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,250.0	7,103.0	7,058.2	7,057.7	21.4	2.5	-56.36	-1,024.6	1,676.5	2,596.0	2,574.8	21.22	122.312	
7,283.4	7,126.7	7,078.8	7,078.4	21.2	2.5	-57.88	-1,024.7	1,676.4	2,580.2	2,558.8	21.33	120.945	
7,300.0	7,138.0	7,088.7	7,088.3	21.2	2.5	-58.66	-1,024.7	1,676.4	2,572.1	2,550.7	21.39	120.274	
7,350.0	7,170.5	7,117.6	7,117.2	20.9	2.5	-61.17	-1,024.9	1,676.4	2,546.9	2,525.4	21.53	118.302	
7,381.9	7,189.8	7,135.0	7,134.5	20.8	2.5	-62.87	-1,025.0	1,676.4	2,530.3	2,508.7	21.61	117.096	
7,400.0	7,200.2	7,144.4	7,144.0	20.7	2.5	-63.86	-1,025.0	1,676.4	2,520.7	2,499.0	21.65	116.445	
7,450.0	7,227.0	7,168.7	7,168.3	20.4	2.5	-66.71	-1,025.2	1,676.4	2,493.5	2,471.8	21.73	114.748	
7,480.3	7,241.9	7,182.2	7,181.7	20.3	2.5	-68.50	-1,025.3	1,676.4	2,476.7	2,455.0	21.76	113.799	
7,500.0	7,250.9	7,190.4	7,189.9	20.2	2.5	-69.69	-1,025.3	1,676.4	2,465.7	2,443.9	21.77	113.242	
7,550.0	7,271.6	7,211.1	7,210.7	20.0	2.5	-72.80	-1,025.5	1,676.5	2,437.4	2,415.6	21.78	111.927	
7,578.7	7,282.0	7,222.6	7,222.1	19.9	2.5	-74.63	-1,025.6	1,676.5	2,421.0	2,399.2	21.76	111.236	
7,600.0	7,289.1	7,230.3	7,229.8	19.8	2.5	-75.99	-1,025.6	1,676.5	2,408.8	2,387.0	21.74	110.792	
7,650.0	7,303.3	7,245.8	7,245.4	19.6	2.5	-79.15	-1,025.7	1,676.6	2,380.0	2,358.3	21.68	109.780	
7,677.1	7,309.5	7,252.7	7,252.3	19.5	2.5	-80.85	-1,025.8	1,676.6	2,364.4	2,342.8	21.65	109.225	
7,700.0	7,314.1	7,257.7	7,257.2	19.5	2.5	-82.25	-1,025.8	1,676.6	2,351.4	2,329.7	21.61	108.795	
7,750.0	7,321.4	7,265.8	7,265.3	19.4	2.5	-85.23	-1,025.8	1,676.6	2,323.0	2,301.4	21.56	107.726	
7,775.6	7,323.9	7,268.5	7,268.1	19.3	2.5	-86.69	-1,025.8	1,676.6	2,308.7	2,287.1	21.56	107.090	
7,800.0	7,325.3	7,270.2	7,269.7	19.3	2.5	-88.04	-1,025.8	1,676.6	2,295.1	2,273.5	21.55	106.481	
7,832.0	7,326.0	7,271.1	7,270.6	19.3	2.5	-89.74	-1,025.8	1,676.6	2,277.6	2,256.0	21.57	105.569	
7,874.0	7,325.9	7,271.2	7,270.7	19.3	2.5	-89.74	-1,025.8	1,676.6	2,255.1	2,233.4	21.62	104.290	
7,900.0	7,325.9	7,271.3	7,270.8	19.3	2.5	-89.75	-1,025.8	1,676.6	2,241.4	2,219.8	21.65	103.514	
7,972.4	7,325.8	7,271.5	7,271.1	19.4	2.5	-89.75	-1,025.8	1,676.6	2,204.5	2,182.7	21.85	100.883	
8,000.0	7,325.8	7,271.6	7,271.1	19.5	2.5	-89.76	-1,025.8	1,676.6	2,191.0	2,169.0	21.93	99.915	
8,070.8	7,325.7	7,271.8	7,271.4	19.8	2.5	-89.76	-1,025.8	1,676.6	2,157.3	2,135.0	22.25	96.948	
8,100.0	7,325.6	7,271.9	7,271.5	19.9	2.5	-89.77	-1,025.8	1,676.6	2,144.0	2,121.6	22.39	95.775	
8,169.3	7,325.5	7,272.1	7,271.7	20.3	2.5	-89.77	-1,025.8	1,676.6	2,113.6	2,090.8	22.82	92.619	
8,200.0	7,325.5	7,272.2	7,271.8	20.5	2.5	-89.78	-1,025.8	1,676.6	2,100.7	2,077.7	23.01	91.284	
8,267.7	7,325.4	7,272.4	7,272.0	21.1	2.5	-89.78	-1,025.8	1,676.6	2,073.7	2,050.1	23.54	88.080	
8,300.0	7,325.3	7,272.5	7,272.1	21.3	2.5	-89.79	-1,025.8	1,676.6	2,061.4	2,037.6	23.80	86.629	
8,366.1	7,325.2	7,272.7	7,272.3	21.9	2.5	-89.79	-1,025.9	1,676.6	2,037.7	2,013.3	24.41	83.495	
8,400.0	7,325.2	7,272.8	7,272.4	22.3	2.5	-89.79	-1,025.9	1,676.6	2,026.3	2,001.6	24.72	81.978	
8,464.5	7,325.1	7,273.0	7,272.6	22.9	2.5	-89.80	-1,025.9	1,676.6	2,005.9	1,980.5	25.39	79.001	
8,500.0	7,325.1	7,273.2	7,272.7	23.3	2.5	-89.80	-1,025.9	1,676.6	1,995.5	1,969.8	25.76	77.464	
8,563.0	7,325.0	7,273.3	7,272.9	24.0	2.5	-89.81	-1,025.9	1,676.6	1,978.5	1,952.0	26.49	74.703	
8,600.0	7,324.9	7,273.5	7,273.0	24.5	2.5	-89.81	-1,025.9	1,676.6	1,969.4	1,942.5	26.91	73.181	
8,661.4	7,324.8	7,273.6	7,273.2	25.2	2.5	-89.82	-1,025.9	1,676.6	1,955.7	1,928.0	27.67	70.669	
8,700.0	7,324.8	7,273.8	7,273.3	25.7	2.5	-89.82	-1,025.9	1,676.6	1,948.1	1,919.9	28.15	69.193	
8,759.8	7,324.7	7,273.9	7,273.5	26.5	2.5	-89.83	-1,025.9	1,676.6	1,937.6	1,908.7	28.94	66.942	
8,800.0	7,324.6	7,274.0	7,273.6	27.1	2.5	-89.83	-1,025.9	1,676.6	1,931.7	1,902.2	29.48	65.533	
8,858.2	7,324.5	7,274.2	7,273.8	27.9	2.5	-89.84	-1,025.9	1,676.6	1,924.4	1,894.1	30.29	63.542	
8,900.0	7,324.5	7,274.3	7,273.9	28.4	2.5	-89.84	-1,025.9	1,676.6	1,920.3	1,889.5	30.87	62.214	
8,956.7	7,324.4	7,274.5	7,274.0	29.3	2.5	-89.84	-1,025.9	1,676.6	1,916.2	1,884.5	31.69	60.470	
9,000.0	7,324.3	7,274.6	7,274.2	29.9	2.5	-89.85	-1,025.9	1,676.6	1,914.2	1,881.9	32.32	59.232	
9,055.1	7,324.3	7,274.8	7,274.3	30.7	2.5	-89.85	-1,025.9	1,676.6	1,913.0	1,879.9	33.14	57.720	
9,068.1	7,324.2	7,274.8	7,274.4	30.9	2.5	-89.85	-1,025.9	1,676.6	1,913.0	1,879.6	33.34	57.381 CC	
9,100.0	7,324.2	7,274.9	7,274.5	31.4	2.5	-89.86	-1,025.9	1,676.6	1,913.2	1,879.4	33.82	56.577 ES	
9,153.5	7,324.1	7,275.1	7,274.6	32.2	2.5	-89.86	-1,025.9	1,676.6	1,914.9	1,880.2	34.64	55.274	
9,200.0	7,324.0	7,275.2	7,274.7	33.0	2.5	-89.87	-1,025.9	1,676.6	1,917.5	1,882.1	35.36	54.227	
9,251.9	7,324.0	7,275.3	7,274.9	33.8	2.5	-89.87	-1,025.9	1,676.6	1,921.8	1,885.6	36.18	53.114	
9,300.0	7,323.9	7,275.5	7,275.0	34.5	2.5	-89.87	-1,025.9	1,676.6	1,927.0	1,890.0	36.94	52.161	
9,350.4	7,323.8	7,275.6	7,275.2	35.4	2.5	-89.88	-1,025.9	1,676.6	1,933.7	1,895.9	37.76	51.215	
9,400.0	7,323.7	7,275.7	7,275.3	36.2	2.5	-89.88	-1,025.9	1,676.6	1,941.5	1,903.0	38.56	50.355	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT BROWN-MCCARTY 30-5 - Wellbore #1 - Wellbore												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	7,323.7	7,275.9	7,275.4	37.0	2.5	-89.89	-1,025.9	1,676.6	1,950.5	1,911.1	39.36	49.556	
9,500.0	7,323.6	7,276.0	7,275.6	37.8	2.5	-89.89	-1,025.9	1,676.6	1,961.1	1,920.9	40.20	48.783	
9,547.2	7,323.5	7,276.1	7,275.7	38.6	2.5	-89.89	-1,025.9	1,676.6	1,972.0	1,931.1	40.99	48.112	
9,600.0	7,323.5	7,276.3	7,275.8	39.5	2.5	-89.90	-1,025.9	1,676.6	1,985.5	1,943.7	41.87	47.422	
9,645.6	7,323.4	7,276.4	7,275.9	40.2	2.5	-89.90	-1,025.9	1,676.6	1,998.2	1,955.6	42.64	46.862	
9,700.0	7,323.3	7,276.5	7,276.1	41.2	2.5	-89.91	-1,025.9	1,676.6	2,014.6	1,971.1	43.56	46.250	
9,744.1	7,323.2	7,276.7	7,276.2	41.9	2.5	-89.91	-1,025.9	1,676.7	2,028.9	1,984.6	44.31	45.785	
9,800.0	7,323.2	7,276.8	7,276.4	42.9	2.5	-89.91	-1,025.9	1,676.7	2,048.2	2,002.9	45.27	45.244	
9,842.5	7,323.1	7,276.9	7,276.5	43.6	2.5	-89.92	-1,025.9	1,676.7	2,063.7	2,017.7	46.00	44.861	
9,900.0	7,323.0	7,277.1	7,276.6	44.6	2.5	-89.92	-1,025.9	1,676.7	2,086.0	2,039.0	47.00	44.386	
9,940.9	7,322.9	7,277.2	7,276.7	45.3	2.5	-89.92	-1,025.9	1,676.7	2,102.7	2,055.0	47.71	44.072	
10,000.0	7,322.9	7,277.3	7,276.9	46.3	2.5	-89.93	-1,025.9	1,676.7	2,127.9	2,079.1	48.74	43.658	
10,039.3	7,322.8	7,277.4	7,277.0	47.0	2.5	-89.93	-1,025.9	1,676.7	2,145.4	2,096.0	49.43	43.403	
10,100.0	7,322.7	7,277.6	7,277.1	48.1	2.5	-89.94	-1,025.9	1,676.7	2,173.5	2,123.0	50.49	43.044	
10,137.8	7,322.6	7,277.7	7,277.2	48.8	2.5	-89.94	-1,025.9	1,676.7	2,191.7	2,140.5	51.16	42.838	
10,200.0	7,322.6	7,277.8	7,277.4	49.9	2.5	-89.94	-1,025.9	1,676.7	2,222.7	2,170.5	52.26	42.530	
10,236.2	7,322.5	7,277.9	7,277.5	50.5	2.5	-89.95	-1,025.9	1,676.7	2,241.4	2,188.5	52.91	42.365	
10,300.0	7,322.4	7,278.1	7,277.6	51.6	2.5	-89.95	-1,025.9	1,676.7	2,275.3	2,221.2	54.04	42.102	
10,334.6	7,322.4	7,278.2	7,277.7	52.3	2.5	-89.95	-1,025.9	1,676.7	2,294.2	2,239.6	54.66	41.971	
10,400.0	7,322.3	7,278.3	7,277.9	53.4	2.5	-89.96	-1,025.9	1,676.7	2,330.9	2,275.1	55.83	41.750	
10,433.0	7,322.2	7,278.4	7,278.0	54.0	2.5	-89.96	-1,025.9	1,676.7	2,350.0	2,293.6	56.43	41.648	
10,500.0	7,322.1	7,278.6	7,278.1	55.2	2.5	-89.97	-1,025.9	1,676.7	2,389.5	2,331.9	57.63	41.464	
10,531.5	7,322.1	7,278.7	7,278.2	55.8	2.5	-89.97	-1,025.9	1,676.7	2,408.5	2,350.3	58.20	41.385	
10,600.0	7,321.9	7,278.8	7,278.4	57.0	2.5	-89.97	-1,025.9	1,676.7	2,450.7	2,391.3	59.43	41.234	
10,629.9	7,321.9	7,278.9	7,278.4	57.6	2.5	-89.97	-1,025.9	1,676.7	2,469.5	2,409.5	59.98	41.175	
10,700.0	7,321.8	7,279.1	7,278.6	58.8	2.5	-89.98	-1,025.9	1,676.7	2,514.4	2,453.2	61.25	41.054	
10,728.3	7,321.8	7,279.1	7,278.7	59.4	2.5	-89.98	-1,025.9	1,676.7	2,532.9	2,471.2	61.76	41.010	
10,800.0	7,321.6	7,279.3	7,278.8	60.7	2.5	-89.99	-1,025.9	1,676.7	2,580.5	2,517.4	63.07	40.916	
10,826.7	7,321.6	7,279.4	7,278.9	61.1	2.5	-89.99	-1,025.9	1,676.7	2,598.5	2,534.9	63.56	40.886	
10,900.0	7,321.5	7,279.5	7,279.1	62.5	2.5	-89.99	-1,025.9	1,676.7	2,648.6	2,583.7	64.89	40.815	
10,925.2	7,321.4	7,279.6	7,279.1	62.9	2.5	-89.99	-1,025.9	1,676.7	2,666.1	2,600.7	65.35	40.795	
11,000.0	7,321.3	7,279.8	7,279.3	64.3	2.5	-90.00	-1,025.9	1,676.7	2,718.7	2,652.0	66.72	40.746	
11,023.6	7,321.3	7,279.8	7,279.4	64.7	2.5	-90.00	-1,025.9	1,676.7	2,735.6	2,668.4	67.16	40.734	
11,100.0	7,321.2	7,280.0	7,279.5	66.1	2.5	-90.01	-1,025.9	1,676.7	2,790.7	2,722.1	68.56	40.704	
11,122.0	7,321.1	7,280.0	7,279.6	66.5	2.5	-90.01	-1,025.9	1,676.7	2,806.8	2,737.8	68.97	40.698	
11,200.0	7,321.0	7,280.2	7,279.8	68.0	2.5	-90.01	-1,025.9	1,676.7	2,864.3	2,793.9	70.40	40.686	
11,220.4	7,321.0	7,280.3	7,279.8	68.4	2.5	-90.01	-1,025.9	1,676.7	2,879.6	2,808.8	70.78	40.684 SF	
11,300.0	7,320.9	7,280.4	7,280.0	69.8	2.5	-90.02	-1,025.9	1,676.7	2,939.5	2,867.3	72.25	40.687	
11,318.9	7,320.8	7,280.5	7,280.0	70.2	2.5	-90.02	-1,025.9	1,676.7	2,953.9	2,881.3	72.60	40.689	
11,400.0	7,320.7	7,280.7	7,280.2	71.7	2.5	-90.03	-1,025.9	1,676.7	3,016.1	2,942.0	74.10	40.706	
11,417.3	7,320.7	7,280.7	7,280.2	72.0	2.5	-90.03	-1,025.9	1,676.7	3,029.5	2,955.1	74.42	40.711	
11,500.0	7,320.6	7,280.9	7,280.4	73.5	2.5	-90.03	-1,025.9	1,676.7	3,094.1	3,018.2	75.95	40.739	
11,515.7	7,320.5	7,280.9	7,280.5	73.8	2.5	-90.03	-1,025.9	1,676.7	3,106.5	3,030.2	76.24	40.746	
11,600.0	7,320.4	7,281.1	7,280.6	75.4	2.5	-90.04	-1,025.9	1,676.7	3,173.3	3,095.5	77.80	40.785	
11,614.1	7,320.4	7,281.1	7,280.7	75.6	2.5	-90.04	-1,025.9	1,676.7	3,184.6	3,106.5	78.07	40.793	
11,700.0	7,320.2	7,281.3	7,280.9	77.2	2.5	-90.04	-1,025.9	1,676.7	3,253.6	3,174.0	79.66	40.842	
11,712.6	7,320.2	7,281.3	7,280.9	77.5	2.5	-90.04	-1,025.9	1,676.7	3,263.8	3,183.9	79.90	40.850	
11,800.0	7,320.1	7,281.5	7,281.1	79.1	2.5	-90.05	-1,025.9	1,676.7	3,335.1	3,253.5	81.53	40.908	
11,811.0	7,320.1	7,281.6	7,281.1	79.3	2.5	-90.05	-1,025.9	1,676.7	3,344.1	3,262.4	81.69	40.937	
11,849.2	7,320.0	7,281.6	7,281.2	79.8	2.5	-90.05	-1,025.9	1,676.7	3,375.5	3,293.2	82.25	41.037	
11,849.6	7,320.0	7,281.6	7,281.2	79.8	2.5	-90.05	-1,025.9	1,676.7	3,375.8	3,293.5	82.26	41.039	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 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	8.5	8.5	0.0	0.0	155.26	-3,686.0	1,698.1	4,058.3				
98.4	98.4	131.4	131.4	0.1	0.1	155.26	-3,685.4	1,697.9	4,057.8	4,057.7	0.16	N/A	
100.0	100.0	132.9	132.9	0.1	0.1	155.26	-3,685.4	1,697.9	4,057.8	4,057.6	0.17	N/A	
196.8	196.8	220.9	220.9	0.3	0.2	155.26	-3,684.9	1,697.8	4,057.3	4,056.7	0.53	7,625.994	
200.0	200.0	223.6	223.6	0.3	0.2	155.26	-3,684.9	1,697.8	4,057.3	4,056.7	0.54	7,491.996	
295.3	295.3	308.6	308.6	0.5	0.3	155.26	-3,684.6	1,697.9	4,057.0	4,056.1	0.83	4,891.986	
300.0	300.0	313.6	313.6	0.5	0.3	155.26	-3,684.6	1,697.9	4,057.0	4,056.1	0.84	4,809.299	
393.7	393.7	411.5	411.5	0.7	0.4	155.26	-3,684.3	1,698.0	4,056.7	4,055.6	1.12	3,612.259	
400.0	400.0	417.2	417.2	0.8	0.4	155.26	-3,684.2	1,698.0	4,056.7	4,055.6	1.14	3,557.003	
492.1	492.1	501.1	501.1	1.0	0.4	155.25	-3,684.0	1,698.1	4,056.5	4,055.2	1.40	2,907.456	
500.0	500.0	509.3	509.3	1.0	0.4	155.25	-3,684.0	1,698.1	4,056.5	4,055.1	1.42	2,865.177	
590.5	590.5	600.0	600.0	1.2	0.5	155.25	-3,683.9	1,698.1	4,056.4	4,054.8	1.65	2,456.594	
600.0	600.0	611.5	611.5	1.2	0.5	155.25	-3,683.9	1,698.1	4,056.4	4,054.7	1.67	2,424.599	
648.2	648.2	654.2	654.2	1.3	0.5	155.25	-3,683.9	1,698.1	4,056.4	4,054.6	1.78	2,274.555	
689.0	689.0	690.4	690.4	1.4	0.5	155.25	-3,683.9	1,698.1	4,056.4	4,054.5	1.88	2,161.416	
700.0	700.0	700.2	700.2	1.4	0.5	155.25	-3,683.9	1,698.1	4,056.4	4,054.5	1.90	2,132.677	
787.4	787.4	789.8	789.8	1.6	0.5	155.25	-3,683.9	1,698.3	4,056.5	4,054.4	2.13	1,900.763	
800.0	800.0	802.9	802.9	1.7	0.5	155.25	-3,683.9	1,698.3	4,056.5	4,054.4	2.17	1,872.166	
885.8	885.8	897.6	897.6	1.9	0.5	155.25	-3,683.9	1,698.3	4,056.5	4,054.1	2.37	1,713.528	
900.0	900.0	911.8	911.8	1.9	0.5	155.25	-3,683.8	1,698.3	4,056.5	4,054.1	2.40	1,688.046	
984.2	984.2	994.7	994.7	2.1	0.6	155.25	-3,683.7	1,698.3	4,056.4	4,053.8	2.62	1,549.303	
1,000.0	1,000.0	1,010.4	1,010.4	2.1	0.6	155.25	-3,683.7	1,698.3	4,056.4	4,053.7	2.66	1,526.754	
1,082.7	1,082.7	1,092.9	1,092.9	2.3	0.6	155.25	-3,683.6	1,698.3	4,056.3	4,053.4	2.86	1,420.497	
1,100.0	1,100.0	1,111.0	1,111.0	2.3	0.6	155.25	-3,683.6	1,698.3	4,056.3	4,053.4	2.90	1,399.132	
1,181.1	1,181.1	1,197.9	1,197.9	2.5	0.6	155.25	-3,683.5	1,698.2	4,056.1	4,053.0	3.11	1,304.462	
1,200.0	1,200.0	1,216.8	1,216.8	2.6	0.6	155.25	-3,683.4	1,698.2	4,056.0	4,052.9	3.16	1,283.329	
1,279.5	1,279.5	1,295.9	1,295.9	2.7	0.6	155.25	-3,683.2	1,698.1	4,055.8	4,052.5	3.38	1,201.056	
1,300.0	1,300.0	1,317.1	1,317.0	2.8	0.7	155.25	-3,683.1	1,698.1	4,055.8	4,052.3	3.43	1,181.516	
1,377.9	1,377.9	1,398.5	1,398.5	3.0	0.7	155.25	-3,682.9	1,698.1	4,055.5	4,051.9	3.65	1,112.564	
1,400.0	1,400.0	1,419.8	1,419.8	3.0	0.7	155.25	-3,682.8	1,698.0	4,055.5	4,051.8	3.70	1,095.264	
1,450.0	1,450.0	1,467.8	1,467.8	3.1	0.7	155.25	-3,682.7	1,698.0	4,055.3	4,051.5	3.83	1,058.118	
1,458.2	1,458.2	1,475.6	1,475.6	3.1	0.7	169.54	-3,682.7	1,697.9	4,055.3	4,051.4	3.84	1,055.003	
1,476.4	1,476.4	1,493.1	1,493.1	3.2	0.7	169.54	-3,682.6	1,697.9	4,055.3	4,051.5	3.89	1,042.233	
1,500.0	1,500.0	1,515.1	1,515.0	3.2	0.7	169.54	-3,682.6	1,697.8	4,055.6	4,051.6	3.95	1,026.794	
1,574.8	1,574.8	1,583.7	1,583.7	3.4	0.7	169.54	-3,682.5	1,697.8	4,057.7	4,053.6	4.13	981.533	
1,600.0	1,599.9	1,608.8	1,608.8	3.5	0.7	169.54	-3,682.5	1,697.8	4,058.9	4,054.7	4.20	966.896	
1,673.2	1,673.0	1,695.3	1,695.3	3.6	0.8	169.54	-3,682.3	1,697.7	4,063.4	4,059.0	4.39	924.695	
1,700.0	1,699.7	1,721.7	1,721.7	3.7	0.8	169.53	-3,682.2	1,697.7	4,065.5	4,061.0	4.47	910.369	
1,771.6	1,771.0	1,789.8	1,789.8	3.9	0.8	169.53	-3,682.0	1,697.7	4,072.3	4,067.6	4.66	874.074	
1,800.0	1,799.1	1,817.3	1,817.3	3.9	0.8	169.52	-3,681.9	1,697.7	4,075.4	4,070.7	4.74	860.558	
1,870.1	1,868.6	1,886.2	1,886.1	4.1	0.9	169.51	-3,681.6	1,697.7	4,084.5	4,079.5	4.93	828.535	
1,900.0	1,898.2	1,915.9	1,915.9	4.2	0.9	169.50	-3,681.5	1,697.7	4,088.8	4,083.8	5.01	815.854	
1,968.5	1,965.7	1,984.6	1,984.6	4.3	0.9	169.49	-3,681.3	1,697.8	4,100.0	4,094.8	5.20	788.120	
2,000.0	1,996.6	2,014.7	2,014.7	4.4	0.9	169.48	-3,681.1	1,697.9	4,105.6	4,100.3	5.29	776.369	
2,049.8	2,045.4	2,059.9	2,059.9	4.6	0.9	169.47	-3,680.9	1,698.0	4,115.2	4,109.8	5.43	758.542	
2,066.9	2,062.2	2,075.5	2,075.5	4.6	0.9	169.47	-3,680.9	1,698.1	4,118.7	4,113.3	5.47	752.884	
2,100.0	2,094.5	2,106.2	2,106.2	4.7	0.9	169.49	-3,680.8	1,698.2	4,125.4	4,119.9	5.56	742.304	
2,165.3	2,158.5	2,173.0	2,172.9	4.9	1.0	169.52	-3,680.6	1,698.4	4,138.7	4,133.0	5.73	721.687	
2,200.0	2,192.3	2,207.0	2,207.0	5.1	1.0	169.54	-3,680.4	1,698.5	4,145.7	4,139.9	5.83	711.660	
2,263.8	2,254.7	2,261.5	2,261.5	5.3	1.0	169.56	-3,680.3	1,698.7	4,158.7	4,152.7	5.99	694.366	
2,300.0	2,290.2	2,292.4	2,292.4	5.4	1.0	169.58	-3,680.3	1,698.7	4,166.1	4,160.0	6.09	684.616	
2,362.2	2,351.0	2,348.4	2,348.4	5.6	1.0	169.61	-3,680.3	1,698.8	4,178.9	4,172.7	6.24	669.319	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,400.0	2,388.0	2,382.7	2,382.7	5.8	1.0	169.63	-3,680.4	1,698.8	4,186.7	4,180.4	6.34	660.471	
2,460.6	2,447.3	2,439.2	2,439.2	6.0	1.0	169.66	-3,680.6	1,698.8	4,199.3	4,192.8	6.50	646.242	
2,500.0	2,485.8	2,476.3	2,476.3	6.1	1.0	169.68	-3,680.8	1,698.7	4,207.5	4,200.9	6.60	637.273	
2,559.0	2,543.6	2,531.4	2,531.4	6.3	1.0	169.71	-3,681.1	1,698.5	4,219.8	4,213.1	6.76	624.184	
2,600.0	2,583.6	2,569.4	2,569.4	6.5	1.0	169.73	-3,681.4	1,698.4	4,228.4	4,221.5	6.87	615.433	
2,657.5	2,639.8	2,625.8	2,625.8	6.7	1.0	169.77	-3,681.8	1,698.0	4,240.4	4,233.4	7.03	603.450	
2,700.0	2,681.4	2,670.8	2,670.8	6.9	1.0	169.80	-3,682.2	1,697.7	4,249.3	4,242.2	7.14	594.874	
2,755.9	2,736.1	2,725.3	2,725.3	7.1	1.0	169.83	-3,682.6	1,697.4	4,261.0	4,253.7	7.30	583.970	
2,800.0	2,779.2	2,764.8	2,764.7	7.3	1.0	169.86	-3,682.9	1,697.1	4,270.2	4,262.8	7.42	575.736	
2,854.3	2,832.4	2,815.6	2,815.6	7.5	1.0	169.89	-3,683.4	1,696.7	4,281.6	4,274.0	7.57	565.851	
2,900.0	2,877.1	2,863.4	2,863.4	7.7	1.0	169.92	-3,683.8	1,696.3	4,291.1	4,283.5	7.69	557.763	
2,952.7	2,928.7	2,923.7	2,923.7	7.9	1.0	169.96	-3,684.2	1,695.9	4,302.2	4,294.3	7.84	548.693	
3,000.0	2,974.9	2,986.8	2,986.7	8.1	1.1	170.00	-3,684.5	1,695.3	4,311.9	4,303.9	7.97	540.787	
3,051.2	3,024.9	3,049.9	3,049.9	8.3	1.1	170.04	-3,684.7	1,694.5	4,322.2	4,314.1	8.12	532.358	
3,100.0	3,072.7	3,109.1	3,109.0	8.5	1.1	170.08	-3,684.7	1,693.7	4,331.9	4,323.7	8.26	524.542	
3,149.6	3,121.2	3,169.4	3,169.4	8.7	1.1	170.12	-3,684.5	1,692.8	4,341.7	4,333.3	8.40	516.691	
3,200.0	3,170.5	3,240.8	3,240.7	8.9	1.1	170.16	-3,684.1	1,691.6	4,351.4	4,342.9	8.55	508.880	
3,248.0	3,217.5	3,313.8	3,313.7	9.1	1.1	170.21	-3,683.2	1,690.5	4,360.4	4,351.7	8.69	501.542	
3,300.0	3,268.3	3,377.5	3,377.4	9.3	1.2	170.24	-3,682.0	1,689.6	4,369.9	4,361.1	8.85	493.971	
3,346.4	3,313.8	3,422.8	3,422.7	9.5	1.2	170.26	-3,681.1	1,689.1	4,378.4	4,369.4	8.98	487.485	
3,400.0	3,366.1	3,466.3	3,466.2	9.7	1.2	170.28	-3,680.1	1,688.9	4,388.2	4,379.0	9.14	480.322	
3,444.9	3,410.0	3,500.0	3,499.9	9.9	1.2	170.30	-3,679.4	1,688.8	4,396.4	4,387.2	9.26	474.540	
3,500.0	3,464.0	3,550.1	3,550.0	10.2	1.2	170.31	-3,678.3	1,688.8	4,406.7	4,397.3	9.43	467.440	
3,543.3	3,506.3	3,587.2	3,587.0	10.3	1.2	170.33	-3,677.6	1,688.8	4,414.9	4,405.3	9.55	462.069	
3,600.0	3,561.8	3,639.0	3,638.8	10.6	1.2	170.34	-3,676.7	1,688.9	4,425.6	4,415.8	9.72	455.225	
3,641.7	3,602.6	3,677.9	3,677.8	10.8	1.2	170.36	-3,676.0	1,688.9	4,433.5	4,423.6	9.85	450.315	
3,700.0	3,659.6	3,731.7	3,731.5	11.0	1.3	170.38	-3,675.0	1,689.0	4,444.5	4,434.5	10.02	443.689	
3,740.1	3,698.9	3,768.4	3,768.2	11.2	1.3	170.39	-3,674.4	1,689.1	4,452.2	4,442.1	10.14	439.255	
3,800.0	3,757.4	3,821.3	3,821.2	11.4	1.3	170.41	-3,673.6	1,689.3	4,463.7	4,453.4	10.31	432.858	
3,838.6	3,795.1	3,854.0	3,853.8	11.6	1.3	170.42	-3,673.1	1,689.4	4,471.1	4,460.7	10.43	428.861	
3,900.0	3,855.2	3,907.3	3,907.1	11.9	1.3	170.44	-3,672.4	1,689.5	4,483.1	4,472.5	10.61	422.676	
3,937.0	3,891.4	3,945.9	3,945.7	12.0	1.3	170.45	-3,671.9	1,689.7	4,490.3	4,479.5	10.72	418.971	
4,000.0	3,953.0	4,010.5	4,010.3	12.3	1.3	170.47	-3,671.0	1,689.9	4,502.5	4,491.6	10.91	412.851	
4,035.4	3,987.7	4,043.8	4,043.6	12.4	1.3	170.48	-3,670.5	1,690.1	4,509.4	4,498.4	11.01	409.542	
4,100.0	4,050.9	4,100.0	4,099.8	12.7	1.4	170.50	-3,669.7	1,690.3	4,521.9	4,510.7	11.20	403.723	
4,133.8	4,084.0	4,132.0	4,131.7	12.9	1.4	170.51	-3,669.3	1,690.4	4,528.5	4,517.2	11.30	400.720	
4,200.0	4,148.7	4,186.8	4,186.5	13.2	1.4	170.53	-3,668.7	1,690.8	4,541.6	4,530.1	11.49	395.095	
4,232.3	4,180.2	4,214.3	4,214.1	13.3	1.4	170.53	-3,668.4	1,691.0	4,548.0	4,536.4	11.59	392.418	
4,300.0	4,246.5	4,273.8	4,273.5	13.6	1.4	170.55	-3,667.9	1,691.4	4,561.5	4,549.8	11.79	386.947	
4,330.7	4,276.5	4,300.8	4,300.6	13.7	1.4	170.56	-3,667.6	1,691.7	4,567.7	4,555.8	11.88	384.523	
4,400.0	4,344.3	4,372.1	4,371.8	14.0	1.4	170.58	-3,667.0	1,692.3	4,581.6	4,569.5	12.08	379.145	
4,429.1	4,372.8	4,401.9	4,401.6	14.1	1.4	170.59	-3,666.8	1,692.5	4,587.5	4,575.3	12.17	376.932	
4,500.0	4,442.1	4,469.6	4,469.3	14.5	1.5	170.61	-3,666.2	1,693.1	4,601.7	4,589.3	12.38	371.729	
4,527.5	4,469.1	4,495.9	4,495.7	14.6	1.5	170.62	-3,666.0	1,693.3	4,607.2	4,594.7	12.46	369.747	
4,600.0	4,539.9	4,563.9	4,563.7	14.9	1.5	170.64	-3,665.4	1,693.7	4,621.8	4,609.1	12.67	364.673	
4,626.0	4,565.4	4,588.3	4,588.1	15.0	1.5	170.65	-3,665.3	1,693.9	4,627.0	4,614.3	12.75	362.885	
4,700.0	4,637.8	4,658.3	4,658.1	15.3	1.5	170.67	-3,664.8	1,694.3	4,642.0	4,629.0	12.97	357.888	
4,724.4	4,661.6	4,681.5	4,681.2	15.4	1.5	170.68	-3,664.7	1,694.5	4,646.9	4,633.8	13.04	356.293	
4,800.0	4,735.6	4,752.7	4,752.4	15.8	1.5	170.70	-3,664.4	1,694.7	4,662.2	4,648.9	13.26	351.475	
4,822.8	4,757.9	4,774.1	4,773.8	15.9	1.5	170.71	-3,664.3	1,694.8	4,666.8	4,653.5	13.33	350.046	
4,900.0	4,833.4	4,856.1	4,855.9	16.2	1.6	170.74	-3,664.1	1,694.7	4,682.5	4,668.9	13.57	345.140	
4,921.2	4,854.2	4,880.2	4,879.9	16.3	1.6	170.75	-3,664.0	1,694.7	4,686.8	4,673.1	13.63	343.791	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 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	4,931.2	4,962.3	4,962.0	16.6	1.6	170.79	-3,663.6	1,694.6	4,702.6	4,688.7	13.87	338.949	
5,019.7	4,950.5	4,982.3	4,982.1	16.7	1.6	170.80	-3,663.5	1,694.6	4,706.5	4,692.6	13.93	337.774	
5,100.0	5,029.0	5,053.1	5,052.9	17.1	1.6	170.82	-3,663.2	1,694.4	4,722.6	4,708.4	14.18	333.154	
5,118.1	5,046.7	5,068.4	5,068.2	17.1	1.6	170.83	-3,663.1	1,694.4	4,726.3	4,712.0	14.23	332.139	
5,200.0	5,126.8	5,142.0	5,141.7	17.5	1.6	170.86	-3,662.9	1,694.5	4,742.9	4,728.4	14.48	327.607	
5,216.5	5,143.0	5,157.6	5,157.3	17.6	1.7	170.87	-3,662.9	1,694.5	4,746.2	4,731.7	14.53	326.703	
5,300.0	5,224.7	5,238.1	5,237.8	17.9	1.7	170.90	-3,662.8	1,694.5	4,763.3	4,748.5	14.78	322.219	
5,314.9	5,239.3	5,252.8	5,252.6	18.0	1.7	170.90	-3,662.8	1,694.5	4,766.3	4,751.5	14.83	321.430	
5,400.0	5,322.5	5,340.3	5,340.0	18.4	1.7	170.94	-3,662.6	1,694.5	4,783.6	4,768.5	15.09	317.032	
5,413.4	5,335.6	5,354.7	5,354.5	18.4	1.7	170.94	-3,662.5	1,694.5	4,786.3	4,771.2	15.13	316.355	
5,500.0	5,420.3	5,446.1	5,445.8	18.8	1.7	170.98	-3,662.3	1,694.2	4,803.8	4,788.4	15.40	312.016	
5,511.8	5,431.8	5,458.2	5,458.0	18.9	1.7	170.99	-3,662.3	1,694.2	4,806.2	4,790.8	15.43	311.433	
5,600.0	5,518.1	5,548.5	5,548.2	19.3	1.8	171.02	-3,661.9	1,694.0	4,823.9	4,808.2	15.70	307.177	
5,610.2	5,528.1	5,558.8	5,558.6	19.3	1.8	171.03	-3,661.8	1,694.0	4,826.0	4,810.2	15.74	306.695	
5,700.0	5,615.9	5,639.3	5,639.0	19.7	1.8	171.05	-3,661.4	1,694.1	4,844.0	4,828.0	16.01	302.650	
5,708.6	5,624.4	5,646.1	5,645.9	19.7	1.8	171.06	-3,661.3	1,694.1	4,845.7	4,829.7	16.03	302.276	
5,800.0	5,713.7	5,723.9	5,723.7	20.1	1.8	171.08	-3,661.1	1,694.3	4,864.4	4,848.0	16.30	298.388	
5,807.1	5,720.7	5,731.1	5,730.8	20.2	1.8	171.09	-3,661.1	1,694.3	4,865.8	4,849.5	16.32	298.086	
5,900.0	5,811.6	5,825.4	5,825.1	20.6	1.8	171.12	-3,660.9	1,694.4	4,884.8	4,868.2	16.61	294.143	
5,905.5	5,816.9	5,831.1	5,830.8	20.6	1.8	171.12	-3,660.9	1,694.4	4,885.9	4,869.3	16.62	293.908	
6,000.0	5,909.4	5,923.3	5,923.0	21.0	1.9	171.16	-3,660.7	1,694.4	4,905.1	4,888.2	16.91	290.042	
6,003.9	5,913.2	5,926.6	5,926.3	21.0	1.9	171.16	-3,660.7	1,694.4	4,905.9	4,889.0	16.92	289.893	
6,053.2	5,961.4	5,968.2	5,968.0	21.3	1.9	171.17	-3,660.7	1,694.5	4,916.0	4,899.0	17.07	288.059	
6,100.0	6,007.3	6,000.0	5,999.7	21.4	1.9	171.21	-3,660.7	1,694.5	4,925.3	4,908.2	17.15	287.265	
6,102.3	6,009.6	6,009.4	6,009.1	21.5	1.9	171.22	-3,660.7	1,694.5	4,925.7	4,908.6	17.15	287.221	
6,200.0	6,105.7	6,088.8	6,088.5	21.8	1.9	171.29	-3,660.9	1,694.7	4,942.9	4,925.6	17.28	286.123	
6,200.8	6,106.5	6,089.4	6,089.1	21.8	1.9	171.30	-3,660.9	1,694.7	4,943.0	4,925.7	17.28	286.116	
6,299.2	6,203.9	6,200.0	6,199.7	22.0	1.9	171.36	-3,661.2	1,695.0	4,957.0	4,939.6	17.39	285.111	
6,300.0	6,204.7	6,200.0	6,199.7	22.0	1.9	171.36	-3,661.2	1,695.0	4,957.1	4,939.7	17.39	285.103	
6,397.6	6,301.8	6,294.0	6,293.7	22.3	1.9	171.41	-3,661.5	1,695.0	4,967.6	4,950.1	17.48	284.197	
6,400.0	6,304.2	6,296.2	6,296.0	22.3	1.9	171.42	-3,661.5	1,695.0	4,967.8	4,950.3	17.48	284.173	
6,496.0	6,400.0	6,388.5	6,388.2	22.4	1.9	171.45	-3,661.8	1,694.9	4,974.9	4,957.3	17.57	283.221	
6,500.0	6,403.9	6,392.3	6,392.0	22.5	1.9	171.45	-3,661.8	1,694.9	4,975.1	4,957.5	17.57	283.177	
6,594.5	6,498.3	6,495.4	6,495.2	22.6	1.8	171.47	-3,662.2	1,694.9	4,978.8	4,961.2	17.65	282.125	
6,600.0	6,503.8	6,501.6	6,501.3	22.6	1.8	171.47	-3,662.2	1,694.9	4,978.9	4,961.3	17.65	282.050	
6,653.0	6,556.8	6,562.3	6,562.0	22.7	1.8	157.18	-3,662.3	1,694.7	4,979.5	4,961.8	17.71	281.236	
6,689.9	6,593.8	6,600.0	6,599.7	22.7	1.8	157.18	-3,662.3	1,694.6	4,979.4	4,961.7	17.77	280.147	
6,692.9	6,596.7	6,600.0	6,599.7	22.7	1.8	157.18	-3,662.3	1,694.6	4,979.4	4,961.7	17.78	280.065	
6,706.0	6,609.8	6,616.5	6,616.2	22.7	1.8	157.18	-3,662.3	1,694.6	4,979.4	4,961.6	17.80	279.683	
6,750.0	6,653.8	6,652.6	6,652.4	22.8	1.8	-22.86	-3,662.4	1,694.5	4,978.2	4,960.4	17.80	279.747	
6,791.3	6,695.0	6,686.4	6,686.2	22.8	1.8	-22.97	-3,662.5	1,694.4	4,974.9	4,957.1	17.81	279.340	
6,800.0	6,703.6	6,700.0	6,699.7	22.8	1.8	-23.01	-3,662.6	1,694.4	4,973.9	4,956.1	17.82	279.157	
6,850.0	6,752.9	6,750.3	6,750.0	22.8	1.8	-23.29	-3,662.8	1,694.2	4,966.4	4,948.6	17.87	277.891	
6,889.7	6,791.6	6,797.3	6,797.0	22.7	1.8	-23.60	-3,662.9	1,694.0	4,958.2	4,940.2	17.93	276.585	
6,900.0	6,801.5	6,800.0	6,799.7	22.7	1.8	-23.69	-3,662.9	1,694.0	4,955.7	4,937.8	17.94	276.255	
6,950.0	6,849.1	6,845.8	6,845.6	22.6	1.8	-24.22	-3,663.1	1,693.8	4,941.9	4,923.9	18.01	274.473	
6,988.2	6,884.8	6,875.4	6,875.1	22.5	1.8	-24.71	-3,663.2	1,693.6	4,929.4	4,911.3	18.05	273.150	
7,000.0	6,895.7	6,884.4	6,884.2	22.5	1.8	-24.88	-3,663.3	1,693.6	4,925.1	4,907.1	18.06	272.722	
7,050.0	6,940.8	6,931.1	6,930.8	22.3	1.8	-25.71	-3,663.5	1,693.4	4,905.5	4,887.4	18.11	270.869	
7,086.6	6,972.8	6,968.8	6,968.6	22.1	1.8	-26.45	-3,663.8	1,693.1	4,889.3	4,871.1	18.15	269.406	
7,100.0	6,984.3	6,982.4	6,982.1	22.1	1.8	-26.75	-3,663.9	1,693.0	4,883.0	4,864.8	18.16	268.829	
7,150.0	7,025.9	7,043.9	7,043.6	21.9	1.9	-28.03	-3,664.2	1,692.2	4,857.6	4,839.4	18.24	266.286	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,185.0	7,053.9	7,089.6	7,089.4	21.7	1.9	-29.11	-3,664.3	1,691.5	4,838.2	4,819.9	18.32	264.142	
7,200.0	7,065.6	7,110.4	7,110.1	21.7	1.9	-29.61	-3,664.2	1,691.2	4,829.5	4,811.1	18.36	263.083	
7,250.0	7,103.0	7,183.5	7,183.2	21.4	1.9	-31.57	-3,663.8	1,690.0	4,798.7	4,780.1	18.53	258.907	
7,283.4	7,126.7	7,216.6	7,216.3	21.2	1.9	-33.01	-3,663.5	1,689.4	4,776.7	4,758.0	18.66	255.944	
7,300.0	7,138.0	7,229.0	7,228.7	21.2	1.9	-33.76	-3,663.4	1,689.2	4,765.4	4,746.7	18.73	254.418	
7,350.0	7,170.5	7,264.3	7,264.0	20.9	1.9	-36.31	-3,662.9	1,688.6	4,730.1	4,711.1	18.98	249.176	
7,381.9	7,189.8	7,285.2	7,284.9	20.8	1.9	-38.18	-3,662.7	1,688.2	4,706.6	4,687.4	19.18	245.333	
7,400.0	7,200.2	7,296.5	7,296.2	20.7	1.9	-39.33	-3,662.5	1,688.0	4,692.9	4,673.5	19.31	243.012	
7,450.0	7,227.0	7,300.0	7,299.7	20.4	1.9	-42.61	-3,662.5	1,687.9	4,654.0	4,634.3	19.65	236.864	
7,480.3	7,241.9	7,300.0	7,299.7	20.3	1.9	-44.85	-3,662.5	1,687.9	4,629.7	4,609.9	19.88	232.911	
7,500.0	7,250.9	7,300.0	7,299.7	20.2	1.9	-46.42	-3,662.5	1,687.9	4,613.7	4,593.7	20.03	230.327	
7,550.0	7,271.6	7,300.0	7,299.7	20.0	1.9	-50.87	-3,662.5	1,687.9	4,572.3	4,551.8	20.43	223.749	
7,578.7	7,282.0	7,300.0	7,299.7	19.9	1.9	-53.76	-3,662.5	1,687.9	4,548.0	4,527.3	20.66	220.141	
7,600.0	7,289.1	7,300.0	7,299.7	19.8	1.9	-56.06	-3,662.5	1,687.9	4,529.8	4,509.0	20.81	217.722	
7,650.0	7,303.3	7,300.0	7,299.7	19.6	1.9	-62.02	-3,662.5	1,687.9	4,486.4	4,465.4	21.07	212.914	
7,677.1	7,309.5	7,300.0	7,299.7	19.5	1.9	-65.58	-3,662.5	1,687.9	4,462.6	4,441.5	21.15	210.998	
7,700.0	7,314.1	7,300.0	7,299.7	19.5	1.9	-68.76	-3,662.5	1,687.9	4,442.4	4,421.3	21.16	209.946	
7,750.0	7,321.4	7,300.0	7,299.7	19.4	1.9	-76.17	-3,662.5	1,687.9	4,398.0	4,376.9	21.03	209.082	
7,775.6	7,323.9	7,300.0	7,299.7	19.3	1.9	-80.16	-3,662.5	1,687.9	4,375.1	4,354.2	20.92	209.182	
7,800.0	7,325.3	7,300.0	7,299.7	19.3	1.9	-84.06	-3,662.5	1,687.9	4,353.2	4,332.4	20.79	209.341	
7,832.0	7,326.0	7,300.0	7,299.7	19.3	1.9	-89.20	-3,662.5	1,687.9	4,324.6	4,303.9	20.74	208.484	
7,874.0	7,325.9	7,300.0	7,299.7	19.3	1.9	-89.20	-3,662.5	1,687.9	4,287.0	4,266.2	20.79	206.190	
7,900.0	7,325.9	7,300.0	7,299.7	19.3	1.9	-89.20	-3,662.5	1,687.9	4,263.8	4,242.9	20.82	204.779	
7,972.4	7,325.8	7,300.0	7,299.7	19.4	1.9	-89.20	-3,662.5	1,687.9	4,199.3	4,178.2	21.02	199.774	
8,000.0	7,325.8	7,300.0	7,299.7	19.5	1.9	-89.20	-3,662.5	1,687.9	4,174.8	4,153.7	21.10	197.896	
8,070.8	7,325.7	7,300.0	7,299.7	19.8	1.9	-89.20	-3,662.5	1,687.9	4,112.0	4,090.6	21.42	191.976	
8,100.0	7,325.6	7,300.0	7,299.7	19.9	1.9	-89.20	-3,662.5	1,687.9	4,086.3	4,064.7	21.55	189.596	
8,169.3	7,325.5	7,300.0	7,299.7	20.3	1.9	-89.20	-3,662.5	1,687.9	4,025.3	4,003.3	21.99	183.077	
8,200.0	7,325.5	7,300.0	7,299.7	20.5	1.9	-89.20	-3,662.5	1,687.9	3,998.4	3,976.2	22.18	180.271	
8,267.7	7,325.4	7,300.0	7,299.7	21.1	1.9	-89.20	-3,662.5	1,687.9	3,939.1	3,916.4	22.71	173.459	
8,300.0	7,325.3	7,300.0	7,299.7	21.3	1.9	-89.20	-3,662.5	1,687.9	3,911.0	3,888.0	22.96	170.325	
8,366.1	7,325.2	7,300.0	7,299.7	21.9	1.9	-89.20	-3,662.5	1,687.9	3,853.6	3,830.0	23.57	163.487	
8,400.0	7,325.2	7,300.0	7,299.7	22.3	1.9	-89.20	-3,662.5	1,687.9	3,824.3	3,800.4	23.88	160.124	
8,464.5	7,325.1	7,300.0	7,299.7	22.9	1.9	-89.20	-3,662.5	1,687.9	3,768.6	3,744.1	24.56	153.466	
8,500.0	7,325.1	7,300.0	7,299.7	23.3	1.9	-89.20	-3,662.5	1,687.9	3,738.2	3,713.3	24.93	149.967	
8,563.0	7,325.0	7,300.0	7,299.7	24.0	1.9	-89.20	-3,662.5	1,687.9	3,684.3	3,658.7	25.65	143.634	
8,600.0	7,324.9	7,300.0	7,299.7	24.5	1.9	-89.20	-3,662.5	1,687.9	3,652.8	3,626.7	26.08	140.079	
8,661.4	7,324.8	7,300.0	7,299.7	25.2	1.9	-89.20	-3,662.5	1,687.9	3,600.8	3,573.9	26.84	134.159	
8,700.0	7,324.8	7,300.0	7,299.7	25.7	1.9	-89.20	-3,662.5	1,687.9	3,568.2	3,540.9	27.32	130.612	
8,759.8	7,324.7	7,300.0	7,299.7	26.5	1.9	-89.20	-3,662.5	1,687.9	3,518.0	3,489.9	28.11	125.150	
8,800.0	7,324.6	7,300.0	7,299.7	27.1	1.9	-89.20	-3,662.5	1,687.9	3,484.4	3,455.8	28.64	121.657	
8,858.2	7,324.5	7,300.0	7,299.7	27.9	1.9	-89.20	-3,662.5	1,687.9	3,436.0	3,406.6	29.45	116.668	
8,900.0	7,324.5	7,300.0	7,299.7	28.4	1.9	-89.20	-3,662.5	1,687.9	3,401.5	3,371.5	30.03	113.264	
8,956.7	7,324.4	7,300.0	7,299.7	29.3	1.9	-89.20	-3,662.5	1,687.9	3,354.9	3,324.1	30.85	108.738	
9,000.0	7,324.3	7,300.0	7,299.7	29.9	1.9	-89.20	-3,662.5	1,687.9	3,319.5	3,288.0	31.48	105.445	
9,055.1	7,324.3	7,300.0	7,299.7	30.7	1.9	-89.20	-3,662.5	1,687.9	3,274.8	3,242.5	32.31	101.363	
9,100.0	7,324.2	7,300.0	7,299.7	31.4	1.9	-89.20	-3,662.5	1,687.9	3,238.6	3,205.6	32.98	98.194	
9,153.5	7,324.1	7,300.0	7,299.7	32.2	1.9	-89.20	-3,662.5	1,687.9	3,195.7	3,161.9	33.81	94.526	
9,200.0	7,324.0	7,300.0	7,299.7	33.0	1.9	-89.20	-3,662.5	1,687.9	3,158.7	3,124.2	34.52	91.490	
9,251.9	7,324.0	7,300.0	7,299.7	33.8	1.9	-89.20	-3,662.5	1,687.9	3,117.7	3,082.3	35.35	88.202	
9,300.0	7,323.9	7,300.0	7,299.7	34.5	1.9	-89.21	-3,662.5	1,687.9	3,080.0	3,043.9	36.11	85.303	
9,350.4	7,323.8	7,300.0	7,299.7	35.4	1.9	-89.21	-3,662.5	1,687.9	3,040.8	3,003.9	36.92	82.362	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,400.0	7,323.7	7,300.0	7,299.7	36.2	1.9	-89.21	-3,662.5	1,687.9	3,002.6	2,964.8	37.72	79.599	
9,448.8	7,323.7	7,300.0	7,299.7	37.0	1.9	-89.21	-3,662.5	1,687.9	2,965.3	2,926.7	38.52	76.974	
9,500.0	7,323.6	7,300.0	7,299.7	37.8	1.9	-89.21	-3,662.5	1,687.9	2,926.5	2,887.1	39.36	74.344	
9,547.2	7,323.5	7,300.0	7,299.7	38.6	1.9	-89.21	-3,662.5	1,687.9	2,891.1	2,850.9	40.15	72.003	
9,600.0	7,323.5	7,300.0	7,299.7	39.5	1.9	-89.21	-3,662.5	1,687.9	2,851.9	2,810.9	41.03	69.503	
9,645.6	7,323.4	7,300.0	7,299.7	40.2	1.9	-89.21	-3,662.5	1,687.9	2,818.4	2,776.6	41.80	67.418	
9,700.0	7,323.3	7,300.0	7,299.7	41.2	1.9	-89.21	-3,662.5	1,687.9	2,778.9	2,736.2	42.72	65.045	
9,744.1	7,323.2	7,300.0	7,299.7	41.9	1.9	-89.21	-3,662.5	1,687.9	2,747.3	2,703.8	43.48	63.190	
9,800.0	7,323.2	7,300.0	7,299.7	42.9	1.9	-89.21	-3,662.5	1,687.9	2,707.7	2,663.3	44.43	60.938	
9,842.5	7,323.1	7,300.0	7,299.7	43.6	1.9	-89.21	-3,662.5	1,687.9	2,678.0	2,632.8	45.17	59.290	
9,900.0	7,323.0	7,300.0	7,299.7	44.6	1.9	-89.21	-3,662.5	1,687.9	2,638.3	2,592.1	46.16	57.155	
9,940.9	7,322.9	7,300.0	7,299.7	45.3	1.9	-89.21	-3,662.5	1,687.9	2,610.5	2,563.6	46.87	55.692	
10,000.0	7,322.9	7,300.0	7,299.7	46.3	1.9	-89.21	-3,662.5	1,687.9	2,570.9	2,523.0	47.90	53.670	
10,039.3	7,322.8	7,300.0	7,299.7	47.0	1.9	-89.21	-3,662.5	1,687.9	2,545.0	2,496.4	48.59	52.374	
10,100.0	7,322.7	7,300.0	7,299.7	48.1	1.9	-89.21	-3,662.5	1,687.9	2,505.7	2,456.1	49.66	50.460	
10,137.8	7,322.6	7,300.0	7,299.7	48.8	1.9	-89.21	-3,662.5	1,687.9	2,481.7	2,431.4	50.33	49.313	
10,200.0	7,322.6	7,300.0	7,299.7	49.9	1.9	-89.21	-3,662.5	1,687.9	2,442.9	2,391.5	51.43	47.503	
10,236.2	7,322.5	7,300.0	7,299.7	50.5	1.9	-89.21	-3,662.5	1,687.9	2,420.8	2,368.7	52.07	46.490	
10,300.0	7,322.4	7,300.0	7,299.7	51.6	1.9	-89.21	-3,662.5	1,687.9	2,382.6	2,329.4	53.21	44.781	
10,334.6	7,322.4	7,300.0	7,299.7	52.3	1.9	-89.21	-3,662.5	1,687.9	2,362.4	2,308.5	53.82	43.890	
10,400.0	7,322.3	7,300.0	7,299.7	53.4	1.9	-89.21	-3,662.5	1,687.9	2,325.1	2,270.1	54.99	42.278	
10,433.0	7,322.2	7,300.0	7,299.7	54.0	1.9	-89.21	-3,662.5	1,687.9	2,306.7	2,251.1	55.59	41.496	
10,500.0	7,322.1	7,300.0	7,299.7	55.2	1.9	-89.21	-3,662.5	1,687.9	2,270.4	2,213.7	56.79	39.979	
10,531.5	7,322.1	7,300.0	7,299.7	55.8	1.9	-89.21	-3,662.5	1,687.9	2,253.9	2,196.5	57.36	39.294	
10,600.0	7,321.9	7,300.0	7,299.7	57.0	1.9	-89.21	-3,662.5	1,687.9	2,219.0	2,160.4	58.60	37.869	
10,629.9	7,321.9	7,300.0	7,299.7	57.6	1.9	-89.21	-3,662.5	1,687.9	2,204.3	2,145.1	59.14	37.273	
10,700.0	7,321.8	7,300.0	7,299.7	58.8	1.9	-89.21	-3,662.5	1,687.9	2,171.0	2,110.5	60.41	35.937	
10,728.3	7,321.8	7,300.0	7,299.7	59.4	1.9	-89.21	-3,662.5	1,687.9	2,158.0	2,097.1	60.93	35.420	
10,800.0	7,321.6	7,300.0	7,299.7	60.7	1.9	-89.21	-3,662.5	1,687.9	2,126.5	2,064.3	62.23	34.172	
10,826.7	7,321.6	7,300.0	7,299.7	61.1	1.9	-89.21	-3,662.5	1,687.9	2,115.3	2,052.6	62.72	33.727	
10,900.0	7,321.5	7,300.0	7,299.7	62.5	1.9	-89.21	-3,662.5	1,687.9	2,085.9	2,021.9	64.06	32.565	
10,925.2	7,321.4	7,300.0	7,299.7	62.9	1.9	-89.21	-3,662.5	1,687.9	2,076.4	2,011.8	64.52	32.183	
11,000.0	7,321.3	7,300.0	7,299.7	64.3	1.9	-89.21	-3,662.5	1,687.9	2,049.4	1,983.6	65.89	31.106	
11,023.6	7,321.3	7,300.0	7,299.7	64.7	1.9	-89.21	-3,662.5	1,687.9	2,041.4	1,975.1	66.32	30.782	
11,100.0	7,321.2	7,300.0	7,299.7	66.1	1.9	-89.21	-3,662.5	1,687.9	2,017.2	1,949.5	67.72	29.787	
11,122.0	7,321.1	7,300.0	7,299.7	66.5	1.9	-89.21	-3,662.5	1,687.9	2,010.7	1,942.6	68.13	29.514	
11,200.0	7,321.0	7,300.0	7,299.7	68.0	1.9	-89.21	-3,662.5	1,687.9	1,989.5	1,920.0	69.56	28.601	
11,220.4	7,321.0	7,300.0	7,299.7	68.4	1.9	-89.21	-3,662.5	1,687.9	1,984.5	1,914.5	69.94	28.373	
11,300.0	7,320.9	7,300.0	7,299.7	69.8	1.9	-89.21	-3,662.5	1,687.9	1,966.6	1,895.1	71.41	27.540	
11,318.9	7,320.8	7,300.0	7,299.7	70.2	1.9	-89.21	-3,662.5	1,687.9	1,962.8	1,891.0	71.76	27.353	
11,400.0	7,320.7	7,300.0	7,299.7	71.7	1.9	-89.21	-3,662.5	1,687.9	1,948.4	1,875.2	73.26	26.597	
11,417.3	7,320.7	7,300.0	7,299.7	72.0	1.9	-89.21	-3,662.5	1,687.9	1,945.8	1,872.2	73.58	26.445	
11,500.0	7,320.6	7,300.0	7,299.7	73.5	1.9	-89.21	-3,662.5	1,687.9	1,935.3	1,860.2	75.11	25.766	
11,515.7	7,320.5	7,300.0	7,299.7	73.8	1.9	-89.21	-3,662.5	1,687.9	1,933.7	1,858.3	75.40	25.645	
11,600.0	7,320.4	7,300.0	7,299.7	75.4	1.9	-89.21	-3,662.5	1,687.9	1,927.3	1,850.3	76.97	25.041	
11,614.1	7,320.4	7,300.0	7,299.7	75.6	1.9	-89.21	-3,662.5	1,687.9	1,926.6	1,849.4	77.23	24.946	
11,700.0	7,320.2	7,300.0	7,299.7	77.2	1.9	-89.21	-3,662.5	1,687.9	1,924.5	1,845.6	78.83	24.414	
11,704.7	7,320.2	7,300.0	7,299.7	77.3	1.9	-89.21	-3,662.5	1,687.9	1,924.5	1,845.5	78.91	24.387 CC	
11,712.6	7,320.2	7,300.0	7,299.7	77.5	1.9	-89.21	-3,662.5	1,687.9	1,924.5	1,845.4	79.06	24.342 ES	
11,800.0	7,320.1	7,300.0	7,299.7	79.1	1.9	-89.21	-3,662.5	1,687.9	1,926.8	1,846.1	80.69	23.880	
11,811.0	7,320.1	7,300.0	7,299.7	79.3	1.9	-89.21	-3,662.5	1,687.9	1,927.4	1,846.5	80.85	23.839	
11,849.2	7,320.0	7,300.0	7,299.7	79.8	1.9	-89.21	-3,662.5	1,687.9	1,929.9	1,848.5	81.42	23.704	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT MCCART 30-2 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,849.6	7,320.0	7,300.0	7,299.7	79.8	1.9	-89.21	-3,662.5	1,687.9	1,929.9	1,848.5	81.42	23.703 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-78.23	228.4	-1,096.1	1,119.6				
98.4	98.4	98.4	98.4	0.1	0.1	-78.23	228.4	-1,096.1	1,119.6	1,119.4	0.22	5,188.237	
100.0	100.0	100.0	100.0	0.1	0.1	-78.23	228.4	-1,096.1	1,119.6	1,119.4	0.22	5,096.907	
196.8	196.8	196.8	196.8	0.3	2.7	-78.23	228.4	-1,096.1	1,119.6	1,116.7	2.96	377.888	
200.0	200.0	200.0	200.0	0.3	2.7	-78.23	228.4	-1,096.1	1,119.6	1,116.6	3.05	366.841	
295.3	295.3	295.3	295.3	0.5	4.7	-78.23	228.4	-1,096.1	1,119.6	1,114.4	5.23	213.937	
300.0	300.0	300.0	300.0	0.5	4.8	-78.23	228.4	-1,096.1	1,119.6	1,114.3	5.34	209.604	
393.7	393.7	393.7	393.7	0.7	6.7	-78.23	228.4	-1,096.1	1,119.6	1,112.2	7.46	150.146	
400.0	400.0	400.0	400.0	0.8	6.8	-78.23	228.4	-1,096.1	1,119.6	1,112.0	7.60	147.336	
492.1	492.1	492.1	492.1	1.0	8.7	-78.23	228.4	-1,096.1	1,119.6	1,110.0	9.67	115.787	
500.0	500.0	500.0	500.0	1.0	8.9	-78.23	228.4	-1,096.1	1,119.6	1,109.8	9.85	113.706	
590.5	590.5	590.5	590.5	1.2	10.7	-78.23	228.4	-1,096.1	1,119.6	1,107.8	11.88	94.262	
600.0	600.0	600.0	600.0	1.2	10.9	-78.23	228.4	-1,096.1	1,119.6	1,107.6	12.09	92.609	
689.0	689.0	689.0	689.0	1.4	12.7	-78.23	228.4	-1,096.1	1,119.6	1,105.6	14.08	79.499	
700.0	700.0	700.0	700.0	1.4	12.9	-78.23	228.4	-1,096.1	1,119.6	1,105.3	14.33	78.128	
787.4	787.4	787.4	787.4	1.6	14.7	-78.23	228.4	-1,096.1	1,119.6	1,103.4	16.29	68.740	
800.0	800.0	800.0	800.0	1.7	14.9	-78.23	228.4	-1,096.1	1,119.6	1,103.1	16.57	67.569	
885.8	885.8	885.8	885.8	1.9	16.6	-78.23	228.4	-1,096.1	1,119.6	1,101.2	18.49	60.549	
900.0	900.0	900.0	900.0	1.9	16.9	-78.23	228.4	-1,096.1	1,119.6	1,100.8	18.81	59.528	
984.2	984.2	984.2	984.2	2.1	18.6	-78.23	228.4	-1,096.1	1,119.6	1,099.0	20.69	54.104	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	18.9	-78.23	228.4	-1,096.1	1,119.6	1,098.6	21.05	53.198	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	20.6	-78.23	228.4	-1,096.1	1,119.6	1,096.8	22.90	48.900	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	21.0	-78.23	228.4	-1,096.1	1,119.6	1,096.4	23.28	48.086	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	22.6	-78.23	228.4	-1,096.1	1,119.6	1,094.5	25.10	44.610	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	23.0	-78.23	228.4	-1,096.1	1,119.6	1,094.1	25.52	43.871	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	24.6	-78.23	228.4	-1,096.1	1,119.6	1,092.3	27.30	41.012	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	25.0	-78.23	228.4	-1,096.1	1,119.6	1,091.9	27.76	40.335	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	26.5	-78.23	228.4	-1,096.1	1,119.6	1,090.1	29.50	37.951	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	27.0	-78.23	228.4	-1,096.1	1,119.6	1,089.7	30.00	37.327	
1,450.0	1,450.0	1,450.0	1,450.0	3.1	28.0	-78.23	228.4	-1,096.1	1,119.6	1,088.5	31.11	35.986	
1,476.4	1,476.4	1,476.4	1,476.4	3.2	28.5	-63.94	228.4	-1,096.1	1,119.6	1,087.9	31.70	35.315	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	29.0	-63.96	228.4	-1,096.1	1,119.5	1,087.2	32.23	34.733	
1,574.8	1,574.8	1,574.8	1,574.8	3.4	30.5	-64.08	228.4	-1,096.1	1,118.5	1,084.6	33.90	32.997	
1,600.0	1,599.9	1,599.9	1,599.9	3.5	31.0	-64.15	228.4	-1,096.1	1,117.9	1,083.5	34.46	32.446	
1,673.2	1,673.0	1,673.0	1,673.0	3.6	32.5	-64.40	228.4	-1,096.1	1,115.9	1,079.8	36.08	30.929	
1,700.0	1,699.7	1,699.7	1,699.7	3.7	33.0	-64.52	228.4	-1,096.1	1,114.9	1,078.2	36.67	30.404	
1,771.6	1,771.0	1,771.0	1,771.0	3.9	34.4	-64.91	228.4	-1,096.1	1,111.8	1,073.6	38.25	29.067	
1,800.0	1,799.1	1,799.1	1,799.1	3.9	35.0	-65.09	228.4	-1,096.1	1,110.4	1,071.6	38.87	28.565	
1,870.1	1,868.6	1,868.6	1,868.6	4.1	36.4	-65.60	228.4	-1,096.1	1,106.5	1,066.1	40.42	27.375	
1,900.0	1,898.2	1,898.2	1,898.2	4.2	37.0	-65.84	228.4	-1,096.1	1,104.6	1,063.5	41.08	26.892	
1,968.5	1,965.7	1,965.7	1,965.7	4.3	38.4	-66.47	228.4	-1,096.1	1,099.9	1,057.3	42.59	25.825	
2,000.0	1,996.6	1,996.6	1,996.6	4.4	39.0	-66.79	228.4	-1,096.1	1,097.5	1,054.3	43.28	25.357	
2,049.8	2,045.4	2,045.4	2,045.4	4.6	40.0	-67.33	228.4	-1,096.1	1,093.6	1,049.2	44.39	24.639	
2,066.9	2,062.2	2,062.2	2,062.2	4.6	40.3	-67.50	228.4	-1,096.1	1,092.2	1,047.4	44.78	24.393	
2,100.0	2,094.5	2,094.5	2,094.5	4.7	41.0	-67.83	228.4	-1,096.1	1,089.5	1,044.0	45.53	23.932	
2,165.3	2,158.5	2,158.5	2,158.5	4.9	42.2	-68.48	228.4	-1,096.1	1,084.4	1,037.4	47.02	23.062	
2,200.0	2,192.3	2,192.3	2,192.3	5.1	42.9	-68.83	228.4	-1,096.1	1,081.7	1,033.9	47.81	22.624	
2,263.8	2,254.7	2,254.7	2,254.7	5.3	44.2	-69.47	228.4	-1,096.1	1,076.9	1,027.6	49.28	21.852	
2,300.0	2,290.2	2,290.2	2,290.2	5.4	44.9	-69.84	228.4	-1,096.1	1,074.3	1,024.1	50.12	21.434	
2,362.2	2,351.0	2,351.0	2,351.0	5.6	46.1	-70.48	228.4	-1,096.1	1,069.8	1,018.2	51.56	20.747	
2,400.0	2,388.0	2,388.0	2,388.0	5.8	46.9	-70.87	228.4	-1,096.1	1,067.1	1,014.7	52.44	20.349	
2,460.6	2,447.3	2,447.3	2,447.3	6.0	48.1	-71.50	228.4	-1,096.1	1,063.0	1,009.1	53.86	19.738	

