

# **PDC ENERGY**

**WELD COUNTY, COLORADO  
NW NE SEC 30 T4N R67W 6th P.M.  
OLSON 30M-223**

**ORIGINAL WELLBORE  
PROPOSAL #2**

## **Anticollision Report**

**27 February, 2016**



# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

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

<b>Survey Tool Program</b>	<b>Date</b> 27/02/2016			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,655.0	PROPOSAL #2 (ORIGINAL WELLBORE)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
NW NE SEC 30 T4N R67W 6th P.M.						
ABDN VERT MCCARTY 30-3 - Wellbore #1 - Wellbore #	11,597.5	6,330.0	813.3	766.5	17.345	CC
ABDN VERT MCCARTY 30-3 - Wellbore #1 - Wellbore #	11,600.0	6,330.0	813.4	766.4	17.337	ES
ABDN VERT MCCARTY 30-3 - Wellbore #1 - Wellbore #	11,655.0	6,330.0	815.4	768.0	17.207	SF
EXIST VERT BROWN 30-2 - Wellbore #1 - Wellbore #1	7,638.7	7,095.7	1,645.8	1,625.2	79.899	CC, ES
EXIST VERT BROWN 30-2 - Wellbore #1 - Wellbore #1	11,655.0	7,098.8	4,340.6	4,258.5	52.912	SF
EXIST VERT BROWN 30-31 - Wellbore #1 - Wellbore #1	7,480.3	7,076.4	411.0	390.3	19.819	SF
EXIST VERT BROWN 30-31 - Wellbore #1 - Wellbore #1	7,493.8	7,079.3	410.8	390.1	19.839	CC, ES
EXIST VERT BROWN MCCARTY 30-43 - Wellbore #1 -	10,198.9	7,110.4	1,659.5	1,604.6	30.216	CC
EXIST VERT BROWN MCCARTY 30-43 - Wellbore #1 -	10,236.2	7,110.8	1,659.9	1,604.3	29.857	ES
EXIST VERT BROWN MCCARTY 30-43 - Wellbore #1 -	11,122.0	7,119.1	1,898.9	1,827.1	26.438	SF
EXIST VERT BROWN-MCCARTY 30-5 - Wellbore #1 - V	8,865.8	7,076.3	1,657.7	1,625.1	50.729	CC
EXIST VERT BROWN-MCCARTY 30-5 - Wellbore #1 - V	8,900.0	7,076.3	1,658.1	1,624.9	49.945	ES
EXIST VERT BROWN-MCCARTY 30-5 - Wellbore #1 - V	10,500.0	7,079.1	2,327.8	2,267.0	38.266	SF
EXIST VERT MCCART 30-2 - Wellbore #1 - Wellbore #1	11,505.2	7,144.6	1,672.2	1,593.6	21.286	CC
EXIST VERT MCCART 30-2 - Wellbore #1 - Wellbore #1	11,515.7	7,144.5	1,672.2	1,593.5	21.234	ES
EXIST VERT MCCART 30-2 - Wellbore #1 - Wellbore #1	11,655.0	7,143.4	1,678.9	1,597.5	20.637	SF
EXIST VERT NYGREN 21-30 - Wellbore #1 - Design #1	3,396.0	3,371.1	1,111.8	1,036.8	14.812	CC
EXIST VERT NYGREN 21-30 - Wellbore #1 - Design #1	7,612.7	7,119.5	1,114.8	954.5	6.954	ES, SF
EXIST VERT SHULTZ 22-30 - Wellbore #1 - Design #1	8,624.7	7,112.6	731.8	563.2	4.340	CC, ES
EXIST VERT SHULTZ 22-30 - Wellbore #1 - Design #1	8,661.4	7,112.5	732.7	563.6	4.333	SF
EXIST VERT SHULTZ 23-30 - Wellbore #1 - Design #1	9,957.7	7,111.3	761.1	570.6	3.996	CC, ES
EXIST VERT SHULTZ 23-30 - Wellbore #1 - Design #1	10,000.0	7,111.2	762.3	571.1	3.987	SF
EXIST VERT SHULTZ FARM 30-32 - Wellbore #1 - Well	9,106.8	7,089.6	31.2	-5.1	0.859	Level 1, CC, ES, SF
EXIST VERT SHULTZ FARM 30-33 - Wellbore #1 - Well	10,232.8	7,104.8	364.7	308.7	6.514	CC
EXIST VERT SHULTZ FARM 30-33 - Wellbore #1 - Well	10,236.2	7,104.8	364.7	308.7	6.507	ES
EXIST VERT SHULTZ FARM 30-33 - Wellbore #1 - Well	10,300.0	7,104.7	370.8	313.6	6.483	SF
OLSON 30M-323 - ORIGINAL WELLBORE - PROPOSA	2,037.1	2,037.1	15.1	6.2	1.697	CC
OLSON 30M-323 - ORIGINAL WELLBORE - PROPOSA	2,100.0	2,099.9	15.2	6.0	1.656	ES, SF
OLSON 30M-403 - ORIGINAL WELLBORE - PROPOSA	1,437.8	1,437.8	14.8	8.6	2.391	CC
OLSON 30M-403 - ORIGINAL WELLBORE - PROPOSA	1,500.0	1,499.9	14.9	8.4	2.307	ES, SF
OLSON 30R-203 - ORIGINAL WELLBORE - PROPOSA	1,738.1	1,737.1	60.0	52.5	7.964	CC
OLSON 30R-203 - ORIGINAL WELLBORE - PROPOSA	1,771.6	1,770.4	60.1	52.4	7.816	ES
OLSON 30R-203 - ORIGINAL WELLBORE - PROPOSA	11,655.0	11,720.5	990.0	837.6	6.495	SF
OLSON 30R-223 - ORIGINAL WELLBORE - PROPOSA	1,538.2	1,537.2	90.1	83.5	13.584	CC
OLSON 30R-223 - ORIGINAL WELLBORE - PROPOSA	1,574.8	1,573.2	90.2	83.4	13.273	ES
OLSON 30R-223 - ORIGINAL WELLBORE - PROPOSA	11,655.0	11,819.1	1,479.9	1,321.9	9.366	SF
OLSON 30R-243 - ORIGINAL WELLBORE - PROPOSA	1,937.2	1,937.2	30.1	21.7	3.576	CC

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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-243 - ORIGINAL WELLBORE - PROPOSA	1,968.5	1,968.4	30.2	21.6	3.520	ES
OLSON 30R-243 - ORIGINAL WELLBORE - PROPOSA	11,655.0	11,654.7	500.0	341.0	3.145	SF
OLSON 30R-303 - ORIGINAL WELLBORE - PROPOSA	1,638.2	1,637.2	75.1	68.0	10.596	CC
OLSON 30R-303 - ORIGINAL WELLBORE - PROPOSA	1,673.2	1,671.8	75.1	67.9	10.378	ES
OLSON 30R-303 - ORIGINAL WELLBORE - PROPOSA	11,655.0	11,850.1	1,236.5	1,078.6	7.831	SF
OLSON 30R-343 - ORIGINAL WELLBORE - PROPOSA	1,837.3	1,837.3	45.2	37.2	5.664	CC
OLSON 30R-343 - ORIGINAL WELLBORE - PROPOSA	1,870.1	1,869.9	45.3	37.1	5.568	ES
OLSON 30R-343 - ORIGINAL WELLBORE - PROPOSA	11,655.0	11,771.4	747.4	589.3	4.727	SF
OLSON 30U-343 - ORIGINAL WELLBORE - PROPOSA	1,438.3	1,437.3	105.2	99.0	17.007	CC
OLSON 30U-343 - ORIGINAL WELLBORE - PROPOSA	1,476.4	1,474.6	105.3	99.0	16.573	ES
OLSON 30U-343 - ORIGINAL WELLBORE - PROPOSA	11,655.0	11,992.6	1,796.0	1,638.3	11.388	SF
PROP HZ CHANDLER FARMS HD 20-389HN - Wellbore	6,800.0	7,011.5	459.1	424.8	13.402	SF
PROP HZ CHANDLER FARMS HD 20-389HN - Wellbore	7,050.0	7,335.2	391.6	365.5	15.002	ES
PROP HZ CHANDLER FARMS HD 20-389HN - Wellbore	7,052.1	7,336.6	391.6	365.6	15.035	CC

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							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	174.54	-3,763.6	359.9	3,780.8				
98.4	98.4	128.0	128.0	0.1	0.1	174.54	-3,763.0	359.4	3,780.2	3,780.1	0.16	N/A	
100.0	100.0	129.4	129.4	0.1	0.1	174.54	-3,763.0	359.4	3,780.2	3,780.1	0.16	N/A	
196.8	196.8	225.4	225.4	0.3	0.2	174.56	-3,762.5	358.4	3,779.6	3,779.1	0.53	7,129.508	
200.0	200.0	230.8	230.8	0.3	0.2	174.56	-3,762.4	358.4	3,779.6	3,779.0	0.54	6,971.851	
295.3	295.3	359.2	359.1	0.5	0.3	174.60	-3,760.9	355.7	3,778.2	3,777.3	0.86	4,385.786	
300.0	300.0	364.3	364.2	0.5	0.3	174.60	-3,760.8	355.6	3,778.1	3,777.2	0.88	4,314.217	
393.7	393.7	455.2	455.1	0.7	0.4	174.63	-3,759.5	353.3	3,776.5	3,775.4	1.14	3,299.155	
400.0	400.0	460.9	460.8	0.8	0.4	174.63	-3,759.4	353.1	3,776.4	3,775.3	1.16	3,249.213	
492.1	492.1	550.9	550.7	1.0	0.5	174.67	-3,758.2	350.8	3,775.0	3,773.6	1.42	2,660.099	
500.0	500.0	559.0	558.8	1.0	0.5	174.67	-3,758.1	350.6	3,774.9	3,773.4	1.44	2,619.477	
590.5	590.5	646.2	646.1	1.2	0.5	174.70	-3,756.9	348.7	3,773.5	3,771.8	1.69	2,235.046	
600.0	600.0	654.8	654.7	1.2	0.5	174.70	-3,756.8	348.5	3,773.3	3,771.6	1.71	2,201.875	
689.0	689.0	745.2	745.0	1.4	0.6	174.73	-3,755.7	346.6	3,772.1	3,770.1	1.96	1,928.839	
700.0	700.0	757.9	757.7	1.4	0.6	174.73	-3,755.5	346.3	3,771.9	3,769.9	1.99	1,899.179	
787.4	787.4	845.7	845.4	1.6	0.6	174.76	-3,754.3	344.4	3,770.5	3,768.3	2.22	1,697.922	
800.0	800.0	857.0	856.8	1.7	0.6	174.76	-3,754.2	344.1	3,770.3	3,768.1	2.25	1,672.896	
885.8	885.8	934.9	934.6	1.9	0.7	174.79	-3,753.2	342.4	3,769.1	3,766.7	2.48	1,520.736	
900.0	900.0	947.8	947.6	1.9	0.7	174.79	-3,753.1	342.1	3,768.9	3,766.4	2.52	1,498.324	
984.2	984.2	1,026.4	1,026.1	2.1	0.7	174.82	-3,752.3	340.5	3,768.0	3,765.2	2.74	1,377.618	
1,000.0	1,000.0	1,041.6	1,041.3	2.1	0.7	174.82	-3,752.2	340.2	3,767.8	3,765.0	2.78	1,357.168	
1,082.7	1,082.7	1,121.0	1,120.7	2.3	0.7	174.84	-3,751.5	338.6	3,766.9	3,763.9	2.99	1,259.248	
1,100.0	1,100.0	1,137.3	1,137.0	2.3	0.8	174.85	-3,751.3	338.4	3,766.7	3,763.7	3.04	1,240.604	
1,181.1	1,181.1	1,212.8	1,212.5	2.5	0.8	174.86	-3,750.7	337.3	3,766.0	3,762.7	3.25	1,160.394	
1,200.0	1,200.0	1,229.7	1,229.3	2.6	0.8	174.86	-3,750.6	337.1	3,765.8	3,762.5	3.29	1,143.386	
1,279.5	1,279.5	1,300.5	1,300.2	2.7	0.8	174.88	-3,750.2	336.1	3,765.3	3,761.8	3.50	1,076.979	
1,300.0	1,300.0	1,322.1	1,321.8	2.8	0.8	174.88	-3,750.1	335.8	3,765.2	3,761.7	3.55	1,060.879	
1,377.9	1,377.9	1,404.5	1,404.1	3.0	0.9	174.90	-3,749.7	334.5	3,764.7	3,761.0	3.75	1,003.716	
1,400.0	1,400.0	1,428.8	1,428.4	3.0	0.9	174.91	-3,749.6	334.1	3,764.5	3,760.7	3.81	988.571	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
1,476.4	1,476.4	1,509.6	1,509.3	3.2	0.9	174.93	-3,749.0	332.8	3,763.9	3,759.9	4.01	939.723	
1,500.0	1,500.0	1,529.0	1,528.6	3.2	0.9	174.93	-3,748.9	332.5	3,763.7	3,759.6	4.06	926.051	
1,574.8	1,574.8	1,590.3	1,590.0	3.4	0.9	174.94	-3,748.6	331.8	3,763.3	3,759.0	4.25	885.306	