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 OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT NYGREN 21-30 - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-INC													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,500.0	2,485.8	2,485.8	2,485.8	6.1	48.8	-71.91	228.4	-1,096.1	1,060.4	1,005.6	54.78	19.358		
2,559.0	2,543.6	2,543.6	2,543.6	6.3	50.0	-72.53	228.4	-1,096.1	1,056.5	1,000.4	56.16	18.812		
2,600.0	2,583.6	2,583.6	2,583.6	6.5	50.8	-72.96	228.4	-1,096.1	1,054.0	996.8	57.12	18.450		
2,657.5	2,639.8	2,639.8	2,639.8	6.7	51.9	-73.57	228.4	-1,096.1	1,050.5	992.0	58.48	17.963		
2,700.0	2,681.4	2,681.4	2,681.4	6.9	52.8	-74.03	228.4	-1,096.1	1,047.9	988.5	59.48	17.617		
2,755.9	2,736.1	2,736.1	2,736.1	7.1	53.9	-74.63	228.4	-1,096.1	1,044.7	983.9	60.81	17.181		
2,800.0	2,779.2	2,779.2	2,779.2	7.3	54.7	-75.10	228.4	-1,096.1	1,042.3	980.4	61.85	16.852		
2,854.3	2,832.4	2,832.4	2,832.4	7.5	55.8	-75.69	228.4	-1,096.1	1,039.4	976.2	63.14	16.461		
2,900.0	2,877.1	2,877.1	2,877.1	7.7	56.7	-76.19	228.4	-1,096.1	1,037.0	972.8	64.23	16.146		
2,952.7	2,928.7	2,928.7	2,928.7	7.9	57.7	-76.77	228.4	-1,096.1	1,034.4	968.9	65.48	15.796		
3,000.0	2,974.9	2,974.9	2,974.9	8.1	58.7	-77.29	228.4	-1,096.1	1,032.2	965.6	66.61	15.496		
3,051.2	3,024.9	3,024.9	3,024.9	8.3	59.7	-77.85	228.4	-1,096.1	1,029.8	962.0	67.83	15.182		
3,100.0	3,072.7	3,072.7	3,072.7	8.5	60.6	-78.39	228.4	-1,096.1	1,027.7	958.7	69.00	14.894		
3,149.6	3,121.2	3,121.2	3,121.2	8.7	61.6	-78.95	228.4	-1,096.1	1,025.6	955.4	70.19	14.613		
3,200.0	3,170.5	3,170.5	3,170.5	8.9	62.6	-79.51	228.4	-1,096.1	1,023.6	952.2	71.39	14.338		
3,248.0	3,217.5	3,217.5	3,217.5	9.1	63.5	-80.05	228.4	-1,096.1	1,021.8	949.3	72.54	14.085		
3,300.0	3,268.3	3,268.3	3,268.3	9.3	64.6	-80.63	228.4	-1,096.1	1,020.0	946.2	73.79	13.822		
3,346.4	3,313.8	3,313.8	3,313.8	9.5	65.5	-81.16	228.4	-1,096.1	1,018.4	943.5	74.91	13.596		
3,400.0	3,366.1	3,366.1	3,366.1	9.7	66.5	-81.76	228.4	-1,096.1	1,016.7	940.5	76.19	13.344		
3,444.9	3,410.0	3,410.0	3,410.0	9.9	67.4	-82.27	228.4	-1,096.1	1,015.4	938.1	77.27	13.141		
3,500.0	3,464.0	3,464.0	3,464.0	10.2	68.5	-82.90	228.4	-1,096.1	1,013.9	935.3	78.59	12.900		
3,543.3	3,506.3	3,506.3	3,506.3	10.3	69.4	-83.40	228.4	-1,096.1	1,012.8	933.2	79.64	12.718		
3,600.0	3,561.8	3,561.8	3,561.8	10.6	70.5	-84.05	228.4	-1,096.1	1,011.5	930.5	81.00	12.487		
3,641.7	3,602.6	3,602.6	3,602.6	10.8	71.3	-84.52	228.4	-1,096.1	1,010.6	928.6	82.00	12.324		
3,700.0	3,659.6	3,659.6	3,659.6	11.0	72.4	-85.19	228.4	-1,096.1	1,009.5	926.1	83.40	12.103		
3,740.1	3,698.9	3,698.9	3,698.9	11.2	73.2	-85.66	228.4	-1,096.1	1,008.8	924.4	84.37	11.957		
3,800.0	3,757.4	3,757.4	3,757.4	11.4	74.4	-86.35	228.4	-1,096.1	1,007.9	922.1	85.81	11.746		
3,838.6	3,795.1	3,795.1	3,795.1	11.6	75.2	-86.79	228.4	-1,096.1	1,007.4	920.7	86.74	11.615		
3,900.0	3,855.2	3,855.2	3,855.2	11.9	76.4	-87.50	228.4	-1,096.1	1,006.8	918.6	88.21	11.413		
3,937.0	3,891.4	3,891.4	3,891.4	12.0	77.1	-87.93	228.4	-1,096.1	1,006.5	917.4	89.10	11.295		
4,000.0	3,953.0	3,953.0	3,953.0	12.3	78.3	-88.66	228.4	-1,096.1	1,006.1	915.4	90.62	11.102		
4,035.4	3,987.7	3,987.7	3,987.7	12.4	79.0	-89.07	228.4	-1,096.1	1,005.9	914.4	91.47	10.997		
4,100.0	4,050.9	4,050.9	4,050.9	12.7	80.3	-89.81	228.4	-1,096.1	1,005.8	912.8	93.02	10.812		
4,116.0	4,066.5	4,066.5	4,066.5	12.8	80.6	-90.00	228.4	-1,096.1	1,005.8	912.4	93.41	10.768		
4,133.8	4,084.0	4,084.0	4,084.0	12.9	81.0	-90.21	228.4	-1,096.1	1,005.8	911.9	93.83	10.719		
4,200.0	4,148.7	4,148.7	4,148.7	13.2	82.3	-90.97	228.4	-1,096.1	1,005.9	910.5	95.42	10.542		
4,232.3	4,180.2	4,180.2	4,180.2	13.3	82.9	-91.35	228.4	-1,096.1	1,006.1	909.9	96.19	10.459		
4,300.0	4,246.5	4,246.5	4,246.5	13.6	84.2	-92.13	228.4	-1,096.1	1,006.5	908.7	97.82	10.290		
4,330.7	4,276.5	4,276.5	4,276.5	13.7	84.8	-92.48	228.4	-1,096.1	1,006.8	908.2	98.55	10.215		
4,400.0	4,344.3	4,344.3	4,344.3	14.0	86.2	-93.28	228.4	-1,096.1	1,007.5	907.3	100.21	10.054		
4,429.1	4,372.8	4,372.8	4,372.8	14.1	86.8	-93.62	228.4	-1,096.1	1,007.9	907.0	100.91	9.988		
4,500.0	4,442.1	4,442.1	4,442.1	14.5	88.2	-94.44	228.4	-1,096.1	1,008.9	906.3	102.60	9.834		
4,527.5	4,469.1	4,469.1	4,469.1	14.6	88.7	-94.75	228.4	-1,096.1	1,009.4	906.1	103.26	9.776		
4,600.0	4,539.9	4,539.9	4,539.9	14.9	90.1	-95.59	228.4	-1,096.1	1,010.8	905.8	104.99	9.628		
4,626.0	4,565.4	4,565.4	4,565.4	15.0	90.6	-95.88	228.4	-1,096.1	1,011.3	905.7	105.60	9.577		
4,700.0	4,637.8	4,637.8	4,637.8	15.3	92.1	-96.73	228.4	-1,096.1	1,013.1	905.7	107.37	9.436		
4,724.4	4,661.6	4,661.6	4,661.6	15.4	92.6	-97.01	228.4	-1,096.1	1,013.7	905.7	107.95	9.391		
4,800.0	4,735.6	4,735.6	4,735.6	15.8	94.1	-97.87	228.4	-1,096.1	1,015.8	906.0	109.74	9.256		
4,822.8	4,757.9	4,757.9	4,757.9	15.9	94.5	-98.13	228.4	-1,096.1	1,016.4	906.2	110.28	9.217		
4,900.0	4,833.4	4,833.4	4,833.4	16.2	96.0	-99.00	228.4	-1,096.1	1,018.9	906.8	112.11	9.088		
4,921.2	4,854.2	4,854.2	4,854.2	16.3	96.5	-99.24	228.4	-1,096.1	1,019.6	907.0	112.61	9.054		
5,000.0	4,931.2	4,931.2	4,931.2	16.6	98.0	-100.13	228.4	-1,096.1	1,022.4	907.9	114.47	8.931		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,950.5	4,950.5	4,950.5	16.7	98.4	-100.35	228.4	-1,096.1	1,023.1	908.2	114.94	8.902	
5,100.0	5,029.0	5,029.0	5,029.0	17.1	100.0	-101.25	228.4	-1,096.1	1,026.3	909.5	116.83	8.785	
5,118.1	5,046.7	5,046.7	5,046.7	17.1	100.3	-101.45	228.4	-1,096.1	1,027.1	909.8	117.26	8.759	
5,200.0	5,126.8	5,126.8	5,126.8	17.5	101.9	-102.36	228.4	-1,096.1	1,030.7	911.5	119.18	8.648	
5,216.5	5,143.0	5,143.0	5,143.0	17.6	102.3	-102.54	228.4	-1,096.1	1,031.4	911.9	119.57	8.626	
5,300.0	5,224.7	5,224.7	5,224.7	17.9	103.9	-103.46	228.4	-1,096.1	1,035.4	913.9	121.53	8.520	
5,314.9	5,239.3	5,239.3	5,239.3	18.0	104.2	-103.62	228.4	-1,096.1	1,036.2	914.3	121.88	8.502	
5,400.0	5,322.5	5,322.5	5,322.5	18.4	105.9	-104.55	228.4	-1,096.1	1,040.6	916.7	123.87	8.401	
5,413.4	5,335.6	5,335.6	5,335.6	18.4	106.1	-104.69	228.4	-1,096.1	1,041.3	917.1	124.18	8.385	
5,500.0	5,420.3	5,420.3	5,420.3	18.8	107.8	-105.63	228.4	-1,096.1	1,046.1	919.9	126.20	8.289	
5,511.8	5,431.8	5,431.8	5,431.8	18.9	108.1	-105.75	228.4	-1,096.1	1,046.8	920.3	126.47	8.277	
5,600.0	5,518.1	5,518.1	5,518.1	19.3	109.8	-106.70	228.4	-1,096.1	1,052.0	923.5	128.52	8.185	
5,610.2	5,528.1	5,528.1	5,528.1	19.3	110.0	-106.80	228.4	-1,096.1	1,052.6	923.9	128.76	8.175	
5,700.0	5,615.9	5,615.9	5,615.9	19.7	111.8	-107.75	228.4	-1,096.1	1,058.3	927.4	130.84	8.088	
5,708.6	5,624.4	5,624.4	5,624.4	19.7	111.9	-107.84	228.4	-1,096.1	1,058.8	927.8	131.04	8.080	
5,800.0	5,713.7	5,713.7	5,713.7	20.1	113.7	-108.80	228.4	-1,096.1	1,064.9	931.8	133.15	7.998	
5,807.1	5,720.7	5,720.7	5,720.7	20.2	113.9	-108.87	228.4	-1,096.1	1,065.4	932.1	133.31	7.992	
5,900.0	5,811.6	5,811.6	5,811.6	20.6	115.7	-109.83	228.4	-1,096.1	1,071.9	936.5	135.45	7.914	
5,905.5	5,816.9	5,816.9	5,816.9	20.6	115.8	-109.88	228.4	-1,096.1	1,072.3	936.7	135.58	7.909	
6,000.0	5,909.4	5,909.4	5,909.4	21.0	117.7	-110.85	228.4	-1,096.1	1,079.3	941.5	137.75	7.835	
6,003.9	5,913.2	5,913.2	5,913.2	21.0	117.8	-110.89	228.4	-1,096.1	1,079.6	941.8	137.84	7.832	
6,053.2	5,961.4	5,961.4	5,961.4	21.3	118.7	-111.38	228.4	-1,096.1	1,083.4	944.4	138.97	7.796	
6,100.0	6,007.3	6,007.3	6,007.3	21.4	119.6	-111.90	228.4	-1,096.1	1,086.9	946.8	140.06	7.760	
6,102.3	6,009.6	6,009.6	6,009.6	21.5	119.7	-111.92	228.4	-1,096.1	1,087.0	946.9	140.11	7.758	
6,200.0	6,105.7	6,105.7	6,105.7	21.8	121.6	-112.86	228.4	-1,096.1	1,093.6	951.3	142.35	7.683	
6,200.8	6,106.5	6,106.5	6,106.5	21.8	121.6	-112.87	228.4	-1,096.1	1,093.6	951.3	142.37	7.682	
6,299.2	6,203.9	6,203.9	6,203.9	22.0	123.6	-113.63	228.4	-1,096.1	1,099.1	954.5	144.60	7.601	
6,300.0	6,204.7	6,204.7	6,204.7	22.0	123.6	-113.63	228.4	-1,096.1	1,099.2	954.6	144.62	7.600	
6,397.6	6,301.8	6,301.8	6,301.8	22.3	125.6	-114.20	228.4	-1,096.1	1,103.4	956.6	146.81	7.516	
6,400.0	6,304.2	6,304.2	6,304.2	22.3	125.6	-114.21	228.4	-1,096.1	1,103.5	956.6	146.87	7.513	
6,496.0	6,400.0	6,400.0	6,400.0	22.4	127.5	-114.59	228.4	-1,096.1	1,106.3	957.3	148.99	7.425	
6,500.0	6,403.9	6,403.9	6,403.9	22.5	127.6	-114.60	228.4	-1,096.1	1,106.4	957.3	149.08	7.422	
6,594.5	6,498.3	6,498.3	6,498.3	22.6	129.5	-114.79	228.4	-1,096.1	1,107.9	956.7	151.13	7.331	
6,600.0	6,503.8	6,503.8	6,503.8	22.6	129.6	-114.79	228.4	-1,096.1	1,107.9	956.7	151.25	7.325	
6,653.0	6,556.8	6,556.8	6,556.8	22.7	130.7	-129.11	228.4	-1,096.1	1,108.1	955.7	152.38	7.272	
6,692.9	6,596.7	6,596.7	6,596.7	22.7	131.5	-129.11	228.4	-1,096.1	1,108.1	954.9	153.23	7.232	
6,706.0	6,609.8	6,609.8	6,609.8	22.7	131.8	-129.11	228.4	-1,096.1	1,108.1	954.6	153.51	7.218	
6,750.0	6,653.8	6,653.8	6,653.8	22.8	132.6	50.99	228.4	-1,096.1	1,107.3	952.9	154.32	7.175	
6,791.3	6,695.0	6,695.0	6,695.0	22.8	133.5	51.29	228.4	-1,096.1	1,104.9	950.1	154.86	7.135	
6,800.0	6,703.6	6,703.6	6,703.6	22.8	133.6	51.38	228.4	-1,096.1	1,104.2	949.3	154.95	7.126	
6,850.0	6,752.9	6,752.9	6,752.9	22.8	134.6	52.04	228.4	-1,096.1	1,099.1	943.7	155.33	7.076	
6,889.7	6,791.6	6,791.6	6,791.6	22.7	135.4	52.76	228.4	-1,096.1	1,093.5	938.0	155.46	7.034	
6,900.0	6,801.5	6,801.5	6,801.5	22.7	135.6	52.98	228.4	-1,096.1	1,091.8	936.3	155.48	7.022	
6,950.0	6,849.1	6,849.1	6,849.1	22.6	136.6	54.20	228.4	-1,096.1	1,082.6	927.1	155.48	6.963	
6,988.2	6,884.8	6,884.8	6,884.8	22.5	137.3	55.32	228.4	-1,096.1	1,074.3	918.9	155.43	6.912	
7,000.0	6,895.7	6,895.7	6,895.7	22.5	137.5	55.71	228.4	-1,096.1	1,071.6	916.1	155.42	6.895	
7,050.0	6,940.8	6,940.8	6,940.8	22.3	138.4	57.49	228.4	-1,096.1	1,058.9	903.5	155.39	6.814	
7,086.6	6,972.8	6,972.8	6,972.8	22.1	139.1	58.96	228.4	-1,096.1	1,048.6	893.2	155.44	6.746	
7,100.0	6,984.3	6,984.3	6,984.3	22.1	139.3	59.53	228.4	-1,096.1	1,044.7	889.2	155.48	6.719	
7,150.0	7,025.9	7,025.9	7,025.9	21.9	140.1	61.83	228.4	-1,096.1	1,029.2	873.4	155.79	6.606	
7,185.0	7,053.9	7,053.9	7,053.9	21.7	140.7	63.57	228.4	-1,096.1	1,017.8	861.7	156.16	6.518	
7,200.0	7,065.6	7,065.6	7,065.6	21.7	140.9	64.35	228.4	-1,096.1	1,012.8	856.5	156.37	6.477	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,250.0	7,103.0	7,103.0	7,103.0	21.4	141.7	67.05	228.4	-1,096.1	995.7	838.5	157.22	6.333	
7,283.4	7,126.7	7,126.7	7,126.7	21.2	142.2	68.93	228.4	-1,096.1	984.0	826.1	157.92	6.231	
7,300.0	7,138.0	7,138.0	7,138.0	21.2	142.4	69.88	228.4	-1,096.1	978.2	819.9	158.30	6.179	
7,350.0	7,170.5	7,170.5	7,170.5	20.9	143.0	72.77	228.4	-1,096.1	960.6	801.1	159.55	6.021	
7,381.9	7,189.8	7,189.8	7,189.8	20.8	143.4	74.62	228.4	-1,096.1	949.6	789.2	160.37	5.921	
7,400.0	7,200.2	7,200.2	7,200.2	20.7	143.6	75.66	228.4	-1,096.1	943.4	782.6	160.84	5.866	
7,450.0	7,227.0	7,227.0	7,227.0	20.4	144.2	78.46	228.4	-1,096.1	926.8	764.8	162.05	5.719	
7,480.3	7,241.9	7,241.9	7,241.9	20.3	144.5	80.08	228.4	-1,096.1	917.3	754.6	162.71	5.638	
7,500.0	7,250.9	7,250.9	7,250.9	20.2	144.7	81.10	228.4	-1,096.1	911.3	748.2	163.10	5.588	
7,550.0	7,271.6	7,271.6	7,271.6	20.0	145.1	83.49	228.4	-1,096.1	897.3	733.4	163.92	5.474	
7,578.7	7,282.0	7,282.0	7,282.0	19.9	145.3	84.73	228.4	-1,096.1	890.0	725.7	164.29	5.417	
7,600.0	7,289.1	7,289.1	7,289.1	19.8	145.4	85.58	228.4	-1,096.1	885.0	720.5	164.50	5.380	
7,650.0	7,303.3	7,303.3	7,303.3	19.6	145.7	87.31	228.4	-1,096.1	874.9	710.0	164.87	5.307	
7,677.1	7,309.5	7,309.5	7,309.5	19.5	145.8	88.08	228.4	-1,096.1	870.4	705.4	165.01	5.275	
7,700.0	7,314.1	7,314.1	7,314.1	19.5	145.9	88.63	228.4	-1,096.1	867.2	702.1	165.08	5.253	
7,750.0	7,321.4	7,321.4	7,321.4	19.4	146.1	89.52	228.4	-1,096.1	862.1	697.0	165.19	5.219	
7,775.6	7,323.9	7,323.9	7,323.9	19.3	146.1	89.80	228.4	-1,096.1	860.6	695.4	165.23	5.209	
7,800.0	7,325.3	7,325.3	7,325.3	19.3	146.2	89.96	228.4	-1,096.1	859.9	694.7	165.24	5.204	
7,813.8	7,325.8	7,325.8	7,325.8	19.3	146.2	90.00	228.4	-1,096.1	859.8	694.5	165.26	5.203 CC, ES, SF	
7,832.0	7,326.0	7,326.0	7,326.0	19.3	146.2	90.00	228.4	-1,096.1	860.0	694.7	165.26	5.204	
7,874.0	7,325.9	7,325.9	7,325.9	19.3	146.2	89.99	228.4	-1,096.1	861.9	696.6	165.31	5.214	
7,900.0	7,325.9	7,325.9	7,325.9	19.3	146.2	89.99	228.4	-1,096.1	864.1	698.8	165.34	5.226	
7,972.4	7,325.8	7,325.8	7,325.8	19.4	146.2	89.99	228.4	-1,096.1	874.3	708.8	165.54	5.282	
8,000.0	7,325.8	7,325.8	7,325.8	19.5	146.2	89.98	228.4	-1,096.1	879.7	714.1	165.61	5.312	
8,070.8	7,325.7	7,325.7	7,325.7	19.8	146.2	89.98	228.4	-1,096.1	897.4	731.5	165.94	5.408	
8,100.0	7,325.6	7,325.6	7,325.6	19.9	146.2	89.97	228.4	-1,096.1	906.2	740.1	166.07	5.457	
8,169.3	7,325.5	7,325.5	7,325.5	20.3	146.2	89.97	228.4	-1,096.1	930.4	763.9	166.50	5.588	
8,200.0	7,325.5	7,325.5	7,325.5	20.5	146.2	89.96	228.4	-1,096.1	942.5	775.8	166.69	5.654	
8,267.7	7,325.4	7,325.4	7,325.4	21.1	146.2	89.96	228.4	-1,096.1	972.2	805.0	167.22	5.814	
8,300.0	7,325.3	7,325.3	7,325.3	21.3	146.2	89.95	228.4	-1,096.1	987.7	820.3	167.47	5.898	
8,366.1	7,325.2	7,325.2	7,325.2	21.9	146.2	89.95	228.4	-1,096.1	1,021.9	853.8	168.08	6.080	
8,400.0	7,325.2	7,325.2	7,325.2	22.3	146.1	89.94	228.4	-1,096.1	1,040.6	872.2	168.39	6.180	
8,464.5	7,325.1	7,325.1	7,325.1	22.9	146.1	89.94	228.4	-1,096.1	1,078.3	909.2	169.06	6.378	
8,500.0	7,325.1	7,325.1	7,325.1	23.3	146.1	89.93	228.4	-1,096.1	1,100.0	930.6	169.43	6.492	
8,563.0	7,325.0	7,325.0	7,325.0	24.0	146.1	89.93	228.4	-1,096.1	1,140.4	970.2	170.16	6.702	
8,600.0	7,324.9	7,324.9	7,324.9	24.5	146.1	89.92	228.4	-1,096.1	1,165.0	994.5	170.58	6.830	
8,661.4	7,324.8	7,324.8	7,324.8	25.2	146.1	89.92	228.4	-1,096.1	1,207.3	1,036.0	171.34	7.046	
8,700.0	7,324.8	7,324.8	7,324.8	25.7	146.1	89.92	228.4	-1,096.1	1,234.7	1,062.9	171.82	7.186	
8,759.8	7,324.7	7,324.7	7,324.7	26.5	146.1	89.91	228.4	-1,096.1	1,278.3	1,105.7	172.61	7.406	
8,800.0	7,324.6	7,324.6	7,324.6	27.1	146.1	89.91	228.4	-1,096.1	1,308.4	1,135.2	173.14	7.557	
8,858.2	7,324.5	7,324.5	7,324.5	27.9	146.1	89.90	228.4	-1,096.1	1,352.8	1,178.9	173.95	7.777	
8,900.0	7,324.5	7,324.5	7,324.5	28.4	146.1	89.90	228.4	-1,096.1	1,385.3	1,210.8	174.53	7.937	
8,956.7	7,324.4	7,324.4	7,324.4	29.3	146.1	89.89	228.4	-1,096.1	1,430.2	1,254.8	175.35	8.156	
9,000.0	7,324.3	7,324.3	7,324.3	29.9	146.1	89.89	228.4	-1,096.1	1,465.0	1,289.0	175.97	8.325	
9,055.1	7,324.3	7,324.3	7,324.3	30.7	146.1	89.88	228.4	-1,096.1	1,510.0	1,333.2	176.80	8.541	
9,100.0	7,324.2	7,324.2	7,324.2	31.4	146.1	89.88	228.4	-1,096.1	1,547.1	1,369.6	177.47	8.717	
9,153.5	7,324.1	7,324.1	7,324.1	32.2	146.1	89.87	228.4	-1,096.1	1,591.9	1,413.6	178.30	8.928	
9,200.0	7,324.0	7,324.0	7,324.0	33.0	146.1	89.86	228.4	-1,096.1	1,631.2	1,452.2	179.01	9.112	
9,251.9	7,324.0	7,324.0	7,324.0	33.8	146.1	89.86	228.4	-1,096.1	1,675.5	1,495.7	179.83	9.317	
9,300.0	7,323.9	7,323.9	7,323.9	34.5	146.1	89.85	228.4	-1,096.1	1,717.0	1,536.4	180.59	9.507	
9,350.4	7,323.8	7,323.8	7,323.8	35.4	146.1	89.85	228.4	-1,096.1	1,760.8	1,579.3	181.40	9.706	
9,400.0	7,323.7	7,323.7	7,323.7	36.2	146.1	89.84	228.4	-1,096.1	1,804.2	1,622.0	182.20	9.902	

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 OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	7,323.7	7,323.7	7,323.7	37.0	146.1	89.84	228.4	-1,096.1	1,847.3	1,664.3	183.00	10.094	
9,500.0	7,323.6	7,323.6	7,323.6	37.8	146.1	89.83	228.4	-1,096.1	1,892.7	1,708.9	183.84	10.295	
9,547.2	7,323.5	7,323.5	7,323.5	38.6	146.1	89.83	228.4	-1,096.1	1,934.9	1,750.3	184.63	10.480	
9,600.0	7,323.5	7,323.5	7,323.5	39.5	146.1	89.82	228.4	-1,096.1	1,982.3	1,796.8	185.51	10.686	
9,645.6	7,323.4	7,323.4	7,323.4	40.2	146.1	89.82	228.4	-1,096.1	2,023.6	1,837.3	186.28	10.863	
9,700.0	7,323.3	7,323.3	7,323.3	41.2	146.1	89.81	228.4	-1,096.1	2,072.9	1,885.7	187.20	11.073	
9,744.1	7,323.2	7,323.2	7,323.2	41.9	146.1	89.81	228.4	-1,096.1	2,113.1	1,925.1	187.95	11.243	
9,800.0	7,323.2	7,323.2	7,323.2	42.9	146.1	89.80	228.4	-1,096.1	2,164.3	1,975.4	188.90	11.457	
9,842.5	7,323.1	7,323.1	7,323.1	43.6	146.1	89.80	228.4	-1,096.1	2,203.4	2,013.7	189.64	11.619	
9,900.0	7,323.0	7,323.0	7,323.0	44.6	146.1	89.79	228.4	-1,096.1	2,256.4	2,065.8	190.63	11.837	
9,940.9	7,322.9	7,322.9	7,322.9	45.3	146.1	89.79	228.4	-1,096.1	2,294.3	2,103.0	191.34	11.991	
10,000.0	7,322.9	7,322.9	7,322.9	46.3	146.1	89.78	228.4	-1,096.1	2,349.2	2,156.8	192.37	12.212	
10,039.3	7,322.8	7,322.8	7,322.8	47.0	146.1	89.78	228.4	-1,096.1	2,385.8	2,192.8	193.06	12.358	
10,100.0	7,322.7	7,322.7	7,322.7	48.1	146.1	89.77	228.4	-1,096.1	2,442.5	2,248.4	194.12	12.583	
10,137.8	7,322.6	7,322.6	7,322.6	48.8	146.1	89.77	228.4	-1,096.1	2,477.9	2,283.1	194.79	12.721	
10,200.0	7,322.6	7,322.6	7,322.6	49.9	146.1	89.76	228.4	-1,096.1	2,536.4	2,340.5	195.88	12.948	
10,236.2	7,322.5	7,322.5	7,322.5	50.5	146.1	89.76	228.4	-1,096.1	2,570.4	2,373.9	196.53	13.079	
10,300.0	7,322.4	7,322.4	7,322.4	51.6	146.1	89.75	228.4	-1,096.1	2,630.7	2,433.0	197.66	13.309	
10,334.6	7,322.4	7,322.4	7,322.4	52.3	146.1	89.75	228.4	-1,096.1	2,663.4	2,465.1	198.28	13.433	
10,400.0	7,322.3	7,322.3	7,322.3	53.4	146.1	89.74	228.4	-1,096.1	2,725.4	2,525.9	199.45	13.665	
10,433.0	7,322.2	7,322.2	7,322.2	54.0	146.1	89.73	228.4	-1,096.1	2,756.7	2,556.7	200.04	13.781	
10,500.0	7,322.1	7,322.1	7,322.1	55.2	146.1	89.73	228.4	-1,096.1	2,820.4	2,619.2	201.24	14.015	
10,531.5	7,322.1	7,322.1	7,322.1	55.8	146.1	89.72	228.4	-1,096.1	2,850.4	2,648.6	201.81	14.124	
10,600.0	7,321.9	7,321.9	7,321.9	57.0	146.1	89.72	228.4	-1,096.1	2,915.8	2,712.8	203.04	14.361	
10,629.9	7,321.9	7,321.9	7,321.9	57.6	146.1	89.71	228.4	-1,096.1	2,944.4	2,740.8	203.58	14.463	
10,700.0	7,321.8	7,321.8	7,321.8	58.8	146.1	89.70	228.4	-1,096.1	3,011.5	2,806.7	204.85	14.701	
10,728.3	7,321.8	7,321.8	7,321.8	59.4	146.1	89.70	228.4	-1,096.1	3,038.7	2,833.3	205.37	14.796	
10,800.0	7,321.6	7,321.6	7,321.6	60.7	146.1	89.69	228.4	-1,096.1	3,107.5	2,900.8	206.67	15.036	
10,826.7	7,321.6	7,321.6	7,321.6	61.1	146.1	89.69	228.4	-1,096.1	3,133.2	2,926.0	207.16	15.125	
10,900.0	7,321.5	7,321.5	7,321.5	62.5	146.1	89.68	228.4	-1,096.1	3,203.7	2,995.2	208.49	15.366	
10,925.2	7,321.4	7,321.4	7,321.4	62.9	146.1	89.68	228.4	-1,096.1	3,228.0	3,019.0	208.95	15.448	
11,000.0	7,321.3	7,321.3	7,321.3	64.3	146.1	89.67	228.4	-1,096.1	3,300.1	3,089.8	210.32	15.691	
11,023.6	7,321.3	7,321.3	7,321.3	64.7	146.1	89.67	228.4	-1,096.1	3,322.9	3,112.2	210.75	15.767	
11,100.0	7,321.2	7,321.2	7,321.2	66.1	146.1	89.66	228.4	-1,096.1	3,396.8	3,184.6	212.15	16.011	
11,122.0	7,321.1	7,321.1	7,321.1	66.5	146.1	89.66	228.4	-1,096.1	3,418.1	3,205.5	212.56	16.081	
11,200.0	7,321.0	7,321.0	7,321.0	68.0	146.1	89.65	228.4	-1,096.1	3,493.6	3,279.6	213.99	16.326	
11,220.4	7,321.0	7,321.0	7,321.0	68.4	146.1	89.65	228.4	-1,096.1	3,513.5	3,299.1	214.37	16.390	
11,300.0	7,320.9	7,320.9	7,320.9	69.8	146.1	89.64	228.4	-1,096.1	3,590.6	3,374.8	215.83	16.636	
11,318.9	7,320.8	7,320.8	7,320.8	70.2	146.1	89.63	228.4	-1,096.1	3,609.0	3,392.8	216.18	16.694	
11,400.0	7,320.7	7,320.7	7,320.7	71.7	146.1	89.63	228.4	-1,096.1	3,687.8	3,470.1	217.68	16.942	
11,417.3	7,320.7	7,320.7	7,320.7	72.0	146.1	89.62	228.4	-1,096.1	3,704.6	3,486.6	218.00	16.994	
11,500.0	7,320.6	7,320.6	7,320.6	73.5	146.1	89.61	228.4	-1,096.1	3,785.1	3,565.6	219.53	17.242	
11,515.7	7,320.5	7,320.5	7,320.5	73.8	146.1	89.61	228.4	-1,096.1	3,800.4	3,580.6	219.82	17.289	
11,600.0	7,320.4	7,320.4	7,320.4	75.4	146.1	89.60	228.4	-1,096.1	3,882.6	3,661.2	221.38	17.538	
11,614.1	7,320.4	7,320.4	7,320.4	75.6	146.1	89.60	228.4	-1,096.1	3,896.4	3,674.7	221.64	17.580	
11,700.0	7,320.2	7,320.2	7,320.2	77.2	146.0	89.59	228.4	-1,096.1	3,980.1	3,756.9	223.24	17.829	
11,712.6	7,320.2	7,320.2	7,320.2	77.5	146.0	89.59	228.4	-1,096.1	3,992.4	3,769.0	223.47	17.866	
11,800.0	7,320.1	7,320.1	7,320.1	79.1	146.0	89.58	228.4	-1,096.1	4,077.8	3,852.8	225.09	18.116	
11,811.0	7,320.1	7,320.1	7,320.1	79.3	146.0	89.58	228.4	-1,096.1	4,088.6	3,863.3	225.26	18.151	
11,849.2	7,320.0	7,320.0	7,320.0	79.8	146.0	89.57	228.4	-1,096.1	4,126.0	3,900.2	225.82	18.271	
11,849.6	7,320.0	7,320.0	7,320.0	79.8	146.0	89.57	228.4	-1,096.1	4,126.3	3,900.5	225.83	18.272	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-137.70	-783.6	-713.1	1,059.5				
98.4	98.4	93.4	93.4	0.1	0.2	-137.70	-783.6	-713.1	1,059.5	1,059.2	0.27	3,904.707	
100.0	100.0	95.0	95.0	0.1	0.2	-137.70	-783.6	-713.1	1,059.5	1,059.2	0.28	3,835.231	
196.8	196.8	191.8	191.8	0.3	2.6	-137.70	-783.6	-713.1	1,059.5	1,056.6	2.88	368.488	
200.0	200.0	195.0	195.0	0.3	2.7	-137.70	-783.6	-713.1	1,059.5	1,056.5	2.96	357.496	
295.3	295.3	290.3	290.3	0.5	4.6	-137.70	-783.6	-713.1	1,059.5	1,054.3	5.17	204.769	
300.0	300.0	295.0	295.0	0.5	4.7	-137.70	-783.6	-713.1	1,059.5	1,054.2	5.28	200.569	
393.7	393.7	388.7	388.7	0.7	6.7	-137.70	-783.6	-713.1	1,059.5	1,052.1	7.40	143.156	
400.0	400.0	395.0	395.0	0.8	6.8	-137.70	-783.6	-713.1	1,059.5	1,052.0	7.54	140.455	
492.1	492.1	487.1	487.1	1.0	8.6	-137.70	-783.6	-713.1	1,059.5	1,049.9	9.62	110.188	
500.0	500.0	495.0	495.0	1.0	8.8	-137.70	-783.6	-713.1	1,059.5	1,049.7	9.79	108.196	
590.5	590.5	585.5	585.5	1.2	10.6	-137.70	-783.6	-713.1	1,059.5	1,047.7	11.82	89.603	
600.0	600.0	595.0	595.0	1.2	10.8	-137.70	-783.6	-713.1	1,059.5	1,047.5	12.04	88.024	
689.0	689.0	684.0	684.0	1.4	12.6	-137.70	-783.6	-713.1	1,059.5	1,045.5	14.03	75.513	
700.0	700.0	695.0	695.0	1.4	12.8	-137.70	-783.6	-713.1	1,059.5	1,045.2	14.28	74.206	
787.4	787.4	782.4	782.4	1.6	14.6	-137.70	-783.6	-713.1	1,059.5	1,043.3	16.24	65.258	
800.0	800.0	795.0	795.0	1.7	14.9	-137.70	-783.6	-713.1	1,059.5	1,043.0	16.52	64.143	
885.8	885.8	880.8	880.8	1.9	16.6	-137.70	-783.6	-713.1	1,059.5	1,041.1	18.44	57.459	
900.0	900.0	895.0	895.0	1.9	16.9	-137.70	-783.6	-713.1	1,059.5	1,040.7	18.76	56.487	
984.2	984.2	979.2	979.2	2.1	18.6	-137.70	-783.6	-713.1	1,059.5	1,038.9	20.64	51.327	
1,000.0	1,000.0	995.0	995.0	2.1	18.9	-137.70	-783.6	-713.1	1,059.5	1,038.5	20.99	50.465	
1,082.7	1,082.7	1,077.7	1,077.7	2.3	20.5	-137.70	-783.6	-713.1	1,059.5	1,036.7	22.84	46.378	
1,100.0	1,100.0	1,095.0	1,095.0	2.3	20.9	-137.70	-783.6	-713.1	1,059.5	1,036.3	23.23	45.604	
1,181.1	1,181.1	1,176.1	1,176.1	2.5	22.5	-137.70	-783.6	-713.1	1,059.5	1,034.5	25.05	42.301	
1,200.0	1,200.0	1,195.0	1,195.0	2.6	22.9	-137.70	-783.6	-713.1	1,059.5	1,034.0	25.47	41.598	
1,279.5	1,279.5	1,274.5	1,274.5	2.7	24.5	-137.70	-783.6	-713.1	1,059.5	1,032.3	27.25	38.882	
1,300.0	1,300.0	1,295.0	1,295.0	2.8	24.9	-137.70	-783.6	-713.1	1,059.5	1,031.8	27.71	38.240	
1,377.9	1,377.9	1,372.9	1,372.9	3.0	26.5	-137.70	-783.6	-713.1	1,059.5	1,030.0	29.45	35.976	
1,400.0	1,400.0	1,395.0	1,395.0	3.0	26.9	-137.70	-783.6	-713.1	1,059.5	1,029.6	29.94	35.383	
1,450.0	1,450.0	1,445.0	1,445.0	3.1	27.9	-137.70	-783.6	-713.1	1,059.5	1,028.4	31.06	34.109	
1,476.4	1,476.4	1,471.4	1,471.4	3.2	28.5	-123.41	-783.6	-713.1	1,059.6	1,027.9	31.65	33.476	
1,500.0	1,500.0	1,495.0	1,495.0	3.2	28.9	-123.42	-783.6	-713.1	1,059.7	1,027.6	32.18	32.933	
1,574.8	1,574.8	1,569.8	1,569.8	3.4	30.5	-123.50	-783.6	-713.1	1,061.0	1,027.2	33.84	31.351	
1,600.0	1,599.9	1,594.9	1,594.9	3.5	31.0	-123.54	-783.6	-713.1	1,061.7	1,027.3	34.40	30.862	
1,673.2	1,673.0	1,668.0	1,668.0	3.6	32.4	-123.71	-783.6	-713.1	1,064.3	1,028.3	36.02	29.550	
1,700.0	1,699.7	1,694.7	1,694.7	3.7	33.0	-123.79	-783.6	-713.1	1,065.5	1,028.9	36.60	29.109	
1,771.6	1,771.0	1,766.0	1,766.0	3.9	34.4	-124.04	-783.6	-713.1	1,069.5	1,031.4	38.17	28.018	
1,800.0	1,799.1	1,794.1	1,794.1	3.9	35.0	-124.16	-783.6	-713.1	1,071.4	1,032.6	38.79	27.620	
1,870.1	1,868.6	1,863.6	1,863.6	4.1	36.4	-124.48	-783.6	-713.1	1,076.7	1,036.4	40.31	26.710	
1,900.0	1,898.2	1,893.2	1,893.2	4.2	37.0	-124.63	-783.6	-713.1	1,079.3	1,038.4	40.96	26.353	
1,968.5	1,965.7	1,960.7	1,960.7	4.3	38.3	-125.02	-783.6	-713.1	1,086.0	1,043.5	42.43	25.595	
2,000.0	1,996.6	1,991.6	1,991.6	4.4	38.9	-125.21	-783.6	-713.1	1,089.4	1,046.3	43.10	25.275	
2,049.8	2,045.4	2,040.4	2,040.4	4.6	39.9	-125.54	-783.6	-713.1	1,095.2	1,051.0	44.16	24.801	
2,066.9	2,062.2	2,057.2	2,057.2	4.6	40.3	-125.69	-783.6	-713.1	1,097.3	1,052.8	44.54	24.635	
2,100.0	2,094.5	2,089.5	2,089.5	4.7	40.9	-125.97	-783.6	-713.1	1,101.4	1,056.1	45.28	24.325	
2,165.3	2,158.5	2,153.5	2,153.5	4.9	42.2	-126.53	-783.6	-713.1	1,109.5	1,062.8	46.74	23.739	
2,200.0	2,192.3	2,187.3	2,187.3	5.1	42.9	-126.83	-783.6	-713.1	1,113.9	1,066.4	47.51	23.445	
2,263.8	2,254.7	2,249.7	2,249.7	5.3	44.1	-127.36	-783.6	-713.1	1,122.0	1,073.0	48.94	22.925	
2,300.0	2,290.2	2,285.2	2,285.2	5.4	44.8	-127.66	-783.6	-713.1	1,126.6	1,076.9	49.75	22.644	
2,362.2	2,351.0	2,346.0	2,346.0	5.6	46.1	-128.17	-783.6	-713.1	1,134.7	1,083.5	51.15	22.182	
2,400.0	2,388.0	2,383.0	2,383.0	5.8	46.8	-128.48	-783.6	-713.1	1,139.6	1,087.6	52.00	21.914	
2,460.6	2,447.3	2,442.3	2,442.3	6.0	48.0	-128.96	-783.6	-713.1	1,147.6	1,094.2	53.37	21.502	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT SHULTZ 22-30 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,485.8	2,480.8	2,480.8	6.1	48.8	-129.27	-783.6	-713.1	1,152.8	1,098.6	54.26	21.247	
2,559.0	2,543.6	2,538.6	2,538.6	6.3	49.9	-129.74	-783.6	-713.1	1,160.8	1,105.2	55.59	20.880	
2,600.0	2,583.6	2,578.6	2,578.6	6.5	50.7	-130.05	-783.6	-713.1	1,166.3	1,109.8	56.52	20.636	
2,657.5	2,639.8	2,634.8	2,634.8	6.7	51.9	-130.50	-783.6	-713.1	1,174.1	1,116.3	57.82	20.308	
2,700.0	2,681.4	2,676.4	2,676.4	6.9	52.7	-130.82	-783.6	-713.1	1,179.9	1,121.2	58.78	20.075	
2,755.9	2,736.1	2,731.1	2,731.1	7.1	53.8	-131.24	-783.6	-713.1	1,187.7	1,127.6	60.04	19.781	
2,800.0	2,779.2	2,774.2	2,774.2	7.3	54.7	-131.56	-783.6	-713.1	1,193.8	1,132.8	61.04	19.559	
2,854.3	2,832.4	2,827.4	2,827.4	7.5	55.7	-131.96	-783.6	-713.1	1,201.4	1,139.1	62.26	19.295	
2,900.0	2,877.1	2,872.1	2,872.1	7.7	56.6	-132.29	-783.6	-713.1	1,207.8	1,144.6	63.30	19.082	
2,952.7	2,928.7	2,923.7	2,923.7	7.9	57.7	-132.67	-783.6	-713.1	1,215.3	1,150.9	64.49	18.846	
3,000.0	2,974.9	2,969.9	2,969.9	8.1	58.6	-133.00	-783.6	-713.1	1,222.1	1,156.5	65.56	18.642	
3,051.2	3,024.9	3,019.9	3,019.9	8.3	59.6	-133.36	-783.6	-713.1	1,229.5	1,162.7	66.71	18.429	
3,100.0	3,072.7	3,067.7	3,067.7	8.5	60.6	-133.70	-783.6	-713.1	1,236.5	1,168.7	67.82	18.234	
3,149.6	3,121.2	3,116.2	3,116.2	8.7	61.6	-134.04	-783.6	-713.1	1,243.8	1,174.8	68.94	18.042	
3,200.0	3,170.5	3,165.5	3,165.5	8.9	62.5	-134.38	-783.6	-713.1	1,251.1	1,181.1	70.07	17.855	
3,248.0	3,217.5	3,212.5	3,212.5	9.1	63.5	-134.70	-783.6	-713.1	1,258.2	1,187.1	71.16	17.682	
3,300.0	3,268.3	3,263.3	3,263.3	9.3	64.5	-135.05	-783.6	-713.1	1,265.9	1,193.6	72.33	17.502	
3,346.4	3,313.8	3,308.8	3,308.8	9.5	65.4	-135.35	-783.6	-713.1	1,272.9	1,199.5	73.38	17.347	
3,400.0	3,366.1	3,361.1	3,361.1	9.7	66.5	-135.70	-783.6	-713.1	1,280.9	1,206.3	74.58	17.174	
3,444.9	3,410.0	3,405.0	3,405.0	9.9	67.4	-135.98	-783.6	-713.1	1,287.6	1,212.0	75.59	17.033	
3,500.0	3,464.0	3,459.0	3,459.0	10.2	68.4	-136.33	-783.6	-713.1	1,296.0	1,219.2	76.84	16.867	
3,543.3	3,506.3	3,501.3	3,501.3	10.3	69.3	-136.60	-783.6	-713.1	1,302.6	1,224.8	77.81	16.740	
3,600.0	3,561.8	3,556.8	3,556.8	10.6	70.4	-136.95	-783.6	-713.1	1,311.3	1,232.2	79.09	16.580	
3,641.7	3,602.6	3,597.6	3,597.6	10.8	71.2	-137.21	-783.6	-713.1	1,317.7	1,237.6	80.02	16.466	
3,700.0	3,659.6	3,654.6	3,654.6	11.0	72.4	-137.56	-783.6	-713.1	1,326.7	1,245.3	81.33	16.311	
3,740.1	3,698.9	3,693.9	3,693.9	11.2	73.2	-137.80	-783.6	-713.1	1,332.9	1,250.7	82.24	16.208	
3,800.0	3,757.4	3,752.4	3,752.4	11.4	74.4	-138.15	-783.6	-713.1	1,342.2	1,258.7	83.58	16.059	
3,838.6	3,795.1	3,790.1	3,790.1	11.6	75.1	-138.38	-783.6	-713.1	1,348.3	1,263.8	84.45	15.966	
3,900.0	3,855.2	3,850.2	3,850.2	11.9	76.3	-138.73	-783.6	-713.1	1,357.9	1,272.1	85.83	15.822	
3,937.0	3,891.4	3,886.4	3,886.4	12.0	77.0	-138.94	-783.6	-713.1	1,363.8	1,277.1	86.66	15.738	
4,000.0	3,953.0	3,948.0	3,948.0	12.3	78.3	-139.30	-783.6	-713.1	1,373.8	1,285.7	88.07	15.599	
4,035.4	3,987.7	3,982.7	3,982.7	12.4	79.0	-139.50	-783.6	-713.1	1,379.4	1,290.6	88.86	15.523	
4,100.0	4,050.9	4,045.9	4,045.9	12.7	80.3	-139.85	-783.6	-713.1	1,389.7	1,299.4	90.31	15.389	
4,133.8	4,084.0	4,079.0	4,079.0	12.9	80.9	-140.04	-783.6	-713.1	1,395.2	1,304.1	91.06	15.321	
4,200.0	4,148.7	4,143.7	4,143.7	13.2	82.2	-140.39	-783.6	-713.1	1,405.8	1,313.3	92.54	15.191	
4,232.3	4,180.2	4,175.2	4,175.2	13.3	82.9	-140.56	-783.6	-713.1	1,411.1	1,317.8	93.27	15.129	
4,300.0	4,246.5	4,241.5	4,241.5	13.6	84.2	-140.92	-783.6	-713.1	1,422.0	1,327.3	94.78	15.004	
4,330.7	4,276.5	4,271.5	4,271.5	13.7	84.8	-141.08	-783.6	-713.1	1,427.0	1,331.6	95.47	14.948	
4,400.0	4,344.3	4,339.3	4,339.3	14.0	86.2	-141.44	-783.6	-713.1	1,438.4	1,341.4	97.01	14.826	
4,429.1	4,372.8	4,367.8	4,367.8	14.1	86.7	-141.59	-783.6	-713.1	1,443.2	1,345.5	97.66	14.777	
4,500.0	4,442.1	4,437.1	4,437.1	14.5	88.1	-141.95	-783.6	-713.1	1,454.8	1,355.6	99.25	14.659	
4,527.5	4,469.1	4,464.1	4,464.1	14.6	88.7	-142.08	-783.6	-713.1	1,459.4	1,359.5	99.86	14.614	
4,600.0	4,539.9	4,534.9	4,534.9	14.9	90.1	-142.44	-783.6	-713.1	1,471.4	1,369.9	101.48	14.500	
4,626.0	4,565.4	4,560.4	4,560.4	15.0	90.6	-142.57	-783.6	-713.1	1,475.7	1,373.6	102.05	14.460	
4,700.0	4,637.8	4,632.8	4,632.8	15.3	92.1	-142.92	-783.6	-713.1	1,488.0	1,384.3	103.70	14.349	
4,724.4	4,661.6	4,656.6	4,656.6	15.4	92.5	-143.04	-783.6	-713.1	1,492.1	1,387.9	104.25	14.313	
4,800.0	4,735.6	4,730.6	4,730.6	15.8	94.0	-143.40	-783.6	-713.1	1,504.8	1,398.9	105.93	14.206	
4,822.8	4,757.9	4,752.9	4,752.9	15.9	94.5	-143.50	-783.6	-713.1	1,508.6	1,402.2	106.44	14.174	
4,900.0	4,833.4	4,828.4	4,828.4	16.2	96.0	-143.86	-783.6	-713.1	1,521.7	1,413.5	108.15	14.070	
4,921.2	4,854.2	4,849.2	4,849.2	16.3	96.4	-143.96	-783.6	-713.1	1,525.3	1,416.6	108.63	14.041	
5,000.0	4,931.2	4,926.2	4,926.2	16.6	98.0	-144.31	-783.6	-713.1	1,538.6	1,428.2	110.38	13.940	
5,019.7	4,950.5	4,945.5	4,945.5	16.7	98.3	-144.40	-783.6	-713.1	1,542.0	1,431.2	110.81	13.915	

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 OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,029.0	5,024.0	5,024.0	17.1	99.9	-144.76	-783.6	-713.1	1,555.7	1,443.1	112.60	13.816	
5,118.1	5,046.7	5,041.7	5,041.7	17.1	100.3	-144.84	-783.6	-713.1	1,558.8	1,445.8	113.00	13.795	
5,200.0	5,126.8	5,121.8	5,121.8	17.5	101.9	-145.19	-783.6	-713.1	1,572.8	1,458.0	114.82	13.699	
5,216.5	5,143.0	5,138.0	5,138.0	17.6	102.2	-145.26	-783.6	-713.1	1,575.7	1,460.5	115.18	13.680	
5,300.0	5,224.7	5,219.7	5,219.7	17.9	103.9	-145.62	-783.6	-713.1	1,590.0	1,473.0	117.03	13.586	
5,314.9	5,239.3	5,234.3	5,234.3	18.0	104.2	-145.68	-783.6	-713.1	1,592.6	1,475.3	117.36	13.570	
5,400.0	5,322.5	5,317.5	5,317.5	18.4	105.8	-146.03	-783.6	-713.1	1,607.4	1,488.1	119.25	13.479	
5,413.4	5,335.6	5,330.6	5,330.6	18.4	106.1	-146.09	-783.6	-713.1	1,609.7	1,490.1	119.55	13.465	
5,500.0	5,420.3	5,415.3	5,415.3	18.8	107.8	-146.44	-783.6	-713.1	1,624.8	1,503.3	121.46	13.376	
5,511.8	5,431.8	5,426.8	5,426.8	18.9	108.0	-146.49	-783.6	-713.1	1,626.8	1,505.1	121.72	13.365	
5,600.0	5,518.1	5,513.1	5,513.1	19.3	109.8	-146.84	-783.6	-713.1	1,642.2	1,518.5	123.68	13.278	
5,610.2	5,528.1	5,523.1	5,523.1	19.3	110.0	-146.88	-783.6	-713.1	1,644.0	1,520.1	123.90	13.269	
5,700.0	5,615.9	5,610.9	5,610.9	19.7	111.7	-147.23	-783.6	-713.1	1,659.8	1,533.9	125.89	13.184	
5,708.6	5,624.4	5,619.4	5,619.4	19.7	111.9	-147.26	-783.6	-713.1	1,661.3	1,535.2	126.08	13.177	
5,800.0	5,713.7	5,708.7	5,708.7	20.1	113.7	-147.61	-783.6	-713.1	1,677.4	1,549.3	128.10	13.095	
5,807.1	5,720.7	5,715.7	5,715.7	20.2	113.8	-147.63	-783.6	-713.1	1,678.6	1,550.4	128.26	13.088	
5,900.0	5,811.6	5,806.6	5,806.6	20.6	115.7	-147.98	-783.6	-713.1	1,695.1	1,564.8	130.31	13.008	
5,905.5	5,816.9	5,811.9	5,811.9	20.6	115.8	-148.00	-783.6	-713.1	1,696.1	1,565.6	130.43	13.004	
6,000.0	5,909.4	5,904.4	5,904.4	21.0	117.6	-148.35	-783.6	-713.1	1,712.9	1,580.3	132.52	12.926	
6,003.9	5,913.2	5,908.2	5,908.2	21.0	117.7	-148.36	-783.6	-713.1	1,713.6	1,580.9	132.60	12.922	
6,053.2	5,961.4	5,956.4	5,956.4	21.3	118.7	-148.54	-783.6	-713.1	1,722.3	1,588.6	133.69	12.883	
6,100.0	6,007.3	6,002.3	6,002.3	21.4	119.6	-148.79	-783.6	-713.1	1,730.4	1,595.4	134.98	12.819	
6,102.3	6,009.6	6,004.6	6,004.6	21.5	119.6	-148.80	-783.6	-713.1	1,730.7	1,595.7	135.05	12.816	
6,200.0	6,105.7	6,100.7	6,100.7	21.8	121.6	-149.24	-783.6	-713.1	1,745.4	1,607.7	137.65	12.680	
6,200.8	6,106.5	6,101.5	6,101.5	21.8	121.6	-149.24	-783.6	-713.1	1,745.5	1,607.8	137.67	12.679	
6,299.2	6,203.9	6,198.9	6,198.9	22.0	123.6	-149.59	-783.6	-713.1	1,757.4	1,617.2	140.22	12.534	
6,300.0	6,204.7	6,199.7	6,199.7	22.0	123.6	-149.59	-783.6	-713.1	1,757.5	1,617.3	140.24	12.532	
6,397.6	6,301.8	6,296.8	6,296.8	22.3	125.5	-149.85	-783.6	-713.1	1,766.4	1,623.8	142.66	12.382	
6,400.0	6,304.2	6,299.2	6,299.2	22.3	125.6	-149.86	-783.6	-713.1	1,766.6	1,623.9	142.72	12.379	
6,496.0	6,400.0	6,395.0	6,395.0	22.4	127.5	-150.03	-783.6	-713.1	1,772.6	1,627.6	144.99	12.225	
6,500.0	6,403.9	6,398.9	6,398.9	22.5	127.6	-150.04	-783.6	-713.1	1,772.8	1,627.7	145.08	12.219	
6,594.5	6,498.3	6,493.3	6,493.3	22.6	129.5	-150.12	-783.6	-713.1	1,775.8	1,628.6	147.20	12.064	
6,600.0	6,503.8	6,498.8	6,498.8	22.6	129.6	-150.12	-783.6	-713.1	1,775.9	1,628.5	147.32	12.054	
6,653.0	6,556.8	6,551.8	6,551.8	22.7	130.6	-164.43	-783.6	-713.1	1,776.3	1,627.8	148.45	11.965	
6,692.9	6,596.7	6,591.7	6,591.7	22.7	131.5	-164.43	-783.6	-713.1	1,776.3	1,627.0	149.32	11.896	
6,706.0	6,609.8	6,604.8	6,604.8	22.7	131.7	-164.43	-783.6	-713.1	1,776.3	1,626.7	149.60	11.873	
6,750.0	6,653.8	6,648.8	6,648.8	22.8	132.6	15.61	-783.6	-713.1	1,775.0	1,624.8	150.21	11.817	
6,791.3	6,695.0	6,690.0	6,690.0	22.8	133.4	15.72	-783.6	-713.1	1,771.4	1,621.1	150.30	11.786	
6,800.0	6,703.6	6,698.6	6,698.6	22.8	133.6	15.75	-783.6	-713.1	1,770.4	1,620.1	150.26	11.782	
6,850.0	6,752.9	6,747.9	6,747.9	22.8	134.6	16.00	-783.6	-713.1	1,762.4	1,612.8	149.64	11.778	
6,889.7	6,791.6	6,786.6	6,786.6	22.7	135.4	16.28	-783.6	-713.1	1,753.7	1,605.0	148.66	11.797	
6,900.0	6,801.5	6,796.5	6,796.5	22.7	135.6	16.37	-783.6	-713.1	1,751.1	1,602.8	148.35	11.804	
6,950.0	6,849.1	6,844.1	6,844.1	22.6	136.5	16.85	-783.6	-713.1	1,736.7	1,590.3	146.41	11.862	
6,988.2	6,884.8	6,879.8	6,879.8	22.5	137.2	17.32	-783.6	-713.1	1,723.5	1,579.0	144.51	11.926	
7,000.0	6,895.7	6,890.7	6,890.7	22.5	137.5	17.48	-783.6	-713.1	1,719.0	1,575.2	143.85	11.950	
7,050.0	6,940.8	6,935.8	6,935.8	22.3	138.4	18.25	-783.6	-713.1	1,698.3	1,557.6	140.74	12.067	
7,086.6	6,972.8	6,967.8	6,967.8	22.1	139.0	18.93	-783.6	-713.1	1,681.3	1,543.2	138.15	12.170	
7,100.0	6,984.3	6,979.3	6,979.3	22.1	139.2	19.21	-783.6	-713.1	1,674.7	1,537.6	137.15	12.211	
7,150.0	7,025.9	7,020.9	7,020.9	21.9	140.1	20.37	-783.6	-713.1	1,648.3	1,515.1	133.20	12.375	
7,185.0	7,053.9	7,048.9	7,048.9	21.7	140.6	21.33	-783.6	-713.1	1,628.1	1,497.8	130.30	12.495	
7,200.0	7,065.6	7,060.6	7,060.6	21.7	140.9	21.77	-783.6	-713.1	1,619.2	1,490.1	129.05	12.547	
7,250.0	7,103.0	7,098.0	7,098.0	21.4	141.6	23.47	-783.6	-713.1	1,587.5	1,462.6	124.94	12.707	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,283.4	7,126.7	7,121.7	7,121.7	21.2	142.1	24.80	-783.6	-713.1	1,565.0	1,442.7	122.36	12.791	
7,300.0	7,138.0	7,133.0	7,133.0	21.2	142.3	25.53	-783.6	-713.1	1,553.5	1,432.3	121.18	12.820	
7,350.0	7,170.5	7,165.5	7,165.5	20.9	143.0	28.01	-783.6	-713.1	1,517.4	1,399.2	118.20	12.838	
7,381.9	7,189.8	7,184.8	7,184.8	20.8	143.4	29.87	-783.6	-713.1	1,493.3	1,376.3	116.95	12.768	
7,400.0	7,200.2	7,195.2	7,195.2	20.7	143.6	31.03	-783.6	-713.1	1,479.3	1,362.7	116.54	12.693	
7,450.0	7,227.0	7,222.0	7,222.0	20.4	144.1	34.69	-783.6	-713.1	1,439.4	1,322.6	116.83	12.321	
7,480.3	7,241.9	7,236.9	7,236.9	20.3	144.4	37.28	-783.6	-713.1	1,414.5	1,296.3	118.19	11.968	
7,500.0	7,250.9	7,245.9	7,245.9	20.2	144.6	39.14	-783.6	-713.1	1,398.0	1,278.4	119.62	11.688	
7,550.0	7,271.6	7,266.6	7,266.6	20.0	145.0	44.51	-783.6	-713.1	1,355.3	1,230.1	125.21	10.824	
7,578.7	7,282.0	7,277.0	7,277.0	19.9	145.2	48.06	-783.6	-713.1	1,330.3	1,200.7	129.64	10.262	
7,600.0	7,289.1	7,284.1	7,284.1	19.8	145.4	50.92	-783.6	-713.1	1,311.6	1,178.2	133.39	9.833	
7,650.0	7,303.3	7,298.3	7,298.3	19.6	145.7	58.39	-783.6	-713.1	1,267.1	1,123.9	143.16	8.851	
7,677.1	7,309.5	7,304.5	7,304.5	19.5	145.8	62.85	-783.6	-713.1	1,242.6	1,094.1	148.56	8.365	
7,700.0	7,314.1	7,309.1	7,309.1	19.5	145.9	66.78	-783.6	-713.1	1,222.0	1,069.2	152.84	7.995	
7,750.0	7,321.4	7,316.4	7,316.4	19.4	146.0	75.72	-783.6	-713.1	1,176.6	1,016.2	160.46	7.333	
7,775.6	7,323.9	7,318.9	7,318.9	19.3	146.1	80.34	-783.6	-713.1	1,153.4	990.3	163.06	7.074	
7,800.0	7,325.3	7,320.3	7,320.3	19.3	146.1	84.69	-783.6	-713.1	1,131.2	966.7	164.58	6.873	
7,832.0	7,326.0	7,321.0	7,321.0	19.3	146.1	90.17	-783.6	-713.1	1,102.4	937.1	165.21	6.672	
7,874.0	7,325.9	7,320.9	7,320.9	19.3	146.1	90.16	-783.6	-713.1	1,064.6	899.3	165.26	6.442	
7,900.0	7,325.9	7,320.9	7,320.9	19.3	146.1	90.16	-783.6	-713.1	1,041.4	876.1	165.29	6.301	
7,972.4	7,325.8	7,320.8	7,320.8	19.4	146.1	90.14	-783.6	-713.1	977.6	812.1	165.49	5.907	
8,000.0	7,325.8	7,320.8	7,320.8	19.5	146.1	90.14	-783.6	-713.1	953.6	788.1	165.56	5.760	
8,070.8	7,325.7	7,320.7	7,320.7	19.8	146.1	90.13	-783.6	-713.1	893.0	727.1	165.88	5.383	
8,100.0	7,325.6	7,320.6	7,320.6	19.9	146.1	90.12	-783.6	-713.1	868.5	702.4	166.02	5.231	
8,169.3	7,325.5	7,320.5	7,320.5	20.3	146.1	90.11	-783.6	-713.1	811.4	645.0	166.45	4.875	
8,200.0	7,325.5	7,320.5	7,320.5	20.5	146.1	90.11	-783.6	-713.1	786.8	620.1	166.64	4.721	
8,267.7	7,325.4	7,320.4	7,320.4	21.1	146.1	90.09	-783.6	-713.1	734.1	566.9	167.17	4.391	
8,300.0	7,325.3	7,320.3	7,320.3	21.3	146.1	90.09	-783.6	-713.1	709.8	542.4	167.42	4.240	
8,366.1	7,325.2	7,320.2	7,320.2	21.9	146.1	90.08	-783.6	-713.1	662.3	494.3	168.03	3.942	
8,400.0	7,325.2	7,320.2	7,320.2	22.3	146.1	90.07	-783.6	-713.1	639.3	471.0	168.34	3.798	
8,464.5	7,325.1	7,320.1	7,320.1	22.9	146.1	90.06	-783.6	-713.1	598.2	429.2	169.01	3.540	
8,500.0	7,325.1	7,320.1	7,320.1	23.3	146.1	90.06	-783.6	-713.1	577.5	408.1	169.38	3.410	
8,563.0	7,325.0	7,320.0	7,320.0	24.0	146.1	90.05	-783.6	-713.1	544.5	374.4	170.10	3.201	
8,600.0	7,324.9	7,319.9	7,319.9	24.5	146.1	90.04	-783.6	-713.1	527.6	357.1	170.53	3.094	
8,661.4	7,324.8	7,319.8	7,319.8	25.2	146.1	90.03	-783.6	-713.1	504.4	333.1	171.29	2.944	
8,700.0	7,324.8	7,319.8	7,319.8	25.7	146.1	90.02	-783.6	-713.1	493.1	321.4	171.77	2.871	
8,759.8	7,324.7	7,319.7	7,319.7	26.5	146.1	90.01	-783.6	-713.1	481.3	308.8	172.56	2.789	
8,800.0	7,324.6	7,319.6	7,319.6	27.1	146.1	90.00	-783.6	-713.1	477.5	304.4	173.09	2.759	
8,825.9	7,324.6	7,319.6	7,319.6	27.4	146.1	90.00	-783.6	-713.1	476.8	303.3	173.45	2.749 CC, ES	
8,858.2	7,324.5	7,319.5	7,319.5	27.9	146.1	89.99	-783.6	-713.1	477.9	304.0	173.90	2.748 SF	
8,900.0	7,324.5	7,319.5	7,319.5	28.4	146.1	89.99	-783.6	-713.1	482.5	308.0	174.48	2.766	
8,956.7	7,324.4	7,319.4	7,319.4	29.3	146.1	89.98	-783.6	-713.1	494.4	319.1	175.30	2.820	
9,000.0	7,324.3	7,319.3	7,319.3	29.9	146.1	89.97	-783.6	-713.1	507.6	331.7	175.92	2.885	
9,055.1	7,324.3	7,319.3	7,319.3	30.7	146.1	89.96	-783.6	-713.1	529.0	352.3	176.75	2.993	
9,100.0	7,324.2	7,319.2	7,319.2	31.4	146.1	89.95	-783.6	-713.1	550.0	372.6	177.42	3.100	
9,153.5	7,324.1	7,319.1	7,319.1	32.2	146.1	89.94	-783.6	-713.1	578.5	400.3	178.24	3.246	
9,200.0	7,324.0	7,319.0	7,319.0	33.0	146.1	89.93	-783.6	-713.1	606.1	427.1	178.96	3.387	
9,251.9	7,324.0	7,319.0	7,319.0	33.8	146.1	89.93	-783.6	-713.1	639.4	459.6	179.78	3.557	
9,300.0	7,323.9	7,318.9	7,318.9	34.5	146.1	89.92	-783.6	-713.1	672.4	491.9	180.54	3.724	
9,350.4	7,323.8	7,318.8	7,318.8	35.4	146.1	89.91	-783.6	-713.1	708.8	527.5	181.35	3.909	
9,400.0	7,323.7	7,318.7	7,318.7	36.2	146.1	89.90	-783.6	-713.1	746.3	564.1	182.15	4.097	
9,448.8	7,323.7	7,318.7	7,318.7	37.0	146.1	89.89	-783.6	-713.1	784.5	601.5	182.95	4.288	

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 OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	7,323.6	7,318.6	7,318.6	37.8	146.1	89.88	-783.6	-713.1	825.7	641.9	183.79	4.493	
9,547.2	7,323.5	7,318.5	7,318.5	38.6	146.1	89.87	-783.6	-713.1	864.7	680.1	184.58	4.685	
9,600.0	7,323.5	7,318.5	7,318.5	39.5	146.1	89.86	-783.6	-713.1	909.2	723.7	185.46	4.902	
9,645.6	7,323.4	7,318.4	7,318.4	40.2	146.1	89.85	-783.6	-713.1	948.3	762.1	186.23	5.092	
9,700.0	7,323.3	7,318.3	7,318.3	41.2	146.1	89.84	-783.6	-713.1	995.7	808.6	187.15	5.320	
9,744.1	7,323.2	7,318.2	7,318.2	41.9	146.1	89.84	-783.6	-713.1	1,034.6	846.7	187.90	5.506	
9,800.0	7,323.2	7,318.2	7,318.2	42.9	146.1	89.83	-783.6	-713.1	1,084.6	895.7	188.85	5.743	
9,842.5	7,323.1	7,318.1	7,318.1	43.6	146.1	89.82	-783.6	-713.1	1,122.9	933.3	189.59	5.923	
9,900.0	7,323.0	7,318.0	7,318.0	44.6	146.1	89.81	-783.6	-713.1	1,175.2	984.6	190.58	6.167	
9,940.9	7,322.9	7,317.9	7,317.9	45.3	146.1	89.80	-783.6	-713.1	1,212.7	1,021.4	191.29	6.340	
10,000.0	7,322.9	7,317.9	7,317.9	46.3	146.1	89.79	-783.6	-713.1	1,267.2	1,074.9	192.32	6.589	
10,039.3	7,322.8	7,317.8	7,317.8	47.0	146.1	89.78	-783.6	-713.1	1,303.8	1,110.8	193.01	6.755	
10,100.0	7,322.7	7,317.7	7,317.7	48.1	146.0	89.77	-783.6	-713.1	1,360.4	1,166.3	194.07	7.010	
10,137.8	7,322.6	7,317.6	7,317.6	48.8	146.0	89.76	-783.6	-713.1	1,395.9	1,201.1	194.74	7.168	
10,200.0	7,322.6	7,317.6	7,317.6	49.9	146.0	89.75	-783.6	-713.1	1,454.5	1,258.7	195.83	7.427	
10,236.2	7,322.5	7,317.5	7,317.5	50.5	146.0	89.74	-783.6	-713.1	1,488.7	1,292.3	196.48	7.577	
10,300.0	7,322.4	7,317.4	7,317.4	51.6	146.0	89.73	-783.6	-713.1	1,549.3	1,351.7	197.61	7.840	
10,334.6	7,322.4	7,317.4	7,317.4	52.3	146.0	89.73	-783.6	-713.1	1,582.3	1,384.1	198.23	7.982	
10,400.0	7,322.3	7,317.3	7,317.3	53.4	146.0	89.71	-783.6	-713.1	1,644.8	1,445.4	199.40	8.249	
10,433.0	7,322.2	7,317.2	7,317.2	54.0	146.0	89.71	-783.6	-713.1	1,676.4	1,476.4	199.99	8.383	
10,500.0	7,322.1	7,317.1	7,317.1	55.2	146.0	89.69	-783.6	-713.1	1,740.7	1,539.5	201.19	8.652	
10,531.5	7,322.1	7,317.1	7,317.1	55.8	146.0	89.69	-783.6	-713.1	1,771.0	1,569.2	201.76	8.778	
10,600.0	7,321.9	7,316.9	7,316.9	57.0	146.0	89.67	-783.6	-713.1	1,837.1	1,634.1	202.99	9.050	
10,629.9	7,321.9	7,316.9	7,316.9	57.6	146.0	89.67	-783.6	-713.1	1,866.0	1,662.4	203.53	9.168	
10,700.0	7,321.8	7,316.8	7,316.8	58.8	146.0	89.65	-783.6	-713.1	1,933.8	1,729.0	204.80	9.442	
10,728.3	7,321.8	7,316.8	7,316.8	59.4	146.0	89.65	-783.6	-713.1	1,961.3	1,756.0	205.32	9.553	
10,800.0	7,321.6	7,316.6	7,316.6	60.7	146.0	89.63	-783.6	-713.1	2,030.9	1,824.3	206.62	9.829	
10,826.7	7,321.6	7,316.6	7,316.6	61.1	146.0	89.63	-783.6	-713.1	2,056.9	1,849.8	207.11	9.932	
10,900.0	7,321.5	7,316.5	7,316.5	62.5	146.0	89.62	-783.6	-713.1	2,128.2	1,919.8	208.44	10.210	
10,925.2	7,321.4	7,316.4	7,316.4	62.9	146.0	89.61	-783.6	-713.1	2,152.8	1,943.9	208.90	10.305	
11,000.0	7,321.3	7,316.3	7,316.3	64.3	146.0	89.60	-783.6	-713.1	2,225.8	2,015.5	210.27	10.585	
11,023.6	7,321.3	7,316.3	7,316.3	64.7	146.0	89.59	-783.6	-713.1	2,248.8	2,038.1	210.70	10.673	
11,100.0	7,321.2	7,316.2	7,316.2	66.1	146.0	89.58	-783.6	-713.1	2,323.6	2,111.5	212.10	10.955	
11,122.0	7,321.1	7,316.1	7,316.1	66.5	146.0	89.57	-783.6	-713.1	2,345.1	2,132.6	212.51	11.036	
11,200.0	7,321.0	7,316.0	7,316.0	68.0	146.0	89.56	-783.6	-713.1	2,421.5	2,207.6	213.94	11.319	
11,220.4	7,321.0	7,316.0	7,316.0	68.4	146.0	89.55	-783.6	-713.1	2,441.6	2,227.3	214.32	11.392	
11,300.0	7,320.9	7,315.9	7,315.9	69.8	146.0	89.54	-783.6	-713.1	2,519.6	2,303.9	215.78	11.677	
11,318.9	7,320.8	7,315.8	7,315.8	70.2	146.0	89.53	-783.6	-713.1	2,538.2	2,322.1	216.13	11.744	
11,400.0	7,320.7	7,315.7	7,315.7	71.7	146.0	89.52	-783.6	-713.1	2,617.9	2,400.3	217.63	12.029	
11,417.3	7,320.7	7,315.7	7,315.7	72.0	146.0	89.51	-783.6	-713.1	2,634.9	2,417.0	217.95	12.090	
11,500.0	7,320.6	7,315.6	7,315.6	73.5	146.0	89.49	-783.6	-713.1	2,716.3	2,496.8	219.48	12.376	
11,515.7	7,320.5	7,315.5	7,315.5	73.8	146.0	89.49	-783.6	-713.1	2,731.8	2,512.0	219.77	12.430	
11,600.0	7,320.4	7,315.4	7,315.4	75.4	146.0	89.47	-783.6	-713.1	2,814.8	2,593.5	221.33	12.718	
11,614.1	7,320.4	7,315.4	7,315.4	75.6	146.0	89.47	-783.6	-713.1	2,828.7	2,607.2	221.59	12.766	
11,700.0	7,320.2	7,315.2	7,315.2	77.2	146.0	89.45	-783.6	-713.1	2,913.4	2,690.2	223.18	13.054	
11,712.6	7,320.2	7,315.2	7,315.2	77.5	146.0	89.45	-783.6	-713.1	2,925.8	2,702.4	223.42	13.096	
11,800.0	7,320.1	7,315.1	7,315.1	79.1	146.0	89.43	-783.6	-713.1	3,012.1	2,787.1	225.04	13.385	
11,811.0	7,320.1	7,315.1	7,315.1	79.3	146.0	89.43	-783.6	-713.1	3,023.0	2,797.8	225.20	13.423	
11,849.2	7,320.0	7,315.0	7,315.0	79.8	146.0	89.42	-783.6	-713.1	3,060.7	2,835.0	225.77	13.557	
11,849.6	7,320.0	7,315.0	7,315.0	79.8	146.0	89.42	-783.6	-713.1	3,061.1	2,835.3	225.77	13.558	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-160.67	-2,116.6	-742.4	2,243.0				
98.4	98.4	95.4	95.4	0.1	0.2	-160.67	-2,116.6	-742.4	2,243.0	2,242.8	0.25	8,974.826	
100.0	100.0	97.0	97.0	0.1	0.2	-160.67	-2,116.6	-742.4	2,243.0	2,242.8	0.25	8,816.227	
196.8	196.8	193.8	193.8	0.3	2.6	-160.67	-2,116.6	-742.4	2,243.0	2,240.1	2.91	770.827	
200.0	200.0	197.0	197.0	0.3	2.7	-160.67	-2,116.6	-742.4	2,243.0	2,240.0	3.00	748.018	
295.3	295.3	292.3	292.3	0.5	4.7	-160.67	-2,116.6	-742.4	2,243.0	2,237.8	5.20	431.528	
300.0	300.0	297.0	297.0	0.5	4.8	-160.67	-2,116.6	-742.4	2,243.0	2,237.7	5.31	422.722	
393.7	393.7	390.7	390.7	0.7	6.7	-160.67	-2,116.6	-742.4	2,243.0	2,235.6	7.42	302.156	
400.0	400.0	397.0	397.0	0.8	6.8	-160.67	-2,116.6	-742.4	2,243.0	2,235.5	7.57	296.473	
492.1	492.1	489.1	489.1	1.0	8.7	-160.67	-2,116.6	-742.4	2,243.0	2,233.4	9.64	232.748	
500.0	500.0	497.0	497.0	1.0	8.8	-160.67	-2,116.6	-742.4	2,243.0	2,233.2	9.81	228.550	
590.5	590.5	587.5	587.5	1.2	10.7	-160.67	-2,116.6	-742.4	2,243.0	2,231.2	11.85	189.351	
600.0	600.0	597.0	597.0	1.2	10.8	-160.67	-2,116.6	-742.4	2,243.0	2,231.0	12.06	186.022	
689.0	689.0	686.0	686.0	1.4	12.6	-160.67	-2,116.6	-742.4	2,243.0	2,229.0	14.05	159.624	
700.0	700.0	697.0	697.0	1.4	12.9	-160.67	-2,116.6	-742.4	2,243.0	2,228.7	14.30	156.865	
787.4	787.4	784.4	784.4	1.6	14.6	-160.67	-2,116.6	-742.4	2,243.0	2,226.8	16.26	137.977	
800.0	800.0	797.0	797.0	1.7	14.9	-160.67	-2,116.6	-742.4	2,243.0	2,226.5	16.54	135.623	
885.8	885.8	882.8	882.8	1.9	16.6	-160.67	-2,116.6	-742.4	2,243.0	2,224.6	18.46	121.506	
900.0	900.0	897.0	897.0	1.9	16.9	-160.67	-2,116.6	-742.4	2,243.0	2,224.3	18.78	119.453	
984.2	984.2	981.2	981.2	2.1	18.6	-160.67	-2,116.6	-742.4	2,243.0	2,222.4	20.66	108.552	
1,000.0	1,000.0	997.0	997.0	2.1	18.9	-160.67	-2,116.6	-742.4	2,243.0	2,222.0	21.02	106.732	
1,082.7	1,082.7	1,079.7	1,079.7	2.3	20.6	-160.67	-2,116.6	-742.4	2,243.0	2,220.2	22.87	98.096	
1,100.0	1,100.0	1,097.0	1,097.0	2.3	20.9	-160.67	-2,116.6	-742.4	2,243.0	2,219.8	23.25	96.461	
1,181.1	1,181.1	1,178.1	1,178.1	2.5	22.6	-160.67	-2,116.6	-742.4	2,243.0	2,218.0	25.07	89.479	
1,200.0	1,200.0	1,197.0	1,197.0	2.6	22.9	-160.67	-2,116.6	-742.4	2,243.0	2,217.5	25.49	87.995	
1,279.5	1,279.5	1,276.5	1,276.5	2.7	24.5	-160.67	-2,116.6	-742.4	2,243.0	2,215.8	27.27	82.254	
1,300.0	1,300.0	1,297.0	1,297.0	2.8	24.9	-160.67	-2,116.6	-742.4	2,243.0	2,215.3	27.73	80.895	
1,377.9	1,377.9	1,374.9	1,374.9	3.0	26.5	-160.67	-2,116.6	-742.4	2,243.0	2,213.6	29.47	76.109	
1,400.0	1,400.0	1,397.0	1,397.0	3.0	27.0	-160.67	-2,116.6	-742.4	2,243.0	2,213.1	29.96	74.856	
1,450.0	1,450.0	1,447.0	1,447.0	3.1	28.0	-160.67	-2,116.6	-742.4	2,243.0	2,211.9	31.08	72.163	
1,476.4	1,476.4	1,473.4	1,473.4	3.2	28.5	-146.38	-2,116.6	-742.4	2,243.1	2,211.5	31.67	70.824	
1,500.0	1,500.0	1,497.0	1,497.0	3.2	29.0	-146.38	-2,116.6	-742.4	2,243.4	2,211.2	32.20	69.676	
1,574.8	1,574.8	1,571.8	1,571.8	3.4	30.5	-146.39	-2,116.6	-742.4	2,245.3	2,211.4	33.85	66.328	
1,600.0	1,599.9	1,596.9	1,596.9	3.5	31.0	-146.40	-2,116.6	-742.4	2,246.3	2,211.9	34.40	65.292	
1,673.2	1,673.0	1,670.0	1,670.0	3.6	32.4	-146.42	-2,116.6	-742.4	2,250.3	2,214.3	36.00	62.513	
1,700.0	1,699.7	1,696.7	1,696.7	3.7	33.0	-146.43	-2,116.6	-742.4	2,252.1	2,215.5	36.57	61.577	
1,771.6	1,771.0	1,768.0	1,768.0	3.9	34.4	-146.46	-2,116.6	-742.4	2,258.1	2,220.0	38.10	59.261	
1,800.0	1,799.1	1,796.1	1,796.1	3.9	35.0	-146.48	-2,116.6	-742.4	2,260.8	2,222.1	38.70	58.416	
1,870.1	1,868.6	1,865.6	1,865.6	4.1	36.4	-146.52	-2,116.6	-742.4	2,268.7	2,228.5	40.17	56.481	
1,900.0	1,898.2	1,895.2	1,895.2	4.2	37.0	-146.54	-2,116.6	-742.4	2,272.5	2,231.7	40.78	55.720	
1,968.5	1,965.7	1,962.7	1,962.7	4.3	38.3	-146.60	-2,116.6	-742.4	2,282.1	2,240.0	42.18	54.102	
2,000.0	1,996.6	1,993.6	1,993.6	4.4	39.0	-146.62	-2,116.6	-742.4	2,287.0	2,244.2	42.82	53.416	
2,049.8	2,045.4	2,042.4	2,042.4	4.6	39.9	-146.66	-2,116.6	-742.4	2,295.4	2,251.6	43.81	52.398	
2,066.9	2,062.2	2,059.2	2,059.2	4.6	40.3	-146.71	-2,116.6	-742.4	2,298.4	2,254.2	44.18	52.020	
2,100.0	2,094.5	2,091.5	2,091.5	4.7	40.9	-146.81	-2,116.6	-742.4	2,304.2	2,259.3	44.91	51.308	
2,165.3	2,158.5	2,155.5	2,155.5	4.9	42.2	-146.99	-2,116.6	-742.4	2,315.6	2,269.3	46.35	49.963	
2,200.0	2,192.3	2,189.3	2,189.3	5.1	42.9	-147.08	-2,116.6	-742.4	2,321.7	2,274.6	47.11	49.284	
2,263.8	2,254.7	2,251.7	2,251.7	5.3	44.1	-147.26	-2,116.6	-742.4	2,332.9	2,284.4	48.51	48.088	
2,300.0	2,290.2	2,287.2	2,287.2	5.4	44.9	-147.36	-2,116.6	-742.4	2,339.3	2,290.0	49.31	47.436	
2,362.2	2,351.0	2,348.0	2,348.0	5.6	46.1	-147.53	-2,116.6	-742.4	2,350.2	2,299.6	50.69	46.365	
2,400.0	2,388.0	2,385.0	2,385.0	5.8	46.8	-147.63	-2,116.6	-742.4	2,356.9	2,305.4	51.53	45.742	
2,460.6	2,447.3	2,444.3	2,444.3	6.0	48.0	-147.79	-2,116.6	-742.4	2,367.6	2,314.8	52.87	44.783	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT SHULTZ 23-30 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,500.0	2,485.8	2,482.8	2,482.8	6.1	48.8	-147.90	-2,116.6	-742.4	2,374.6	2,320.9	53.74	44.186	
2,559.0	2,543.6	2,540.6	2,540.6	6.3	50.0	-148.05	-2,116.6	-742.4	2,385.1	2,330.0	55.05	43.324	
2,600.0	2,583.6	2,580.6	2,580.6	6.5	50.8	-148.16	-2,116.6	-742.4	2,392.3	2,336.4	55.96	42.750	
2,657.5	2,639.8	2,636.8	2,636.8	6.7	51.9	-148.31	-2,116.6	-742.4	2,402.6	2,345.3	57.24	41.975	
2,700.0	2,681.4	2,678.4	2,678.4	6.9	52.7	-148.42	-2,116.6	-742.4	2,410.1	2,352.0	58.18	41.424	
2,755.9	2,736.1	2,733.1	2,733.1	7.1	53.8	-148.56	-2,116.6	-742.4	2,420.1	2,360.7	59.43	40.725	
2,800.0	2,779.2	2,776.2	2,776.2	7.3	54.7	-148.67	-2,116.6	-742.4	2,428.0	2,367.6	60.41	40.194	
2,854.3	2,832.4	2,829.4	2,829.4	7.5	55.8	-148.81	-2,116.6	-742.4	2,437.7	2,376.1	61.61	39.563	
2,900.0	2,877.1	2,874.1	2,874.1	7.7	56.7	-148.93	-2,116.6	-742.4	2,445.8	2,383.2	62.63	39.052	
2,952.7	2,928.7	2,925.7	2,925.7	7.9	57.7	-149.06	-2,116.6	-742.4	2,455.3	2,391.5	63.81	38.481	
3,000.0	2,974.9	2,971.9	2,971.9	8.1	58.6	-149.17	-2,116.6	-742.4	2,463.8	2,398.9	64.86	37.987	
3,051.2	3,024.9	3,021.9	3,021.9	8.3	59.6	-149.30	-2,116.6	-742.4	2,473.0	2,407.0	66.00	37.470	
3,100.0	3,072.7	3,069.7	3,069.7	8.5	60.6	-149.42	-2,116.6	-742.4	2,481.7	2,414.7	67.09	36.994	
3,149.6	3,121.2	3,118.2	3,118.2	8.7	61.6	-149.54	-2,116.6	-742.4	2,490.7	2,422.5	68.19	36.525	
3,200.0	3,170.5	3,167.5	3,167.5	8.9	62.6	-149.66	-2,116.6	-742.4	2,499.8	2,430.4	69.31	36.065	
3,248.0	3,217.5	3,214.5	3,214.5	9.1	63.5	-149.77	-2,116.6	-742.4	2,508.4	2,438.0	70.38	35.639	
3,300.0	3,268.3	3,265.3	3,265.3	9.3	64.5	-149.90	-2,116.6	-742.4	2,517.8	2,446.3	71.54	35.194	
3,346.4	3,313.8	3,310.8	3,310.8	9.5	65.4	-150.01	-2,116.6	-742.4	2,526.2	2,453.6	72.58	34.808	
3,400.0	3,366.1	3,363.1	3,363.1	9.7	66.5	-150.13	-2,116.6	-742.4	2,535.9	2,462.1	73.77	34.376	
3,444.9	3,410.0	3,407.0	3,407.0	9.9	67.4	-150.24	-2,116.6	-742.4	2,544.1	2,469.3	74.77	34.025	
3,500.0	3,464.0	3,461.0	3,461.0	10.2	68.5	-150.36	-2,116.6	-742.4	2,554.1	2,478.1	76.00	33.607	
3,543.3	3,506.3	3,503.3	3,503.3	10.3	69.3	-150.46	-2,116.6	-742.4	2,561.9	2,485.0	76.96	33.287	
3,600.0	3,561.8	3,558.8	3,558.8	10.6	70.4	-150.59	-2,116.6	-742.4	2,572.2	2,494.0	78.23	32.882	
3,641.7	3,602.6	3,599.6	3,599.6	10.8	71.3	-150.68	-2,116.6	-742.4	2,579.8	2,500.7	79.16	32.591	
3,700.0	3,659.6	3,656.6	3,656.6	11.0	72.4	-150.82	-2,116.6	-742.4	2,590.5	2,510.0	80.46	32.197	
3,740.1	3,698.9	3,695.9	3,695.9	11.2	73.2	-150.90	-2,116.6	-742.4	2,597.8	2,516.4	81.35	31.933	
3,800.0	3,757.4	3,754.4	3,754.4	11.4	74.4	-151.04	-2,116.6	-742.4	2,608.7	2,526.0	82.68	31.551	
3,838.6	3,795.1	3,792.1	3,792.1	11.6	75.1	-151.12	-2,116.6	-742.4	2,615.8	2,532.2	83.54	31.310	
3,900.0	3,855.2	3,852.2	3,852.2	11.9	76.3	-151.25	-2,116.6	-742.4	2,627.0	2,542.1	84.91	30.938	
3,937.0	3,891.4	3,888.4	3,888.4	12.0	77.1	-151.33	-2,116.6	-742.4	2,633.8	2,548.0	85.74	30.720	
4,000.0	3,953.0	3,950.0	3,950.0	12.3	78.3	-151.47	-2,116.6	-742.4	2,645.3	2,558.2	87.14	30.358	
4,035.4	3,987.7	3,984.7	3,984.7	12.4	79.0	-151.55	-2,116.6	-742.4	2,651.8	2,563.9	87.93	30.159	
4,100.0	4,050.9	4,047.9	4,047.9	12.7	80.3	-151.68	-2,116.6	-742.4	2,663.7	2,574.3	89.37	29.807	
4,133.8	4,084.0	4,081.0	4,081.0	12.9	80.9	-151.75	-2,116.6	-742.4	2,669.9	2,579.8	90.12	29.627	
4,200.0	4,148.7	4,145.7	4,145.7	13.2	82.2	-151.89	-2,116.6	-742.4	2,682.1	2,590.5	91.59	29.283	
4,232.3	4,180.2	4,177.2	4,177.2	13.3	82.9	-151.96	-2,116.6	-742.4	2,688.1	2,595.7	92.31	29.120	
4,300.0	4,246.5	4,243.5	4,243.5	13.6	84.2	-152.10	-2,116.6	-742.4	2,700.5	2,606.7	93.82	28.785	
4,330.7	4,276.5	4,273.5	4,273.5	13.7	84.8	-152.16	-2,116.6	-742.4	2,706.2	2,611.7	94.50	28.637	
4,400.0	4,344.3	4,341.3	4,341.3	14.0	86.2	-152.30	-2,116.6	-742.4	2,719.0	2,623.0	96.04	28.310	
4,429.1	4,372.8	4,369.8	4,369.8	14.1	86.7	-152.36	-2,116.6	-742.4	2,724.4	2,627.7	96.69	28.176	
4,500.0	4,442.1	4,439.1	4,439.1	14.5	88.1	-152.50	-2,116.6	-742.4	2,737.5	2,639.3	98.27	27.858	
4,527.5	4,469.1	4,466.1	4,466.1	14.6	88.7	-152.56	-2,116.6	-742.4	2,742.6	2,643.7	98.88	27.737	
4,600.0	4,539.9	4,536.9	4,536.9	14.9	90.1	-152.70	-2,116.6	-742.4	2,756.1	2,655.6	100.49	27.425	
4,626.0	4,565.4	4,562.4	4,562.4	15.0	90.6	-152.75	-2,116.6	-742.4	2,760.9	2,659.8	101.07	27.316	
4,700.0	4,637.8	4,634.8	4,634.8	15.3	92.1	-152.90	-2,116.6	-742.4	2,774.6	2,671.9	102.72	27.013	
4,724.4	4,661.6	4,658.6	4,658.6	15.4	92.6	-152.95	-2,116.6	-742.4	2,779.2	2,675.9	103.26	26.915	
4,800.0	4,735.6	4,732.6	4,732.6	15.8	94.0	-153.09	-2,116.6	-742.4	2,793.2	2,688.3	104.94	26.618	
4,822.8	4,757.9	4,754.9	4,754.9	15.9	94.5	-153.14	-2,116.6	-742.4	2,797.5	2,692.0	105.45	26.530	
4,900.0	4,833.4	4,830.4	4,830.4	16.2	96.0	-153.28	-2,116.6	-742.4	2,811.9	2,704.7	107.16	26.239	
4,921.2	4,854.2	4,851.2	4,851.2	16.3	96.4	-153.32	-2,116.6	-742.4	2,815.8	2,708.2	107.63	26.161	
5,000.0	4,931.2	4,928.2	4,928.2	16.6	98.0	-153.47	-2,116.6	-742.4	2,830.5	2,721.1	109.38	25.877	
5,019.7	4,950.5	4,947.5	4,947.5	16.7	98.4	-153.51	-2,116.6	-742.4	2,834.2	2,724.4	109.82	25.807	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,029.0	5,026.0	5,026.0	17.1	99.9	-153.66	-2,116.6	-742.4	2,849.2	2,737.6	111.60	25.529	
5,118.1	5,046.7	5,043.7	5,043.7	17.1	100.3	-153.69	-2,116.6	-742.4	2,852.6	2,740.6	112.01	25.468	
5,200.0	5,126.8	5,123.8	5,123.8	17.5	101.9	-153.84	-2,116.6	-742.4	2,867.9	2,754.1	113.83	25.196	
5,216.5	5,143.0	5,140.0	5,140.0	17.6	102.2	-153.87	-2,116.6	-742.4	2,871.0	2,756.8	114.19	25.142	
5,300.0	5,224.7	5,221.7	5,221.7	17.9	103.9	-154.02	-2,116.6	-742.4	2,886.7	2,770.6	116.05	24.875	
5,314.9	5,239.3	5,236.3	5,236.3	18.0	104.2	-154.05	-2,116.6	-742.4	2,889.5	2,773.1	116.38	24.829	
5,400.0	5,322.5	5,319.5	5,319.5	18.4	105.8	-154.20	-2,116.6	-742.4	2,905.4	2,787.2	118.26	24.567	
5,413.4	5,335.6	5,332.6	5,332.6	18.4	106.1	-154.22	-2,116.6	-742.4	2,908.0	2,789.4	118.56	24.527	
5,500.0	5,420.3	5,417.3	5,417.3	18.8	107.8	-154.38	-2,116.6	-742.4	2,924.2	2,803.8	120.48	24.271	
5,511.8	5,431.8	5,428.8	5,428.8	18.9	108.0	-154.40	-2,116.6	-742.4	2,926.5	2,805.7	120.75	24.237	
5,600.0	5,518.1	5,515.1	5,515.1	19.3	109.8	-154.55	-2,116.6	-742.4	2,943.1	2,820.4	122.70	23.986	
5,610.2	5,528.1	5,525.1	5,525.1	19.3	110.0	-154.57	-2,116.6	-742.4	2,945.0	2,822.1	122.93	23.957	
5,700.0	5,615.9	5,612.9	5,612.9	19.7	111.7	-154.72	-2,116.6	-742.4	2,961.9	2,837.0	124.92	23.711	
5,708.6	5,624.4	5,621.4	5,621.4	19.7	111.9	-154.74	-2,116.6	-742.4	2,963.6	2,838.5	125.11	23.687	
5,800.0	5,713.7	5,710.7	5,710.7	20.1	113.7	-154.89	-2,116.6	-742.4	2,980.8	2,853.7	127.14	23.446	
5,807.1	5,720.7	5,717.7	5,717.7	20.2	113.9	-154.91	-2,116.6	-742.4	2,982.1	2,854.9	127.29	23.427	
5,900.0	5,811.6	5,808.6	5,808.6	20.6	115.7	-155.06	-2,116.6	-742.4	2,999.7	2,870.4	129.35	23.190	
5,905.5	5,816.9	5,813.9	5,813.9	20.6	115.8	-155.07	-2,116.6	-742.4	3,000.8	2,871.3	129.47	23.176	
6,000.0	5,909.4	5,906.4	5,906.4	21.0	117.6	-155.23	-2,116.6	-742.4	3,018.6	2,887.1	131.57	22.943	
6,003.9	5,913.2	5,910.2	5,910.2	21.0	117.7	-155.23	-2,116.6	-742.4	3,019.4	2,887.7	131.66	22.934	
6,053.2	5,961.4	5,958.4	5,958.4	21.3	118.7	-155.31	-2,116.6	-742.4	3,028.7	2,896.0	132.75	22.816	
6,100.0	6,007.3	6,004.3	6,004.3	21.4	119.6	-155.46	-2,116.6	-742.4	3,037.3	2,903.2	134.09	22.651	
6,102.3	6,009.6	6,006.6	6,006.6	21.5	119.7	-155.47	-2,116.6	-742.4	3,037.7	2,903.5	134.15	22.643	
6,200.0	6,105.7	6,102.7	6,102.7	21.8	121.6	-155.73	-2,116.6	-742.4	3,053.2	2,916.4	136.84	22.312	
6,200.8	6,106.5	6,103.5	6,103.5	21.8	121.6	-155.73	-2,116.6	-742.4	3,053.3	2,916.5	136.87	22.309	
6,299.2	6,203.9	6,200.9	6,200.9	22.0	123.6	-155.94	-2,116.6	-742.4	3,065.9	2,926.5	139.47	21.982	
6,300.0	6,204.7	6,201.7	6,201.7	22.0	123.6	-155.94	-2,116.6	-742.4	3,066.0	2,926.5	139.49	21.980	
6,397.6	6,301.8	6,298.8	6,298.8	22.3	125.5	-156.10	-2,116.6	-742.4	3,075.5	2,933.5	141.96	21.664	
6,400.0	6,304.2	6,301.2	6,301.2	22.3	125.6	-156.10	-2,116.6	-742.4	3,075.7	2,933.6	142.02	21.656	
6,496.0	6,400.0	6,397.0	6,397.0	22.4	127.5	-156.20	-2,116.6	-742.4	3,082.0	2,937.6	144.33	21.354	
6,500.0	6,403.9	6,400.9	6,400.9	22.5	127.6	-156.21	-2,116.6	-742.4	3,082.1	2,937.7	144.42	21.342	
6,594.5	6,498.3	6,495.3	6,495.3	22.6	129.5	-156.26	-2,116.6	-742.4	3,085.3	2,938.8	146.55	21.053	
6,600.0	6,503.8	6,500.8	6,500.8	22.6	129.6	-156.26	-2,116.6	-742.4	3,085.4	2,938.8	146.67	21.036	
6,653.0	6,556.8	6,553.8	6,553.8	22.7	130.7	-170.56	-2,116.6	-742.4	3,085.9	2,938.1	147.81	20.878	
6,692.9	6,596.7	6,593.7	6,593.7	22.7	131.5	-170.56	-2,116.6	-742.4	3,085.9	2,937.2	148.68	20.756	
6,706.0	6,609.8	6,606.8	6,606.8	22.7	131.7	-170.56	-2,116.6	-742.4	3,085.9	2,936.9	148.96	20.716	
6,750.0	6,653.8	6,650.8	6,650.8	22.8	132.6	9.46	-2,116.6	-742.4	3,084.5	2,935.0	149.54	20.626	
6,791.3	6,695.0	6,692.0	6,692.0	22.8	133.4	9.52	-2,116.6	-742.4	3,080.9	2,931.3	149.58	20.596	
6,800.0	6,703.6	6,700.6	6,700.6	22.8	133.6	9.54	-2,116.6	-742.4	3,079.8	2,930.3	149.53	20.596	
6,850.0	6,752.9	6,749.9	6,749.9	22.8	134.6	9.68	-2,116.6	-742.4	3,071.6	2,922.8	148.80	20.642	
6,889.7	6,791.6	6,788.6	6,788.6	22.7	135.4	9.83	-2,116.6	-742.4	3,062.8	2,915.0	147.71	20.735	
6,900.0	6,801.5	6,798.5	6,798.5	22.7	135.6	9.87	-2,116.6	-742.4	3,060.1	2,912.8	147.35	20.767	
6,950.0	6,849.1	6,846.1	6,846.1	22.6	136.5	10.14	-2,116.6	-742.4	3,045.3	2,900.1	145.19	20.975	
6,988.2	6,884.8	6,881.8	6,881.8	22.5	137.3	10.39	-2,116.6	-742.4	3,031.8	2,888.7	143.06	21.192	
7,000.0	6,895.7	6,892.7	6,892.7	22.5	137.5	10.48	-2,116.6	-742.4	3,027.2	2,884.9	142.32	21.270	
7,050.0	6,940.8	6,937.8	6,937.8	22.3	138.4	10.90	-2,116.6	-742.4	3,006.0	2,867.2	138.78	21.659	
7,086.6	6,972.8	6,969.8	6,969.8	22.1	139.0	11.27	-2,116.6	-742.4	2,988.5	2,852.7	135.78	22.009	
7,100.0	6,984.3	6,981.3	6,981.3	22.1	139.3	11.42	-2,116.6	-742.4	2,981.7	2,847.1	134.61	22.151	
7,150.0	7,025.9	7,022.9	7,022.9	21.9	140.1	12.06	-2,116.6	-742.4	2,954.5	2,824.6	129.85	22.753	
7,185.0	7,053.9	7,050.9	7,050.9	21.7	140.7	12.59	-2,116.6	-742.4	2,933.7	2,807.5	126.21	23.244	
7,200.0	7,065.6	7,062.6	7,062.6	21.7	140.9	12.83	-2,116.6	-742.4	2,924.5	2,799.9	124.60	23.472	
7,250.0	7,103.0	7,100.0	7,100.0	21.4	141.7	13.77	-2,116.6	-742.4	2,891.8	2,772.9	118.96	24.309	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,283.4	7,126.7	7,123.7	7,123.7	21.2	142.1	14.52	-2,116.6	-742.4	2,868.6	2,753.6	115.06	24.931	
7,300.0	7,138.0	7,135.0	7,135.0	21.2	142.4	14.93	-2,116.6	-742.4	2,856.7	2,743.6	113.12	25.255	
7,350.0	7,170.5	7,167.5	7,167.5	20.9	143.0	16.35	-2,116.6	-742.4	2,819.3	2,712.0	107.31	26.272	
7,381.9	7,189.8	7,186.8	7,186.8	20.8	143.4	17.43	-2,116.6	-742.4	2,794.3	2,690.5	103.80	26.921	
7,400.0	7,200.2	7,197.2	7,197.2	20.7	143.6	18.11	-2,116.6	-742.4	2,779.8	2,677.9	101.93	27.273	
7,450.0	7,227.0	7,224.0	7,224.0	20.4	144.1	20.35	-2,116.6	-742.4	2,738.3	2,640.8	97.52	28.079	
7,480.3	7,241.9	7,238.9	7,238.9	20.3	144.4	21.99	-2,116.6	-742.4	2,712.4	2,616.7	95.68	28.349	
7,500.0	7,250.9	7,247.9	7,247.9	20.2	144.6	23.21	-2,116.6	-742.4	2,695.2	2,600.2	94.95	28.386	
7,550.0	7,271.6	7,268.6	7,268.6	20.0	145.0	26.97	-2,116.6	-742.4	2,650.5	2,555.1	95.36	27.794	
7,578.7	7,282.0	7,279.0	7,279.0	19.9	145.3	29.68	-2,116.6	-742.4	2,624.2	2,526.7	97.50	26.916	
7,600.0	7,289.1	7,286.1	7,286.1	19.8	145.4	32.01	-2,116.6	-742.4	2,604.5	2,504.4	100.17	26.002	
7,650.0	7,303.3	7,300.3	7,300.3	19.6	145.7	38.92	-2,116.6	-742.4	2,557.5	2,446.9	110.62	23.119	
7,677.1	7,309.5	7,306.5	7,306.5	19.5	145.8	43.75	-2,116.6	-742.4	2,531.6	2,412.8	118.85	21.301	
7,700.0	7,314.1	7,311.1	7,311.1	19.5	145.9	48.55	-2,116.6	-742.4	2,509.7	2,382.7	127.00	19.762	
7,750.0	7,321.4	7,318.4	7,318.4	19.4	146.0	61.77	-2,116.6	-742.4	2,461.3	2,314.5	146.75	16.772	
7,775.6	7,323.9	7,320.9	7,320.9	19.3	146.1	70.01	-2,116.6	-742.4	2,436.4	2,280.5	155.88	15.629	
7,800.0	7,325.3	7,322.3	7,322.3	19.3	146.1	78.61	-2,116.6	-742.4	2,412.5	2,250.3	162.23	14.871	
7,832.0	7,326.0	7,323.0	7,323.0	19.3	146.1	90.37	-2,116.6	-742.4	2,381.3	2,216.1	165.23	14.412	
7,874.0	7,325.9	7,322.9	7,322.9	19.3	146.1	90.36	-2,116.6	-742.4	2,340.2	2,175.0	165.27	14.160	
7,900.0	7,325.9	7,322.9	7,322.9	19.3	146.1	90.36	-2,116.6	-742.4	2,314.9	2,149.6	165.30	14.004	
7,972.4	7,325.8	7,322.8	7,322.8	19.4	146.1	90.35	-2,116.6	-742.4	2,244.2	2,078.7	165.50	13.560	
8,000.0	7,325.8	7,322.8	7,322.8	19.5	146.1	90.34	-2,116.6	-742.4	2,217.4	2,051.8	165.58	13.392	
8,070.8	7,325.7	7,322.7	7,322.7	19.8	146.1	90.33	-2,116.6	-742.4	2,148.5	1,982.6	165.90	12.951	
8,100.0	7,325.6	7,322.6	7,322.6	19.9	146.1	90.33	-2,116.6	-742.4	2,120.2	1,954.1	166.03	12.770	
8,169.3	7,325.5	7,322.5	7,322.5	20.3	146.1	90.32	-2,116.6	-742.4	2,052.9	1,886.5	166.46	12.333	
8,200.0	7,325.5	7,322.5	7,322.5	20.5	146.1	90.31	-2,116.6	-742.4	2,023.2	1,856.5	166.66	12.140	
8,267.7	7,325.4	7,322.4	7,322.4	21.1	146.1	90.30	-2,116.6	-742.4	1,957.7	1,790.5	167.18	11.710	
8,300.0	7,325.3	7,322.3	7,322.3	21.3	146.1	90.30	-2,116.6	-742.4	1,926.5	1,759.1	167.44	11.506	
8,366.1	7,325.2	7,322.2	7,322.2	21.9	146.1	90.29	-2,116.6	-742.4	1,862.8	1,694.8	168.04	11.085	
8,400.0	7,325.2	7,322.2	7,322.2	22.3	146.1	90.28	-2,116.6	-742.4	1,830.2	1,661.9	168.35	10.871	
8,464.5	7,325.1	7,322.1	7,322.1	22.9	146.1	90.27	-2,116.6	-742.4	1,768.3	1,599.3	169.03	10.462	
8,500.0	7,325.1	7,322.1	7,322.1	23.3	146.1	90.27	-2,116.6	-742.4	1,734.3	1,565.0	169.40	10.238	
8,563.0	7,325.0	7,322.0	7,322.0	24.0	146.1	90.26	-2,116.6	-742.4	1,674.2	1,504.1	170.12	9.841	
8,600.0	7,324.9	7,321.9	7,321.9	24.5	146.1	90.25	-2,116.6	-742.4	1,639.0	1,468.4	170.54	9.610	
8,661.4	7,324.8	7,321.8	7,321.8	25.2	146.1	90.24	-2,116.6	-742.4	1,580.7	1,409.4	171.31	9.227	
8,700.0	7,324.8	7,321.8	7,321.8	25.7	146.1	90.24	-2,116.6	-742.4	1,544.2	1,372.4	171.78	8.989	
8,759.8	7,324.7	7,321.7	7,321.7	26.5	146.1	90.23	-2,116.6	-742.4	1,487.8	1,315.2	172.57	8.621	
8,800.0	7,324.6	7,321.6	7,321.6	27.1	146.1	90.22	-2,116.6	-742.4	1,450.1	1,276.9	173.10	8.377	
8,858.2	7,324.5	7,321.5	7,321.5	27.9	146.1	90.21	-2,116.6	-742.4	1,395.6	1,221.7	173.91	8.025	
8,900.0	7,324.5	7,321.5	7,321.5	28.4	146.1	90.21	-2,116.6	-742.4	1,356.8	1,182.3	174.49	7.776	
8,956.7	7,324.4	7,321.4	7,321.4	29.3	146.1	90.20	-2,116.6	-742.4	1,304.4	1,129.1	175.31	7.440	
9,000.0	7,324.3	7,321.3	7,321.3	29.9	146.1	90.19	-2,116.6	-742.4	1,264.6	1,088.6	175.94	7.188	
9,055.1	7,324.3	7,321.3	7,321.3	30.7	146.1	90.18	-2,116.6	-742.4	1,214.3	1,037.5	176.76	6.869	
9,100.0	7,324.2	7,321.2	7,321.2	31.4	146.1	90.17	-2,116.6	-742.4	1,173.6	996.2	177.44	6.614	
9,153.5	7,324.1	7,321.1	7,321.1	32.2	146.1	90.17	-2,116.6	-742.4	1,125.5	947.3	178.26	6.314	
9,200.0	7,324.0	7,321.0	7,321.0	33.0	146.1	90.16	-2,116.6	-742.4	1,084.2	905.3	178.98	6.058	
9,251.9	7,324.0	7,321.0	7,321.0	33.8	146.1	90.15	-2,116.6	-742.4	1,038.6	858.8	179.80	5.776	
9,300.0	7,323.9	7,320.9	7,320.9	34.5	146.1	90.14	-2,116.6	-742.4	996.9	816.3	180.56	5.521	
9,350.4	7,323.8	7,320.8	7,320.8	35.4	146.1	90.13	-2,116.6	-742.4	953.8	772.5	181.37	5.259	
9,400.0	7,323.7	7,320.7	7,320.7	36.2	146.1	90.13	-2,116.6	-742.4	912.2	730.0	182.17	5.007	
9,448.8	7,323.7	7,320.7	7,320.7	37.0	146.1	90.12	-2,116.6	-742.4	872.0	689.0	182.97	4.766	
9,500.0	7,323.6	7,320.6	7,320.6	37.8	146.1	90.11	-2,116.6	-742.4	830.8	647.0	183.81	4.520	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT SHULTZ 23-30 - 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	
9,547.2	7,323.5	7,320.5	7,320.5	38.6	146.1	90.10	-2,116.6	-742.4	793.9	609.3	184.60	4.301	
9,600.0	7,323.5	7,320.5	7,320.5	39.5	146.1	90.09	-2,116.6	-742.4	754.0	568.5	185.47	4.065	
9,645.6	7,323.4	7,320.4	7,320.4	40.2	146.1	90.09	-2,116.6	-742.4	720.8	534.5	186.25	3.870	
9,700.0	7,323.3	7,320.3	7,320.3	41.2	146.1	90.08	-2,116.6	-742.4	683.2	496.0	187.16	3.650	
9,744.1	7,323.2	7,320.2	7,320.2	41.9	146.1	90.07	-2,116.6	-742.4	654.4	466.5	187.92	3.482	
9,800.0	7,323.2	7,320.2	7,320.2	42.9	146.1	90.06	-2,116.6	-742.4	620.4	431.6	188.87	3.285	
9,842.5	7,323.1	7,320.1	7,320.1	43.6	146.1	90.05	-2,116.6	-742.4	596.9	407.3	189.60	3.148	
9,900.0	7,323.0	7,320.0	7,320.0	44.6	146.1	90.04	-2,116.6	-742.4	568.5	377.9	190.59	2.983	
9,940.9	7,322.9	7,319.9	7,319.9	45.3	146.1	90.04	-2,116.6	-742.4	551.0	359.7	191.31	2.880	
10,000.0	7,322.9	7,319.9	7,319.9	46.3	146.1	90.03	-2,116.6	-742.4	530.5	338.1	192.33	2.758	
10,039.3	7,322.8	7,319.8	7,319.8	47.0	146.1	90.02	-2,116.6	-742.4	520.0	327.0	193.02	2.694	
10,100.0	7,322.7	7,319.7	7,319.7	48.1	146.1	90.01	-2,116.6	-742.4	509.5	315.4	194.09	2.625	
10,137.8	7,322.6	7,319.6	7,319.6	48.8	146.1	90.00	-2,116.6	-742.4	506.6	311.8	194.75	2.601	
10,158.9	7,322.6	7,319.6	7,319.6	49.1	146.1	90.00	-2,116.6	-742.4	506.1	311.0	195.13	2.594 CC, ES	
10,200.0	7,322.6	7,319.6	7,319.6	49.9	146.1	89.99	-2,116.6	-742.4	507.8	311.9	195.85	2.593 SF	
10,236.2	7,322.5	7,319.5	7,319.5	50.5	146.1	89.99	-2,116.6	-742.4	512.0	315.5	196.50	2.606	
10,300.0	7,322.4	7,319.4	7,319.4	51.6	146.1	89.98	-2,116.6	-742.4	525.4	327.8	197.63	2.659	
10,334.6	7,322.4	7,319.4	7,319.4	52.3	146.1	89.97	-2,116.6	-742.4	535.8	337.5	198.25	2.703	
10,400.0	7,322.3	7,319.3	7,319.3	53.4	146.1	89.96	-2,116.6	-742.4	560.6	361.2	199.41	2.811	
10,433.0	7,322.2	7,319.2	7,319.2	54.0	146.1	89.95	-2,116.6	-742.4	575.6	375.6	200.01	2.878	
10,500.0	7,322.1	7,319.1	7,319.1	55.2	146.1	89.94	-2,116.6	-742.4	610.3	409.1	201.21	3.033	
10,531.5	7,322.1	7,319.1	7,319.1	55.8	146.1	89.94	-2,116.6	-742.4	628.5	426.7	201.78	3.115	
10,600.0	7,321.9	7,318.9	7,318.9	57.0	146.1	89.92	-2,116.6	-742.4	671.4	468.4	203.01	3.307	
10,629.9	7,321.9	7,318.9	7,318.9	57.6	146.1	89.92	-2,116.6	-742.4	691.4	487.8	203.55	3.397	
10,700.0	7,321.8	7,318.8	7,318.8	58.8	146.1	89.91	-2,116.6	-742.4	740.9	536.1	204.82	3.617	
10,728.3	7,321.8	7,318.8	7,318.8	59.4	146.1	89.90	-2,116.6	-742.4	761.9	556.5	205.34	3.710	
10,800.0	7,321.6	7,318.6	7,318.6	60.7	146.0	89.89	-2,116.6	-742.4	816.8	610.2	206.64	3.953	
10,826.7	7,321.6	7,318.6	7,318.6	61.1	146.0	89.88	-2,116.6	-742.4	838.0	630.9	207.13	4.046	
10,900.0	7,321.5	7,318.5	7,318.5	62.5	146.0	89.87	-2,116.6	-742.4	897.5	689.0	208.46	4.305	
10,925.2	7,321.4	7,318.4	7,318.4	62.9	146.0	89.87	-2,116.6	-742.4	918.4	709.4	208.92	4.396	
11,000.0	7,321.3	7,318.3	7,318.3	64.3	146.0	89.85	-2,116.6	-742.4	981.7	771.4	210.29	4.668	
11,023.6	7,321.3	7,318.3	7,318.3	64.7	146.0	89.85	-2,116.6	-742.4	1,002.0	791.2	210.72	4.755	
11,100.0	7,321.2	7,318.2	7,318.2	66.1	146.0	89.83	-2,116.6	-742.4	1,068.6	856.5	212.12	5.038	
11,122.0	7,321.1	7,318.1	7,318.1	66.5	146.0	89.83	-2,116.6	-742.4	1,088.0	875.5	212.53	5.120	
11,200.0	7,321.0	7,318.0	7,318.0	68.0	146.0	89.82	-2,116.6	-742.4	1,157.6	943.7	213.96	5.411	
11,220.4	7,321.0	7,318.0	7,318.0	68.4	146.0	89.81	-2,116.6	-742.4	1,176.1	961.7	214.34	5.487	
11,300.0	7,320.9	7,317.9	7,317.9	69.8	146.0	89.80	-2,116.6	-742.4	1,248.3	1,032.5	215.80	5.785	
11,318.9	7,320.8	7,317.8	7,317.8	70.2	146.0	89.79	-2,116.6	-742.4	1,265.6	1,049.5	216.15	5.855	
11,400.0	7,320.7	7,317.7	7,317.7	71.7	146.0	89.78	-2,116.6	-742.4	1,340.4	1,122.7	217.65	6.158	
11,417.3	7,320.7	7,317.7	7,317.7	72.0	146.0	89.78	-2,116.6	-742.4	1,356.4	1,138.4	217.97	6.223	
11,500.0	7,320.6	7,317.6	7,317.6	73.5	146.0	89.76	-2,116.6	-742.4	1,433.5	1,214.0	219.50	6.531	
11,515.7	7,320.5	7,317.5	7,317.5	73.8	146.0	89.76	-2,116.6	-742.4	1,448.2	1,228.4	219.79	6.589	
11,600.0	7,320.4	7,317.4	7,317.4	75.4	146.0	89.74	-2,116.6	-742.4	1,527.4	1,306.1	221.35	6.900	
11,614.1	7,320.4	7,317.4	7,317.4	75.6	146.0	89.74	-2,116.6	-742.4	1,540.8	1,319.2	221.61	6.953	
11,700.0	7,320.2	7,317.2	7,317.2	77.2	146.0	89.72	-2,116.6	-742.4	1,622.1	1,398.9	223.21	7.267	
11,712.6	7,320.2	7,317.2	7,317.2	77.5	146.0	89.72	-2,116.6	-742.4	1,634.1	1,410.6	223.44	7.313	
11,800.0	7,320.1	7,317.1	7,317.1	79.1	146.0	89.71	-2,116.6	-742.4	1,717.4	1,492.3	225.07	7.631	
11,811.0	7,320.1	7,317.1	7,317.1	79.3	146.0	89.70	-2,116.6	-742.4	1,727.9	1,502.7	225.23	7.672	
11,849.2	7,320.0	7,317.0	7,317.0	79.8	146.0	89.70	-2,116.6	-742.4	1,764.5	1,538.7	225.79	7.815	
11,849.6	7,320.0	7,317.0	7,317.0	79.8	146.0	89.70	-2,116.6	-742.4	1,764.9	1,539.1	225.80	7.816	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT SHULTZ FARM 30-32 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	172.58	-1,235.4	161.0	1,246.1				
98.4	98.4	67.7	67.7	0.1	0.0	172.58	-1,235.4	161.0	1,245.8	1,245.7	0.11	N/A	
100.0	100.0	69.2	69.2	0.1	0.0	172.58	-1,235.4	161.0	1,245.9	1,245.7	0.12	N/A	
196.8	196.8	163.9	163.9	0.3	0.1	172.58	-1,235.6	161.0	1,246.1	1,245.6	0.45	2,749.424	
200.0	200.0	167.0	167.0	0.3	0.2	172.58	-1,235.6	161.0	1,246.1	1,245.6	0.47	2,676.991	
295.3	295.3	262.7	262.7	0.5	0.3	172.58	-1,236.0	160.9	1,246.4	1,245.6	0.79	1,578.862	
300.0	300.0	267.6	267.6	0.5	0.3	172.58	-1,236.0	160.9	1,246.4	1,245.6	0.80	1,549.819	
393.7	393.7	361.0	361.0	0.7	0.3	172.60	-1,236.3	160.7	1,246.7	1,245.6	1.09	1,146.617	
400.0	400.0	367.2	367.2	0.8	0.3	172.60	-1,236.3	160.6	1,246.7	1,245.6	1.11	1,127.284	
492.1	492.1	458.8	458.8	1.0	0.4	172.62	-1,236.6	160.3	1,247.0	1,245.6	1.37	909.070	
500.0	500.0	466.6	466.6	1.0	0.4	172.62	-1,236.7	160.2	1,247.0	1,245.6	1.39	894.496	
590.5	590.5	554.7	554.7	1.2	0.5	172.65	-1,237.1	159.5	1,247.4	1,245.7	1.65	757.284	
600.0	600.0	563.8	563.7	1.2	0.5	172.66	-1,237.2	159.4	1,247.4	1,245.8	1.67	745.479	
689.0	689.0	652.2	652.2	1.4	0.5	172.70	-1,237.9	158.5	1,248.0	1,246.1	1.92	650.332	
700.0	700.0	663.5	663.4	1.4	0.5	172.71	-1,238.0	158.4	1,248.1	1,246.2	1.95	640.226	
787.4	787.4	750.5	750.5	1.6	0.6	172.76	-1,238.6	157.4	1,248.6	1,246.4	2.19	570.775	
800.0	800.0	762.9	762.8	1.7	0.6	172.76	-1,238.7	157.3	1,248.7	1,246.5	2.22	562.066	
885.8	885.8	846.9	846.9	1.9	0.6	172.80	-1,239.4	156.5	1,249.3	1,246.9	2.45	509.380	
900.0	900.0	860.8	860.7	1.9	0.6	172.81	-1,239.6	156.3	1,249.4	1,246.9	2.49	501.645	
984.2	984.2	942.9	942.9	2.1	0.7	172.87	-1,240.5	155.1	1,250.2	1,247.5	2.72	460.352	
1,000.0	1,000.0	958.2	958.2	2.1	0.7	172.89	-1,240.7	154.8	1,250.3	1,247.6	2.76	453.416	
1,082.7	1,082.7	1,038.6	1,038.5	2.3	0.7	172.96	-1,241.7	153.4	1,251.3	1,248.3	2.98	420.309	
1,100.0	1,100.0	1,055.4	1,055.4	2.3	0.7	172.97	-1,242.0	153.1	1,251.5	1,248.5	3.02	414.002	
1,181.1	1,181.1	1,134.6	1,134.5	2.5	0.7	173.04	-1,243.2	151.8	1,252.6	1,249.3	3.24	386.892	
1,200.0	1,200.0	1,153.2	1,153.1	2.6	0.8	173.05	-1,243.5	151.5	1,252.8	1,249.5	3.29	381.091	
1,279.5	1,279.5	1,230.4	1,230.3	2.7	0.8	173.12	-1,244.8	150.2	1,254.0	1,250.5	3.50	358.572	
1,300.0	1,300.0	1,249.9	1,249.8	2.8	0.8	173.14	-1,245.2	149.9	1,254.4	1,250.8	3.55	353.235	
1,377.9	1,377.9	1,325.9	1,325.7	3.0	0.8	173.21	-1,246.7	148.5	1,255.8	1,252.0	3.76	334.317	
1,400.0	1,400.0	1,348.3	1,348.2	3.0	0.8	173.23	-1,247.2	148.0	1,256.2	1,252.4	3.81	329.319	
1,450.0	1,450.0	1,399.2	1,399.0	3.1	0.9	173.28	-1,248.2	147.1	1,257.1	1,253.1	3.95	318.523	
1,476.4	1,476.4	1,425.8	1,425.6	3.2	0.9	-172.40	-1,248.8	146.5	1,257.6	1,253.7	3.99	315.245	
1,500.0	1,500.0	1,449.5	1,449.3	3.2	0.9	-172.38	-1,249.2	146.1	1,258.4	1,254.3	4.05	310.560	
1,574.8	1,574.8	1,523.3	1,523.1	3.4	0.9	-172.32	-1,250.7	144.9	1,261.9	1,257.7	4.25	296.865	
1,600.0	1,599.9	1,547.2	1,547.0	3.5	0.9	-172.30	-1,251.1	144.5	1,263.6	1,259.3	4.32	292.649	
1,673.2	1,673.0	1,620.5	1,620.2	3.6	1.0	-172.24	-1,252.8	143.1	1,269.8	1,265.2	4.51	281.280	
1,700.0	1,699.7	1,651.9	1,651.6	3.7	1.0	-172.22	-1,253.4	142.4	1,272.4	1,267.8	4.59	277.465	
1,771.6	1,771.0	1,731.8	1,731.5	3.9	1.0	-172.14	-1,254.5	140.3	1,280.2	1,275.5	4.78	268.041	
1,800.0	1,799.1	1,761.3	1,760.9	3.9	1.0	-172.11	-1,254.8	139.4	1,283.7	1,278.9	4.85	264.701	
1,870.1	1,868.6	1,838.9	1,838.5	4.1	1.0	-172.04	-1,255.5	136.9	1,293.4	1,288.4	5.03	257.006	
1,900.0	1,898.2	1,874.5	1,874.1	4.2	1.0	-172.00	-1,255.6	135.6	1,297.8	1,292.7	5.11	253.983	
1,968.5	1,965.7	1,945.0	1,944.5	4.3	1.1	-171.92	-1,255.4	132.9	1,308.8	1,303.5	5.29	247.508	
2,000.0	1,996.6	1,975.0	1,974.5	4.4	1.1	-171.89	-1,255.4	131.8	1,314.4	1,309.1	5.37	244.766	
2,049.8	2,045.4	2,022.8	2,022.3	4.6	1.1	-171.85	-1,255.4	130.0	1,324.0	1,318.5	5.50	240.648	
2,066.9	2,062.2	2,039.5	2,039.0	4.6	1.1	-171.84	-1,255.4	129.4	1,327.5	1,321.9	5.55	239.325	
2,100.0	2,094.5	2,071.6	2,071.1	4.7	1.1	-171.83	-1,255.4	128.1	1,334.1	1,328.5	5.63	236.855	
2,165.3	2,158.5	2,136.2	2,135.6	4.9	1.1	-171.79	-1,255.4	125.4	1,347.3	1,341.5	5.81	232.084	
2,200.0	2,192.3	2,171.0	2,170.4	5.1	1.1	-171.78	-1,255.4	124.1	1,354.3	1,348.4	5.89	229.739	
2,263.8	2,254.7	2,229.8	2,229.1	5.3	1.2	-171.76	-1,255.3	121.9	1,367.1	1,361.1	6.06	225.546	
2,300.0	2,290.2	2,260.6	2,260.0	5.4	1.2	-171.75	-1,255.4	120.8	1,374.6	1,368.4	6.16	223.137	
2,362.2	2,351.0	2,315.1	2,314.4	5.6	1.2	-171.75	-1,255.8	119.1	1,387.6	1,381.2	6.33	219.232	
2,400.0	2,388.0	2,350.8	2,350.0	5.8	1.2	-171.75	-1,256.1	118.1	1,395.6	1,389.1	6.43	216.913	
2,460.6	2,447.3	2,407.8	2,407.0	6.0	1.2	-171.76	-1,256.7	116.6	1,408.5	1,401.9	6.60	213.326	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,485.8	2,444.0	2,443.2	6.1	1.2	-171.76	-1,257.1	115.6	1,416.9	1,410.2	6.71	211.129	
2,559.0	2,543.6	2,500.0	2,499.2	6.3	1.3	-171.76	-1,257.9	114.1	1,429.7	1,422.8	6.88	207.936	
2,600.0	2,583.6	2,536.3	2,535.5	6.5	1.3	-171.77	-1,258.5	113.2	1,438.6	1,431.6	6.99	205.825	
2,657.5	2,639.8	2,589.9	2,589.1	6.7	1.3	-171.77	-1,259.4	111.8	1,451.2	1,444.1	7.15	202.937	
2,700.0	2,681.4	2,630.5	2,629.6	6.9	1.3	-171.77	-1,260.1	110.7	1,460.6	1,453.4	7.27	200.889	
2,755.9	2,736.1	2,684.3	2,683.4	7.1	1.3	-171.78	-1,261.2	109.3	1,473.0	1,465.6	7.43	198.281	
2,800.0	2,779.2	2,725.9	2,725.0	7.3	1.3	-171.78	-1,262.0	108.1	1,482.8	1,475.2	7.55	196.306	
2,854.3	2,832.4	2,776.6	2,775.7	7.5	1.4	-171.77	-1,263.0	106.6	1,494.9	1,487.2	7.71	193.954	
2,900.0	2,877.1	2,819.8	2,818.8	7.7	1.4	-171.77	-1,264.0	105.4	1,505.2	1,497.3	7.84	192.049	
2,952.7	2,928.7	2,870.3	2,869.3	7.9	1.4	-171.76	-1,265.2	103.8	1,517.0	1,509.0	7.99	189.907	
3,000.0	2,974.9	2,917.2	2,916.1	8.1	1.4	-171.76	-1,266.3	102.4	1,527.7	1,519.6	8.12	188.060	
3,051.2	3,024.9	2,971.2	2,970.1	8.3	1.4	-171.75	-1,267.4	100.8	1,539.1	1,530.8	8.27	186.113	
3,100.0	3,072.7	3,022.7	3,021.6	8.5	1.5	-171.75	-1,268.4	99.3	1,549.9	1,541.5	8.41	184.322	
3,149.6	3,121.2	3,075.0	3,073.8	8.7	1.5	-171.75	-1,269.3	97.8	1,560.7	1,552.2	8.55	182.557	
3,200.0	3,170.5	3,130.5	3,129.4	8.9	1.5	-171.74	-1,270.0	96.1	1,571.6	1,562.9	8.69	180.821	
3,248.0	3,217.5	3,185.6	3,184.4	9.1	1.5	-171.75	-1,270.5	94.5	1,581.7	1,572.9	8.83	179.193	
3,300.0	3,268.3	3,248.9	3,247.6	9.3	1.5	-171.76	-1,270.6	92.9	1,592.4	1,583.4	8.97	177.542	
3,346.4	3,313.8	3,305.5	3,304.2	9.5	1.5	-171.77	-1,270.2	91.6	1,601.5	1,592.4	9.10	176.043	
3,400.0	3,366.1	3,360.8	3,359.6	9.7	1.6	-171.79	-1,269.6	90.5	1,611.9	1,602.6	9.24	174.352	
3,444.9	3,410.0	3,406.6	3,405.4	9.9	1.6	-171.81	-1,269.0	89.6	1,620.4	1,611.1	9.37	173.021	
3,500.0	3,464.0	3,458.9	3,457.6	10.2	1.6	-171.84	-1,268.4	88.7	1,631.0	1,621.5	9.52	171.358	
3,543.3	3,506.3	3,500.0	3,498.7	10.3	1.6	-171.86	-1,267.9	88.1	1,639.3	1,629.7	9.64	170.087	
3,600.0	3,561.8	3,553.9	3,552.6	10.6	1.6	-171.89	-1,267.3	87.2	1,650.3	1,640.5	9.80	168.450	
3,641.7	3,602.6	3,593.6	3,592.3	10.8	1.6	-171.91	-1,266.9	86.5	1,658.4	1,648.5	9.91	167.278	
3,700.0	3,659.6	3,647.4	3,646.1	11.0	1.6	-171.94	-1,266.4	85.6	1,669.8	1,659.8	10.08	165.681	
3,740.1	3,698.9	3,684.4	3,683.1	11.2	1.6	-171.95	-1,266.2	85.1	1,677.8	1,667.6	10.19	164.614	
3,800.0	3,757.4	3,740.8	3,739.4	11.4	1.7	-171.98	-1,265.9	84.2	1,689.7	1,679.3	10.36	163.058	
3,838.6	3,795.1	3,777.5	3,776.1	11.6	1.7	-172.00	-1,265.7	83.6	1,697.4	1,686.9	10.47	162.083	
3,900.0	3,855.2	3,836.4	3,835.1	11.9	1.7	-172.03	-1,265.5	82.6	1,709.7	1,699.1	10.65	160.582	
3,937.0	3,891.4	3,872.1	3,870.8	12.0	1.7	-172.04	-1,265.4	82.0	1,717.1	1,706.4	10.75	159.692	
4,000.0	3,953.0	3,933.5	3,932.1	12.3	1.7	-172.06	-1,265.2	80.8	1,729.8	1,718.9	10.93	158.214	
4,035.4	3,987.7	3,968.3	3,967.0	12.4	1.7	-172.07	-1,265.2	80.2	1,737.0	1,725.9	11.04	157.403	
4,100.0	4,050.9	4,038.2	4,036.8	12.7	1.7	-172.09	-1,264.9	78.7	1,749.9	1,738.7	11.22	155.968	
4,133.8	4,084.0	4,078.3	4,076.9	12.9	1.8	-172.10	-1,264.6	77.8	1,756.5	1,745.2	11.32	155.208	
4,200.0	4,148.7	4,151.8	4,150.4	13.2	1.8	-172.11	-1,263.7	75.9	1,769.1	1,757.6	11.50	153.776	
4,232.3	4,180.2	4,186.9	4,185.5	13.3	1.8	-172.12	-1,263.1	75.0	1,775.2	1,763.6	11.60	153.094	
4,300.0	4,246.5	4,254.9	4,253.5	13.6	1.8	-172.13	-1,262.0	73.2	1,787.8	1,776.0	11.79	151.670	
4,330.7	4,276.5	4,285.3	4,283.8	13.7	1.8	-172.13	-1,261.4	72.5	1,793.5	1,781.7	11.87	151.037	
4,400.0	4,344.3	4,355.6	4,354.1	14.0	1.8	-172.15	-1,260.2	70.9	1,806.4	1,794.3	12.07	149.629	
4,429.1	4,372.8	4,385.3	4,383.8	14.1	1.8	-172.16	-1,259.6	70.3	1,811.8	1,799.6	12.16	149.048	
4,500.0	4,442.1	4,448.6	4,447.0	14.5	1.9	-172.19	-1,258.4	69.3	1,824.9	1,812.6	12.36	147.672	
4,527.5	4,469.1	4,472.2	4,470.7	14.6	1.9	-172.20	-1,258.0	68.9	1,830.1	1,817.7	12.44	147.156	
4,600.0	4,539.9	4,541.2	4,539.6	14.9	1.9	-172.24	-1,257.0	67.9	1,844.0	1,831.3	12.65	145.823	
4,626.0	4,565.4	4,567.8	4,566.3	15.0	1.9	-172.25	-1,256.7	67.5	1,848.9	1,836.2	12.72	145.348	
4,700.0	4,637.8	4,647.7	4,646.2	15.3	1.9	-172.29	-1,255.3	66.6	1,862.9	1,849.9	12.93	144.039	
4,724.4	4,661.6	4,675.0	4,673.4	15.4	1.9	-172.32	-1,254.8	66.4	1,867.4	1,854.4	13.00	143.619	
4,800.0	4,735.6	4,750.7	4,749.1	15.8	1.9	-172.39	-1,253.0	66.4	1,881.3	1,868.1	13.22	142.330	
4,822.8	4,757.9	4,772.4	4,770.8	15.9	1.9	-172.41	-1,252.5	66.4	1,885.5	1,872.2	13.28	141.949	
4,900.0	4,833.4	4,845.9	4,844.3	16.2	1.9	-172.48	-1,250.9	66.5	1,899.8	1,886.2	13.50	140.676	
4,921.2	4,854.2	4,866.1	4,864.5	16.3	1.9	-172.50	-1,250.5	66.5	1,903.7	1,890.1	13.57	140.331	
5,000.0	4,931.2	4,934.9	4,933.3	16.6	1.9	-172.56	-1,249.2	66.5	1,918.5	1,904.7	13.79	139.090	
5,019.7	4,950.5	4,950.8	4,949.2	16.7	1.9	-172.57	-1,248.9	66.5	1,922.2	1,908.4	13.85	138.792	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design											NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT SHULTZ FARM 30-32 - Wellbore #1 - Wellbore #1		Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT											Offset Well Error:		0.0 usft	
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			Separation Factor
5,100.0	5,029.0	5,017.4	5,015.8	17.1	1.9	-172.62	-1,248.2	66.2	1,937.9	1,923.8	14.08	137.613		
5,118.1	5,046.7	5,033.7	5,032.0	17.1	1.9	-172.63	-1,248.1	66.1	1,941.5	1,927.4	14.14	137.348		
5,200.0	5,126.8	5,107.4	5,105.8	17.5	1.9	-172.68	-1,247.7	65.9	1,957.9	1,943.6	14.38	136.193		
5,216.5	5,143.0	5,122.9	5,121.3	17.6	2.0	-172.69	-1,247.7	65.8	1,961.3	1,946.9	14.42	135.969		
5,300.0	5,224.7	5,200.0	5,198.3	17.9	2.0	-172.74	-1,247.5	65.4	1,978.3	1,963.6	14.67	134.867		
5,314.9	5,239.3	5,215.3	5,213.6	18.0	2.0	-172.75	-1,247.5	65.4	1,981.3	1,966.6	14.71	134.669		
5,400.0	5,322.5	5,296.5	5,294.8	18.4	2.0	-172.80	-1,247.5	64.7	1,998.8	1,983.8	14.96	133.583		
5,413.4	5,335.6	5,308.4	5,306.7	18.4	2.0	-172.80	-1,247.5	64.6	2,001.5	1,986.5	15.00	133.417		
5,500.0	5,420.3	5,383.4	5,381.7	18.8	2.0	-172.84	-1,247.8	63.9	2,019.6	2,004.3	15.26	132.380		
5,511.8	5,431.8	5,393.6	5,391.9	18.9	2.0	-172.84	-1,247.8	63.8	2,022.1	2,006.8	15.29	132.244		
5,600.0	5,518.1	5,481.8	5,480.1	19.3	2.1	-172.88	-1,248.4	62.8	2,040.7	2,025.2	15.55	131.213		
5,610.2	5,528.1	5,492.2	5,490.5	19.3	2.1	-172.88	-1,248.5	62.7	2,042.9	2,027.3	15.58	131.094		
5,700.0	5,615.9	5,561.2	5,559.5	19.7	2.1	-172.91	-1,249.2	61.8	2,062.1	2,046.3	15.85	130.134		
5,708.6	5,624.4	5,567.6	5,565.9	19.7	2.1	-172.91	-1,249.3	61.7	2,064.0	2,048.2	15.87	130.046		
5,800.0	5,713.7	5,641.2	5,639.5	20.1	2.1	-172.92	-1,250.8	60.5	2,084.5	2,068.4	16.14	129.128		
5,807.1	5,720.7	5,647.3	5,645.5	20.2	2.1	-172.92	-1,251.0	60.3	2,086.2	2,070.0	16.16	129.057		
5,900.0	5,811.6	5,739.4	5,737.6	20.6	2.1	-172.90	-1,253.5	57.4	2,107.5	2,091.0	16.45	128.130		
5,905.5	5,816.9	5,746.2	5,744.4	20.6	2.1	-172.89	-1,253.7	57.2	2,108.7	2,092.3	16.46	128.074		
6,000.0	5,909.4	5,869.9	5,868.0	21.0	2.2	-172.89	-1,255.8	54.2	2,129.5	2,112.7	16.75	127.118		
6,003.9	5,913.2	5,875.2	5,873.4	21.0	2.2	-172.89	-1,255.8	54.2	2,130.3	2,113.6	16.76	127.078		
6,053.2	5,961.4	5,931.8	5,929.9	21.3	2.2	-172.92	-1,256.0	53.6	2,140.6	2,123.7	16.91	126.587		
6,100.0	6,007.3	5,979.7	5,977.8	21.4	2.2	-172.96	-1,256.1	53.3	2,149.9	2,132.9	16.99	126.556		
6,102.3	6,009.6	5,982.1	5,980.2	21.5	2.2	-172.97	-1,256.1	53.2	2,150.4	2,133.4	16.99	126.559		
6,200.0	6,105.7	6,071.2	6,069.3	21.8	2.2	-173.05	-1,256.3	52.9	2,167.4	2,150.3	17.11	126.648		
6,200.8	6,106.5	6,071.9	6,070.0	21.8	2.2	-173.05	-1,256.3	52.9	2,167.5	2,150.4	17.11	126.648		
6,299.2	6,203.9	6,164.0	6,162.2	22.0	2.3	-173.12	-1,256.8	52.7	2,181.7	2,164.5	17.23	126.653		
6,300.0	6,204.7	6,164.8	6,162.9	22.0	2.3	-173.12	-1,256.8	52.7	2,181.8	2,164.6	17.23	126.652		
6,397.6	6,301.8	6,260.0	6,258.1	22.3	2.3	-173.18	-1,257.4	52.7	2,192.7	2,175.4	17.33	126.545		
6,400.0	6,304.2	6,262.3	6,260.4	22.3	2.3	-173.18	-1,257.4	52.7	2,192.9	2,175.6	17.33	126.540		
6,496.0	6,400.0	6,353.7	6,351.8	22.4	2.3	-173.22	-1,258.1	52.9	2,200.4	2,183.0	17.42	126.299		
6,500.0	6,403.9	6,357.3	6,355.5	22.5	2.3	-173.22	-1,258.1	53.0	2,200.7	2,183.3	17.43	126.285		
6,594.5	6,498.3	6,448.7	6,446.9	22.6	2.3	-173.24	-1,259.0	53.0	2,205.1	2,187.6	17.52	125.879		
6,600.0	6,503.8	6,454.3	6,452.4	22.6	2.3	-173.24	-1,259.0	53.1	2,205.2	2,187.7	17.52	125.847		
6,653.0	6,556.8	6,508.3	6,506.4	22.7	2.3	172.46	-1,259.6	53.1	2,206.3	2,188.7	17.58	125.524		
6,692.9	6,596.7	6,553.3	6,551.4	22.7	2.3	172.46	-1,260.0	53.2	2,206.6	2,188.9	17.65	124.985		
6,706.0	6,609.8	6,568.0	6,566.1	22.7	2.3	172.46	-1,260.1	53.2	2,206.7	2,189.0	17.68	124.809		
6,750.0	6,653.8	6,613.9	6,612.0	22.8	2.3	-7.55	-1,260.3	53.2	2,205.6	2,187.9	17.67	124.855		
6,791.3	6,695.0	6,650.6	6,648.7	22.8	2.3	-7.60	-1,260.6	53.2	2,202.2	2,184.5	17.67	124.597		
6,800.0	6,703.6	6,658.3	6,656.4	22.8	2.3	-7.61	-1,260.7	53.2	2,201.2	2,183.5	17.68	124.499		
6,850.0	6,752.9	6,700.0	6,698.1	22.8	2.3	-7.71	-1,261.1	53.0	2,193.4	2,175.7	17.72	123.790		
6,889.7	6,791.6	6,737.8	6,735.9	22.7	2.3	-7.83	-1,261.5	52.7	2,185.0	2,167.2	17.75	123.098		
6,900.0	6,801.5	6,746.9	6,745.0	22.7	2.3	-7.86	-1,261.7	52.6	2,182.4	2,164.7	17.76	122.907		
6,950.0	6,849.1	6,790.5	6,788.6	22.6	2.3	-8.07	-1,262.3	52.2	2,168.2	2,150.4	17.77	122.000		
6,988.2	6,884.8	6,827.0	6,825.1	22.5	2.4	-8.26	-1,262.9	51.7	2,155.1	2,137.3	17.76	121.323		
7,000.0	6,895.7	6,838.6	6,836.7	22.5	2.4	-8.33	-1,263.1	51.6	2,150.7	2,132.9	17.76	121.112		
7,050.0	6,940.8	6,886.7	6,884.8	22.3	2.4	-8.68	-1,263.8	51.2	2,129.9	2,112.2	17.71	120.289		
7,086.6	6,972.8	6,922.5	6,920.6	22.1	2.4	-8.99	-1,264.3	51.0	2,112.7	2,095.1	17.65	119.724		
7,100.0	6,984.3	6,935.7	6,933.8	22.1	2.4	-9.12	-1,264.4	50.9	2,106.0	2,088.4	17.62	119.516		
7,150.0	7,025.9	6,983.5	6,981.6	21.9	2.4	-9.67	-1,264.9	50.7	2,079.0	2,061.5	17.50	118.783		
7,185.0	7,053.9	7,013.7	7,011.8	21.7	2.4	-10.12	-1,265.1	50.5	2,058.4	2,041.0	17.40	118.291		
7,200.0	7,065.6	7,025.5	7,023.6	21.7	2.4	-10.33	-1,265.2	50.4	2,049.1	2,031.8	17.35	118.079		
7,250.0	7,103.0	7,063.3	7,061.4	21.4	2.4	-11.13	-1,265.5	50.1	2,016.6	1,999.4	17.19	117.325		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,283.4	7,126.7	7,087.2	7,085.3	21.2	2.4	-11.77	-1,265.6	50.0	1,993.4	1,976.3	17.08	116.733	
7,300.0	7,138.0	7,098.7	7,096.8	21.2	2.4	-12.12	-1,265.7	49.9	1,981.5	1,964.5	17.02	116.399	
7,350.0	7,170.5	7,131.7	7,129.8	20.9	2.4	-13.34	-1,266.0	49.6	1,944.1	1,927.2	16.88	115.139	
7,381.9	7,189.8	7,151.3	7,149.4	20.8	2.4	-14.28	-1,266.1	49.4	1,919.1	1,902.2	16.82	114.063	
7,400.0	7,200.2	7,161.9	7,160.0	20.7	2.5	-14.88	-1,266.2	49.4	1,904.5	1,887.7	16.80	113.337	
7,450.0	7,227.0	7,189.3	7,187.4	20.4	2.5	-16.84	-1,266.4	49.2	1,863.0	1,846.1	16.82	110.741	
7,480.3	7,241.9	7,204.3	7,202.4	20.3	2.5	-18.30	-1,266.5	49.1	1,836.9	1,820.0	16.91	108.660	
7,500.0	7,250.9	7,213.4	7,211.5	20.2	2.5	-19.39	-1,266.5	49.0	1,819.7	1,802.7	16.99	107.089	
7,550.0	7,271.6	7,234.3	7,232.4	20.0	2.5	-22.78	-1,266.7	48.9	1,774.9	1,757.5	17.37	102.179	
7,578.7	7,282.0	7,244.9	7,242.9	19.9	2.5	-25.25	-1,266.8	48.8	1,748.5	1,730.8	17.71	98.749	
7,600.0	7,289.1	7,252.0	7,250.0	19.8	2.5	-27.41	-1,266.8	48.8	1,728.8	1,710.8	18.01	95.966	
7,650.0	7,303.3	7,266.4	7,264.4	19.6	2.5	-33.93	-1,266.9	48.8	1,681.6	1,662.6	18.96	88.695	
7,677.1	7,309.5	7,272.8	7,270.8	19.5	2.5	-38.60	-1,266.9	48.7	1,655.6	1,636.0	19.59	84.510	
7,700.0	7,314.1	7,277.4	7,275.5	19.5	2.5	-43.35	-1,267.0	48.7	1,633.6	1,613.4	20.15	81.064	
7,750.0	7,321.4	7,285.0	7,283.1	19.4	2.5	-56.99	-1,267.0	48.7	1,585.0	1,563.7	21.27	74.524	
7,775.6	7,323.9	7,287.6	7,285.6	19.3	2.5	-65.87	-1,267.0	48.7	1,559.9	1,538.4	21.58	72.283	
7,800.0	7,325.3	7,289.2	7,287.3	19.3	2.5	-75.39	-1,267.0	48.7	1,536.0	1,514.4	21.60	71.103	
7,832.0	7,326.0	7,290.1	7,288.1	19.3	2.5	-88.63	-1,267.0	48.7	1,504.6	1,483.1	21.49	70.001	
7,874.0	7,325.9	7,290.3	7,288.3	19.3	2.5	-88.67	-1,267.0	48.7	1,463.4	1,441.8	21.54	67.929	
7,900.0	7,325.9	7,290.4	7,288.4	19.3	2.5	-88.70	-1,267.0	48.7	1,437.9	1,416.3	21.57	66.653	
7,972.4	7,325.8	7,290.7	7,288.8	19.4	2.5	-88.77	-1,267.1	48.7	1,367.0	1,345.2	21.77	62.787	
8,000.0	7,325.8	7,290.9	7,288.9	19.5	2.5	-88.80	-1,267.1	48.7	1,340.0	1,318.1	21.85	61.335	
8,070.8	7,325.7	7,291.2	7,289.3	19.8	2.5	-88.86	-1,267.1	48.7	1,270.9	1,248.7	22.17	57.321	
8,100.0	7,325.6	7,291.4	7,289.4	19.9	2.5	-88.89	-1,267.1	48.7	1,242.5	1,220.2	22.30	55.705	
8,169.3	7,325.5	7,291.7	7,289.7	20.3	2.5	-88.96	-1,267.1	48.7	1,175.1	1,152.4	22.74	51.680	
8,200.0	7,325.5	7,291.8	7,289.9	20.5	2.5	-88.99	-1,267.1	48.7	1,145.4	1,122.4	22.93	49.946	
8,267.7	7,325.4	7,292.2	7,290.2	21.1	2.5	-89.06	-1,267.1	48.7	1,079.9	1,056.5	23.46	46.029	
8,300.0	7,325.3	7,292.3	7,290.4	21.3	2.5	-89.09	-1,267.1	48.7	1,048.8	1,025.1	23.71	44.226	
8,366.1	7,325.2	7,292.6	7,290.7	21.9	2.5	-89.15	-1,267.1	48.7	985.3	961.0	24.32	40.508	
8,400.0	7,325.2	7,292.8	7,290.9	22.3	2.5	-89.19	-1,267.1	48.7	953.0	928.3	24.64	38.680	
8,464.5	7,325.1	7,293.1	7,291.2	22.9	2.5	-89.25	-1,267.1	48.7	891.6	866.3	25.31	35.225	
8,500.0	7,325.1	7,293.3	7,291.3	23.3	2.5	-89.28	-1,267.1	48.7	858.1	832.4	25.68	33.412	
8,563.0	7,325.0	7,293.6	7,291.6	24.0	2.5	-89.34	-1,267.1	48.7	798.9	772.5	26.41	30.256	
8,600.0	7,324.9	7,293.7	7,291.8	24.5	2.5	-89.38	-1,267.1	48.7	764.5	737.6	26.83	28.490	
8,661.4	7,324.8	7,294.0	7,292.1	25.2	2.5	-89.44	-1,267.1	48.7	707.9	680.3	27.60	25.651	
8,700.0	7,324.8	7,294.2	7,292.3	25.7	2.5	-89.48	-1,267.1	48.7	672.7	644.6	28.08	23.960	
8,759.8	7,324.7	7,294.5	7,292.6	26.5	2.5	-89.53	-1,267.1	48.7	619.0	590.2	28.87	21.444	
8,800.0	7,324.6	7,294.7	7,292.8	27.1	2.5	-89.57	-1,267.1	48.7	583.7	554.3	29.40	19.853	
8,858.2	7,324.5	7,295.0	7,293.0	27.9	2.5	-89.63	-1,267.1	48.7	533.6	503.4	30.21	17.663	
8,900.0	7,324.5	7,295.2	7,293.2	28.4	2.5	-89.67	-1,267.1	48.7	498.8	468.0	30.79	16.200	
8,956.7	7,324.4	7,295.4	7,293.5	29.3	2.5	-89.72	-1,267.1	48.7	453.4	421.8	31.61	14.344	
9,000.0	7,324.3	7,295.6	7,293.7	29.9	2.5	-89.76	-1,267.1	48.7	420.6	388.4	32.24	13.046	
9,055.1	7,324.3	7,295.9	7,294.0	30.7	2.5	-89.82	-1,267.1	48.7	381.9	348.9	33.07	11.550	
9,100.0	7,324.2	7,296.1	7,294.2	31.4	2.5	-89.86	-1,267.1	48.7	353.6	319.9	33.74	10.480	
9,153.5	7,324.1	7,296.4	7,294.4	32.2	2.5	-89.91	-1,267.1	48.7	324.8	290.3	34.57	9.396	
9,200.0	7,324.0	7,296.6	7,294.7	33.0	2.5	-89.95	-1,267.1	48.7	305.3	270.0	35.29	8.651	
9,251.9	7,324.0	7,296.8	7,294.9	33.8	2.5	-90.00	-1,267.1	48.7	290.7	254.6	36.11	8.051	
9,300.0	7,323.9	7,297.1	7,295.1	34.5	2.5	-90.05	-1,267.1	48.7	285.2	248.3	36.87	7.734	
9,309.4	7,323.9	7,297.1	7,295.2	34.7	2.5	-90.06	-1,267.1	48.7	285.0	248.0	37.02	7.699 CC, ES	
9,350.4	7,323.8	7,297.3	7,295.4	35.4	2.5	-90.10	-1,267.1	48.7	287.9	250.3	37.68	7.641 SF	
9,400.0	7,323.7	7,297.5	7,295.6	36.2	2.5	-90.14	-1,267.1	48.7	299.1	260.6	38.49	7.771	
9,448.8	7,323.7	7,297.8	7,295.8	37.0	2.5	-90.19	-1,267.1	48.7	317.3	278.0	39.29	8.076	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT SHULTZ FARM 30-32 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,500.0	7,323.6	7,298.0	7,296.1	37.8	2.5	-90.24	-1,267.1	48.7	342.9	302.8	40.13	8.545	
9,547.2	7,323.5	7,298.2	7,296.3	38.6	2.5	-90.28	-1,267.1	48.7	371.2	330.3	40.92	9.072	
9,600.0	7,323.5	7,298.5	7,296.5	39.5	2.5	-90.33	-1,267.1	48.7	407.1	365.3	41.80	9.739	
9,645.6	7,323.4	7,298.7	7,296.7	40.2	2.5	-90.37	-1,267.1	48.7	440.8	398.3	42.57	10.355	
9,700.0	7,323.3	7,298.9	7,297.0	41.2	2.5	-90.42	-1,267.1	48.7	483.6	440.1	43.49	11.119	
9,744.1	7,323.2	7,300.0	7,298.1	41.9	2.5	-90.64	-1,267.1	48.7	519.8	475.6	44.25	11.748	
9,800.0	7,323.2	7,300.0	7,298.1	42.9	2.5	-90.64	-1,267.1	48.7	567.4	522.2	45.20	12.553	
9,842.5	7,323.1	7,300.0	7,298.1	43.6	2.5	-90.64	-1,267.1	48.7	604.5	558.6	45.94	13.160	
9,900.0	7,323.0	7,300.0	7,298.1	44.6	2.5	-90.64	-1,267.1	48.7	655.8	608.9	46.93	13.974	
9,940.9	7,322.9	7,300.1	7,298.1	45.3	2.5	-90.65	-1,267.1	48.7	692.9	645.3	47.64	14.544	
10,000.0	7,322.9	7,300.3	7,298.4	46.3	2.5	-90.70	-1,267.1	48.7	747.1	698.5	48.67	15.350	
10,039.3	7,322.8	7,300.5	7,298.6	47.0	2.5	-90.74	-1,267.1	48.7	783.7	734.3	49.36	15.875	
10,100.0	7,322.7	7,300.8	7,298.9	48.1	2.5	-90.80	-1,267.1	48.7	840.4	790.0	50.43	16.666	
10,137.8	7,322.6	7,301.0	7,299.1	48.8	2.5	-90.84	-1,267.1	48.7	876.1	825.0	51.10	17.145	
10,200.0	7,322.6	7,301.3	7,299.4	49.9	2.5	-90.90	-1,267.1	48.7	935.1	882.9	52.20	17.915	
10,236.2	7,322.5	7,301.5	7,299.5	50.5	2.5	-90.93	-1,267.1	48.7	969.7	916.8	52.84	18.351	
10,300.0	7,322.4	7,301.8	7,299.8	51.6	2.5	-90.99	-1,267.1	48.7	1,030.8	976.8	53.98	19.098	
10,334.6	7,322.4	7,302.0	7,300.0	52.3	2.5	-91.03	-1,267.1	48.7	1,064.1	1,009.5	54.60	19.491	
10,400.0	7,322.3	7,302.3	7,300.3	53.4	2.5	-91.09	-1,267.1	48.7	1,127.3	1,071.5	55.76	20.215	
10,433.0	7,322.2	7,302.4	7,300.5	54.0	2.5	-91.12	-1,267.1	48.7	1,159.3	1,102.9	56.36	20.569	
10,500.0	7,322.1	7,302.8	7,300.8	55.2	2.5	-91.19	-1,267.1	48.7	1,224.3	1,166.7	57.56	21.269	
10,531.5	7,322.1	7,302.9	7,301.0	55.8	2.5	-91.22	-1,267.1	48.7	1,254.9	1,196.8	58.13	21.588	
10,600.0	7,321.9	7,303.2	7,301.3	57.0	2.5	-91.28	-1,267.1	48.7	1,321.7	1,262.4	59.37	22.263	
10,629.9	7,321.9	7,303.4	7,301.5	57.6	2.5	-91.31	-1,267.1	48.7	1,350.9	1,291.0	59.91	22.550	
10,700.0	7,321.8	7,303.7	7,301.8	58.8	2.5	-91.38	-1,267.1	48.7	1,419.5	1,358.4	61.18	23.203	
10,728.3	7,321.8	7,303.9	7,301.9	59.4	2.5	-91.41	-1,267.1	48.7	1,447.3	1,385.6	61.70	23.459	
10,800.0	7,321.6	7,304.2	7,302.3	60.7	2.5	-91.48	-1,267.1	48.7	1,517.6	1,454.6	63.00	24.090	
10,826.7	7,321.6	7,304.4	7,302.4	61.1	2.5	-91.51	-1,267.1	48.7	1,543.9	1,480.4	63.49	24.318	
10,900.0	7,321.5	7,304.7	7,302.8	62.5	2.5	-91.58	-1,267.1	48.7	1,616.0	1,551.1	64.82	24.928	
10,925.2	7,321.4	7,304.9	7,302.9	62.9	2.5	-91.60	-1,267.1	48.7	1,640.8	1,575.5	65.28	25.132	
11,000.0	7,321.3	7,305.2	7,303.3	64.3	2.5	-91.68	-1,267.1	48.7	1,714.5	1,647.8	66.65	25.722	
11,023.6	7,321.3	7,305.4	7,303.4	64.7	2.5	-91.70	-1,267.1	48.7	1,737.8	1,670.7	67.09	25.903	
11,100.0	7,321.2	7,305.7	7,303.8	66.1	2.5	-91.78	-1,267.1	48.7	1,813.2	1,744.7	68.49	26.474	
11,122.0	7,321.1	7,305.8	7,303.9	66.5	2.5	-91.80	-1,267.1	48.7	1,834.9	1,766.0	68.89	26.634	
11,200.0	7,321.0	7,306.2	7,304.3	68.0	2.5	-91.88	-1,267.1	48.7	1,912.0	1,841.7	70.33	27.187	
11,220.4	7,321.0	7,306.3	7,304.4	68.4	2.5	-91.90	-1,267.2	48.7	1,932.2	1,861.5	70.71	27.328	
11,300.0	7,320.9	7,306.7	7,304.8	69.8	2.5	-91.98	-1,267.2	48.7	2,010.9	1,938.8	72.17	27.863	
11,318.9	7,320.8	7,306.8	7,304.9	70.2	2.5	-91.99	-1,267.2	48.7	2,029.6	1,957.1	72.52	27.987	
11,400.0	7,320.7	7,307.3	7,305.3	71.7	2.5	-92.08	-1,267.2	48.7	2,110.0	2,035.9	74.02	28.506	
11,417.3	7,320.7	7,307.3	7,305.4	72.0	2.5	-92.09	-1,267.2	48.7	2,127.1	2,052.8	74.34	28.614	
11,500.0	7,320.6	7,307.8	7,305.8	73.5	2.5	-92.18	-1,267.2	48.7	2,209.1	2,133.2	75.87	29.117	
11,515.7	7,320.5	7,307.8	7,305.9	73.8	2.5	-92.19	-1,267.2	48.7	2,224.7	2,148.5	76.16	29.210	
11,600.0	7,320.4	7,308.3	7,306.3	75.4	2.5	-92.28	-1,267.2	48.7	2,308.3	2,230.6	77.72	29.699	
11,614.1	7,320.4	7,308.3	7,306.4	75.6	2.5	-92.29	-1,267.2	48.7	2,322.3	2,244.3	77.99	29.779	
11,700.0	7,320.2	7,308.8	7,306.9	77.2	2.5	-92.38	-1,267.2	48.7	2,407.6	2,328.0	79.58	30.254	
11,712.6	7,320.2	7,308.9	7,306.9	77.5	2.5	-92.39	-1,267.2	48.7	2,420.0	2,340.2	79.81	30.322	
11,800.0	7,320.1	7,309.3	7,307.4	79.1	2.5	-92.48	-1,267.2	48.7	2,506.9	2,425.4	81.44	30.783	
11,811.0	7,320.1	7,309.4	7,307.4	79.3	2.5	-92.49	-1,267.2	48.7	2,517.8	2,436.2	81.60	30.856	
11,849.2	7,320.0	7,309.6	7,307.6	79.8	2.5	-92.53	-1,267.2	48.7	2,555.8	2,473.6	82.16	31.106	
11,849.6	7,320.0	7,309.6	7,307.6	79.8	2.5	-92.53	-1,267.2	48.7	2,556.2	2,474.0	82.17	31.109	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT SHULTZ FARM 30-33 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	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	168.25	-2,371.6	493.3	2,422.4				
98.4	98.4	73.3	73.3	0.1	0.0	168.25	-2,371.7	493.2	2,422.5	2,422.4	0.11	N/A	
100.0	100.0	74.7	74.7	0.1	0.0	168.25	-2,371.8	493.2	2,422.5	2,422.4	0.11	N/A	
196.8	196.8	177.1	177.1	0.3	0.2	168.26	-2,372.1	493.0	2,422.8	2,422.4	0.45	5,335.060	
200.0	200.0	180.6	180.6	0.3	0.2	168.26	-2,372.1	493.0	2,422.8	2,422.4	0.47	5,191.742	
295.3	295.3	275.7	275.7	0.5	0.3	168.27	-2,372.3	492.6	2,422.9	2,422.1	0.78	3,102.702	
300.0	300.0	280.2	280.2	0.5	0.3	168.27	-2,372.3	492.5	2,422.9	2,422.1	0.80	3,044.728	
393.7	393.7	369.8	369.8	0.7	0.3	168.28	-2,372.5	492.4	2,423.1	2,422.0	1.07	2,273.270	
400.0	400.0	375.8	375.8	0.8	0.3	168.28	-2,372.5	492.4	2,423.1	2,422.0	1.08	2,236.154	
492.1	492.1	463.5	463.5	1.0	0.4	168.28	-2,372.9	492.4	2,423.4	2,422.1	1.35	1,799.323	
500.0	500.0	471.0	471.0	1.0	0.4	168.28	-2,372.9	492.4	2,423.5	2,422.1	1.37	1,769.594	
590.5	590.5	563.1	563.1	1.2	0.4	168.28	-2,373.4	492.5	2,423.9	2,422.3	1.63	1,488.789	
600.0	600.0	573.0	573.0	1.2	0.4	168.28	-2,373.4	492.5	2,424.0	2,422.3	1.66	1,464.620	
689.0	689.0	666.0	666.0	1.4	0.5	168.28	-2,373.7	492.4	2,424.3	2,422.4	1.90	1,274.645	
700.0	700.0	677.5	677.4	1.4	0.5	168.28	-2,373.8	492.4	2,424.3	2,422.4	1.93	1,254.686	
787.4	787.4	762.2	762.2	1.6	0.5	168.29	-2,374.0	492.2	2,424.5	2,422.4	2.16	1,121.802	
800.0	800.0	774.1	774.1	1.7	0.5	168.29	-2,374.1	492.2	2,424.6	2,422.4	2.19	1,105.201	
885.8	885.8	861.6	861.6	1.9	0.6	168.29	-2,374.4	492.4	2,424.9	2,422.5	2.42	1,000.993	
900.0	900.0	876.5	876.5	1.9	0.6	168.28	-2,374.4	492.4	2,424.9	2,422.5	2.46	985.414	
984.2	984.2	960.6	960.6	2.1	0.6	168.28	-2,374.6	492.6	2,425.1	2,422.4	2.69	903.097	
1,000.0	1,000.0	976.1	976.0	2.1	0.6	168.28	-2,374.6	492.6	2,425.2	2,422.4	2.73	889.287	
1,082.7	1,082.7	1,057.2	1,057.1	2.3	0.6	168.28	-2,374.9	492.6	2,425.4	2,422.5	2.94	824.372	
1,100.0	1,100.0	1,074.2	1,074.2	2.3	0.7	168.28	-2,374.9	492.6	2,425.5	2,422.5	2.99	812.054	
1,181.1	1,181.1	1,159.9	1,159.9	2.5	0.7	168.29	-2,375.3	492.2	2,425.8	2,422.6	3.20	758.004	
1,200.0	1,200.0	1,180.5	1,180.5	2.6	0.7	168.30	-2,375.3	492.1	2,425.8	2,422.5	3.25	746.311	
1,279.5	1,279.5	1,256.8	1,256.8	2.7	0.7	168.30	-2,375.5	491.8	2,425.9	2,422.4	3.45	702.161	
1,300.0	1,300.0	1,275.6	1,275.6	2.8	0.7	168.30	-2,375.5	491.8	2,425.9	2,422.4	3.51	691.733	
1,377.9	1,377.9	1,353.3	1,353.3	3.0	0.8	168.31	-2,375.9	491.7	2,426.2	2,422.5	3.71	653.790	
1,400.0	1,400.0	1,376.2	1,376.2	3.0	0.8	168.31	-2,375.9	491.6	2,426.3	2,422.5	3.77	643.665	
1,450.0	1,450.0	1,426.8	1,426.8	3.1	0.8	168.32	-2,376.1	491.4	2,426.4	2,422.5	3.90	621.975	
1,476.4	1,476.4	1,452.9	1,452.9	3.2	0.8	-177.39	-2,376.2	491.3	2,426.6	2,422.6	3.96	613.465	
1,500.0	1,500.0	1,476.3	1,476.3	3.2	0.8	-177.39	-2,376.3	491.2	2,427.0	2,422.9	4.02	604.151	
1,574.8	1,574.8	1,553.4	1,553.4	3.4	0.8	-177.38	-2,376.6	490.8	2,429.4	2,425.2	4.21	576.684	
1,600.0	1,599.9	1,579.8	1,579.8	3.5	0.8	-177.37	-2,376.6	490.7	2,430.7	2,426.4	4.28	568.096	
1,673.2	1,673.0	1,657.9	1,657.9	3.6	0.9	-177.36	-2,376.8	490.2	2,435.5	2,431.0	4.47	544.980	
1,700.0	1,699.7	1,686.5	1,686.5	3.7	0.9	-177.36	-2,376.8	490.0	2,437.6	2,433.1	4.54	537.164	
1,771.6	1,771.0	1,753.4	1,753.3	3.9	0.9	-177.34	-2,376.8	489.3	2,444.7	2,440.0	4.72	517.581	
1,800.0	1,799.1	1,778.9	1,778.9	3.9	0.9	-177.34	-2,376.9	489.0	2,448.0	2,443.2	4.80	510.388	
1,870.1	1,868.6	1,852.5	1,852.4	4.1	0.9	-177.31	-2,377.2	488.0	2,457.5	2,452.5	4.98	493.278	
1,900.0	1,898.2	1,886.1	1,886.0	4.2	0.9	-177.30	-2,377.3	487.6	2,462.0	2,456.9	5.06	486.431	
1,968.5	1,965.7	1,947.9	1,947.9	4.3	1.0	-177.28	-2,377.4	486.6	2,473.4	2,468.2	5.24	471.749	
2,000.0	1,996.6	1,974.7	1,974.7	4.4	1.0	-177.27	-2,377.5	486.2	2,479.3	2,473.9	5.33	465.518	
2,049.8	2,045.4	2,021.9	2,021.9	4.6	1.0	-177.25	-2,377.8	485.4	2,489.3	2,483.9	5.46	455.921	
2,066.9	2,062.2	2,040.8	2,040.8	4.6	1.0	-177.25	-2,377.9	485.1	2,492.9	2,487.4	5.51	452.829	
2,100.0	2,094.5	2,077.2	2,077.1	4.7	1.0	-177.24	-2,378.1	484.4	2,499.8	2,494.2	5.59	447.036	
2,165.3	2,158.5	2,140.9	2,140.8	4.9	1.0	-177.23	-2,378.3	483.2	2,513.4	2,507.6	5.76	436.060	
2,200.0	2,192.3	2,172.6	2,172.5	5.1	1.0	-177.22	-2,378.4	482.7	2,520.6	2,514.7	5.85	430.705	
2,263.8	2,254.7	2,229.1	2,229.1	5.3	1.1	-177.21	-2,378.7	481.7	2,533.9	2,527.9	6.02	421.053	
2,300.0	2,290.2	2,260.3	2,260.2	5.4	1.1	-177.21	-2,379.0	481.2	2,541.6	2,535.5	6.12	415.495	
2,362.2	2,351.0	2,316.4	2,316.3	5.6	1.1	-177.20	-2,379.5	480.2	2,554.9	2,548.6	6.28	406.537	
2,400.0	2,388.0	2,355.2	2,355.0	5.8	1.1	-177.19	-2,380.0	479.5	2,563.0	2,556.6	6.39	401.236	
2,460.6	2,447.3	2,417.0	2,416.9	6.0	1.1	-177.17	-2,380.6	478.1	2,575.9	2,569.4	6.55	393.076	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,485.8	2,456.5	2,456.3	6.1	1.1	-177.15	-2,381.0	477.2	2,584.3	2,577.6	6.66	388.051	
2,559.0	2,543.6	2,513.6	2,513.4	6.3	1.2	-177.14	-2,381.5	476.0	2,596.8	2,590.0	6.82	380.751	
2,600.0	2,583.6	2,549.0	2,548.8	6.5	1.2	-177.13	-2,381.9	475.2	2,605.6	2,598.6	6.93	375.890	
2,657.5	2,639.8	2,600.0	2,599.8	6.7	1.2	-177.11	-2,382.5	474.1	2,617.9	2,610.9	7.09	369.272	
2,700.0	2,681.4	2,645.6	2,645.4	6.9	1.2	-177.10	-2,383.1	473.1	2,627.1	2,619.9	7.21	364.499	
2,755.9	2,736.1	2,700.0	2,699.8	7.1	1.2	-177.08	-2,383.7	471.9	2,639.1	2,631.7	7.36	358.466	
2,800.0	2,779.2	2,742.1	2,741.9	7.3	1.3	-177.07	-2,384.2	470.9	2,648.5	2,641.0	7.48	353.869	
2,854.3	2,832.4	2,786.7	2,786.4	7.5	1.3	-177.05	-2,384.8	469.9	2,660.2	2,652.6	7.63	348.482	
2,900.0	2,877.1	2,828.5	2,828.2	7.7	1.3	-177.04	-2,385.5	469.0	2,670.2	2,662.5	7.76	344.033	
2,952.7	2,928.7	2,879.6	2,879.3	7.9	1.3	-177.02	-2,386.3	467.8	2,681.8	2,673.9	7.91	338.985	
3,000.0	2,974.9	2,927.9	2,927.6	8.1	1.3	-177.01	-2,387.2	466.6	2,692.2	2,684.1	8.04	334.651	
3,051.2	3,024.9	2,982.5	2,982.2	8.3	1.3	-176.98	-2,388.0	465.2	2,703.3	2,695.1	8.19	330.109	
3,100.0	3,072.7	3,041.3	3,041.0	8.5	1.4	-176.96	-2,388.8	463.5	2,713.8	2,705.5	8.33	325.942	
3,149.6	3,121.2	3,104.4	3,104.0	8.7	1.4	-176.94	-2,389.3	461.9	2,724.2	2,715.8	8.47	321.815	
3,200.0	3,170.5	3,166.1	3,165.7	8.9	1.4	-176.92	-2,389.5	460.2	2,734.6	2,726.0	8.60	317.842	
3,248.0	3,217.5	3,222.5	3,222.1	9.1	1.4	-176.90	-2,389.5	458.5	2,744.3	2,735.5	8.74	314.160	
3,300.0	3,268.3	3,280.0	3,279.6	9.3	1.4	-176.88	-2,389.3	457.0	2,754.6	2,745.7	8.88	310.245	
3,346.4	3,313.8	3,331.4	3,330.9	9.5	1.4	-176.87	-2,388.9	455.7	2,763.7	2,754.7	9.01	306.845	
3,400.0	3,366.1	3,390.5	3,390.1	9.7	1.5	-176.85	-2,388.4	454.2	2,774.1	2,765.0	9.15	303.045	
3,444.9	3,410.0	3,454.3	3,453.7	9.9	1.5	-176.83	-2,387.6	452.4	2,782.6	2,773.4	9.28	299.905	
3,500.0	3,464.0	3,526.4	3,525.9	10.2	1.5	-176.80	-2,386.2	449.9	2,792.7	2,783.2	9.43	296.155	
3,543.3	3,506.3	3,573.0	3,572.4	10.3	1.5	-176.79	-2,385.1	448.2	2,800.4	2,790.9	9.55	293.297	
3,600.0	3,561.8	3,625.3	3,624.6	10.6	1.5	-176.77	-2,383.9	446.4	2,810.5	2,800.8	9.70	289.633	
3,641.7	3,602.6	3,658.5	3,657.8	10.8	1.5	-176.75	-2,383.2	445.2	2,818.1	2,808.3	9.82	286.996	
3,700.0	3,659.6	3,705.9	3,705.1	11.0	1.5	-176.73	-2,382.4	443.5	2,828.8	2,818.8	9.98	283.425	
3,740.1	3,698.9	3,743.7	3,742.9	11.2	1.5	-176.72	-2,381.9	442.2	2,836.3	2,826.2	10.09	280.975	
3,800.0	3,757.4	3,800.0	3,799.2	11.4	1.6	-176.69	-2,381.0	440.2	2,847.5	2,837.2	10.26	277.431	
3,838.6	3,795.1	3,833.6	3,832.8	11.6	1.6	-176.68	-2,380.6	439.0	2,854.7	2,844.4	10.37	275.226	
3,900.0	3,855.2	3,887.0	3,886.1	11.9	1.6	-176.66	-2,380.0	437.2	2,866.4	2,855.9	10.55	271.823	
3,937.0	3,891.4	3,921.8	3,920.9	12.0	1.6	-176.65	-2,379.6	436.0	2,873.5	2,862.8	10.65	269.812	
4,000.0	3,953.0	3,984.1	3,983.2	12.3	1.6	-176.63	-2,379.0	434.1	2,885.6	2,874.7	10.83	266.463	
4,035.4	3,987.7	4,018.6	4,017.6	12.4	1.6	-176.61	-2,378.6	433.0	2,892.3	2,881.4	10.93	264.634	
4,100.0	4,050.9	4,080.4	4,079.4	12.7	1.6	-176.60	-2,377.9	431.4	2,904.7	2,893.6	11.11	261.406	
4,133.8	4,084.0	4,113.0	4,112.0	12.9	1.7	-176.60	-2,377.5	430.7	2,911.2	2,900.0	11.21	259.755	
4,200.0	4,148.7	4,177.3	4,176.3	13.2	1.7	-176.60	-2,376.7	429.8	2,924.0	2,912.6	11.39	256.615	
4,232.3	4,180.2	4,210.7	4,209.7	13.3	1.7	-176.60	-2,376.2	429.4	2,930.2	2,918.7	11.49	255.114	
4,300.0	4,246.5	4,291.9	4,290.9	13.6	1.7	-176.61	-2,374.9	428.5	2,943.0	2,931.3	11.68	252.001	
4,330.7	4,276.5	4,321.9	4,320.9	13.7	1.7	-176.61	-2,374.3	428.2	2,948.7	2,937.0	11.77	250.632	
4,400.0	4,344.3	4,385.5	4,384.5	14.0	1.7	-176.61	-2,373.2	427.3	2,961.8	2,949.8	11.96	247.632	
4,429.1	4,372.8	4,410.7	4,409.7	14.1	1.7	-176.62	-2,372.8	427.0	2,967.3	2,955.2	12.04	246.395	
4,500.0	4,442.1	4,467.5	4,466.4	14.5	1.7	-176.62	-2,372.0	426.2	2,980.9	2,968.6	12.24	243.453	
4,527.5	4,469.1	4,489.5	4,488.5	14.6	1.7	-176.62	-2,371.8	425.9	2,986.2	2,973.9	12.32	242.341	
4,600.0	4,539.9	4,541.7	4,540.6	14.9	1.7	-176.62	-2,371.4	425.1	3,000.6	2,988.1	12.53	239.495	
4,626.0	4,565.4	4,559.9	4,558.9	15.0	1.7	-176.62	-2,371.4	424.9	3,005.9	2,993.3	12.60	238.507	
4,700.0	4,637.8	4,614.9	4,613.8	15.3	1.8	-176.62	-2,371.5	424.4	3,021.2	3,008.4	12.81	235.756	
4,724.4	4,661.6	4,636.5	4,635.5	15.4	1.8	-176.62	-2,371.6	424.2	3,026.3	3,013.4	12.89	234.842	
4,800.0	4,735.6	4,704.2	4,703.1	15.8	1.8	-176.62	-2,371.9	423.7	3,042.3	3,029.2	13.11	232.106	
4,822.8	4,757.9	4,727.8	4,726.7	15.9	1.8	-176.63	-2,372.1	423.5	3,047.2	3,034.0	13.17	231.293	
4,900.0	4,833.4	4,807.4	4,806.3	16.2	1.8	-176.63	-2,372.5	423.0	3,063.5	3,050.1	13.40	228.605	
4,921.2	4,854.2	4,828.6	4,827.5	16.3	1.8	-176.63	-2,372.6	422.8	3,068.0	3,054.5	13.46	227.885	
5,000.0	4,931.2	4,907.4	4,906.4	16.6	1.9	-176.64	-2,373.0	422.2	3,084.5	3,070.8	13.69	225.274	
5,019.7	4,950.5	4,927.2	4,926.2	16.7	1.9	-176.64	-2,373.0	422.1	3,088.6	3,074.9	13.75	224.632	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,029.0	5,008.3	5,007.2	17.1	1.9	-176.65	-2,373.3	421.5	3,105.5	3,091.5	13.98	222.066	
5,118.1	5,046.7	5,026.8	5,025.7	17.1	1.9	-176.65	-2,373.4	421.3	3,109.2	3,095.2	14.04	221.498	
5,200.0	5,126.8	5,110.1	5,109.1	17.5	1.9	-176.66	-2,373.6	420.7	3,126.3	3,112.0	14.28	218.979	
5,216.5	5,143.0	5,126.2	5,125.1	17.6	1.9	-176.66	-2,373.6	420.5	3,129.7	3,115.4	14.32	218.481	
5,300.0	5,224.7	5,207.7	5,206.6	17.9	2.0	-176.66	-2,373.7	419.9	3,147.1	3,132.5	14.57	216.019	
5,314.9	5,239.3	5,222.9	5,221.8	18.0	2.0	-176.67	-2,373.8	419.8	3,150.2	3,135.6	14.61	215.584	
5,400.0	5,322.5	5,310.0	5,308.9	18.4	2.0	-176.67	-2,373.9	419.2	3,167.8	3,152.9	14.86	213.152	
5,413.4	5,335.6	5,324.3	5,323.2	18.4	2.0	-176.67	-2,373.9	419.1	3,170.6	3,155.7	14.90	212.776	
5,500.0	5,420.3	5,413.3	5,412.2	18.8	2.0	-176.68	-2,373.8	418.4	3,188.3	3,173.2	15.15	210.391	
5,511.8	5,431.8	5,423.1	5,422.0	18.9	2.0	-176.68	-2,373.8	418.3	3,190.7	3,175.5	15.19	210.078	
5,600.0	5,518.1	5,500.0	5,498.9	19.3	2.0	-176.69	-2,373.9	417.6	3,209.0	3,193.6	15.44	207.779	
5,610.2	5,528.1	5,505.7	5,504.6	19.3	2.0	-176.69	-2,373.9	417.5	3,211.2	3,195.7	15.47	207.528	
5,700.0	5,615.9	5,598.5	5,597.4	19.7	2.1	-176.68	-2,374.3	416.3	3,229.9	3,214.2	15.74	205.198	
5,708.6	5,624.4	5,600.0	5,598.9	19.7	2.1	-176.68	-2,374.3	416.3	3,231.7	3,215.9	15.76	205.006	
5,800.0	5,713.7	5,679.7	5,678.6	20.1	2.1	-176.68	-2,374.8	414.9	3,250.9	3,234.9	16.03	202.779	
5,807.1	5,720.7	5,685.4	5,684.3	20.2	2.1	-176.67	-2,374.8	414.8	3,252.4	3,236.4	16.05	202.611	
5,900.0	5,811.6	5,783.4	5,782.2	20.6	2.1	-176.66	-2,375.8	412.8	3,272.2	3,255.9	16.33	200.364	
5,905.5	5,816.9	5,789.5	5,788.4	20.6	2.1	-176.66	-2,375.8	412.7	3,273.4	3,257.0	16.35	200.232	
6,000.0	5,909.4	5,874.4	5,873.2	21.0	2.2	-176.64	-2,376.5	411.1	3,293.4	3,276.8	16.63	198.080	
6,003.9	5,913.2	5,877.8	5,876.7	21.0	2.2	-176.64	-2,376.5	411.0	3,294.2	3,277.6	16.64	197.993	
6,053.2	5,961.4	5,923.0	5,921.9	21.3	2.2	-176.64	-2,377.0	410.2	3,304.8	3,288.0	16.78	196.899	
6,100.0	6,007.3	5,968.3	5,967.1	21.4	2.2	-176.64	-2,377.5	409.2	3,314.4	3,297.6	16.86	196.530	
6,102.3	6,009.6	5,970.5	5,969.4	21.5	2.2	-176.64	-2,377.5	409.2	3,314.9	3,298.0	16.87	196.520	
6,200.0	6,105.7	6,048.7	6,047.5	21.8	2.2	-176.65	-2,378.5	407.6	3,332.7	3,315.7	16.99	196.118	
6,200.8	6,106.5	6,049.3	6,048.0	21.8	2.2	-176.65	-2,378.5	407.6	3,332.9	3,315.9	16.99	196.115	
6,299.2	6,203.9	6,132.7	6,131.4	22.0	2.2	-176.65	-2,380.1	406.5	3,348.2	3,331.1	17.11	195.707	
6,300.0	6,204.7	6,133.6	6,132.4	22.0	2.2	-176.65	-2,380.1	406.5	3,348.3	3,331.2	17.11	195.703	
6,397.6	6,301.8	6,245.1	6,243.8	22.3	2.3	-176.64	-2,382.1	404.8	3,360.0	3,342.8	17.22	195.168	
6,400.0	6,304.2	6,247.8	6,246.5	22.3	2.3	-176.64	-2,382.1	404.7	3,360.2	3,343.0	17.22	195.153	
6,496.0	6,400.0	6,356.3	6,355.0	22.4	2.3	-176.61	-2,383.7	402.3	3,368.1	3,350.8	17.31	194.525	
6,500.0	6,403.9	6,360.8	6,359.5	22.5	2.3	-176.61	-2,383.8	402.1	3,368.3	3,351.0	17.32	194.494	
6,594.5	6,498.3	6,453.6	6,452.3	22.6	2.4	-176.58	-2,384.9	399.9	3,372.5	3,355.1	17.41	193.718	
6,600.0	6,503.8	6,458.6	6,457.3	22.6	2.4	-176.57	-2,385.0	399.8	3,372.7	3,355.3	17.42	193.665	
6,653.0	6,556.8	6,507.4	6,506.1	22.7	2.4	169.15	-2,385.7	398.5	3,373.7	3,356.2	17.47	193.141	
6,692.9	6,596.7	6,550.2	6,548.8	22.7	2.4	169.18	-2,386.4	397.3	3,374.0	3,356.5	17.55	192.304	
6,706.0	6,609.8	6,564.1	6,562.8	22.7	2.4	169.18	-2,386.6	396.9	3,374.2	3,356.6	17.57	192.031	
6,750.0	6,653.8	6,610.9	6,609.5	22.8	2.4	-10.81	-2,387.2	395.5	3,373.2	3,355.7	17.56	192.131	
6,791.3	6,695.0	6,653.7	6,652.3	22.8	2.4	-10.85	-2,387.8	394.3	3,369.9	3,352.3	17.57	191.808	
6,800.0	6,703.6	6,662.7	6,661.3	22.8	2.4	-10.86	-2,387.9	394.0	3,368.9	3,351.3	17.58	191.679	
6,850.0	6,752.9	6,713.4	6,711.9	22.8	2.4	-10.98	-2,388.6	392.5	3,361.1	3,343.5	17.62	190.742	
6,889.7	6,791.6	6,751.8	6,750.3	22.7	2.5	-11.13	-2,389.1	391.4	3,352.5	3,334.9	17.66	189.859	
6,900.0	6,801.5	6,761.7	6,760.2	22.7	2.5	-11.17	-2,389.2	391.0	3,350.0	3,332.3	17.67	189.616	
6,950.0	6,849.1	6,810.2	6,808.7	22.6	2.5	-11.43	-2,389.9	389.5	3,335.5	3,317.8	17.70	188.496	
6,988.2	6,884.8	6,850.2	6,848.6	22.5	2.5	-11.68	-2,390.4	388.2	3,322.3	3,304.6	17.70	187.704	
7,000.0	6,895.7	6,862.4	6,860.8	22.5	2.5	-11.77	-2,390.5	387.9	3,317.8	3,300.1	17.70	187.467	
7,050.0	6,940.8	6,913.9	6,912.3	22.3	2.5	-12.22	-2,391.0	386.5	3,296.9	3,279.2	17.67	186.593	
7,086.6	6,972.8	6,952.2	6,950.6	22.1	2.5	-12.62	-2,391.3	385.7	3,279.5	3,261.9	17.63	186.038	
7,100.0	6,984.3	6,965.9	6,964.3	22.1	2.5	-12.78	-2,391.4	385.5	3,272.8	3,255.2	17.61	185.844	
7,150.0	7,025.9	7,013.5	7,011.9	21.9	2.5	-13.48	-2,391.5	384.8	3,245.7	3,228.1	17.52	185.221	
7,185.0	7,053.9	7,042.3	7,040.7	21.7	2.5	-14.05	-2,391.5	384.4	3,225.0	3,207.5	17.45	184.837	
7,200.0	7,065.6	7,054.3	7,052.7	21.7	2.6	-14.32	-2,391.5	384.2	3,215.7	3,198.3	17.41	184.661	
7,250.0	7,103.0	7,092.9	7,091.3	21.4	2.6	-15.34	-2,391.6	383.5	3,183.2	3,165.9	17.30	183.974	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,283.4	7,126.7	7,120.8	7,119.2	21.2	2.6	-16.16	-2,391.7	383.0	3,160.0	3,142.7	17.24	183.278		
7,300.0	7,138.0	7,134.8	7,133.2	21.2	2.6	-16.61	-2,391.7	382.8	3,148.1	3,130.9	17.22	182.839		
7,350.0	7,170.5	7,174.7	7,173.1	20.9	2.6	-18.20	-2,391.6	382.2	3,110.7	3,093.5	17.18	181.023		
7,381.9	7,189.8	7,198.2	7,196.6	20.8	2.6	-19.41	-2,391.5	381.8	3,085.6	3,068.4	17.20	179.351		
7,400.0	7,200.2	7,200.0	7,198.4	20.7	2.6	-20.09	-2,391.5	381.8	3,071.1	3,053.9	17.21	178.434		
7,450.0	7,227.0	7,226.5	7,224.9	20.4	2.6	-22.50	-2,391.4	381.5	3,029.6	3,012.2	17.37	174.414		
7,480.3	7,241.9	7,237.5	7,235.9	20.3	2.6	-24.23	-2,391.3	381.3	3,003.7	2,986.1	17.54	171.272		
7,500.0	7,250.9	7,244.3	7,242.7	20.2	2.6	-25.50	-2,391.3	381.2	2,986.5	2,968.8	17.68	168.914		
7,550.0	7,271.6	7,259.8	7,258.2	20.0	2.6	-29.38	-2,391.4	381.0	2,942.0	2,923.8	18.20	161.688		
7,578.7	7,282.0	7,267.7	7,266.1	19.9	2.6	-32.15	-2,391.4	380.9	2,915.8	2,897.2	18.59	156.807		
7,600.0	7,289.1	7,273.1	7,271.5	19.8	2.6	-34.52	-2,391.4	380.8	2,896.2	2,877.2	18.93	152.968		
7,650.0	7,303.3	7,284.0	7,282.3	19.6	2.6	-41.43	-2,391.4	380.7	2,849.4	2,829.5	19.87	143.431		
7,677.1	7,309.5	7,300.0	7,298.4	19.5	2.6	-46.68	-2,391.5	380.4	2,823.6	2,803.2	20.48	137.883		
7,700.0	7,314.1	7,300.0	7,298.4	19.5	2.6	-51.21	-2,391.5	380.4	2,801.8	2,780.9	20.90	134.067		
7,750.0	7,321.4	7,300.0	7,298.4	19.4	2.6	-63.41	-2,391.5	380.4	2,753.6	2,732.0	21.59	127.512		
7,775.6	7,323.9	7,300.0	7,298.4	19.3	2.6	-70.88	-2,391.5	380.4	2,728.8	2,707.0	21.73	125.575		
7,800.0	7,325.3	7,300.0	7,298.4	19.3	2.6	-78.65	-2,391.5	380.4	2,705.0	2,683.3	21.70	124.673		
7,832.0	7,326.0	7,302.5	7,300.9	19.3	2.6	-89.58	-2,391.5	380.4	2,673.9	2,652.3	21.64	123.559		
7,874.0	7,325.9	7,302.7	7,301.1	19.3	2.6	-89.60	-2,391.5	380.4	2,633.0	2,611.4	21.69	121.396		
7,900.0	7,325.9	7,302.8	7,301.2	19.3	2.6	-89.61	-2,391.5	380.4	2,607.8	2,586.1	21.72	120.065		
7,972.4	7,325.8	7,303.1	7,301.5	19.4	2.6	-89.64	-2,391.5	380.4	2,537.5	2,515.5	21.92	115.765		
8,000.0	7,325.8	7,303.3	7,301.7	19.5	2.6	-89.66	-2,391.5	380.4	2,510.7	2,488.7	21.99	114.150		
8,070.8	7,325.7	7,303.6	7,302.0	19.8	2.6	-89.69	-2,391.5	380.4	2,442.1	2,419.8	22.32	109.417		
8,100.0	7,325.6	7,303.7	7,302.1	19.9	2.6	-89.70	-2,391.5	380.4	2,413.9	2,391.5	22.45	107.511		
8,169.3	7,325.5	7,304.1	7,302.4	20.3	2.6	-89.73	-2,391.5	380.4	2,347.0	2,324.1	22.89	102.545		
8,200.0	7,325.5	7,304.2	7,302.6	20.5	2.6	-89.75	-2,391.5	380.4	2,317.4	2,294.3	23.08	100.404		
8,267.7	7,325.4	7,304.5	7,302.9	21.1	2.6	-89.78	-2,391.5	380.4	2,252.2	2,228.6	23.61	95.389		
8,300.0	7,325.3	7,304.7	7,303.1	21.3	2.6	-89.79	-2,391.6	380.4	2,221.1	2,197.3	23.86	93.077		
8,366.1	7,325.2	7,305.0	7,303.4	21.9	2.6	-89.82	-2,391.6	380.4	2,157.7	2,133.2	24.47	88.166		
8,400.0	7,325.2	7,305.1	7,303.5	22.3	2.6	-89.83	-2,391.6	380.4	2,125.2	2,100.5	24.79	85.746		
8,464.5	7,325.1	7,305.4	7,303.8	22.9	2.6	-89.86	-2,391.6	380.4	2,063.6	2,038.1	25.46	81.053		
8,500.0	7,325.1	7,305.6	7,304.0	23.3	2.6	-89.88	-2,391.6	380.4	2,029.8	2,003.9	25.83	78.583		
8,563.0	7,325.0	7,305.9	7,304.3	24.0	2.6	-89.91	-2,391.6	380.3	1,969.9	1,943.3	26.55	74.183		
8,600.0	7,324.9	7,306.1	7,304.5	24.5	2.6	-89.92	-2,391.6	380.3	1,934.7	1,907.7	26.98	71.709		
8,661.4	7,324.8	7,306.4	7,304.8	25.2	2.6	-89.95	-2,391.6	380.3	1,876.6	1,848.9	27.74	67.642		
8,700.0	7,324.8	7,306.6	7,304.9	25.7	2.6	-89.97	-2,391.6	380.3	1,840.2	1,812.0	28.22	65.202		
8,759.8	7,324.7	7,306.8	7,305.2	26.5	2.6	-89.99	-2,391.6	380.3	1,784.0	1,754.9	29.01	61.485		
8,800.0	7,324.6	7,307.0	7,305.4	27.1	2.6	-90.01	-2,391.6	380.3	1,746.3	1,716.8	29.55	59.105		
8,858.2	7,324.5	7,307.3	7,305.7	27.9	2.6	-90.04	-2,391.6	380.3	1,691.9	1,661.6	30.36	55.737		
8,900.0	7,324.5	7,307.5	7,305.9	28.4	2.6	-90.06	-2,391.6	380.3	1,653.1	1,622.2	30.94	53.436		
8,956.7	7,324.4	7,307.8	7,306.2	29.3	2.6	-90.08	-2,391.6	380.3	1,600.7	1,568.9	31.76	50.402		
9,000.0	7,324.3	7,308.0	7,306.4	29.9	2.6	-90.10	-2,391.6	380.3	1,560.8	1,528.4	32.39	48.192		
9,055.1	7,324.3	7,308.2	7,306.6	30.7	2.6	-90.13	-2,391.6	380.3	1,510.3	1,477.1	33.21	45.473		
9,100.0	7,324.2	7,308.5	7,306.8	31.4	2.6	-90.15	-2,391.6	380.3	1,469.5	1,435.6	33.89	43.363		
9,153.5	7,324.1	7,308.7	7,307.1	32.2	2.6	-90.17	-2,391.6	380.3	1,421.1	1,386.3	34.71	40.936		
9,200.0	7,324.0	7,308.9	7,307.3	33.0	2.6	-90.19	-2,391.6	380.3	1,379.3	1,343.9	35.43	38.929		
9,251.9	7,324.0	7,309.2	7,307.6	33.8	2.6	-90.22	-2,391.6	380.3	1,333.1	1,296.8	36.25	36.771		
9,300.0	7,323.9	7,309.4	7,307.8	34.5	2.6	-90.24	-2,391.6	380.3	1,290.7	1,253.6	37.01	34.870		
9,350.4	7,323.8	7,309.7	7,308.0	35.4	2.6	-90.26	-2,391.6	380.3	1,246.6	1,208.8	37.83	32.956		
9,400.0	7,323.7	7,309.9	7,308.3	36.2	2.6	-90.28	-2,391.6	380.3	1,203.8	1,165.1	38.63	31.162		
9,448.8	7,323.7	7,310.1	7,308.5	37.0	2.6	-90.30	-2,391.6	380.3	1,162.1	1,122.7	39.43	29.472		
9,500.0	7,323.6	7,310.4	7,308.8	37.8	2.6	-90.33	-2,391.6	380.3	1,119.0	1,078.8	40.27	27.787		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	7,323.5	7,310.6	7,309.0	38.6	2.6	-90.35	-2,391.6	380.3	1,080.0	1,038.9	41.06	26.301	
9,600.0	7,323.5	7,310.9	7,309.2	39.5	2.6	-90.37	-2,391.6	380.3	1,037.1	995.1	41.94	24.726	
9,645.6	7,323.4	7,311.1	7,309.5	40.2	2.6	-90.39	-2,391.6	380.3	1,000.7	958.0	42.71	23.429	
9,700.0	7,323.3	7,311.3	7,309.7	41.2	2.6	-90.42	-2,391.6	380.3	958.5	914.9	43.63	21.968	
9,744.1	7,323.2	7,311.6	7,309.9	41.9	2.6	-90.44	-2,391.6	380.3	925.2	880.8	44.39	20.844	
9,800.0	7,323.2	7,311.8	7,310.2	42.9	2.6	-90.46	-2,391.6	380.3	884.3	838.9	45.34	19.502	
9,842.5	7,323.1	7,312.0	7,310.4	43.6	2.6	-90.48	-2,391.6	380.3	854.3	808.3	46.08	18.542	
9,900.0	7,323.0	7,312.3	7,310.7	44.6	2.6	-90.51	-2,391.6	380.3	815.6	768.5	47.07	17.327	
9,940.9	7,322.9	7,312.5	7,310.9	45.3	2.6	-90.53	-2,391.6	380.3	789.4	741.6	47.78	16.521	
10,000.0	7,322.9	7,312.8	7,311.2	46.3	2.6	-90.56	-2,391.6	380.3	753.9	705.1	48.81	15.446	
10,039.3	7,322.8	7,313.0	7,311.4	47.0	2.6	-90.57	-2,391.6	380.3	732.0	682.5	49.50	14.787	
10,100.0	7,322.7	7,313.3	7,311.7	48.1	2.6	-90.60	-2,391.6	380.2	701.2	650.6	50.57	13.866	
10,137.8	7,322.6	7,313.5	7,311.9	48.8	2.6	-90.62	-2,391.6	380.2	684.0	632.8	51.24	13.350	
10,200.0	7,322.6	7,313.8	7,312.2	49.9	2.6	-90.65	-2,391.6	380.2	659.5	607.1	52.34	12.600	
10,236.2	7,322.5	7,314.0	7,312.3	50.5	2.6	-90.66	-2,391.6	380.2	647.5	594.5	52.98	12.221	
10,300.0	7,322.4	7,314.3	7,312.7	51.6	2.6	-90.69	-2,391.6	380.2	631.0	576.8	54.12	11.659	
10,334.6	7,322.4	7,314.4	7,312.8	52.3	2.6	-90.71	-2,391.6	380.2	624.5	569.8	54.74	11.410	
10,400.0	7,322.3	7,314.8	7,313.1	53.4	2.6	-90.74	-2,391.6	380.2	617.5	561.6	55.90	11.046	
10,433.0	7,322.2	7,314.9	7,313.3	54.0	2.6	-90.75	-2,391.6	380.2	616.6	560.1	56.50	10.913	
10,433.9	7,322.2	7,314.9	7,313.3	54.0	2.6	-90.75	-2,391.6	380.2	616.6	560.1	56.51	10.911 CC, ES	
10,500.0	7,322.1	7,315.3	7,313.6	55.2	2.6	-90.78	-2,391.6	380.2	620.1	562.4	57.70	10.747	
10,531.5	7,322.1	7,315.4	7,313.8	55.8	2.6	-90.80	-2,391.6	380.2	624.3	566.0	58.27	10.713 SF	
10,600.0	7,321.9	7,315.8	7,314.1	57.0	2.6	-90.83	-2,391.6	380.2	638.6	579.1	59.51	10.731	
10,629.9	7,321.9	7,315.9	7,314.3	57.6	2.6	-90.84	-2,391.6	380.2	647.0	587.0	60.05	10.774	
10,700.0	7,321.8	7,316.3	7,314.6	58.8	2.6	-90.88	-2,391.6	380.2	671.6	610.3	61.32	10.952	
10,728.3	7,321.8	7,316.4	7,314.8	59.4	2.6	-90.89	-2,391.6	380.2	683.3	621.5	61.84	11.050	
10,800.0	7,321.6	7,316.8	7,315.1	60.7	2.6	-90.92	-2,391.6	380.2	717.1	654.0	63.14	11.357	
10,826.7	7,321.6	7,316.9	7,315.3	61.1	2.6	-90.94	-2,391.6	380.2	731.1	667.5	63.63	11.491	
10,900.0	7,321.5	7,317.3	7,315.6	62.5	2.6	-90.97	-2,391.6	380.2	773.0	708.0	64.97	11.898	
10,925.2	7,321.4	7,317.4	7,315.8	62.9	2.6	-90.98	-2,391.6	380.2	788.4	723.0	65.43	12.050	
11,000.0	7,321.3	7,317.8	7,316.1	64.3	2.6	-91.02	-2,391.6	380.2	837.1	770.3	66.80	12.532	
11,023.6	7,321.3	7,317.9	7,316.3	64.7	2.6	-91.03	-2,391.6	380.2	853.2	786.0	67.23	12.691	
11,100.0	7,321.2	7,318.3	7,316.6	66.1	2.6	-91.06	-2,391.6	380.2	907.7	839.1	68.63	13.225	
11,122.0	7,321.1	7,318.4	7,316.7	66.5	2.6	-91.07	-2,391.6	380.2	924.0	854.9	69.04	13.384	
11,200.0	7,321.0	7,318.8	7,317.1	68.0	2.6	-91.11	-2,391.6	380.2	983.4	913.0	70.47	13.955	
11,220.4	7,321.0	7,318.9	7,317.2	68.4	2.6	-91.12	-2,391.6	380.2	999.4	928.6	70.85	14.106	
11,300.0	7,320.9	7,319.3	7,317.6	69.8	2.6	-91.15	-2,391.6	380.2	1,063.2	990.9	72.32	14.702	
11,318.9	7,320.8	7,319.4	7,317.7	70.2	2.6	-91.16	-2,391.6	380.2	1,078.6	1,006.0	72.67	14.843	
11,400.0	7,320.7	7,319.8	7,318.2	71.7	2.6	-91.20	-2,391.7	380.2	1,146.1	1,072.0	74.17	15.453	
11,417.3	7,320.7	7,319.9	7,318.2	72.0	2.6	-91.21	-2,391.7	380.2	1,160.7	1,086.3	74.49	15.583	
11,500.0	7,320.6	7,320.3	7,318.7	73.5	2.6	-91.25	-2,391.7	380.2	1,231.6	1,155.6	76.02	16.201	
11,515.7	7,320.5	7,320.4	7,318.7	73.8	2.6	-91.26	-2,391.7	380.2	1,245.2	1,168.9	76.31	16.318	
11,600.0	7,320.4	7,320.8	7,319.2	75.4	2.6	-91.29	-2,391.7	380.1	1,319.1	1,241.2	77.87	16.939	
11,614.1	7,320.4	7,320.9	7,319.2	75.6	2.6	-91.30	-2,391.7	380.1	1,331.6	1,253.5	78.14	17.042	
11,700.0	7,320.2	7,321.3	7,319.7	77.2	2.6	-91.34	-2,391.7	380.1	1,408.3	1,328.5	79.73	17.663	
11,712.6	7,320.2	7,321.4	7,319.7	77.5	2.6	-91.35	-2,391.7	380.1	1,419.6	1,339.6	79.97	17.752	
11,800.0	7,320.1	7,321.8	7,320.2	79.1	2.6	-91.39	-2,391.7	380.1	1,498.8	1,417.2	81.59	18.369	
11,811.0	7,320.1	7,321.9	7,320.2	79.3	2.6	-91.39	-2,391.7	380.1	1,508.9	1,427.1	81.76	18.456	
11,849.2	7,320.0	7,322.1	7,320.4	79.8	2.6	-91.41	-2,391.7	380.1	1,543.8	1,461.5	82.32	18.754	
11,849.6	7,320.0	7,322.1	7,320.4	79.8	2.6	-91.41	-2,391.7	380.1	1,544.2	1,461.8	82.33	18.757	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	91.41	-0.4	14.8	14.8				
98.4	98.4	98.4	98.4	0.1	0.1	91.41	-0.4	14.8	14.8	14.6	0.17	87.034	
100.0	100.0	100.0	100.0	0.1	0.1	91.41	-0.4	14.8	14.8	14.6	0.17	85.459	
196.8	196.8	196.8	196.8	0.3	0.3	91.41	-0.4	14.8	14.8	14.2	0.61	24.309	
200.0	200.0	200.0	200.0	0.3	0.3	91.41	-0.4	14.8	14.8	14.2	0.62	23.756	
295.3	295.3	295.3	295.3	0.5	0.5	91.41	-0.4	14.8	14.8	13.7	1.05	14.074	
300.0	300.0	300.0	300.0	0.5	0.5	91.41	-0.4	14.8	14.8	13.7	1.07	13.795	
393.7	393.7	393.7	393.7	0.7	0.7	91.41	-0.4	14.8	14.8	13.3	1.49	9.904	
400.0	400.0	400.0	400.0	0.8	0.8	91.41	-0.4	14.8	14.8	13.3	1.52	9.720	
492.1	492.1	492.1	492.1	1.0	1.0	91.41	-0.4	14.8	14.8	12.9	1.94	7.640	
500.0	500.0	500.0	500.0	1.0	1.0	91.41	-0.4	14.8	14.8	12.8	1.97	7.503	
590.5	590.5	590.5	590.5	1.2	1.2	91.41	-0.4	14.8	14.8	12.4	2.38	6.219	
600.0	600.0	600.0	600.0	1.2	1.2	91.41	-0.4	14.8	14.8	12.4	2.42	6.110	
689.0	689.0	689.0	689.0	1.4	1.4	91.41	-0.4	14.8	14.8	12.0	2.82	5.243	
700.0	700.0	700.0	700.0	1.4	1.4	91.41	-0.4	14.8	14.8	11.9	2.87	5.153	
787.4	787.4	787.4	787.4	1.6	1.6	91.41	-0.4	14.8	14.8	11.5	3.26	4.533	
800.0	800.0	800.0	800.0	1.7	1.7	91.41	-0.4	14.8	14.8	11.5	3.32	4.455	
885.8	885.8	885.8	885.8	1.9	1.9	91.41	-0.4	14.8	14.8	11.1	3.71	3.991	
900.0	900.0	900.0	900.0	1.9	1.9	91.41	-0.4	14.8	14.8	11.0	3.77	3.924	
984.2	984.2	984.2	984.2	2.1	2.1	91.41	-0.4	14.8	14.8	10.6	4.15	3.566	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	91.41	-0.4	14.8	14.8	10.6	4.22	3.506	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	91.41	-0.4	14.8	14.8	10.2	4.59	3.222	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	91.41	-0.4	14.8	14.8	10.1	4.67	3.168	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	91.41	-0.4	14.8	14.8	9.8	5.03	2.939	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	91.41	-0.4	14.8	14.8	9.7	5.12	2.890	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	91.41	-0.4	14.8	14.8	9.3	5.48	2.701	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	91.41	-0.4	14.8	14.8	9.2	5.57	2.657	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	91.41	-0.4	14.8	14.8	8.9	5.92	2.499	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	91.41	-0.4	14.8	14.8	8.8	6.02	2.458	
1,450.0	1,450.0	1,450.0	1,450.0	3.1	3.1	91.41	-0.4	14.8	14.8	8.5	6.24	2.370 CC	
1,476.4	1,476.4	1,476.4	1,476.4	3.2	3.2	106.16	-0.4	14.8	14.8	8.5	6.36	2.331	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	107.32	-0.4	14.8	14.9	8.4	6.47	2.307 ES, SF	
1,574.8	1,574.8	1,574.8	1,574.8	3.4	3.4	115.25	-0.4	14.8	15.7	8.9	6.80	2.316	
1,600.0	1,599.9	1,599.9	1,599.9	3.5	3.5	119.08	-0.4	14.8	16.3	9.4	6.91	2.358	
1,673.2	1,673.0	1,673.0	1,673.0	3.6	3.6	131.64	-0.4	14.8	19.1	11.8	7.23	2.637	
1,700.0	1,699.7	1,699.7	1,699.7	3.7	3.7	136.20	-0.4	14.8	20.6	13.3	7.35	2.804	
1,771.6	1,771.0	1,771.0	1,771.0	3.9	3.8	146.97	-0.4	14.8	26.2	18.6	7.66	3.425	
1,800.0	1,799.1	1,799.1	1,799.1	3.9	3.9	150.50	-0.4	14.8	29.1	21.3	7.78	3.738	
1,870.1	1,868.6	1,868.6	1,868.6	4.1	4.1	157.50	-0.4	14.8	37.6	29.5	8.08	4.650	
1,900.0	1,898.2	1,898.2	1,898.2	4.2	4.1	159.84	-0.4	14.8	41.8	33.6	8.20	5.095	
1,968.5	1,965.7	1,965.7	1,965.7	4.3	4.3	164.10	-0.4	14.8	52.8	44.3	8.48	6.219	
2,000.0	1,996.6	1,996.6	1,996.6	4.4	4.3	165.64	-0.4	14.8	58.4	49.8	8.61	6.783	
2,049.8	2,045.4	2,045.4	2,045.4	4.6	4.5	167.66	-0.4	14.8	68.1	59.3	8.81	7.726	
2,066.9	2,062.2	2,062.2	2,062.2	4.6	4.5	168.27	-0.4	14.8	71.6	62.7	8.89	8.052	
2,100.0	2,094.5	2,094.5	2,094.5	4.7	4.6	169.29	-0.4	14.8	78.3	69.3	9.03	8.667	
2,165.3	2,158.5	2,158.7	2,158.7	4.9	4.7	170.87	-0.4	14.8	91.7	82.3	9.33	9.826	
2,200.0	2,192.3	2,193.7	2,193.7	5.1	4.8	171.48	0.0	14.8	98.5	89.0	9.49	10.384	
2,263.8	2,254.7	2,258.6	2,258.6	5.3	4.9	172.18	1.7	14.8	110.1	100.3	9.78	11.260	
2,300.0	2,290.2	2,295.7	2,295.7	5.4	5.0	172.40	3.3	14.8	116.1	106.2	9.95	11.671	
2,362.2	2,351.0	2,359.7	2,359.5	5.6	5.2	172.52	7.3	14.8	125.4	115.2	10.24	12.248	
2,400.0	2,388.0	2,398.8	2,398.5	5.8	5.3	172.47	10.4	14.8	130.4	120.0	10.42	12.522	
2,460.6	2,447.3	2,461.7	2,461.1	6.0	5.4	172.23	16.6	14.9	137.5	126.8	10.70	12.844	