1,600.0	1,600.0	1,615.1	1,614.7	3.5	1.0	174.95	-3,748.5	331.5	3,763.2	3,758.9	4.31	872.165	
1,673.2	1,673.2	1,697.3	1,697.0	3.6	1.0	174.96	-3,748.2	330.5	3,762.8	3,758.3	4.50	835.563	
1,700.0	1,700.0	1,724.6	1,724.3	3.7	1.0	174.97	-3,748.0	330.2	3,762.6	3,758.1	4.57	823.045	
1,771.6	1,771.6	1,797.0	1,796.6	3.8	1.0	174.98	-3,747.6	329.3	3,762.2	3,757.4	4.75	791.340	
1,800.0	1,800.0	1,821.4	1,821.0	3.9	1.0	174.98	-3,747.5	329.0	3,762.0	3,757.2	4.82	779.789	
1,870.1	1,870.1	1,880.4	1,880.1	4.1	1.1	175.00	-3,747.3	328.2	3,761.7	3,756.7	5.00	752.747	
1,900.0	1,900.0	1,906.8	1,906.4	4.1	1.1	175.00	-3,747.3	327.8	3,761.6	3,756.6	5.07	741.744	
1,968.5	1,968.5	1,975.8	1,975.4	4.3	1.1	175.01	-3,747.3	326.9	3,761.5	3,756.3	5.24	717.518	
2,000.0	2,000.0	2,007.5	2,007.2	4.4	1.1	175.02	-3,747.2	326.6	3,761.5	3,756.1	5.32	706.893	
2,066.9	2,066.9	2,075.6	2,075.2	4.5	1.1	175.03	-3,747.1	326.1	3,761.3	3,755.8	5.49	685.290	
2,100.0	2,100.0	2,109.8	2,109.4	4.6	1.1	175.03	-3,747.1	325.8	3,761.2	3,755.7	5.57	675.060	
2,150.0	2,150.0	2,164.2	2,163.8	4.7	1.2	175.04	-3,747.0	325.4	3,761.1	3,755.4	5.70	660.039	
2,161.3	2,161.3	2,176.5	2,176.1	4.7	1.2	174.79	-3,746.9	325.3	3,761.1	3,755.3	5.73	656.835	
2,165.3	2,165.3	2,180.9	2,180.5	4.7	1.2	174.80	-3,746.9	325.3	3,761.1	3,755.3	5.74	655.664	
2,200.0	2,200.0	2,217.4	2,217.0	4.8	1.2	174.80	-3,746.8	325.0	3,761.3	3,755.5	5.82	645.859	
2,263.8	2,263.7	2,282.2	2,281.8	5.0	1.2	174.81	-3,746.5	324.4	3,762.8	3,756.8	5.98	628.721	
2,300.0	2,299.9	2,314.6	2,314.2	5.0	1.2	174.81	-3,746.4	324.1	3,764.3	3,758.3	6.07	619.705	
2,362.2	2,362.0	2,363.0	2,362.6	5.2	1.2	174.82	-3,746.3	323.6	3,768.1	3,761.9	6.23	605.241	
2,400.0	2,399.7	2,400.0	2,399.6	5.3	1.2	174.82	-3,746.4	323.2	3,771.2	3,764.9	6.32	596.774	
2,460.6	2,460.0	2,453.3	2,452.9	5.4	1.3	174.82	-3,746.6	322.7	3,777.2	3,770.8	6.47	583.954	
2,500.0	2,499.1	2,494.6	2,494.2	5.5	1.3	174.83	-3,746.7	322.4	3,781.8	3,775.2	6.57	575.873	
2,559.0	2,557.7	2,558.2	2,557.8	5.6	1.3	174.83	-3,746.8	321.9	3,789.6	3,782.9	6.72	564.322	
2,600.0	2,598.2	2,600.0	2,599.6	5.7	1.3	174.84	-3,746.8	321.4	3,795.7	3,788.9	6.82	556.758	
2,657.5	2,654.8	2,648.4	2,648.0	5.9	1.3	174.84	-3,746.9	320.8	3,805.2	3,798.3	6.96	546.664	
2,700.0	2,696.6	2,682.8	2,682.4	6.0	1.3	174.84	-3,747.0	320.3	3,813.1	3,806.0	7.07	539.605	
2,755.9	2,751.4	2,745.1	2,744.6	6.1	1.4	174.85	-3,747.3	319.4	3,824.5	3,817.3	7.21	530.404	
2,800.0	2,794.4	2,802.1	2,801.6	6.2	1.4	174.87	-3,747.3	318.6	3,834.0	3,826.7	7.32	523.447	
2,854.3	2,847.3	2,860.4	2,859.9	6.4	1.4	174.88	-3,747.3	317.7	3,846.6	3,839.1	7.47	515.195	
2,888.8	2,880.6	2,897.3	2,896.8	6.5	1.4	174.88	-3,747.2	316.9	3,855.0	3,847.4	7.55	510.349	
2,900.0	2,891.5	2,911.1	2,910.6	6.6	1.4	174.89	-3,747.2	316.7	3,857.8	3,850.2	7.58	508.733	
2,952.7	2,942.5	2,978.7	2,978.2	6.7	1.4	174.94	-3,746.8	315.3	3,870.8	3,863.1	7.72	501.304	
3,000.0	2,988.2	3,038.6	3,038.1	6.9	1.5	174.97	-3,746.2	314.3	3,882.3	3,874.5	7.85	494.532	
3,051.2	3,037.6	3,100.0	3,099.5	7.1	1.5	175.01	-3,745.4	313.3	3,894.6	3,886.6	7.99	487.548	
3,100.0	3,084.9	3,146.4	3,145.9	7.3	1.5	175.03	-3,744.7	312.8	3,906.2	3,898.1	8.12	481.001	
3,149.6	3,132.8	3,191.1	3,190.6	7.5	1.5	175.05	-3,744.0	312.4	3,918.1	3,909.9	8.26	474.564	
3,200.0	3,181.5	3,229.6	3,229.0	7.6	1.5	175.06	-3,743.5	312.1	3,930.3	3,921.9	8.39	468.197	
3,248.0	3,228.0	3,264.5	3,264.0	7.8	1.5	175.08	-3,743.2	311.9	3,942.0	3,933.4	8.53	462.288	
3,300.0	3,278.2	3,300.0	3,299.5	8.0	1.6	175.09	-3,742.9	311.8	3,954.8	3,946.1	8.67	456.139	
3,346.4	3,323.2	3,331.7	3,331.2	8.2	1.6	175.11	-3,742.8	311.6	3,966.4	3,957.6	8.80	450.891	
3,400.0	3,374.9	3,365.9	3,365.4	8.5	1.6	175.12	-3,742.8	311.4	3,980.1	3,971.1	8.94	445.117	
3,444.9	3,418.3	3,400.0	3,399.5	8.6	1.6	175.13	-3,743.0	311.2	3,991.7	3,982.6	9.06	440.382	
3,500.0	3,471.6	3,436.7	3,436.2	8.9	1.6	175.15	-3,743.3	310.9	4,006.1	3,996.8	9.21	434.805	
3,543.3	3,513.5	3,470.9	3,470.4	9.1	1.6	175.17	-3,743.7	310.4	4,017.5	4,008.1	9.33	430.419	
3,600.0	3,568.3	3,522.2	3,521.7	9.3	1.6	175.20	-3,744.3	309.5	4,032.5	4,023.0	9.50	424.690	
3,641.7	3,608.7	3,569.2	3,568.6	9.5	1.6	175.23	-3,744.9	308.5	4,043.6	4,034.0	9.61	420.599	
3,700.0	3,665.0	3,641.7	3,641.1	9.7	1.6	175.28	-3,745.7	306.5	4,058.9	4,049.1	9.78	415.030	
3,740.1	3,703.8	3,695.9	3,695.3	9.9	1.7	175.32	-3,746.0	304.9	4,069.2	4,059.3	9.89	411.242	
3,800.0	3,761.7	3,755.8	3,755.2	10.2	1.7	175.37	-3,746.2	303.1	4,084.5	4,074.5	10.06	405.835	
3,838.6	3,799.0	3,793.8	3,793.1	10.4	1.7	175.39	-3,746.4	302.0	4,094.4	4,084.2	10.17	402.416	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
3,900.0	3,858.4	3,850.5	3,849.8	10.7	1.7	175.44	-3,746.6	300.2	4,110.1	4,099.8	10.35	397.080	
3,937.0	3,894.2	3,884.3	3,883.6	10.8	1.7	175.46	-3,746.8	299.1	4,119.6	4,109.2	10.46	393.934	
4,000.0	3,955.1	3,936.3	3,935.5	11.1	1.7	175.50	-3,747.1	297.3	4,135.8	4,125.2	10.64	388.753	
4,035.4	3,989.3	3,964.2	3,963.5	11.3	1.7	175.52	-3,747.3	296.4	4,145.0	4,134.3	10.74	385.909	
4,100.0	4,051.8	4,018.5	4,017.7	11.6	1.8	175.57	-3,747.8	294.5	4,161.9	4,151.0	10.93	380.839	
4,133.8	4,084.5	4,051.1	4,050.3	11.7	1.8	175.59	-3,748.2	293.3	4,170.8	4,159.8	11.03	378.207	
4,200.0	4,148.5	4,118.5	4,117.6	12.1	1.8	175.65	-3,748.9	290.8	4,188.1	4,176.9	11.22	373.179	
4,232.3	4,179.7	4,157.2	4,156.3	12.2	1.8	175.68	-3,749.3	289.2	4,196.6	4,185.2	11.32	370.756	
4,300.0	4,245.2	4,232.7	4,231.8	12.5	1.8	175.75	-3,749.8	286.0	4,214.0	4,202.5	11.52	365.824	
4,330.7	4,274.9	4,264.2	4,263.2	12.7	1.8	175.77	-3,750.0	284.7	4,221.9	4,210.3	11.61	363.649	
4,400.0	4,341.9	4,334.2	4,333.1	13.0	1.9	175.84	-3,750.4	281.6	4,239.7	4,227.9	11.82	358.842	
4,429.1	4,370.0	4,363.2	4,362.1	13.1	1.9	175.86	-3,750.5	280.4	4,247.2	4,235.3	11.90	356.856	
4,500.0	4,438.6	4,433.6	4,432.5	13.5	1.9	175.92	-3,750.8	277.3	4,265.3	4,253.2	12.11	352.132	
4,527.5	4,465.2	4,460.9	4,459.7	13.6	1.9	175.95	-3,750.9	276.1	4,272.4	4,260.2	12.20	350.330	
4,600.0	4,535.3	4,531.6	4,530.3	14.0	1.9	176.00	-3,751.2	273.1	4,290.9	4,278.5	12.41	345.704	
4,626.0	4,560.4	4,556.5	4,555.2	14.1	1.9	176.02	-3,751.3	272.1	4,297.5	4,285.1	12.49	344.079	
4,700.0	4,631.9	4,626.5	4,625.2	14.5	2.0	176.08	-3,751.6	269.1	4,316.5	4,303.8	12.71	339.558	
4,724.4	4,655.5	4,649.0	4,647.7	14.6	2.0	176.10	-3,751.7	268.1	4,322.7	4,309.9	12.79	338.098	
4,800.0	4,728.6	4,717.9	4,716.4	15.0	2.0	176.16	-3,752.0	265.2	4,342.1	4,329.1	13.01	333.685	
4,822.8	4,750.7	4,737.8	4,736.4	15.1	2.0	176.18	-3,752.1	264.3	4,348.0	4,334.9	13.08	332.382	
4,900.0	4,825.3	4,805.5	4,804.0	15.4	2.0	176.23	-3,752.6	261.4	4,367.9	4,354.6	13.31	328.078	
4,921.2	4,845.9	4,824.7	4,823.2	15.6	2.0	176.25	-3,752.7	260.5	4,373.5	4,360.1	13.38	326.911	
5,000.0	4,922.0	4,895.9	4,894.3	15.9	2.1	176.31	-3,753.3	257.2	4,393.9	4,380.3	13.62	322.686	
5,019.7	4,941.0	4,915.8	4,914.2	16.0	2.1	176.33	-3,753.5	256.3	4,399.1	4,385.4	13.68	321.640	
5,100.0	5,018.7	4,999.7	4,998.0	16.4	2.1	176.40	-3,754.2	252.4	4,419.9	4,406.0	13.92	317.443	
5,118.1	5,036.2	5,014.8	5,013.1	16.5	2.1	176.41	-3,754.3	251.7	4,424.6	4,410.7	13.98	316.537	
5,200.0	5,115.4	5,082.8	5,081.0	16.9	2.1	176.46	-3,754.9	248.9	4,446.0	4,431.8	14.23	312.531	
5,216.5	5,131.4	5,100.0	5,098.2	17.0	2.1	176.47	-3,755.1	248.2	4,450.3	4,436.1	14.28	311.716	
5,300.0	5,212.1	5,185.3	5,183.4	17.4	2.2	176.53	-3,755.9	245.3	4,472.2	4,457.6	14.53	307.691	
5,314.9	5,226.6	5,201.4	5,199.6	17.5	2.2	176.54	-3,756.0	244.7	4,476.1	4,461.5	14.58	306.977	
5,400.0	5,308.8	5,297.2	5,295.3	17.9	2.2	176.60	-3,756.6	241.9	4,498.1	4,483.3	14.85	302.997	
5,413.4	5,321.7	5,310.6	5,308.7	18.0	2.2	176.61	-3,756.6	241.5	4,501.5	4,486.7	14.89	302.387	
5,500.0	5,405.5	5,395.0	5,393.0	18.4	2.2	176.65	-3,757.0	239.3	4,523.8	4,508.7	15.15	298.531	
5,511.8	5,416.9	5,408.1	5,406.1	18.5	2.2	176.66	-3,757.0	239.0	4,526.9	4,511.7	15.19	298.005	
5,600.0	5,502.2	5,515.6	5,513.7	18.9	2.3	176.71	-3,757.2	236.6	4,549.3	4,533.9	15.47	294.079	
5,610.2	5,512.1	5,528.2	5,526.3	19.0	2.3	176.72	-3,757.1	236.3	4,551.9	4,536.4	15.50	293.631	
5,700.0	5,598.9	5,640.8	5,638.8	19.4	2.3	176.76	-3,756.6	234.3	4,574.3	4,558.5	15.79	289.744	