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 OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,485.8	2,502.7	2,501.9	6.1	5.5	171.97	21.3	14.9	141.4	130.5	10.89	12.983	
2,559.0	2,543.6	2,564.4	2,563.0	6.3	5.6	171.43	29.6	14.9	146.4	135.2	11.18	13.091	
2,600.0	2,583.6	2,607.3	2,605.4	6.5	5.7	170.96	36.1	14.9	149.1	137.7	11.38	13.101	
2,657.5	2,639.8	2,667.6	2,664.8	6.7	5.9	170.17	46.3	15.0	152.0	140.4	11.67	13.029	
2,700.0	2,681.4	2,712.2	2,708.6	6.9	6.0	169.47	54.6	15.0	153.5	141.6	11.88	12.917	
2,755.9	2,736.1	2,770.9	2,766.0	7.1	6.2	168.41	66.7	15.1	154.6	142.4	12.18	12.696	
2,800.0	2,779.2	2,817.1	2,811.1	7.3	6.3	167.44	77.0	15.1	154.7	142.3	12.41	12.468	
2,854.3	2,832.4	2,874.1	2,866.4	7.5	6.5	166.07	90.7	15.2	154.1	141.4	12.71	12.128	
2,900.0	2,877.1	2,920.3	2,911.1	7.7	6.6	164.83	102.4	15.2	153.1	140.1	12.96	11.812	
2,952.7	2,928.7	2,972.9	2,962.0	7.9	6.8	163.40	115.8	15.3	151.9	138.7	13.26	11.458	
3,000.0	2,974.9	3,020.0	3,007.5	8.1	7.0	162.09	127.8	15.3	151.0	137.5	13.54	11.154	
3,051.2	3,024.9	3,071.1	3,056.9	8.3	7.2	160.67	140.9	15.4	150.1	136.2	13.85	10.838	
3,100.0	3,072.7	3,119.7	3,104.0	8.5	7.3	159.29	153.3	15.4	149.3	135.1	14.15	10.549	
3,149.6	3,121.2	3,169.2	3,151.8	8.7	7.5	157.87	165.9	15.5	148.6	134.1	14.47	10.265	
3,200.0	3,170.5	3,219.5	3,200.4	8.9	7.7	156.42	178.7	15.5	148.0	133.1	14.81	9.990	
3,248.0	3,217.5	3,267.3	3,246.7	9.1	7.9	155.03	190.9	15.6	147.4	132.3	15.14	9.737	
3,300.0	3,268.3	3,319.2	3,296.8	9.3	8.1	153.51	204.1	15.7	147.0	131.5	15.51	9.476	
3,346.4	3,313.8	3,365.5	3,341.6	9.5	8.3	152.14	215.9	15.7	146.7	130.8	15.85	9.251	
3,400.0	3,366.1	3,418.9	3,393.2	9.7	8.5	150.56	229.6	15.8	146.4	130.1	16.26	9.004	
3,444.9	3,410.0	3,463.6	3,436.5	9.9	8.7	149.24	241.0	15.8	146.3	129.7	16.61	8.805	
3,498.1	3,462.1	3,516.7	3,487.8	10.2	8.9	147.66	254.5	15.9	146.2	129.2	17.04	8.580	
3,500.0	3,464.0	3,518.6	3,489.6	10.2	9.0	147.61	255.0	15.9	146.2	129.2	17.06	8.572	
3,543.3	3,506.3	3,561.8	3,531.4	10.3	9.1	146.33	266.0	15.9	146.3	128.8	17.42	8.398	
3,600.0	3,561.8	3,618.3	3,586.0	10.6	9.4	144.65	280.4	16.0	146.4	128.5	17.90	8.181	
3,641.7	3,602.6	3,659.9	3,626.3	10.8	9.6	143.42	291.0	16.0	146.6	128.4	18.26	8.028	
3,700.0	3,659.6	3,718.0	3,682.4	11.0	9.8	141.71	305.9	16.1	147.0	128.2	18.78	7.827	
3,740.1	3,698.9	3,758.1	3,721.2	11.2	10.0	140.53	316.1	16.1	147.4	128.2	19.15	7.695	
3,800.0	3,757.4	3,817.7	3,778.9	11.4	10.3	138.80	331.3	16.2	148.0	128.3	19.71	7.509	
3,838.6	3,795.1	3,856.2	3,816.0	11.6	10.5	137.69	341.1	16.2	148.5	128.4	20.08	7.396	
3,900.0	3,855.2	3,917.5	3,875.3	11.9	10.7	135.93	356.7	16.3	149.4	128.7	20.67	7.226	
3,937.0	3,891.4	3,954.3	3,910.9	12.0	10.9	134.89	366.1	16.3	150.0	128.9	21.03	7.130	
4,000.0	3,953.0	4,017.2	3,971.7	12.3	11.2	133.13	382.1	16.4	151.1	129.4	21.66	6.976	
4,035.4	3,987.7	4,052.5	4,005.8	12.4	11.4	132.15	391.1	16.4	151.8	129.8	22.01	6.895	
4,100.0	4,050.9	4,116.9	4,068.1	12.7	11.7	130.39	407.6	16.5	153.2	130.5	22.67	6.757	
4,133.8	4,084.0	4,150.6	4,100.7	12.9	11.8	129.48	416.2	16.6	153.9	130.9	23.02	6.689	
4,200.0	4,148.7	4,216.6	4,164.5	13.2	12.1	127.73	433.0	16.6	155.6	131.9	23.70	6.565	
4,232.3	4,180.2	4,248.8	4,195.6	13.3	12.3	126.89	441.2	16.7	156.4	132.4	24.03	6.509	
4,300.0	4,246.5	4,316.3	4,260.9	13.6	12.6	125.16	458.4	16.7	158.3	133.6	24.74	6.400	
4,330.7	4,276.5	4,346.9	4,290.5	13.7	12.8	124.39	466.2	16.8	159.2	134.2	25.06	6.354	
4,400.0	4,344.3	4,416.0	4,357.3	14.0	13.1	122.68	483.9	16.8	161.4	135.6	25.79	6.258	
4,429.1	4,372.8	4,445.1	4,385.4	14.1	13.2	121.97	491.3	16.9	162.3	136.2	26.10	6.220	
4,500.0	4,442.1	4,515.7	4,453.8	14.5	13.6	120.30	509.3	17.0	164.7	137.9	26.85	6.137	
4,527.5	4,469.1	4,543.2	4,480.3	14.6	13.7	119.66	516.3	17.0	165.7	138.6	27.14	6.107	
4,600.0	4,539.9	4,615.4	4,550.2	14.9	14.1	118.01	534.7	17.1	168.4	140.5	27.90	6.035	
4,626.0	4,565.4	4,641.3	4,575.2	15.0	14.2	117.43	541.3	17.1	169.4	141.2	28.17	6.011	
4,700.0	4,637.8	4,715.2	4,646.6	15.3	14.5	115.82	560.2	17.2	172.3	143.3	28.95	5.950	
4,724.4	4,661.6	4,739.5	4,670.1	15.4	14.7	115.31	566.4	17.2	173.2	144.0	29.21	5.931	
4,800.0	4,735.6	4,814.9	4,743.0	15.8	15.0	113.74	585.6	17.3	176.4	146.4	30.00	5.880	
4,822.8	4,757.9	4,837.6	4,765.0	15.9	15.1	113.27	591.4	17.3	177.3	147.1	30.23	5.866	
4,900.0	4,833.4	4,914.6	4,839.4	16.2	15.5	111.75	611.0	17.4	180.7	149.7	31.04	5.823	
4,921.2	4,854.2	4,935.8	4,859.9	16.3	15.6	111.34	616.4	17.4	181.7	150.4	31.25	5.813	
5,000.0	4,931.2	5,014.3	4,935.8	16.6	16.0	109.85	636.4	17.5	185.3	153.2	32.07	5.778	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,950.5	5,033.9	4,954.8	16.7	16.1	109.49	641.4	17.5	186.2	153.9	32.27	5.770	
5,100.0	5,029.0	5,114.0	5,032.3	17.1	16.5	108.05	661.9	17.6	190.0	156.9	33.09	5.743	
5,118.1	5,046.7	5,132.0	5,049.7	17.1	16.6	107.73	666.5	17.6	190.9	157.6	33.27	5.738	
5,200.0	5,126.8	5,213.7	5,128.7	17.5	17.0	106.34	687.3	17.7	194.9	160.9	34.10	5.717	
5,216.5	5,143.0	5,230.2	5,144.6	17.6	17.1	106.06	691.5	17.7	195.8	161.5	34.26	5.714	
5,300.0	5,224.7	5,313.4	5,225.1	17.9	17.5	104.71	712.7	17.8	200.0	164.9	35.10	5.699	
5,314.9	5,239.3	5,328.3	5,239.5	18.0	17.6	104.47	716.5	17.8	200.8	165.6	35.25	5.697	
5,400.0	5,322.5	5,413.1	5,321.5	18.4	18.0	103.16	738.2	17.9	205.3	169.2	36.09	5.688	
5,413.4	5,335.6	5,426.5	5,334.4	18.4	18.1	102.96	741.6	17.9	206.0	169.8	36.22	5.687	
5,500.0	5,420.3	5,512.9	5,417.9	18.8	18.5	101.70	763.6	18.0	210.7	173.6	37.07	5.683	
5,511.8	5,431.8	5,524.6	5,429.3	18.9	18.6	101.53	766.6	18.0	211.3	174.1	37.19	5.683	
5,600.0	5,518.1	5,612.6	5,514.3	19.3	19.0	100.30	789.0	18.1	216.2	178.1	38.04	5.683	
5,610.2	5,528.1	5,622.8	5,524.2	19.3	19.1	100.16	791.6	18.1	216.8	178.6	38.14	5.683	
5,700.0	5,615.9	5,712.3	5,610.7	19.7	19.5	98.98	814.4	18.2	221.8	182.8	39.01	5.687	
5,708.6	5,624.4	5,720.9	5,619.1	19.7	19.6	98.87	816.6	18.3	222.3	183.2	39.09	5.688	
5,800.0	5,713.7	5,812.6	5,707.9	20.1	20.0	97.91	839.3	18.4	227.5	187.6	39.91	5.700	
5,807.1	5,720.7	5,819.7	5,714.9	20.2	20.0	97.86	840.9	18.4	227.9	187.9	39.97	5.702	
5,900.0	5,811.6	5,913.3	5,806.3	20.6	20.3	97.70	861.0	18.4	232.8	192.1	40.71	5.720	
5,905.5	5,816.9	5,918.9	5,811.8	20.6	20.3	97.72	862.1	18.4	233.1	192.4	40.75	5.721	
6,000.0	5,909.4	6,014.1	5,905.4	21.0	20.6	98.35	879.2	18.5	237.8	196.3	41.46	5.736	
6,003.9	5,913.2	6,018.0	5,909.3	21.0	20.7	98.40	879.8	18.5	238.0	196.5	41.49	5.736	
6,053.2	5,961.4	6,067.6	5,958.3	21.3	20.8	99.03	887.4	18.6	240.3	198.5	41.84	5.744	
6,100.0	6,007.3	6,114.6	6,004.8	21.4	20.9	99.76	893.9	18.6	242.4	200.3	42.13	5.754	
6,102.3	6,009.6	6,116.9	6,007.1	21.5	20.9	99.80	894.2	18.6	242.5	200.4	42.15	5.755	
6,200.0	6,105.7	6,214.9	6,104.5	21.8	21.2	101.28	905.0	18.6	246.4	203.8	42.65	5.777	
6,200.8	6,106.5	6,215.7	6,105.3	21.8	21.2	101.29	905.1	18.6	246.4	203.8	42.66	5.777	
6,299.2	6,203.9	6,314.2	6,203.5	22.0	21.4	102.74	912.7	18.7	249.7	206.6	43.08	5.795	
6,300.0	6,204.7	6,315.0	6,204.3	22.0	21.4	102.75	912.7	18.7	249.7	206.6	43.08	5.796	
6,397.6	6,301.8	6,412.6	6,301.8	22.3	21.5	104.16	916.8	18.7	252.2	208.8	43.41	5.809	
6,400.0	6,304.2	6,414.9	6,304.1	22.3	21.6	104.19	916.9	18.7	252.2	208.8	43.42	5.809	
6,496.0	6,400.0	6,510.8	6,400.0	22.4	21.7	105.53	917.7	18.7	254.0	210.3	43.66	5.817	
6,500.0	6,403.9	6,514.6	6,403.8	22.5	21.7	105.58	917.7	18.7	254.0	210.4	43.67	5.817	
6,594.5	6,498.3	6,607.4	6,496.3	22.6	21.7	107.69	911.7	18.7	255.3	211.6	43.72	5.840	
6,600.0	6,503.8	6,612.7	6,501.6	22.6	21.7	107.87	911.0	18.7	255.4	211.7	43.71	5.842	
6,653.0	6,556.8	6,663.4	6,551.5	22.7	21.7	95.64	902.3	18.7	256.3	212.7	43.57	5.882	
6,692.9	6,596.7	6,700.0	6,587.1	22.7	21.6	97.51	893.9	18.7	257.4	214.0	43.40	5.931	
6,706.0	6,609.8	6,712.6	6,599.3	22.7	21.6	98.25	890.5	18.7	257.9	214.6	43.31	5.954	
6,750.0	6,653.8	6,752.6	6,637.4	22.8	21.5	-79.23	878.6	18.7	259.9	216.9	42.98	6.046	
6,791.3	6,695.0	6,789.5	6,672.0	22.8	21.4	-76.94	865.6	18.7	262.2	219.6	42.59	6.157	
6,800.0	6,703.6	6,797.2	6,679.1	22.8	21.4	-76.47	862.7	18.7	262.8	220.3	42.51	6.182	
6,850.0	6,752.9	6,841.3	6,719.2	22.8	21.3	-73.84	844.5	18.7	266.2	224.2	41.94	6.346	
6,889.7	6,791.6	6,875.8	6,749.9	22.7	21.1	-71.85	828.6	18.7	269.2	227.7	41.43	6.497	
6,900.0	6,801.5	6,884.7	6,757.6	22.7	21.1	-71.35	824.2	18.7	270.0	228.7	41.29	6.538	
6,950.0	6,849.1	6,927.6	6,794.3	22.6	20.9	-69.00	801.9	18.7	274.1	233.6	40.58	6.756	
6,988.2	6,884.8	6,960.0	6,821.0	22.5	20.8	-67.31	783.7	18.7	277.5	237.5	39.99	6.939	
7,000.0	6,895.7	6,970.0	6,829.1	22.5	20.7	-66.80	777.8	18.7	278.5	238.7	39.80	6.998	
7,050.0	6,940.8	7,011.9	6,862.1	22.3	20.5	-64.76	751.9	18.7	283.1	244.1	38.98	7.262	
7,086.6	6,972.8	7,042.3	6,885.0	22.1	20.4	-63.37	732.0	18.7	286.5	248.1	38.36	7.469	
7,100.0	6,984.3	7,050.0	6,890.7	22.1	20.3	-63.00	726.8	18.7	287.8	249.6	38.17	7.539	
7,150.0	7,025.9	7,094.5	6,922.4	21.9	20.1	-61.15	695.5	18.7	292.4	255.1	37.25	7.849	
7,185.0	7,053.9	7,123.1	6,941.7	21.7	19.9	-60.03	674.4	18.7	295.6	259.0	36.63	8.070	
7,200.0	7,065.6	7,135.2	6,949.6	21.7	19.9	-59.57	665.2	18.7	296.9	260.6	36.36	8.166	

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 OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,250.0	7,103.0	7,175.7	6,974.9	21.4	19.7	-58.14	633.7	18.7	301.4	265.9	35.48	8.493	
7,283.4	7,126.7	7,200.0	6,989.3	21.2	19.5	-57.32	614.1	18.7	304.2	269.3	34.94	8.708	
7,300.0	7,138.0	7,215.8	6,998.2	21.2	19.5	-56.85	601.0	18.7	305.6	271.0	34.63	8.824	
7,350.0	7,170.5	7,255.7	7,019.6	20.9	19.3	-55.70	567.3	18.7	309.6	275.7	33.81	9.155	
7,381.9	7,189.8	7,281.1	7,032.1	20.8	19.1	-55.04	545.3	18.7	311.9	278.6	33.33	9.360	
7,400.0	7,200.2	7,300.0	7,041.0	20.7	19.1	-54.61	528.6	18.7	313.3	280.3	33.02	9.488	
7,450.0	7,227.0	7,334.9	7,056.2	20.4	18.9	-53.81	497.1	18.7	316.6	284.2	32.38	9.777	
7,480.3	7,241.9	7,358.8	7,065.6	20.3	18.8	-53.34	475.2	18.7	318.4	286.4	32.01	9.946	
7,500.0	7,250.9	7,374.2	7,071.4	20.2	18.8	-53.06	460.9	18.7	319.5	287.7	31.80	10.049	
7,550.0	7,271.6	7,413.4	7,084.6	20.0	18.6	-52.43	424.0	18.7	322.1	290.8	31.32	10.284	
7,578.7	7,282.0	7,435.9	7,091.2	19.9	18.6	-52.12	402.6	18.7	323.3	292.2	31.10	10.396	
7,600.0	7,289.1	7,450.0	7,095.0	19.8	18.5	-51.94	388.9	18.7	324.2	293.2	30.97	10.467	
7,650.0	7,303.3	7,491.4	7,104.7	19.6	18.4	-51.52	348.7	18.7	325.8	295.1	30.74	10.599	
7,677.1	7,309.5	7,512.5	7,108.8	19.5	18.4	-51.36	327.9	18.7	326.5	295.9	30.69	10.641	
7,700.0	7,314.1	7,530.3	7,111.7	19.5	18.3	-51.25	310.4	18.7	327.0	296.4	30.66	10.665	
7,750.0	7,321.4	7,569.2	7,116.5	19.4	18.3	-51.08	271.9	18.7	327.7	297.0	30.72	10.669	
7,775.6	7,323.9	7,589.0	7,118.2	19.3	18.3	-51.04	252.1	18.7	327.9	297.1	30.80	10.645	
7,800.0	7,325.3	7,608.0	7,119.3	19.3	18.3	-51.03	233.1	18.7	327.9	297.0	30.91	10.610	
7,832.0	7,326.0	7,632.8	7,120.0	19.3	18.3	-51.06	208.3	18.7	327.8	296.7	31.10	10.542	
7,842.8	7,326.0	7,641.3	7,120.0	19.3	18.3	-51.07	199.8	18.7	327.8	296.7	31.13	10.531	
7,874.0	7,325.9	7,672.4	7,119.9	19.3	18.3	-51.06	168.8	18.7	327.8	296.6	31.23	10.496	
7,900.0	7,325.9	7,698.4	7,119.9	19.3	18.4	-51.06	142.8	18.7	327.8	296.5	31.32	10.466	
7,972.4	7,325.8	7,770.8	7,119.7	19.4	18.6	-51.05	70.3	18.7	327.9	296.1	31.75	10.327	
8,000.0	7,325.8	7,798.4	7,119.6	19.5	18.6	-51.05	42.8	18.7	327.9	296.0	31.91	10.274	
8,070.8	7,325.7	7,869.2	7,119.4	19.8	19.0	-51.04	-28.1	18.7	327.9	295.4	32.54	10.079	
8,100.0	7,325.6	7,898.4	7,119.4	19.9	19.1	-51.03	-57.2	18.7	328.0	295.2	32.79	10.001	
8,169.3	7,325.5	7,967.6	7,119.2	20.3	19.5	-51.02	-126.5	18.7	328.0	294.4	33.59	9.766	
8,200.0	7,325.5	7,998.4	7,119.1	20.5	19.7	-51.02	-157.2	18.7	328.0	294.1	33.94	9.665	
8,267.7	7,325.4	8,066.1	7,119.0	21.1	20.3	-51.01	-224.9	18.7	328.1	293.2	34.88	9.407	
8,300.0	7,325.3	8,098.4	7,118.9	21.3	20.5	-51.00	-257.2	18.7	328.1	292.8	35.32	9.288	
8,366.1	7,325.2	8,164.5	7,118.7	21.9	21.1	-50.99	-323.4	18.7	328.1	291.8	36.38	9.019	
8,400.0	7,325.2	8,198.4	7,118.6	22.3	21.5	-50.99	-357.2	18.7	328.2	291.2	36.92	8.888	
8,464.5	7,325.1	8,262.9	7,118.5	22.9	22.1	-50.98	-421.8	18.7	328.2	290.1	38.07	8.620	
8,500.0	7,325.1	8,298.4	7,118.4	23.3	22.5	-50.97	-457.2	18.7	328.2	289.5	38.71	8.480	
8,563.0	7,325.0	8,361.3	7,118.2	24.0	23.3	-50.97	-520.2	18.7	328.3	288.3	39.93	8.221	
8,600.0	7,324.9	8,398.4	7,118.1	24.5	23.7	-50.96	-557.2	18.7	328.3	287.6	40.65	8.075	
8,661.4	7,324.8	8,459.8	7,118.0	25.2	24.5	-50.95	-618.6	18.7	328.3	286.4	41.93	7.830	
8,700.0	7,324.8	8,498.4	7,117.9	25.7	25.0	-50.95	-657.2	18.7	328.4	285.6	42.74	7.683	
8,759.8	7,324.7	8,558.2	7,117.7	26.5	25.8	-50.94	-717.1	18.7	328.4	284.3	44.06	7.454	
8,800.0	7,324.6	8,598.4	7,117.6	27.1	26.3	-50.93	-757.2	18.7	328.4	283.5	44.94	7.308	
8,858.2	7,324.5	8,656.6	7,117.5	27.9	27.1	-50.93	-815.5	18.7	328.5	282.2	46.29	7.096	
8,900.0	7,324.5	8,698.4	7,117.4	28.4	27.7	-50.92	-857.2	18.7	328.5	281.2	47.25	6.952	
8,956.7	7,324.4	8,755.0	7,117.3	29.3	28.5	-50.91	-913.9	18.7	328.5	279.9	48.61	6.759	
9,000.0	7,324.3	8,798.4	7,117.2	29.9	29.2	-50.91	-957.2	18.7	328.5	278.9	49.64	6.618	
9,055.1	7,324.3	8,853.5	7,117.0	30.7	30.0	-50.90	-1,012.3	18.7	328.6	277.6	51.01	6.442	
9,100.0	7,324.2	8,898.4	7,116.9	31.4	30.7	-50.89	-1,057.2	18.7	328.6	276.5	52.12	6.306	
9,153.5	7,324.1	8,951.9	7,116.8	32.2	31.5	-50.88	-1,110.8	18.7	328.6	275.2	53.47	6.146	
9,200.0	7,324.0	8,998.4	7,116.7	33.0	32.3	-50.88	-1,157.2	18.7	328.7	274.0	54.65	6.014	
9,251.9	7,324.0	9,050.3	7,116.5	33.8	33.1	-50.87	-1,209.2	18.7	328.7	272.7	56.00	5.870	
9,300.0	7,323.9	9,098.4	7,116.4	34.5	33.9	-50.86	-1,257.2	18.7	328.7	271.5	57.25	5.743	
9,350.4	7,323.8	9,148.7	7,116.3	35.4	34.7	-50.86	-1,307.6	18.7	328.8	270.2	58.58	5.613	
9,400.0	7,323.7	9,198.4	7,116.2	36.2	35.5	-50.85	-1,357.2	18.7	328.8	268.9	59.89	5.490	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWDD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	7,323.7	9,247.2	7,116.0	37.0	36.3	-50.84	-1,406.0	18.7	328.8	267.6	61.20	5.373	
9,500.0	7,323.6	9,298.4	7,115.9	37.8	37.2	-50.84	-1,457.2	18.7	328.9	266.3	62.57	5.256	
9,547.2	7,323.5	9,345.6	7,115.8	38.6	38.0	-50.83	-1,504.4	18.7	328.9	265.0	63.86	5.150	
9,600.0	7,323.5	9,398.4	7,115.7	39.5	38.8	-50.82	-1,557.2	18.7	328.9	263.6	65.29	5.038	
9,645.6	7,323.4	9,444.0	7,115.6	40.2	39.6	-50.82	-1,602.9	18.7	329.0	262.4	66.55	4.943	
9,700.0	7,323.3	9,498.4	7,115.4	41.2	40.5	-50.81	-1,657.2	18.7	329.0	260.9	68.05	4.835	
9,744.1	7,323.2	9,542.4	7,115.3	41.9	41.3	-50.81	-1,701.3	18.7	329.0	259.7	69.28	4.749	
9,800.0	7,323.2	9,598.4	7,115.2	42.9	42.3	-50.80	-1,757.2	18.7	329.1	258.2	70.83	4.646	
9,842.5	7,323.1	9,640.9	7,115.1	43.6	43.0	-50.79	-1,799.7	18.7	329.1	257.1	72.03	4.569	
9,900.0	7,323.0	9,698.4	7,114.9	44.6	44.0	-50.78	-1,857.2	18.7	329.1	255.5	73.64	4.469	
9,940.9	7,322.9	9,739.3	7,114.8	45.3	44.7	-50.78	-1,898.1	18.7	329.2	254.3	74.80	4.400	
10,000.0	7,322.9	9,798.4	7,114.7	46.3	45.8	-50.77	-1,957.2	18.7	329.2	252.7	76.48	4.305	
10,039.3	7,322.8	9,837.7	7,114.6	47.0	46.5	-50.77	-1,996.6	18.7	329.2	251.6	77.60	4.243	
10,100.0	7,322.7	9,898.4	7,114.4	48.1	47.5	-50.76	-2,057.2	18.7	329.3	249.9	79.33	4.151	
10,137.8	7,322.6	9,936.1	7,114.3	48.8	48.2	-50.75	-2,095.0	18.7	329.3	248.9	80.41	4.095	
10,200.0	7,322.6	9,998.4	7,114.2	49.9	49.3	-50.74	-2,157.2	18.7	329.3	247.1	82.20	4.006	
10,236.2	7,322.5	10,034.6	7,114.1	50.5	50.0	-50.74	-2,193.4	18.7	329.3	246.1	83.24	3.956	
10,300.0	7,322.4	10,098.4	7,113.9	51.6	51.1	-50.73	-2,257.2	18.7	329.4	244.3	85.08	3.871	
10,334.6	7,322.4	10,133.0	7,113.8	52.3	51.7	-50.73	-2,291.8	18.7	329.4	243.3	86.09	3.826	
10,400.0	7,322.3	10,198.4	7,113.7	53.4	52.9	-50.72	-2,357.2	18.7	329.4	241.5	87.98	3.744	
10,433.0	7,322.2	10,231.4	7,113.6	54.0	53.5	-50.71	-2,390.3	18.7	329.5	240.5	88.95	3.704	
10,500.0	7,322.1	10,298.4	7,113.4	55.2	54.7	-50.71	-2,457.2	18.7	329.5	238.6	90.90	3.625	
10,531.5	7,322.1	10,329.8	7,113.3	55.8	55.3	-50.70	-2,488.7	18.7	329.5	237.7	91.82	3.589	
10,600.0	7,321.9	10,398.4	7,113.2	57.0	56.5	-50.69	-2,557.2	18.7	329.6	235.7	93.82	3.513	
10,629.9	7,321.9	10,428.3	7,113.1	57.6	57.1	-50.69	-2,587.1	18.7	329.6	234.9	94.70	3.480	
10,700.0	7,321.8	10,498.4	7,112.9	58.8	58.3	-50.68	-2,657.2	18.7	329.6	232.9	96.75	3.407	
10,728.3	7,321.8	10,526.7	7,112.8	59.4	58.9	-50.68	-2,685.5	18.7	329.7	232.1	97.59	3.378	
10,800.0	7,321.6	10,598.4	7,112.7	60.7	60.2	-50.67	-2,757.2	18.7	329.7	230.0	99.70	3.307	
10,826.7	7,321.6	10,625.1	7,112.6	61.1	60.7	-50.66	-2,784.0	18.7	329.7	229.2	100.49	3.281	
10,900.0	7,321.5	10,698.4	7,112.4	62.5	62.0	-50.65	-2,857.2	18.7	329.8	227.1	102.65	3.212	
10,925.2	7,321.4	10,723.5	7,112.4	62.9	62.5	-50.65	-2,882.4	18.7	329.8	226.4	103.40	3.189	
11,000.0	7,321.3	10,798.4	7,112.2	64.3	63.8	-50.64	-2,957.2	18.7	329.8	224.2	105.61	3.123	
11,023.6	7,321.3	10,822.0	7,112.1	64.7	64.3	-50.64	-2,980.8	18.7	329.8	223.5	106.31	3.103	
11,100.0	7,321.2	10,898.4	7,111.9	66.1	65.7	-50.63	-3,057.2	18.7	329.9	221.3	108.58	3.038	
11,122.0	7,321.1	10,920.4	7,111.9	66.5	66.1	-50.62	-3,079.2	18.7	329.9	220.7	109.23	3.020	
11,200.0	7,321.0	10,998.4	7,111.7	68.0	67.5	-50.61	-3,157.2	18.7	329.9	218.4	111.55	2.958	
11,220.4	7,321.0	11,018.8	7,111.6	68.4	67.9	-50.61	-3,177.7	18.7	330.0	217.8	112.16	2.942	
11,300.0	7,320.9	11,098.4	7,111.4	69.8	69.4	-50.60	-3,257.2	18.7	330.0	215.5	114.53	2.881	
11,318.9	7,320.8	11,117.2	7,111.4	70.2	69.7	-50.60	-3,276.1	18.7	330.0	214.9	115.10	2.867	
11,400.0	7,320.7	11,198.4	7,111.2	71.7	71.2	-50.59	-3,357.2	18.7	330.1	212.6	117.52	2.809	
11,417.3	7,320.7	11,215.7	7,111.1	72.0	71.5	-50.59	-3,374.5	18.7	330.1	212.0	118.03	2.796	
11,500.0	7,320.6	11,298.4	7,110.9	73.5	73.1	-50.58	-3,457.2	18.7	330.1	209.6	120.51	2.740	
11,515.7	7,320.5	11,314.1	7,110.9	73.8	73.4	-50.57	-3,472.9	18.7	330.1	209.2	120.98	2.729	
11,600.0	7,320.4	11,398.4	7,110.7	75.4	74.9	-50.56	-3,557.2	18.7	330.2	206.7	123.50	2.674	
11,614.1	7,320.4	11,412.5	7,110.6	75.6	75.2	-50.56	-3,571.4	18.7	330.2	206.3	123.93	2.665	
11,700.0	7,320.2	11,498.4	7,110.4	77.2	76.8	-50.55	-3,657.2	18.7	330.3	203.8	126.50	2.611	
11,712.6	7,320.2	11,510.9	7,110.4	77.5	77.0	-50.55	-3,669.8	18.7	330.3	203.4	126.88	2.603	
11,800.0	7,320.1	11,598.4	7,110.1	79.1	78.7	-50.54	-3,757.2	18.7	330.3	200.8	129.50	2.551	
11,811.0	7,320.1	11,609.4	7,110.1	79.3	78.9	-50.54	-3,768.2	18.7	330.3	200.5	129.79	2.545	
11,849.2	7,320.0	11,647.6	7,110.0	79.8	79.6	-50.53	-3,806.4	18.7	330.3	199.5	130.81	2.525	
11,849.6	7,320.0	11,648.0	7,110.0	79.8	79.6	-50.53	-3,806.8	18.7	330.3	199.5	130.82	2.525	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	91.40	-0.7	29.9	29.9				
98.4	98.4	98.4	98.4	0.1	0.1	91.40	-0.7	29.9	29.9	29.7	0.17	175.709	
100.0	100.0	100.0	100.0	0.1	0.1	91.40	-0.7	29.9	29.9	29.7	0.17	172.529	
196.8	196.8	196.8	196.8	0.3	0.3	91.40	-0.7	29.9	29.9	29.3	0.61	49.075	
200.0	200.0	200.0	200.0	0.3	0.3	91.40	-0.7	29.9	29.9	29.2	0.62	47.959	
295.3	295.3	295.3	295.3	0.5	0.5	91.40	-0.7	29.9	29.9	28.8	1.05	28.413	
300.0	300.0	300.0	300.0	0.5	0.5	91.40	-0.7	29.9	29.9	28.8	1.07	27.851	
393.7	393.7	393.7	393.7	0.7	0.7	91.40	-0.7	29.9	29.9	28.4	1.49	19.995	
400.0	400.0	400.0	400.0	0.8	0.8	91.40	-0.7	29.9	29.9	28.3	1.52	19.623	
492.1	492.1	492.1	492.1	1.0	1.0	91.40	-0.7	29.9	29.9	27.9	1.94	15.425	
500.0	500.0	500.0	500.0	1.0	1.0	91.40	-0.7	29.9	29.9	27.9	1.97	15.148	
590.5	590.5	590.5	590.5	1.2	1.2	91.40	-0.7	29.9	29.9	27.5	2.38	12.555	
600.0	600.0	600.0	600.0	1.2	1.2	91.40	-0.7	29.9	29.9	27.4	2.42	12.335	
689.0	689.0	689.0	689.0	1.4	1.4	91.40	-0.7	29.9	29.9	27.0	2.82	10.586	
700.0	700.0	700.0	700.0	1.4	1.4	91.40	-0.7	29.9	29.9	27.0	2.87	10.403	
787.4	787.4	787.4	787.4	1.6	1.6	91.40	-0.7	29.9	29.9	26.6	3.26	9.151	
800.0	800.0	800.0	800.0	1.7	1.7	91.40	-0.7	29.9	29.9	26.5	3.32	8.994	
885.8	885.8	885.8	885.8	1.9	1.9	91.40	-0.7	29.9	29.9	26.2	3.71	8.058	
900.0	900.0	900.0	900.0	1.9	1.9	91.40	-0.7	29.9	29.9	26.1	3.77	7.922	
984.2	984.2	984.2	984.2	2.1	2.1	91.40	-0.7	29.9	29.9	25.7	4.15	7.198	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	91.40	-0.7	29.9	29.9	25.6	4.22	7.078	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	91.40	-0.7	29.9	29.9	25.3	4.59	6.505	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	91.40	-0.7	29.9	29.9	25.2	4.67	6.396	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	91.40	-0.7	29.9	29.9	24.8	5.03	5.933	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	91.40	-0.7	29.9	29.9	24.7	5.12	5.834	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	91.40	-0.7	29.9	29.9	24.4	5.48	5.453	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	91.40	-0.7	29.9	29.9	24.3	5.57	5.363	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	91.40	-0.7	29.9	29.9	23.9	5.92	5.046	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	91.40	-0.7	29.9	29.9	23.8	6.02	4.963	
1,450.0	1,450.0	1,450.0	1,450.0	3.1	3.1	91.40	-0.7	29.9	29.9	23.6	6.24	4.784 CC	
1,476.4	1,476.4	1,476.4	1,476.4	3.2	3.2	105.91	-0.7	29.9	29.9	23.5	6.36	4.700	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	106.49	-0.7	29.9	30.0	23.5	6.47	4.637 ES	
1,574.8	1,574.8	1,574.8	1,574.8	3.4	3.4	110.56	-0.7	29.9	30.7	23.9	6.80	4.516	
1,600.0	1,599.9	1,599.9	1,599.9	3.5	3.5	112.63	-0.7	29.9	31.2	24.2	6.91	4.507	
1,673.2	1,673.0	1,673.0	1,673.0	3.6	3.6	120.18	-0.7	29.9	33.3	26.0	7.24	4.598	
1,700.0	1,699.7	1,699.7	1,699.7	3.7	3.7	123.33	-0.7	29.9	34.4	27.1	7.35	4.683	
1,771.6	1,771.0	1,771.0	1,771.0	3.9	3.8	132.07	-0.7	29.9	38.8	31.2	7.67	5.064	
1,800.0	1,799.1	1,799.1	1,799.1	3.9	3.9	135.46	-0.7	29.9	41.1	33.3	7.79	5.280	
1,870.1	1,868.6	1,868.6	1,868.6	4.1	4.1	143.18	-0.7	29.9	48.3	40.2	8.09	5.970	
1,900.0	1,898.2	1,898.2	1,898.2	4.2	4.1	146.12	-0.7	29.9	52.0	43.8	8.22	6.331	
1,968.5	1,965.7	1,965.7	1,965.7	4.3	4.3	151.96	-0.7	29.9	61.9	53.4	8.50	7.286	
2,000.0	1,996.6	1,996.6	1,996.6	4.4	4.3	154.25	-0.7	29.9	67.2	58.5	8.63	7.784	
2,049.8	2,045.4	2,045.4	2,045.4	4.6	4.5	157.41	-0.7	29.9	76.3	67.4	8.83	8.635	
2,066.9	2,062.2	2,062.4	2,062.4	4.6	4.5	158.39	-0.7	29.9	79.6	70.6	8.91	8.932	
2,100.0	2,094.5	2,095.4	2,095.4	4.7	4.6	159.93	-0.4	29.9	85.8	76.7	9.05	9.474	
2,165.3	2,158.5	2,161.1	2,161.0	4.9	4.7	161.92	1.4	30.4	97.5	88.1	9.35	10.423	
2,200.0	2,192.3	2,196.0	2,196.0	5.1	4.8	162.54	2.9	30.8	103.3	93.8	9.51	10.864	
2,263.8	2,254.7	2,260.7	2,260.5	5.3	4.9	163.11	6.8	31.9	113.3	103.5	9.80	11.555	
2,300.0	2,290.2	2,297.6	2,297.3	5.4	5.0	163.17	9.6	32.6	118.5	108.5	9.97	11.881	
2,362.2	2,351.0	2,361.1	2,360.5	5.6	5.2	162.88	15.6	34.2	126.7	116.5	10.27	12.337	
2,400.0	2,388.0	2,399.9	2,399.0	5.8	5.3	162.51	19.9	35.4	131.3	120.8	10.46	12.555	
2,460.6	2,447.3	2,462.1	2,460.7	6.0	5.4	161.63	27.8	37.5	137.9	127.1	10.76	12.811	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,485.8	2,502.6	2,500.7	6.1	5.5	160.88	33.7	39.1	141.7	130.7	10.96	12.925	
2,559.0	2,543.6	2,563.3	2,560.6	6.3	5.7	159.51	43.6	41.7	146.8	135.5	11.27	13.016	
2,600.0	2,583.6	2,605.5	2,602.0	6.5	5.8	158.40	51.1	43.8	149.9	138.4	11.50	13.033	
2,657.5	2,639.8	2,664.6	2,659.9	6.7	5.9	156.61	62.7	46.9	153.7	141.8	11.83	12.992	
2,700.0	2,681.4	2,708.3	2,702.5	6.9	6.1	155.12	72.0	49.3	156.1	144.0	12.08	12.923	
2,755.9	2,736.1	2,765.5	2,758.1	7.1	6.2	152.93	85.1	52.9	159.0	146.5	12.44	12.783	
2,800.0	2,779.2	2,809.3	2,800.5	7.3	6.4	151.20	95.5	55.7	161.1	148.4	12.72	12.664	
2,854.3	2,832.4	2,863.2	2,852.8	7.5	6.6	149.13	108.4	59.1	164.0	150.9	13.09	12.526	
2,900.0	2,877.1	2,908.6	2,896.8	7.7	6.7	147.44	119.2	62.0	166.6	153.2	13.41	12.419	
2,952.7	2,928.7	2,960.9	2,947.5	7.9	6.9	145.56	131.6	65.3	169.7	155.9	13.79	12.302	
3,000.0	2,974.9	3,007.8	2,993.0	8.1	7.1	143.93	142.8	68.3	172.7	158.5	14.15	12.208	
3,051.2	3,024.9	3,058.6	3,042.2	8.3	7.3	142.23	154.9	71.6	176.0	161.5	14.54	12.110	
3,100.0	3,072.7	3,107.1	3,089.2	8.5	7.4	140.67	166.4	74.7	179.4	164.5	14.92	12.026	
3,149.6	3,121.2	3,156.3	3,136.9	8.7	7.6	139.15	178.1	77.8	182.9	167.6	15.31	11.946	
3,200.0	3,170.5	3,206.4	3,185.4	8.9	7.8	137.65	190.0	81.0	186.7	170.9	15.72	11.873	
3,248.0	3,217.5	3,254.1	3,231.6	9.1	8.0	136.29	201.3	84.0	190.3	174.2	16.12	11.807	
3,300.0	3,268.3	3,305.6	3,281.6	9.3	8.2	134.87	213.6	87.3	194.4	177.9	16.55	11.744	
3,346.4	3,313.8	3,351.8	3,326.3	9.5	8.4	133.65	224.6	90.3	198.2	181.2	16.95	11.691	
3,400.0	3,366.1	3,404.9	3,377.8	9.7	8.7	132.30	237.2	93.6	202.6	185.2	17.41	11.637	
3,444.9	3,410.0	3,449.5	3,421.0	9.9	8.8	131.21	247.8	96.5	206.4	188.6	17.80	11.595	
3,500.0	3,464.0	3,504.2	3,474.0	10.2	9.1	129.93	260.8	100.0	211.1	192.8	18.28	11.550	
3,543.3	3,506.3	3,547.2	3,515.7	10.3	9.3	128.97	271.0	102.7	214.9	196.3	18.66	11.517	
3,600.0	3,561.8	3,603.4	3,570.2	10.6	9.5	127.75	284.4	106.3	220.0	200.8	19.16	11.481	
3,641.7	3,602.6	3,644.9	3,610.4	10.8	9.7	126.89	294.3	108.9	223.8	204.3	19.54	11.456	
3,700.0	3,659.6	3,702.7	3,666.4	11.0	9.9	125.74	308.0	112.6	229.2	209.1	20.06	11.426	
3,740.1	3,698.9	3,742.6	3,705.1	11.2	10.1	124.98	317.5	115.2	232.9	212.5	20.42	11.407	
3,800.0	3,757.4	3,802.0	3,762.6	11.4	10.4	123.89	331.7	119.0	238.6	217.6	20.96	11.384	
3,838.6	3,795.1	3,840.3	3,799.8	11.6	10.6	123.21	340.8	121.4	242.3	221.0	21.31	11.371	
3,900.0	3,855.2	3,901.2	3,858.9	11.9	10.8	122.18	355.3	125.3	248.3	226.4	21.87	11.354	
3,937.0	3,891.4	3,938.0	3,894.5	12.0	11.0	121.58	364.0	127.6	251.9	229.7	22.20	11.345	
4,000.0	3,953.0	4,000.5	3,955.1	12.3	11.3	120.59	378.9	131.6	258.1	235.4	22.78	11.333	
4,035.4	3,987.7	4,035.7	3,989.2	12.4	11.4	120.06	387.2	133.9	261.7	238.6	23.10	11.327	
4,100.0	4,050.9	4,099.8	4,051.3	12.7	11.7	119.13	402.5	138.0	268.2	244.5	23.69	11.320	
4,133.8	4,084.0	4,133.4	4,083.8	12.9	11.9	118.66	410.5	140.1	271.6	247.6	24.00	11.317	
4,200.0	4,148.7	4,199.1	4,147.5	13.2	12.2	117.77	426.1	144.3	278.4	253.8	24.61	11.313	
4,232.3	4,180.2	4,231.1	4,178.5	13.3	12.4	117.35	433.7	146.3	281.7	256.8	24.90	11.312	
4,300.0	4,246.5	4,298.3	4,243.7	13.6	12.7	116.50	449.7	150.6	288.7	263.2	25.52	11.313	
4,330.7	4,276.5	4,328.8	4,273.2	13.7	12.8	116.13	457.0	152.6	291.9	266.1	25.80	11.313	
4,400.0	4,344.3	4,397.6	4,339.9	14.0	13.1	115.33	473.3	156.9	299.2	272.8	26.44	11.317	
4,429.1	4,372.8	4,426.5	4,367.9	14.1	13.3	115.00	480.2	158.8	302.3	275.6	26.71	11.319	
4,500.0	4,442.1	4,496.9	4,436.1	14.5	13.6	114.23	496.9	163.3	309.8	282.5	27.36	11.325	
4,527.5	4,469.1	4,524.2	4,462.6	14.6	13.7	113.94	503.4	165.0	312.8	285.1	27.61	11.327	
4,600.0	4,539.9	4,596.1	4,532.3	14.9	14.1	113.21	520.6	169.6	320.5	292.2	28.28	11.336	
4,626.0	4,565.4	4,621.9	4,557.3	15.0	14.2	112.95	526.7	171.3	323.3	294.8	28.51	11.339	
4,700.0	4,637.8	4,695.4	4,628.5	15.3	14.6	112.25	544.2	175.9	331.3	302.1	29.19	11.350	
4,724.4	4,661.6	4,719.6	4,652.0	15.4	14.7	112.03	549.9	177.5	334.0	304.5	29.42	11.353	
4,800.0	4,735.6	4,794.7	4,724.8	15.8	15.0	111.35	567.8	182.3	342.2	312.1	30.11	11.366	
4,822.8	4,757.9	4,817.3	4,746.7	15.9	15.1	111.16	573.2	183.7	344.7	314.4	30.32	11.369	
4,900.0	4,833.4	4,893.9	4,821.0	16.2	15.5	110.51	591.4	188.6	353.2	322.1	31.02	11.383	
4,921.2	4,854.2	4,915.0	4,841.4	16.3	15.6	110.34	596.4	189.9	355.5	324.3	31.22	11.387	
5,000.0	4,931.2	4,993.2	4,917.2	16.6	16.0	109.72	615.0	194.9	364.2	332.3	31.94	11.403	
5,019.7	4,950.5	5,012.7	4,936.1	16.7	16.1	109.57	619.6	196.2	366.4	334.3	32.12	11.406	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,029.0	5,092.5	5,013.4	17.1	16.5	108.98	638.6	201.3	375.3	342.4	32.85	11.423	
5,118.1	5,046.7	5,110.4	5,030.8	17.1	16.6	108.85	642.9	202.4	377.3	344.3	33.02	11.427	
5,200.0	5,126.8	5,191.7	5,109.6	17.5	17.0	108.28	662.2	207.6	386.5	352.7	33.77	11.444	
5,216.5	5,143.0	5,208.1	5,125.5	17.6	17.0	108.16	666.1	208.6	388.3	354.4	33.92	11.448	
5,300.0	5,224.7	5,291.0	5,205.8	17.9	17.4	107.61	685.8	213.9	397.7	363.0	34.68	11.466	
5,314.9	5,239.3	5,305.8	5,220.2	18.0	17.5	107.52	689.4	214.9	399.3	364.5	34.82	11.469	
5,400.0	5,322.5	5,390.3	5,302.0	18.4	17.9	106.99	709.4	220.3	408.9	373.3	35.59	11.488	
5,413.4	5,335.6	5,403.5	5,314.9	18.4	18.0	106.91	712.6	221.1	410.4	374.7	35.72	11.492	
5,500.0	5,420.3	5,489.5	5,398.2	18.8	18.4	106.40	733.1	226.6	420.2	383.7	36.51	11.511	
5,511.8	5,431.8	5,501.2	5,409.6	18.9	18.5	106.33	735.8	227.3	421.6	385.0	36.61	11.514	
5,600.0	5,518.1	5,588.8	5,494.4	19.3	18.9	105.84	756.7	232.9	431.6	394.2	37.42	11.534	
5,610.2	5,528.1	5,598.9	5,504.3	19.3	18.9	105.78	759.1	233.6	432.7	395.2	37.51	11.537	
5,700.0	5,615.9	5,688.1	5,590.6	19.7	19.4	105.30	780.3	239.2	443.0	404.6	38.33	11.557	
5,708.6	5,624.4	5,696.6	5,599.0	19.7	19.4	105.26	782.3	239.8	444.0	405.5	38.41	11.559	
5,800.0	5,713.7	5,787.3	5,686.9	20.1	19.9	104.80	803.9	245.6	454.4	415.2	39.24	11.581	
5,807.1	5,720.7	5,794.4	5,693.7	20.2	19.9	104.76	805.6	246.0	455.2	415.9	39.30	11.582	
5,900.0	5,811.6	5,887.5	5,783.9	20.6	20.4	104.32	827.6	251.9	465.8	425.7	40.14	11.606	
5,905.5	5,816.9	5,893.1	5,789.4	20.6	20.4	104.30	828.9	252.3	466.5	426.3	40.19	11.607	
6,000.0	5,909.4	5,991.1	5,885.0	21.0	20.7	104.15	849.8	257.9	476.7	435.7	40.94	11.642	
6,003.9	5,913.2	5,995.2	5,889.0	21.0	20.8	104.16	850.6	258.1	477.1	436.1	40.98	11.643	
6,053.2	5,961.4	6,046.4	5,939.2	21.3	20.9	104.24	860.2	260.7	482.1	440.7	41.35	11.658	
6,100.0	6,007.3	6,095.0	5,987.0	21.4	21.1	104.46	868.5	262.9	486.5	444.8	41.69	11.670	
6,102.3	6,009.6	6,097.4	5,989.4	21.5	21.1	104.47	868.9	263.0	486.7	445.0	41.71	11.671	
6,200.0	6,105.7	6,199.0	6,089.8	21.8	21.4	104.91	883.6	266.9	494.8	452.4	42.31	11.695	
6,200.8	6,106.5	6,199.8	6,090.6	21.8	21.4	104.91	883.7	267.0	494.8	452.5	42.31	11.695	
6,299.2	6,203.9	6,302.2	6,192.4	22.0	21.6	105.33	895.0	270.0	501.2	458.3	42.84	11.699	
6,300.0	6,204.7	6,303.1	6,193.3	22.0	21.6	105.33	895.0	270.0	501.2	458.4	42.84	11.699	
6,397.6	6,301.8	6,404.8	6,294.6	22.3	21.8	105.72	902.8	272.1	505.8	462.5	43.28	11.686	
6,400.0	6,304.2	6,407.2	6,297.1	22.3	21.8	105.73	902.9	272.1	505.9	462.6	43.29	11.686	
6,496.0	6,400.0	6,507.3	6,397.1	22.4	22.0	106.09	907.0	273.2	508.7	465.1	43.65	11.655	
6,500.0	6,403.9	6,511.4	6,401.2	22.5	22.0	106.11	907.1	273.2	508.8	465.1	43.66	11.653	
6,594.5	6,498.3	6,608.6	6,498.3	22.6	22.1	106.43	907.9	273.4	510.0	466.0	43.94	11.606	
6,600.0	6,503.8	6,614.0	6,503.7	22.6	22.2	106.44	907.9	273.4	510.0	466.0	43.95	11.603	
6,653.0	6,556.8	6,665.4	6,555.1	22.7	22.2	92.45	905.7	273.4	510.2	466.2	44.05	11.582	
6,692.9	6,596.7	6,703.8	6,593.3	22.7	22.2	92.91	901.6	273.4	510.4	466.3	44.10	11.575	
6,706.0	6,609.8	6,716.3	6,605.6	22.7	22.2	93.10	899.9	273.4	510.5	466.4	44.10	11.576	
6,750.0	6,653.8	6,758.0	6,646.7	22.8	22.2	-86.17	892.4	273.4	510.9	466.8	44.09	11.587	
6,791.3	6,695.0	6,796.9	6,684.5	22.8	22.1	-85.51	883.4	273.4	511.3	467.3	44.02	11.616	
6,800.0	6,703.6	6,805.0	6,692.3	22.8	22.1	-85.38	881.2	273.4	511.4	467.4	44.00	11.623	
6,850.0	6,752.9	6,850.0	6,735.2	22.8	22.0	-84.63	867.7	273.4	512.1	468.2	43.85	11.678	
6,889.7	6,791.6	6,888.3	6,771.1	22.7	21.9	-84.01	854.1	273.4	512.6	468.9	43.66	11.741	
6,900.0	6,801.5	6,897.8	6,779.8	22.7	21.9	-83.86	850.5	273.4	512.7	469.1	43.61	11.758	
6,950.0	6,849.1	6,943.6	6,821.3	22.6	21.7	-83.14	831.1	273.4	513.5	470.2	43.31	11.855	
6,988.2	6,884.8	6,978.4	6,852.0	22.5	21.6	-82.62	814.7	273.4	514.1	471.0	43.04	11.943	
7,000.0	6,895.7	6,989.1	6,861.3	22.5	21.5	-82.46	809.4	273.4	514.3	471.3	42.96	11.971	
7,050.0	6,940.8	7,034.3	6,899.5	22.3	21.3	-81.82	785.3	273.4	515.1	472.5	42.55	12.104	
7,086.6	6,972.8	7,067.2	6,926.3	22.1	21.2	-81.37	766.3	273.4	515.7	473.4	42.23	12.212	
7,100.0	6,984.3	7,079.2	6,935.9	22.1	21.1	-81.21	759.0	273.4	515.9	473.8	42.10	12.252	
7,150.0	7,025.9	7,123.8	6,970.4	21.9	20.9	-80.65	730.7	273.4	516.7	475.1	41.62	12.414	
7,185.0	7,053.9	7,154.9	6,993.4	21.7	20.8	-80.28	709.7	273.4	517.2	476.0	41.27	12.534	
7,200.0	7,065.6	7,168.2	7,002.9	21.7	20.7	-80.12	700.5	273.4	517.5	476.4	41.11	12.587	
7,250.0	7,103.0	7,212.4	7,033.3	21.4	20.5	-79.65	668.4	273.4	518.2	477.7	40.59	12.768	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,283.4	7,126.7	7,241.8	7,052.4	21.2	20.3	-79.35	646.0	273.4	518.7	478.5	40.23	12.893	
7,300.0	7,138.0	7,256.4	7,061.5	21.2	20.2	-79.21	634.7	273.4	519.0	478.9	40.06	12.955	
7,350.0	7,170.5	7,300.0	7,087.5	20.9	20.0	-78.83	599.6	273.4	519.6	480.1	39.54	13.143	
7,381.9	7,189.8	7,328.0	7,103.0	20.8	19.9	-78.61	576.3	273.4	520.0	480.8	39.21	13.261	
7,400.0	7,200.2	7,343.8	7,111.3	20.7	19.8	-78.49	562.9	273.4	520.2	481.2	39.03	13.328	
7,450.0	7,227.0	7,387.4	7,132.7	20.4	19.6	-78.21	525.0	273.5	520.8	482.2	38.56	13.506	
7,480.3	7,241.9	7,413.7	7,144.5	20.3	19.4	-78.06	501.4	273.5	521.1	482.8	38.29	13.608	
7,500.0	7,250.9	7,430.8	7,151.8	20.2	19.4	-77.97	485.9	273.5	521.2	483.1	38.12	13.672	
7,550.0	7,271.6	7,474.1	7,168.4	20.0	19.2	-77.78	445.9	273.5	521.6	483.8	37.74	13.821	
7,578.7	7,282.0	7,500.0	7,177.1	19.9	19.1	-77.70	421.6	273.5	521.7	484.2	37.54	13.899	
7,600.0	7,289.1	7,517.4	7,182.5	19.8	19.0	-77.65	405.0	273.5	521.8	484.4	37.41	13.948	
7,650.0	7,303.3	7,560.6	7,194.1	19.6	18.9	-77.56	363.4	273.5	522.0	484.8	37.15	14.050	
7,677.1	7,309.5	7,584.1	7,199.4	19.5	18.8	-77.54	340.5	273.5	522.0	485.0	37.05	14.090	
7,700.0	7,314.1	7,603.8	7,203.2	19.5	18.7	-77.53	321.2	273.5	522.1	485.1	36.97	14.121	
7,750.0	7,321.4	7,650.0	7,210.1	19.4	18.6	-77.55	275.5	273.5	522.0	485.2	36.86	14.161	
7,775.6	7,323.9	7,669.1	7,212.1	19.3	18.6	-77.58	256.5	273.5	522.0	485.1	36.85	14.163	
7,800.0	7,325.3	7,690.3	7,213.7	19.3	18.6	-77.62	235.4	273.5	521.9	485.0	36.85	14.163	
7,832.0	7,326.0	7,717.9	7,214.8	19.3	18.5	-77.70	207.8	273.5	521.7	484.9	36.88	14.148	
7,851.6	7,326.0	7,734.9	7,215.0	19.3	18.5	-77.72	190.8	273.5	521.7	484.8	36.91	14.134	
7,874.0	7,325.9	7,756.2	7,214.8	19.3	18.5	-77.70	169.5	273.5	521.7	484.8	36.96	14.116	
7,900.0	7,325.9	7,782.2	7,214.5	19.3	18.5	-77.67	143.5	273.5	521.8	484.8	37.02	14.093	
7,972.4	7,325.8	7,854.6	7,213.7	19.4	18.7	-77.60	71.1	273.5	521.9	484.5	37.40	13.956	
8,000.0	7,325.8	7,882.2	7,213.4	19.5	18.7	-77.57	43.5	273.5	522.0	484.4	37.55	13.901	
8,070.8	7,325.7	7,953.1	7,212.6	19.8	19.0	-77.49	-27.3	273.5	522.1	484.0	38.17	13.681	
8,100.0	7,325.6	7,982.2	7,212.3	19.9	19.1	-77.46	-56.5	273.5	522.2	483.8	38.43	13.587	
8,169.3	7,325.5	8,051.5	7,211.5	20.3	19.6	-77.39	-125.7	273.5	522.4	483.1	39.27	13.302	
8,200.0	7,325.5	8,082.2	7,211.2	20.5	19.8	-77.36	-156.5	273.5	522.4	482.8	39.65	13.174	
8,267.7	7,325.4	8,149.9	7,210.4	21.1	20.3	-77.29	-224.2	273.5	522.6	481.9	40.68	12.846	
8,300.0	7,325.3	8,182.2	7,210.0	21.3	20.5	-77.25	-256.5	273.5	522.6	481.4	41.18	12.691	
8,366.1	7,325.2	8,248.3	7,209.3	21.9	21.2	-77.19	-322.6	273.5	522.8	480.4	42.37	12.340	
8,400.0	7,325.2	8,282.2	7,208.9	22.3	21.5	-77.15	-356.4	273.5	522.8	479.9	42.98	12.164	
8,464.5	7,325.1	8,346.7	7,208.2	22.9	22.2	-77.08	-421.0	273.5	523.0	478.7	44.30	11.807	
8,500.0	7,325.1	8,382.2	7,207.8	23.3	22.5	-77.05	-456.4	273.5	523.1	478.0	45.03	11.617	
8,563.0	7,325.0	8,445.2	7,207.1	24.0	23.3	-76.98	-519.4	273.5	523.2	476.8	46.44	11.267	
8,600.0	7,324.9	8,482.2	7,206.7	24.5	23.7	-76.94	-556.4	273.5	523.3	476.0	47.28	11.068	
8,661.4	7,324.8	8,543.6	7,206.0	25.2	24.5	-76.88	-617.8	273.5	523.4	474.7	48.76	10.734	
8,700.0	7,324.8	8,582.2	7,205.6	25.7	25.0	-76.84	-656.4	273.5	523.5	473.8	49.71	10.532	
8,759.8	7,324.7	8,642.0	7,204.9	26.5	25.8	-76.78	-716.2	273.5	523.6	472.4	51.25	10.218	
8,800.0	7,324.6	8,682.2	7,204.4	27.1	26.3	-76.73	-756.4	273.5	523.7	471.4	52.29	10.015	
8,858.2	7,324.5	8,740.4	7,203.8	27.9	27.1	-76.67	-814.6	273.5	523.9	470.0	53.87	9.725	
8,900.0	7,324.5	8,782.2	7,203.3	28.4	27.7	-76.63	-856.4	273.5	524.0	468.9	55.01	9.525	
8,956.7	7,324.4	8,838.8	7,202.7	29.3	28.6	-76.57	-913.1	273.5	524.1	467.5	56.61	9.258	
9,000.0	7,324.3	8,882.2	7,202.2	29.9	29.2	-76.53	-956.4	273.5	524.2	466.3	57.84	9.063	
9,055.1	7,324.3	8,937.3	7,201.6	30.7	30.0	-76.47	-1,011.5	273.5	524.3	464.9	59.45	8.820	
9,100.0	7,324.2	8,982.1	7,201.1	31.4	30.7	-76.42	-1,056.4	273.5	524.4	463.6	60.76	8.631	
9,153.5	7,324.1	9,035.7	7,200.5	32.2	31.5	-76.37	-1,109.9	273.5	524.5	462.2	62.37	8.410	
9,200.0	7,324.0	9,082.1	7,200.0	33.0	32.3	-76.32	-1,156.3	273.5	524.6	460.9	63.77	8.227	
9,251.9	7,324.0	9,134.1	7,199.4	33.8	33.1	-76.27	-1,208.3	273.5	524.8	459.4	65.37	8.028	
9,300.0	7,323.9	9,182.1	7,198.8	34.5	33.9	-76.22	-1,256.3	273.5	524.9	458.0	66.85	7.852	
9,350.4	7,323.8	9,232.5	7,198.3	35.4	34.7	-76.16	-1,306.7	273.5	525.0	456.6	68.43	7.672	
9,400.0	7,323.7	9,282.1	7,197.7	36.2	35.5	-76.11	-1,356.3	273.5	525.1	455.1	69.99	7.503	
9,448.8	7,323.7	9,330.9	7,197.2	37.0	36.3	-76.06	-1,405.1	273.5	525.2	453.7	71.54	7.341	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MW/D												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	7,323.6	9,382.1	7,196.6	37.8	37.1	-76.01	-1,456.3	273.5	525.3	452.2	73.18	7.179	
9,547.2	7,323.5	9,429.4	7,196.1	38.6	37.9	-75.96	-1,503.5	273.4	525.5	450.7	74.71	7.033	
9,600.0	7,323.5	9,482.1	7,195.5	39.5	38.8	-75.91	-1,556.3	273.4	525.6	449.2	76.42	6.878	
9,645.6	7,323.4	9,527.8	7,195.0	40.2	39.6	-75.86	-1,601.9	273.4	525.7	447.8	77.91	6.747	
9,700.0	7,323.3	9,582.1	7,194.4	41.2	40.5	-75.80	-1,656.3	273.4	525.8	446.1	79.70	6.598	
9,744.1	7,323.2	9,626.2	7,193.9	41.9	41.3	-75.76	-1,700.4	273.4	525.9	444.8	81.15	6.480	
9,800.0	7,323.2	9,682.1	7,193.2	42.9	42.2	-75.70	-1,756.3	273.4	526.1	443.0	83.01	6.337	
9,842.5	7,323.1	9,724.6	7,192.8	43.6	43.0	-75.66	-1,798.8	273.4	526.2	441.7	84.43	6.232	
9,900.0	7,323.0	9,782.1	7,192.1	44.6	44.0	-75.60	-1,856.3	273.4	526.3	439.9	86.35	6.095	
9,940.9	7,322.9	9,823.0	7,191.6	45.3	44.7	-75.56	-1,897.2	273.4	526.4	438.7	87.73	6.000	
10,000.0	7,322.9	9,882.1	7,191.0	46.3	45.7	-75.50	-1,956.3	273.4	526.5	436.8	89.72	5.869	
10,039.3	7,322.8	9,921.5	7,190.5	47.0	46.4	-75.46	-1,995.6	273.4	526.6	435.6	91.05	5.784	
10,100.0	7,322.7	9,982.1	7,189.9	48.1	47.5	-75.39	-2,056.2	273.4	526.8	433.7	93.11	5.658	
10,137.8	7,322.6	10,019.9	7,189.4	48.8	48.1	-75.35	-2,094.0	273.4	526.9	432.5	94.40	5.581	
10,200.0	7,322.6	10,082.1	7,188.7	49.9	49.2	-75.29	-2,156.2	273.4	527.0	430.5	96.52	5.460	
10,236.2	7,322.5	10,118.3	7,188.3	50.5	49.9	-75.25	-2,192.4	273.4	527.1	429.4	97.77	5.392	
10,300.0	7,322.4	10,182.1	7,187.6	51.6	51.0	-75.19	-2,256.2	273.4	527.3	427.3	99.95	5.275	
10,334.6	7,322.4	10,216.7	7,187.2	52.3	51.7	-75.15	-2,290.8	273.4	527.4	426.2	101.15	5.214	
10,400.0	7,322.3	10,282.1	7,186.5	53.4	52.8	-75.09	-2,356.2	273.4	527.5	424.1	103.40	5.102	
10,433.0	7,322.2	10,315.1	7,186.1	54.0	53.4	-75.05	-2,389.3	273.4	527.6	423.1	104.54	5.047	
10,500.0	7,322.1	10,382.1	7,185.4	55.2	54.6	-74.99	-2,456.2	273.4	527.8	420.9	106.86	4.939	
10,531.5	7,322.1	10,413.6	7,185.0	55.8	55.2	-74.95	-2,487.7	273.4	527.9	419.9	107.95	4.890	
10,600.0	7,321.9	10,482.1	7,184.2	57.0	56.4	-74.88	-2,556.2	273.4	528.0	417.7	110.33	4.786	
10,629.9	7,321.9	10,512.0	7,183.9	57.6	57.0	-74.85	-2,586.1	273.4	528.1	416.7	111.37	4.742	
10,700.0	7,321.8	10,582.1	7,183.1	58.8	58.3	-74.78	-2,656.2	273.4	528.3	414.5	113.82	4.642	
10,728.3	7,321.8	10,610.4	7,182.8	59.4	58.8	-74.75	-2,684.5	273.4	528.4	413.6	114.80	4.602	
10,800.0	7,321.6	10,682.1	7,182.0	60.7	60.1	-74.68	-2,756.2	273.4	528.5	411.2	117.31	4.506	
10,826.7	7,321.6	10,708.8	7,181.7	61.1	60.6	-74.65	-2,782.9	273.4	528.6	410.4	118.24	4.471	
10,900.0	7,321.5	10,782.1	7,180.9	62.5	61.9	-74.58	-2,856.2	273.4	528.8	408.0	120.81	4.377	
10,925.2	7,321.4	10,807.2	7,180.6	62.9	62.4	-74.55	-2,881.3	273.4	528.9	407.2	121.69	4.346	
11,000.0	7,321.3	10,882.1	7,179.7	64.3	63.7	-74.48	-2,956.1	273.4	529.1	404.7	124.32	4.256	
11,023.6	7,321.3	10,905.7	7,179.5	64.7	64.2	-74.45	-2,979.7	273.4	529.1	404.0	125.15	4.228	
11,100.0	7,321.2	10,982.1	7,178.6	66.1	65.6	-74.38	-3,056.1	273.4	529.3	401.5	127.83	4.141	
11,122.0	7,321.1	11,004.1	7,178.4	66.5	66.0	-74.35	-3,078.2	273.4	529.4	400.8	128.61	4.116	
11,200.0	7,321.0	11,082.0	7,177.5	68.0	67.4	-74.27	-3,156.1	273.4	529.6	398.2	131.35	4.032	
11,220.4	7,321.0	11,102.5	7,177.3	68.4	67.8	-74.25	-3,176.6	273.4	529.6	397.6	132.07	4.010	
11,300.0	7,320.9	11,182.0	7,176.4	69.8	69.3	-74.17	-3,256.1	273.4	529.9	395.0	134.88	3.928	
11,318.9	7,320.8	11,200.9	7,176.2	70.2	69.6	-74.15	-3,275.0	273.4	529.9	394.4	135.54	3.910	
11,400.0	7,320.7	11,282.0	7,175.2	71.7	71.1	-74.07	-3,356.1	273.4	530.1	391.7	138.40	3.830	
11,417.3	7,320.7	11,299.3	7,175.0	72.0	71.4	-74.06	-3,373.4	273.4	530.2	391.1	139.02	3.814	
11,500.0	7,320.6	11,382.0	7,174.1	73.5	73.0	-73.97	-3,456.1	273.4	530.4	388.4	141.94	3.737	
11,515.7	7,320.5	11,397.8	7,173.9	73.8	73.3	-73.96	-3,471.8	273.4	530.4	387.9	142.49	3.722	
11,600.0	7,320.4	11,482.0	7,173.0	75.4	74.8	-73.87	-3,556.1	273.4	530.7	385.2	145.47	3.648	
11,614.1	7,320.4	11,496.2	7,172.8	75.6	75.1	-73.86	-3,570.2	273.4	530.7	384.7	145.97	3.636	
11,700.0	7,320.2	11,582.0	7,171.9	77.2	76.7	-73.77	-3,656.1	273.4	530.9	381.9	149.01	3.563	
11,712.6	7,320.2	11,594.6	7,171.7	77.5	76.9	-73.76	-3,668.6	273.4	531.0	381.5	149.46	3.553	
11,800.0	7,320.1	11,682.0	7,170.7	79.1	78.6	-73.67	-3,756.1	273.4	531.2	378.6	152.55	3.482	
11,811.0	7,320.1	11,693.0	7,170.6	79.3	78.8	-73.66	-3,767.1	273.4	531.2	378.3	152.90	3.474	
11,849.2	7,320.0	11,731.2	7,170.2	79.8	79.5	-73.62	-3,805.3	273.4	531.3	377.2	154.11	3.448	
11,849.6	7,320.0	11,731.6	7,170.2	79.8	79.5	-73.62	-3,805.7	273.4	531.3	377.2	154.12	3.448 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	91.67	-2.2	74.8	74.8				
98.4	98.4	97.4	97.4	0.1	0.1	91.67	-2.2	74.8	74.8	74.6	0.17	442.405	
100.0	100.0	99.0	99.0	0.1	0.1	91.67	-2.2	74.8	74.8	74.6	0.17	434.356	
196.8	196.8	195.8	195.8	0.3	0.3	91.67	-2.2	74.8	74.8	74.2	0.61	123.390	
200.0	200.0	199.0	199.0	0.3	0.3	91.67	-2.2	74.8	74.8	74.2	0.62	120.573	
295.3	295.3	294.3	294.3	0.5	0.5	91.67	-2.2	74.8	74.8	73.7	1.05	71.328	
300.0	300.0	299.0	299.0	0.5	0.5	91.67	-2.2	74.8	74.8	73.7	1.07	69.912	
393.7	393.7	392.7	392.7	0.7	0.7	91.67	-2.2	74.8	74.8	73.3	1.49	50.163	
400.0	400.0	399.0	399.0	0.8	0.8	91.67	-2.2	74.8	74.8	73.3	1.52	49.228	
492.1	492.1	491.1	491.1	1.0	1.0	91.67	-2.2	74.8	74.8	72.9	1.93	38.684	
500.0	500.0	499.0	499.0	1.0	1.0	91.67	-2.2	74.8	74.8	72.8	1.97	37.989	
590.5	590.5	589.5	589.5	1.2	1.2	91.67	-2.2	74.8	74.8	72.4	2.38	31.481	
600.0	600.0	599.0	599.0	1.2	1.2	91.67	-2.2	74.8	74.8	72.4	2.42	30.928	
689.0	689.0	688.0	688.0	1.4	1.4	91.67	-2.2	74.8	74.8	72.0	2.82	26.539	
700.0	700.0	699.0	699.0	1.4	1.4	91.67	-2.2	74.8	74.8	71.9	2.87	26.080	
787.4	787.4	786.4	786.4	1.6	1.6	91.67	-2.2	74.8	74.8	71.5	3.26	22.938	
800.0	800.0	799.0	799.0	1.7	1.7	91.67	-2.2	74.8	74.8	71.5	3.32	22.546	
885.8	885.8	884.8	884.8	1.9	1.9	91.67	-2.2	74.8	74.8	71.1	3.70	20.197	
900.0	900.0	899.0	899.0	1.9	1.9	91.67	-2.2	74.8	74.8	71.0	3.77	19.856	
984.2	984.2	983.2	983.2	2.1	2.1	91.67	-2.2	74.8	74.8	70.7	4.15	18.042	
1,000.0	1,000.0	999.0	999.0	2.1	2.1	91.67	-2.2	74.8	74.8	70.6	4.22	17.739	
1,082.7	1,082.7	1,081.7	1,081.7	2.3	2.3	91.67	-2.2	74.8	74.8	70.2	4.59	16.302	
1,100.0	1,100.0	1,099.0	1,099.0	2.3	2.3	91.67	-2.2	74.8	74.8	70.1	4.67	16.030	
1,181.1	1,181.1	1,180.1	1,180.1	2.5	2.5	91.67	-2.2	74.8	74.8	69.8	5.03	14.868	
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	91.67	-2.2	74.8	74.8	69.7	5.12	14.621	
1,279.5	1,279.5	1,278.5	1,278.5	2.7	2.7	91.67	-2.2	74.8	74.8	69.3	5.47	13.666	
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	91.67	-2.2	74.8	74.8	69.2	5.57	13.440	
1,377.9	1,377.9	1,376.9	1,376.9	3.0	3.0	91.67	-2.2	74.8	74.8	68.9	5.92	12.644	
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	91.67	-2.2	74.8	74.8	68.8	6.01	12.436	
1,450.0	1,450.0	1,449.0	1,449.0	3.1	3.1	91.67	-2.2	74.8	74.8	68.6	6.24	11.988 CC	
1,476.4	1,476.4	1,475.4	1,475.4	3.2	3.2	106.06	-2.2	74.8	74.8	68.5	6.36	11.770	
1,500.0	1,500.0	1,499.0	1,499.0	3.2	3.2	106.29	-2.2	74.8	74.9	68.5	6.46	11.591 ES	
1,574.8	1,574.8	1,573.8	1,573.8	3.4	3.4	107.93	-2.2	74.8	75.6	68.8	6.80	11.120	
1,600.0	1,599.9	1,598.9	1,598.9	3.5	3.5	108.79	-2.2	74.8	76.0	69.1	6.91	10.994	
1,673.2	1,673.0	1,672.0	1,672.0	3.6	3.6	112.09	-2.2	74.8	77.6	70.4	7.24	10.729	
1,700.0	1,699.7	1,698.7	1,698.7	3.7	3.7	113.56	-2.2	74.8	78.5	71.1	7.36	10.672	
1,771.6	1,771.0	1,769.7	1,769.7	3.9	3.8	118.02	-2.1	74.8	81.7	74.0	7.67	10.640	
1,800.0	1,799.1	1,797.5	1,797.5	3.9	3.9	119.77	-1.9	75.0	83.4	75.6	7.80	10.698	
1,870.1	1,868.6	1,866.2	1,866.2	4.1	4.1	123.70	-0.4	76.3	89.2	81.1	8.11	11.007	
1,900.0	1,898.2	1,895.6	1,895.6	4.2	4.1	125.19	0.6	77.2	92.3	84.1	8.24	11.208	
1,968.5	1,965.7	1,962.6	1,962.6	4.3	4.3	128.11	3.7	80.0	100.7	92.1	8.54	11.783	
2,000.0	1,996.6	1,993.4	1,993.4	4.4	4.3	129.24	5.5	81.7	105.1	96.4	8.68	12.105	
2,049.8	2,045.4	2,042.0	2,041.5	4.6	4.4	130.76	8.9	84.7	112.8	103.9	8.91	12.662	
2,066.9	2,062.2	2,058.7	2,058.1	4.6	4.5	131.23	10.2	85.9	115.6	106.6	8.99	12.859	
2,100.0	2,094.5	2,091.0	2,090.2	4.7	4.6	131.96	12.9	88.3	121.1	112.0	9.15	13.237	
2,165.3	2,158.5	2,154.7	2,153.3	4.9	4.7	132.77	19.0	93.9	132.3	122.8	9.48	13.956	
2,200.0	2,192.3	2,188.5	2,186.7	5.1	4.8	132.90	22.7	97.2	138.4	128.7	9.66	14.329	
2,263.8	2,254.7	2,250.5	2,248.0	5.3	5.0	132.73	30.2	103.9	149.8	139.8	10.00	14.975	
2,300.0	2,290.2	2,285.7	2,282.6	5.4	5.0	132.43	34.9	108.2	156.4	146.2	10.20	15.329	
2,362.2	2,351.0	2,346.0	2,341.7	5.6	5.2	131.63	43.7	116.1	168.0	157.4	10.56	15.901	
2,400.0	2,388.0	2,382.5	2,377.4	5.8	5.3	130.99	49.5	121.3	175.2	164.4	10.79	16.238	
2,460.6	2,447.3	2,440.9	2,434.2	6.0	5.5	129.79	59.4	130.2	187.1	175.9	11.17	16.746	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,485.8	2,478.6	2,470.8	6.1	5.6	128.90	66.3	136.4	195.0	183.6	11.43	17.069	
2,559.0	2,543.6	2,535.0	2,525.2	6.3	5.8	127.46	77.2	146.3	207.3	195.5	11.83	17.531	
2,600.0	2,583.6	2,573.8	2,562.5	6.5	6.0	126.39	85.2	153.5	216.1	204.0	12.11	17.844	
2,657.5	2,639.8	2,628.1	2,614.4	6.7	6.2	124.82	97.0	164.1	228.9	216.4	12.53	18.270	
2,700.0	2,681.4	2,668.0	2,652.4	6.9	6.4	123.63	106.2	172.3	238.7	225.9	12.85	18.584	
2,755.9	2,736.1	2,720.1	2,701.7	7.1	6.6	122.02	118.7	183.6	252.1	238.8	13.27	18.997	
2,800.0	2,779.2	2,761.3	2,740.5	7.3	6.8	120.73	129.1	193.0	263.1	249.5	13.62	19.319	
2,854.3	2,832.4	2,813.4	2,789.4	7.5	7.1	119.20	142.3	204.9	276.9	262.8	14.06	19.692	
2,900.0	2,877.1	2,857.2	2,830.5	7.7	7.3	118.03	153.5	214.9	288.6	274.1	14.43	19.993	
2,952.7	2,928.7	2,907.8	2,878.1	7.9	7.6	116.78	166.3	226.5	302.2	287.4	14.87	20.330	
3,000.0	2,974.9	2,953.1	2,920.6	8.1	7.8	115.76	177.8	236.8	314.6	299.3	15.26	20.615	
3,051.2	3,024.9	3,002.1	2,966.7	8.3	8.1	114.74	190.3	248.1	328.0	312.4	15.69	20.915	
3,100.0	3,072.7	3,048.9	3,010.7	8.5	8.4	113.84	202.2	258.8	341.0	324.9	16.10	21.185	
3,149.6	3,121.2	3,096.5	3,055.4	8.7	8.7	112.99	214.3	269.7	354.2	337.7	16.51	21.450	
3,200.0	3,170.5	3,144.8	3,100.8	8.9	8.9	112.19	226.5	280.7	367.7	350.7	16.94	21.706	
3,248.0	3,217.5	3,190.8	3,144.0	9.1	9.2	111.48	238.2	291.3	380.6	363.3	17.35	21.942	
3,300.0	3,268.3	3,240.6	3,190.9	9.3	9.5	110.77	250.9	302.7	394.6	376.9	17.79	22.185	
3,346.4	3,313.8	3,285.2	3,232.7	9.5	9.8	110.17	262.2	312.8	407.2	389.0	18.19	22.393	
3,400.0	3,366.1	3,336.5	3,281.0	9.7	10.1	109.52	275.3	324.6	421.8	403.1	18.64	22.624	
3,444.9	3,410.0	3,379.5	3,321.4	9.9	10.4	109.02	286.2	334.4	434.0	415.0	19.03	22.809	
3,500.0	3,464.0	3,432.4	3,371.0	10.2	10.7	108.43	299.6	346.5	449.1	429.6	19.50	23.028	
3,543.3	3,506.3	3,473.9	3,410.0	10.3	10.9	108.00	310.2	356.0	461.0	441.1	19.88	23.193	
3,600.0	3,561.8	3,528.2	3,461.1	10.6	11.3	107.46	324.0	368.5	476.6	456.2	20.37	23.400	
3,641.7	3,602.6	3,568.2	3,498.7	10.8	11.5	107.09	334.2	377.6	488.0	467.3	20.73	23.547	
3,700.0	3,659.6	3,624.1	3,551.2	11.0	11.9	106.60	348.4	390.4	504.1	482.9	21.23	23.744	
3,740.1	3,698.9	3,662.6	3,587.4	11.2	12.1	106.28	358.2	399.2	515.2	493.6	21.58	23.875	
3,800.0	3,757.4	3,720.0	3,641.3	11.4	12.5	105.82	372.7	412.3	531.8	509.7	22.10	24.063	
3,838.6	3,795.1	3,756.0	3,675.1	11.6	12.7	105.55	381.9	420.6	542.5	520.1	22.43	24.187	
3,900.0	3,855.2	3,807.5	3,723.6	11.9	13.0	105.23	394.6	432.8	560.0	537.1	22.91	24.441	
3,937.0	3,891.4	3,838.4	3,752.6	12.0	13.2	105.07	401.9	440.4	571.0	547.8	23.20	24.615	
4,000.0	3,953.0	3,891.6	3,802.6	12.3	13.5	104.87	413.8	454.1	590.2	566.5	23.68	24.922	
4,035.4	3,987.7	3,925.2	3,834.2	12.4	13.7	104.77	421.2	462.9	601.2	577.2	23.98	25.069	
4,100.0	4,050.9	3,986.6	3,891.9	12.7	14.1	104.59	434.7	479.0	621.3	596.8	24.53	25.326	
4,133.8	4,084.0	4,018.8	3,922.1	12.9	14.4	104.50	441.8	487.4	631.8	607.0	24.82	25.456	
4,200.0	4,148.7	4,081.6	3,981.1	13.2	14.8	104.33	455.6	503.8	652.4	627.0	25.38	25.700	
4,232.3	4,180.2	4,112.3	4,010.0	13.3	15.0	104.26	462.4	511.9	662.4	636.8	25.66	25.816	
4,300.0	4,246.5	4,176.6	4,070.4	13.6	15.4	104.10	476.5	528.7	683.5	657.2	26.24	26.049	
4,330.7	4,276.5	4,205.8	4,097.8	13.7	15.6	104.03	482.9	536.4	693.0	666.5	26.50	26.151	
4,400.0	4,344.3	4,271.6	4,159.7	14.0	16.0	103.89	497.4	553.6	714.6	687.5	27.10	26.373	
4,429.1	4,372.8	4,299.3	4,185.7	14.1	16.2	103.83	503.5	560.8	723.7	696.3	27.35	26.464	
4,500.0	4,442.1	4,366.6	4,249.0	14.5	16.7	103.69	518.3	578.5	745.7	717.8	27.95	26.676	
4,527.5	4,469.1	4,392.8	4,273.6	14.6	16.8	103.64	524.1	585.3	754.3	726.1	28.19	26.757	
4,600.0	4,539.9	4,461.6	4,338.2	14.9	17.3	103.51	539.2	603.4	776.8	748.0	28.81	26.960	
4,626.0	4,565.4	4,486.3	4,361.4	15.0	17.5	103.47	544.6	609.8	784.9	755.9	29.04	27.031	
4,700.0	4,637.8	4,556.6	4,427.5	15.3	17.9	103.35	560.1	628.2	808.0	778.3	29.68	27.226	
4,724.4	4,661.6	4,579.8	4,449.3	15.4	18.1	103.31	565.2	634.3	815.6	785.7	29.89	27.288	
4,800.0	4,735.6	4,651.6	4,516.8	15.8	18.6	103.20	581.0	653.1	839.1	808.6	30.54	27.476	
4,822.8	4,757.9	4,673.3	4,537.2	15.9	18.7	103.16	585.8	658.8	846.2	815.5	30.74	27.531	
4,900.0	4,833.4	4,746.6	4,606.1	16.2	19.2	103.05	601.9	678.0	870.3	838.9	31.41	27.711	
4,921.2	4,854.2	4,766.8	4,625.0	16.3	19.3	103.02	606.3	683.3	876.9	845.3	31.59	27.759	
5,000.0	4,931.2	4,841.6	4,695.4	16.6	19.9	102.92	622.8	702.9	901.4	869.1	32.27	27.932	
5,019.7	4,950.5	4,860.3	4,712.9	16.7	20.0	102.90	626.9	707.8	907.5	875.1	32.44	27.974	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,029.0	4,936.6	4,784.6	17.1	20.5	102.80	643.7	727.7	932.6	899.4	33.14	28.141	
5,118.1	5,046.7	4,953.8	4,800.8	17.1	20.6	102.78	647.5	732.2	938.2	904.9	33.30	28.178	
5,200.0	5,126.8	5,031.7	4,873.9	17.5	21.1	102.68	664.6	752.6	963.7	929.7	34.01	28.339	
5,216.5	5,143.0	5,047.4	4,888.7	17.6	21.3	102.66	668.0	756.7	968.9	934.7	34.15	28.370	
5,300.0	5,224.7	5,126.7	4,963.2	17.9	21.8	102.57	685.5	777.5	994.9	960.0	34.88	28.525	
5,314.9	5,239.3	5,140.9	4,976.5	18.0	21.9	102.56	688.6	781.2	999.5	964.5	35.01	28.552	
5,400.0	5,322.5	5,221.7	5,052.5	18.4	22.4	102.47	706.4	802.4	1,026.0	990.3	35.75	28.702	
5,413.4	5,335.6	5,234.4	5,064.4	18.4	22.5	102.46	709.2	805.7	1,030.2	994.3	35.86	28.725	
5,500.0	5,420.3	5,316.7	5,141.7	18.8	23.1	102.38	727.3	827.3	1,057.2	1,020.6	36.62	28.871	
5,511.8	5,431.8	5,327.9	5,152.3	18.9	23.2	102.37	729.7	830.2	1,060.9	1,024.2	36.72	28.890	
5,600.0	5,518.1	5,411.7	5,231.0	19.3	23.7	102.29	748.2	852.1	1,088.4	1,050.9	37.49	29.030	
5,610.2	5,528.1	5,421.4	5,240.1	19.3	23.8	102.28	750.3	854.7	1,091.6	1,054.0	37.58	29.046	
5,700.0	5,615.9	5,507.7	5,321.3	19.7	24.4	102.20	769.3	877.3	1,119.5	1,081.2	38.37	29.180	
5,708.6	5,624.4	5,519.5	5,332.4	19.7	24.5	102.19	771.9	880.3	1,122.2	1,083.8	38.45	29.184	
5,800.0	5,713.7	5,645.3	5,451.7	20.1	25.2	102.20	797.4	910.8	1,148.9	1,109.5	39.35	29.194	
5,807.1	5,720.7	5,655.1	5,461.1	20.2	25.2	102.21	799.3	913.0	1,150.8	1,111.4	39.42	29.193	
5,900.0	5,811.6	5,785.6	5,586.7	20.6	25.8	102.42	822.0	940.0	1,174.6	1,134.3	40.30	29.147	
5,905.5	5,816.9	5,793.4	5,594.3	20.6	25.8	102.44	823.2	941.5	1,175.9	1,135.6	40.35	29.142	
6,000.0	5,909.4	5,928.2	5,725.7	21.0	26.3	102.85	842.5	964.4	1,196.7	1,155.5	41.23	29.027	
6,003.9	5,913.2	5,933.8	5,731.2	21.0	26.4	102.87	843.2	965.3	1,197.5	1,156.2	41.26	29.021	
6,053.2	5,961.4	6,004.7	5,800.9	21.3	26.6	103.16	851.7	975.4	1,206.9	1,165.2	41.71	28.934	
6,100.0	6,007.3	6,072.4	5,867.6	21.4	26.8	103.61	858.7	983.8	1,215.0	1,172.8	42.14	28.830	
6,102.3	6,009.6	6,075.8	5,871.0	21.5	26.8	103.64	859.1	984.2	1,215.4	1,173.2	42.16	28.825	
6,200.0	6,105.7	6,218.2	6,012.2	21.8	27.2	104.50	870.5	997.7	1,228.9	1,185.9	42.94	28.618	
6,200.8	6,106.5	6,219.3	6,013.4	21.8	27.2	104.51	870.5	997.8	1,229.0	1,186.0	42.95	28.616	
6,299.2	6,203.9	6,363.8	6,157.4	22.0	27.5	105.27	877.4	1,006.0	1,238.1	1,194.5	43.61	28.388	
6,300.0	6,204.7	6,365.0	6,158.6	22.0	27.5	105.28	877.4	1,006.0	1,238.1	1,194.5	43.62	28.386	
6,397.6	6,301.8	6,507.2	6,300.8	22.3	27.6	105.93	879.6	1,008.6	1,242.7	1,198.5	44.16	28.138	
6,400.0	6,304.2	6,509.6	6,303.2	22.3	27.6	105.94	879.6	1,008.6	1,242.7	1,198.5	44.17	28.133	
6,496.0	6,400.0	6,605.4	6,399.0	22.4	27.7	106.28	879.6	1,008.6	1,244.6	1,200.1	44.55	27.940	
6,500.0	6,403.9	6,609.3	6,402.9	22.5	27.7	106.29	879.6	1,008.6	1,244.7	1,200.1	44.56	27.932	
6,594.5	6,498.3	6,698.1	6,491.5	22.6	27.8	106.67	875.2	1,008.6	1,245.9	1,201.0	44.83	27.791	
6,600.0	6,503.8	6,703.2	6,496.6	22.6	27.8	106.70	874.6	1,008.6	1,245.9	1,201.1	44.84	27.784	
6,653.0	6,556.8	6,750.0	6,542.8	22.7	27.8	92.76	867.5	1,008.6	1,246.4	1,201.5	44.94	27.736	
6,692.9	6,596.7	6,787.4	6,579.4	22.7	27.7	93.12	859.7	1,008.6	1,246.9	1,201.9	44.99	27.717	
6,706.0	6,609.8	6,800.0	6,591.6	22.7	27.7	93.26	856.7	1,008.6	1,247.0	1,202.0	45.00	27.710	
6,750.0	6,653.8	6,837.4	6,627.6	22.8	27.7	-86.27	846.3	1,008.6	1,247.7	1,202.7	45.03	27.709	
6,791.3	6,695.0	6,873.1	6,661.4	22.8	27.6	-85.82	834.7	1,008.6	1,248.4	1,203.4	45.00	27.743	
6,800.0	6,703.6	6,880.6	6,668.3	22.8	27.6	-85.73	832.1	1,008.6	1,248.6	1,203.6	44.99	27.752	
6,850.0	6,752.9	6,923.2	6,707.7	22.8	27.5	-85.21	815.6	1,008.6	1,249.5	1,204.6	44.88	27.841	
6,889.7	6,791.6	6,956.8	6,737.9	22.7	27.4	-84.81	801.1	1,008.6	1,250.3	1,205.5	44.74	27.944	
6,900.0	6,801.5	6,965.4	6,745.6	22.7	27.3	-84.71	797.1	1,008.6	1,250.5	1,205.8	44.70	27.974	
6,950.0	6,849.1	7,007.2	6,781.9	22.6	27.2	-84.24	776.6	1,008.6	1,251.5	1,207.0	44.46	28.148	
6,988.2	6,884.8	7,038.8	6,808.6	22.5	27.1	-83.89	759.7	1,008.6	1,252.3	1,208.1	44.23	28.312	
7,000.0	6,895.7	7,050.0	6,817.9	22.5	27.1	-83.78	753.4	1,008.6	1,252.5	1,208.4	44.15	28.368	
7,050.0	6,940.8	7,089.5	6,849.8	22.3	26.9	-83.37	730.1	1,008.6	1,253.6	1,209.8	43.80	28.620	
7,086.6	6,972.8	7,119.3	6,873.0	22.1	26.8	-83.07	711.4	1,008.6	1,254.3	1,210.8	43.50	28.832	
7,100.0	6,984.3	7,130.2	6,881.3	22.1	26.7	-82.97	704.3	1,008.6	1,254.6	1,211.2	43.39	28.912	
7,150.0	7,025.9	7,170.6	6,911.0	21.9	26.5	-82.60	677.0	1,008.6	1,255.6	1,212.7	42.95	29.236	
7,185.0	7,053.9	7,200.0	6,931.7	21.7	26.4	-82.36	656.0	1,008.6	1,256.3	1,213.7	42.61	29.485	
7,200.0	7,065.6	7,210.7	6,939.0	21.7	26.3	-82.27	648.2	1,008.6	1,256.6	1,214.1	42.47	29.588	
7,250.0	7,103.0	7,250.0	6,964.8	21.4	26.2	-81.96	618.6	1,008.6	1,257.5	1,215.5	41.97	29.962	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,283.4	7,126.7	7,277.1	6,981.6	21.2	26.0	-81.78	597.3	1,008.6	1,258.0	1,216.4	41.62	30.227	
7,300.0	7,138.0	7,290.2	6,989.5	21.2	26.0	-81.69	586.8	1,008.6	1,258.3	1,216.8	41.45	30.359	
7,350.0	7,170.5	7,329.7	7,011.9	20.9	25.8	-81.45	554.3	1,008.6	1,259.0	1,218.1	40.93	30.763	
7,381.9	7,189.8	7,350.0	7,022.7	20.8	25.7	-81.33	537.2	1,008.6	1,259.5	1,218.9	40.63	31.002	
7,400.0	7,200.2	7,369.1	7,032.5	20.7	25.6	-81.24	520.7	1,008.6	1,259.7	1,219.3	40.41	31.169	
7,450.0	7,227.0	7,408.3	7,051.1	20.4	25.3	-81.07	486.2	1,008.6	1,260.2	1,220.3	39.92	31.569	
7,480.3	7,241.9	7,432.1	7,061.5	20.3	25.2	-80.99	464.9	1,008.6	1,260.5	1,220.9	39.64	31.801	
7,500.0	7,250.9	7,450.0	7,068.8	20.2	25.1	-80.93	448.5	1,008.6	1,260.7	1,221.2	39.44	31.963	
7,550.0	7,271.6	7,486.5	7,082.5	20.0	25.0	-80.84	414.7	1,008.6	1,261.0	1,222.0	39.03	32.307	
7,578.7	7,282.0	7,508.9	7,090.0	19.9	24.8	-80.80	393.5	1,008.6	1,261.2	1,222.3	38.81	32.492	
7,600.0	7,289.1	7,525.5	7,095.2	19.8	24.8	-80.78	377.8	1,008.6	1,261.2	1,222.6	38.66	32.624	
7,650.0	7,303.3	7,564.5	7,105.8	19.6	24.6	-80.75	340.3	1,008.6	1,261.3	1,223.0	38.35	32.893	
7,677.1	7,309.5	7,585.7	7,110.7	19.5	24.5	-80.75	319.7	1,008.6	1,261.3	1,223.1	38.21	33.012	
7,700.0	7,314.1	7,600.0	7,113.7	19.5	24.4	-80.76	305.7	1,008.6	1,261.3	1,223.2	38.10	33.102	
7,702.6	7,314.5	7,605.5	7,114.8	19.5	24.4	-80.76	300.3	1,008.6	1,261.3	1,223.2	38.09	33.115	
7,750.0	7,321.4	7,642.5	7,120.9	19.4	24.2	-80.81	263.8	1,008.6	1,261.1	1,223.2	37.92	33.254	
7,775.6	7,323.9	7,662.4	7,123.4	19.3	24.1	-80.85	244.0	1,008.6	1,261.0	1,223.1	37.87	33.297	
7,800.0	7,325.3	7,681.5	7,125.3	19.3	24.1	-80.89	225.1	1,008.6	1,260.8	1,223.0	37.83	33.330	
7,832.0	7,326.0	7,706.5	7,127.1	19.3	24.0	-80.97	200.1	1,008.6	1,260.6	1,222.8	37.81	33.344	
7,874.0	7,325.9	7,739.4	7,128.0	19.3	23.8	-81.01	167.2	1,008.6	1,260.4	1,222.5	37.86	33.294	
7,882.3	7,325.9	7,746.5	7,128.0	19.3	23.8	-81.01	160.2	1,008.6	1,260.4	1,222.5	37.87	33.285	
7,900.0	7,325.9	7,763.5	7,127.9	19.3	23.7	-81.01	143.2	1,008.6	1,260.4	1,222.6	37.85	33.297	
7,972.4	7,325.8	7,835.9	7,127.6	19.4	23.5	-81.00	70.7	1,008.6	1,260.4	1,222.6	37.85	33.297	
8,000.0	7,325.8	7,863.5	7,127.5	19.5	23.4	-80.99	43.2	1,008.6	1,260.5	1,222.6	37.84	33.314	
8,070.8	7,325.7	7,934.3	7,127.1	19.8	23.3	-80.98	-27.7	1,008.6	1,260.5	1,222.5	37.98	33.189	
8,100.0	7,325.6	7,963.5	7,127.0	19.9	23.3	-80.98	-56.8	1,008.6	1,260.5	1,222.4	38.07	33.113	
8,169.3	7,325.5	8,032.7	7,126.7	20.3	23.3	-80.97	-126.1	1,008.6	1,260.5	1,222.1	38.46	32.779	
8,200.0	7,325.5	8,063.5	7,126.6	20.5	23.4	-80.97	-156.8	1,008.6	1,260.6	1,221.9	38.66	32.606	
8,267.7	7,325.4	8,131.2	7,126.2	21.1	23.5	-80.96	-224.5	1,008.6	1,260.6	1,221.3	39.28	32.095	
8,300.0	7,325.3	8,163.5	7,126.1	21.3	23.6	-80.95	-256.8	1,008.6	1,260.6	1,221.0	39.60	31.830	
8,366.1	7,325.2	8,229.6	7,125.8	21.9	23.9	-80.94	-323.0	1,008.6	1,260.6	1,220.2	40.42	31.187	
8,400.0	7,325.2	8,263.5	7,125.6	22.3	24.0	-80.94	-356.8	1,008.6	1,260.7	1,219.8	40.87	30.842	
8,464.5	7,325.1	8,328.0	7,125.4	22.9	24.4	-80.93	-421.4	1,008.6	1,260.7	1,218.8	41.87	30.112	
8,500.0	7,325.1	8,363.5	7,125.2	23.3	24.6	-80.92	-456.8	1,008.6	1,260.7	1,218.3	42.45	29.701	
8,563.0	7,325.0	8,426.4	7,124.9	24.0	25.0	-80.92	-519.8	1,008.6	1,260.7	1,217.2	43.58	28.926	
8,600.0	7,324.9	8,463.5	7,124.7	24.5	25.3	-80.91	-556.8	1,008.6	1,260.8	1,216.5	44.29	28.467	
8,661.4	7,324.8	8,524.9	7,124.5	25.2	25.7	-80.90	-618.2	1,008.6	1,260.8	1,215.2	45.55	27.682	
8,700.0	7,324.8	8,563.5	7,124.3	25.7	26.1	-80.90	-656.8	1,008.6	1,260.8	1,214.4	46.37	27.190	
8,759.8	7,324.7	8,623.3	7,124.0	26.5	26.6	-80.89	-716.7	1,008.6	1,260.8	1,213.1	47.72	26.420	
8,800.0	7,324.6	8,663.5	7,123.8	27.1	26.9	-80.88	-756.8	1,008.6	1,260.9	1,212.2	48.66	25.911	
8,858.2	7,324.5	8,721.7	7,123.6	27.9	27.5	-80.87	-815.1	1,008.6	1,260.9	1,210.8	50.09	25.174	
8,900.0	7,324.5	8,763.5	7,123.4	28.4	27.9	-80.87	-856.8	1,008.6	1,260.9	1,209.8	51.14	24.658	
8,956.7	7,324.4	8,820.1	7,123.1	29.3	28.5	-80.86	-913.5	1,008.6	1,260.9	1,208.3	52.61	23.967	
9,000.0	7,324.3	8,863.5	7,122.9	29.9	29.0	-80.86	-956.8	1,008.6	1,261.0	1,207.2	53.77	23.453	
9,055.1	7,324.3	8,918.6	7,122.7	30.7	29.6	-80.85	-1,011.9	1,008.6	1,261.0	1,205.7	55.28	22.812	
9,100.0	7,324.2	8,963.5	7,122.5	31.4	30.1	-80.84	-1,056.8	1,008.6	1,261.0	1,204.5	56.53	22.306	
9,153.5	7,324.1	9,017.0	7,122.2	32.2	30.7	-80.83	-1,110.3	1,008.6	1,261.0	1,203.0	58.06	21.718	
9,200.0	7,324.0	9,063.5	7,122.0	33.0	31.3	-80.83	-1,156.8	1,008.6	1,261.1	1,201.6	59.42	21.224	
9,251.9	7,324.0	9,115.4	7,121.8	33.8	31.9	-80.82	-1,208.8	1,008.6	1,261.1	1,200.1	60.95	20.689	
9,300.0	7,323.9	9,163.5	7,121.6	34.5	32.5	-80.81	-1,256.8	1,008.6	1,261.1	1,198.7	62.40	20.211	
9,350.4	7,323.8	9,213.8	7,121.4	35.4	33.2	-80.81	-1,307.2	1,008.6	1,261.1	1,197.2	63.93	19.725	
9,400.0	7,323.7	9,263.5	7,121.1	36.2	33.9	-80.80	-1,356.8	1,008.6	1,261.2	1,195.7	65.47	19.264	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MW/D												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	7,323.7	9,312.3	7,120.9	37.0	34.5	-80.79	-1,405.6	1,008.6	1,261.2	1,194.2	66.99	18.826	
9,500.0	7,323.6	9,363.5	7,120.7	37.8	35.2	-80.79	-1,456.8	1,008.6	1,261.2	1,192.6	68.61	18.382	
9,547.2	7,323.5	9,410.7	7,120.5	38.6	35.9	-80.78	-1,504.0	1,008.6	1,261.2	1,191.1	70.12	17.988	
9,600.0	7,323.5	9,463.5	7,120.2	39.5	36.6	-80.77	-1,556.8	1,008.6	1,261.3	1,189.4	71.82	17.562	
9,645.6	7,323.4	9,509.1	7,120.0	40.2	37.3	-80.77	-1,602.5	1,008.6	1,261.3	1,188.0	73.30	17.207	
9,700.0	7,323.3	9,563.5	7,119.8	41.2	38.1	-80.76	-1,656.8	1,008.6	1,261.3	1,186.2	75.08	16.800	
9,744.1	7,323.2	9,607.5	7,119.6	41.9	38.7	-80.75	-1,700.9	1,008.6	1,261.3	1,184.8	76.53	16.481	
9,800.0	7,323.2	9,663.5	7,119.3	42.9	39.6	-80.75	-1,756.8	1,008.6	1,261.4	1,183.0	78.39	16.091	
9,842.5	7,323.1	9,706.0	7,119.1	43.6	40.2	-80.74	-1,799.3	1,008.6	1,261.4	1,181.6	79.81	15.804	
9,900.0	7,323.0	9,763.5	7,118.9	44.6	41.1	-80.73	-1,856.8	1,008.6	1,261.4	1,179.7	81.74	15.431	
9,940.9	7,322.9	9,804.4	7,118.7	45.3	41.7	-80.73	-1,897.7	1,008.6	1,261.4	1,178.3	83.13	15.174	
10,000.0	7,322.9	9,863.5	7,118.4	46.3	42.7	-80.72	-1,956.8	1,008.6	1,261.5	1,176.3	85.14	14.817	
10,039.3	7,322.8	9,902.8	7,118.3	47.0	43.3	-80.71	-1,996.2	1,008.6	1,261.5	1,175.0	86.48	14.587	
10,100.0	7,322.7	9,963.5	7,118.0	48.1	44.2	-80.71	-2,056.8	1,008.6	1,261.5	1,172.9	88.56	14.244	
10,137.8	7,322.6	10,001.2	7,117.8	48.8	44.8	-80.70	-2,094.6	1,008.6	1,261.5	1,171.7	89.86	14.038	
10,200.0	7,322.6	10,063.5	7,117.5	49.9	45.8	-80.69	-2,156.8	1,008.6	1,261.6	1,169.5	92.02	13.710	
10,236.2	7,322.5	10,099.7	7,117.4	50.5	46.4	-80.69	-2,193.0	1,008.6	1,261.6	1,168.3	93.27	13.526	
10,300.0	7,322.4	10,163.5	7,117.1	51.6	47.5	-80.68	-2,256.8	1,008.6	1,261.6	1,166.1	95.50	13.211	
10,334.6	7,322.4	10,198.1	7,116.9	52.3	48.0	-80.68	-2,291.4	1,008.6	1,261.6	1,164.9	96.71	13.046	
10,400.0	7,322.3	10,263.5	7,116.6	53.4	49.1	-80.67	-2,356.8	1,008.6	1,261.7	1,162.7	99.00	12.744	
10,433.0	7,322.2	10,296.5	7,116.5	54.0	49.7	-80.66	-2,389.9	1,008.6	1,261.7	1,161.5	100.16	12.596	
10,500.0	7,322.1	10,363.5	7,116.2	55.2	50.8	-80.65	-2,456.8	1,008.6	1,261.7	1,159.2	102.52	12.306	
10,531.5	7,322.1	10,394.9	7,116.0	55.8	51.3	-80.65	-2,488.3	1,008.6	1,261.7	1,158.1	103.64	12.174	
10,600.0	7,321.9	10,463.5	7,115.7	57.0	52.5	-80.64	-2,556.8	1,008.6	1,261.8	1,155.7	106.07	11.896	
10,629.9	7,321.9	10,493.4	7,115.6	57.6	53.0	-80.64	-2,586.7	1,008.6	1,261.8	1,154.6	107.13	11.778	
10,700.0	7,321.8	10,563.5	7,115.3	58.8	54.2	-80.63	-2,656.8	1,008.6	1,261.8	1,152.2	109.63	11.510	
10,728.3	7,321.8	10,591.8	7,115.2	59.4	54.7	-80.62	-2,685.1	1,008.6	1,261.8	1,151.2	110.64	11.405	
10,800.0	7,321.6	10,663.5	7,114.8	60.7	55.9	-80.61	-2,756.8	1,008.6	1,261.9	1,148.7	113.20	11.147	
10,826.7	7,321.6	10,690.2	7,114.7	61.1	56.4	-80.61	-2,783.5	1,008.6	1,261.9	1,147.7	114.16	11.053	
10,900.0	7,321.5	10,763.5	7,114.4	62.5	57.6	-80.60	-2,856.8	1,008.6	1,261.9	1,145.1	116.79	10.805	
10,925.2	7,321.4	10,788.6	7,114.3	62.9	58.1	-80.60	-2,882.0	1,008.6	1,261.9	1,144.2	117.70	10.722	
11,000.0	7,321.3	10,863.5	7,113.9	64.3	59.4	-80.59	-2,956.8	1,008.6	1,262.0	1,141.6	120.39	10.482	
11,023.6	7,321.3	10,887.1	7,113.8	64.7	59.8	-80.58	-2,980.4	1,008.6	1,262.0	1,140.7	121.25	10.408	
11,100.0	7,321.2	10,963.5	7,113.5	66.1	61.1	-80.57	-3,056.8	1,008.6	1,262.0	1,138.0	124.01	10.177	
11,122.0	7,321.1	10,985.5	7,113.4	66.5	61.5	-80.57	-3,078.8	1,008.6	1,262.0	1,137.2	124.80	10.112	
11,200.0	7,321.0	11,063.5	7,113.1	68.0	62.9	-80.56	-3,156.8	1,008.7	1,262.1	1,134.4	127.63	9.888	
11,220.4	7,321.0	11,083.9	7,113.0	68.4	63.2	-80.56	-3,177.2	1,008.7	1,262.1	1,133.7	128.37	9.831	
11,300.0	7,320.9	11,163.5	7,112.6	69.8	64.7	-80.55	-3,256.8	1,008.7	1,262.1	1,130.8	131.26	9.615	
11,318.9	7,320.8	11,182.3	7,112.5	70.2	65.0	-80.55	-3,275.7	1,008.7	1,262.1	1,130.2	131.95	9.565	
11,400.0	7,320.7	11,263.5	7,112.2	71.7	66.4	-80.54	-3,356.8	1,008.7	1,262.2	1,127.3	134.90	9.356	
11,417.3	7,320.7	11,280.8	7,112.1	72.0	66.7	-80.53	-3,374.1	1,008.7	1,262.2	1,126.6	135.53	9.313	
11,500.0	7,320.6	11,363.5	7,111.7	73.5	68.2	-80.52	-3,456.8	1,008.7	1,262.2	1,123.7	138.55	9.110	
11,515.7	7,320.5	11,379.2	7,111.6	73.8	68.5	-80.52	-3,472.5	1,008.7	1,262.2	1,123.1	139.13	9.072	
11,600.0	7,320.4	11,463.5	7,111.3	75.4	70.0	-80.51	-3,556.8	1,008.7	1,262.3	1,120.1	142.21	8.876	
11,614.1	7,320.4	11,477.6	7,111.2	75.6	70.3	-80.51	-3,570.9	1,008.7	1,262.3	1,119.5	142.73	8.844	
11,700.0	7,320.2	11,563.5	7,110.8	77.2	71.8	-80.50	-3,656.8	1,008.7	1,262.3	1,116.4	145.87	8.653	
11,712.6	7,320.2	11,576.0	7,110.8	77.5	72.0	-80.49	-3,669.4	1,008.7	1,262.3	1,116.0	146.33	8.626	
11,800.0	7,320.1	11,663.5	7,110.4	79.1	73.6	-80.48	-3,756.8	1,008.7	1,262.4	1,112.8	149.54	8.441	
11,811.0	7,320.1	11,674.5	7,110.3	79.3	73.8	-80.48	-3,767.8	1,008.7	1,262.4	1,112.5	149.91	8.421	
11,849.2	7,320.0	11,712.7	7,110.2	79.8	74.5	-80.48	-3,806.0	1,008.7	1,262.4	1,111.2	151.16	8.351	
11,849.6	7,320.0	11,713.1	7,110.2	79.8	74.5	-80.48	-3,806.4	1,008.7	1,262.4	1,111.2	151.17	8.351 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	91.59	-2.9	104.9	104.9				
98.4	98.4	97.4	97.4	0.1	0.1	91.59	-2.9	104.9	104.9	104.8	0.17	620.661	
100.0	100.0	99.0	99.0	0.1	0.1	91.59	-2.9	104.9	104.9	104.8	0.17	609.370	
196.8	196.8	195.8	195.8	0.3	0.3	91.59	-2.9	104.9	104.9	104.3	0.61	173.107	
200.0	200.0	199.0	199.0	0.3	0.3	91.59	-2.9	104.9	104.9	104.3	0.62	169.155	
295.3	295.3	294.3	294.3	0.5	0.5	91.59	-2.9	104.9	104.9	103.9	1.05	100.068	
300.0	300.0	299.0	299.0	0.5	0.5	91.59	-2.9	104.9	104.9	103.9	1.07	98.082	
393.7	393.7	392.7	392.7	0.7	0.7	91.59	-2.9	104.9	104.9	103.4	1.49	70.375	
400.0	400.0	399.0	399.0	0.8	0.8	91.59	-2.9	104.9	104.9	103.4	1.52	69.063	
492.1	492.1	491.1	491.1	1.0	1.0	91.59	-2.9	104.9	104.9	103.0	1.93	54.271	
500.0	500.0	499.0	499.0	1.0	1.0	91.59	-2.9	104.9	104.9	103.0	1.97	53.296	
590.5	590.5	589.5	589.5	1.2	1.2	91.59	-2.9	104.9	104.9	102.6	2.38	44.165	
600.0	600.0	599.0	599.0	1.2	1.2	91.59	-2.9	104.9	104.9	102.5	2.42	43.389	
689.0	689.0	688.0	688.0	1.4	1.4	91.59	-2.9	104.9	104.9	102.1	2.82	37.232	
700.0	700.0	699.0	699.0	1.4	1.4	91.59	-2.9	104.9	104.9	102.1	2.87	36.588	
787.4	787.4	786.4	786.4	1.6	1.6	91.59	-2.9	104.9	104.9	101.7	3.26	32.180	
800.0	800.0	799.0	799.0	1.7	1.7	91.59	-2.9	104.9	104.9	101.6	3.32	31.631	
885.8	885.8	884.8	884.8	1.9	1.9	91.59	-2.9	104.9	104.9	101.2	3.70	28.335	
900.0	900.0	899.0	899.0	1.9	1.9	91.59	-2.9	104.9	104.9	101.2	3.77	27.856	
984.2	984.2	983.2	983.2	2.1	2.1	91.59	-2.9	104.9	104.9	100.8	4.15	25.311	
1,000.0	1,000.0	999.0	999.0	2.1	2.1	91.59	-2.9	104.9	104.9	100.7	4.22	24.886	
1,082.7	1,082.7	1,081.7	1,081.7	2.3	2.3	91.59	-2.9	104.9	104.9	100.3	4.59	22.871	
1,100.0	1,100.0	1,099.0	1,099.0	2.3	2.3	91.59	-2.9	104.9	104.9	100.3	4.67	22.489	
1,181.1	1,181.1	1,180.1	1,180.1	2.5	2.5	91.59	-2.9	104.9	104.9	99.9	5.03	20.859	
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	91.59	-2.9	104.9	104.9	99.8	5.12	20.513	
1,279.5	1,279.5	1,278.5	1,278.5	2.7	2.7	91.59	-2.9	104.9	104.9	99.5	5.47	19.173	
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	91.59	-2.9	104.9	104.9	99.4	5.57	18.856	
1,377.9	1,377.9	1,376.9	1,376.9	3.0	3.0	91.59	-2.9	104.9	104.9	99.0	5.92	17.739	
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	91.59	-2.9	104.9	104.9	98.9	6.01	17.447	
1,450.0	1,450.0	1,449.0	1,449.0	3.1	3.1	91.59	-2.9	104.9	104.9	98.7	6.24	16.818 CC	
1,476.4	1,476.4	1,475.4	1,475.4	3.2	3.2	105.95	-2.9	104.9	105.0	98.6	6.36	16.510	
1,500.0	1,500.0	1,499.0	1,499.0	3.2	3.2	106.11	-2.9	104.9	105.1	98.6	6.46	16.253 ES	
1,574.8	1,574.8	1,573.1	1,573.1	3.4	3.4	107.24	-2.9	105.0	105.8	99.0	6.79	15.570	
1,600.0	1,599.9	1,597.5	1,597.5	3.5	3.4	107.74	-2.7	105.2	106.4	99.5	6.90	15.413	
1,673.2	1,673.0	1,668.4	1,668.4	3.6	3.6	109.36	-1.6	107.0	109.6	102.4	7.22	15.191	
1,700.0	1,699.7	1,694.3	1,694.2	3.7	3.7	110.00	-1.0	108.0	111.4	104.0	7.33	15.189	
1,771.6	1,771.0	1,763.4	1,763.2	3.9	3.8	111.77	1.3	111.7	117.4	109.8	7.64	15.362	
1,800.0	1,799.1	1,790.7	1,790.4	3.9	3.9	112.48	2.4	113.5	120.4	112.6	7.77	15.502	
1,870.1	1,868.6	1,857.9	1,857.3	4.1	4.0	114.19	5.8	118.9	129.2	121.1	8.08	15.989	
1,900.0	1,898.2	1,886.5	1,885.7	4.2	4.1	114.89	7.5	121.7	133.6	125.4	8.21	16.262	
1,968.5	1,965.7	1,951.6	1,950.3	4.3	4.2	116.39	11.9	128.8	145.0	136.5	8.53	16.988	
2,000.0	1,996.6	1,981.4	1,979.8	4.4	4.3	117.03	14.2	132.5	150.9	142.2	8.68	17.380	
2,049.8	2,045.4	2,028.3	2,026.1	4.6	4.4	117.97	18.1	138.8	161.0	152.1	8.92	18.041	
2,066.9	2,062.2	2,044.4	2,041.9	4.6	4.5	118.32	19.5	141.1	164.7	155.7	9.01	18.276	
2,100.0	2,094.5	2,075.4	2,072.4	4.7	4.6	118.89	22.4	145.7	172.0	162.9	9.18	18.738	
2,165.3	2,158.5	2,136.3	2,132.3	4.9	4.7	119.66	28.6	155.7	187.2	177.7	9.53	19.646	
2,200.0	2,192.3	2,168.5	2,163.7	5.1	4.8	119.90	32.1	161.4	195.7	186.0	9.72	20.135	
2,263.8	2,254.7	2,227.4	2,221.2	5.3	5.0	120.10	39.1	172.7	211.8	201.8	10.08	21.018	
2,300.0	2,290.2	2,260.7	2,253.5	5.4	5.2	120.09	43.3	179.5	221.4	211.1	10.29	21.519	
2,362.2	2,351.0	2,317.6	2,308.4	5.6	5.4	119.90	50.9	191.8	238.4	227.8	10.66	22.366	
2,400.0	2,388.0	2,351.9	2,341.4	5.8	5.5	119.70	55.8	199.7	249.2	238.3	10.89	22.875	
2,460.6	2,447.3	2,406.5	2,393.8	6.0	5.7	119.28	64.0	212.9	267.0	255.7	11.27	23.681	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,485.8	2,441.7	2,427.4	6.1	5.9	118.94	69.6	221.9	278.9	267.4	11.53	24.192	
2,559.0	2,543.6	2,494.2	2,477.2	6.3	6.1	118.37	78.3	236.0	297.5	285.6	11.92	24.962	
2,600.0	2,583.6	2,530.2	2,511.2	6.5	6.3	117.93	84.5	246.1	310.8	298.6	12.20	25.482	
2,657.5	2,639.8	2,580.4	2,558.3	6.7	6.6	117.28	93.6	260.7	330.1	317.5	12.59	26.210	
2,700.0	2,681.4	2,617.1	2,592.6	6.9	6.8	116.77	100.6	271.9	344.7	331.9	12.89	26.745	
2,755.9	2,736.1	2,665.0	2,637.1	7.1	7.1	116.09	109.9	287.0	364.6	351.4	13.29	27.436	
2,800.0	2,779.2	2,700.0	2,669.4	7.3	7.3	115.57	117.0	298.5	380.8	367.2	13.59	28.012	
2,854.3	2,832.4	2,748.0	2,713.4	7.5	7.6	114.84	127.1	314.8	401.3	387.3	14.01	28.650	
2,900.0	2,877.1	2,787.0	2,748.9	7.7	7.9	114.25	135.6	328.4	419.0	404.7	14.35	29.204	
2,952.7	2,928.7	2,835.3	2,792.8	7.9	8.2	113.55	146.1	345.4	439.6	424.9	14.76	29.779	
3,000.0	2,974.9	2,878.5	2,832.2	8.1	8.5	112.98	155.6	360.7	458.2	443.0	15.13	30.273	
3,051.2	3,024.9	2,925.4	2,874.8	8.3	8.8	112.42	165.8	377.2	478.3	462.7	15.54	30.775	
3,100.0	3,072.7	2,970.1	2,915.5	8.5	9.2	111.92	175.6	393.0	497.5	481.6	15.93	31.229	
3,149.6	3,121.2	3,015.5	2,956.8	8.7	9.5	111.45	185.5	409.1	517.0	500.7	16.33	31.666	
3,200.0	3,170.5	3,061.7	2,998.8	8.9	9.9	111.01	195.6	425.4	536.9	520.2	16.74	32.084	
3,248.0	3,217.5	3,105.7	3,038.8	9.1	10.2	110.61	205.3	440.9	555.9	538.8	17.12	32.464	
3,300.0	3,268.3	3,153.3	3,082.1	9.3	10.6	110.22	215.7	457.7	576.5	558.9	17.55	32.851	
3,346.4	3,313.8	3,195.8	3,120.8	9.5	10.9	109.89	225.0	472.7	594.9	576.9	17.93	33.181	
3,400.0	3,366.1	3,244.8	3,165.4	9.7	11.3	109.53	235.7	490.0	616.1	597.7	18.37	33.541	
3,444.9	3,410.0	3,285.9	3,202.8	9.9	11.6	109.25	244.7	504.5	633.9	615.2	18.74	33.829	
3,500.0	3,464.0	3,336.4	3,248.7	10.2	12.0	108.93	255.7	522.3	655.8	636.6	19.19	34.165	
3,543.3	3,506.3	3,376.1	3,284.8	10.3	12.3	108.69	264.4	536.3	673.0	653.4	19.55	34.417	
3,600.0	3,561.8	3,428.0	3,332.1	10.6	12.7	108.39	275.7	554.7	695.5	675.5	20.03	34.731	
3,641.7	3,602.6	3,466.2	3,366.8	10.8	13.1	108.19	284.1	568.1	712.1	691.8	20.38	34.951	
3,700.0	3,659.6	3,519.6	3,415.4	11.0	13.5	107.92	295.8	587.0	735.3	714.5	20.86	35.246	
3,740.1	3,698.9	3,556.4	3,448.8	11.2	13.8	107.74	303.8	600.0	751.3	730.1	21.20	35.439	
3,800.0	3,757.4	3,611.2	3,498.7	11.4	14.2	107.49	315.8	619.3	775.2	753.5	21.70	35.717	
3,838.6	3,795.1	3,646.5	3,530.8	11.6	14.5	107.33	323.5	631.8	790.5	768.5	22.03	35.886	
3,900.0	3,855.2	3,702.7	3,582.0	11.9	15.0	107.10	335.8	651.6	815.0	792.5	22.55	36.148	
3,937.0	3,891.4	3,736.6	3,612.8	12.0	15.3	106.97	343.2	663.6	829.8	806.9	22.86	36.297	
4,000.0	3,953.0	3,794.3	3,665.3	12.3	15.7	106.75	355.9	683.9	854.9	831.5	23.39	36.543	
4,035.4	3,987.7	3,826.8	3,694.8	12.4	16.0	106.63	363.0	695.4	869.0	845.3	23.70	36.675	
4,100.0	4,050.9	3,885.9	3,748.6	12.7	16.5	106.43	375.9	716.3	894.8	870.6	24.24	36.908	
4,133.8	4,084.0	3,916.9	3,776.8	12.9	16.7	106.33	382.7	727.2	908.3	883.8	24.53	37.024	
4,200.0	4,148.7	3,977.5	3,831.9	13.2	17.3	106.14	395.9	748.6	934.8	909.7	25.10	37.244	
4,232.3	4,180.2	4,007.0	3,858.8	13.3	17.5	106.05	402.4	759.0	947.7	922.3	25.37	37.348	
4,300.0	4,246.5	4,069.1	3,915.2	13.6	18.0	105.87	415.9	780.9	974.7	948.8	25.95	37.556	
4,330.7	4,276.5	4,097.2	3,940.8	13.7	18.3	105.79	422.1	790.8	987.0	960.8	26.22	37.648	
4,400.0	4,344.3	4,160.6	3,998.5	14.0	18.8	105.62	436.0	813.2	1,014.7	987.9	26.81	37.846	
4,429.1	4,372.8	4,187.3	4,022.8	14.1	19.0	105.55	441.8	822.7	1,026.3	999.3	27.06	37.927	
4,500.0	4,442.1	4,252.2	4,081.9	14.5	19.5	105.39	456.0	845.6	1,054.7	1,027.0	27.67	38.116	
4,527.5	4,469.1	4,277.4	4,104.8	14.6	19.8	105.33	461.5	854.5	1,065.7	1,037.8	27.91	38.187	
4,600.0	4,539.9	4,343.8	4,165.2	14.9	20.3	105.18	476.0	877.9	1,094.7	1,066.1	28.53	38.367	
4,626.0	4,565.4	4,367.6	4,186.8	15.0	20.5	105.13	481.2	886.3	1,105.1	1,076.3	28.76	38.430	
4,700.0	4,637.8	4,435.4	4,248.5	15.3	21.1	104.98	496.0	910.2	1,134.7	1,105.3	29.39	38.602	
4,724.4	4,661.6	4,457.7	4,268.8	15.4	21.3	104.94	500.9	918.1	1,144.5	1,114.8	29.61	38.657	
4,800.0	4,735.6	4,527.0	4,331.8	15.8	21.9	104.80	516.1	942.5	1,174.7	1,144.5	30.26	38.822	
4,822.8	4,757.9	4,547.9	4,350.8	15.9	22.0	104.76	520.6	949.9	1,183.8	1,153.4	30.46	38.870	
4,900.0	4,833.4	4,618.5	4,415.1	16.2	22.6	104.63	536.1	974.9	1,214.7	1,183.6	31.12	39.028	
4,921.2	4,854.2	4,638.0	4,432.8	16.3	22.8	104.59	540.4	981.7	1,223.3	1,191.9	31.31	39.070	
5,000.0	4,931.2	4,710.1	4,498.4	16.6	23.4	104.47	556.1	1,007.2	1,254.8	1,222.8	31.99	39.222	
5,019.7	4,950.5	4,728.1	4,514.8	16.7	23.6	104.44	560.1	1,013.6	1,262.7	1,230.5	32.16	39.259	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,029.0	4,801.7	4,581.7	17.1	24.2	104.32	576.2	1,039.5	1,294.8	1,262.0	32.86	39.405	
5,118.1	5,046.7	4,818.3	4,596.8	17.1	24.3	104.29	579.8	1,045.4	1,302.1	1,269.1	33.02	39.437	
5,200.0	5,126.8	4,893.3	4,665.0	17.5	25.0	104.18	596.2	1,071.8	1,334.9	1,301.2	33.73	39.577	
5,216.5	5,143.0	4,908.4	4,678.8	17.6	25.1	104.15	599.5	1,077.2	1,341.5	1,307.6	33.87	39.604	
5,300.0	5,224.7	4,984.8	4,748.3	17.9	25.7	104.04	616.2	1,104.2	1,375.0	1,340.4	34.60	39.739	
5,314.9	5,239.3	4,998.5	4,760.8	18.0	25.9	104.02	619.2	1,109.0	1,380.9	1,346.2	34.73	39.763	
5,400.0	5,322.5	5,076.4	4,831.7	18.4	26.5	103.92	636.2	1,136.5	1,415.0	1,379.5	35.47	39.892	
5,413.4	5,335.6	5,088.7	4,842.8	18.4	26.6	103.90	638.9	1,140.8	1,420.4	1,384.8	35.59	39.912	
5,500.0	5,420.3	5,168.0	4,915.0	18.8	27.3	103.80	656.3	1,168.8	1,455.1	1,418.7	36.34	40.038	
5,511.8	5,431.8	5,178.8	4,924.8	18.9	27.4	103.79	658.6	1,172.6	1,459.8	1,423.4	36.45	40.054	
5,600.0	5,518.1	5,259.6	4,998.3	19.3	28.1	103.69	676.3	1,201.1	1,495.2	1,458.0	37.22	40.175	
5,610.2	5,528.1	5,268.9	5,006.8	19.3	28.2	103.67	678.3	1,204.4	1,499.3	1,462.0	37.31	40.189	
5,700.0	5,615.9	5,351.2	5,081.6	19.7	28.9	103.58	696.3	1,233.5	1,535.3	1,497.2	38.09	40.306	
5,708.6	5,624.4	5,359.1	5,088.8	19.7	28.9	103.57	698.1	1,236.3	1,538.7	1,500.6	38.17	40.317	
5,800.0	5,713.7	5,442.7	5,164.9	20.1	29.6	103.48	716.4	1,265.8	1,575.3	1,536.4	38.96	40.430	
5,807.1	5,720.7	5,449.2	5,170.8	20.2	29.7	103.47	717.8	1,268.1	1,578.2	1,539.1	39.03	40.439	
5,900.0	5,811.6	5,583.5	5,293.7	20.6	30.7	103.37	746.2	1,314.0	1,614.6	1,574.6	40.00	40.360	
5,905.5	5,816.9	5,593.2	5,302.7	20.6	30.7	103.37	748.2	1,317.1	1,616.6	1,576.6	40.07	40.347	
6,000.0	5,909.4	5,762.9	5,461.5	21.0	31.7	103.44	779.5	1,367.8	1,649.4	1,608.3	41.15	40.087	
6,003.9	5,913.2	5,770.1	5,468.3	21.0	31.7	103.45	780.8	1,369.8	1,650.7	1,609.5	41.19	40.074	
6,053.2	5,961.4	5,861.0	5,554.9	21.3	32.2	103.57	795.4	1,393.4	1,665.9	1,624.2	41.75	39.901	
6,100.0	6,007.3	5,948.7	5,639.2	21.4	32.6	103.98	808.2	1,414.0	1,679.2	1,636.8	42.34	39.661	
6,102.3	6,009.6	5,953.1	5,643.5	21.5	32.6	104.00	808.8	1,415.0	1,679.8	1,637.4	42.37	39.650	
6,200.0	6,105.7	6,140.3	5,825.7	21.8	33.4	104.75	831.3	1,451.2	1,702.9	1,659.4	43.45	39.195	
6,200.8	6,106.5	6,141.8	5,827.1	21.8	33.4	104.76	831.4	1,451.5	1,703.0	1,659.6	43.45	39.192	
6,299.2	6,203.9	6,334.9	6,017.6	22.0	34.0	105.40	847.9	1,478.2	1,720.1	1,675.7	44.39	38.748	
6,300.0	6,204.7	6,336.5	6,019.2	22.0	34.0	105.40	848.1	1,478.4	1,720.2	1,675.8	44.40	38.745	
6,397.6	6,301.8	6,531.0	6,212.8	22.3	34.4	105.93	857.8	1,494.0	1,730.8	1,685.6	45.16	38.324	
6,400.0	6,304.2	6,535.8	6,217.6	22.3	34.4	105.94	857.9	1,494.3	1,731.0	1,685.8	45.18	38.314	
6,496.0	6,400.0	6,717.3	6,399.0	22.4	34.6	106.34	860.6	1,498.6	1,735.0	1,689.2	45.74	37.929	
6,500.0	6,403.9	6,721.2	6,402.9	22.5	34.6	106.35	860.6	1,498.6	1,735.0	1,689.3	45.76	37.917	
6,594.5	6,498.3	6,808.6	6,490.2	22.6	34.6	106.60	856.9	1,498.6	1,736.2	1,690.1	46.05	37.703	
6,600.0	6,503.8	6,813.6	6,495.2	22.6	34.6	106.62	856.4	1,498.6	1,736.2	1,690.2	46.06	37.693	
6,653.0	6,556.8	6,861.0	6,542.1	22.7	34.6	92.57	849.7	1,498.6	1,736.7	1,690.5	46.18	37.608	
6,692.9	6,596.7	6,896.1	6,576.5	22.7	34.6	92.80	842.8	1,498.6	1,737.1	1,690.8	46.25	37.561	
6,706.0	6,609.8	6,907.4	6,587.5	22.7	34.6	92.88	840.2	1,498.6	1,737.2	1,691.0	46.27	37.548	
6,750.0	6,653.8	6,945.2	6,624.0	22.8	34.6	-86.78	830.3	1,498.6	1,737.8	1,691.5	46.32	37.514	
6,791.3	6,695.0	6,980.4	6,657.4	22.8	34.5	-86.48	819.3	1,498.6	1,738.3	1,692.0	46.32	37.532	
6,800.0	6,703.6	6,987.7	6,664.3	22.8	34.5	-86.42	816.8	1,498.6	1,738.5	1,692.1	46.31	37.537	
6,850.0	6,752.9	7,029.7	6,703.3	22.8	34.4	-86.07	801.2	1,498.6	1,739.2	1,692.9	46.23	37.617	
6,889.7	6,791.6	7,062.8	6,733.3	22.7	34.3	-85.80	787.3	1,498.6	1,739.8	1,693.6	46.12	37.723	
6,900.0	6,801.5	7,071.3	6,740.9	22.7	34.3	-85.73	783.6	1,498.6	1,739.9	1,693.8	46.08	37.754	
6,950.0	6,849.1	7,112.5	6,777.1	22.6	34.2	-85.42	763.9	1,498.6	1,740.7	1,694.8	45.87	37.947	
6,988.2	6,884.8	7,143.8	6,803.8	22.5	34.1	-85.19	747.7	1,498.6	1,741.2	1,695.6	45.66	38.132	
7,000.0	6,895.7	7,150.0	6,809.0	22.5	34.1	-85.14	744.3	1,498.6	1,741.4	1,695.8	45.61	38.181	
7,050.0	6,940.8	7,194.0	6,845.1	22.3	34.0	-84.84	719.1	1,498.6	1,742.1	1,696.9	45.26	38.490	
7,086.6	6,972.8	7,223.5	6,868.4	22.1	33.9	-84.65	701.1	1,498.6	1,742.6	1,697.7	44.98	38.742	
7,100.0	6,984.3	7,234.3	6,876.8	22.1	33.8	-84.59	694.2	1,498.6	1,742.8	1,698.0	44.88	38.837	
7,150.0	7,025.9	7,274.3	6,906.8	21.9	33.7	-84.35	667.7	1,498.6	1,743.5	1,699.1	44.45	39.228	
7,185.0	7,053.9	7,300.0	6,925.2	21.7	33.6	-84.21	649.8	1,498.6	1,744.0	1,699.8	44.13	39.515	
7,200.0	7,065.6	7,314.1	6,935.1	21.7	33.5	-84.14	639.7	1,498.6	1,744.1	1,700.2	43.98	39.657	
7,250.0	7,103.0	7,350.0	6,959.2	21.4	33.4	-83.96	613.2	1,498.6	1,744.7	1,701.2	43.51	40.101	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,283.4	7,126.7	7,380.1	6,978.5	21.2	33.3	-83.84	590.0	1,498.6	1,745.1	1,701.9	43.15	40.444	
7,300.0	7,138.0	7,393.2	6,986.5	21.2	33.2	-83.79	579.7	1,498.6	1,745.2	1,702.2	42.98	40.608	
7,350.0	7,170.5	7,432.5	7,009.5	20.9	33.0	-83.65	547.9	1,498.6	1,745.7	1,703.2	42.46	41.114	
7,381.9	7,189.8	7,457.5	7,023.3	20.8	32.9	-83.57	527.0	1,498.6	1,745.9	1,703.8	42.13	41.441	
7,400.0	7,200.2	7,471.7	7,030.7	20.7	32.9	-83.54	514.9	1,498.6	1,746.0	1,704.1	41.94	41.628	
7,450.0	7,227.0	7,510.8	7,050.0	20.4	32.7	-83.45	480.9	1,498.6	1,746.3	1,704.9	41.44	42.138	
7,480.3	7,241.9	7,534.5	7,060.8	20.3	32.6	-83.41	459.8	1,498.6	1,746.4	1,705.3	41.15	42.438	
7,500.0	7,250.9	7,550.0	7,067.5	20.2	32.6	-83.39	445.8	1,498.6	1,746.5	1,705.6	40.96	42.635	
7,550.0	7,271.6	7,588.9	7,082.9	20.0	32.4	-83.35	410.1	1,498.6	1,746.6	1,706.1	40.53	43.098	
7,578.7	7,282.0	7,611.3	7,090.9	19.9	32.3	-83.35	389.2	1,498.6	1,746.7	1,706.4	40.30	43.343	
7,600.0	7,289.1	7,627.8	7,096.4	19.8	32.2	-83.35	373.5	1,498.6	1,746.7	1,706.5	40.13	43.521	
7,650.0	7,303.3	7,666.8	7,107.8	19.6	32.1	-83.37	336.3	1,498.6	1,746.6	1,706.8	39.80	43.890	
7,677.1	7,309.5	7,688.0	7,113.2	19.5	32.0	-83.39	315.8	1,498.6	1,746.5	1,706.9	39.64	44.058	
7,700.0	7,314.1	7,705.9	7,117.2	19.5	31.9	-83.41	298.4	1,498.6	1,746.4	1,706.9	39.52	44.194	
7,750.0	7,321.4	7,750.0	7,125.4	19.4	31.8	-83.49	255.0	1,498.6	1,746.2	1,706.9	39.30	44.434	
7,775.6	7,323.9	7,764.9	7,127.6	19.3	31.7	-83.53	240.3	1,498.6	1,746.1	1,706.8	39.24	44.496	
7,800.0	7,325.3	7,784.1	7,129.9	19.3	31.7	-83.58	221.3	1,498.6	1,745.9	1,706.7	39.18	44.561	
7,832.0	7,326.0	7,809.1	7,132.1	19.3	31.6	-83.66	196.3	1,498.6	1,745.6	1,706.5	39.13	44.607	
7,874.0	7,325.9	7,842.2	7,133.7	19.3	31.5	-83.71	163.2	1,498.6	1,745.4	1,706.2	39.16	44.566	
7,899.1	7,325.9	7,862.1	7,134.0	19.3	31.4	-83.72	143.4	1,498.6	1,745.4	1,706.2	39.19	44.535	
7,900.0	7,325.9	7,862.8	7,134.0	19.3	31.4	-83.72	142.7	1,498.6	1,745.4	1,706.2	39.19	44.534	
7,972.4	7,325.8	7,934.2	7,133.5	19.4	31.3	-83.71	71.3	1,498.6	1,745.4	1,705.9	39.47	44.223	
8,000.0	7,325.8	7,961.8	7,133.3	19.5	31.2	-83.70	43.7	1,498.6	1,745.4	1,705.8	39.59	44.086	
8,070.8	7,325.7	8,032.6	7,132.7	19.8	31.1	-83.69	-27.1	1,498.6	1,745.5	1,705.4	40.10	43.533	
8,100.0	7,325.6	8,061.8	7,132.5	19.9	31.1	-83.68	-56.3	1,498.6	1,745.5	1,705.2	40.33	43.280	
8,169.3	7,325.5	8,131.1	7,132.0	20.3	31.1	-83.67	-125.6	1,498.6	1,745.5	1,704.5	41.06	42.514	
8,200.0	7,325.5	8,161.8	7,131.8	20.5	31.1	-83.66	-156.3	1,498.6	1,745.6	1,704.2	41.41	42.154	
8,267.7	7,325.4	8,229.5	7,131.3	21.1	31.1	-83.65	-224.0	1,498.6	1,745.6	1,703.3	42.33	41.235	
8,300.0	7,325.3	8,261.8	7,131.0	21.3	31.2	-83.64	-256.3	1,498.6	1,745.6	1,702.8	42.80	40.784	
8,366.1	7,325.2	8,327.9	7,130.5	21.9	31.3	-83.63	-322.4	1,498.6	1,745.7	1,701.8	43.89	39.771	
8,400.0	7,325.2	8,361.8	7,130.3	22.3	31.4	-83.62	-356.3	1,498.6	1,745.7	1,701.2	44.48	39.247	
8,464.5	7,325.1	8,426.3	7,129.8	22.9	31.6	-83.61	-420.8	1,498.6	1,745.7	1,700.0	45.71	38.192	
8,500.0	7,325.1	8,461.8	7,129.5	23.3	31.7	-83.60	-456.3	1,498.6	1,745.8	1,699.4	46.41	37.615	
8,563.0	7,325.0	8,524.8	7,129.0	24.0	32.0	-83.59	-519.2	1,498.6	1,745.8	1,698.1	47.75	36.559	
8,600.0	7,324.9	8,561.8	7,128.8	24.5	32.2	-83.58	-556.3	1,498.6	1,745.8	1,697.3	48.57	35.947	
8,661.4	7,324.8	8,623.2	7,128.3	25.2	32.5	-83.57	-617.7	1,498.6	1,745.9	1,695.9	50.00	34.920	
8,700.0	7,324.8	8,661.8	7,128.0	25.7	32.8	-83.56	-656.3	1,498.6	1,745.9	1,695.0	50.92	34.289	
8,759.8	7,324.7	8,721.6	7,127.6	26.5	33.2	-83.55	-716.1	1,498.6	1,746.0	1,693.5	52.41	33.311	
8,800.0	7,324.6	8,761.8	7,127.3	27.1	33.6	-83.54	-756.3	1,498.6	1,746.0	1,692.5	53.44	32.672	
8,858.2	7,324.5	8,820.0	7,126.8	27.9	34.1	-83.53	-814.5	1,498.6	1,746.0	1,691.0	54.98	31.757	
8,900.0	7,324.5	8,861.8	7,126.5	28.4	34.4	-83.52	-856.3	1,498.6	1,746.0	1,689.9	56.11	31.120	
8,956.7	7,324.4	8,918.4	7,126.1	29.3	35.0	-83.51	-912.9	1,498.6	1,746.1	1,688.4	57.68	30.272	
9,000.0	7,324.3	8,961.8	7,125.8	29.9	35.4	-83.50	-956.2	1,498.6	1,746.1	1,687.2	58.90	29.645	
9,055.1	7,324.3	9,016.9	7,125.3	30.7	36.0	-83.49	-1,011.3	1,498.6	1,746.2	1,685.7	60.49	28.866	
9,100.0	7,324.2	9,061.8	7,125.0	31.4	36.5	-83.48	-1,056.2	1,498.6	1,746.2	1,684.4	61.80	28.253	
9,153.5	7,324.1	9,115.3	7,124.6	32.2	37.2	-83.47	-1,109.8	1,498.6	1,746.2	1,682.8	63.40	27.542	
9,200.0	7,324.0	9,161.8	7,124.3	33.0	37.7	-83.46	-1,156.2	1,498.6	1,746.3	1,681.5	64.80	26.947	
9,251.9	7,324.0	9,213.7	7,123.9	33.8	38.4	-83.45	-1,208.2	1,498.6	1,746.3	1,679.9	66.40	26.301	
9,300.0	7,323.9	9,261.8	7,123.5	34.5	39.0	-83.44	-1,256.2	1,498.6	1,746.3	1,678.4	67.89	25.725	
9,350.4	7,323.8	9,312.1	7,123.1	35.4	39.6	-83.43	-1,306.6	1,498.6	1,746.4	1,676.9	69.47	25.140	
9,400.0	7,323.7	9,361.8	7,122.8	36.2	40.3	-83.42	-1,356.2	1,498.6	1,746.4	1,675.4	71.04	24.584	
9,448.8	7,323.7	9,410.6	7,122.4	37.0	41.0	-83.41	-1,405.0	1,498.6	1,746.4	1,673.8	72.60	24.055	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - OLSON 30R-223 - ORIGINAL WELLBORE - PROPOSAL #2												Offset Site Error:	0.0 usft
Survey Program: 0-MW/D												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	7,323.6	9,461.8	7,122.0	37.8	41.7	-83.40	-1,456.2	1,498.6	1,746.5	1,672.2	74.25	23.520	
9,547.2	7,323.5	9,509.0	7,121.7	38.6	42.3	-83.40	-1,503.4	1,498.6	1,746.5	1,670.7	75.79	23.043	
9,600.0	7,323.5	9,561.8	7,121.3	39.5	43.1	-83.38	-1,556.2	1,498.6	1,746.5	1,669.0	77.52	22.529	
9,645.6	7,323.4	9,607.4	7,120.9	40.2	43.8	-83.38	-1,601.9	1,498.6	1,746.6	1,667.5	79.03	22.099	
9,700.0	7,323.3	9,661.8	7,120.5	41.2	44.6	-83.37	-1,656.2	1,498.6	1,746.6	1,665.8	80.84	21.605	
9,744.1	7,323.2	9,705.8	7,120.2	41.9	45.2	-83.36	-1,700.3	1,498.6	1,746.6	1,664.3	82.32	21.218	
9,800.0	7,323.2	9,761.8	7,119.8	42.9	46.1	-83.35	-1,756.2	1,498.6	1,746.7	1,662.5	84.20	20.744	
9,842.5	7,323.1	9,804.3	7,119.4	43.6	46.7	-83.34	-1,798.7	1,498.6	1,746.7	1,661.1	85.64	20.396	
9,900.0	7,323.0	9,861.8	7,119.0	44.6	47.6	-83.33	-1,856.2	1,498.6	1,746.7	1,659.2	87.60	19.940	
9,940.9	7,322.9	9,902.7	7,118.7	45.3	48.2	-83.32	-1,897.1	1,498.6	1,746.8	1,657.8	89.00	19.627	
10,000.0	7,322.9	9,961.7	7,118.3	46.3	49.2	-83.31	-1,956.2	1,498.6	1,746.8	1,655.8	91.03	19.190	
10,039.3	7,322.8	10,001.1	7,118.0	47.0	49.8	-83.30	-1,995.6	1,498.6	1,746.8	1,654.5	92.39	18.908	
10,100.0	7,322.7	10,061.7	7,117.5	48.1	50.8	-83.29	-2,056.2	1,498.6	1,746.9	1,652.4	94.49	18.488	
10,137.8	7,322.6	10,099.5	7,117.2	48.8	51.4	-83.28	-2,094.0	1,498.6	1,746.9	1,651.1	95.80	18.234	
10,200.0	7,322.6	10,161.7	7,116.8	49.9	52.4	-83.27	-2,156.2	1,498.6	1,747.0	1,649.0	97.98	17.831	
10,236.2	7,322.5	10,197.9	7,116.5	50.5	53.0	-83.26	-2,192.4	1,498.6	1,747.0	1,647.7	99.24	17.603	
10,300.0	7,322.4	10,261.7	7,116.0	51.6	54.0	-83.25	-2,256.2	1,498.6	1,747.0	1,645.5	101.49	17.215	
10,334.6	7,322.4	10,296.4	7,115.7	52.3	54.6	-83.24	-2,290.8	1,498.6	1,747.1	1,644.4	102.71	17.010	
10,400.0	7,322.3	10,361.7	7,115.3	53.4	55.7	-83.23	-2,356.2	1,498.6	1,747.1	1,642.1	105.02	16.636	
10,433.0	7,322.2	10,394.8	7,115.0	54.0	56.2	-83.22	-2,389.2	1,498.6	1,747.1	1,640.9	106.19	16.453	
10,500.0	7,322.1	10,461.7	7,114.5	55.2	57.3	-83.21	-2,456.2	1,498.6	1,747.2	1,638.6	108.57	16.093	
10,531.5	7,322.1	10,493.2	7,114.3	55.8	57.8	-83.20	-2,487.7	1,498.6	1,747.2	1,637.5	109.69	15.929	
10,600.0	7,321.9	10,561.7	7,113.7	57.0	59.0	-83.19	-2,556.2	1,498.6	1,747.3	1,635.1	112.13	15.582	
10,629.9	7,321.9	10,591.6	7,113.5	57.6	59.5	-83.18	-2,586.1	1,498.6	1,747.3	1,634.1	113.20	15.435	
10,700.0	7,321.8	10,661.7	7,113.0	58.8	60.7	-83.17	-2,656.2	1,498.6	1,747.3	1,631.6	115.72	15.100	
10,728.3	7,321.8	10,690.1	7,112.8	59.4	61.2	-83.16	-2,684.5	1,498.6	1,747.3	1,630.6	116.74	14.968	
10,800.0	7,321.6	10,761.7	7,112.2	60.7	62.4	-83.15	-2,756.2	1,498.6	1,747.4	1,628.1	119.32	14.645	
10,826.7	7,321.6	10,788.5	7,112.0	61.1	62.9	-83.15	-2,782.9	1,498.6	1,747.4	1,627.1	120.28	14.528	
10,900.0	7,321.5	10,861.7	7,111.5	62.5	64.1	-83.13	-2,856.2	1,498.6	1,747.5	1,624.5	122.93	14.216	
10,925.2	7,321.4	10,886.9	7,111.3	62.9	64.6	-83.13	-2,881.3	1,498.6	1,747.5	1,623.7	123.84	14.111	
11,000.0	7,321.3	10,961.7	7,110.7	64.3	65.9	-83.11	-2,956.2	1,498.6	1,747.5	1,621.0	126.55	13.809	
11,023.6	7,321.3	10,985.3	7,110.6	64.7	66.3	-83.11	-2,979.8	1,498.6	1,747.6	1,620.2	127.40	13.717	
11,100.0	7,321.2	11,061.7	7,110.0	66.1	67.6	-83.09	-3,056.2	1,498.6	1,747.6	1,617.4	130.18	13.425	
11,122.0	7,321.1	11,083.8	7,109.8	66.5	68.0	-83.09	-3,078.2	1,498.6	1,747.6	1,616.6	130.98	13.343	
11,200.0	7,321.0	11,161.7	7,109.2	68.0	69.4	-83.07	-3,156.1	1,498.6	1,747.7	1,613.9	133.82	13.060	
11,220.4	7,321.0	11,182.2	7,109.1	68.4	69.7	-83.07	-3,176.6	1,498.6	1,747.7	1,613.1	134.57	12.987	
11,300.0	7,320.9	11,261.7	7,108.5	69.8	71.1	-83.05	-3,256.1	1,498.6	1,747.8	1,610.3	137.47	12.713	
11,318.9	7,320.8	11,280.6	7,108.4	70.2	71.5	-83.05	-3,275.0	1,498.6	1,747.8	1,609.6	138.16	12.650	
11,400.0	7,320.7	11,361.7	7,107.7	71.7	72.9	-83.03	-3,356.1	1,498.6	1,747.8	1,606.7	141.13	12.384	
11,417.3	7,320.7	11,379.0	7,107.6	72.0	73.2	-83.03	-3,373.4	1,498.6	1,747.8	1,606.1	141.77	12.329	
11,500.0	7,320.6	11,461.7	7,107.0	73.5	74.7	-83.02	-3,456.1	1,498.6	1,747.9	1,603.1	144.80	12.071	
11,515.7	7,320.5	11,477.4	7,106.9	73.8	74.9	-83.01	-3,471.9	1,498.6	1,747.9	1,602.5	145.38	12.023	
11,600.0	7,320.4	11,561.7	7,106.2	75.4	76.5	-83.00	-3,556.1	1,498.6	1,748.0	1,599.5	148.48	11.773	
11,614.1	7,320.4	11,575.9	7,106.1	75.6	76.7	-82.99	-3,570.3	1,498.6	1,748.0	1,599.0	149.00	11.732	
11,700.0	7,320.2	11,661.7	7,105.5	77.2	78.2	-82.98	-3,656.1	1,498.6	1,748.1	1,595.9	152.16	11.488	
11,712.6	7,320.2	11,674.3	7,105.4	77.5	78.5	-82.97	-3,668.7	1,498.6	1,748.1	1,595.4	152.62	11.454	
11,800.0	7,320.1	11,761.7	7,104.7	79.1	80.0	-82.96	-3,756.1	1,498.6	1,748.1	1,592.3	155.85	11.217	
11,811.0	7,320.1	11,772.7	7,104.7	79.3	80.2	-82.96	-3,767.1	1,498.6	1,748.1	1,591.9	156.21	11.191	
11,849.2	7,320.0	11,810.5	7,104.4	79.8	80.9	-82.95	-3,804.9	1,498.6	1,748.2	1,590.7	157.47	11.102	
11,849.6	7,320.0	11,810.9	7,104.4	79.8	80.9	-82.95	-3,805.3	1,498.6	1,748.2	1,590.7	157.48	11.101 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - OLSON 30R-243 - ORIGINAL WELLBORE - PROPOSAL #2												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	91.86	-1.5	44.9	44.9				
98.4	98.4	98.4	98.4	0.1	0.1	91.86	-1.5	44.9	44.9	44.8	0.17	264.446	
100.0	100.0	100.0	100.0	0.1	0.1	91.86	-1.5	44.9	44.9	44.8	0.17	259.659	
196.8	196.8	196.8	196.8	0.3	0.3	91.86	-1.5	44.9	44.9	44.3	0.61	73.860	
200.0	200.0	200.0	200.0	0.3	0.3	91.86	-1.5	44.9	44.9	44.3	0.62	72.180	
295.3	295.3	295.3	295.3	0.5	0.5	91.86	-1.5	44.9	44.9	43.9	1.05	42.763	
300.0	300.0	300.0	300.0	0.5	0.5	91.86	-1.5	44.9	44.9	43.9	1.07	41.916	
393.7	393.7	393.7	393.7	0.7	0.7	91.86	-1.5	44.9	44.9	43.4	1.49	30.093	
400.0	400.0	400.0	400.0	0.8	0.8	91.86	-1.5	44.9	44.9	43.4	1.52	29.533	
492.1	492.1	492.1	492.1	1.0	1.0	91.86	-1.5	44.9	44.9	43.0	1.94	23.215	
500.0	500.0	500.0	500.0	1.0	1.0	91.86	-1.5	44.9	44.9	43.0	1.97	22.798	
590.5	590.5	590.5	590.5	1.2	1.2	91.86	-1.5	44.9	44.9	42.6	2.38	18.896	
600.0	600.0	600.0	600.0	1.2	1.2	91.86	-1.5	44.9	44.9	42.5	2.42	18.564	
689.0	689.0	689.0	689.0	1.4	1.4	91.86	-1.5	44.9	44.9	42.1	2.82	15.932	
700.0	700.0	700.0	700.0	1.4	1.4	91.86	-1.5	44.9	44.9	42.1	2.87	15.657	
787.4	787.4	787.4	787.4	1.6	1.6	91.86	-1.5	44.9	44.9	41.7	3.26	13.772	
800.0	800.0	800.0	800.0	1.7	1.7	91.86	-1.5	44.9	44.9	41.6	3.32	13.537	
885.8	885.8	885.8	885.8	1.9	1.9	91.86	-1.5	44.9	44.9	41.2	3.71	12.127	
900.0	900.0	900.0	900.0	1.9	1.9	91.86	-1.5	44.9	44.9	41.2	3.77	11.922	
984.2	984.2	984.2	984.2	2.1	2.1	91.86	-1.5	44.9	44.9	40.8	4.15	10.834	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	91.86	-1.5	44.9	44.9	40.7	4.22	10.652	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	91.86	-1.5	44.9	44.9	40.3	4.59	9.790	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	91.86	-1.5	44.9	44.9	40.3	4.67	9.626	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	91.86	-1.5	44.9	44.9	39.9	5.03	8.929	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	91.86	-1.5	44.9	44.9	39.8	5.12	8.781	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	91.86	-1.5	44.9	44.9	39.5	5.48	8.207	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	91.86	-1.5	44.9	44.9	39.4	5.57	8.072	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	91.86	-1.5	44.9	44.9	39.0	5.92	7.594	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	91.86	-1.5	44.9	44.9	38.9	6.02	7.469	
1,450.0	1,450.0	1,450.0	1,450.0	3.1	3.1	91.86	-1.5	44.9	44.9	38.7	6.24	7.200 CC	
1,476.4	1,476.4	1,476.4	1,476.4	3.2	3.2	106.30	-1.5	44.9	45.0	38.6	6.36	7.071	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	106.69	-1.5	44.9	45.1	38.6	6.47	6.969 ES	
1,574.8	1,574.8	1,574.8	1,574.8	3.4	3.4	109.41	-1.5	44.9	45.8	39.0	6.80	6.731	
1,600.0	1,599.9	1,599.9	1,599.9	3.5	3.5	110.81	-1.5	44.9	46.2	39.3	6.91	6.682	
1,673.2	1,673.0	1,673.0	1,673.0	3.6	3.6	116.09	-1.5	44.9	48.1	40.9	7.24	6.644	
1,700.0	1,699.7	1,699.7	1,699.7	3.7	3.7	118.38	-1.5	44.9	49.1	41.7	7.36	6.675	
1,771.6	1,771.0	1,771.0	1,771.0	3.9	3.8	125.11	-1.5	44.9	52.9	45.2	7.67	6.891	
1,800.0	1,799.1	1,799.1	1,799.1	3.9	3.9	127.90	-1.5	44.9	54.9	47.1	7.80	7.036	
1,870.1	1,868.6	1,868.6	1,868.6	4.1	4.1	134.75	-1.5	44.9	61.1	53.0	8.10	7.541	
1,900.0	1,898.2	1,898.2	1,898.2	4.2	4.1	137.55	-1.5	44.9	64.4	56.2	8.23	7.824	
1,968.5	1,965.7	1,965.8	1,965.8	4.3	4.3	143.47	-1.4	44.9	73.3	64.8	8.52	8.607	
2,000.0	1,996.6	1,996.9	1,996.9	4.4	4.3	145.73	-1.1	45.1	78.0	69.4	8.65	9.023	
2,049.8	2,045.4	2,046.2	2,046.2	4.6	4.5	148.58	0.0	45.7	86.1	77.2	8.86	9.723	
2,066.9	2,062.2	2,063.3	2,063.3	4.6	4.5	149.39	0.5	46.0	89.0	80.1	8.93	9.962	
2,100.0	2,094.5	2,096.2	2,096.1	4.7	4.6	150.66	1.8	46.7	94.5	85.4	9.08	10.406	
2,165.3	2,158.5	2,161.4	2,161.2	4.9	4.7	152.21	5.4	48.5	105.1	95.7	9.39	11.202	
2,200.0	2,192.3	2,196.0	2,195.7	5.1	4.8	152.62	7.9	49.8	110.6	101.0	9.55	11.584	
2,263.8	2,254.7	2,260.0	2,259.4	5.3	4.9	152.78	13.4	52.7	120.2	110.4	9.85	12.202	
2,300.0	2,290.2	2,296.4	2,295.6	5.4	5.0	152.58	17.0	54.7	125.5	115.4	10.03	12.507	
2,362.2	2,351.0	2,359.0	2,357.6	5.6	5.2	151.85	24.3	58.5	134.1	123.7	10.35	12.958	
2,400.0	2,388.0	2,397.0	2,395.2	5.8	5.3	151.18	29.3	61.1	139.1	128.6	10.54	13.194	
2,460.6	2,447.3	2,458.1	2,455.4	6.0	5.4	149.82	38.3	65.8	146.9	136.0	10.88	13.506	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,485.8	2,497.7	2,494.3	6.1	5.5	148.76	44.7	69.2	151.8	140.7	11.10	13.677	
2,559.0	2,543.6	2,557.0	2,552.4	6.3	5.7	146.95	55.2	74.8	159.0	147.5	11.45	13.877	
2,600.0	2,583.6	2,598.0	2,592.5	6.5	5.8	145.54	63.1	78.9	163.8	152.1	11.71	13.993	
2,657.5	2,639.8	2,655.5	2,648.4	6.7	6.0	143.38	75.0	85.2	170.6	158.5	12.09	14.110	
2,700.0	2,681.4	2,697.9	2,689.5	6.9	6.1	141.65	84.4	90.1	175.6	163.3	12.38	14.184	
2,755.9	2,736.1	2,753.3	2,742.8	7.1	6.3	139.28	97.5	97.0	182.3	169.6	12.79	14.256	
2,800.0	2,779.2	2,796.6	2,784.6	7.3	6.5	137.50	107.8	102.4	187.8	174.7	13.12	14.314	
2,854.3	2,832.4	2,850.1	2,836.0	7.5	6.7	135.44	120.5	109.1	194.8	181.3	13.54	14.385	
2,900.0	2,877.1	2,895.0	2,879.3	7.7	6.9	133.82	131.2	114.8	200.9	187.0	13.90	14.451	
2,952.7	2,928.7	2,946.9	2,929.3	7.9	7.1	132.07	143.6	121.3	208.1	193.7	14.32	14.525	
3,000.0	2,974.9	2,993.4	2,974.0	8.1	7.3	130.60	154.7	127.1	214.6	199.9	14.71	14.596	
3,051.2	3,024.9	3,043.7	3,022.5	8.3	7.5	129.10	166.7	133.4	221.9	206.8	15.13	14.669	
3,100.0	3,072.7	3,091.7	3,068.8	8.5	7.7	127.76	178.1	139.4	229.0	213.5	15.53	14.743	
3,149.6	3,121.2	3,140.5	3,115.8	8.7	7.9	126.49	189.7	145.6	236.3	220.4	15.95	14.816	
3,200.0	3,170.5	3,190.1	3,163.5	8.9	8.1	125.27	201.5	151.8	243.9	227.5	16.38	14.891	
3,248.0	3,217.5	3,237.3	3,209.0	9.1	8.3	124.17	212.8	157.7	251.2	234.4	16.79	14.962	
3,300.0	3,268.3	3,288.4	3,258.2	9.3	8.5	123.06	225.0	164.1	259.1	241.9	17.23	15.039	
3,346.4	3,313.8	3,334.1	3,302.2	9.5	8.8	122.12	235.8	169.9	266.3	248.7	17.63	15.106	
3,400.0	3,366.1	3,386.8	3,352.9	9.7	9.0	121.09	248.4	176.5	274.7	256.6	18.09	15.184	
3,444.9	3,410.0	3,430.9	3,395.5	9.9	9.2	120.28	258.9	182.0	281.8	263.3	18.48	15.247	
3,500.0	3,464.0	3,485.2	3,447.7	10.2	9.5	119.34	271.8	188.8	290.6	271.6	18.96	15.325	
3,543.3	3,506.3	3,527.8	3,488.7	10.3	9.7	118.64	282.0	194.1	297.6	278.2	19.34	15.385	
3,600.0	3,561.8	3,583.5	3,542.4	10.6	9.9	117.77	295.2	201.1	306.7	286.9	19.84	15.462	
3,641.7	3,602.6	3,624.6	3,581.9	10.8	10.1	117.16	305.0	206.3	313.5	293.3	20.20	15.518	
3,700.0	3,659.6	3,681.9	3,637.1	11.0	10.4	116.36	318.7	213.5	323.0	302.3	20.71	15.595	
3,740.1	3,698.9	3,721.4	3,675.2	11.2	10.6	115.83	328.1	218.4	329.7	308.6	21.07	15.647	
3,800.0	3,757.4	3,780.2	3,731.9	11.4	10.9	115.08	342.1	225.8	339.5	317.9	21.60	15.723	
3,838.6	3,795.1	3,818.2	3,768.4	11.6	11.1	114.62	351.2	230.6	345.9	324.0	21.94	15.771	
3,900.0	3,855.2	3,878.6	3,826.6	11.9	11.4	113.92	365.5	238.1	356.2	333.7	22.48	15.846	
3,937.0	3,891.4	3,915.0	3,861.6	12.0	11.6	113.52	374.2	242.7	362.4	339.6	22.80	15.891	
4,000.0	3,953.0	3,977.0	3,921.3	12.3	11.9	112.86	389.0	250.5	373.0	349.6	23.36	15.965	
4,035.4	3,987.7	4,011.8	3,954.9	12.4	12.1	112.51	397.3	254.9	378.9	355.3	23.68	16.005	
4,100.0	4,050.9	4,075.3	4,016.0	12.7	12.4	111.90	412.4	262.8	389.9	365.6	24.25	16.078	
4,133.8	4,084.0	4,108.6	4,048.1	12.9	12.6	111.59	420.3	267.0	395.6	371.0	24.55	16.115	
4,200.0	4,148.7	4,173.7	4,110.8	13.2	12.9	111.01	435.8	275.2	406.8	381.7	25.13	16.187	
4,232.3	4,180.2	4,205.4	4,141.3	13.3	13.0	110.74	443.4	279.1	412.3	386.9	25.42	16.221	
4,300.0	4,246.5	4,272.0	4,205.5	13.6	13.4	110.20	459.3	287.5	423.9	397.9	26.02	16.291	
4,330.7	4,276.5	4,302.2	4,234.6	13.7	13.5	109.96	466.5	291.3	429.2	402.9	26.29	16.322	
4,400.0	4,344.3	4,370.4	4,300.2	14.0	13.9	109.45	482.7	299.8	441.1	414.2	26.91	16.390	
4,429.1	4,372.8	4,399.0	4,327.8	14.1	14.0	109.24	489.5	303.4	446.1	418.9	27.17	16.419	
4,500.0	4,442.1	4,468.8	4,394.9	14.5	14.4	108.75	506.1	312.2	458.3	430.5	27.80	16.486	
4,527.5	4,469.1	4,495.8	4,421.0	14.6	14.5	108.57	512.6	315.6	463.0	435.0	28.04	16.511	
4,600.0	4,539.9	4,567.1	4,489.7	14.9	14.9	108.11	529.6	324.5	475.6	446.9	28.69	16.577	
4,626.0	4,565.4	4,592.7	4,514.3	15.0	15.0	107.95	535.7	327.7	480.1	451.2	28.92	16.600	
4,700.0	4,637.8	4,665.5	4,584.4	15.3	15.4	107.51	553.0	336.8	492.9	463.3	29.58	16.664	
4,724.4	4,661.6	4,689.5	4,607.5	15.4	15.6	107.37	558.7	339.8	497.1	467.4	29.80	16.685	
4,800.0	4,735.6	4,763.8	4,679.1	15.8	15.9	106.95	576.4	349.2	510.3	479.8	30.47	16.748	
4,822.8	4,757.9	4,786.3	4,700.8	15.9	16.1	106.83	581.8	352.0	514.3	483.6	30.67	16.766	
4,900.0	4,833.4	4,862.2	4,773.9	16.2	16.5	106.43	599.9	361.5	527.7	496.4	31.36	16.828	
4,921.2	4,854.2	4,883.1	4,794.0	16.3	16.6	106.32	604.8	364.1	531.4	499.9	31.55	16.845	
5,000.0	4,931.2	4,960.5	4,868.6	16.6	17.0	105.94	623.3	373.9	545.2	512.9	32.25	16.905	
5,019.7	4,950.5	4,979.9	4,887.2	16.7	17.1	105.84	627.9	376.3	548.6	516.2	32.43	16.919	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,029.0	5,058.9	4,963.3	17.1	17.5	105.48	646.7	386.2	562.7	529.6	33.14	16.978	
5,118.1	5,046.7	5,076.7	4,980.5	17.1	17.6	105.40	651.0	388.4	565.9	532.6	33.30	16.991	
5,200.0	5,126.8	5,157.3	5,058.0	17.5	18.0	105.05	670.2	398.5	580.2	546.2	34.03	17.049	
5,216.5	5,143.0	5,173.5	5,073.7	17.6	18.1	104.98	674.0	400.6	583.1	549.0	34.18	17.060	
5,300.0	5,224.7	5,255.6	5,152.8	17.9	18.5	104.64	693.6	410.9	597.8	562.9	34.93	17.117	
5,314.9	5,239.3	5,270.3	5,166.9	18.0	18.6	104.58	697.1	412.7	600.4	565.4	35.06	17.127	
5,400.0	5,322.5	5,354.0	5,247.5	18.4	19.1	104.26	717.0	423.2	615.4	579.6	35.82	17.182	
5,413.4	5,335.6	5,367.1	5,260.2	18.4	19.1	104.21	720.2	424.8	617.8	581.8	35.94	17.190	
5,500.0	5,420.3	5,452.3	5,342.2	18.8	19.6	103.90	740.5	435.5	633.0	596.3	36.71	17.244	
5,511.8	5,431.8	5,463.9	5,353.4	18.9	19.7	103.86	743.2	437.0	635.1	598.3	36.81	17.252	
5,600.0	5,518.1	5,550.7	5,436.9	19.3	20.1	103.56	763.9	447.9	650.7	613.1	37.60	17.304	
5,610.2	5,528.1	5,560.8	5,446.6	19.3	20.2	103.52	766.3	449.1	652.5	614.8	37.69	17.310	
5,700.0	5,615.9	5,649.1	5,531.7	19.7	20.6	103.23	787.3	460.2	668.3	629.8	38.49	17.362	
5,708.6	5,624.4	5,657.6	5,539.9	19.7	20.7	103.21	789.3	461.3	669.9	631.3	38.57	17.367	
5,800.0	5,713.7	5,750.6	5,629.5	20.1	21.2	102.93	811.4	472.9	686.0	646.6	39.38	17.417	
5,807.1	5,720.7	5,758.4	5,637.1	20.2	21.2	102.91	813.2	473.8	687.2	647.7	39.45	17.420	
5,900.0	5,811.6	5,862.0	5,737.6	20.6	21.6	102.83	835.1	485.4	702.3	662.1	40.23	17.455	
5,905.5	5,816.9	5,868.2	5,743.6	20.6	21.7	102.84	836.4	486.0	703.1	662.9	40.28	17.456	
6,000.0	5,909.4	5,974.1	5,847.3	21.0	22.0	103.06	855.3	496.0	716.8	675.8	41.04	17.465	
6,003.9	5,913.2	5,978.5	5,851.7	21.0	22.0	103.07	856.0	496.4	717.3	676.3	41.07	17.465	
6,053.2	5,961.4	6,033.8	5,906.1	21.3	22.2	103.30	864.4	500.8	723.8	682.3	41.46	17.458	
6,100.0	6,007.3	6,086.4	5,958.1	21.4	22.4	103.65	871.6	504.6	729.4	687.6	41.81	17.445	
6,102.3	6,009.6	6,089.0	5,960.7	21.5	22.4	103.67	871.9	504.8	729.7	687.9	41.83	17.445	
6,200.0	6,105.7	6,199.0	6,069.8	21.8	22.7	104.37	884.1	511.2	739.6	697.1	42.46	17.419	
6,200.8	6,106.5	6,199.9	6,070.7	21.8	22.7	104.37	884.2	511.2	739.6	697.2	42.46	17.419	
6,299.2	6,203.9	6,310.9	6,181.3	22.0	22.9	105.02	892.7	515.7	747.1	704.1	43.01	17.371	
6,300.0	6,204.7	6,311.8	6,182.2	22.0	22.9	105.03	892.8	515.7	747.1	704.1	43.01	17.371	
6,397.6	6,301.8	6,422.0	6,292.3	22.3	23.1	105.62	897.4	518.2	752.0	708.5	43.46	17.302	
6,400.0	6,304.2	6,424.7	6,295.0	22.3	23.1	105.64	897.5	518.2	752.1	708.6	43.47	17.300	
6,496.0	6,400.0	6,529.7	6,400.0	22.4	23.2	106.16	898.4	518.7	754.4	710.5	43.83	17.211	
6,500.0	6,403.9	6,533.5	6,403.8	22.5	23.2	106.18	898.4	518.7	754.4	710.6	43.84	17.207	
6,594.5	6,498.3	6,624.0	6,494.0	22.6	23.3	106.88	892.7	518.7	755.7	711.6	44.06	17.150	
6,600.0	6,503.8	6,629.2	6,499.2	22.6	23.3	106.94	892.1	518.7	755.7	711.6	44.07	17.148	
6,653.0	6,556.8	6,678.6	6,547.8	22.7	23.2	93.31	883.8	518.7	756.3	712.2	44.12	17.141	
6,692.9	6,596.7	6,715.0	6,583.3	22.7	23.2	93.93	875.6	518.7	756.9	712.8	44.14	17.148	
6,706.0	6,609.8	6,726.7	6,594.6	22.7	23.2	94.16	872.6	518.7	757.2	713.0	44.14	17.153	
6,750.0	6,653.8	6,765.7	6,632.0	22.8	23.1	-84.99	861.1	518.7	758.1	714.0	44.12	17.184	
6,791.3	6,695.0	6,800.0	6,664.2	22.8	23.0	-84.24	849.4	518.7	759.2	715.1	44.04	17.236	
6,800.0	6,703.6	6,809.5	6,673.0	22.8	23.0	-84.04	845.9	518.7	759.4	715.4	44.02	17.253	
6,850.0	6,752.9	6,850.0	6,710.1	22.8	22.9	-83.18	829.7	518.7	760.8	717.0	43.85	17.349	
6,889.7	6,791.6	6,886.6	6,742.8	22.7	22.7	-82.43	813.2	518.7	762.0	718.4	43.65	17.457	
6,900.0	6,801.5	6,895.3	6,750.4	22.7	22.7	-82.26	809.0	518.7	762.4	718.8	43.60	17.484	
6,950.0	6,849.1	6,937.5	6,786.7	22.6	22.5	-81.41	787.5	518.7	764.0	720.7	43.30	17.645	
6,988.2	6,884.8	6,969.3	6,813.2	22.5	22.4	-80.80	769.9	518.7	765.3	722.3	43.02	17.788	
7,000.0	6,895.7	6,979.2	6,821.2	22.5	22.4	-80.61	764.2	518.7	765.7	722.8	42.94	17.834	
7,050.0	6,940.8	7,020.5	6,854.1	22.3	22.2	-79.85	739.2	518.7	767.5	725.0	42.53	18.048	
7,086.6	6,972.8	7,050.0	6,876.7	22.1	22.0	-79.33	720.2	518.7	768.8	726.6	42.20	18.219	
7,100.0	6,984.3	7,061.4	6,885.1	22.1	22.0	-79.13	712.6	518.7	769.3	727.2	42.07	18.286	
7,150.0	7,025.9	7,100.0	6,913.0	21.9	21.8	-78.49	685.9	518.7	771.1	729.5	41.59	18.539	
7,185.0	7,053.9	7,130.2	6,933.8	21.7	21.6	-78.02	664.0	518.7	772.3	731.1	41.21	18.738	
7,200.0	7,065.6	7,142.2	6,941.8	21.7	21.5	-77.84	655.0	518.7	772.8	731.7	41.06	18.822	
7,250.0	7,103.0	7,182.2	6,967.4	21.4	21.3	-77.27	624.2	518.7	774.4	733.9	40.52	19.112	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,283.4	7,126.7	7,208.8	6,983.4	21.2	21.2	-76.92	603.0	518.7	775.5	735.4	40.16	19.311	
7,300.0	7,138.0	7,222.0	6,991.0	21.2	21.1	-76.75	592.3	518.7	776.0	736.0	39.98	19.410	
7,350.0	7,170.5	7,261.5	7,012.7	20.9	20.9	-76.28	559.3	518.7	777.5	738.0	39.44	19.712	
7,381.9	7,189.8	7,286.6	7,025.6	20.8	20.8	-76.02	537.7	518.7	778.3	739.2	39.11	19.903	
7,400.0	7,200.2	7,300.0	7,032.1	20.7	20.7	-75.88	526.0	518.7	778.8	739.9	38.92	20.009	
7,450.0	7,227.0	7,340.0	7,050.3	20.4	20.5	-75.52	490.3	518.7	780.0	741.5	38.43	20.298	
7,480.3	7,241.9	7,363.7	7,060.2	20.3	20.4	-75.33	468.8	518.7	780.6	742.5	38.15	20.462	
7,500.0	7,250.9	7,379.1	7,066.2	20.2	20.3	-75.22	454.6	518.7	781.0	743.0	37.97	20.567	
7,550.0	7,271.6	7,418.0	7,080.0	20.0	20.1	-74.98	418.2	518.7	781.8	744.2	37.57	20.809	
7,578.7	7,282.0	7,440.4	7,087.0	19.9	20.0	-74.87	397.0	518.7	782.2	744.8	37.37	20.932	
7,600.0	7,289.1	7,456.9	7,091.8	19.8	19.9	-74.80	381.2	518.7	782.4	745.2	37.23	21.019	
7,650.0	7,303.3	7,500.0	7,102.5	19.6	19.7	-74.66	339.5	518.7	782.9	746.0	36.94	21.194	
7,677.1	7,309.5	7,516.8	7,106.0	19.5	19.6	-74.63	323.1	518.7	783.0	746.2	36.84	21.254	
7,700.0	7,314.1	7,534.5	7,109.3	19.5	19.5	-74.61	305.7	518.7	783.1	746.4	36.76	21.306	
7,750.0	7,321.4	7,573.2	7,114.9	19.4	19.4	-74.60	267.4	518.7	783.1	746.5	36.64	21.374	
7,775.6	7,323.9	7,593.0	7,117.0	19.3	19.3	-74.62	247.7	518.7	783.1	746.5	36.61	21.387	
7,800.0	7,325.3	7,612.0	7,118.5	19.3	19.2	-74.65	228.8	518.7	783.0	746.3	36.61	21.389	
7,832.0	7,326.0	7,636.7	7,119.7	19.3	19.2	-74.72	204.0	518.7	782.7	746.1	36.63	21.369	
7,863.3	7,326.0	7,661.4	7,120.0	19.3	19.1	-74.74	179.4	518.7	782.6	745.9	36.68	21.336	
7,874.0	7,325.9	7,672.0	7,120.0	19.3	19.0	-74.74	168.8	518.7	782.6	745.9	36.71	21.321	
7,900.0	7,325.9	7,698.0	7,119.9	19.3	19.0	-74.74	142.8	518.7	782.6	745.8	36.77	21.285	
7,972.4	7,325.8	7,770.4	7,119.7	19.4	18.8	-74.73	70.3	518.7	782.6	745.5	37.15	21.070	
8,000.0	7,325.8	7,798.0	7,119.7	19.5	18.8	-74.73	42.8	518.7	782.6	745.4	37.29	20.988	
8,070.8	7,325.7	7,868.9	7,119.5	19.8	18.9	-74.73	-28.1	518.7	782.7	744.7	37.91	20.644	
8,100.0	7,325.6	7,898.0	7,119.4	19.9	19.0	-74.72	-57.2	518.7	782.7	744.5	38.17	20.505	
8,169.3	7,325.5	7,967.3	7,119.2	20.3	19.3	-74.72	-126.5	518.7	782.7	743.7	39.01	20.064	
8,200.0	7,325.5	7,998.0	7,119.2	20.5	19.5	-74.72	-157.2	518.7	782.7	743.3	39.38	19.874	
8,267.7	7,325.4	8,065.7	7,119.0	21.1	20.1	-74.71	-224.9	518.7	782.7	742.3	40.41	19.369	
8,300.0	7,325.3	8,098.0	7,118.9	21.3	20.4	-74.71	-257.2	518.7	782.7	741.8	40.90	19.136	
8,366.1	7,325.2	8,164.1	7,118.8	21.9	21.0	-74.70	-323.4	518.7	782.7	740.7	42.09	18.599	
8,400.0	7,325.2	8,198.0	7,118.7	22.3	21.3	-74.70	-357.2	518.7	782.8	740.1	42.69	18.335	
8,464.5	7,325.1	8,262.6	7,118.5	22.9	22.1	-74.70	-421.8	518.7	782.8	738.8	44.00	17.789	
8,500.0	7,325.1	8,298.0	7,118.4	23.3	22.5	-74.69	-457.2	518.7	782.8	738.1	44.72	17.503	
8,563.0	7,325.0	8,361.0	7,118.3	24.0	23.2	-74.69	-520.2	518.7	782.8	736.7	46.13	16.969	
8,600.0	7,324.9	8,398.0	7,118.2	24.5	23.7	-74.69	-557.2	518.7	782.8	735.8	46.96	16.670	
8,661.4	7,324.8	8,459.4	7,118.0	25.2	24.4	-74.68	-618.6	518.7	782.8	734.4	48.44	16.160	
8,700.0	7,324.8	8,498.0	7,117.9	25.7	24.9	-74.68	-657.2	518.7	782.8	733.5	49.38	15.854	
8,759.8	7,324.7	8,557.8	7,117.8	26.5	25.8	-74.68	-717.1	518.7	782.9	731.9	50.92	15.376	
8,800.0	7,324.6	8,598.0	7,117.7	27.1	26.3	-74.67	-757.2	518.7	782.9	730.9	51.95	15.070	
8,858.2	7,324.5	8,656.3	7,117.5	27.9	27.1	-74.67	-815.5	518.7	782.9	729.4	53.52	14.627	
8,900.0	7,324.5	8,698.0	7,117.4	28.4	27.7	-74.67	-857.2	518.7	782.9	728.2	54.65	14.324	
8,956.7	7,324.4	8,754.7	7,117.3	29.3	28.5	-74.66	-913.9	518.7	782.9	726.7	56.25	13.918	
9,000.0	7,324.3	8,798.0	7,117.2	29.9	29.2	-74.66	-957.2	518.7	782.9	725.4	57.47	13.622	
9,055.1	7,324.3	8,853.1	7,117.1	30.7	30.0	-74.65	-1,012.3	518.7	782.9	723.9	59.08	13.252	
9,100.0	7,324.2	8,898.0	7,117.0	31.4	30.7	-74.65	-1,057.2	518.7	782.9	722.6	60.39	12.965	
9,153.5	7,324.1	8,951.5	7,116.8	32.2	31.5	-74.65	-1,110.8	518.7	783.0	721.0	62.00	12.629	
9,200.0	7,324.0	8,998.0	7,116.7	33.0	32.3	-74.64	-1,157.2	518.7	783.0	719.6	63.39	12.351	
9,251.9	7,324.0	9,050.0	7,116.6	33.8	33.1	-74.64	-1,209.2	518.7	783.0	718.0	64.99	12.048	
9,300.0	7,323.9	9,098.0	7,116.5	34.5	33.8	-74.64	-1,257.2	518.7	783.0	716.5	66.47	11.780	
9,350.4	7,323.8	9,148.4	7,116.3	35.4	34.7	-74.63	-1,307.6	518.7	783.0	715.0	68.05	11.507	
9,400.0	7,323.7	9,198.0	7,116.2	36.2	35.5	-74.63	-1,357.2	518.7	783.0	713.4	69.60	11.250	
9,448.8	7,323.7	9,246.8	7,116.1	37.0	36.3	-74.63	-1,406.0	518.7	783.0	711.9	71.16	11.004	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MW/D												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	7,323.6	9,298.0	7,116.0	37.8	37.1	-74.62	-1,457.2	518.7	783.1	710.3	72.80	10.757	
9,547.2	7,323.5	9,345.2	7,115.8	38.6	37.9	-74.62	-1,504.5	518.7	783.1	708.7	74.33	10.535	
9,600.0	7,323.5	9,398.0	7,115.7	39.5	38.8	-74.62	-1,557.2	518.7	783.1	707.0	76.04	10.299	
9,645.6	7,323.4	9,443.7	7,115.6	40.2	39.6	-74.61	-1,602.9	518.7	783.1	705.6	77.54	10.100	
9,700.0	7,323.3	9,498.0	7,115.5	41.2	40.5	-74.61	-1,657.2	518.7	783.1	703.8	79.32	9.873	
9,744.1	7,323.2	9,542.1	7,115.4	41.9	41.2	-74.61	-1,701.3	518.7	783.1	702.3	80.78	9.694	
9,800.0	7,323.2	9,598.0	7,115.2	42.9	42.2	-74.60	-1,757.2	518.7	783.1	700.5	82.64	9.476	
9,842.5	7,323.1	9,640.5	7,115.1	43.6	42.9	-74.60	-1,799.7	518.7	783.1	699.1	84.07	9.316	
9,900.0	7,323.0	9,698.0	7,115.0	44.6	43.9	-74.59	-1,857.2	518.7	783.2	697.2	85.99	9.107	
9,940.9	7,322.9	9,738.9	7,114.9	45.3	44.6	-74.59	-1,898.1	518.7	783.2	695.8	87.38	8.963	
10,000.0	7,322.9	9,798.0	7,114.7	46.3	45.7	-74.59	-1,957.2	518.7	783.2	693.8	89.38	8.763	
10,039.3	7,322.8	9,837.4	7,114.6	47.0	46.4	-74.58	-1,996.6	518.7	783.2	692.5	90.72	8.634	
10,100.0	7,322.7	9,898.0	7,114.5	48.1	47.4	-74.58	-2,057.2	518.7	783.2	690.4	92.78	8.441	
10,137.8	7,322.6	9,935.8	7,114.4	48.8	48.1	-74.58	-2,095.0	518.7	783.2	689.1	94.08	8.325	
10,200.0	7,322.6	9,998.0	7,114.2	49.9	49.2	-74.57	-2,157.2	518.7	783.2	687.0	96.21	8.141	
10,236.2	7,322.5	10,034.2	7,114.1	50.5	49.8	-74.57	-2,193.4	518.7	783.3	685.8	97.46	8.036	
10,300.0	7,322.4	10,098.0	7,114.0	51.6	51.0	-74.57	-2,257.2	518.7	783.3	683.6	99.67	7.859	
10,334.6	7,322.4	10,132.6	7,113.9	52.3	51.6	-74.56	-2,291.8	518.7	783.3	682.4	100.87	7.765	
10,400.0	7,322.3	10,198.0	7,113.7	53.4	52.8	-74.56	-2,357.2	518.7	783.3	680.2	103.14	7.595	
10,433.0	7,322.2	10,231.1	7,113.6	54.0	53.4	-74.56	-2,390.3	518.7	783.3	679.0	104.29	7.511	
10,500.0	7,322.1	10,298.0	7,113.5	55.2	54.6	-74.55	-2,457.2	518.7	783.3	676.7	106.62	7.347	
10,531.5	7,322.1	10,329.5	7,113.4	55.8	55.1	-74.55	-2,488.7	518.7	783.3	675.6	107.72	7.272	
10,600.0	7,321.9	10,398.0	7,113.2	57.0	56.4	-74.55	-2,557.2	518.7	783.3	673.2	110.12	7.113	
10,629.9	7,321.9	10,427.9	7,113.1	57.6	56.9	-74.54	-2,587.1	518.7	783.4	672.2	111.18	7.046	
10,700.0	7,321.8	10,498.0	7,113.0	58.8	58.2	-74.54	-2,657.2	518.7	783.4	669.7	113.64	6.893	
10,728.3	7,321.8	10,526.3	7,112.9	59.4	58.7	-74.54	-2,685.5	518.7	783.4	668.7	114.64	6.833	
10,800.0	7,321.6	10,598.0	7,112.7	60.7	60.0	-74.53	-2,757.2	518.7	783.4	666.2	117.17	6.686	
10,826.7	7,321.6	10,624.8	7,112.6	61.1	60.5	-74.53	-2,784.0	518.7	783.4	665.3	118.12	6.633	
10,900.0	7,321.5	10,698.0	7,112.5	62.5	61.8	-74.53	-2,857.2	518.7	783.4	662.7	120.71	6.490	
10,925.2	7,321.4	10,723.2	7,112.4	62.9	62.3	-74.52	-2,882.4	518.7	783.4	661.8	121.60	6.443	
11,000.0	7,321.3	10,798.0	7,112.2	64.3	63.7	-74.52	-2,957.2	518.7	783.5	659.2	124.26	6.305	
11,023.6	7,321.3	10,821.6	7,112.1	64.7	64.1	-74.52	-2,980.8	518.7	783.5	658.4	125.10	6.263	
11,100.0	7,321.2	10,898.0	7,112.0	66.1	65.5	-74.51	-3,057.2	518.7	783.5	655.7	127.82	6.130	
11,122.0	7,321.1	10,920.0	7,111.9	66.5	65.9	-74.51	-3,079.2	518.7	783.5	654.9	128.60	6.092	
11,200.0	7,321.0	10,998.0	7,111.7	68.0	67.3	-74.50	-3,157.2	518.7	783.5	652.1	131.39	5.963	
11,220.4	7,321.0	11,018.5	7,111.6	68.4	67.7	-74.50	-3,177.7	518.7	783.5	651.4	132.12	5.930	
11,300.0	7,320.9	11,098.0	7,111.4	69.8	69.2	-74.50	-3,257.2	518.7	783.5	648.6	134.96	5.806	
11,318.9	7,320.8	11,116.9	7,111.4	70.2	69.5	-74.50	-3,276.1	518.7	783.5	647.9	135.64	5.777	
11,400.0	7,320.7	11,198.0	7,111.2	71.7	71.0	-74.49	-3,357.2	518.7	783.6	645.0	138.55	5.656	
11,417.3	7,320.7	11,215.3	7,111.2	72.0	71.3	-74.49	-3,374.5	518.7	783.6	644.4	139.17	5.630	
11,500.0	7,320.6	11,298.0	7,110.9	73.5	72.9	-74.48	-3,457.2	518.7	783.6	641.5	142.14	5.513	
11,515.7	7,320.5	11,313.7	7,110.9	73.8	73.2	-74.48	-3,472.9	518.7	783.6	640.9	142.70	5.491	
11,600.0	7,320.4	11,398.0	7,110.7	75.4	74.7	-74.48	-3,557.2	518.7	783.6	637.9	145.73	5.377	
11,614.1	7,320.4	11,412.2	7,110.7	75.6	75.0	-74.48	-3,571.4	518.7	783.6	637.4	146.24	5.358	
11,700.0	7,320.2	11,498.0	7,110.4	77.2	76.6	-74.47	-3,657.2	518.7	783.6	634.3	149.33	5.248	
11,712.6	7,320.2	11,510.6	7,110.4	77.5	76.8	-74.47	-3,669.8	518.7	783.6	633.9	149.79	5.232	
11,800.0	7,320.1	11,598.0	7,110.2	79.1	78.4	-74.46	-3,757.2	518.7	783.7	630.7	152.94	5.124	
11,811.0	7,320.1	11,609.0	7,110.2	79.3	78.6	-74.46	-3,768.2	518.7	783.7	630.4	153.30	5.112	
11,849.2	7,320.0	11,647.2	7,110.1	79.8	79.4	-74.46	-3,806.4	518.7	783.7	629.1	154.53	5.071	
11,849.6	7,320.0	11,647.6	7,110.1	79.8	79.4	-74.46	-3,806.8	518.7	783.7	629.1	154.54	5.071 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	91.63	-2.5	89.8	89.9				
98.4	98.4	97.4	97.4	0.1	0.1	91.63	-2.5	89.8	89.9	89.7	0.17	531.533	
100.0	100.0	99.0	99.0	0.1	0.1	91.63	-2.5	89.8	89.9	89.7	0.17	521.863	
196.8	196.8	195.8	195.8	0.3	0.3	91.63	-2.5	89.8	89.9	89.3	0.61	148.248	
200.0	200.0	199.0	199.0	0.3	0.3	91.63	-2.5	89.8	89.9	89.2	0.62	144.864	
295.3	295.3	294.3	294.3	0.5	0.5	91.63	-2.5	89.8	89.9	88.8	1.05	85.698	
300.0	300.0	299.0	299.0	0.5	0.5	91.63	-2.5	89.8	89.9	88.8	1.07	83.997	
393.7	393.7	392.7	392.7	0.7	0.7	91.63	-2.5	89.8	89.9	88.4	1.49	60.269	
400.0	400.0	399.0	399.0	0.8	0.8	91.63	-2.5	89.8	89.9	88.3	1.52	59.146	
492.1	492.1	491.1	491.1	1.0	1.0	91.63	-2.5	89.8	89.9	87.9	1.93	46.478	
500.0	500.0	499.0	499.0	1.0	1.0	91.63	-2.5	89.8	89.9	87.9	1.97	45.642	
590.5	590.5	589.5	589.5	1.2	1.2	91.63	-2.5	89.8	89.9	87.5	2.38	37.823	
600.0	600.0	599.0	599.0	1.2	1.2	91.63	-2.5	89.8	89.9	87.4	2.42	37.159	
689.0	689.0	688.0	688.0	1.4	1.4	91.63	-2.5	89.8	89.9	87.0	2.82	31.885	
700.0	700.0	699.0	699.0	1.4	1.4	91.63	-2.5	89.8	89.9	87.0	2.87	31.334	
787.4	787.4	786.4	786.4	1.6	1.6	91.63	-2.5	89.8	89.9	86.6	3.26	27.559	
800.0	800.0	799.0	799.0	1.7	1.7	91.63	-2.5	89.8	89.9	86.5	3.32	27.088	
885.8	885.8	884.8	884.8	1.9	1.9	91.63	-2.5	89.8	89.9	86.2	3.70	24.266	
900.0	900.0	899.0	899.0	1.9	1.9	91.63	-2.5	89.8	89.9	86.1	3.77	23.856	
984.2	984.2	983.2	983.2	2.1	2.1	91.63	-2.5	89.8	89.9	85.7	4.15	21.677	
1,000.0	1,000.0	999.0	999.0	2.1	2.1	91.63	-2.5	89.8	89.9	85.7	4.22	21.313	
1,082.7	1,082.7	1,081.7	1,081.7	2.3	2.3	91.63	-2.5	89.8	89.9	85.3	4.59	19.586	
1,100.0	1,100.0	1,099.0	1,099.0	2.3	2.3	91.63	-2.5	89.8	89.9	85.2	4.67	19.259	
1,181.1	1,181.1	1,180.1	1,180.1	2.5	2.5	91.63	-2.5	89.8	89.9	84.8	5.03	17.864	
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	91.63	-2.5	89.8	89.9	84.8	5.12	17.567	
1,279.5	1,279.5	1,278.5	1,278.5	2.7	2.7	91.63	-2.5	89.8	89.9	84.4	5.47	16.420	
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	91.63	-2.5	89.8	89.9	84.3	5.57	16.148	
1,377.9	1,377.9	1,376.9	1,376.9	3.0	3.0	91.63	-2.5	89.8	89.9	84.0	5.92	15.192	
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	91.63	-2.5	89.8	89.9	83.9	6.01	14.941	
1,450.0	1,450.0	1,449.0	1,449.0	3.1	3.1	91.63	-2.5	89.8	89.9	83.6	6.24	14.403 CC	
1,476.4	1,476.4	1,475.4	1,475.4	3.2	3.2	105.99	-2.5	89.8	89.9	83.5	6.36	14.140	
1,500.0	1,500.0	1,499.0	1,499.0	3.2	3.2	106.18	-2.5	89.8	90.0	83.5	6.46	13.922 ES	
1,574.8	1,574.8	1,573.8	1,573.8	3.4	3.4	107.56	-2.5	89.8	90.7	83.9	6.80	13.335	
1,600.0	1,599.9	1,598.9	1,598.9	3.5	3.5	108.27	-2.5	89.8	91.0	84.1	6.91	13.172	
1,673.2	1,673.0	1,671.5	1,671.5	3.6	3.6	110.98	-2.5	89.9	92.7	85.5	7.23	12.812	
1,700.0	1,699.7	1,697.6	1,697.6	3.7	3.7	112.06	-2.3	90.1	93.7	86.4	7.35	12.751	
1,771.6	1,771.0	1,767.3	1,767.3	3.9	3.8	114.93	-1.1	91.8	98.0	90.4	7.66	12.794	
1,800.0	1,799.1	1,794.9	1,794.8	3.9	3.9	116.03	-0.4	92.8	100.3	92.5	7.78	12.888	
1,870.1	1,868.6	1,862.8	1,862.6	4.1	4.0	118.59	2.2	96.2	107.5	99.4	8.09	13.276	
1,900.0	1,898.2	1,891.8	1,891.5	4.2	4.1	119.59	3.6	98.0	111.1	102.9	8.23	13.512	
1,968.5	1,965.7	1,957.8	1,957.2	4.3	4.2	121.66	7.4	103.1	121.0	112.4	8.54	14.166	
2,000.0	1,996.6	1,988.1	1,987.3	4.4	4.3	122.50	9.4	105.8	126.1	117.4	8.68	14.527	
2,049.8	2,045.4	2,035.8	2,034.6	4.6	4.4	123.67	13.0	110.6	135.1	126.2	8.92	15.147	
2,066.9	2,062.2	2,052.2	2,050.8	4.6	4.5	124.08	14.4	112.4	138.4	129.4	9.00	15.368	
2,100.0	2,094.5	2,083.7	2,082.1	4.7	4.5	124.71	17.1	116.1	144.9	135.7	9.17	15.801	
2,165.3	2,158.5	2,145.9	2,143.5	4.9	4.7	125.49	23.1	124.1	158.3	148.8	9.51	16.645	
2,200.0	2,192.3	2,178.8	2,175.8	5.1	4.8	125.68	26.6	128.8	165.7	156.0	9.69	17.097	
2,263.8	2,254.7	2,239.2	2,235.0	5.3	5.0	125.73	33.7	138.1	179.8	169.8	10.04	17.904	
2,300.0	2,290.2	2,273.3	2,268.4	5.4	5.1	125.59	38.0	143.9	188.2	177.9	10.25	18.360	
2,362.2	2,351.0	2,331.7	2,325.2	5.6	5.3	125.16	45.9	154.4	203.0	192.4	10.62	19.120	
2,400.0	2,388.0	2,366.9	2,359.5	5.8	5.4	124.79	51.0	161.2	212.3	201.5	10.84	19.576	
2,460.6	2,447.3	2,423.2	2,413.8	6.0	5.6	124.06	59.7	172.8	227.8	216.5	11.22	20.291	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,485.8	2,459.5	2,448.8	6.1	5.7	123.51	65.6	180.7	238.2	226.7	11.48	20.749	
2,559.0	2,543.6	2,513.6	2,500.6	6.3	6.0	122.61	75.0	193.2	254.3	242.4	11.87	21.421	
2,600.0	2,583.6	2,550.9	2,536.1	6.5	6.1	121.94	81.7	202.2	265.9	253.7	12.15	21.877	
2,657.5	2,639.8	2,600.0	2,582.7	6.7	6.3	121.01	91.1	214.7	282.7	270.1	12.54	22.545	
2,700.0	2,681.4	2,640.9	2,621.3	6.9	6.6	120.20	99.2	225.6	295.5	282.6	12.86	22.982	
2,755.9	2,736.1	2,690.6	2,667.9	7.1	6.8	119.19	109.6	239.4	312.9	299.7	13.26	23.595	
2,800.0	2,779.2	2,731.0	2,705.5	7.3	7.0	118.36	118.3	251.0	327.1	313.5	13.59	24.064	
2,854.3	2,832.4	2,782.1	2,753.2	7.5	7.3	117.40	129.4	265.8	344.7	330.7	14.01	24.595	
2,900.0	2,877.1	2,825.1	2,793.3	7.7	7.6	116.67	138.7	278.2	359.5	345.2	14.37	25.019	
2,952.7	2,928.7	2,874.7	2,839.6	7.9	7.9	115.89	149.4	292.5	376.7	362.0	14.79	25.481	
3,000.0	2,974.9	2,919.2	2,881.0	8.1	8.1	115.25	159.0	305.3	392.2	377.0	15.16	25.873	
3,051.2	3,024.9	2,967.3	2,926.0	8.3	8.4	114.61	169.5	319.2	409.0	393.4	15.57	26.272	
3,100.0	3,072.7	3,013.3	2,968.8	8.5	8.7	114.05	179.4	332.5	425.0	409.1	15.96	26.636	
3,149.6	3,121.2	3,059.9	3,012.3	8.7	9.0	113.52	189.5	346.0	441.4	425.0	16.36	26.982	
3,200.0	3,170.5	3,107.4	3,056.6	8.9	9.3	113.02	199.8	359.7	458.0	441.3	16.77	27.319	
3,248.0	3,217.5	3,152.6	3,098.7	9.1	9.6	112.57	209.6	372.7	473.9	456.8	17.16	27.620	
3,300.0	3,268.3	3,201.5	3,144.3	9.3	9.9	112.13	220.2	386.9	491.1	473.6	17.58	27.933	
3,346.4	3,313.8	3,245.2	3,185.1	9.5	10.2	111.75	229.6	399.5	506.5	488.6	17.97	28.196	
3,400.0	3,366.1	3,295.6	3,232.1	9.7	10.6	111.35	240.5	414.0	524.3	505.9	18.41	28.487	
3,444.9	3,410.0	3,337.8	3,271.5	9.9	10.8	111.03	249.7	426.2	539.3	520.5	18.78	28.717	
3,500.0	3,464.0	3,389.7	3,319.9	10.2	11.2	110.66	260.9	441.2	557.6	538.4	19.24	28.989	
3,543.3	3,506.3	3,430.4	3,357.9	10.3	11.5	110.39	269.7	453.0	572.0	552.4	19.60	29.190	
3,600.0	3,561.8	3,483.8	3,407.6	10.6	11.8	110.05	281.3	468.4	590.9	570.9	20.07	29.444	
3,641.7	3,602.6	3,523.0	3,444.2	10.8	12.1	109.82	289.8	479.7	604.9	584.4	20.42	29.622	
3,700.0	3,659.6	3,577.9	3,495.4	11.0	12.5	109.51	301.6	495.5	624.3	603.4	20.91	29.860	
3,740.1	3,698.9	3,615.7	3,530.6	11.2	12.7	109.30	309.8	506.5	637.7	616.5	21.25	30.017	
3,800.0	3,757.4	3,672.0	3,583.1	11.4	13.1	109.02	322.0	522.7	657.8	636.0	21.75	30.240	
3,838.6	3,795.1	3,708.3	3,617.0	11.6	13.4	108.84	329.9	533.2	670.7	648.6	22.08	30.379	
3,900.0	3,855.2	3,766.1	3,670.9	11.9	13.8	108.57	342.4	549.9	691.2	668.6	22.60	30.589	
3,937.0	3,891.4	3,800.9	3,703.4	12.0	14.0	108.42	349.9	559.9	703.6	680.7	22.91	30.712	
4,000.0	3,953.0	3,860.2	3,758.7	12.3	14.4	108.17	362.8	577.1	724.7	701.3	23.45	30.911	
4,035.4	3,987.7	3,893.5	3,789.7	12.4	14.7	108.04	370.0	586.7	736.6	712.9	23.75	31.019	
4,100.0	4,050.9	3,954.3	3,846.4	12.7	15.1	107.81	383.1	604.2	758.3	734.0	24.30	31.207	
4,133.8	4,084.0	3,986.2	3,876.1	12.9	15.3	107.69	390.0	613.4	769.6	745.1	24.59	31.302	
4,200.0	4,148.7	4,048.4	3,934.2	13.2	15.8	107.47	403.5	631.4	791.8	766.7	25.15	31.481	
4,232.3	4,180.2	4,078.8	3,962.5	13.3	16.0	107.37	410.1	640.2	802.7	777.2	25.43	31.565	
4,300.0	4,246.5	4,142.5	4,021.9	13.6	16.4	107.16	423.9	658.6	825.4	799.4	26.01	31.736	
4,330.7	4,276.5	4,171.4	4,048.9	13.7	16.7	107.07	430.1	666.9	835.7	809.5	26.27	31.810	
4,400.0	4,344.3	4,236.6	4,109.7	14.0	17.1	106.88	444.3	685.7	859.0	832.2	26.87	31.972	
4,429.1	4,372.8	4,264.0	4,135.3	14.1	17.3	106.80	450.2	693.7	868.8	841.7	27.12	32.038	
4,500.0	4,442.1	4,330.7	4,197.5	14.5	17.8	106.62	464.6	712.9	892.6	864.9	27.73	32.192	
4,527.5	4,469.1	4,356.6	4,221.6	14.6	18.0	106.55	470.2	720.4	901.9	873.9	27.97	32.250	
4,600.0	4,539.9	4,424.8	4,285.2	14.9	18.5	106.37	485.0	740.1	926.3	897.7	28.59	32.398	
4,626.0	4,565.4	4,449.3	4,308.0	15.0	18.6	106.31	490.3	747.1	935.0	906.2	28.82	32.449	
4,700.0	4,637.8	4,518.9	4,373.0	15.3	19.1	106.15	505.4	767.3	959.9	930.5	29.45	32.590	
4,724.4	4,661.6	4,541.9	4,394.4	15.4	19.3	106.09	510.3	773.9	968.1	938.5	29.67	32.635	
4,800.0	4,735.6	4,613.0	4,460.8	15.8	19.8	105.94	525.7	794.4	993.6	963.3	30.32	32.771	
4,822.8	4,757.9	4,634.5	4,480.8	15.9	20.0	105.89	530.4	800.6	1,001.3	970.8	30.52	32.810	
4,900.0	4,833.4	4,707.1	4,548.5	16.2	20.5	105.74	546.1	821.6	1,027.3	996.1	31.19	32.940	
4,921.2	4,854.2	4,727.1	4,567.2	16.3	20.6	105.70	550.5	827.4	1,034.4	1,003.1	31.37	32.975	
5,000.0	4,931.2	4,801.2	4,636.3	16.6	21.2	105.55	566.5	848.8	1,060.9	1,028.9	32.05	33.099	
5,019.7	4,950.5	4,819.7	4,653.5	16.7	21.3	105.52	570.5	854.1	1,067.6	1,035.4	32.22	33.129	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.0	5,029.0	4,895.3	4,724.0	17.1	21.9	105.38	586.9	875.9	1,094.6	1,061.7	32.92	33.249		
5,118.1	5,046.7	4,912.4	4,739.9	17.1	22.0	105.35	590.6	880.9	1,100.7	1,067.7	33.08	33.275		
5,200.0	5,126.8	4,989.4	4,811.8	17.5	22.5	105.22	607.2	903.1	1,128.3	1,094.5	33.79	33.391		
5,216.5	5,143.0	5,005.0	4,826.3	17.6	22.7	105.19	610.6	907.6	1,133.9	1,100.0	33.94	33.413		
5,300.0	5,224.7	5,083.5	4,899.6	17.9	23.2	105.06	627.6	930.3	1,162.0	1,127.4	34.66	33.524		
5,314.9	5,239.3	5,097.6	4,912.7	18.0	23.3	105.04	630.7	934.3	1,167.1	1,132.3	34.79	33.544		
5,400.0	5,322.5	5,177.6	4,987.3	18.4	23.9	104.92	648.0	957.5	1,195.8	1,160.2	35.53	33.651		
5,413.4	5,335.6	5,190.2	4,999.1	18.4	24.0	104.90	650.7	961.1	1,200.3	1,164.6	35.65	33.667		
5,500.0	5,420.3	5,271.7	5,075.1	18.8	24.6	104.78	668.4	984.6	1,229.5	1,193.1	36.41	33.771		
5,511.8	5,431.8	5,282.8	5,085.4	18.9	24.7	104.77	670.8	987.8	1,233.5	1,197.0	36.51	33.784		
5,600.0	5,518.1	5,365.8	5,162.8	19.3	25.3	104.65	688.7	1,011.8	1,263.2	1,225.9	37.28	33.884		
5,610.2	5,528.1	5,375.5	5,171.8	19.3	25.4	104.64	690.8	1,014.6	1,266.7	1,229.3	37.37	33.896		
5,700.0	5,615.9	5,459.9	5,250.6	19.7	26.0	104.53	709.1	1,039.0	1,296.9	1,258.8	38.15	33.992		
5,708.6	5,624.4	5,468.1	5,258.2	19.7	26.0	104.52	710.9	1,041.3	1,299.9	1,261.6	38.23	34.002		
5,800.0	5,713.7	5,554.1	5,338.4	20.1	26.7	104.41	729.5	1,066.1	1,330.7	1,291.7	39.03	34.095		
5,807.1	5,720.7	5,560.7	5,344.6	20.2	26.7	104.40	730.9	1,068.1	1,333.1	1,294.0	39.09	34.102		
5,900.0	5,811.6	5,648.2	5,426.1	20.6	27.3	104.30	749.9	1,093.3	1,364.4	1,324.5	39.90	34.193		
5,905.5	5,816.9	5,653.3	5,431.0	20.6	27.4	104.29	751.0	1,094.8	1,366.3	1,326.3	39.95	34.198		
6,000.0	5,909.4	5,787.7	5,557.2	21.0	28.2	104.21	778.7	1,131.8	1,397.0	1,356.1	40.90	34.152		
6,003.9	5,913.2	5,793.8	5,562.9	21.0	28.2	104.21	779.8	1,133.3	1,398.2	1,357.2	40.95	34.147		
6,053.2	5,961.4	5,870.1	5,635.5	21.3	28.6	104.25	793.9	1,152.1	1,412.7	1,371.3	41.44	34.088		
6,100.0	6,007.3	5,943.5	5,706.0	21.4	28.9	104.56	806.3	1,168.6	1,425.5	1,383.6	41.96	33.977		
6,102.3	6,009.6	5,947.2	5,709.5	21.5	28.9	104.58	806.9	1,169.4	1,426.1	1,384.2	41.98	33.973		
6,200.0	6,105.7	6,103.2	5,860.8	21.8	29.6	105.15	829.6	1,199.6	1,449.2	1,406.3	42.93	33.759		
6,200.8	6,106.5	6,104.5	5,862.1	21.8	29.6	105.15	829.7	1,199.9	1,449.4	1,406.4	42.93	33.757		
6,299.2	6,203.9	6,264.8	6,019.6	22.0	30.1	105.62	847.8	1,224.0	1,467.6	1,423.8	43.77	33.531		
6,300.0	6,204.7	6,266.1	6,020.9	22.0	30.1	105.62	847.9	1,224.1	1,467.7	1,423.9	43.77	33.529		
6,397.6	6,301.8	6,427.6	6,180.9	22.3	30.6	106.00	860.7	1,241.2	1,480.6	1,436.1	44.47	33.291		
6,400.0	6,304.2	6,431.6	6,184.8	22.3	30.6	106.01	861.0	1,241.5	1,480.9	1,436.4	44.49	33.285		
6,496.0	6,400.0	6,592.0	6,344.8	22.4	30.9	106.29	868.2	1,251.1	1,488.4	1,443.3	45.05	33.042		
6,500.0	6,403.9	6,598.6	6,351.4	22.5	30.9	106.30	868.4	1,251.4	1,488.6	1,443.5	45.07	33.030		
6,594.5	6,498.3	6,744.6	6,497.3	22.6	31.0	106.48	870.1	1,253.6	1,490.9	1,445.4	45.46	32.794		
6,600.0	6,503.8	6,750.1	6,502.8	22.6	31.1	106.48	870.1	1,253.6	1,490.9	1,445.4	45.48	32.783		
6,653.0	6,556.8	6,800.0	6,552.7	22.7	31.1	92.26	868.7	1,253.6	1,491.1	1,445.5	45.61	32.690		
6,692.9	6,596.7	6,836.2	6,588.8	22.7	31.1	92.38	865.6	1,253.6	1,491.2	1,445.5	45.69	32.639		
6,706.0	6,609.8	6,850.0	6,602.5	22.7	31.1	92.44	863.9	1,253.6	1,491.3	1,445.6	45.72	32.620		
6,750.0	6,653.8	6,888.1	6,640.1	22.8	31.1	-87.35	857.9	1,253.6	1,491.5	1,445.8	45.77	32.586		
6,791.3	6,695.0	6,925.4	6,676.6	22.8	31.0	-87.16	850.2	1,253.6	1,491.8	1,446.0	45.77	32.596		
6,800.0	6,703.6	6,933.2	6,684.1	22.8	31.0	-87.12	848.3	1,253.6	1,491.8	1,446.1	45.76	32.600		
6,850.0	6,752.9	6,978.0	6,727.2	22.8	31.0	-86.91	836.0	1,253.6	1,492.1	1,446.4	45.68	32.665		
6,889.7	6,791.6	7,013.4	6,760.7	22.7	30.9	-86.75	824.3	1,253.6	1,492.4	1,446.8	45.56	32.755		
6,900.0	6,801.5	7,022.5	6,769.2	22.7	30.9	-86.71	821.1	1,253.6	1,492.4	1,446.9	45.53	32.782		
6,950.0	6,849.1	7,066.8	6,809.9	22.6	30.8	-86.52	803.7	1,253.6	1,492.7	1,447.4	45.31	32.948		
6,988.2	6,884.8	7,100.0	6,839.7	22.5	30.7	-86.39	789.1	1,253.6	1,492.9	1,447.8	45.10	33.105		
7,000.0	6,895.7	7,110.9	6,849.3	22.5	30.7	-86.35	784.0	1,253.6	1,493.0	1,448.0	45.02	33.161		
7,050.0	6,940.8	7,154.7	6,887.2	22.3	30.5	-86.19	762.0	1,253.6	1,493.2	1,448.6	44.68	33.419		
7,086.6	6,972.8	7,186.7	6,914.0	22.1	30.4	-86.09	744.5	1,253.6	1,493.4	1,449.0	44.40	33.638		
7,100.0	6,984.3	7,200.0	6,924.9	22.1	30.4	-86.05	736.9	1,253.6	1,493.5	1,449.2	44.29	33.724		
7,150.0	7,025.9	7,242.0	6,958.3	21.9	30.2	-85.93	711.5	1,253.6	1,493.7	1,449.9	43.86	34.059		
7,185.0	7,053.9	7,272.4	6,981.6	21.7	30.1	-85.85	691.9	1,253.6	1,493.8	1,450.3	43.53	34.319		
7,200.0	7,065.6	7,285.4	6,991.3	21.7	30.1	-85.83	683.3	1,253.6	1,493.9	1,450.5	43.39	34.433		
7,250.0	7,103.0	7,328.7	7,022.4	21.4	29.9	-85.74	653.2	1,253.6	1,494.1	1,451.2	42.89	34.835		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,283.4	7,126.7	7,357.6	7,042.1	21.2	29.8	-85.69	632.0	1,253.6	1,494.2	1,451.6	42.55	35.116	
7,300.0	7,138.0	7,371.9	7,051.5	21.2	29.7	-85.67	621.3	1,253.6	1,494.2	1,451.8	42.38	35.259	
7,350.0	7,170.5	7,415.0	7,078.7	20.9	29.5	-85.62	587.8	1,253.6	1,494.3	1,452.4	41.86	35.697	
7,381.9	7,189.8	7,442.5	7,094.9	20.8	29.4	-85.60	565.6	1,253.6	1,494.3	1,452.8	41.53	35.980	
7,400.0	7,200.2	7,458.1	7,103.7	20.7	29.3	-85.59	552.7	1,253.6	1,494.4	1,453.0	41.35	36.142	
7,450.0	7,227.0	7,500.0	7,126.0	20.4	29.1	-85.58	517.3	1,253.6	1,494.4	1,453.5	40.85	36.578	
7,480.3	7,241.9	7,527.3	7,139.4	20.3	29.0	-85.58	493.5	1,253.6	1,494.4	1,453.8	40.56	36.840	
7,500.0	7,250.9	7,544.3	7,147.3	20.2	28.9	-85.58	478.5	1,253.6	1,494.4	1,454.0	40.38	37.009	
7,550.0	7,271.6	7,587.4	7,165.7	20.0	28.7	-85.61	439.5	1,253.6	1,494.3	1,454.4	39.95	37.409	
7,578.7	7,282.0	7,612.1	7,175.2	19.9	28.6	-85.63	416.6	1,253.6	1,494.3	1,454.5	39.72	37.619	
7,600.0	7,289.1	7,630.5	7,181.7	19.8	28.5	-85.65	399.4	1,253.6	1,494.2	1,454.7	39.56	37.771	
7,650.0	7,303.3	7,673.7	7,195.3	19.6	28.3	-85.72	358.4	1,253.6	1,494.1	1,454.9	39.23	38.086	
7,677.1	7,309.5	7,700.0	7,202.3	19.5	28.2	-85.76	333.1	1,253.6	1,494.0	1,455.0	39.07	38.240	
7,700.0	7,314.1	7,717.0	7,206.4	19.5	28.2	-85.80	316.6	1,253.6	1,494.0	1,455.0	38.96	38.342	
7,750.0	7,321.4	7,760.3	7,214.9	19.4	28.0	-85.90	274.1	1,253.6	1,493.8	1,455.0	38.77	38.531	
7,775.6	7,323.9	7,782.6	7,218.3	19.3	27.9	-85.96	252.2	1,253.6	1,493.7	1,455.0	38.70	38.593	
7,800.0	7,325.3	7,803.8	7,220.9	19.3	27.8	-86.02	231.0	1,253.6	1,493.6	1,454.9	38.65	38.647	
7,832.0	7,326.0	7,831.7	7,223.4	19.3	27.7	-86.10	203.3	1,253.6	1,493.4	1,454.8	38.61	38.676	
7,874.0	7,325.9	7,868.5	7,225.0	19.3	27.6	-86.16	166.5	1,253.6	1,493.3	1,454.6	38.64	38.643	
7,889.5	7,325.9	7,882.1	7,225.1	19.3	27.6	-86.17	152.9	1,253.6	1,493.3	1,454.6	38.66	38.627	
7,900.0	7,325.9	7,891.4	7,225.0	19.3	27.5	-86.16	143.6	1,253.6	1,493.3	1,454.6	38.67	38.615	
7,972.4	7,325.8	7,963.8	7,224.0	19.4	27.3	-86.13	71.2	1,253.6	1,493.3	1,454.4	38.96	38.328	
8,000.0	7,325.8	7,991.4	7,223.6	19.5	27.3	-86.12	43.7	1,253.6	1,493.4	1,454.3	39.08	38.216	
8,070.8	7,325.7	8,062.2	7,222.7	19.8	27.2	-86.08	-27.2	1,253.6	1,493.4	1,453.8	39.61	37.699	
8,100.0	7,325.6	8,091.4	7,222.3	19.9	27.2	-86.07	-56.3	1,253.6	1,493.4	1,453.6	39.84	37.484	
8,169.3	7,325.5	8,160.6	7,221.3	20.3	27.1	-86.04	-125.6	1,253.6	1,493.5	1,452.9	40.61	36.779	
8,200.0	7,325.5	8,191.4	7,220.9	20.5	27.1	-86.02	-156.3	1,253.6	1,493.5	1,452.6	40.95	36.469	
8,267.7	7,325.4	8,259.0	7,220.0	21.1	27.2	-85.99	-224.0	1,253.6	1,493.6	1,451.7	41.92	35.633	
8,300.0	7,325.3	8,291.3	7,219.5	21.3	27.3	-85.98	-256.3	1,253.6	1,493.6	1,451.2	42.38	35.241	
8,366.1	7,325.2	8,357.5	7,218.6	21.9	27.4	-85.94	-322.4	1,253.6	1,493.7	1,450.2	43.51	34.327	
8,400.0	7,325.2	8,391.3	7,218.1	22.3	27.6	-85.93	-356.3	1,253.6	1,493.7	1,449.6	44.10	33.872	
8,464.5	7,325.1	8,455.9	7,217.2	22.9	27.9	-85.90	-420.8	1,253.6	1,493.8	1,448.4	45.37	32.925	
8,500.0	7,325.1	8,491.3	7,216.8	23.3	28.1	-85.88	-456.3	1,253.6	1,493.8	1,447.7	46.07	32.424	
8,563.0	7,325.0	8,554.3	7,215.9	24.0	28.4	-85.85	-519.2	1,253.6	1,493.8	1,446.4	47.45	31.482	
8,600.0	7,324.9	8,591.3	7,215.4	24.5	28.7	-85.83	-556.2	1,253.6	1,493.9	1,445.6	48.27	30.950	
8,661.4	7,324.8	8,652.7	7,214.5	25.2	29.2	-85.80	-617.6	1,253.6	1,493.9	1,444.2	49.73	30.040	
8,700.0	7,324.8	8,691.3	7,214.0	25.7	29.6	-85.79	-656.2	1,253.6	1,494.0	1,443.3	50.66	29.491	
8,759.8	7,324.7	8,751.1	7,213.2	26.5	30.1	-85.76	-716.0	1,253.6	1,494.0	1,441.8	52.19	28.628	
8,800.0	7,324.6	8,791.3	7,212.6	27.1	30.5	-85.74	-756.2	1,253.6	1,494.1	1,440.8	53.22	28.074	
8,858.2	7,324.5	8,849.6	7,211.8	27.9	31.2	-85.71	-814.4	1,253.6	1,494.1	1,439.3	54.79	27.269	
8,900.0	7,324.5	8,891.3	7,211.2	28.4	31.6	-85.69	-856.2	1,253.6	1,494.2	1,438.2	55.92	26.718	
8,956.7	7,324.4	8,948.0	7,210.5	29.3	32.3	-85.67	-912.9	1,253.6	1,494.2	1,436.7	57.53	25.975	
9,000.0	7,324.3	8,991.3	7,209.9	29.9	32.8	-85.64	-956.2	1,253.6	1,494.3	1,435.5	58.75	25.432	
9,055.1	7,324.3	9,046.4	7,209.1	30.7	33.5	-85.62	-1,011.3	1,253.6	1,494.3	1,433.9	60.37	24.752	
9,100.0	7,324.2	9,091.3	7,208.5	31.4	34.1	-85.60	-1,056.2	1,253.6	1,494.3	1,432.7	61.69	24.223	
9,153.5	7,324.1	9,144.8	7,207.7	32.2	34.8	-85.57	-1,109.7	1,253.6	1,494.4	1,431.1	63.31	23.603	
9,200.0	7,324.0	9,191.3	7,207.1	33.0	35.5	-85.55	-1,156.1	1,253.6	1,494.4	1,429.7	64.72	23.090	
9,251.9	7,324.0	9,243.2	7,206.4	33.8	36.2	-85.53	-1,208.1	1,253.6	1,494.5	1,428.2	66.34	22.528	
9,300.0	7,323.9	9,291.3	7,205.7	34.5	36.9	-85.50	-1,256.1	1,253.6	1,494.5	1,426.7	67.84	22.032	
9,350.4	7,323.8	9,341.6	7,205.0	35.4	37.6	-85.48	-1,306.5	1,253.6	1,494.6	1,425.2	69.44	21.524	
9,400.0	7,323.7	9,391.3	7,204.3	36.2	38.3	-85.46	-1,356.1	1,253.6	1,494.6	1,423.6	71.02	21.046	
9,448.8	7,323.7	9,440.1	7,203.7	37.0	39.0	-85.43	-1,404.9	1,253.6	1,494.7	1,422.1	72.60	20.588	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MW/D												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	7,323.6	9,491.3	7,203.0	37.8	39.8	-85.41	-1,456.1	1,253.6	1,494.7	1,420.5	74.26	20.128	
9,547.2	7,323.5	9,538.5	7,202.3	38.6	40.5	-85.39	-1,503.3	1,253.6	1,494.8	1,419.0	75.82	19.716	
9,600.0	7,323.5	9,591.2	7,201.6	39.5	41.3	-85.36	-1,556.1	1,253.6	1,494.8	1,417.3	77.56	19.274	
9,645.6	7,323.4	9,636.9	7,201.0	40.2	42.0	-85.34	-1,601.7	1,253.6	1,494.9	1,415.8	79.08	18.903	
9,700.0	7,323.3	9,691.2	7,200.2	41.2	42.9	-85.32	-1,656.1	1,253.6	1,494.9	1,414.0	80.90	18.479	
9,744.1	7,323.2	9,735.3	7,199.6	41.9	43.6	-85.29	-1,700.1	1,253.6	1,495.0	1,412.6	82.39	18.145	
9,800.0	7,323.2	9,791.2	7,198.8	42.9	44.5	-85.27	-1,756.0	1,253.6	1,495.0	1,410.8	84.28	17.738	
9,842.5	7,323.1	9,833.7	7,198.2	43.6	45.2	-85.25	-1,798.5	1,253.6	1,495.1	1,409.3	85.74	17.438	
9,900.0	7,323.0	9,891.2	7,197.5	44.6	46.1	-85.22	-1,856.0	1,253.6	1,495.1	1,407.4	87.70	17.048	
9,940.9	7,322.9	9,932.1	7,196.9	45.3	46.8	-85.20	-1,896.9	1,253.6	1,495.2	1,406.1	89.12	16.778	
10,000.0	7,322.9	9,991.2	7,196.1	46.3	47.7	-85.17	-1,956.0	1,253.6	1,495.2	1,404.1	91.16	16.403	
10,039.3	7,322.8	10,030.6	7,195.5	47.0	48.4	-85.16	-1,995.3	1,253.6	1,495.3	1,402.8	92.52	16.161	
10,100.0	7,322.7	10,091.2	7,194.7	48.1	49.4	-85.13	-2,056.0	1,253.6	1,495.4	1,400.7	94.64	15.801	
10,137.8	7,322.6	10,129.0	7,194.2	48.8	50.0	-85.11	-2,093.8	1,253.6	1,495.4	1,399.4	95.96	15.584	
10,200.0	7,322.6	10,191.2	7,193.3	49.9	51.1	-85.08	-2,156.0	1,253.6	1,495.5	1,397.3	98.14	15.238	
10,236.2	7,322.5	10,227.4	7,192.8	50.5	51.7	-85.06	-2,192.2	1,253.6	1,495.5	1,396.1	99.42	15.043	
10,300.0	7,322.4	10,291.2	7,191.9	51.6	52.7	-85.03	-2,255.9	1,253.6	1,495.6	1,393.9	101.67	14.710	
10,334.6	7,322.4	10,325.8	7,191.5	52.3	53.3	-85.02	-2,290.6	1,253.6	1,495.6	1,392.7	102.90	14.535	
10,400.0	7,322.3	10,391.2	7,190.6	53.4	54.4	-84.99	-2,355.9	1,253.6	1,495.7	1,390.5	105.22	14.215	
10,433.0	7,322.2	10,424.2	7,190.1	54.0	55.0	-84.97	-2,389.0	1,253.6	1,495.7	1,389.3	106.40	14.058	
10,500.0	7,322.1	10,491.2	7,189.2	55.2	56.2	-84.94	-2,455.9	1,253.6	1,495.8	1,387.0	108.79	13.750	
10,531.5	7,322.1	10,522.7	7,188.7	55.8	56.7	-84.93	-2,487.4	1,253.6	1,495.8	1,385.9	109.91	13.609	
10,600.0	7,321.9	10,591.2	7,187.8	57.0	57.9	-84.89	-2,555.9	1,253.6	1,495.9	1,383.5	112.37	13.312	
10,629.9	7,321.9	10,621.1	7,187.4	57.6	58.4	-84.88	-2,585.8	1,253.6	1,495.9	1,382.5	113.44	13.186	
10,700.0	7,321.8	10,691.2	7,186.4	58.8	59.6	-84.85	-2,655.9	1,253.6	1,496.0	1,380.0	115.97	12.900	
10,728.3	7,321.8	10,719.5	7,186.0	59.4	60.1	-84.83	-2,684.2	1,253.6	1,496.0	1,379.0	116.99	12.788	
10,800.0	7,321.6	10,791.2	7,185.0	60.7	61.4	-84.80	-2,755.9	1,253.6	1,496.1	1,376.5	119.58	12.512	
10,826.7	7,321.6	10,817.9	7,184.7	61.1	61.9	-84.79	-2,782.6	1,253.6	1,496.1	1,375.6	120.55	12.411	
10,900.0	7,321.5	10,891.2	7,183.7	62.5	63.1	-84.75	-2,855.8	1,253.6	1,496.2	1,373.0	123.20	12.144	
10,925.2	7,321.4	10,916.3	7,183.3	62.9	63.6	-84.74	-2,881.0	1,253.6	1,496.3	1,372.1	124.12	12.055	
11,000.0	7,321.3	10,991.1	7,182.3	64.3	64.9	-84.71	-2,955.8	1,253.6	1,496.3	1,369.5	126.84	11.797	
11,023.6	7,321.3	11,014.7	7,182.0	64.7	65.3	-84.70	-2,979.4	1,253.6	1,496.4	1,368.7	127.70	11.718	
11,100.0	7,321.2	11,091.1	7,180.9	66.1	66.7	-84.66	-3,055.8	1,253.6	1,496.5	1,366.0	130.48	11.469	
11,122.0	7,321.1	11,113.2	7,180.6	66.5	67.1	-84.65	-3,077.8	1,253.6	1,496.5	1,365.2	131.29	11.398	
11,200.0	7,321.0	11,191.1	7,179.5	68.0	68.5	-84.61	-3,155.8	1,253.6	1,496.6	1,362.4	134.14	11.157	
11,220.4	7,321.0	11,211.6	7,179.2	68.4	68.8	-84.60	-3,176.2	1,253.6	1,496.6	1,361.7	134.89	11.095	
11,300.0	7,320.9	11,291.1	7,178.1	69.8	70.3	-84.57	-3,255.8	1,253.6	1,496.7	1,358.9	137.80	10.861	
11,318.9	7,320.8	11,310.0	7,177.9	70.2	70.6	-84.56	-3,274.6	1,253.6	1,496.7	1,358.2	138.49	10.807	
11,400.0	7,320.7	11,391.1	7,176.8	71.7	72.1	-84.52	-3,355.8	1,253.6	1,496.8	1,355.3	141.47	10.580	
11,417.3	7,320.7	11,408.4	7,176.5	72.0	72.4	-84.51	-3,373.1	1,253.6	1,496.8	1,354.7	142.11	10.533	
11,500.0	7,320.6	11,491.1	7,175.4	73.5	73.9	-84.47	-3,455.7	1,253.6	1,496.9	1,351.8	145.15	10.313	
11,515.7	7,320.5	11,506.8	7,175.2	73.8	74.2	-84.47	-3,471.5	1,253.6	1,496.9	1,351.2	145.73	10.272	
11,600.0	7,320.4	11,591.1	7,174.0	75.4	75.7	-84.43	-3,555.7	1,253.6	1,497.0	1,348.2	148.84	10.058	
11,614.1	7,320.4	11,605.2	7,173.8	75.6	75.9	-84.42	-3,569.9	1,253.6	1,497.1	1,347.7	149.36	10.023	
11,700.0	7,320.2	11,691.1	7,172.6	77.2	77.5	-84.38	-3,655.7	1,253.6	1,497.2	1,344.6	152.53	9.816	
11,712.6	7,320.2	11,703.7	7,172.5	77.5	77.7	-84.37	-3,668.3	1,253.6	1,497.2	1,344.2	152.99	9.786	
11,800.0	7,320.1	11,791.1	7,171.3	79.1	79.3	-84.33	-3,755.7	1,253.6	1,497.3	1,341.1	156.22	9.584	
11,811.0	7,320.1	11,802.1	7,171.1	79.3	79.5	-84.33	-3,766.7	1,253.6	1,497.3	1,340.7	156.59	9.562	
11,849.2	7,320.0	11,840.4	7,170.6	79.8	80.2	-84.31	-3,805.0	1,253.6	1,497.4	1,339.5	157.86	9.486	
11,849.6	7,320.0	11,840.7	7,170.6	79.8	80.2	-84.31	-3,805.3	1,253.6	1,497.4	1,339.5	157.87	9.485 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	91.74	-1.8	60.0	60.0				
98.4	98.4	98.4	98.4	0.1	0.1	91.74	-1.8	60.0	60.0	59.8	0.17	353.119	
100.0	100.0	100.0	100.0	0.1	0.1	91.74	-1.8	60.0	60.0	59.8	0.17	346.726	
196.8	196.8	196.8	196.8	0.3	0.3	91.74	-1.8	60.0	60.0	59.4	0.61	98.626	
200.0	200.0	200.0	200.0	0.3	0.3	91.74	-1.8	60.0	60.0	59.4	0.62	96.383	
295.3	295.3	295.3	295.3	0.5	0.5	91.74	-1.8	60.0	60.0	59.0	1.05	57.102	
300.0	300.0	300.0	300.0	0.5	0.5	91.74	-1.8	60.0	60.0	58.9	1.07	55.971	
393.7	393.7	393.7	393.7	0.7	0.7	91.74	-1.8	60.0	60.0	58.5	1.49	40.184	
400.0	400.0	400.0	400.0	0.8	0.8	91.74	-1.8	60.0	60.0	58.5	1.52	39.436	
492.1	492.1	492.1	492.1	1.0	1.0	91.74	-1.8	60.0	60.0	58.1	1.94	30.999	
500.0	500.0	500.0	500.0	1.0	1.0	91.74	-1.8	60.0	60.0	58.0	1.97	30.442	
590.5	590.5	590.5	590.5	1.2	1.2	91.74	-1.8	60.0	60.0	57.6	2.38	25.232	
600.0	600.0	600.0	600.0	1.2	1.2	91.74	-1.8	60.0	60.0	57.6	2.42	24.789	
689.0	689.0	689.0	689.0	1.4	1.4	91.74	-1.8	60.0	60.0	57.2	2.82	21.274	
700.0	700.0	700.0	700.0	1.4	1.4	91.74	-1.8	60.0	60.0	57.1	2.87	20.907	
787.4	787.4	787.4	787.4	1.6	1.6	91.74	-1.8	60.0	60.0	56.7	3.26	18.390	
800.0	800.0	800.0	800.0	1.7	1.7	91.74	-1.8	60.0	60.0	56.7	3.32	18.076	
885.8	885.8	885.8	885.8	1.9	1.9	91.74	-1.8	60.0	60.0	56.3	3.71	16.194	
900.0	900.0	900.0	900.0	1.9	1.9	91.74	-1.8	60.0	60.0	56.2	3.77	15.920	
984.2	984.2	984.2	984.2	2.1	2.1	91.74	-1.8	60.0	60.0	55.9	4.15	14.467	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	91.74	-1.8	60.0	60.0	55.8	4.22	14.224	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	91.74	-1.8	60.0	60.0	55.4	4.59	13.072	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	91.74	-1.8	60.0	60.0	55.3	4.67	12.854	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	91.74	-1.8	60.0	60.0	55.0	5.03	11.923	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	91.74	-1.8	60.0	60.0	54.9	5.12	11.725	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	91.74	-1.8	60.0	60.0	54.5	5.48	10.960	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	91.74	-1.8	60.0	60.0	54.4	5.57	10.778	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	91.74	-1.8	60.0	60.0	54.1	5.92	10.140	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	91.74	-1.8	60.0	60.0	54.0	6.02	9.973	
1,450.0	1,450.0	1,450.0	1,450.0	3.1	3.1	91.74	-1.8	60.0	60.0	53.8	6.24	9.614 CC	
1,476.4	1,476.4	1,476.4	1,476.4	3.2	3.2	106.14	-1.8	60.0	60.0	53.7	6.36	9.440	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	106.43	-1.8	60.0	60.1	53.7	6.47	9.299 ES	
1,574.8	1,574.8	1,574.8	1,574.8	3.4	3.4	108.48	-1.8	60.0	60.8	54.0	6.80	8.943	
1,600.0	1,599.9	1,599.9	1,599.9	3.5	3.5	109.54	-1.8	60.0	61.2	54.3	6.91	8.855	
1,673.2	1,673.0	1,673.0	1,673.0	3.6	3.6	113.59	-1.8	60.0	63.0	55.7	7.24	8.698	
1,700.0	1,699.7	1,699.7	1,699.7	3.7	3.7	115.39	-1.8	60.0	63.9	56.5	7.36	8.683	
1,771.6	1,771.0	1,771.0	1,771.0	3.9	3.8	120.81	-1.8	60.0	67.3	59.6	7.68	8.762	
1,800.0	1,799.1	1,799.1	1,799.1	3.9	3.9	123.13	-1.8	60.0	69.0	61.2	7.80	8.849	
1,870.1	1,868.6	1,868.5	1,868.5	4.1	4.1	129.01	-1.8	60.0	74.6	66.5	8.11	9.201	
1,900.0	1,898.2	1,897.9	1,897.9	4.2	4.1	131.29	-1.5	60.2	77.6	69.4	8.24	9.423	
1,968.5	1,965.7	1,965.3	1,965.3	4.3	4.3	135.65	0.0	61.4	85.9	77.4	8.53	10.067	
2,000.0	1,996.6	1,996.3	1,996.2	4.4	4.3	137.26	1.1	62.3	90.3	81.7	8.67	10.422	
2,049.8	2,045.4	2,045.2	2,045.1	4.6	4.5	139.37	3.4	64.1	98.0	89.1	8.88	11.032	
2,066.9	2,062.2	2,062.1	2,061.9	4.6	4.5	140.00	4.3	64.8	100.8	91.8	8.96	11.246	
2,100.0	2,094.5	2,094.7	2,094.4	4.7	4.6	140.97	6.4	66.5	106.2	97.1	9.11	11.652	
2,165.3	2,158.5	2,159.1	2,158.5	4.9	4.7	142.08	11.2	70.3	117.0	107.5	9.43	12.406	
2,200.0	2,192.3	2,193.2	2,192.4	5.1	4.8	142.31	14.3	72.7	122.7	113.1	9.60	12.785	
2,263.8	2,254.7	2,256.2	2,254.8	5.3	4.9	142.21	20.7	77.8	133.2	123.3	9.92	13.428	
2,300.0	2,290.2	2,291.9	2,290.1	5.4	5.0	141.91	24.9	81.1	139.2	129.1	10.11	13.769	
2,362.2	2,351.0	2,353.2	2,350.6	5.6	5.2	141.04	32.8	87.3	149.5	139.0	10.45	14.304	
2,400.0	2,388.0	2,390.3	2,387.1	5.8	5.3	140.34	38.0	91.5	155.8	145.1	10.66	14.609	
2,460.6	2,447.3	2,449.9	2,445.5	6.0	5.4	138.96	47.3	98.8	165.9	154.9	11.02	15.054	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - OLSON 30R-343 - ORIGINAL WELLBORE - PROPOSAL #2												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,485.8	2,488.4	2,483.1	6.1	5.6	137.94	53.8	103.9	172.6	161.4	11.26	15.328	
2,559.0	2,543.6	2,546.0	2,539.2	6.3	5.7	136.24	64.2	112.1	182.9	171.2	11.65	15.701	
2,600.0	2,583.6	2,585.8	2,577.8	6.5	5.9	134.97	71.9	118.2	190.1	178.2	11.92	15.951	
2,657.5	2,639.8	2,641.4	2,631.4	6.7	6.1	133.08	83.4	127.3	200.6	188.3	12.32	16.279	
2,700.0	2,681.4	2,682.4	2,670.7	6.9	6.2	131.62	92.4	134.4	208.6	196.0	12.63	16.516	
2,755.9	2,736.1	2,736.8	2,722.8	7.1	6.4	129.74	104.7	144.1	219.4	206.4	13.06	16.806	
2,800.0	2,779.2	2,779.7	2,763.9	7.3	6.6	128.37	114.3	151.8	228.1	214.7	13.39	17.030	
2,854.3	2,832.4	2,832.5	2,814.5	7.5	6.8	126.82	126.3	161.2	238.9	225.1	13.82	17.293	
2,900.0	2,877.1	2,877.0	2,857.1	7.7	7.0	125.62	136.3	169.1	248.2	234.0	14.18	17.506	
2,952.7	2,928.7	2,928.3	2,906.3	7.9	7.3	124.35	147.9	178.2	258.9	244.4	14.60	17.741	
3,000.0	2,974.9	2,974.3	2,950.3	8.1	7.5	123.29	158.2	186.4	268.7	253.7	14.98	17.943	
3,051.2	3,024.9	3,024.1	2,998.0	8.3	7.7	122.23	169.5	195.3	279.4	264.0	15.39	18.152	
3,100.0	3,072.7	3,071.6	3,043.5	8.5	7.9	121.29	180.2	203.8	289.6	273.8	15.79	18.343	
3,149.6	3,121.2	3,119.9	3,089.8	8.7	8.2	120.40	191.1	212.4	300.1	283.9	16.20	18.529	
3,200.0	3,170.5	3,168.9	3,136.8	8.9	8.4	119.55	202.2	221.1	310.8	294.2	16.61	18.711	
3,248.0	3,217.5	3,215.7	3,181.5	9.1	8.6	118.80	212.7	229.4	321.1	304.1	17.01	18.876	
3,300.0	3,268.3	3,266.3	3,230.0	9.3	8.9	118.04	224.1	238.4	332.3	314.9	17.45	19.048	
3,346.4	3,313.8	3,311.5	3,273.3	9.5	9.1	117.40	234.3	246.5	342.3	324.5	17.83	19.196	
3,400.0	3,366.1	3,363.6	3,323.2	9.7	9.4	116.71	246.1	255.8	353.9	335.7	18.28	19.359	
3,444.9	3,410.0	3,407.3	3,365.0	9.9	9.6	116.16	255.9	263.6	363.7	345.1	18.66	19.490	
3,500.0	3,464.0	3,460.9	3,416.4	10.2	9.9	115.53	268.0	273.1	375.8	356.6	19.13	19.644	
3,543.3	3,506.3	3,503.0	3,456.7	10.3	10.1	115.07	277.5	280.6	385.2	365.7	19.49	19.762	
3,600.0	3,561.8	3,558.2	3,509.6	10.6	10.4	114.49	290.0	290.5	397.7	377.7	19.98	19.908	
3,641.7	3,602.6	3,598.8	3,548.5	10.8	10.6	114.08	299.1	297.7	406.9	386.6	20.33	20.013	
3,700.0	3,659.6	3,655.5	3,602.8	11.0	10.9	113.55	311.9	307.8	419.8	398.9	20.83	20.153	
3,740.1	3,698.9	3,694.6	3,640.2	11.2	11.1	113.20	320.7	314.8	428.6	407.5	21.17	20.246	
3,800.0	3,757.4	3,752.8	3,696.0	11.4	11.4	112.70	333.9	325.1	441.9	420.2	21.69	20.379	
3,838.6	3,795.1	3,790.4	3,732.0	11.6	11.6	112.40	342.3	331.8	450.5	428.5	22.02	20.462	
3,900.0	3,855.2	3,850.2	3,789.2	11.9	11.9	111.94	355.8	342.5	464.2	441.6	22.54	20.589	
3,937.0	3,891.4	3,886.2	3,823.7	12.0	12.1	111.67	363.9	348.9	472.4	449.5	22.86	20.663	
4,000.0	3,953.0	3,947.5	3,882.4	12.3	12.5	111.24	377.8	359.8	486.5	463.1	23.41	20.785	
4,035.4	3,987.7	3,982.0	3,915.4	12.4	12.7	111.01	385.5	366.0	494.4	470.7	23.71	20.851	
4,100.0	4,050.9	4,044.8	3,975.6	12.7	13.0	110.61	399.7	377.2	508.8	484.6	24.27	20.967	
4,133.8	4,084.0	4,077.7	4,007.2	12.9	13.2	110.41	407.1	383.0	516.4	491.9	24.56	21.026	
4,200.0	4,148.7	4,142.1	4,068.8	13.2	13.5	110.03	421.7	394.5	531.3	506.1	25.13	21.138	
4,232.3	4,180.2	4,173.5	4,098.9	13.3	13.7	109.85	428.7	400.1	538.5	513.1	25.41	21.190	
4,300.0	4,246.5	4,239.4	4,162.1	13.6	14.1	109.49	443.6	411.8	553.7	527.7	26.00	21.297	
4,330.7	4,276.5	4,269.3	4,190.7	13.7	14.2	109.34	450.3	417.2	560.7	534.4	26.27	21.344	
4,400.0	4,344.3	4,336.7	4,255.3	14.0	14.6	109.00	465.6	429.2	576.3	549.4	26.87	21.447	
4,429.1	4,372.8	4,365.1	4,282.4	14.1	14.8	108.87	471.9	434.2	582.8	555.7	27.12	21.488	
4,500.0	4,442.1	4,434.1	4,348.5	14.5	15.2	108.55	487.5	446.5	598.8	571.1	27.74	21.587	
4,527.5	4,469.1	4,460.9	4,374.2	14.6	15.3	108.43	493.6	451.3	605.0	577.1	27.98	21.624	
4,600.0	4,539.9	4,531.4	4,441.7	14.9	15.7	108.13	509.5	463.9	621.4	592.8	28.61	21.719	
4,626.0	4,565.4	4,556.7	4,465.9	15.0	15.9	108.02	515.2	468.4	627.3	598.4	28.84	21.752	
4,700.0	4,637.8	4,628.7	4,534.9	15.3	16.3	107.73	531.4	481.2	644.0	614.5	29.48	21.844	
4,724.4	4,661.6	4,652.4	4,557.6	15.4	16.4	107.64	536.8	485.4	649.5	619.9	29.70	21.873	
4,800.0	4,735.6	4,726.0	4,628.1	15.8	16.8	107.37	553.4	498.5	666.7	636.3	30.36	21.961	
4,822.8	4,757.9	4,748.2	4,649.4	15.9	16.9	107.29	558.4	502.5	671.8	641.3	30.56	21.987	
4,900.0	4,833.4	4,823.3	4,721.3	16.2	17.4	107.03	575.3	515.9	689.3	658.1	31.23	22.072	
4,921.2	4,854.2	4,844.0	4,741.1	16.3	17.5	106.96	580.0	519.6	694.2	662.7	31.42	22.095	
5,000.0	4,931.2	4,920.6	4,814.5	16.6	17.9	106.71	597.3	533.2	712.0	679.9	32.11	22.177	
5,019.7	4,950.5	4,939.8	4,832.9	16.7	18.0	106.64	601.6	536.6	716.5	684.2	32.28	22.197	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,029.0	5,018.0	4,907.7	17.1	18.5	106.40	619.2	550.6	734.7	701.8	32.98	22.276	
5,118.1	5,046.7	5,035.6	4,924.6	17.1	18.6	106.35	623.2	553.7	738.9	705.7	33.14	22.294	
5,200.0	5,126.8	5,115.3	5,000.9	17.5	19.0	106.12	641.2	567.9	757.5	723.6	33.86	22.371	
5,216.5	5,143.0	5,131.4	5,016.3	17.6	19.1	106.08	644.8	570.8	761.2	727.2	34.00	22.386	
5,300.0	5,224.7	5,212.6	5,094.2	17.9	19.6	105.86	663.1	585.2	780.2	745.5	34.74	22.461	
5,314.9	5,239.3	5,227.1	5,108.1	18.0	19.7	105.82	666.4	587.8	783.6	748.8	34.87	22.474	
5,400.0	5,322.5	5,309.9	5,187.4	18.4	20.1	105.61	685.1	602.6	803.0	767.4	35.62	22.546	
5,413.4	5,335.6	5,322.9	5,199.8	18.4	20.2	105.57	688.0	604.9	806.0	770.3	35.73	22.557	
5,500.0	5,420.3	5,407.2	5,280.6	18.8	20.7	105.37	707.0	619.9	825.8	789.3	36.49	22.627	
5,511.8	5,431.8	5,418.7	5,291.6	18.9	20.8	105.34	709.6	622.0	828.4	791.8	36.60	22.636	
5,600.0	5,518.1	5,504.5	5,373.8	19.3	21.2	105.14	729.0	637.3	848.5	811.2	37.37	22.704	
5,610.2	5,528.1	5,514.5	5,383.3	19.3	21.3	105.12	731.2	639.0	850.9	813.4	37.46	22.712	
5,700.0	5,615.9	5,601.9	5,467.0	19.7	21.8	104.93	750.9	654.6	871.3	833.1	38.25	22.778	
5,708.6	5,624.4	5,610.3	5,475.1	19.7	21.9	104.91	752.8	656.1	873.3	835.0	38.33	22.784	
5,800.0	5,713.7	5,699.2	5,560.2	20.1	22.4	104.73	772.9	671.9	894.1	855.0	39.13	22.849	
5,807.1	5,720.7	5,706.1	5,566.8	20.2	22.4	104.72	774.4	673.2	895.8	856.6	39.20	22.854	
5,900.0	5,811.6	5,797.2	5,654.1	20.6	22.9	104.54	795.0	689.4	917.0	876.9	40.02	22.915	
5,905.5	5,816.9	5,803.9	5,660.5	20.6	23.0	104.52	796.5	690.6	918.2	878.1	40.06	22.918	
6,000.0	5,909.4	5,918.5	5,771.0	21.0	23.4	104.45	820.3	709.4	938.5	897.6	40.89	22.954	
6,003.9	5,913.2	5,923.3	5,775.6	21.0	23.5	104.45	821.2	710.1	939.3	898.3	40.92	22.954	
6,053.2	5,961.4	5,983.5	5,834.2	21.3	23.7	104.50	832.2	718.8	948.9	907.6	41.34	22.953	
6,100.0	6,007.3	6,041.0	5,890.4	21.4	23.9	104.75	841.9	726.4	957.4	915.7	41.74	22.938	
6,102.3	6,009.6	6,043.9	5,893.2	21.5	23.9	104.76	842.3	726.8	957.8	916.0	41.76	22.938	
6,200.0	6,105.7	6,164.7	6,012.0	21.8	24.3	105.23	859.6	740.4	973.0	930.5	42.48	22.905	
6,200.8	6,106.5	6,165.6	6,012.9	21.8	24.3	105.23	859.7	740.5	973.1	930.6	42.49	22.904	
6,299.2	6,203.9	6,288.3	6,134.4	22.0	24.7	105.63	873.1	751.2	985.1	942.0	43.13	22.841	
6,300.0	6,204.7	6,289.3	6,135.4	22.0	24.7	105.64	873.2	751.2	985.2	942.0	43.13	22.840	
6,397.6	6,301.8	6,411.7	6,257.2	22.3	24.9	105.97	882.5	758.6	993.7	950.0	43.67	22.753	
6,400.0	6,304.2	6,414.7	6,260.1	22.3	24.9	105.98	882.7	758.7	993.8	950.1	43.68	22.751	
6,496.0	6,400.0	6,535.5	6,380.8	22.4	25.1	106.25	887.8	762.7	998.8	954.7	44.11	22.641	
6,500.0	6,403.9	6,540.4	6,385.7	22.5	25.1	106.26	887.9	762.8	998.9	954.8	44.13	22.636	
6,594.5	6,498.3	6,653.1	6,498.3	22.6	25.3	106.46	889.0	763.7	1,000.6	956.1	44.46	22.505	
6,600.0	6,503.8	6,658.6	6,503.8	22.6	25.3	106.47	889.0	763.7	1,000.6	956.1	44.48	22.497	
6,653.0	6,556.8	6,708.8	6,554.0	22.7	25.3	92.31	887.2	763.7	1,000.8	956.2	44.60	22.440	
6,692.9	6,596.7	6,746.3	6,591.3	22.7	25.3	92.51	883.6	763.7	1,001.0	956.3	44.67	22.407	
6,706.0	6,609.8	6,758.5	6,603.4	22.7	25.3	92.60	882.0	763.7	1,001.0	956.3	44.69	22.400	
6,750.0	6,653.8	6,800.0	6,644.3	22.8	25.3	-87.05	875.1	763.7	1,001.3	956.6	44.73	22.385	
6,791.3	6,695.0	6,837.4	6,680.8	22.8	25.3	-86.74	866.8	763.7	1,001.6	956.9	44.71	22.405	
6,800.0	6,703.6	6,845.3	6,688.5	22.8	25.3	-86.68	864.8	763.7	1,001.7	957.0	44.70	22.409	
6,850.0	6,752.9	6,891.0	6,732.2	22.8	25.2	-86.32	851.6	763.7	1,002.1	957.5	44.60	22.470	
6,889.7	6,791.6	6,927.1	6,766.1	22.7	25.1	-86.05	839.3	763.7	1,002.4	957.9	44.46	22.546	
6,900.0	6,801.5	6,936.3	6,774.7	22.7	25.1	-85.98	835.8	763.7	1,002.5	958.1	44.42	22.567	
6,950.0	6,849.1	6,981.4	6,815.8	22.6	24.9	-85.65	817.5	763.7	1,002.9	958.7	44.18	22.699	
6,988.2	6,884.8	7,015.6	6,846.3	22.5	24.8	-85.42	801.9	763.7	1,003.2	959.3	43.96	22.823	
7,000.0	6,895.7	7,026.2	6,855.5	22.5	24.8	-85.35	796.7	763.7	1,003.3	959.4	43.88	22.864	
7,050.0	6,940.8	7,070.7	6,893.6	22.3	24.6	-85.07	773.7	763.7	1,003.7	960.2	43.53	23.059	
7,086.6	6,972.8	7,103.1	6,920.4	22.1	24.5	-84.87	755.4	763.7	1,004.0	960.8	43.24	23.221	
7,100.0	6,984.3	7,115.0	6,930.0	22.1	24.4	-84.81	748.5	763.7	1,004.1	961.0	43.13	23.283	
7,150.0	7,025.9	7,159.0	6,964.6	21.9	24.3	-84.57	721.2	763.7	1,004.5	961.8	42.68	23.533	
7,185.0	7,053.9	7,189.8	6,987.7	21.7	24.1	-84.41	700.9	763.7	1,004.8	962.4	42.35	23.723	
7,200.0	7,065.6	7,200.0	6,995.2	21.7	24.1	-84.36	693.9	763.7	1,004.9	962.7	42.23	23.797	
7,250.0	7,103.0	7,246.7	7,028.1	21.4	23.8	-84.16	660.8	763.7	1,005.2	963.5	41.71	24.098	