5,708.6	5,607.2	5,652.0	5,650.0	19.5	2.3	176.77	-3,756.5	234.1	4,576.4	4,560.6	15.82	289.367	
5,745.8	5,643.2	5,700.1	5,698.1	19.7	2.3	176.79	-3,756.0	233.4	4,585.5	4,569.5	15.94	287.755	
5,800.0	5,695.7	5,772.3	5,770.3	19.9	2.4	176.83	-3,755.1	232.1	4,598.0	4,582.0	16.05	286.471	
5,807.1	5,702.6	5,781.7	5,779.7	19.9	2.4	176.84	-3,754.9	231.9	4,599.6	4,583.5	16.06	286.347	
5,900.0	5,793.2	5,847.7	5,845.6	20.3	2.4	176.88	-3,754.0	230.6	4,618.5	4,602.3	16.21	284.998	
5,905.5	5,798.6	5,851.0	5,849.0	20.3	2.4	176.88	-3,753.9	230.6	4,619.5	4,603.3	16.21	284.930	
6,000.0	5,891.5	5,911.9	5,909.8	20.6	2.4	176.92	-3,753.5	229.7	4,636.3	4,620.0	16.34	283.717	
6,003.9	5,895.4	5,915.4	5,913.3	20.6	2.4	176.92	-3,753.5	229.7	4,636.9	4,620.6	16.35	283.665	
6,100.0	5,990.4	6,000.0	5,997.9	20.9	2.4	176.96	-3,753.3	228.7	4,651.1	4,634.6	16.47	282.431	
6,102.3	5,992.7	6,000.0	5,997.9	20.9	2.4	176.96	-3,753.3	228.7	4,651.4	4,634.9	16.47	282.412	
6,200.0	6,089.7	6,088.3	6,086.2	21.1	2.5	176.99	-3,753.3	227.9	4,662.7	4,646.1	16.58	281.241	
6,200.8	6,090.4	6,089.0	6,086.9	21.1	2.5	176.99	-3,753.3	227.9	4,662.8	4,646.2	16.58	281.232	
6,299.2	6,188.5	6,172.8	6,170.7	21.4	2.5	177.01	-3,753.5	227.3	4,671.0	4,654.3	16.68	280.088	
6,300.0	6,189.3	6,173.4	6,171.4	21.4	2.5	177.01	-3,753.5	227.3	4,671.1	4,654.4	16.68	280.078	
6,397.6	6,286.8	6,282.5	6,280.4	21.5	2.5	177.02	-3,753.9	226.9	4,676.0	4,659.3	16.77	278.806	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
6,400.0	6,289.2	6,285.4	6,283.4	21.5	2.5	177.02	-3,753.9	226.9	4,676.1	4,659.3	16.77	278.770	
6,484.6	6,373.8	6,330.0	6,327.9	21.6	2.5	177.27	-3,754.0	226.7	4,677.6	4,660.7	16.85	277.613	
6,496.0	6,385.3	6,330.0	6,327.9	21.7	2.5	177.27	-3,754.0	226.7	4,677.7	4,660.8	16.87	277.282	
6,500.0	6,389.2	6,330.0	6,327.9	21.7	2.5	177.27	-3,754.0	226.7	4,677.8	4,660.9	16.88	277.169	
6,514.6	6,403.8	6,330.0	6,327.9	21.7	2.5	177.27	-3,754.0	226.7	4,678.0	4,661.1	16.91	276.702	
6,550.0	6,439.2	6,330.0	6,327.9	21.7	2.5	-2.73	-3,754.0	226.7	4,677.8	4,660.9	16.88	277.071	
6,594.5	6,483.5	6,330.0	6,327.9	21.7	2.5	-2.74	-3,754.0	226.7	4,675.5	4,658.6	16.87	277.109	
6,600.0	6,489.0	6,330.0	6,327.9	21.7	2.5	-2.74	-3,754.0	226.7	4,675.1	4,658.2	16.87	277.070	
6,650.0	6,538.4	6,330.0	6,327.9	21.7	2.5	-2.76	-3,754.0	226.7	4,669.4	4,652.5	16.88	276.596	
6,692.9	6,580.3	6,330.0	6,327.9	21.6	2.5	-2.79	-3,754.0	226.7	4,662.1	4,645.3	16.88	276.139	
6,700.0	6,587.1	6,330.0	6,327.9	21.6	2.5	-2.80	-3,754.0	226.7	4,660.7	4,643.9	16.88	276.063	
6,750.0	6,635.0	6,330.0	6,327.9	21.5	2.5	-2.84	-3,754.0	226.7	4,649.2	4,632.4	16.86	275.781	
6,791.3	6,673.7	6,330.0	6,327.9	21.4	2.5	-2.89	-3,754.0	226.7	4,637.5	4,620.7	16.81	275.887	
6,800.0	6,681.7	6,330.0	6,327.9	21.4	2.5	-2.90	-3,754.0	226.7	4,634.8	4,618.0	16.80	275.941	
6,850.0	6,727.1	6,330.0	6,327.9	21.2	2.5	-2.98	-3,754.0	226.7	4,617.6	4,600.9	16.69	276.641	
6,889.7	6,762.0	6,330.0	6,327.9	21.1	2.5	-3.05	-3,754.0	226.7	4,602.0	4,585.4	16.58	277.615	
6,900.0	6,770.9	6,330.0	6,327.9	21.0	2.5	-3.07	-3,754.0	226.7	4,597.7	4,581.1	16.54	277.913	
6,950.0	6,812.9	6,330.0	6,327.9	20.8	2.5	-3.18	-3,754.0	226.7	4,575.0	4,558.6	16.35	279.737	
6,988.2	6,843.6	6,330.0	6,327.9	20.6	2.5	-3.28	-3,754.0	226.7	4,555.9	4,539.7	16.19	281.469	
7,000.0	6,852.9	6,330.0	6,327.9	20.6	2.5	-3.32	-3,754.0	226.7	4,549.7	4,533.5	16.13	282.047	
7,050.0	6,890.7	6,330.0	6,327.9	20.3	2.5	-3.48	-3,754.0	226.7	4,521.8	4,505.9	15.88	284.727	
7,086.6	6,916.9	6,330.0	6,327.9	20.1	2.5	-3.61	-3,754.0	226.7	4,499.8	4,484.1	15.69	286.824	
7,100.0	6,926.2	6,330.0	6,327.9	20.1	2.5	-3.67	-3,754.0	226.7	4,491.4	4,475.8	15.62	287.596	
7,150.0	6,959.1	6,330.0	6,327.9	19.8	2.5	-3.89	-3,754.0	226.7	4,458.7	4,443.4	15.35	290.395	
7,185.0	6,980.5	6,330.0	6,327.9	19.6	2.5	-4.08	-3,754.0	226.7	4,434.5	4,419.3	15.18	292.124	
7,200.0	6,989.3	6,330.0	6,327.9	19.5	2.5	-4.17	-3,754.0	226.7	4,423.8	4,408.7	15.11	292.775	
7,250.0	7,016.6	6,330.0	6,327.9	19.3	2.5	-4.50	-3,754.0	226.7	4,386.7	4,371.8	14.91	294.301	
7,283.4	7,033.3	6,330.0	6,327.9	19.1	2.5	-4.77	-3,754.0	226.7	4,360.7	4,345.9	14.80	294.581	
7,300.0	7,041.0	6,330.0	6,327.9	19.1	2.5	-4.92	-3,754.0	226.7	4,347.5	4,332.8	14.76	294.473	
7,350.0	7,062.2	6,330.0	6,327.9	18.8	2.5	-5.43	-3,754.0	226.7	4,306.6	4,291.8	14.71	292.798	
7,381.9	7,074.1	6,330.0	6,327.9	18.7	2.5	-5.84	-3,754.0	226.7	4,279.5	4,264.8	14.73	290.559	
7,400.0	7,080.3	6,330.0	6,327.9	18.7	2.5	-6.10	-3,754.0	226.7	4,263.8	4,249.1	14.76	288.896	
7,450.0	7,095.0	6,330.0	6,327.9	18.5	2.5	-6.96	-3,754.0	226.7	4,219.6	4,204.6	14.93	282.598	
7,480.3	7,102.4	6,330.0	6,327.9	18.4	2.5	-7.63	-3,754.0	226.7	4,192.0	4,176.9	15.10	277.616	
7,500.0	7,106.4	6,330.0	6,327.9	18.4	2.5	-8.15	-3,754.0	226.7	4,173.9	4,158.6	15.23	273.992	
7,550.0	7,114.4	6,330.0	6,327.9	18.3	2.5	-9.84	-3,754.0	226.7	4,127.0	4,111.3	15.67	263.346	
7,578.7	7,117.4	6,330.0	6,327.9	18.3	2.5	-11.18	-3,754.0	226.7	4,099.6	4,083.6	15.99	256.379	
7,600.0	7,118.9	6,330.0	6,327.9	18.3	2.5	-12.43	-3,754.0	226.7	4,079.1	4,062.8	16.26	250.877	
7,641.3	7,120.0	6,330.0	6,327.9	18.3	2.5	-15.90	-3,754.0	226.7	4,038.8	4,021.9	16.90	239.017	
7,677.1	7,119.9	6,330.0	6,327.9	18.3	2.5	-15.90	-3,754.0	226.7	4,003.8	3,986.7	17.04	234.966	
7,700.0	7,119.9	6,330.0	6,327.9	18.4	2.5	-15.90	-3,754.0	226.7	3,981.4	3,964.3	17.13	232.413	
7,775.6	7,119.7	6,330.0	6,327.9	18.6	2.5	-15.90	-3,754.0	226.7	3,907.4	3,890.0	17.46	223.743	
7,800.0	7,119.6	6,330.0	6,327.9	18.6	2.5	-15.90	-3,754.0	226.7	3,883.5	3,866.0	17.57	221.009	
7,874.0	7,119.4	6,330.0	6,327.9	19.0	2.5	-15.90	-3,754.0	226.7	3,811.2	3,793.3	17.94	212.499	
7,900.0	7,119.4	6,330.0	6,327.9	19.1	2.5	-15.90	-3,754.0	226.7	3,785.8	3,767.8	18.06	209.589	
7,972.4	7,119.2	6,330.0	6,327.9	19.6	2.5	-15.90	-3,754.0	226.7	3,715.1	3,696.7	18.45	201.356	
8,000.0	7,119.1	6,330.0	6,327.9	19.7	2.5	-15.90	-3,754.0	226.7	3,688.2	3,669.6	18.60	198.312	
8,070.8	7,118.9	6,330.0	6,327.9	20.3	2.5	-15.90	-3,754.0	226.7	3,619.2	3,600.1	19.00	190.438	
8,100.0	7,118.9	6,330.0	6,327.9	20.5	2.5	-15.90	-3,754.0	226.7	3,590.8	3,571.6	19.17	187.296	
8,169.3	7,118.7	6,330.0	6,327.9	21.2	2.5	-15.90	-3,754.0	226.7	3,523.3	3,503.7	19.59	179.835	
8,200.0	7,118.6	6,330.0	6,327.9	21.5	2.5	-15.90	-3,754.0	226.7	3,493.4	3,473.6	19.78	176.629	
8,267.7	7,118.5	6,330.0	6,327.9	22.2	2.5	-15.90	-3,754.0	226.7	3,427.6	3,407.4	20.21	169.610	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	7,118.4	6,330.0	6,327.9	22.5	2.5	-15.90	-3,754.0	226.7	3,396.3	3,375.8	20.41	166.366		
8,366.1	7,118.2	6,330.0	6,327.9	23.3	2.5	-15.90	-3,754.0	226.7	3,332.1	3,311.2	20.85	159.801		
8,400.0	7,118.1	6,330.0	6,327.9	23.7	2.5	-15.90	-3,754.0	226.7	3,299.3	3,278.2	21.08	156.544		
8,464.5	7,118.0	6,330.0	6,327.9	24.5	2.5	-15.90	-3,754.0	226.7	3,236.7	3,215.2	21.52	150.430		
8,500.0	7,117.9	6,330.0	6,327.9	25.0	2.5	-15.90	-3,754.0	226.7	3,202.4	3,180.7	21.76	147.179		
8,563.0	7,117.7	6,330.0	6,327.9	25.8	2.5	-15.90	-3,754.0	226.7	3,141.6	3,119.4	22.20	141.504		
8,600.0	7,117.6	6,330.0	6,327.9	26.3	2.5	-15.90	-3,754.0	226.7	3,105.8	3,083.4	22.46	138.274		
8,661.4	7,117.5	6,330.0	6,327.9	27.2	2.5	-15.90	-3,754.0	226.7	3,046.6	3,023.7	22.90	133.022		
8,700.0	7,117.4	6,330.0	6,327.9	27.7	2.5	-15.90	-3,754.0	226.7	3,009.4	2,986.2	23.18	129.825		
8,759.8	7,117.2	6,330.0	6,327.9	28.6	2.5	-15.90	-3,754.0	226.7	2,951.9	2,928.2	23.62	124.974		
8,800.0	7,117.1	6,330.0	6,327.9	29.2	2.5	-15.90	-3,754.0	226.7	2,913.3	2,889.4	23.91	121.819		
8,858.2	7,117.0	6,330.0	6,327.9	30.1	2.5	-15.90	-3,754.0	226.7	2,857.4	2,833.0	24.35	117.347		
8,900.0	7,116.9	6,330.0	6,327.9	30.7	2.5	-15.90	-3,754.0	226.7	2,817.4	2,792.7	24.66	114.241		
8,956.7	7,116.8	6,330.0	6,327.9	31.6	2.5	-15.90	-3,754.0	226.7	2,763.2	2,738.1	25.09	110.123		
9,000.0	7,116.7	6,330.0	6,327.9	32.3	2.5	-15.90	-3,754.0	226.7	2,721.8	2,696.4	25.42	107.072		
9,055.1	7,116.5	6,330.0	6,327.9	33.2	2.5	-15.90	-3,754.0	226.7	2,669.3	2,643.4	25.84	103.285		
9,100.0	7,116.4	6,330.0	6,327.9	33.9	2.5	-15.90	-3,754.0	226.7	2,626.5	2,600.3	26.19	100.292		
9,153.5	7,116.3	6,330.0	6,327.9	34.8	2.5	-15.90	-3,754.0	226.7	2,575.7	2,549.1	26.61	96.812		
9,200.0	7,116.2	6,330.0	6,327.9	35.5	2.5	-15.90	-3,754.0	226.7	2,531.6	2,504.7	26.97	93.881		
9,251.9	7,116.0	6,330.0	6,327.9	36.4	2.5	-15.90	-3,754.0	226.7	2,482.5	2,455.1	27.37	90.687		
9,300.0	7,115.9	6,330.0	6,327.9	37.2	2.5	-15.90	-3,754.0	226.7	2,437.2	2,409.4	27.75	87.819		
9,350.4	7,115.8	6,330.0	6,327.9	38.0	2.5	-15.90	-3,754.0	226.7	2,389.7	2,361.6	28.15	84.889		
9,400.0	7,115.7	6,330.0	6,327.9	38.9	2.5	-15.90	-3,754.0	226.7	2,343.1	2,314.6	28.54	82.086		
9,448.8	7,115.5	6,330.0	6,327.9	39.7	2.5	-15.90	-3,754.0	226.7	2,297.4	2,268.5	28.93	79.400		
9,500.0	7,115.4	6,330.0	6,327.9	40.6	2.5	-15.90	-3,754.0	226.7	2,249.6	2,220.3	29.34	76.664		
9,547.2	7,115.3	6,330.0	6,327.9	41.4	2.5	-15.90	-3,754.0	226.7	2,205.7	2,175.9	29.72	74.204		
9,600.0	7,115.2	6,330.0	6,327.9	42.3	2.5	-15.90	-3,754.0	226.7	2,156.7	2,126.5	30.15	71.534		
9,645.6	7,115.1	6,330.0	6,327.9	43.1	2.5	-15.90	-3,754.0	226.7	2,114.5	2,084.0	30.52	69.285		
9,700.0	7,114.9	6,330.0	6,327.9	44.0	2.5	-15.90	-3,754.0	226.7	2,064.4	2,033.5	30.96	66.682		
9,744.1	7,114.8	6,330.0	6,327.9	44.8	2.5	-15.90	-3,754.0	226.7	2,024.0	1,992.7	31.32	64.626		
9,800.0	7,114.7	6,330.0	6,327.9	45.8	2.5	-15.90	-3,754.0	226.7	1,972.9	1,941.1	31.77	62.092		
9,842.5	7,114.6	6,330.0	6,327.9	46.5	2.5	-15.90	-3,754.0	226.7	1,934.3	1,902.1	32.12	60.216		
9,900.0	7,114.4	6,330.0	6,327.9	47.6	2.5	-15.90	-3,754.0	226.7	1,882.2	1,849.6	32.59	57.750		
9,940.9	7,114.3	6,330.0	6,327.9	48.3	2.5	-15.90	-3,754.0	226.7	1,845.4	1,812.5	32.93	56.041		
10,000.0	7,114.2	6,330.0	6,327.9	49.3	2.5	-15.90	-3,754.0	226.7	1,792.6	1,759.2	33.42	53.644		
10,039.3	7,114.1	6,330.0	6,327.9	50.0	2.5	-15.90	-3,754.0	226.7	1,757.6	1,723.9	33.74	52.091		
10,100.0	7,113.9	6,330.0	6,327.9	51.1	2.5	-15.90	-3,754.0	226.7	1,704.1	1,669.8	34.24	49.765		
10,137.8	7,113.8	6,330.0	6,327.9	51.8	2.5	-15.90	-3,754.0	226.7	1,671.0	1,636.4	34.56	48.356		
10,200.0	7,113.7	6,330.0	6,327.9	52.9	2.5	-15.90	-3,754.0	226.7	1,616.9	1,581.8	35.07	46.102		
10,236.2	7,113.6	6,330.0	6,327.9	53.6	2.5	-15.90	-3,754.0	226.7	1,585.7	1,550.3	35.37	44.828		
10,300.0	7,113.4	6,330.0	6,327.9	54.7	2.5	-15.90	-3,754.0	226.7	1,531.3	1,495.4	35.90	42.649		
10,334.6	7,113.3	6,330.0	6,327.9	55.4	2.5	-15.90	-3,754.0	226.7	1,502.1	1,465.9	36.19	41.501		
10,400.0	7,113.2	6,330.0	6,327.9	56.5	2.5	-15.90	-3,754.0	226.7	1,447.6	1,410.8	36.74	39.400		
10,433.0	7,113.1	6,330.0	6,327.9	57.1	2.5	-15.90	-3,754.0	226.7	1,420.3	1,383.3	37.02	38.370		
10,500.0	7,112.9	6,330.0	6,327.9	58.4	2.5	-15.90	-3,754.0	226.7	1,366.0	1,328.4	37.58	36.350		
10,531.5	7,112.8	6,330.0	6,327.9	58.9	2.5	-15.90	-3,754.0	226.7	1,340.8	1,303.0	37.84	35.432		
10,600.0	7,112.7	6,330.0	6,327.9	60.2	2.5	-15.90	-3,754.0	226.7	1,287.0	1,248.6	38.42	33.500		
10,629.9	7,112.6	6,330.0	6,327.9	60.7	2.5	-15.90	-3,754.0	226.7	1,264.0	1,225.3	38.67	32.686		
10,700.0	7,112.4	6,330.0	6,327.9	62.0	2.5	-15.90	-3,754.0	226.7	1,211.2	1,171.9	39.26	30.850		
10,728.3	7,112.3	6,330.0	6,327.9	62.5	2.5	-15.90	-3,754.0	226.7	1,190.3	1,150.8	39.50	30.135		
10,800.0	7,112.2	6,330.0	6,327.9	63.9	2.5	-15.90	-3,754.0	226.7	1,139.1	1,099.0	40.10	28.402		
10,826.7	7,112.1	6,330.0	6,327.9	64.4	2.5	-15.90	-3,754.0	226.7	1,120.5	1,080.2	40.33	27.782		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - ABDN VERT MCCARTY 30-3 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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	7,111.9	6,330.0	6,327.9	65.7	2.5	-15.90	-3,754.0	226.7	1,071.4	1,030.5	40.95	26.164	
10,925.2	7,111.8	6,330.0	6,327.9	66.2	2.5	-15.90	-3,754.0	226.7	1,055.2	1,014.1	41.16	25.634	
11,000.0	7,111.7	6,330.0	6,327.9	67.6	2.5	-15.90	-3,754.0	226.7	1,009.2	967.4	41.80	24.144	
11,023.6	7,111.6	6,330.0	6,327.9	68.0	2.5	-15.90	-3,754.0	226.7	995.4	953.4	42.00	23.701	
11,100.0	7,111.4	6,330.0	6,327.9	69.4	2.5	-15.90	-3,754.0	226.7	953.4	910.8	42.65	22.355	
11,122.0	7,111.3	6,330.0	6,327.9	69.8	2.5	-15.90	-3,754.0	226.7	942.1	899.3	42.84	21.994	
11,200.0	7,111.2	6,330.0	6,327.9	71.3	2.5	-15.90	-3,754.0	226.7	905.3	861.8	43.50	20.811	
11,220.4	7,111.1	6,330.0	6,327.9	71.6	2.5	-15.90	-3,754.0	226.7	896.5	852.8	43.67	20.527	
11,300.0	7,110.9	6,330.0	6,327.9	73.1	2.5	-15.90	-3,754.0	226.7	866.0	821.7	44.35	19.527	
11,318.9	7,110.9	6,330.0	6,327.9	73.5	2.5	-15.90	-3,754.0	226.7	859.7	815.2	44.51	19.315	
11,400.0	7,110.6	6,330.0	6,327.9	75.0	2.5	-15.90	-3,754.0	226.7	837.0	791.8	45.20	18.515	
11,417.3	7,110.6	6,330.0	6,327.9	75.3	2.5	-15.90	-3,754.0	226.7	833.1	787.7	45.35	18.369	
11,500.0	7,110.4	6,330.0	6,327.9	76.8	2.5	-15.90	-3,754.0	226.7	819.2	773.1	46.06	17.785	
11,515.7	7,110.4	6,330.0	6,327.9	77.1	2.5	-15.90	-3,754.0	226.7	817.4	771.2	46.19	17.696	
11,597.5	7,110.1	6,330.0	6,327.9	78.7	2.5	-15.90	-3,754.0	226.7	813.3	766.5	46.89	17.345 CC	
11,600.0	7,110.1	6,330.0	6,327.9	78.7	2.5	-15.90	-3,754.0	226.7	813.4	766.4	46.91	17.337 ES	
11,614.1	7,110.1	6,330.0	6,327.9	79.0	2.5	-15.90	-3,754.0	226.7	813.5	766.5	47.04	17.296	
11,655.0	7,110.0	6,330.0	6,327.9	79.7	2.5	-15.90	-3,754.0	226.7	815.4	768.0	47.39	17.207 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT BROWN 30-2 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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	84.90	154.2	1,727.1	1,734.6				
98.4	98.4	54.7	54.7	0.1	0.0	84.90	154.2	1,727.1	1,734.0	1,733.9	0.12	N/A	
100.0	100.0	56.3	56.3	0.1	0.0	84.90	154.2	1,727.1	1,734.0	1,733.9	0.12	N/A	
171.7	171.7	126.7	126.7	0.2	0.1	84.90	154.1	1,727.1	1,733.9	1,733.6	0.31	5,654.839	
196.8	196.8	149.8	149.8	0.3	0.1	84.90	154.1	1,727.1	1,733.9	1,733.6	0.36	4,767.324	
200.0	200.0	152.7	152.7	0.3	0.1	84.90	154.1	1,727.1	1,733.9	1,733.6	0.37	4,675.475	
295.3	295.3	250.4	250.4	0.5	0.1	84.89	154.4	1,727.3	1,734.2	1,733.5	0.64	2,728.424	
300.0	300.0	255.8	255.8	0.5	0.1	84.89	154.4	1,727.3	1,734.2	1,733.5	0.65	2,661.583	
393.7	393.7	357.9	357.9	0.7	0.2	84.86	155.3	1,726.8	1,733.8	1,732.9	0.97	1,794.224	
400.0	400.0	364.5	364.5	0.8	0.2	84.86	155.4	1,726.8	1,733.8	1,732.8	0.99	1,755.885	
492.1	492.1	455.3	455.3	1.0	0.3	84.82	156.5	1,726.2	1,733.3	1,732.0	1.27	1,362.762	
500.0	500.0	462.8	462.8	1.0	0.3	84.82	156.6	1,726.1	1,733.2	1,731.9	1.30	1,338.390	
590.5	590.5	555.7	555.7	1.2	0.4	84.76	158.1	1,725.6	1,732.8	1,731.3	1.56	1,111.454	
600.0	600.0	566.0	565.9	1.2	0.4	84.76	158.3	1,725.5	1,732.8	1,731.2	1.59	1,092.219	
689.0	689.0	657.4	657.3	1.4	0.4	84.71	159.7	1,724.7	1,732.1	1,730.3	1.84	942.555	
700.0	700.0	668.3	668.3	1.4	0.5	84.70	159.9	1,724.6	1,732.0	1,730.2	1.87	927.040	
787.4	787.4	755.1	755.0	1.6	0.5	84.66	161.2	1,723.8	1,731.4	1,729.3	2.11	821.301	
800.0	800.0	767.6	767.5	1.7	0.5	84.65	161.5	1,723.7	1,731.3	1,729.1	2.14	808.115	
885.8	885.8	853.3	853.2	1.9	0.6	84.59	163.1	1,722.9	1,730.7	1,728.3	2.37	728.990	
900.0	900.0	867.5	867.4	1.9	0.6	84.58	163.4	1,722.8	1,730.6	1,728.1	2.41	717.439	
984.2	984.2	955.2	955.1	2.1	0.6	84.51	165.5	1,721.9	1,729.9	1,727.3	2.64	655.671	
1,000.0	1,000.0	972.0	971.9	2.1	0.6	84.50	165.9	1,721.7	1,729.8	1,727.1	2.68	645.274	
1,082.7	1,082.7	1,060.5	1,060.4	2.3	0.7	84.41	168.4	1,720.4	1,728.8	1,725.9	2.90	595.809	
1,100.0	1,100.0	1,079.1	1,078.9	2.3	0.7	84.39	169.0	1,720.1	1,728.6	1,725.6	2.95	586.391	
1,181.1	1,181.1	1,165.9	1,165.6	2.5	0.7	84.29	171.7	1,718.5	1,727.3	1,724.2	3.16	546.099	
1,200.0	1,200.0	1,186.1	1,185.8	2.6	0.7	84.27	172.3	1,718.1	1,727.0	1,723.8	3.21	537.487	
1,279.5	1,279.5	1,264.1	1,263.8	2.7	0.8	84.18	174.8	1,716.4	1,725.6	1,722.2	3.42	504.576	
1,300.0	1,300.0	1,283.9	1,283.5	2.8	0.8	84.16	175.5	1,716.1	1,725.2	1,721.8	3.47	496.771	
1,377.9	1,377.9	1,360.0	1,359.6	3.0	0.8	84.08	177.9	1,714.6	1,724.0	1,720.3	3.67	469.244	
1,400.0	1,400.0	1,381.6	1,381.2	3.0	0.8	84.05	178.6	1,714.2	1,723.7	1,719.9	3.73	462.008	
1,476.4	1,476.4	1,458.5	1,458.1	3.2	0.8	83.96	181.2	1,712.7	1,722.5	1,718.6	3.93	438.559	
1,500.0	1,500.0	1,482.5	1,482.1	3.2	0.9	83.93	182.0	1,712.3	1,722.1	1,718.1	3.99	431.772	
1,574.8	1,574.8	1,561.0	1,560.5	3.4	0.9	83.84	184.7	1,710.7	1,720.9	1,716.7	4.18	411.529	