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 OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,283.4	7,126.7	7,275.9	7,047.5	21.2	23.7	-84.05	639.1	763.7	1,005.4	964.0	41.37	24.301	
7,300.0	7,138.0	7,290.3	7,056.8	21.2	23.6	-84.00	628.0	763.7	1,005.5	964.3	41.20	24.403	
7,350.0	7,170.5	7,333.8	7,083.4	20.9	23.4	-83.86	593.7	763.7	1,005.8	965.1	40.69	24.715	
7,381.9	7,189.8	7,361.4	7,099.2	20.8	23.2	-83.79	571.0	763.7	1,005.9	965.5	40.37	24.915	
7,400.0	7,200.2	7,377.1	7,107.8	20.7	23.1	-83.75	557.8	763.7	1,006.0	965.8	40.19	25.029	
7,450.0	7,227.0	7,420.4	7,130.0	20.4	22.9	-83.66	520.6	763.7	1,006.1	966.4	39.71	25.337	
7,480.3	7,241.9	7,450.0	7,143.8	20.3	22.8	-83.62	494.5	763.7	1,006.2	966.8	39.42	25.528	
7,481.7	7,242.5	7,450.0	7,143.8	20.3	22.8	-83.62	494.5	763.7	1,006.2	966.8	39.41	25.532	
7,500.0	7,250.9	7,463.7	7,149.8	20.2	22.7	-83.61	482.2	763.7	1,006.2	967.0	39.26	25.631	
7,550.0	7,271.6	7,506.9	7,167.3	20.0	22.5	-83.58	442.7	763.7	1,006.3	967.5	38.85	25.905	
7,578.7	7,282.0	7,531.7	7,176.2	19.9	22.3	-83.57	419.5	763.7	1,006.3	967.7	38.64	26.044	
7,600.0	7,289.1	7,550.0	7,182.3	19.8	22.2	-83.57	402.3	763.7	1,006.3	967.8	38.49	26.148	
7,650.0	7,303.3	7,593.3	7,195.0	19.6	22.0	-83.60	360.9	763.7	1,006.3	968.1	38.19	26.351	
7,677.1	7,309.5	7,616.8	7,200.8	19.5	21.9	-83.62	338.1	763.7	1,006.2	968.2	38.06	26.439	
7,700.0	7,314.1	7,636.6	7,205.0	19.5	21.8	-83.65	318.8	763.7	1,006.2	968.2	37.96	26.509	
7,750.0	7,321.4	7,679.9	7,212.6	19.4	21.6	-83.73	276.2	763.7	1,006.0	968.2	37.80	26.616	
7,775.6	7,323.9	7,700.0	7,215.2	19.3	21.5	-83.77	256.2	763.7	1,005.9	968.2	37.75	26.649	
7,800.0	7,325.3	7,723.2	7,217.5	19.3	21.4	-83.83	233.1	763.7	1,005.8	968.1	37.72	26.669	
7,832.0	7,326.0	7,750.0	7,219.3	19.3	21.3	-83.91	206.4	763.7	1,005.7	968.0	37.70	26.676	
7,870.6	7,325.9	7,784.6	7,220.1	19.3	21.1	-83.96	171.8	763.7	1,005.6	967.8	37.75	26.637	
7,874.0	7,325.9	7,787.6	7,220.1	19.3	21.1	-83.96	168.8	763.7	1,005.6	967.8	37.76	26.634	
7,900.0	7,325.9	7,812.8	7,219.8	19.3	21.0	-83.94	143.6	763.7	1,005.6	967.8	37.81	26.594	
7,972.4	7,325.8	7,885.3	7,218.9	19.4	20.8	-83.90	71.2	763.7	1,005.7	967.5	38.13	26.373	
8,000.0	7,325.8	7,912.8	7,218.6	19.5	20.7	-83.88	43.6	763.7	1,005.7	967.4	38.28	26.273	
8,070.8	7,325.7	7,983.7	7,217.7	19.8	20.5	-83.84	-27.2	763.7	1,005.8	966.9	38.86	25.886	
8,100.0	7,325.6	8,012.8	7,217.3	19.9	20.4	-83.82	-56.4	763.7	1,005.8	966.7	39.12	25.714	
8,169.3	7,325.5	8,082.1	7,216.5	20.3	20.4	-83.78	-125.7	763.7	1,005.9	966.0	39.92	25.198	
8,200.0	7,325.5	8,112.8	7,216.1	20.5	20.4	-83.76	-156.4	763.7	1,005.9	965.7	40.30	24.963	
8,267.7	7,325.4	8,180.5	7,215.2	21.1	20.8	-83.71	-224.1	763.7	1,006.0	964.7	41.30	24.359	
8,300.0	7,325.3	8,212.8	7,214.8	21.3	21.1	-83.69	-256.4	763.7	1,006.1	964.3	41.80	24.070	
8,366.1	7,325.2	8,278.9	7,214.0	21.9	21.7	-83.65	-322.5	763.7	1,006.2	963.2	42.97	23.417	
8,400.0	7,325.2	8,312.8	7,213.6	22.3	22.1	-83.63	-356.4	763.7	1,006.2	962.6	43.58	23.087	
8,464.5	7,325.1	8,377.4	7,212.8	22.9	22.8	-83.59	-420.9	763.7	1,006.3	961.4	44.89	22.419	
8,500.0	7,325.1	8,412.8	7,212.3	23.3	23.2	-83.57	-456.3	763.7	1,006.3	960.7	45.62	22.060	
8,563.0	7,325.0	8,475.8	7,211.6	24.0	23.9	-83.53	-519.3	763.7	1,006.4	959.4	47.03	21.400	
8,600.0	7,324.9	8,512.8	7,211.1	24.5	24.4	-83.51	-556.3	763.7	1,006.4	958.6	47.87	21.025	
8,661.4	7,324.8	8,574.2	7,210.3	25.2	25.1	-83.47	-617.7	763.7	1,006.5	957.2	49.36	20.390	
8,700.0	7,324.8	8,612.8	7,209.9	25.7	25.6	-83.44	-656.3	763.7	1,006.6	956.3	50.31	20.007	
8,759.8	7,324.7	8,672.6	7,209.1	26.5	26.4	-83.41	-716.1	763.7	1,006.6	954.8	51.86	19.409	
8,800.0	7,324.6	8,712.8	7,208.6	27.1	27.0	-83.38	-756.3	763.7	1,006.7	953.8	52.92	19.024	
8,858.2	7,324.5	8,771.0	7,207.9	27.9	27.8	-83.35	-814.5	763.7	1,006.8	952.3	54.51	18.469	
8,900.0	7,324.5	8,812.8	7,207.4	28.4	28.3	-83.32	-856.3	763.7	1,006.8	951.2	55.66	18.089	
8,956.7	7,324.4	8,869.5	7,206.7	29.3	29.2	-83.29	-912.9	763.7	1,006.9	949.6	57.28	17.579	
9,000.0	7,324.3	8,912.8	7,206.1	29.9	29.8	-83.26	-956.3	763.7	1,006.9	948.4	58.52	17.206	
9,055.1	7,324.3	8,967.9	7,205.4	30.7	30.6	-83.22	-1,011.4	763.7	1,007.0	946.9	60.16	16.740	
9,100.0	7,324.2	9,012.8	7,204.9	31.4	31.3	-83.20	-1,056.3	763.7	1,007.1	945.6	61.49	16.378	
9,153.5	7,324.1	9,066.3	7,204.2	32.2	32.1	-83.16	-1,109.8	763.7	1,007.1	944.0	63.12	15.955	
9,200.0	7,324.0	9,112.8	7,203.6	33.0	32.8	-83.13	-1,156.2	763.7	1,007.2	942.7	64.55	15.604	
9,251.9	7,324.0	9,164.7	7,203.0	33.8	33.6	-83.10	-1,208.2	763.7	1,007.3	941.1	66.17	15.222	
9,300.0	7,323.9	9,212.8	7,202.4	34.5	34.4	-83.07	-1,256.2	763.7	1,007.3	939.7	67.68	14.884	
9,350.4	7,323.8	9,263.1	7,201.8	35.4	35.2	-83.04	-1,306.6	763.7	1,007.4	938.1	69.29	14.539	
9,400.0	7,323.7	9,312.7	7,201.1	36.2	36.0	-83.01	-1,356.2	763.7	1,007.5	936.6	70.88	14.214	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MW/D												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	7,323.7	9,361.5	7,200.5	37.0	36.7	-82.98	-1,405.0	763.7	1,007.5	935.1	72.46	13.904	
9,500.0	7,323.6	9,412.7	7,199.9	37.8	37.6	-82.95	-1,456.2	763.7	1,007.6	933.5	74.13	13.592	
9,547.2	7,323.5	9,460.0	7,199.3	38.6	38.4	-82.92	-1,503.4	763.7	1,007.7	932.0	75.69	13.313	
9,600.0	7,323.5	9,512.7	7,198.6	39.5	39.2	-82.89	-1,556.2	763.7	1,007.7	930.3	77.44	13.014	
9,645.6	7,323.4	9,558.4	7,198.1	40.2	40.0	-82.86	-1,601.8	763.7	1,007.8	928.8	78.97	12.763	
9,700.0	7,323.3	9,612.7	7,197.4	41.2	40.9	-82.82	-1,656.2	763.7	1,007.9	927.1	80.79	12.476	
9,744.1	7,323.2	9,656.8	7,196.8	41.9	41.6	-82.80	-1,700.2	763.7	1,007.9	925.7	82.28	12.250	
9,800.0	7,323.2	9,712.7	7,196.1	42.9	42.6	-82.76	-1,756.1	763.7	1,008.0	923.9	84.17	11.975	
9,842.5	7,323.1	9,755.2	7,195.6	43.6	43.3	-82.73	-1,798.6	763.7	1,008.1	922.5	85.63	11.773	
9,900.0	7,323.0	9,812.7	7,194.9	44.6	44.3	-82.70	-1,856.1	763.7	1,008.2	920.6	87.60	11.509	
9,940.9	7,322.9	9,853.6	7,194.4	45.3	45.0	-82.67	-1,897.1	763.7	1,008.2	919.2	89.01	11.327	
10,000.0	7,322.9	9,912.7	7,193.6	46.3	46.0	-82.64	-1,956.1	763.7	1,008.3	917.3	91.05	11.075	
10,039.3	7,322.8	9,952.1	7,193.1	47.0	46.7	-82.61	-1,995.5	763.7	1,008.4	915.9	92.42	10.911	
10,100.0	7,322.7	10,012.7	7,192.4	48.1	47.7	-82.57	-2,056.1	763.7	1,008.5	913.9	94.52	10.669	
10,137.8	7,322.6	10,050.5	7,191.9	48.8	48.4	-82.55	-2,093.9	763.7	1,008.5	912.7	95.85	10.522	
10,200.0	7,322.6	10,112.7	7,191.1	49.9	49.5	-82.51	-2,156.1	763.7	1,008.6	910.6	98.03	10.289	
10,236.2	7,322.5	10,148.9	7,190.7	50.5	50.1	-82.49	-2,192.3	763.7	1,008.6	909.3	99.30	10.158	
10,300.0	7,322.4	10,212.7	7,189.9	51.6	51.2	-82.45	-2,256.1	763.7	1,008.7	907.2	101.55	9.934	
10,334.6	7,322.4	10,247.3	7,189.4	52.3	51.9	-82.43	-2,290.7	763.7	1,008.8	906.0	102.77	9.816	
10,400.0	7,322.3	10,312.7	7,188.6	53.4	53.0	-82.39	-2,356.1	763.7	1,008.9	903.8	105.09	9.600	
10,433.0	7,322.2	10,345.7	7,188.2	54.0	53.6	-82.37	-2,389.1	763.7	1,008.9	902.7	106.26	9.495	
10,500.0	7,322.1	10,412.7	7,187.4	55.2	54.8	-82.33	-2,456.0	763.7	1,009.0	900.4	108.65	9.287	
10,531.5	7,322.1	10,444.1	7,187.0	55.8	55.4	-82.31	-2,487.5	763.7	1,009.1	899.3	109.77	9.193	
10,600.0	7,321.9	10,512.7	7,186.1	57.0	56.6	-82.26	-2,556.0	763.7	1,009.2	897.0	112.22	8.993	
10,629.9	7,321.9	10,542.6	7,185.7	57.6	57.1	-82.25	-2,585.9	763.7	1,009.2	895.9	113.29	8.908	
10,700.0	7,321.8	10,612.7	7,184.9	58.8	58.4	-82.20	-2,656.0	763.7	1,009.3	893.5	115.81	8.716	
10,728.3	7,321.8	10,641.0	7,184.5	59.4	58.9	-82.18	-2,684.3	763.7	1,009.4	892.6	116.82	8.640	
10,800.0	7,321.6	10,712.7	7,183.6	60.7	60.2	-82.14	-2,756.0	763.7	1,009.5	890.1	119.40	8.454	
10,826.7	7,321.6	10,739.4	7,183.3	61.1	60.7	-82.12	-2,782.7	763.7	1,009.5	889.2	120.37	8.387	
10,900.0	7,321.5	10,812.6	7,182.3	62.5	62.0	-82.08	-2,856.0	763.7	1,009.6	886.6	123.01	8.208	
10,925.2	7,321.4	10,837.8	7,182.0	62.9	62.5	-82.06	-2,881.2	763.7	1,009.7	885.8	123.92	8.147	
11,000.0	7,321.3	10,912.6	7,181.1	64.3	63.8	-82.02	-2,956.0	763.7	1,009.8	883.2	126.63	7.974	
11,023.6	7,321.3	10,936.2	7,180.8	64.7	64.2	-82.00	-2,979.6	763.7	1,009.8	882.3	127.49	7.921	
11,100.0	7,321.2	11,012.6	7,179.8	66.1	65.6	-81.95	-3,056.0	763.7	1,009.9	879.7	130.26	7.753	
11,122.0	7,321.1	11,034.7	7,179.5	66.5	66.0	-81.94	-3,078.0	763.7	1,010.0	878.9	131.06	7.706	
11,200.0	7,321.0	11,112.6	7,178.6	68.0	67.5	-81.89	-3,155.9	763.7	1,010.1	876.2	133.90	7.544	
11,220.4	7,321.0	11,133.1	7,178.3	68.4	67.8	-81.88	-3,176.4	763.7	1,010.1	875.5	134.64	7.502	
11,300.0	7,320.9	11,212.6	7,177.3	69.8	69.3	-81.83	-3,255.9	763.7	1,010.3	872.7	137.54	7.345	
11,318.9	7,320.8	11,231.5	7,177.1	70.2	69.6	-81.82	-3,274.8	763.7	1,010.3	872.1	138.23	7.309	
11,400.0	7,320.7	11,312.6	7,176.0	71.7	71.1	-81.77	-3,355.9	763.7	1,010.4	869.2	141.19	7.156	
11,417.3	7,320.7	11,329.9	7,175.8	72.0	71.4	-81.76	-3,373.2	763.7	1,010.4	868.6	141.83	7.125	
11,500.0	7,320.6	11,412.6	7,174.8	73.5	73.0	-81.71	-3,455.9	763.7	1,010.6	865.7	144.85	6.977	
11,515.7	7,320.5	11,428.3	7,174.6	73.8	73.3	-81.70	-3,471.6	763.7	1,010.6	865.2	145.43	6.949	
11,600.0	7,320.4	11,512.6	7,173.5	75.4	74.8	-81.64	-3,555.9	763.7	1,010.7	862.2	148.51	6.806	
11,614.1	7,320.4	11,526.7	7,173.3	75.6	75.1	-81.64	-3,570.0	763.7	1,010.8	861.7	149.03	6.782	
11,700.0	7,320.2	11,612.6	7,172.3	77.2	76.7	-81.58	-3,655.9	763.7	1,010.9	858.7	152.18	6.643	
11,712.6	7,320.2	11,625.2	7,172.1	77.5	76.9	-81.57	-3,668.4	763.7	1,010.9	858.3	152.64	6.623	
11,800.0	7,320.1	11,712.6	7,171.0	79.1	78.5	-81.52	-3,755.9	763.7	1,011.1	855.2	155.85	6.487	
11,811.0	7,320.1	11,723.6	7,170.9	79.3	78.7	-81.51	-3,766.9	763.7	1,011.1	854.9	156.22	6.472	
11,849.2	7,320.0	11,761.8	7,170.4	79.8	79.4	-81.49	-3,805.1	763.7	1,011.1	853.7	157.48	6.421	
11,849.6	7,320.0	11,762.2	7,170.4	79.8	79.4	-81.49	-3,805.5	763.7	1,011.1	853.7	157.49	6.421 SF	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	91.56	-3.3	120.0	120.0				
98.4	98.4	97.4	97.4	0.1	0.1	91.56	-3.3	120.0	120.0	119.8	0.17	709.789	
100.0	100.0	99.0	99.0	0.1	0.1	91.56	-3.3	120.0	120.0	119.8	0.17	696.875	
196.8	196.8	195.8	195.8	0.3	0.3	91.56	-3.3	120.0	120.0	119.4	0.61	197.965	
200.0	200.0	199.0	199.0	0.3	0.3	91.56	-3.3	120.0	120.0	119.4	0.62	193.446	
295.3	295.3	294.3	294.3	0.5	0.5	91.56	-3.3	120.0	120.0	119.0	1.05	114.438	
300.0	300.0	299.0	299.0	0.5	0.5	91.56	-3.3	120.0	120.0	118.9	1.07	112.166	
393.7	393.7	392.7	392.7	0.7	0.7	91.56	-3.3	120.0	120.0	118.5	1.49	80.481	
400.0	400.0	399.0	399.0	0.8	0.8	91.56	-3.3	120.0	120.0	118.5	1.52	78.981	
492.1	492.1	491.1	491.1	1.0	1.0	91.56	-3.3	120.0	120.0	118.1	1.93	62.065	
500.0	500.0	499.0	499.0	1.0	1.0	91.56	-3.3	120.0	120.0	118.0	1.97	60.949	
590.5	590.5	589.5	589.5	1.2	1.2	91.56	-3.3	120.0	120.0	117.6	2.38	50.507	
600.0	600.0	599.0	599.0	1.2	1.2	91.56	-3.3	120.0	120.0	117.6	2.42	49.620	
689.0	689.0	688.0	688.0	1.4	1.4	91.56	-3.3	120.0	120.0	117.2	2.82	42.578	
700.0	700.0	699.0	699.0	1.4	1.4	91.56	-3.3	120.0	120.0	117.1	2.87	41.843	
787.4	787.4	786.4	786.4	1.6	1.6	91.56	-3.3	120.0	120.0	116.7	3.26	36.801	
800.0	800.0	799.0	799.0	1.7	1.7	91.56	-3.3	120.0	120.0	116.7	3.32	36.173	
885.8	885.8	884.8	884.8	1.9	1.9	91.56	-3.3	120.0	120.0	116.3	3.70	32.404	
900.0	900.0	899.0	899.0	1.9	1.9	91.56	-3.3	120.0	120.0	116.2	3.77	31.856	
984.2	984.2	983.2	983.2	2.1	2.1	91.56	-3.3	120.0	120.0	115.9	4.15	28.946	
1,000.0	1,000.0	999.0	999.0	2.1	2.1	91.56	-3.3	120.0	120.0	115.8	4.22	28.460	
1,082.7	1,082.7	1,081.7	1,081.7	2.3	2.3	91.56	-3.3	120.0	120.0	115.4	4.59	26.155	
1,100.0	1,100.0	1,099.0	1,099.0	2.3	2.3	91.56	-3.3	120.0	120.0	115.3	4.67	25.718	
1,181.1	1,181.1	1,180.1	1,180.1	2.5	2.5	91.56	-3.3	120.0	120.0	115.0	5.03	23.855	
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	91.56	-3.3	120.0	120.0	114.9	5.12	23.458	
1,279.5	1,279.5	1,278.5	1,278.5	2.7	2.7	91.56	-3.3	120.0	120.0	114.5	5.47	21.926	
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	91.56	-3.3	120.0	120.0	114.4	5.57	21.563	
1,377.9	1,377.9	1,376.9	1,376.9	3.0	3.0	91.56	-3.3	120.0	120.0	114.1	5.92	20.286	
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	91.56	-3.3	120.0	120.0	114.0	6.01	19.952	
1,450.0	1,450.0	1,449.0	1,449.0	3.1	3.1	91.56	-3.3	120.0	120.0	113.8	6.24	19.233 CC, ES	
1,476.4	1,476.4	1,474.5	1,474.5	3.2	3.2	105.88	-3.2	120.1	120.1	113.8	6.35	18.907	
1,500.0	1,500.0	1,497.3	1,497.2	3.2	3.2	105.95	-3.1	120.3	120.5	114.0	6.46	18.662	
1,574.8	1,574.8	1,569.3	1,569.3	3.4	3.4	106.42	-2.2	122.2	123.0	116.3	6.77	18.161	
1,600.0	1,599.9	1,593.6	1,593.5	3.5	3.4	106.66	-1.7	123.2	124.4	117.5	6.88	18.075	
1,673.2	1,673.0	1,663.8	1,663.6	3.6	3.6	107.56	0.3	127.1	129.8	122.6	7.20	18.034	
1,700.0	1,699.7	1,689.5	1,689.2	3.7	3.6	107.95	1.2	128.9	132.3	125.0	7.31	18.094	
1,771.6	1,771.0	1,757.8	1,757.2	3.9	3.8	109.09	4.2	134.7	140.4	132.8	7.62	18.418	
1,800.0	1,799.1	1,784.7	1,784.0	3.9	3.9	109.58	5.5	137.4	144.2	136.4	7.75	18.614	
1,870.1	1,868.6	1,851.0	1,849.7	4.1	4.0	110.81	9.3	145.0	155.0	146.9	8.06	19.222	
1,900.0	1,898.2	1,879.1	1,877.5	4.2	4.1	111.34	11.1	148.6	160.2	152.0	8.20	19.544	
1,968.5	1,965.7	1,943.1	1,940.7	4.3	4.3	112.52	15.7	157.8	173.6	165.0	8.52	20.365	
2,000.0	1,996.6	1,972.4	1,969.5	4.4	4.3	113.05	18.1	162.4	180.4	171.7	8.67	20.797	
2,049.8	2,045.4	2,018.3	2,014.5	4.6	4.5	113.84	22.0	170.2	191.9	183.0	8.92	21.515	
2,066.9	2,062.2	2,034.0	2,030.0	4.6	4.5	114.17	23.4	173.0	196.1	187.1	9.01	21.767	
2,100.0	2,094.5	2,064.3	2,059.6	4.7	4.6	114.72	26.2	178.6	204.4	195.2	9.18	22.264	
2,165.3	2,158.5	2,123.9	2,117.7	4.9	4.8	115.53	32.2	190.4	221.6	212.1	9.54	23.245	
2,200.0	2,192.3	2,155.2	2,148.1	5.1	4.9	115.82	35.5	197.1	231.2	221.5	9.73	23.772	
2,263.8	2,254.7	2,212.6	2,203.7	5.3	5.1	116.17	42.1	210.1	249.5	239.4	10.09	24.733	
2,300.0	2,290.2	2,245.0	2,234.8	5.4	5.3	116.27	46.0	217.9	260.3	250.0	10.30	25.276	
2,362.2	2,351.0	2,300.0	2,287.6	5.6	5.5	116.31	53.0	231.8	279.6	269.0	10.67	26.204	
2,400.0	2,388.0	2,333.5	2,319.5	5.8	5.6	116.26	57.4	240.7	291.8	280.9	10.90	26.755	
2,460.6	2,447.3	2,386.4	2,369.8	6.0	5.9	116.08	64.9	255.5	311.9	300.6	11.29	27.636	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,485.8	2,420.5	2,402.0	6.1	6.1	115.92	69.9	265.4	325.4	313.9	11.54	28.205	
2,559.0	2,543.6	2,471.1	2,449.6	6.3	6.3	115.61	77.6	280.8	346.3	334.4	11.92	29.041	
2,600.0	2,583.6	2,505.9	2,482.1	6.5	6.5	115.37	83.1	291.9	361.2	349.0	12.19	29.624	
2,657.5	2,639.8	2,554.2	2,527.1	6.7	6.8	114.98	91.1	307.8	382.8	370.2	12.58	30.415	
2,700.0	2,681.4	2,589.7	2,559.8	6.9	7.1	114.67	97.2	319.8	399.2	386.3	12.87	31.009	
2,755.9	2,736.1	2,635.7	2,602.2	7.1	7.4	114.24	105.4	336.1	421.3	408.1	13.26	31.764	
2,800.0	2,779.2	2,671.7	2,635.0	7.3	7.6	113.89	112.0	349.2	439.3	425.7	13.57	32.364	
2,854.3	2,832.4	2,715.4	2,674.7	7.5	7.9	113.44	120.2	365.6	462.0	448.0	13.96	33.095	
2,900.0	2,877.1	2,751.8	2,707.5	7.7	8.2	113.06	127.3	379.7	481.5	467.2	14.29	33.700	
2,952.7	2,928.7	2,793.4	2,744.7	7.9	8.5	112.61	135.6	396.2	504.7	490.0	14.67	34.406	
3,000.0	2,974.9	2,830.1	2,777.3	8.1	8.8	112.20	143.2	411.3	525.9	510.9	15.01	35.026	
3,051.2	3,024.9	2,875.2	2,817.3	8.3	9.2	111.72	152.6	430.0	549.1	533.7	15.41	35.628	
3,100.0	3,072.7	2,918.5	2,855.6	8.5	9.6	111.30	161.6	447.9	571.3	555.5	15.80	36.170	
3,149.6	3,121.2	2,962.5	2,894.6	8.7	9.9	110.90	170.8	466.2	593.9	577.8	16.19	36.689	
3,200.0	3,170.5	3,007.2	2,934.2	8.9	10.3	110.52	180.1	484.7	616.9	600.3	16.59	37.193	
3,248.0	3,217.5	3,049.8	2,972.0	9.1	10.7	110.19	189.0	502.4	638.8	621.9	16.97	37.641	
3,300.0	3,268.3	3,095.9	3,012.8	9.3	11.1	109.85	198.6	521.5	662.6	645.2	17.39	38.107	
3,346.4	3,313.8	3,137.2	3,049.3	9.5	11.5	109.57	207.2	538.6	683.8	666.0	17.76	38.496	
3,400.0	3,366.1	3,184.7	3,091.4	9.7	11.9	109.27	217.1	558.2	708.3	690.1	18.20	38.926	
3,444.9	3,410.0	3,224.5	3,126.7	9.9	12.3	109.03	225.4	574.8	728.8	710.3	18.56	39.266	
3,500.0	3,464.0	3,273.4	3,170.0	10.2	12.7	108.75	235.6	595.0	754.1	735.0	19.01	39.665	
3,543.3	3,506.3	3,311.8	3,204.0	10.3	13.1	108.55	243.6	611.0	773.9	754.5	19.36	39.963	
3,600.0	3,561.8	3,362.1	3,248.6	10.6	13.5	108.30	254.1	631.8	799.9	780.0	19.83	40.334	
3,641.7	3,602.6	3,399.1	3,281.4	10.8	13.9	108.12	261.8	647.2	819.0	798.8	20.17	40.596	
3,700.0	3,659.6	3,450.8	3,327.2	11.0	14.4	107.89	272.6	668.6	845.7	825.1	20.66	40.942	
3,740.1	3,698.9	3,486.4	3,358.7	11.2	14.7	107.74	280.0	683.4	864.1	843.1	20.99	41.171	
3,800.0	3,757.4	3,539.5	3,405.8	11.4	15.2	107.53	291.0	705.4	891.6	870.1	21.49	41.496	
3,838.6	3,795.1	3,573.8	3,436.1	11.6	15.5	107.40	298.2	719.6	909.3	887.5	21.81	41.696	
3,900.0	3,855.2	3,628.3	3,484.4	11.9	16.0	107.20	309.5	742.1	937.5	915.2	22.32	42.002	
3,937.0	3,891.4	3,661.1	3,513.5	12.0	16.3	107.09	316.4	755.8	954.5	931.9	22.63	42.178	
4,000.0	3,953.0	3,717.0	3,563.0	12.3	16.9	106.90	328.0	778.9	983.4	960.3	23.16	42.467	
4,035.4	3,987.7	3,748.4	3,590.8	12.4	17.2	106.80	334.6	792.0	999.7	976.2	23.46	42.621	
4,100.0	4,050.9	3,805.7	3,641.6	12.7	17.7	106.63	346.5	815.7	1,029.4	1,005.4	24.00	42.894	
4,133.8	4,084.0	3,835.7	3,668.2	12.9	18.0	106.54	352.8	828.2	1,044.9	1,020.6	24.28	43.030	
4,200.0	4,148.7	3,894.4	3,720.1	13.2	18.5	106.38	365.0	852.5	1,075.3	1,050.5	24.84	43.288	
4,232.3	4,180.2	3,923.1	3,745.5	13.3	18.8	106.31	371.0	864.4	1,090.2	1,065.0	25.11	43.408	
4,300.0	4,246.5	3,983.1	3,798.7	13.6	19.4	106.15	383.5	889.3	1,121.3	1,095.6	25.69	43.652	
4,330.7	4,276.5	4,010.4	3,822.9	13.7	19.6	106.09	389.2	900.6	1,135.4	1,109.5	25.95	43.758	
4,400.0	4,344.3	4,071.9	3,877.3	14.0	20.2	105.94	402.0	926.0	1,167.3	1,140.7	26.54	43.989	
4,429.1	4,372.8	4,097.7	3,900.2	14.1	20.5	105.89	407.4	936.8	1,180.7	1,153.9	26.78	44.083	
4,500.0	4,442.1	4,160.6	3,955.9	14.5	21.1	105.75	420.5	962.8	1,213.3	1,185.9	27.39	44.303	
4,527.5	4,469.1	4,185.0	3,977.6	14.6	21.3	105.70	425.6	973.0	1,226.0	1,198.3	27.62	44.385	
4,600.0	4,539.9	4,249.3	4,034.5	14.9	21.9	105.57	439.0	999.6	1,259.3	1,231.1	28.24	44.595	
4,626.0	4,565.4	4,272.3	4,054.9	15.0	22.2	105.52	443.8	1,009.2	1,271.2	1,242.8	28.46	44.667	
4,700.0	4,637.8	4,338.0	4,113.1	15.3	22.8	105.40	457.5	1,036.4	1,305.3	1,276.2	29.09	44.867	
4,724.4	4,661.6	4,359.7	4,132.3	15.4	23.0	105.36	462.0	1,045.4	1,316.5	1,287.2	29.30	44.931	
4,800.0	4,735.6	4,426.7	4,191.7	15.8	23.6	105.25	476.0	1,073.2	1,351.3	1,321.4	29.95	45.122	
4,822.8	4,757.9	4,447.0	4,209.6	15.9	23.8	105.21	480.2	1,081.6	1,361.8	1,331.7	30.14	45.178	
4,900.0	4,833.4	4,515.5	4,270.3	16.2	24.5	105.10	494.4	1,109.9	1,397.4	1,366.6	30.81	45.361	
4,921.2	4,854.2	4,534.3	4,287.0	16.3	24.7	105.07	498.4	1,117.8	1,407.2	1,376.2	30.99	45.409	
5,000.0	4,931.2	4,604.2	4,348.9	16.6	25.4	104.96	512.9	1,146.7	1,443.4	1,411.7	31.66	45.585	
5,019.7	4,950.5	4,621.6	4,364.3	16.7	25.5	104.94	516.6	1,154.0	1,452.5	1,420.6	31.83	45.627	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,029.0	4,692.9	4,427.5	17.1	26.2	104.84	531.4	1,183.5	1,489.5	1,456.9	32.52	45.795	
5,118.1	5,046.7	4,709.0	4,441.7	17.1	26.4	104.81	534.8	1,190.1	1,497.8	1,465.1	32.68	45.832	
5,200.0	5,126.8	4,781.6	4,506.1	17.5	27.1	104.72	549.9	1,220.3	1,535.5	1,502.1	33.39	45.994	
5,216.5	5,143.0	4,796.3	4,519.1	17.6	27.2	104.70	553.0	1,226.3	1,543.1	1,509.6	33.53	46.025	
5,300.0	5,224.7	4,870.3	4,584.7	17.9	27.9	104.60	568.4	1,257.1	1,581.6	1,547.3	34.25	46.180	
5,314.9	5,239.3	4,883.6	4,596.4	18.0	28.1	104.59	571.2	1,262.5	1,588.5	1,554.1	34.38	46.207	
5,400.0	5,322.5	4,959.1	4,663.2	18.4	28.8	104.50	586.9	1,293.8	1,627.6	1,592.5	35.11	46.357	
5,413.4	5,335.6	4,970.9	4,673.8	18.4	28.9	104.48	589.4	1,298.7	1,633.8	1,598.6	35.23	46.380	
5,500.0	5,420.3	5,047.8	4,741.8	18.8	29.7	104.39	605.4	1,330.6	1,673.7	1,637.7	35.98	46.524	
5,511.8	5,431.8	5,058.2	4,751.1	18.9	29.8	104.38	607.6	1,334.9	1,679.1	1,643.1	36.08	46.543	
5,600.0	5,518.1	5,136.5	4,820.4	19.3	30.5	104.30	623.9	1,367.4	1,719.8	1,682.9	36.84	46.682	
5,610.2	5,528.1	5,145.6	4,828.5	19.3	30.6	104.29	625.8	1,371.1	1,724.5	1,687.5	36.93	46.697	
5,700.0	5,615.9	5,225.2	4,899.0	19.7	31.4	104.21	642.4	1,404.2	1,765.8	1,728.1	37.71	46.832	
5,708.6	5,624.4	5,232.9	4,905.8	19.7	31.5	104.20	644.0	1,407.3	1,769.8	1,732.0	37.78	46.844	
5,800.0	5,713.7	5,313.9	4,977.6	20.1	32.3	104.12	660.9	1,440.9	1,811.9	1,773.3	38.57	46.974	
5,807.1	5,720.7	5,320.2	4,983.2	20.2	32.3	104.12	662.2	1,443.5	1,815.2	1,776.5	38.63	46.984	
5,900.0	5,811.6	5,402.7	5,056.2	20.6	33.1	104.04	679.3	1,477.7	1,858.0	1,818.6	39.44	47.109	
5,905.5	5,816.9	5,407.5	5,060.5	20.6	33.2	104.04	680.4	1,479.7	1,860.5	1,821.0	39.49	47.116	
6,000.0	5,909.4	5,491.4	5,134.8	21.0	34.0	103.96	697.8	1,514.5	1,904.1	1,863.8	40.31	47.238	
6,003.9	5,913.2	5,494.9	5,137.9	21.0	34.0	103.96	698.6	1,515.9	1,905.9	1,865.5	40.34	47.243	
6,053.2	5,961.4	5,582.3	5,215.8	21.3	34.8	103.90	716.4	1,551.4	1,928.3	1,887.3	40.96	47.079	
6,100.0	6,007.3	5,686.3	5,309.9	21.4	35.6	104.29	736.2	1,590.9	1,948.1	1,906.4	41.71	46.701	
6,102.3	6,009.6	5,691.6	5,314.8	21.5	35.6	104.30	737.2	1,592.8	1,949.1	1,907.3	41.75	46.684	
6,200.0	6,105.7	5,919.3	5,526.3	21.8	37.0	104.98	775.0	1,668.0	1,985.3	1,942.1	43.19	45.967	
6,200.8	6,106.5	5,921.2	5,528.0	21.8	37.0	104.99	775.3	1,668.6	1,985.5	1,942.3	43.20	45.962	
6,299.2	6,203.9	6,163.5	5,759.8	22.0	38.3	105.53	807.0	1,731.7	2,014.5	1,970.0	44.49	45.275	
6,300.0	6,204.7	6,165.6	5,761.8	22.0	38.3	105.54	807.3	1,732.2	2,014.7	1,970.2	44.50	45.269	
6,397.6	6,301.8	6,416.4	6,007.0	22.3	39.2	105.96	830.7	1,778.7	2,035.3	1,989.7	45.59	44.645	
6,400.0	6,304.2	6,422.6	6,013.1	22.3	39.2	105.97	831.1	1,779.6	2,035.7	1,990.1	45.61	44.630	
6,496.0	6,400.0	6,676.4	6,265.1	22.4	39.8	106.28	844.6	1,806.5	2,047.7	2,001.2	46.45	44.086	
6,500.0	6,403.9	6,686.9	6,275.6	22.5	39.8	106.29	845.0	1,807.2	2,048.0	2,001.5	46.48	44.064	
6,594.5	6,498.3	6,908.8	6,497.3	22.6	40.1	106.49	848.2	1,813.7	2,051.3	2,004.3	47.02	43.630	
6,600.0	6,503.8	6,914.4	6,502.8	22.6	40.1	106.49	848.2	1,813.7	2,051.3	2,004.3	47.03	43.614	
6,653.0	6,556.8	6,962.6	6,551.1	22.7	40.1	92.25	847.0	1,813.7	2,051.5	2,004.4	47.17	43.491	
6,692.9	6,596.7	7,000.0	6,588.3	22.7	40.1	92.34	843.8	1,813.7	2,051.7	2,004.4	47.26	43.413	
6,706.0	6,609.8	7,009.9	6,598.1	22.7	40.1	92.37	842.7	1,813.7	2,051.7	2,004.5	47.28	43.395	
6,750.0	6,653.8	7,050.0	6,637.8	22.8	40.1	-87.48	836.5	1,813.7	2,052.0	2,004.6	47.36	43.331	
6,791.3	6,695.0	7,085.1	6,672.2	22.8	40.1	-87.35	829.4	1,813.7	2,052.2	2,004.8	47.36	43.332	
6,800.0	6,703.6	7,092.7	6,679.6	22.8	40.1	-87.32	827.6	1,813.7	2,052.2	2,004.9	47.36	43.333	
6,850.0	6,752.9	7,136.4	6,721.6	22.8	40.0	-87.17	815.9	1,813.7	2,052.5	2,005.2	47.29	43.401	
6,889.7	6,791.6	7,171.0	6,754.4	22.7	40.0	-87.06	804.9	1,813.7	2,052.7	2,005.5	47.18	43.505	
6,900.0	6,801.5	7,179.9	6,762.7	22.7	40.0	-87.04	801.8	1,813.7	2,052.7	2,005.6	47.15	43.535	
6,950.0	6,849.1	7,223.1	6,802.7	22.6	39.9	-86.91	785.2	1,813.7	2,053.0	2,006.0	46.94	43.732	
6,988.2	6,884.8	7,256.0	6,832.4	22.5	39.8	-86.83	771.0	1,813.7	2,053.1	2,006.4	46.74	43.924	
7,000.0	6,895.7	7,266.2	6,841.4	22.5	39.8	-86.81	766.4	1,813.7	2,053.2	2,006.5	46.67	43.990	
7,050.0	6,940.8	7,309.1	6,878.8	22.3	39.7	-86.71	745.3	1,813.7	2,053.4	2,007.0	46.34	44.306	
7,086.6	6,972.8	7,340.4	6,905.2	22.1	39.6	-86.65	728.6	1,813.7	2,053.5	2,007.4	46.07	44.576	
7,100.0	6,984.3	7,350.0	6,913.2	22.1	39.6	-86.63	723.2	1,813.7	2,053.5	2,007.6	45.97	44.669	
7,150.0	7,025.9	7,394.5	6,949.1	21.9	39.5	-86.56	697.0	1,813.7	2,053.7	2,008.1	45.54	45.100	
7,185.0	7,053.9	7,424.4	6,972.3	21.7	39.4	-86.52	678.1	1,813.7	2,053.7	2,008.5	45.21	45.426	
7,200.0	7,065.6	7,437.1	6,981.9	21.7	39.3	-86.51	669.8	1,813.7	2,053.8	2,008.7	45.07	45.569	
7,250.0	7,103.0	7,479.6	7,013.0	21.4	39.2	-86.47	640.8	1,813.7	2,053.9	2,009.3	44.58	46.076	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - OLSON 30U-343 - ORIGINAL WELLBORE - PROPOSAL #2												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,283.4	7,126.7	7,508.0	7,032.8	21.2	39.1	-86.45	620.4	1,813.7	2,053.9	2,009.7	44.23	46.432	
7,300.0	7,138.0	7,522.1	7,042.3	21.2	39.0	-86.45	610.0	1,813.7	2,053.9	2,009.8	44.06	46.612	
7,350.0	7,170.5	7,564.5	7,069.6	20.9	38.9	-86.44	577.6	1,813.7	2,053.9	2,010.4	43.54	47.170	
7,381.9	7,189.8	7,591.6	7,086.1	20.8	38.8	-86.44	556.1	1,813.7	2,053.9	2,010.7	43.21	47.531	
7,400.0	7,200.2	7,607.0	7,095.0	20.7	38.7	-86.45	543.6	1,813.7	2,053.9	2,010.9	43.02	47.739	
7,450.0	7,227.0	7,650.0	7,118.7	20.4	38.6	-86.47	507.7	1,813.7	2,053.9	2,011.3	42.51	48.310	
7,480.3	7,241.9	7,675.2	7,131.5	20.3	38.5	-86.49	486.0	1,813.7	2,053.8	2,011.6	42.22	48.641	
7,500.0	7,250.9	7,692.0	7,139.6	20.2	38.4	-86.51	471.3	1,813.7	2,053.8	2,011.7	42.03	48.859	
7,550.0	7,271.6	7,734.5	7,158.7	20.0	38.3	-86.56	433.2	1,813.7	2,053.7	2,012.1	41.59	49.383	
7,578.7	7,282.0	7,759.0	7,168.6	19.9	38.2	-86.60	410.8	1,813.7	2,053.6	2,012.2	41.35	49.662	
7,600.0	7,289.1	7,777.2	7,175.5	19.8	38.1	-86.63	394.0	1,813.7	2,053.5	2,012.3	41.18	49.864	
7,650.0	7,303.3	7,820.0	7,189.9	19.6	38.0	-86.71	353.8	1,813.7	2,053.4	2,012.5	40.83	50.289	
7,677.1	7,309.5	7,843.3	7,196.8	19.5	37.9	-86.76	331.5	1,813.7	2,053.3	2,012.6	40.67	50.488	
7,700.0	7,314.1	7,862.9	7,202.0	19.5	37.8	-86.80	312.6	1,813.7	2,053.2	2,012.6	40.54	50.645	
7,750.0	7,321.4	7,905.9	7,211.6	19.4	37.7	-86.91	270.6	1,813.7	2,053.0	2,012.6	40.32	50.921	
7,775.6	7,323.9	7,928.0	7,215.5	19.3	37.6	-86.97	248.9	1,813.7	2,052.8	2,012.6	40.24	51.018	
7,800.0	7,325.3	7,950.0	7,218.8	19.3	37.6	-87.04	227.2	1,813.7	2,052.7	2,012.6	40.16	51.110	
7,832.0	7,326.0	7,976.9	7,221.8	19.3	37.5	-87.12	200.4	1,813.7	2,052.6	2,012.5	40.11	51.170	
7,874.0	7,325.9	8,013.6	7,224.4	19.3	37.4	-87.19	163.8	1,813.7	2,052.4	2,012.3	40.12	51.156	
7,900.0	7,325.9	8,036.4	7,225.0	19.3	37.3	-87.21	141.0	1,813.7	2,052.4	2,012.3	40.14	51.131	
7,911.3	7,325.9	8,046.3	7,225.1	19.3	37.3	-87.21	131.1	1,813.7	2,052.4	2,012.2	40.17	51.098	
7,972.4	7,325.8	8,106.2	7,224.3	19.4	37.2	-87.19	71.2	1,813.7	2,052.4	2,012.1	40.37	50.846	
8,000.0	7,325.8	8,133.8	7,223.9	19.5	37.2	-87.18	43.7	1,813.7	2,052.4	2,011.9	40.49	50.691	
8,070.8	7,325.7	8,204.6	7,223.0	19.8	37.1	-87.16	-27.2	1,813.7	2,052.5	2,011.5	40.95	50.127	
8,100.0	7,325.6	8,233.8	7,222.6	19.9	37.0	-87.15	-56.3	1,813.7	2,052.5	2,011.3	41.18	49.843	
8,169.3	7,325.5	8,303.1	7,221.6	20.3	37.0	-87.13	-125.6	1,813.7	2,052.5	2,010.7	41.86	49.035	
8,200.0	7,325.5	8,333.8	7,221.2	20.5	37.0	-87.12	-156.3	1,813.7	2,052.6	2,010.4	42.21	48.631	
8,267.7	7,325.4	8,401.5	7,220.3	21.1	37.0	-87.09	-224.0	1,813.7	2,052.6	2,009.5	43.08	47.643	
8,300.0	7,325.3	8,433.8	7,219.8	21.3	37.0	-87.08	-256.3	1,813.7	2,052.6	2,009.1	43.55	47.134	
8,366.1	7,325.2	8,499.9	7,218.9	21.9	37.1	-87.06	-322.4	1,813.7	2,052.7	2,008.1	44.59	46.030	
8,400.0	7,325.2	8,533.8	7,218.4	22.3	37.2	-87.05	-356.3	1,813.7	2,052.7	2,007.5	45.18	45.437	
8,464.5	7,325.1	8,598.3	7,217.5	22.9	37.3	-87.02	-420.8	1,813.7	2,052.7	2,006.4	46.37	44.273	
8,500.0	7,325.1	8,633.8	7,217.1	23.3	37.4	-87.01	-456.3	1,813.7	2,052.8	2,005.7	47.06	43.620	
8,563.0	7,325.0	8,696.7	7,216.2	24.0	37.6	-86.99	-519.2	1,813.7	2,052.8	2,004.4	48.37	42.443	
8,600.0	7,324.9	8,733.8	7,215.7	24.5	37.7	-86.98	-556.2	1,813.7	2,052.8	2,003.6	49.17	41.749	
8,661.4	7,324.8	8,795.2	7,214.8	25.2	38.0	-86.96	-617.6	1,813.7	2,052.9	2,002.3	50.57	40.596	
8,700.0	7,324.8	8,833.8	7,214.3	25.7	38.2	-86.94	-656.2	1,813.7	2,052.9	2,001.4	51.48	39.877	
8,759.8	7,324.7	8,893.6	7,213.5	26.5	38.5	-86.92	-716.0	1,813.7	2,052.9	2,000.0	52.95	38.772	
8,800.0	7,324.6	8,933.7	7,212.9	27.1	38.7	-86.91	-756.2	1,813.7	2,053.0	1,999.0	53.96	38.043	
8,858.2	7,324.5	8,992.0	7,212.1	27.9	39.1	-86.89	-814.5	1,813.7	2,053.0	1,997.5	55.48	37.002	
8,900.0	7,324.5	9,033.7	7,211.5	28.4	39.3	-86.87	-856.2	1,813.7	2,053.0	1,996.4	56.60	36.273	
8,956.7	7,324.4	9,090.4	7,210.8	29.3	39.8	-86.85	-912.9	1,813.7	2,053.1	1,994.9	58.15	35.304	
9,000.0	7,324.3	9,133.7	7,210.2	29.9	40.1	-86.84	-956.2	1,813.7	2,053.1	1,993.7	59.36	34.585	
9,055.1	7,324.3	9,188.8	7,209.4	30.7	40.6	-86.82	-1,011.3	1,813.7	2,053.1	1,992.2	60.94	33.691	
9,100.0	7,324.2	9,233.7	7,208.8	31.4	41.0	-86.81	-1,056.2	1,813.7	2,053.2	1,990.9	62.24	32.986	
9,153.5	7,324.1	9,287.2	7,208.0	32.2	41.4	-86.79	-1,109.7	1,813.7	2,053.2	1,989.4	63.83	32.168	
9,200.0	7,324.0	9,333.7	7,207.4	33.0	41.9	-86.77	-1,156.1	1,813.7	2,053.2	1,988.0	65.22	31.482	
9,251.9	7,324.0	9,385.7	7,206.7	33.8	42.4	-86.75	-1,208.1	1,813.7	2,053.3	1,986.5	66.80	30.736	
9,300.0	7,323.9	9,433.7	7,206.0	34.5	42.9	-86.74	-1,256.1	1,813.7	2,053.3	1,985.0	68.28	30.071	
9,350.4	7,323.8	9,484.1	7,205.3	35.4	43.5	-86.72	-1,306.5	1,813.7	2,053.3	1,983.5	69.86	29.393	
9,400.0	7,323.7	9,533.7	7,204.6	36.2	44.0	-86.70	-1,356.1	1,813.7	2,053.4	1,981.9	71.42	28.751	
9,448.8	7,323.7	9,582.5	7,204.0	37.0	44.6	-86.69	-1,404.9	1,813.7	2,053.4	1,980.4	72.98	28.137	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - OLSON 30U-343 - ORIGINAL WELLBORE - PROPOSAL #2												Offset Site Error:	0.0 usft
Survey Program: 0-MW/D												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	7,323.6	9,633.7	7,203.3	37.8	45.2	-86.67	-1,456.1	1,813.7	2,053.4	1,978.8	74.62	27.518	
9,547.2	7,323.5	9,680.9	7,202.6	38.6	45.8	-86.65	-1,503.3	1,813.7	2,053.5	1,977.3	76.16	26.963	
9,600.0	7,323.5	9,733.7	7,201.9	39.5	46.5	-86.63	-1,556.1	1,813.7	2,053.5	1,975.6	77.88	26.367	
9,645.6	7,323.4	9,779.3	7,201.2	40.2	47.1	-86.62	-1,601.7	1,813.7	2,053.5	1,974.2	79.39	25.867	
9,700.0	7,323.3	9,833.7	7,200.5	41.2	47.8	-86.60	-1,656.1	1,813.7	2,053.6	1,972.4	81.19	25.293	
9,744.1	7,323.2	9,877.8	7,199.9	41.9	48.4	-86.58	-1,700.1	1,813.7	2,053.6	1,970.9	82.67	24.842	
9,800.0	7,323.2	9,933.7	7,199.1	42.9	49.1	-86.57	-1,756.0	1,813.7	2,053.7	1,969.1	84.55	24.290	
9,842.5	7,323.1	9,976.2	7,198.5	43.6	49.7	-86.55	-1,798.5	1,813.7	2,053.7	1,967.7	85.99	23.884	
9,900.0	7,323.0	10,033.7	7,197.7	44.6	50.5	-86.53	-1,856.0	1,813.7	2,053.7	1,965.8	87.94	23.354	
9,940.9	7,322.9	10,074.6	7,197.2	45.3	51.1	-86.52	-1,897.0	1,813.7	2,053.8	1,964.4	89.34	22.988	
10,000.0	7,322.9	10,133.7	7,196.4	46.3	52.0	-86.50	-1,956.0	1,813.7	2,053.8	1,962.4	91.37	22.478	
10,039.3	7,322.8	10,173.0	7,195.8	47.0	52.5	-86.48	-1,995.4	1,813.7	2,053.8	1,961.1	92.73	22.149	
10,100.0	7,322.7	10,233.7	7,195.0	48.1	53.4	-86.46	-2,056.0	1,813.7	2,053.9	1,959.1	94.83	21.659	
10,137.8	7,322.6	10,271.4	7,194.5	48.8	54.0	-86.45	-2,093.8	1,813.7	2,053.9	1,957.8	96.14	21.363	
10,200.0	7,322.6	10,333.7	7,193.6	49.9	54.9	-86.43	-2,156.0	1,813.7	2,054.0	1,955.6	98.31	20.892	
10,236.2	7,322.5	10,369.8	7,193.1	50.5	55.5	-86.42	-2,192.2	1,813.7	2,054.0	1,954.4	99.58	20.626	
10,300.0	7,322.4	10,433.6	7,192.2	51.6	56.5	-86.39	-2,256.0	1,813.7	2,054.0	1,952.2	101.83	20.172	
10,334.6	7,322.4	10,468.3	7,191.7	52.3	57.0	-86.38	-2,290.6	1,813.7	2,054.1	1,951.0	103.05	19.933	
10,400.0	7,322.3	10,533.6	7,190.8	53.4	58.0	-86.36	-2,356.0	1,813.7	2,054.1	1,948.8	105.36	19.496	
10,433.0	7,322.2	10,566.7	7,190.4	54.0	58.5	-86.35	-2,389.0	1,813.7	2,054.1	1,947.6	106.53	19.282	
10,500.0	7,322.1	10,633.6	7,189.4	55.2	59.6	-86.33	-2,455.9	1,813.7	2,054.2	1,945.3	108.91	18.861	
10,531.5	7,322.1	10,665.1	7,189.0	55.8	60.1	-86.31	-2,487.4	1,813.7	2,054.2	1,944.2	110.04	18.669	
10,600.0	7,321.9	10,733.6	7,188.1	57.0	61.2	-86.29	-2,555.9	1,813.7	2,054.3	1,941.8	112.48	18.263	
10,629.9	7,321.9	10,763.5	7,187.7	57.6	61.7	-86.28	-2,585.8	1,813.7	2,054.3	1,940.7	113.56	18.090	
10,700.0	7,321.8	10,833.6	7,186.7	58.8	62.8	-86.26	-2,655.9	1,813.7	2,054.4	1,938.3	116.07	17.699	
10,728.3	7,321.8	10,861.9	7,186.3	59.4	63.3	-86.25	-2,684.2	1,813.7	2,054.4	1,937.3	117.09	17.545	
10,800.0	7,321.6	10,933.6	7,185.3	60.7	64.5	-86.22	-2,755.9	1,813.7	2,054.4	1,934.8	119.68	17.167	
10,826.7	7,321.6	10,960.4	7,184.9	61.1	64.9	-86.21	-2,782.6	1,813.7	2,054.5	1,933.8	120.64	17.029	
10,900.0	7,321.5	11,033.6	7,183.9	62.5	66.1	-86.19	-2,855.9	1,813.7	2,054.5	1,931.2	123.29	16.664	
10,925.2	7,321.4	11,058.8	7,183.6	62.9	66.5	-86.18	-2,881.0	1,813.7	2,054.5	1,930.3	124.21	16.541	
11,000.0	7,321.3	11,133.6	7,182.5	64.3	67.8	-86.15	-2,955.9	1,813.7	2,054.6	1,927.7	126.92	16.188	
11,023.6	7,321.3	11,157.2	7,182.2	64.7	68.2	-86.15	-2,979.4	1,813.7	2,054.6	1,926.8	127.78	16.079	
11,100.0	7,321.2	11,233.6	7,181.2	66.1	69.5	-86.12	-3,055.8	1,813.7	2,054.7	1,924.1	130.56	15.737	
11,122.0	7,321.1	11,255.6	7,180.9	66.5	69.9	-86.11	-3,077.9	1,813.7	2,054.7	1,923.3	131.37	15.641	
11,200.0	7,321.0	11,333.6	7,179.8	68.0	71.2	-86.09	-3,155.8	1,813.7	2,054.8	1,920.6	134.21	15.310	
11,220.4	7,321.0	11,354.0	7,179.5	68.4	71.5	-86.08	-3,176.3	1,813.7	2,054.8	1,919.8	134.96	15.225	
11,300.0	7,320.9	11,433.6	7,178.4	69.8	72.9	-86.05	-3,255.8	1,813.6	2,054.8	1,917.0	137.87	14.904	
11,318.9	7,320.8	11,452.5	7,178.1	70.2	73.2	-86.05	-3,274.7	1,813.6	2,054.9	1,916.3	138.57	14.829	
11,400.0	7,320.7	11,533.6	7,177.0	71.7	74.6	-86.02	-3,355.8	1,813.6	2,054.9	1,913.4	141.54	14.518	
11,417.3	7,320.7	11,550.9	7,176.8	72.0	74.9	-86.01	-3,373.1	1,813.6	2,054.9	1,912.8	142.18	14.453	
11,500.0	7,320.6	11,633.6	7,175.6	73.5	76.3	-85.98	-3,455.8	1,813.6	2,055.0	1,909.8	145.22	14.151	
11,515.7	7,320.5	11,649.3	7,175.4	73.8	76.6	-85.98	-3,471.5	1,813.6	2,055.0	1,909.2	145.80	14.095	
11,600.0	7,320.4	11,733.6	7,174.3	75.4	78.1	-85.95	-3,555.8	1,813.6	2,055.1	1,906.2	148.91	13.801	
11,614.1	7,320.4	11,747.7	7,174.1	75.6	78.3	-85.95	-3,569.9	1,813.6	2,055.1	1,905.7	149.43	13.753	
11,700.0	7,320.2	11,833.6	7,172.9	77.2	79.8	-85.92	-3,655.7	1,813.6	2,055.2	1,902.6	152.60	13.468	
11,712.6	7,320.2	11,846.1	7,172.7	77.5	80.0	-85.91	-3,668.3	1,813.6	2,055.2	1,902.1	153.06	13.427	
11,800.0	7,320.1	11,933.5	7,171.5	79.1	81.6	-85.88	-3,755.7	1,813.6	2,055.3	1,899.0	156.30	13.150	
11,811.0	7,320.1	11,944.5	7,171.3	79.3	81.8	-85.88	-3,766.7	1,813.6	2,055.3	1,898.6	156.66	13.119	
11,849.2	7,320.0	11,982.8	7,170.8	79.8	82.4	-85.87	-3,804.9	1,813.6	2,055.3	1,897.4	157.93	13.014	
11,849.6	7,320.0	11,983.1	7,170.8	79.8	82.4	-85.87	-3,805.3	1,813.6	2,055.3	1,897.4	157.94	13.013 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - PROP HZ CHANDLER FARMS HD 20-389HN - Wellbore #1 - W												Offset Site Error:	0.0 usft
Survey Program: 16-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	-3.49	1,369.4	-83.4	1,372.5				
98.4	98.4	58.6	58.6	0.1	0.1	-3.49	1,369.4	-83.4	1,372.0	1,371.8	0.19	7,341.974	
100.0	100.0	60.2	60.2	0.1	0.1	-3.49	1,369.4	-83.4	1,372.0	1,371.8	0.19	7,139.104	
196.8	196.8	157.0	157.0	0.3	0.3	-3.49	1,369.4	-83.4	1,372.0	1,371.3	0.63	2,186.224	
200.0	200.0	160.2	160.2	0.3	0.3	-3.49	1,369.4	-83.4	1,372.0	1,371.3	0.64	2,137.982	
295.3	295.3	255.5	255.5	0.5	0.5	-3.49	1,369.4	-83.4	1,372.0	1,370.9	1.07	1,282.206	
300.0	300.0	260.2	260.2	0.5	0.6	-3.49	1,369.4	-83.4	1,372.0	1,370.9	1.09	1,257.248	
393.7	393.7	353.9	353.9	0.7	0.8	-3.49	1,369.4	-83.4	1,372.0	1,370.4	1.51	907.110	
400.0	400.0	360.2	360.2	0.8	0.8	-3.49	1,369.4	-83.4	1,372.0	1,370.4	1.54	890.436	
492.1	492.1	452.3	452.3	1.0	1.0	-3.49	1,369.4	-83.4	1,372.0	1,370.0	1.95	701.804	
500.0	500.0	460.2	460.2	1.0	1.0	-3.49	1,369.4	-83.4	1,372.0	1,370.0	1.99	689.321	
590.5	590.5	550.7	550.7	1.2	1.2	-3.49	1,369.4	-83.4	1,372.0	1,369.6	2.40	572.280	
600.0	600.0	560.2	560.2	1.2	1.2	-3.49	1,369.4	-83.4	1,372.0	1,369.5	2.44	562.316	
689.0	689.0	649.2	649.2	1.4	1.4	-3.49	1,369.4	-83.4	1,372.0	1,369.1	2.84	483.117	
700.0	700.0	660.2	660.2	1.4	1.5	-3.49	1,369.4	-83.4	1,372.0	1,369.1	2.89	474.830	
787.4	787.4	747.6	747.6	1.6	1.7	-3.49	1,369.4	-83.4	1,372.0	1,368.7	3.28	417.992	
800.0	800.0	760.2	760.2	1.7	1.7	-3.49	1,369.4	-83.4	1,372.0	1,368.6	3.34	410.901	
885.8	885.8	846.0	846.0	1.9	1.9	-3.49	1,369.4	-83.4	1,372.0	1,368.2	3.72	368.340	
900.0	900.0	860.2	860.2	1.9	1.9	-3.49	1,369.4	-83.4	1,372.0	1,368.2	3.79	362.144	
984.2	984.2	944.4	944.4	2.1	2.1	-3.49	1,369.4	-83.4	1,372.0	1,367.8	4.17	329.231	
1,000.0	1,000.0	960.2	960.2	2.1	2.1	-3.49	1,369.4	-83.4	1,372.0	1,367.7	4.24	323.731	
1,082.7	1,082.7	1,042.9	1,042.9	2.3	2.3	-3.49	1,369.4	-83.4	1,372.0	1,367.3	4.61	297.630	
1,100.0	1,100.0	1,060.2	1,060.2	2.3	2.4	-3.49	1,369.4	-83.4	1,372.0	1,367.3	4.69	292.685	
1,181.1	1,181.1	1,141.3	1,141.3	2.5	2.5	-3.49	1,369.4	-83.4	1,372.0	1,366.9	5.05	271.564	
1,200.0	1,200.0	1,160.2	1,160.2	2.6	2.6	-3.49	1,369.4	-83.4	1,372.0	1,366.8	5.14	267.072	
1,279.5	1,279.5	1,239.7	1,239.7	2.7	2.8	-3.49	1,369.4	-83.4	1,372.0	1,366.5	5.49	249.696	
1,300.0	1,300.0	1,260.2	1,260.2	2.8	2.8	-3.49	1,369.4	-83.4	1,372.0	1,366.4	5.59	245.582	
1,377.9	1,377.9	1,338.1	1,338.1	3.0	3.0	-3.49	1,369.4	-83.4	1,372.0	1,366.0	5.94	231.087	
1,400.0	1,400.0	1,360.2	1,360.2	3.0	3.0	-3.49	1,369.4	-83.4	1,372.0	1,365.9	6.04	227.293	
1,450.0	1,450.0	1,410.2	1,410.2	3.1	3.1	-3.49	1,369.4	-83.4	1,372.0	1,365.7	6.26	219.133	
1,476.4	1,476.4	1,436.6	1,436.6	3.2	3.2	10.81	1,369.4	-83.4	1,371.8	1,365.5	6.38	215.048	
1,500.0	1,500.0	1,460.2	1,460.2	3.2	3.3	10.81	1,369.4	-83.4	1,371.5	1,365.0	6.48	211.497	
1,574.8	1,574.8	1,535.0	1,535.0	3.4	3.4	10.84	1,369.4	-83.4	1,369.3	1,362.5	6.82	200.848	
1,600.0	1,599.9	1,560.1	1,560.1	3.5	3.5	10.85	1,369.4	-83.4	1,368.1	1,361.2	6.93	197.459	
1,673.2	1,673.0	1,633.2	1,633.2	3.6	3.6	10.91	1,369.4	-83.4	1,363.4	1,356.2	7.25	188.068	
1,700.0	1,699.7	1,659.9	1,659.9	3.7	3.7	10.93	1,369.4	-83.4	1,361.3	1,353.9	7.37	184.812	
1,771.6	1,771.0	1,731.2	1,731.2	3.9	3.9	11.02	1,369.4	-83.4	1,354.2	1,346.6	7.67	176.457	
1,800.0	1,799.1	1,759.3	1,759.3	3.9	3.9	11.06	1,369.4	-83.4	1,351.0	1,343.2	7.80	173.309	
1,870.1	1,868.6	1,828.8	1,828.8	4.1	4.1	11.17	1,369.4	-83.4	1,341.8	1,333.7	8.09	165.806	
1,900.0	1,898.2	1,858.4	1,858.4	4.2	4.1	11.23	1,369.4	-83.4	1,337.3	1,329.1	8.22	162.743	
1,968.5	1,965.7	1,925.9	1,925.9	4.3	4.3	11.37	1,369.4	-83.4	1,326.0	1,317.5	8.50	155.944	
2,000.0	1,996.6	1,956.8	1,956.8	4.4	4.4	11.44	1,369.4	-83.4	1,320.3	1,311.7	8.63	152.945	
2,049.8	2,045.4	2,005.6	2,005.6	4.6	4.5	11.57	1,369.4	-83.4	1,310.6	1,301.7	8.84	148.315	
2,066.9	2,062.2	2,022.4	2,022.4	4.6	4.5	11.60	1,369.4	-83.4	1,307.1	1,298.2	8.91	146.622	
2,100.0	2,094.5	2,054.7	2,054.7	4.7	4.6	11.66	1,369.4	-83.4	1,300.3	1,291.3	9.06	143.448	
2,165.3	2,158.5	2,118.7	2,118.7	4.9	4.7	11.78	1,369.4	-83.4	1,287.0	1,277.7	9.37	137.425	
2,200.0	2,192.3	2,152.5	2,152.5	5.1	4.8	11.85	1,369.4	-83.4	1,280.0	1,270.4	9.52	134.409	
2,263.8	2,254.7	2,214.9	2,214.9	5.3	4.9	11.97	1,369.4	-83.4	1,267.0	1,257.2	9.82	129.085	
2,300.0	2,290.2	2,250.4	2,250.4	5.4	5.0	12.04	1,369.4	-83.4	1,259.6	1,249.6	9.99	126.146	
2,362.2	2,351.0	2,311.2	2,311.2	5.6	5.2	12.16	1,369.4	-83.4	1,247.0	1,236.7	10.27	121.361	
2,400.0	2,388.0	2,348.2	2,348.2	5.8	5.2	12.24	1,369.4	-83.4	1,239.3	1,228.8	10.45	118.573	
2,460.6	2,447.3	2,407.5	2,407.5	6.0	5.4	12.37	1,369.4	-83.4	1,227.0	1,216.2	10.74	114.284	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - PROP HZ CHANDLER FARMS HD 20-389HN - Wellbore #1 - W												Offset Site Error:	0.0 usft
Survey Program: 16-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,485.8	2,446.0	2,446.0	6.1	5.5	12.45	1,369.4	-83.4	1,219.0	1,208.0	10.92	111.613	
2,559.0	2,543.6	2,503.8	2,503.8	6.3	5.6	12.57	1,369.4	-83.4	1,207.0	1,195.8	11.20	107.762	
2,600.0	2,583.6	2,543.8	2,543.8	6.5	5.7	12.66	1,369.4	-83.4	1,198.6	1,187.3	11.39	105.199	
2,657.5	2,639.8	2,600.0	2,600.0	6.7	5.8	12.79	1,369.4	-83.4	1,187.0	1,175.3	11.67	101.735	
2,700.0	2,681.4	2,641.6	2,641.6	6.9	5.9	12.88	1,369.4	-83.4	1,178.4	1,166.5	11.87	99.273	
2,755.9	2,736.1	2,696.3	2,696.3	7.1	6.0	13.01	1,369.4	-83.4	1,167.0	1,154.9	12.14	96.153	
2,800.0	2,779.2	2,739.4	2,739.4	7.3	6.1	13.11	1,369.4	-83.4	1,158.1	1,145.7	12.35	93.785	
2,854.3	2,832.4	2,792.6	2,792.6	7.5	6.2	13.24	1,369.4	-83.4	1,147.1	1,134.5	12.61	90.970	
2,900.0	2,877.1	2,837.3	2,837.3	7.7	6.3	13.35	1,369.4	-83.4	1,137.8	1,125.0	12.83	88.690	
2,952.7	2,928.7	2,888.9	2,888.9	7.9	6.5	13.48	1,369.4	-83.4	1,127.2	1,114.1	13.08	86.146	
3,000.0	2,974.9	2,935.1	2,935.1	8.1	6.6	13.59	1,369.4	-83.4	1,117.6	1,104.3	13.31	83.949	
3,051.2	3,024.9	2,985.1	2,985.1	8.3	6.7	13.72	1,369.4	-83.4	1,107.2	1,093.7	13.56	81.648	
3,100.0	3,072.7	3,032.9	3,032.9	8.5	6.8	13.85	1,369.4	-83.4	1,097.4	1,083.6	13.80	79.528	
3,149.6	3,121.2	3,081.4	3,081.4	8.7	6.9	13.98	1,369.4	-83.4	1,087.4	1,073.3	14.04	77.444	
3,200.0	3,170.5	3,130.7	3,130.7	8.9	7.0	14.11	1,369.4	-83.4	1,077.2	1,062.9	14.29	75.398	
3,248.0	3,217.5	3,177.7	3,177.7	9.1	7.1	14.24	1,369.4	-83.4	1,067.5	1,053.0	14.52	73.509	
3,300.0	3,268.3	3,228.5	3,228.5	9.3	7.2	14.39	1,369.4	-83.4	1,057.0	1,042.2	14.78	71.530	
3,346.4	3,313.8	3,274.0	3,274.0	9.5	7.3	14.52	1,369.4	-83.4	1,047.7	1,032.7	15.01	69.817	
3,400.0	3,366.1	3,326.3	3,326.3	9.7	7.4	14.67	1,369.4	-83.4	1,036.9	1,021.6	15.27	67.903	
3,444.9	3,410.0	3,370.2	3,370.2	9.9	7.5	14.80	1,369.4	-83.4	1,027.8	1,012.4	15.49	66.347	
3,500.0	3,464.0	3,424.2	3,424.2	10.2	7.7	14.97	1,369.4	-83.4	1,016.8	1,001.0	15.76	64.495	
3,543.3	3,506.3	3,466.5	3,466.5	10.3	7.8	15.10	1,369.4	-83.4	1,008.1	992.1	15.98	63.082	
3,600.0	3,561.8	3,522.0	3,522.0	10.6	7.9	15.28	1,369.4	-83.4	996.7	980.4	16.26	61.286	
3,641.7	3,602.6	3,562.8	3,562.8	10.8	8.0	15.41	1,369.4	-83.4	988.3	971.8	16.47	60.003	
3,700.0	3,659.6	3,619.8	3,619.8	11.0	8.1	15.60	1,369.4	-83.4	976.6	959.8	16.76	58.262	
3,740.1	3,698.9	3,659.1	3,659.1	11.2	8.2	15.73	1,369.4	-83.4	968.6	951.6	16.96	57.096	
3,800.0	3,757.4	3,717.6	3,717.6	11.4	8.3	15.93	1,369.4	-83.4	956.6	939.3	17.26	55.407	
3,838.6	3,795.1	3,755.3	3,755.3	11.6	8.4	16.06	1,369.4	-83.4	948.8	931.4	17.46	54.347	
3,900.0	3,855.2	3,815.4	3,815.4	11.9	8.5	16.28	1,369.4	-83.4	936.6	918.8	17.77	52.707	
3,937.0	3,891.4	3,851.6	3,851.6	12.0	8.6	16.41	1,369.4	-83.4	929.2	911.2	17.96	51.745	
4,000.0	3,953.0	3,913.2	3,913.2	12.3	8.8	16.64	1,369.4	-83.4	916.6	898.3	18.28	50.150	
4,035.4	3,987.7	3,947.9	3,947.9	12.4	8.8	16.78	1,369.4	-83.4	909.5	891.1	18.46	49.277	
4,100.0	4,050.9	4,011.1	4,011.1	12.7	9.0	17.02	1,369.4	-83.4	896.7	877.9	18.79	47.727	
4,133.8	4,084.0	4,044.2	4,044.2	12.9	9.1	17.16	1,369.4	-83.4	889.9	871.0	18.96	46.935	
4,200.0	4,148.7	4,108.9	4,108.9	13.2	9.2	17.42	1,369.4	-83.4	876.8	857.5	19.30	45.426	
4,232.3	4,180.2	4,140.4	4,140.4	13.3	9.3	17.55	1,369.4	-83.4	870.4	850.9	19.47	44.709	
4,300.0	4,246.5	4,206.7	4,206.7	13.6	9.4	17.84	1,369.4	-83.4	856.9	837.1	19.82	43.240	
4,330.7	4,276.5	4,236.7	4,236.7	13.7	9.5	17.97	1,369.4	-83.4	850.9	830.9	19.98	42.591	
4,400.0	4,344.3	4,304.5	4,304.5	14.0	9.6	18.27	1,369.4	-83.4	837.1	816.8	20.34	41.160	
4,429.1	4,372.8	4,333.0	4,333.0	14.1	9.7	18.40	1,369.4	-83.4	831.4	810.9	20.49	40.574	
4,500.0	4,442.1	4,402.3	4,402.3	14.5	9.9	18.73	1,369.4	-83.4	817.4	796.5	20.86	39.180	
4,527.5	4,469.1	4,429.3	4,429.3	14.6	9.9	18.86	1,369.4	-83.4	812.0	790.9	21.01	38.650	
4,600.0	4,539.9	4,500.1	4,500.1	14.9	10.1	19.20	1,369.4	-83.4	797.7	776.3	21.39	37.291	
4,626.0	4,565.4	4,525.6	4,525.6	15.0	10.1	19.33	1,369.4	-83.4	792.6	771.0	21.53	36.815	
4,700.0	4,637.8	4,598.0	4,598.0	15.3	10.3	19.71	1,369.4	-83.4	778.0	756.1	21.92	35.489	
4,724.4	4,661.6	4,621.8	4,621.8	15.4	10.4	19.83	1,369.4	-83.4	773.3	751.2	22.05	35.062	
4,800.0	4,735.6	4,695.8	4,695.8	15.8	10.5	20.23	1,369.4	-83.4	758.5	736.0	22.46	33.768	
4,822.8	4,757.9	4,718.1	4,718.1	15.9	10.6	20.36	1,369.4	-83.4	754.0	731.4	22.58	33.386	
4,900.0	4,833.4	4,793.6	4,793.6	16.2	10.7	20.79	1,369.4	-83.4	738.9	715.9	23.00	32.123	
4,921.2	4,854.2	4,814.4	4,814.4	16.3	10.8	20.91	1,369.4	-83.4	734.8	711.7	23.12	31.783	
5,000.0	4,931.2	4,891.4	4,891.4	16.6	11.0	21.38	1,369.4	-83.4	719.5	695.9	23.55	30.550	
5,019.7	4,950.5	4,910.7	4,910.7	16.7	11.0	21.50	1,369.4	-83.4	715.7	692.0	23.66	30.248	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - PROP HZ CHANDLER FARMS HD 20-389HN - Wellbore #1 - W												Offset Site Error:	0.0 usft
Survey Program: 16-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	5,029.0	4,989.2	4,989.2	17.1	11.2	21.99	1,369.4	-83.4	700.1	676.0	24.11	29.044	
5,118.1	5,046.7	5,006.9	5,006.9	17.1	11.2	22.11	1,369.4	-83.4	696.6	672.4	24.21	28.778	
5,200.0	5,126.8	5,087.0	5,087.0	17.5	11.4	22.65	1,369.4	-83.4	680.8	656.2	24.67	27.601	
5,216.5	5,143.0	5,103.2	5,103.2	17.6	11.4	22.76	1,369.4	-83.4	677.7	652.9	24.76	27.369	
5,300.0	5,224.7	5,184.9	5,184.9	17.9	11.6	23.34	1,369.4	-83.4	661.6	636.4	25.24	26.218	
5,314.9	5,239.3	5,199.5	5,199.5	18.0	11.7	23.44	1,369.4	-83.4	658.8	633.5	25.32	26.017	
5,400.0	5,322.5	5,282.7	5,282.7	18.4	11.8	24.07	1,369.4	-83.4	642.5	616.7	25.81	24.892	
5,413.4	5,335.6	5,295.8	5,295.8	18.4	11.9	24.17	1,369.4	-83.4	640.0	614.1	25.89	24.719	
5,500.0	5,420.3	5,380.5	5,380.5	18.8	12.1	24.85	1,369.4	-83.4	623.6	597.2	26.40	23.620	
5,511.8	5,431.8	5,392.0	5,392.0	18.9	12.1	24.94	1,369.4	-83.4	621.3	594.9	26.47	23.474	
5,600.0	5,518.1	5,478.3	5,478.3	19.3	12.3	25.67	1,369.4	-83.4	604.7	577.7	27.00	22.400	
5,610.2	5,528.1	5,488.3	5,488.3	19.3	12.3	25.76	1,369.4	-83.4	602.8	575.7	27.06	22.278	
5,700.0	5,615.9	5,576.1	5,576.1	19.7	12.5	26.55	1,369.4	-83.4	585.9	558.3	27.60	21.228	
5,708.6	5,624.4	5,584.6	5,584.6	19.7	12.5	26.62	1,369.4	-83.4	584.3	556.7	27.66	21.129	
5,800.0	5,713.7	5,673.9	5,673.9	20.1	12.7	27.48	1,369.4	-83.4	567.3	539.1	28.22	20.103	
5,807.1	5,720.7	5,680.9	5,680.9	20.2	12.7	27.55	1,369.4	-83.4	566.0	537.8	28.27	20.025	
5,900.0	5,811.6	5,807.6	5,807.5	20.6	13.0	28.47	1,367.0	-87.7	546.8	517.9	28.92	18.910	
5,905.5	5,816.9	5,821.6	5,821.4	20.6	13.0	28.50	1,366.3	-89.0	545.4	516.4	28.96	18.830	
6,000.0	5,909.4	6,024.9	6,015.3	21.0	13.5	25.60	1,338.1	-139.4	509.6	480.2	29.39	17.341	
6,003.9	5,913.2	6,030.3	6,020.2	21.0	13.5	25.43	1,336.9	-141.4	507.8	478.4	29.39	17.275	
6,053.2	5,961.4	6,095.3	6,077.5	21.3	13.7	22.94	1,322.0	-168.1	484.0	454.5	29.46	16.429	
6,100.0	6,007.3	6,135.2	6,111.9	21.4	13.8	20.84	1,312.1	-185.8	461.0	431.5	29.54	15.605	
6,102.3	6,009.6	6,137.2	6,113.6	21.5	13.8	20.74	1,311.7	-186.6	459.9	430.3	29.55	15.565	
6,200.0	6,105.7	6,217.8	6,183.1	21.8	14.1	15.96	1,291.7	-222.3	415.7	386.0	29.70	13.999	
6,200.8	6,106.5	6,218.5	6,183.7	21.8	14.1	15.91	1,291.5	-222.6	415.4	385.7	29.70	13.987	
6,299.2	6,203.9	6,300.7	6,254.5	22.0	14.5	10.29	1,271.2	-258.9	376.9	347.0	29.92	12.596	
6,300.0	6,204.7	6,301.3	6,255.1	22.0	14.5	10.24	1,271.0	-259.2	376.6	346.7	29.93	12.585	
6,397.6	6,301.8	6,383.7	6,326.1	22.3	14.9	3.83	1,250.7	-295.7	345.9	315.6	30.31	11.412	
6,400.0	6,304.2	6,385.7	6,327.8	22.3	14.9	3.67	1,250.2	-296.5	345.2	314.9	30.32	11.386	
6,496.0	6,400.0	6,479.0	6,409.7	22.4	15.4	-3.83	1,226.5	-334.2	322.7	291.8	30.94	10.432	
6,500.0	6,403.9	6,483.1	6,413.4	22.5	15.4	-4.14	1,225.4	-335.7	321.9	291.0	30.97	10.395	
6,594.5	6,498.3	6,592.3	6,514.4	22.6	15.8	-11.29	1,195.7	-364.6	303.1	271.3	31.79	9.535	
6,600.0	6,503.8	6,599.1	6,520.8	22.6	15.8	-11.65	1,193.8	-365.7	302.0	270.1	31.84	9.483	
6,653.0	6,556.8	6,665.1	6,583.6	22.7	16.0	-28.91	1,175.0	-373.0	290.5	258.2	32.27	9.002	
6,692.9	6,596.7	6,715.6	6,631.9	22.7	16.2	-30.52	1,160.4	-373.6	280.6	248.0	32.59	8.610	
6,706.0	6,609.8	6,732.0	6,647.6	22.7	16.2	-30.92	1,155.7	-372.9	277.0	244.4	32.68	8.477	
6,750.0	6,653.8	6,787.4	6,700.3	22.8	16.3	149.05	1,139.5	-367.2	264.8	232.1	32.74	8.089	
6,791.3	6,695.0	6,838.7	6,748.4	22.8	16.4	150.25	1,124.7	-357.4	253.5	220.9	32.58	7.781	
6,800.0	6,703.6	6,849.3	6,758.2	22.8	16.4	150.66	1,121.6	-354.9	251.2	218.7	32.52	7.723	
6,850.0	6,752.9	6,908.7	6,812.2	22.8	16.5	154.09	1,104.7	-337.1	238.2	206.2	32.05	7.433	
6,889.7	6,791.6	6,953.3	6,851.6	22.7	16.6	157.98	1,092.3	-320.2	229.0	197.5	31.50	7.269	
6,900.0	6,801.5	6,964.4	6,861.1	22.7	16.6	159.13	1,089.3	-315.5	226.9	195.5	31.35	7.237	
6,950.0	6,849.1	7,015.6	6,904.2	22.6	16.6	165.29	1,075.5	-291.4	218.7	188.1	30.58	7.152 SF	
6,988.2	6,884.8	7,051.5	6,933.2	22.5	16.6	170.39	1,066.2	-272.3	215.7	185.7	30.03	7.183	
7,000.0	6,895.7	7,062.1	6,941.4	22.5	16.7	171.99	1,063.5	-266.3	215.5	185.6	29.88	7.213 ES	
7,000.7	6,896.3	7,062.7	6,941.9	22.4	16.7	172.09	1,063.3	-266.0	215.5	185.7	29.87	7.215 CC	
7,050.0	6,940.8	7,103.7	6,973.1	22.3	16.7	178.68	1,053.2	-241.3	219.0	189.7	29.33	7.466	
7,086.6	6,972.8	7,131.3	6,993.1	22.1	16.7	-176.64	1,046.6	-223.5	226.4	197.3	29.07	7.787	
7,100.0	6,984.3	7,140.8	6,999.8	22.1	16.7	-174.98	1,044.3	-217.1	230.1	201.1	29.00	7.936	
7,150.0	7,025.9	7,173.7	7,022.2	21.9	16.7	-169.11	1,036.9	-194.3	248.9	220.1	28.79	8.646	
7,185.0	7,053.9	7,194.4	7,035.6	21.7	16.8	-165.25	1,032.3	-179.2	266.3	237.6	28.71	9.275	
7,200.0	7,065.6	7,200.0	7,039.2	21.7	16.8	-164.09	1,031.1	-175.1	274.6	246.0	28.61	9.600	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - PROP HZ CHANDLER FARMS HD 20-389HN - Wellbore #1 - W												Offset Site Error:	0.0 usft
Survey Program: 16-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,250.0	7,103.0	7,228.2	7,056.6	21.4	16.8	-158.42	1,025.2	-153.6	306.1	277.3	28.81	10.623	
7,283.4	7,126.7	7,243.6	7,065.6	21.2	16.9	-154.95	1,022.1	-141.6	329.7	300.8	28.94	11.393	
7,300.0	7,138.0	7,250.7	7,069.7	21.2	16.9	-153.22	1,020.7	-135.9	342.1	313.1	29.03	11.784	
7,350.0	7,170.5	7,270.5	7,080.6	20.9	17.0	-147.80	1,016.9	-119.9	381.7	352.2	29.43	12.966	
7,381.9	7,189.8	7,281.8	7,086.7	20.8	17.1	-144.10	1,014.8	-110.6	408.3	378.5	29.85	13.680	
7,400.0	7,200.2	7,300.0	7,096.1	20.7	17.2	-140.41	1,011.5	-95.3	424.1	393.5	30.57	13.872	
7,450.0	7,227.0	7,300.0	7,096.1	20.4	17.2	-135.43	1,011.5	-95.3	468.1	437.0	31.11	15.045	
7,480.3	7,241.9	7,300.0	7,096.1	20.3	17.2	-131.43	1,011.5	-95.3	495.8	464.1	31.73	15.625	
7,500.0	7,250.9	7,316.5	7,104.2	20.2	17.4	-127.15	1,008.6	-81.3	513.8	481.2	32.58	15.768	
7,550.0	7,271.6	7,328.2	7,109.7	20.0	17.5	-117.67	1,006.7	-71.2	560.5	526.4	34.13	16.423	
7,578.7	7,282.0	7,334.2	7,112.5	19.9	17.6	-111.47	1,005.7	-65.9	587.7	552.7	34.96	16.811	
7,600.0	7,289.1	7,338.4	7,114.4	19.8	17.6	-106.53	1,005.0	-62.2	608.0	572.5	35.47	17.143	
7,650.0	7,303.3	7,347.3	7,118.3	19.6	17.7	-94.02	1,003.5	-54.4	655.9	619.8	36.02	18.208	
7,677.1	7,309.5	7,351.6	7,120.2	19.5	17.8	-86.93	1,002.9	-50.6	682.0	646.1	35.83	19.034	
7,700.0	7,314.1	7,354.9	7,121.6	19.5	17.8	-80.99	1,002.3	-47.6	704.0	668.6	35.36	19.907	
7,750.0	7,321.4	7,361.4	7,124.4	19.4	17.9	-68.59	1,001.3	-41.8	752.1	718.5	33.57	22.402	
7,775.6	7,323.9	7,364.3	7,125.6	19.3	17.9	-62.81	1,000.9	-39.2	776.6	744.2	32.40	23.969	
7,800.0	7,325.3	7,366.9	7,126.6	19.3	17.9	-57.72	1,000.5	-36.9	800.0	768.7	31.22	25.623	
7,832.0	7,326.0	7,369.9	7,127.9	19.3	17.9	-51.73	1,000.1	-34.2	830.4	800.7	29.72	27.938	
7,874.0	7,325.9	7,373.5	7,129.3	19.3	18.0	-52.43	999.5	-30.9	870.5	840.5	29.99	29.025	
7,900.0	7,325.9	7,375.7	7,130.2	19.3	18.0	-52.85	999.2	-28.9	895.3	865.2	30.15	29.696	
7,972.4	7,325.8	7,400.0	7,139.4	19.4	18.3	-57.21	995.7	-6.7	965.1	933.6	31.54	30.601	
8,000.0	7,325.8	7,400.0	7,139.4	19.5	18.3	-57.21	995.7	-6.7	991.6	960.0	31.61	31.366	
8,070.8	7,325.7	7,400.0	7,139.4	19.8	18.3	-57.21	995.7	-6.7	1,059.9	1,028.0	31.92	33.206	
8,100.0	7,325.6	7,400.0	7,139.4	19.9	18.3	-57.21	995.7	-6.7	1,088.1	1,056.1	32.04	33.956	
8,169.3	7,325.5	7,400.0	7,139.4	20.3	18.3	-57.21	995.7	-6.7	1,155.3	1,122.8	32.44	35.610	
8,200.0	7,325.5	7,400.0	7,139.4	20.5	18.3	-57.20	995.7	-6.7	1,185.2	1,152.5	32.62	36.333	
8,267.7	7,325.4	7,400.0	7,139.4	21.1	18.3	-57.20	995.7	-6.7	1,251.1	1,218.0	33.10	37.802	
8,300.0	7,325.3	7,400.0	7,139.4	21.3	18.3	-57.20	995.7	-6.7	1,282.7	1,249.4	33.32	38.490	
8,366.1	7,325.2	7,400.0	7,139.4	21.9	18.3	-57.20	995.7	-6.7	1,347.4	1,313.5	33.87	39.781	
8,400.0	7,325.2	7,400.0	7,139.4	22.3	18.3	-57.20	995.7	-6.7	1,380.5	1,346.4	34.15	40.428	
8,464.5	7,325.1	7,400.0	7,139.4	22.9	18.3	-57.20	995.7	-6.7	1,443.9	1,409.1	34.75	41.555	
8,500.0	7,325.1	7,400.0	7,139.4	23.3	18.3	-57.20	995.7	-6.7	1,478.7	1,443.6	35.07	42.160	
8,563.0	7,325.0	7,400.0	7,139.4	24.0	18.3	-57.20	995.7	-6.7	1,540.6	1,504.9	35.71	43.139	
8,600.0	7,324.9	7,426.2	7,148.3	24.5	18.6	-61.31	992.3	17.7	1,576.6	1,539.4	37.22	42.358	
8,661.4	7,324.8	7,430.0	7,149.5	25.2	18.7	-61.84	991.8	21.2	1,637.0	1,599.0	38.06	43.016	
8,700.0	7,324.8	7,432.3	7,150.2	25.7	18.7	-62.17	991.5	23.4	1,675.0	1,636.4	38.58	43.419	
8,759.8	7,324.7	7,435.7	7,151.3	26.5	18.8	-62.65	991.1	26.7	1,733.9	1,694.5	39.43	43.978	
8,800.0	7,324.6	7,438.0	7,152.0	27.1	18.8	-62.96	990.8	28.8	1,773.5	1,733.5	40.00	44.343	
8,858.2	7,324.5	7,441.3	7,153.0	27.9	18.8	-63.39	990.4	31.9	1,831.0	1,790.1	40.85	44.817	
8,900.0	7,324.5	7,443.6	7,153.7	28.4	18.9	-63.69	990.2	34.1	1,872.2	1,830.7	41.47	45.148	
8,956.7	7,324.4	7,446.6	7,154.5	29.3	18.9	-64.08	989.8	36.9	1,928.1	1,885.8	42.33	45.550	
9,000.0	7,324.3	7,448.9	7,155.2	29.9	18.9	-64.36	989.6	39.1	1,970.9	1,927.9	42.99	45.850	
9,055.1	7,324.3	7,451.7	7,156.0	30.7	19.0	-64.72	989.2	41.8	2,025.4	1,981.5	43.85	46.192	
9,100.0	7,324.2	7,454.0	7,156.6	31.4	19.0	-64.99	989.0	44.0	2,069.8	2,025.2	44.55	46.464	
9,153.5	7,324.1	7,456.6	7,157.4	32.2	19.0	-65.31	988.7	46.5	2,122.7	2,077.3	45.40	46.755	
9,200.0	7,324.0	7,458.9	7,158.0	33.0	19.1	-65.58	988.4	48.7	2,168.7	2,122.5	46.14	47.002	
9,251.9	7,324.0	7,461.4	7,158.7	33.8	19.1	-65.87	988.2	51.0	2,220.1	2,173.1	46.99	47.251	
9,300.0	7,323.9	7,463.6	7,159.3	34.5	19.1	-66.12	987.9	53.2	2,267.7	2,219.9	47.77	47.475	
9,350.4	7,323.8	7,465.9	7,159.9	35.4	19.2	-66.38	987.7	55.4	2,317.6	2,269.0	48.60	47.688	
9,400.0	7,323.7	7,468.1	7,160.4	36.2	19.2	-66.63	987.4	57.5	2,366.7	2,317.3	49.42	47.892	
9,448.8	7,323.7	7,470.3	7,161.0	37.0	19.2	-66.87	987.2	59.6	2,415.1	2,364.8	50.24	48.075	