1,600.0	1,600.0	1,587.7	1,587.1	3.5	0.9	83.81	185.6	1,710.1	1,720.4	1,716.2	4.25	405.112	
1,673.2	1,673.2	1,663.8	1,663.2	3.6	0.9	83.72	187.9	1,708.3	1,719.0	1,714.6	4.44	387.563	
1,700.0	1,700.0	1,691.6	1,691.0	3.7	0.9	83.70	188.6	1,707.7	1,718.4	1,713.9	4.50	381.511	
1,771.6	1,771.6	1,762.4	1,761.7	3.8	1.0	83.63	190.4	1,706.0	1,717.0	1,712.3	4.69	366.297	
1,800.0	1,800.0	1,790.2	1,789.5	3.9	1.0	83.61	191.0	1,705.4	1,716.4	1,711.6	4.76	360.609	
1,870.1	1,870.1	1,857.6	1,856.9	4.1	1.0	83.55	192.6	1,703.9	1,715.0	1,710.1	4.94	347.354	
1,900.0	1,900.0	1,886.3	1,885.6	4.1	1.0	83.53	193.3	1,703.3	1,714.5	1,709.5	5.01	341.992	
1,968.5	1,968.5	1,953.2	1,952.5	4.3	1.0	83.47	194.8	1,701.9	1,713.3	1,708.1	5.19	330.327	
2,000.0	2,000.0	1,984.2	1,983.4	4.4	1.1	83.44	195.6	1,701.3	1,712.8	1,707.5	5.27	325.226	
2,066.9	2,066.9	2,050.2	2,049.4	4.5	1.1	83.38	197.2	1,700.0	1,711.7	1,706.2	5.44	314.908	
2,100.0	2,100.0	2,082.8	2,082.0	4.6	1.1	83.35	198.0	1,699.4	1,711.1	1,705.6	5.52	310.048	
2,150.0	2,150.0	2,133.0	2,132.2	4.7	1.1	83.31	199.3	1,698.5	1,710.4	1,704.7	5.65	302.973	
2,165.3	2,165.3	2,148.5	2,147.7	4.7	1.1	83.05	199.8	1,698.2	1,710.1	1,704.4	5.68	300.829	
2,200.0	2,200.0	2,183.6	2,182.7	4.8	1.1	83.05	200.7	1,697.5	1,709.5	1,703.7	5.77	296.162	
2,263.8	2,263.7	2,249.2	2,248.3	5.0	1.2	83.07	202.5	1,696.2	1,708.2	1,702.3	5.93	287.929	
2,300.0	2,299.9	2,286.6	2,285.6	5.0	1.2	83.11	203.4	1,695.4	1,707.4	1,701.4	6.02	283.423	
2,362.2	2,362.0	2,350.0	2,349.0	5.2	1.2	83.21	205.1	1,694.0	1,705.8	1,699.6	6.18	275.966	
2,400.0	2,399.7	2,388.4	2,387.4	5.3	1.2	83.30	206.0	1,693.2	1,704.7	1,698.4	6.28	271.598	
2,460.6	2,460.0	2,451.3	2,450.2	5.4	1.2	83.49	207.6	1,691.8	1,702.8	1,696.4	6.43	264.703	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT BROWN 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
2,500.0	2,499.1	2,492.2	2,491.2	5.5	1.2	83.64	208.5	1,690.8	1,701.4	1,694.9	6.53	260.375	
2,559.0	2,557.7	2,550.3	2,549.2	5.6	1.3	83.89	209.7	1,689.4	1,699.3	1,692.6	6.69	253.916	
2,600.0	2,598.2	2,590.2	2,589.1	5.7	1.3	84.09	210.6	1,688.4	1,697.7	1,690.9	6.80	249.606	
2,657.5	2,654.8	2,647.0	2,645.9	5.9	1.3	84.41	211.8	1,687.1	1,695.5	1,688.6	6.97	243.436	
2,700.0	2,696.6	2,689.1	2,687.9	6.0	1.3	84.67	212.7	1,686.1	1,693.9	1,686.8	7.09	239.043	
2,755.9	2,751.4	2,742.2	2,741.0	6.1	1.3	85.03	213.8	1,684.9	1,691.6	1,684.4	7.26	233.070	
2,800.0	2,794.4	2,783.6	2,782.4	6.2	1.4	85.34	214.6	1,684.0	1,689.9	1,682.5	7.39	228.558	
2,854.3	2,847.3	2,835.3	2,834.1	6.4	1.4	85.76	215.6	1,682.9	1,687.8	1,680.3	7.58	222.734	
2,888.8	2,880.6	2,868.3	2,867.0	6.5	1.4	86.04	216.1	1,682.3	1,686.5	1,678.8	7.69	219.181	
2,900.0	2,891.5	2,879.0	2,877.8	6.6	1.4	86.13	216.3	1,682.1	1,686.1	1,678.4	7.73	217.994	
2,952.7	2,942.5	2,930.2	2,928.9	6.7	1.4	86.54	217.2	1,681.0	1,684.2	1,676.3	7.93	212.378	
3,000.0	2,988.2	2,976.5	2,975.3	6.9	1.4	86.92	218.0	1,680.1	1,682.6	1,674.5	8.11	207.576	
3,051.2	3,037.6	3,025.4	3,024.1	7.1	1.4	87.32	218.7	1,679.1	1,680.9	1,672.6	8.31	202.346	
3,100.0	3,084.9	3,070.7	3,069.5	7.3	1.5	87.69	219.2	1,678.3	1,679.4	1,670.9	8.50	197.603	
3,149.6	3,132.8	3,116.0	3,114.7	7.5	1.5	88.08	219.5	1,677.5	1,678.1	1,669.4	8.70	192.809	
3,200.0	3,181.5	3,160.7	3,159.4	7.6	1.5	88.46	219.7	1,676.9	1,676.9	1,668.0	8.91	188.184	
3,248.0	3,228.0	3,203.3	3,202.0	7.8	1.5	88.83	219.8	1,676.3	1,676.0	1,666.9	9.12	183.836	
3,300.0	3,278.2	3,251.3	3,250.0	8.0	1.5	89.24	219.8	1,675.8	1,675.2	1,665.8	9.34	179.348	
3,346.4	3,323.2	3,294.2	3,292.9	8.2	1.5	89.61	219.9	1,675.4	1,674.6	1,665.0	9.55	175.411	
3,400.0	3,374.9	3,346.2	3,344.9	8.5	1.5	90.06	220.0	1,674.9	1,674.1	1,664.3	9.79	171.075	
3,444.9	3,418.3	3,390.0	3,388.7	8.6	1.6	90.44	220.1	1,674.5	1,673.7	1,663.7	9.99	167.518	
3,500.0	3,471.6	3,444.4	3,443.1	8.9	1.6	90.92	220.2	1,674.0	1,673.3	1,663.1	10.24	163.347	
3,543.3	3,513.5	3,487.3	3,486.0	9.1	1.6	91.29	220.2	1,673.6	1,673.1	1,662.6	10.45	160.149	
3,600.0	3,568.3	3,539.3	3,538.0	9.3	1.6	91.74	220.2	1,673.1	1,672.9	1,662.2	10.71	156.203	
3,613.0	3,580.9	3,550.9	3,549.6	9.4	1.6	91.85	220.2	1,673.0	1,672.9	1,662.1	10.77	155.316	
3,641.7	3,608.7	3,576.7	3,575.3	9.5	1.6	92.07	220.2	1,672.8	1,672.9	1,662.0	10.91	153.393	
3,700.0	3,665.0	3,627.2	3,625.9	9.7	1.6	92.52	219.9	1,672.5	1,673.2	1,662.0	11.18	149.713	
3,740.1	3,703.8	3,661.1	3,659.7	9.9	1.6	92.83	219.6	1,672.4	1,673.6	1,662.3	11.36	147.287	
3,800.0	3,761.7	3,712.6	3,711.3	10.2	1.6	93.30	219.1	1,672.5	1,674.6	1,662.9	11.64	143.858	
3,838.6	3,799.0	3,748.3	3,747.0	10.4	1.6	93.62	218.7	1,672.6	1,675.3	1,663.5	11.82	141.737	
3,900.0	3,858.4	3,805.8	3,804.4	10.7	1.6	94.14	218.1	1,672.8	1,676.7	1,664.6	12.11	138.511	
3,937.0	3,894.2	3,843.4	3,842.1	10.8	1.6	94.48	217.7	1,673.0	1,677.7	1,665.4	12.28	136.624	
4,000.0	3,955.1	3,907.4	3,906.0	11.1	1.6	95.05	217.1	1,673.1	1,679.3	1,666.7	12.57	133.540	
4,035.4	3,989.3	3,942.8	3,941.5	11.3	1.6	95.37	216.8	1,673.2	1,680.2	1,667.4	12.74	131.843	
4,100.0	4,051.8	4,007.4	4,006.0	11.6	1.6	95.95	216.2	1,673.2	1,681.9	1,668.9	13.05	128.874	
4,133.8	4,084.5	4,040.9	4,039.6	11.7	1.6	96.25	215.9	1,673.1	1,682.9	1,669.7	13.21	127.355	
4,200.0	4,148.5	4,106.3	4,104.9	12.1	1.6	96.83	215.2	1,673.0	1,684.8	1,671.3	13.53	124.507	
4,232.3	4,179.7	4,137.1	4,135.8	12.2	1.6	97.11	214.9	1,672.9	1,685.8	1,672.1	13.69	123.160	
4,300.0	4,245.2	4,201.9	4,200.6	12.5	1.6	97.69	214.1	1,672.8	1,688.1	1,674.1	14.01	120.451	
4,330.7	4,274.9	4,232.2	4,230.9	12.7	1.6	97.96	213.8	1,672.8	1,689.2	1,675.0	14.16	119.260	
4,400.0	4,341.9	4,300.7	4,299.3	13.0	1.6	98.57	213.0	1,672.6	1,691.7	1,677.3	14.50	116.677	
4,429.1	4,370.0	4,329.1	4,327.8	13.1	1.6	98.83	212.8	1,672.5	1,692.9	1,678.2	14.64	115.621	
4,500.0	4,438.6	4,398.4	4,397.1	13.5	1.6	99.44	212.2	1,672.3	1,695.7	1,680.7	14.99	113.152	
4,527.5	4,465.2	4,425.7	4,424.3	13.6	1.6	99.67	212.0	1,672.2	1,696.8	1,681.7	15.12	112.216	
4,600.0	4,535.3	4,497.4	4,496.1	14.0	1.6	100.30	211.6	1,671.9	1,699.9	1,684.5	15.48	109.847	
4,626.0	4,560.4	4,522.9	4,521.5	14.1	1.6	100.52	211.5	1,671.8	1,701.1	1,685.5	15.60	109.018	
4,700.0	4,631.9	4,595.5	4,594.1	14.5	1.7	101.14	211.2	1,671.4	1,704.4	1,688.5	15.97	106.740	
4,724.4	4,655.5	4,619.5	4,618.1	14.6	1.7	101.35	211.2	1,671.3	1,705.6	1,689.5	16.09	106.009	
4,800.0	4,728.6	4,694.0	4,692.7	15.0	1.7	101.98	211.0	1,670.9	1,709.2	1,692.8	16.46	103.822	
4,822.8	4,750.7	4,716.3	4,714.9	15.1	1.7	102.17	211.0	1,670.8	1,710.4	1,693.8	16.58	103.181	
4,900.0	4,825.3	4,791.1	4,789.8	15.4	1.7	102.80	210.8	1,670.3	1,714.3	1,697.4	16.96	101.093	
4,921.2	4,845.9	4,811.5	4,810.1	15.6	1.7	102.97	210.8	1,670.2	1,715.4	1,698.4	17.06	100.538	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	4,922.0	4,886.2	4,884.8	15.9	1.7	103.60	210.5	1,669.7	1,719.8	1,702.4	17.45	98.562	
5,019.7	4,941.0	4,904.8	4,903.5	16.0	1.7	103.76	210.5	1,669.6	1,720.9	1,703.4	17.55	98.085	
5,100.0	5,018.7	4,980.6	4,979.3	16.4	1.7	104.40	210.2	1,669.3	1,725.8	1,707.8	17.94	96.217	
5,118.1	5,036.2	4,997.7	4,996.3	16.5	1.7	104.54	210.1	1,669.2	1,726.9	1,708.9	18.02	95.810	
5,200.0	5,115.4	5,077.6	5,076.2	16.9	1.8	105.20	209.9	1,668.9	1,732.2	1,713.7	18.42	94.030	
5,216.5	5,131.4	5,093.7	5,092.3	17.0	1.8	105.34	209.8	1,668.8	1,733.3	1,714.8	18.50	93.682	
5,300.0	5,212.1	5,177.6	5,176.2	17.4	1.8	106.03	209.7	1,668.4	1,738.8	1,719.9	18.91	91.970	
5,314.9	5,226.6	5,192.7	5,191.3	17.5	1.8	106.15	209.7	1,668.3	1,739.8	1,720.9	18.98	91.672	
5,400.0	5,308.8	5,277.7	5,276.3	17.9	1.8	106.84	209.6	1,667.7	1,745.6	1,726.2	19.39	90.020	
5,413.4	5,321.7	5,291.0	5,289.7	18.0	1.8	106.95	209.7	1,667.6	1,746.5	1,727.1	19.46	89.767	
5,500.0	5,405.5	5,378.1	5,376.7	18.4	1.8	107.65	209.7	1,666.9	1,752.6	1,732.7	19.88	88.179	
5,511.8	5,416.9	5,389.9	5,388.6	18.5	1.8	107.74	209.8	1,666.8	1,753.4	1,733.5	19.93	87.969	
5,600.0	5,502.2	5,482.5	5,481.1	18.9	1.9	108.49	209.8	1,665.7	1,759.6	1,739.2	20.35	86.446	
5,610.2	5,512.1	5,493.3	5,491.9	19.0	1.9	108.57	209.8	1,665.5	1,760.3	1,739.9	20.40	86.274	
5,700.0	5,598.9	5,582.5	5,581.0	19.4	1.9	109.29	209.7	1,664.1	1,766.6	1,745.7	20.83	84.809	
5,708.6	5,607.2	5,591.0	5,589.6	19.5	1.9	109.36	209.7	1,663.9	1,767.2	1,746.3	20.87	84.672	