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 OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 16-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	7,323.6	7,500.0	7,167.8	37.8	19.6	-69.78	984.2	88.3	2,466.2	2,414.3	51.85	47.560	
9,547.2	7,323.5	7,500.0	7,167.8	38.6	19.6	-69.78	984.2	88.3	2,513.0	2,460.4	52.60	47.772	
9,600.0	7,323.5	7,500.0	7,167.8	39.5	19.6	-69.78	984.2	88.3	2,565.2	2,511.8	53.44	48.004	
9,645.6	7,323.4	7,500.0	7,167.8	40.2	19.6	-69.78	984.2	88.3	2,610.5	2,556.3	54.17	48.189	
9,700.0	7,323.3	7,500.0	7,167.8	41.2	19.6	-69.78	984.2	88.3	2,664.4	2,609.3	55.04	48.405	
9,744.1	7,323.2	7,500.0	7,167.8	41.9	19.6	-69.78	984.2	88.3	2,708.1	2,652.3	55.76	48.568	
9,800.0	7,323.2	7,500.0	7,167.8	42.9	19.6	-69.77	984.2	88.3	2,763.6	2,706.9	56.67	48.769	
9,842.5	7,323.1	7,500.0	7,167.8	43.6	19.6	-69.77	984.2	88.3	2,805.7	2,748.4	57.36	48.912	
9,900.0	7,323.0	7,500.0	7,167.8	44.6	19.6	-69.77	984.2	88.3	2,862.8	2,804.5	58.30	49.101	
9,940.9	7,322.9	7,500.0	7,167.8	45.3	19.6	-69.77	984.2	88.3	2,903.4	2,844.4	58.98	49.226	
10,000.0	7,322.9	7,500.0	7,167.8	46.3	19.6	-69.77	984.2	88.3	2,962.1	2,902.1	59.96	49.403	
10,039.3	7,322.8	7,500.0	7,167.8	47.0	19.6	-69.77	984.2	88.3	3,001.2	2,940.6	60.61	49.513	
10,100.0	7,322.7	7,500.0	7,167.8	48.1	19.6	-69.77	984.2	88.3	3,061.4	2,999.8	61.62	49.680	
10,137.8	7,322.6	7,500.0	7,167.8	48.8	19.6	-69.77	984.2	88.3	3,099.0	3,036.7	62.26	49.777	
10,200.0	7,322.6	7,500.0	7,167.8	49.9	19.6	-69.76	984.2	88.3	3,160.8	3,097.5	63.30	49.934	
10,236.2	7,322.5	7,500.0	7,167.8	50.5	19.6	-69.76	984.2	88.3	3,196.8	3,132.9	63.91	50.019	
10,300.0	7,322.4	7,500.0	7,167.8	51.6	19.6	-69.76	984.2	88.3	3,260.2	3,195.2	64.99	50.167	
10,334.6	7,322.4	7,500.0	7,167.8	52.3	19.6	-69.76	984.2	88.3	3,294.7	3,229.1	65.57	50.243	
10,400.0	7,322.3	7,500.0	7,167.8	53.4	19.6	-69.76	984.2	88.3	3,359.7	3,293.0	66.68	50.383	
10,433.0	7,322.2	7,500.0	7,167.8	54.0	19.6	-69.76	984.2	88.3	3,392.5	3,325.3	67.25	50.449	
10,500.0	7,322.1	7,500.0	7,167.8	55.2	19.6	-69.76	984.2	88.3	3,459.2	3,390.8	68.39	50.582	
10,531.5	7,322.1	7,500.0	7,167.8	55.8	19.6	-69.76	984.2	88.3	3,490.5	3,421.5	68.93	50.640	
10,600.0	7,321.9	7,500.0	7,167.8	57.0	19.6	-69.75	984.2	88.3	3,558.7	3,488.6	70.10	50.766	
10,629.9	7,321.9	7,500.0	7,167.8	57.6	19.6	-69.75	984.2	88.3	3,588.4	3,517.8	70.61	50.818	
10,700.0	7,321.8	7,500.0	7,167.8	58.8	19.6	-69.75	984.2	88.3	3,658.2	3,586.4	71.82	50.937	
10,728.3	7,321.8	7,500.0	7,167.8	59.4	19.6	-69.75	984.2	88.3	3,686.4	3,614.1	72.31	50.983	
10,800.0	7,321.6	7,500.0	7,167.8	60.7	19.6	-69.75	984.2	88.3	3,757.8	3,684.2	73.54	51.097	
10,826.7	7,321.6	7,500.0	7,167.8	61.1	19.6	-69.75	984.2	88.3	3,784.4	3,710.4	74.01	51.137	
10,900.0	7,321.5	7,500.0	7,167.8	62.5	19.6	-69.75	984.2	88.3	3,857.4	3,782.1	75.27	51.245	
10,925.2	7,321.4	7,500.0	7,167.8	62.9	19.6	-69.75	984.2	88.3	3,882.4	3,806.7	75.71	51.280	
11,000.0	7,321.3	7,500.0	7,167.8	64.3	19.6	-69.74	984.2	88.3	3,957.0	3,880.0	77.01	51.384	
11,023.6	7,321.3	7,500.0	7,167.8	64.7	19.6	-69.74	984.2	88.3	3,980.5	3,903.1	77.42	51.415	
11,100.0	7,321.2	7,500.0	7,167.8	66.1	19.6	-69.74	984.2	88.3	4,056.6	3,977.8	78.75	51.514	
11,122.0	7,321.1	7,500.0	7,167.8	66.5	19.6	-69.74	984.2	88.3	4,078.5	3,999.4	79.13	51.541	
11,200.0	7,321.0	7,500.0	7,167.8	68.0	19.6	-69.74	984.2	88.3	4,156.2	4,075.7	80.49	51.635	
11,220.4	7,321.0	7,500.0	7,167.8	68.4	19.6	-69.74	984.2	88.3	4,176.6	4,095.8	80.85	51.659	
11,300.0	7,320.9	7,500.0	7,167.8	69.8	19.6	-69.73	984.2	88.3	4,255.9	4,173.7	82.24	51.749	
11,318.9	7,320.8	7,500.0	7,167.8	70.2	19.6	-69.73	984.2	88.3	4,274.7	4,192.1	82.57	51.770	
11,400.0	7,320.7	7,500.0	7,167.8	71.7	19.6	-69.73	984.2	88.3	4,355.6	4,271.6	83.99	51.857	
11,417.3	7,320.7	7,500.0	7,167.8	72.0	19.6	-69.73	984.2	88.3	4,372.8	4,288.5	84.30	51.875	
11,500.0	7,320.6	7,500.0	7,167.8	73.5	19.6	-69.73	984.2	88.3	4,455.3	4,369.5	85.75	51.958	
11,515.7	7,320.5	7,535.2	7,174.2	73.8	20.2	-72.45	981.3	122.8	4,470.5	4,383.3	87.18	51.280	
11,600.0	7,320.4	7,537.1	7,174.4	75.4	20.2	-72.57	981.1	124.7	4,554.5	4,465.7	88.73	51.329	
11,614.1	7,320.4	7,537.4	7,174.5	75.6	20.3	-72.59	981.1	125.0	4,568.6	4,479.6	88.99	51.337	
11,700.0	7,320.2	7,539.2	7,174.8	77.2	20.3	-72.71	981.0	126.8	4,654.1	4,563.5	90.58	51.384	
11,712.6	7,320.2	7,539.5	7,174.8	77.5	20.3	-72.73	981.0	127.1	4,666.6	4,575.8	90.81	51.390	
11,800.0	7,320.1	7,541.4	7,175.1	79.1	20.3	-72.84	980.8	128.9	4,753.8	4,661.4	92.42	51.435	
11,811.0	7,320.1	7,541.6	7,175.1	79.3	20.3	-72.86	980.8	129.1	4,764.8	4,672.2	92.58	51.464	
11,849.2	7,320.0	7,542.4	7,175.2	79.8	20.3	-72.91	980.8	129.9	4,802.9	4,709.7	93.15	51.563	
11,849.6	7,320.0	7,542.4	7,175.2	79.8	20.3	-72.91	980.8	129.9	4,803.2	4,710.1	93.15	51.564	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