5,745.8	5,643.2	5,626.3	5,624.9	19.7	1.9	109.65	209.6	1,663.3	1,769.9	1,748.8	21.05	84.094	
5,800.0	5,695.7	5,677.3	5,675.9	19.9	1.9	110.12	209.3	1,662.4	1,773.7	1,752.4	21.26	83.427	
5,807.1	5,702.6	5,684.0	5,682.5	19.9	1.9	110.18	209.3	1,662.3	1,774.2	1,752.9	21.28	83.361	
5,900.0	5,793.2	5,769.3	5,767.8	20.3	2.0	110.89	208.7	1,660.9	1,780.3	1,758.7	21.58	82.495	
5,905.5	5,798.6	5,774.3	5,772.9	20.3	2.0	110.93	208.6	1,660.8	1,780.6	1,759.0	21.60	82.451	
6,000.0	5,891.5	5,862.6	5,861.2	20.6	2.0	111.56	207.8	1,659.6	1,786.1	1,764.3	21.87	81.683	
6,003.9	5,895.4	5,866.3	5,864.9	20.6	2.0	111.58	207.8	1,659.6	1,786.3	1,764.5	21.88	81.655	
6,100.0	5,990.4	5,957.7	5,956.2	20.9	2.0	112.11	207.0	1,658.6	1,791.1	1,769.0	22.12	80.966	
6,102.3	5,992.7	5,959.9	5,958.4	20.9	2.0	112.13	207.0	1,658.5	1,791.2	1,769.1	22.13	80.952	
6,200.0	6,089.7	6,054.2	6,052.7	21.1	2.0	112.55	206.4	1,657.8	1,795.0	1,772.7	22.35	80.324	
6,200.8	6,090.4	6,054.9	6,053.5	21.1	2.0	112.55	206.4	1,657.8	1,795.0	1,772.7	22.35	80.320	
6,299.2	6,188.5	6,153.6	6,152.1	21.4	2.1	112.85	206.2	1,657.2	1,797.7	1,775.2	22.55	79.734	
6,300.0	6,189.3	6,154.4	6,152.9	21.4	2.1	112.85	206.2	1,657.2	1,797.8	1,775.2	22.55	79.729	
6,397.6	6,286.8	6,253.3	6,251.8	21.5	2.1	113.03	206.0	1,656.5	1,799.0	1,776.3	22.72	79.180	
6,400.0	6,289.2	6,255.7	6,254.2	21.5	2.1	113.03	206.0	1,656.5	1,799.1	1,776.3	22.73	79.165	
6,484.6	6,373.8	6,341.5	6,340.1	21.6	2.1	113.32	205.8	1,655.9	1,799.1	1,776.2	22.86	78.712	
6,496.0	6,385.3	6,353.3	6,351.8	21.7	2.1	113.32	205.8	1,655.8	1,799.0	1,776.1	22.87	78.646	
6,500.0	6,389.2	6,357.4	6,355.9	21.7	2.1	113.33	205.8	1,655.8	1,799.0	1,776.1	22.88	78.623	
6,514.6	6,403.8	6,372.4	6,370.9	21.7	2.1	113.33	205.8	1,655.7	1,798.9	1,776.0	22.91	78.534	
6,550.0	6,439.2	6,408.5	6,407.0	21.7	2.1	-66.74	205.7	1,655.4	1,798.3	1,775.3	22.95	78.348	
6,594.5	6,483.5	6,452.4	6,450.9	21.7	2.1	-66.96	205.6	1,655.0	1,796.5	1,773.6	22.99	78.130	
6,600.0	6,489.0	6,457.8	6,456.3	21.7	2.1	-67.00	205.5	1,654.9	1,796.3	1,773.3	23.00	78.095	
6,650.0	6,538.4	6,506.8	6,505.3	21.7	2.2	-67.45	205.3	1,654.5	1,792.9	1,769.9	23.04	77.833	
6,692.9	6,580.3	6,548.3	6,546.9	21.6	2.2	-68.00	205.1	1,654.1	1,789.0	1,766.0	23.05	77.615	
6,700.0	6,587.1	6,555.2	6,553.7	21.6	2.2	-68.10	205.1	1,654.0	1,788.3	1,765.2	23.05	77.572	
6,750.0	6,635.0	6,600.0	6,598.5	21.5	2.2	-68.92	204.8	1,653.6	1,782.5	1,759.4	23.05	77.329	
6,791.3	6,673.7	6,638.9	6,637.4	21.4	2.2	-69.74	204.6	1,653.3	1,776.8	1,753.8	23.03	77.151	
6,800.0	6,681.7	6,646.4	6,644.9	21.4	2.2	-69.93	204.5	1,653.2	1,775.5	1,752.5	23.03	77.110	
6,850.0	6,727.1	6,689.0	6,687.5	21.2	2.2	-71.07	204.3	1,653.0	1,767.7	1,744.7	22.97	76.944	
6,889.7	6,762.0	6,724.6	6,723.2	21.1	2.2	-72.12	204.2	1,652.8	1,760.9	1,738.0	22.91	76.848	
6,900.0	6,770.9	6,734.0	6,732.5	21.0	2.2	-72.41	204.1	1,652.7	1,759.0	1,736.1	22.90	76.820	
6,950.0	6,812.9	6,778.5	6,777.0	20.8	2.2	-73.91	204.0	1,652.5	1,749.6	1,726.8	22.79	76.762	
6,988.2	6,843.6	6,810.6	6,809.1	20.6	2.2	-75.12	203.9	1,652.2	1,742.0	1,719.3	22.69	76.777	
7,000.0	6,852.9	6,820.1	6,818.6	20.6	2.2	-75.50	203.9	1,652.2	1,739.5	1,716.9	22.65	76.786	
7,050.0	6,890.7	6,858.6	6,857.1	20.3	2.2	-77.15	203.8	1,651.9	1,729.1	1,706.6	22.49	76.900	
7,086.6	6,916.9	6,885.3	6,883.8	20.1	2.3	-78.38	203.7	1,651.7	1,721.4	1,699.0	22.34	77.042	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,926.2	6,894.7	6,893.2	20.1	2.3	-78.83	203.6	1,651.6	1,718.5	1,696.3	22.29	77.103	
7,150.0	6,959.1	6,928.3	6,926.8	19.8	2.3	-80.53	203.5	1,651.3	1,708.0	1,685.9	22.07	77.389	
7,185.0	6,980.5	6,950.2	6,948.7	19.6	2.3	-81.70	203.4	1,651.1	1,700.7	1,678.8	21.91	77.628	
7,200.0	6,989.3	6,959.1	6,957.6	19.5	2.3	-82.19	203.4	1,651.0	1,697.7	1,675.8	21.84	77.742	
7,250.0	7,016.6	6,987.0	6,985.5	19.3	2.3	-83.79	203.3	1,650.8	1,687.8	1,666.2	21.60	78.138	
7,283.4	7,033.3	7,004.2	7,002.7	19.1	2.3	-84.81	203.2	1,650.6	1,681.6	1,660.1	21.45	78.406	
7,300.0	7,041.0	7,012.3	7,010.8	19.1	2.3	-85.29	203.2	1,650.5	1,678.6	1,657.2	21.37	78.549	
7,350.0	7,062.2	7,034.6	7,033.1	18.8	2.3	-86.67	203.1	1,650.3	1,670.2	1,649.1	21.16	78.947	
7,381.9	7,074.1	7,047.1	7,045.6	18.7	2.3	-87.46	203.0	1,650.2	1,665.4	1,644.3	21.04	79.167	
7,400.0	7,080.3	7,053.6	7,052.1	18.7	2.3	-87.88	203.0	1,650.1	1,662.8	1,641.9	20.97	79.303	
7,450.0	7,095.0	7,069.1	7,067.6	18.5	2.3	-88.89	202.9	1,649.9	1,656.6	1,635.8	20.81	79.595	
7,480.3	7,102.4	7,076.9	7,075.4	18.4	2.3	-89.41	202.9	1,649.8	1,653.5	1,632.8	20.74	79.715	
7,500.0	7,106.4	7,081.2	7,079.7	18.4	2.3	-89.69	202.9	1,649.8	1,651.7	1,631.0	20.70	79.805	
7,550.0	7,114.4	7,089.6	7,088.1	18.3	2.3	-90.26	202.9	1,649.7	1,648.3	1,627.6	20.62	79.925	
7,578.7	7,117.4	7,092.8	7,091.3	18.3	2.3	-90.48	202.9	1,649.7	1,647.0	1,626.3	20.60	79.930	
7,600.0	7,118.9	7,094.5	7,093.0	18.3	2.3	-90.59	202.8	1,649.6	1,646.3	1,625.7	20.59	79.950	
7,638.7	7,120.0	7,095.7	7,094.2	18.3	2.3	-90.67	202.8	1,649.6	1,645.8	1,625.2	20.60	79.899 CC, ES	
7,641.3	7,120.0	7,095.7	7,094.2	18.3	2.3	-90.67	202.8	1,649.6	1,645.8	1,625.2	20.60	79.897	
7,677.1	7,119.9	7,095.8	7,094.3	18.3	2.3	-90.67	202.8	1,649.6	1,646.3	1,625.6	20.64	79.761	
7,700.0	7,119.9	7,095.8	7,094.3	18.4	2.3	-90.67	202.8	1,649.6	1,647.0	1,626.3	20.67	79.694	
7,775.6	7,119.7	7,095.9	7,094.4	18.6	2.3	-90.67	202.8	1,649.6	1,651.5	1,630.7	20.87	79.129	
7,800.0	7,119.6	7,095.9	7,094.4	18.6	2.3	-90.67	202.8	1,649.6	1,653.7	1,632.8	20.94	78.984	
7,874.0	7,119.4	7,095.9	7,094.4	19.0	2.3	-90.68	202.8	1,649.6	1,662.6	1,641.3	21.28	78.133	
7,900.0	7,119.4	7,096.0	7,094.5	19.1	2.3	-90.68	202.8	1,649.6	1,666.5	1,645.1	21.40	77.876	
7,972.4	7,119.2	7,096.0	7,094.5	19.6	2.3	-90.68	202.8	1,649.6	1,679.3	1,657.5	21.86	76.819	
8,000.0	7,119.1	7,096.0	7,094.5	19.7	2.3	-90.68	202.8	1,649.6	1,685.0	1,663.0	22.04	76.464	
8,070.8	7,118.9	7,096.1	7,094.6	20.3	2.3	-90.68	202.8	1,649.6	1,701.6	1,679.0	22.60	75.284	
8,100.0	7,118.9	7,096.1	7,094.6	20.5	2.3	-90.68	202.8	1,649.6	1,709.3	1,686.4	22.84	74.851	
8,169.3	7,118.7	7,096.2	7,094.7	21.2	2.3	-90.69	202.8	1,649.6	1,729.3	1,705.8	23.49	73.624	
8,200.0	7,118.6	7,096.2	7,094.7	21.5	2.3	-90.69	202.8	1,649.6	1,738.9	1,715.2	23.78	73.135	
8,267.7	7,118.5	7,096.3	7,094.8	22.2	2.3	-90.69	202.8	1,649.6	1,762.0	1,737.5	24.50	71.921	
8,300.0	7,118.4	7,096.3	7,094.8	22.5	2.3	-90.69	202.8	1,649.6	1,773.8	1,748.9	24.84	71.398	
8,366.1	7,118.2	7,096.4	7,094.9	23.3	2.3	-90.69	202.8	1,649.6	1,799.5	1,773.8	25.62	70.239	
8,400.0	7,118.1	7,096.4	7,094.9	23.7	2.3	-90.69	202.8	1,649.6	1,813.4	1,787.4	26.02	69.702	
8,464.5	7,118.0	7,096.4	7,094.9	24.5	2.3	-90.69	202.8	1,649.6	1,841.5	1,814.6	26.83	68.623	
8,500.0	7,117.9	7,096.5	7,095.0	25.0	2.3	-90.69	202.8	1,649.6	1,857.6	1,830.3	27.28	68.086	
8,563.0	7,117.7	7,096.5	7,095.0	25.8	2.3	-90.70	202.8	1,649.6	1,887.6	1,859.5	28.13	67.103	
8,600.0	7,117.6	7,096.5	7,095.0	26.3	2.3	-90.70	202.8	1,649.6	1,906.1	1,877.4	28.63	66.578	
8,661.4	7,117.5	7,096.6	7,095.1	27.2	2.3	-90.70	202.8	1,649.6	1,937.7	1,908.3	29.50	65.693	
8,700.0	7,117.4	7,096.6	7,095.1	27.7	2.3	-90.70	202.8	1,649.6	1,958.4	1,928.4	30.04	65.188	
8,759.8	7,117.2	7,096.7	7,095.2	28.6	2.3	-90.70	202.8	1,649.6	1,991.5	1,960.5	30.92	64.401	
8,800.0	7,117.1	7,096.7	7,095.2	29.2	2.3	-90.70	202.8	1,649.6	2,014.3	1,982.8	31.51	63.919	
8,858.2	7,117.0	7,096.8	7,095.3	30.1	2.3	-90.70	202.8	1,649.6	2,048.5	2,016.1	32.40	63.225	
8,900.0	7,116.9	7,096.8	7,095.3	30.7	2.3	-90.71	202.8	1,649.6	2,073.6	2,040.6	33.03	62.770	
8,956.7	7,116.8	7,096.8	7,095.3	31.6	2.3	-90.71	202.8	1,649.6	2,108.6	2,074.6	33.92	62.161	
9,000.0	7,116.7	7,096.9	7,095.4	32.3	2.3	-90.71	202.8	1,649.6	2,135.9	2,101.3	34.60	61.734	
9,055.1	7,116.5	7,096.9	7,095.4	33.2	2.3	-90.71	202.8	1,649.6	2,171.5	2,136.0	35.48	61.202	
9,100.0	7,116.4	7,096.9	7,095.4	33.9	2.3	-90.71	202.8	1,649.6	2,201.0	2,164.8	36.20	60.803	
9,153.5	7,116.3	7,097.0	7,095.5	34.8	2.3	-90.71	202.8	1,649.6	2,236.9	2,199.8	37.07	60.339	
9,200.0	7,116.2	7,097.0	7,095.5	35.5	2.3	-90.71	202.8	1,649.6	2,268.6	2,230.8	37.83	59.968	
9,251.9	7,116.0	7,097.1	7,095.6	36.4	2.3	-90.71	202.8	1,649.6	2,304.7	2,266.0	38.69	59.564	
9,300.0	7,115.9	7,097.1	7,095.6	37.2	2.3	-90.72	202.8	1,649.6	2,338.6	2,299.1	39.49	59.219	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT BROWN 30-2 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,350.4	7,115.8	7,097.1	7,095.6	38.0	2.3	-90.72	202.8	1,649.6	2,374.6	2,334.3	40.34	58.868	
9,400.0	7,115.7	7,097.2	7,095.7	38.9	2.3	-90.72	202.8	1,649.6	2,410.7	2,369.5	41.17	58.548	
9,448.8	7,115.5	7,097.2	7,095.7	39.7	2.3	-90.72	202.8	1,649.6	2,446.5	2,404.5	42.01	58.243	
9,500.0	7,115.4	7,097.3	7,095.8	40.6	2.3	-90.72	202.8	1,649.6	2,484.7	2,441.8	42.88	57.946	
9,547.2	7,115.3	7,097.3	7,095.8	41.4	2.3	-90.72	202.8	1,649.6	2,520.2	2,476.5	43.69	57.681	
9,600.0	7,115.2	7,097.3	7,095.8	42.3	2.3	-90.72	202.8	1,649.6	2,560.4	2,515.8	44.60	57.406	
9,645.6	7,115.1	7,097.4	7,095.9	43.1	2.3	-90.72	202.8	1,649.6	2,595.6	2,550.2	45.40	57.176	
9,700.0	7,114.9	7,097.4	7,095.9	44.0	2.3	-90.73	202.8	1,649.6	2,637.8	2,591.5	46.34	56.922	
9,744.1	7,114.8	7,097.4	7,095.9	44.8	2.3	-90.73	202.8	1,649.6	2,672.4	2,625.3	47.11	56.722	
9,800.0	7,114.7	7,097.5	7,096.0	45.8	2.3	-90.73	202.8	1,649.6	2,716.7	2,668.6	48.10	56.486	
9,842.5	7,114.6	7,097.5	7,096.0	46.5	2.3	-90.73	202.8	1,649.6	2,750.6	2,701.8	48.85	56.312	
9,900.0	7,114.4	7,097.6	7,096.1	47.6	2.3	-90.73	202.8	1,649.6	2,796.9	2,747.0	49.86	56.093	
9,940.9	7,114.3	7,097.6	7,096.1	48.3	2.3	-90.73	202.8	1,649.6	2,830.1	2,779.5	50.59	55.942	
10,000.0	7,114.2	7,097.6	7,096.1	49.3	2.3	-90.73	202.8	1,649.6	2,878.4	2,826.7	51.64	55.739	
10,039.3	7,114.1	7,097.7	7,096.2	50.0	2.3	-90.73	202.8	1,649.6	2,910.7	2,858.4	52.34	55.608	
10,100.0	7,113.9	7,097.7	7,096.2	51.1	2.3	-90.74	202.8	1,649.6	2,960.9	2,907.5	53.43	55.419	
10,137.8	7,113.8	7,097.7	7,096.2	51.8	2.3	-90.74	202.8	1,649.6	2,992.4	2,938.3	54.11	55.305	
10,200.0	7,113.7	7,097.8	7,096.3	52.9	2.3	-90.74	202.8	1,649.6	3,044.6	2,989.4	55.23	55.129	
10,236.2	7,113.6	7,097.8	7,096.3	53.6	2.3	-90.74	202.8	1,649.6	3,075.1	3,019.2	55.88	55.030	
10,300.0	7,113.4	7,097.9	7,096.4	54.7	2.3	-90.74	202.8	1,649.6	3,129.2	3,072.1	57.03	54.866	
10,334.6	7,113.3	7,097.9	7,096.4	55.4	2.3	-90.74	202.8	1,649.6	3,158.7	3,101.0	57.66	54.780	
10,400.0	7,113.2	7,097.9	7,096.4	56.5	2.3	-90.74	202.8	1,649.6	3,214.7	3,155.8	58.85	54.628	
10,433.0	7,113.1	7,098.0	7,096.5	57.1	2.3	-90.74	202.8	1,649.6	3,243.1	3,183.6	59.45	54.553	
10,500.0	7,112.9	7,098.0	7,096.5	58.4	2.3	-90.75	202.8	1,649.6	3,301.0	3,240.3	60.67	54.411	
10,531.5	7,112.8	7,098.0	7,096.5	58.9	2.3	-90.75	202.8	1,649.6	3,328.3	3,267.0	61.24	54.347	
10,600.0	7,112.7	7,098.1	7,096.6	60.2	2.3	-90.75	202.8	1,649.6	3,388.0	3,325.5	62.49	54.214	
10,629.9	7,112.6	7,098.1	7,096.6	60.7	2.3	-90.75	202.8	1,649.6	3,414.2	3,351.1	63.04	54.158	
10,700.0	7,112.4	7,098.2	7,096.7	62.0	2.3	-90.75	202.8	1,649.6	3,475.8	3,411.4	64.33	54.034	
10,728.3	7,112.3	7,098.2	7,096.7	62.5	2.3	-90.75	202.8	1,649.6	3,500.7	3,435.9	64.85	53.985	
10,800.0	7,112.2	7,098.2	7,096.7	63.9	2.3	-90.75	202.8	1,649.6	3,564.1	3,498.0	66.16	53.869	
10,826.7	7,112.1	7,098.3	7,096.7	64.4	2.3	-90.75	202.8	1,649.6	3,587.9	3,521.2	66.66	53.827	
10,900.0	7,111.9	7,098.3	7,096.8	65.7	2.3	-90.75	202.8	1,649.6	3,653.1	3,585.1	68.01	53.718	
10,925.2	7,111.8	7,098.3	7,096.8	66.2	2.3	-90.76	202.8	1,649.6	3,675.6	3,607.2	68.47	53.682	
11,000.0	7,111.7	7,098.4	7,096.9	67.6	2.3	-90.76	202.8	1,649.6	3,742.7	3,672.8	69.85	53.580	
11,023.6	7,111.6	7,098.4	7,096.9	68.0	2.3	-90.76	202.8	1,649.6	3,763.9	3,693.6	70.29	53.549	
11,100.0	7,111.4	7,098.4	7,096.9	69.4	2.3	-90.76	202.8	1,649.6	3,832.7	3,761.0	71.70	53.453	
11,122.0	7,111.3	7,098.5	7,097.0	69.8	2.3	-90.76	202.8	1,649.6	3,852.7	3,780.5	72.11	53.427	
11,200.0	7,111.2	7,098.5	7,097.0	71.3	2.3	-90.76	202.8	1,649.6	3,923.3	3,849.7	73.56	53.337	
11,220.4	7,111.1	7,098.5	7,097.0	71.6	2.3	-90.76	202.8	1,649.6	3,941.9	3,867.9	73.94	53.314	
11,300.0	7,110.9	7,098.6	7,097.1	73.1	2.3	-90.76	202.8	1,649.6	4,014.3	3,938.9	75.41	53.230	
11,318.9	7,110.9	7,098.6	7,097.1	73.5	2.3	-90.76	202.8	1,649.6	4,031.5	3,955.7	75.77	53.210	
11,400.0	7,110.6	7,098.7	7,097.2	75.0	2.3	-90.77	202.8	1,649.6	4,105.7	4,028.4	77.28	53.131	
11,417.3	7,110.6	7,098.7	7,097.2	75.3	2.3	-90.77	202.8	1,649.6	4,121.6	4,044.0	77.60	53.114	
11,500.0	7,110.4	7,098.7	7,097.2	76.8	2.3	-90.77	202.8	1,649.6	4,197.5	4,118.4	79.14	53.039	
11,515.7	7,110.4	7,098.7	7,097.2	77.1	2.3	-90.77	202.8	1,649.6	4,212.0	4,132.5	79.43	53.026	
11,600.0	7,110.1	7,098.8	7,097.3	78.7	2.3	-90.77	202.8	1,649.6	4,289.7	4,208.7	81.01	52.955	
11,614.1	7,110.1	7,098.8	7,097.3	79.0	2.3	-90.77	202.8	1,649.6	4,302.8	4,221.5	81.27	52.944	
11,655.0	7,110.0	7,098.8	7,097.3	79.7	2.3	-90.77	202.8	1,649.6	4,340.6	4,258.5	82.03	52.912 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT BROWN 30-31 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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	51.46	406.2	510.0	652.7				
98.4	98.4	76.0	76.0	0.1	0.0	51.49	405.7	509.8	651.6	651.4	0.13	5,144.709	
100.0	100.0	77.8	77.8	0.1	0.0	51.49	405.7	509.8	651.6	651.4	0.13	5,035.861	
196.8	196.8	178.7	178.7	0.3	0.2	51.57	404.0	509.1	650.0	649.5	0.49	1,330.768	
200.0	200.0	181.9	181.9	0.3	0.2	51.57	403.9	509.0	649.9	649.4	0.50	1,297.537	
295.3	295.3	281.5	281.4	0.5	0.3	51.66	401.8	508.0	647.9	647.1	0.82	790.800	
300.0	300.0	286.4	286.4	0.5	0.3	51.67	401.6	508.0	647.8	647.0	0.83	776.322	
393.7	393.7	383.5	383.4	0.7	0.4	51.80	398.8	506.8	645.2	644.0	1.12	576.982	
400.0	400.0	390.0	389.9	0.8	0.4	51.81	398.6	506.7	645.0	643.8	1.14	567.220	
492.1	492.1	481.1	480.9	1.0	0.4	51.98	395.4	505.7	642.2	640.8	1.40	458.514	
500.0	500.0	488.8	488.6	1.0	0.4	51.99	395.1	505.6	641.9	640.5	1.42	451.138	
590.5	590.5	579.7	579.4	1.2	0.5	52.18	391.8	504.8	639.3	637.6	1.68	381.365	
600.0	600.0	589.2	588.9	1.2	0.5	52.20	391.5	504.7	639.0	637.3	1.70	375.291	
689.0	689.0	677.5	677.2	1.4	0.5	52.38	388.3	503.9	636.4	634.5	1.95	326.799	
700.0	700.0	688.4	688.1	1.4	0.6	52.41	387.9	503.8	636.1	634.1	1.98	321.640	
787.4	787.4	774.4	774.1	1.6	0.6	52.59	384.9	503.2	633.7	631.5	2.21	286.152	
800.0	800.0	786.8	786.5	1.7	0.6	52.61	384.5	503.1	633.4	631.1	2.25	281.668	
885.8	885.8	872.1	871.7	1.9	0.6	52.77	381.8	502.4	631.2	628.7	2.48	254.546	
900.0	900.0	886.2	885.8	1.9	0.7	52.79	381.3	502.3	630.9	628.3	2.52	250.551	
984.2	984.2	969.9	969.4	2.1	0.7	52.94	378.8	501.6	628.8	626.0	2.74	229.225	
1,000.0	1,000.0	985.5	985.0	2.1	0.7	52.97	378.3	501.5	628.4	625.6	2.79	225.629	
1,082.7	1,082.7	1,068.1	1,067.6	2.3	0.7	53.12	375.9	500.9	626.4	623.4	3.00	208.463	
1,100.0	1,100.0	1,085.5	1,084.9	2.3	0.7	53.15	375.3	500.8	626.0	623.0	3.05	205.182	
1,181.1	1,181.1	1,165.9	1,165.3	2.5	0.8	53.28	373.0	500.2	624.1	620.9	3.27	191.127	
1,200.0	1,200.0	1,184.6	1,184.0	2.6	0.8	53.31	372.5	500.0	623.7	620.4	3.32	188.121	
1,279.5	1,279.5	1,261.7	1,261.1	2.7	0.8	53.43	370.6	499.5	622.0	618.5	3.52	176.520	
1,300.0	1,300.0	1,281.5	1,280.9	2.8	0.8	53.45	370.1	499.3	621.7	618.1	3.58	173.773	
1,377.9	1,377.9	1,358.7	1,358.1	3.0	0.9	53.53	368.7	498.8	620.4	616.6	3.78	164.034	
1,400.0	1,400.0	1,380.7	1,380.1	3.0	0.9	53.55	368.3	498.6	620.0	616.2	3.84	161.466	
1,476.4	1,476.4	1,457.4	1,456.8	3.2	0.9	53.59	367.2	497.9	618.8	614.7	4.04	153.109	
1,500.0	1,500.0	1,481.2	1,480.5	3.2	0.9	53.60	366.9	497.7	618.4	614.3	4.10	150.684	
1,574.8	1,574.8	1,556.5	1,555.9	3.4	0.9	53.62	365.9	496.7	617.0	612.7	4.30	143.467	
1,600.0	1,600.0	1,581.9	1,581.3	3.5	0.9	53.62	365.6	496.3	616.6	612.2	4.37	141.179	
1,673.2	1,673.2	1,655.8	1,655.2	3.6	1.0	53.60	365.0	495.1	615.2	610.7	4.56	134.910	
1,700.0	1,700.0	1,682.9	1,682.2	3.7	1.0	53.58	364.9	494.5	614.7	610.1	4.63	132.743	
1,771.6	1,771.6	1,754.7	1,754.1	3.8	1.0	53.51	364.6	492.9	613.2	608.4	4.82	127.282	
1,800.0	1,800.0	1,783.1	1,782.4	3.9	1.0	53.47	364.6	492.2	612.7	607.8	4.89	125.239	
1,870.1	1,870.1	1,852.6	1,851.9	4.1	1.0	53.37	364.7	490.4	611.3	606.2	5.07	120.475	
1,900.0	1,900.0	1,882.2	1,881.5	4.1	1.0	53.32	364.7	489.7	610.7	605.6	5.15	118.551	