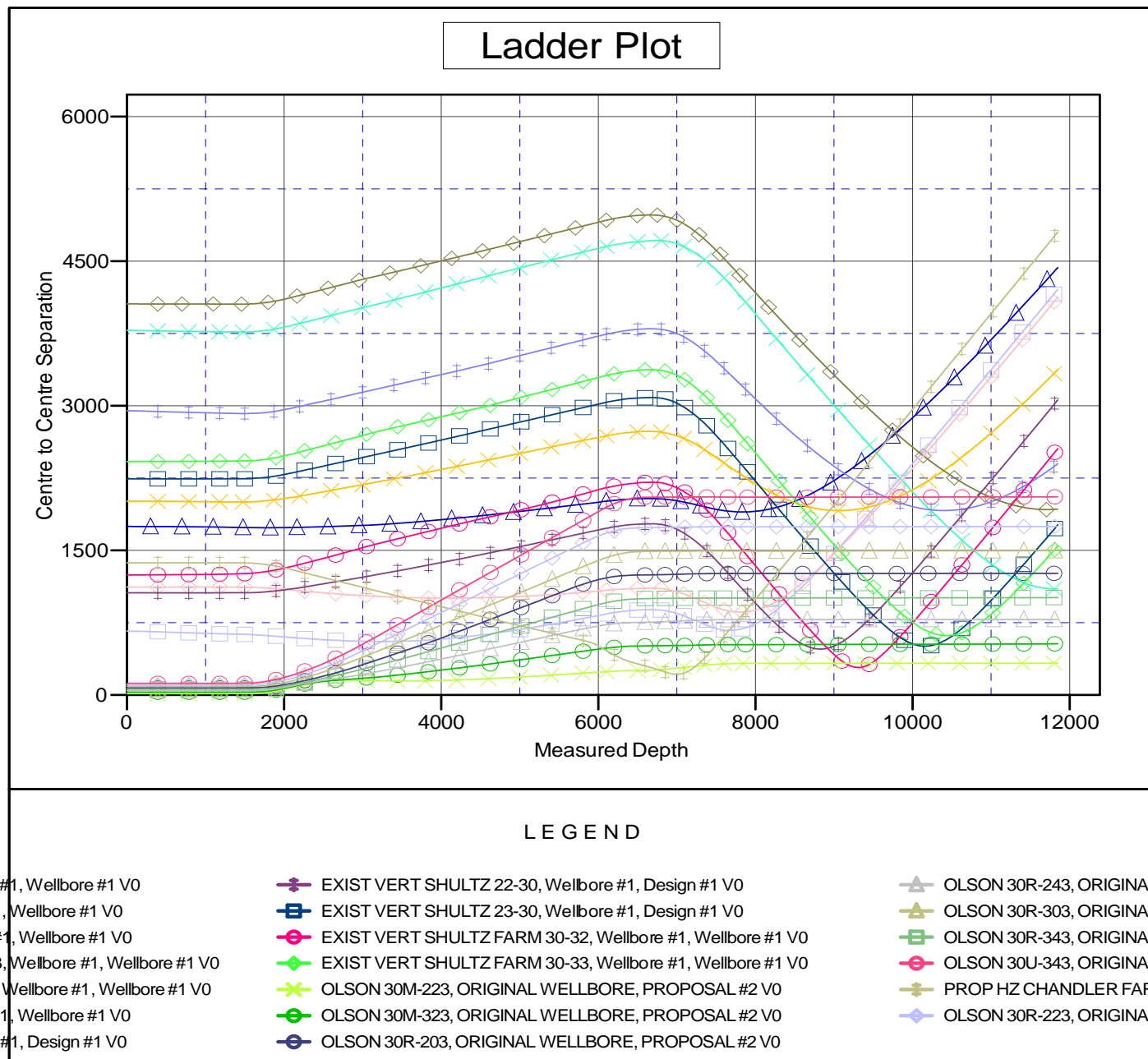
Reference Depths are relative to KB-EST @ 4990.0usft (Original Well ECoordinates are relative to: OLSON 30M-403

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: 0.37°



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well OLSON 30M-403
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Reference Site:	NW NE SEC 30 T4N R67W 6th P.M.	MD Reference:	KB-EST @ 4990.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	OLSON 30M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB-EST @ 4990.0usft (Original Well ECoordinates are relative to: OLSON 30M-403

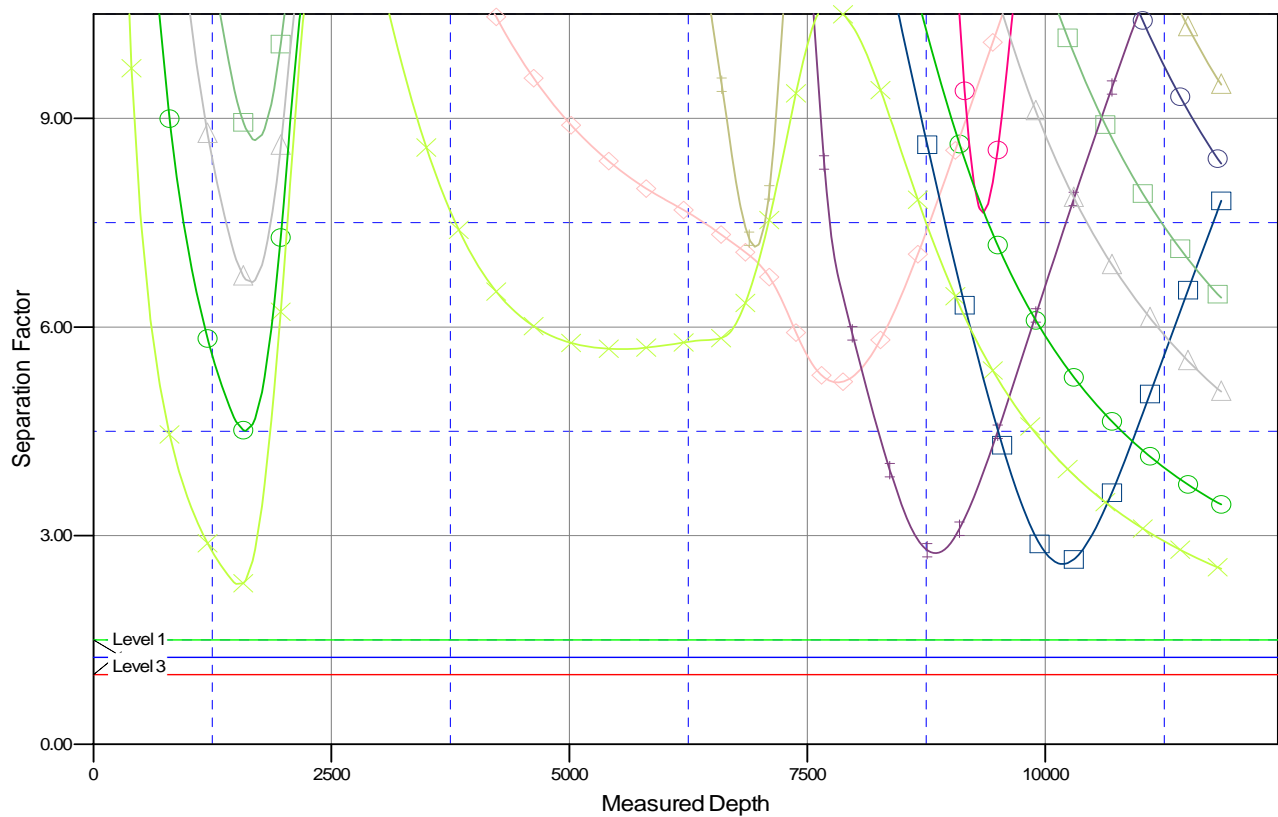
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.500000

Grid Convergence at Surface is: 0.37°

Separation Factor Plot



LEGEND

Wellbore #1, Wellbore #1 V0	EXIST VERT SHULTZ 22-30, Wellbore #1, Design #1 V0	OLSON 30R-243, ORIGINAL V
1, Wellbore #1 V0	EXIST VERT SHULTZ 23-30, Wellbore #1, Design #1 V0	OLSON 30R-303, ORIGINAL V
#1, Wellbore #1 V0	EXIST VERT SHULTZ FARM 30-32, Wellbore #1, Wellbore #1 V0	OLSON 30R-343, ORIGINAL V
3, Wellbore #1, Wellbore #1 V0	EXIST VERT SHULTZ FARM 30-33, Wellbore #1, Wellbore #1 V0	OLSON 30U-343, ORIGINAL V
i, Wellbore #1, Wellbore #1 V0	OLSON 30M-223, ORIGINAL WELLBORE, PROPOSAL #2 V0	PROP HZ CHANDLER FARM
#1, Wellbore #1 V0	OLSON 30M-323, ORIGINAL WELLBORE, PROPOSAL #2 V0	OLSON 30R-223, ORIGINAL V
#1, Design #1 V0	OLSON 30R-203, ORIGINAL WELLBORE, PROPOSAL #2 V0	