1,968.5	1,968.5	1,949.4	1,948.7	4.3	1.1	53.22	364.8	488.1	609.5	604.2	5.33	114.390	
2,000.0	2,000.0	1,980.3	1,979.5	4.4	1.1	53.18	364.9	487.4	609.0	603.6	5.41	112.579	
2,066.9	2,066.9	2,046.0	2,045.3	4.5	1.1	53.10	365.0	486.2	608.0	602.4	5.58	108.927	
2,100.0	2,100.0	2,078.6	2,077.8	4.6	1.1	53.07	365.0	485.6	607.6	601.9	5.67	107.211	
2,150.0	2,150.0	2,128.3	2,127.5	4.7	1.1	53.02	365.0	484.8	606.9	601.1	5.80	104.721	
2,165.3	2,165.3	2,143.7	2,142.9	4.7	1.1	52.77	365.1	484.6	606.7	600.9	5.84	103.977	
2,200.0	2,200.0	2,178.4	2,177.6	4.8	1.1	52.78	365.1	484.0	606.0	600.1	5.92	102.291	
2,263.8	2,263.7	2,242.7	2,241.9	5.0	1.1	52.88	365.2	482.9	604.1	598.0	6.09	99.208	
2,300.0	2,299.9	2,279.3	2,278.5	5.0	1.2	52.99	365.1	482.3	602.6	596.4	6.18	97.463	
2,362.2	2,362.0	2,341.9	2,341.1	5.2	1.2	53.30	365.0	481.2	599.3	593.0	6.34	94.468	
2,400.0	2,399.7	2,379.8	2,379.0	5.3	1.2	53.55	364.9	480.6	596.9	590.5	6.44	92.658	
2,460.6	2,460.0	2,440.2	2,439.4	5.4	1.2	54.03	364.7	479.5	592.5	585.9	6.60	89.750	
2,500.0	2,499.1	2,479.3	2,478.4	5.5	1.2	54.41	364.6	478.9	589.2	582.5	6.70	87.883	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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
2,559.0	2,557.7	2,538.0	2,537.2	5.6	1.2	55.08	364.4	477.8	583.7	576.8	6.86	85.053	
2,600.0	2,598.2	2,578.8	2,578.0	5.7	1.3	55.62	364.3	477.1	579.5	572.5	6.97	83.112	
2,657.5	2,654.8	2,635.6	2,634.8	5.9	1.3	56.46	364.1	476.1	573.1	566.0	7.13	80.337	
2,700.0	2,696.6	2,677.5	2,676.6	6.0	1.3	57.17	364.0	475.3	568.1	560.8	7.25	78.316	
2,755.9	2,751.4	2,733.7	2,732.8	6.1	1.3	58.22	363.7	474.2	560.9	553.5	7.42	75.577	
2,800.0	2,794.4	2,778.6	2,777.7	6.2	1.3	59.16	363.5	473.2	554.9	547.3	7.56	73.435	
2,854.3	2,847.3	2,832.4	2,831.5	6.4	1.3	60.41	363.0	471.8	546.9	539.2	7.73	70.711	
2,888.8	2,880.6	2,865.9	2,865.0	6.5	1.4	61.26	362.8	471.0	541.7	533.9	7.85	69.024	
2,900.0	2,891.5	2,876.8	2,875.9	6.6	1.4	61.51	362.7	470.7	540.0	532.1	7.89	68.469	
2,952.7	2,942.5	2,928.2	2,927.3	6.7	1.4	62.74	362.3	469.3	532.1	524.0	8.08	65.897	
3,000.0	2,988.2	2,974.5	2,973.5	6.9	1.4	63.87	361.9	468.0	525.2	516.9	8.25	63.695	
3,051.2	3,037.6	3,024.5	3,023.5	7.1	1.4	65.12	361.4	466.6	517.8	509.4	8.44	61.357	
3,100.0	3,084.9	3,072.1	3,071.1	7.3	1.4	66.35	360.9	465.2	511.0	502.4	8.63	59.234	
3,149.6	3,132.8	3,120.7	3,119.6	7.5	1.4	67.64	360.4	463.7	504.3	495.5	8.83	57.129	
3,200.0	3,181.5	3,170.1	3,169.1	7.6	1.5	68.98	359.8	462.1	497.6	488.6	9.03	55.097	
3,248.0	3,228.0	3,217.8	3,216.7	7.8	1.5	70.31	359.2	460.5	491.5	482.2	9.24	53.214	
3,300.0	3,278.2	3,270.3	3,269.1	8.0	1.5	71.80	358.5	458.4	484.9	475.4	9.46	51.263	
3,346.4	3,323.2	3,315.8	3,314.6	8.2	1.5	73.12	358.0	456.5	479.1	469.4	9.66	49.574	
3,400.0	3,374.9	3,365.6	3,364.3	8.5	1.5	74.61	357.2	454.5	472.8	462.9	9.90	47.763	
3,444.9	3,418.3	3,407.3	3,406.0	8.6	1.5	75.91	356.5	453.0	468.0	457.9	10.10	46.328	
3,500.0	3,471.6	3,458.8	3,457.5	8.9	1.6	77.55	355.6	451.3	462.6	452.2	10.35	44.699	
3,543.3	3,513.5	3,500.0	3,498.7	9.1	1.6	78.89	354.9	450.1	458.8	448.2	10.55	43.494	
3,600.0	3,568.3	3,552.2	3,550.8	9.3	1.6	80.61	354.0	448.7	454.4	443.6	10.81	42.041	
3,641.7	3,608.7	3,591.1	3,589.8	9.5	1.6	81.90	353.4	447.7	451.6	440.6	11.00	41.043	
3,700.0	3,665.0	3,647.3	3,645.9	9.7	1.6	83.79	352.7	446.4	448.2	436.9	11.27	39.755	
3,740.1	3,703.8	3,686.2	3,684.8	9.9	1.6	85.11	352.2	445.5	446.2	434.7	11.46	38.920	
3,800.0	3,761.7	3,744.1	3,742.7	10.2	1.7	87.09	351.4	444.2	443.6	431.8	11.74	37.771	
3,838.6	3,799.0	3,781.3	3,779.9	10.4	1.7	88.37	350.9	443.3	442.2	430.3	11.93	37.080	
3,900.0	3,858.4	3,840.6	3,839.2	10.7	1.7	90.43	350.2	441.8	440.5	428.2	12.21	36.074	
3,937.0	3,894.2	3,876.4	3,874.9	10.8	1.7	91.68	349.7	440.9	439.7	427.3	12.38	35.514	
4,000.0	3,955.1	3,936.6	3,935.2	11.1	1.7	93.79	348.9	439.5	438.9	426.3	12.67	34.649	
4,033.4	3,987.4	3,968.5	3,967.0	11.3	1.7	94.90	348.5	438.7	438.8	426.0	12.82	34.231	
4,035.4	3,989.3	3,970.4	3,968.9	11.3	1.7	94.97	348.5	438.7	438.8	426.0	12.83	34.207	
4,100.0	4,051.8	4,031.4	4,029.9	11.6	1.8	97.09	347.9	437.4	439.3	426.2	13.12	33.490	
4,133.8	4,084.5	4,063.1	4,061.6	11.7	1.8	98.18	347.6	436.8	439.8	426.6	13.27	33.156	
4,200.0	4,148.5	4,126.2	4,124.7	12.1	1.8	100.31	347.2	435.8	441.7	428.1	13.55	32.589	
4,232.3	4,179.7	4,157.7	4,156.2	12.2	1.8	101.37	347.0	435.3	442.8	429.1	13.69	32.342	
4,300.0	4,245.2	4,223.5	4,221.9	12.5	1.8	103.54	346.8	434.2	445.6	431.6	13.97	31.886	
4,330.7	4,274.9	4,253.1	4,251.5	12.7	1.8	104.50	346.7	433.7	447.1	433.0	14.10	31.705	
4,400.0	4,341.9	4,320.0	4,318.4	13.0	1.8	106.65	346.7	432.7	450.9	436.5	14.38	31.356	
4,429.1	4,370.0	4,348.2	4,346.7	13.1	1.9	107.54	346.7	432.3	452.7	438.2	14.50	31.231	
4,500.0	4,438.6	4,416.9	4,415.3	13.5	1.9	109.67	346.8	431.2	457.6	442.8	14.77	30.979	
4,527.5	4,465.2	4,443.5	4,441.9	13.6	1.9	110.47	346.8	430.8	459.7	444.8	14.88	30.899	
4,600.0	4,535.3	4,513.5	4,512.0	14.0	1.9	112.55	347.1	429.9	465.6	450.4	15.15	30.737	
4,626.0	4,560.4	4,538.8	4,537.2	14.1	1.9	113.28	347.3	429.5	467.8	452.6	15.24	30.693	
4,700.0	4,631.9	4,610.6	4,609.0	14.5	1.9	115.32	347.7	428.6	474.7	459.2	15.51	30.610	
4,724.4	4,655.5	4,633.9	4,632.3	14.6	1.9	115.97	347.9	428.3	477.1	461.5	15.59	30.595	
4,800.0	4,728.6	4,706.4	4,704.8	15.0	1.9	117.91	348.6	427.5	485.0	469.2	15.86	30.589	
4,822.8	4,750.7	4,728.5	4,726.9	15.1	1.9	118.49	348.8	427.3	487.6	471.6	15.93	30.598	
4,900.0	4,825.3	4,803.5	4,801.9	15.4	2.0	120.42	349.5	426.6	496.5	480.3	16.19	30.662	
4,921.2	4,845.9	4,823.9	4,822.3	15.6	2.0	120.93	349.6	426.4	499.0	482.8	16.26	30.687	
5,000.0	4,922.0	4,899.5	4,897.8	15.9	2.0	122.79	350.3	425.7	508.9	492.4	16.52	30.814	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT BROWN 30-31 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,019.7	4,941.0	4,918.4	4,916.8	16.0	2.0	123.24	350.4	425.6	511.5	494.9	16.58	30.853	
5,100.0	5,018.7	4,995.8	4,994.2	16.4	2.0	125.05	351.1	425.0	522.4	505.5	16.83	31.039	
5,118.1	5,036.2	5,013.1	5,011.5	16.5	2.0	125.45	351.2	424.8	524.9	508.0	16.89	31.087	
5,200.0	5,115.4	5,091.2	5,089.6	16.9	2.0	127.20	351.6	424.3	536.8	519.7	17.13	31.330	
5,216.5	5,131.4	5,107.1	5,105.5	17.0	2.0	127.55	351.7	424.2	539.3	522.1	17.18	31.385	
5,300.0	5,212.1	5,188.1	5,186.4	17.4	2.0	129.28	352.0	423.6	552.2	534.7	17.43	31.683	
5,314.9	5,226.6	5,202.5	5,200.9	17.5	2.0	129.58	352.0	423.5	554.5	537.0	17.47	31.739	
5,400.0	5,308.8	5,284.6	5,283.0	17.9	2.1	131.26	352.2	422.9	568.2	550.5	17.71	32.078	
5,413.4	5,321.7	5,297.5	5,295.9	18.0	2.1	131.51	352.3	422.8	570.4	552.6	17.75	32.134	
5,500.0	5,405.5	5,380.6	5,379.0	18.4	2.1	133.13	352.3	422.1	585.0	567.0	17.99	32.517	
5,511.8	5,416.9	5,391.9	5,390.3	18.5	2.1	133.35	352.3	422.0	587.0	569.0	18.02	32.571	
5,600.0	5,502.2	5,476.3	5,474.6	18.9	2.1	134.93	352.1	421.2	602.5	584.2	18.26	32.998	
5,610.2	5,512.1	5,486.0	5,484.4	19.0	2.1	135.11	352.1	421.1	604.3	586.0	18.29	33.050	
5,700.0	5,598.9	5,571.6	5,570.0	19.4	2.2	136.65	351.5	420.1	620.8	602.3	18.52	33.521	
5,708.6	5,607.2	5,579.8	5,578.2	19.5	2.2	136.80	351.5	420.0	622.4	603.8	18.54	33.568	
5,745.8	5,643.2	5,615.1	5,613.4	19.7	2.2	137.42	351.1	419.6	629.4	610.8	18.64	33.774	
5,800.0	5,695.7	5,666.4	5,664.7	19.9	2.2	138.43	350.4	418.8	639.5	620.8	18.71	34.182	
5,807.1	5,702.6	5,673.1	5,671.4	19.9	2.2	138.56	350.3	418.7	640.7	622.0	18.71	34.239	
5,900.0	5,793.2	5,763.3	5,761.6	20.3	2.2	140.09	348.8	417.3	656.5	637.7	18.79	34.937	
5,905.5	5,798.6	5,768.8	5,767.1	20.3	2.2	140.17	348.8	417.2	657.4	638.6	18.80	34.976	
6,000.0	5,891.5	5,862.1	5,860.4	20.6	2.3	141.40	347.9	416.5	671.2	652.3	18.88	35.558	
6,003.9	5,895.4	5,866.0	5,864.3	20.6	2.3	141.44	347.9	416.5	671.7	652.8	18.88	35.580	
6,100.0	5,990.4	5,961.0	5,959.3	20.9	2.3	142.37	347.6	416.3	683.3	664.3	18.96	36.036	
6,102.3	5,992.7	5,963.3	5,961.6	20.9	2.3	142.39	347.6	416.3	683.5	664.6	18.96	36.046	
6,200.0	6,089.7	6,060.5	6,058.8	21.1	2.3	143.07	347.4	416.3	692.7	673.7	19.05	36.370	
6,200.8	6,090.4	6,061.3	6,059.6	21.1	2.3	143.08	347.4	416.3	692.8	673.8	19.05	36.373	
6,299.2	6,188.5	6,159.3	6,157.6	21.4	2.3	143.54	347.4	416.5	699.4	680.2	19.14	36.546	
6,300.0	6,189.3	6,160.1	6,158.4	21.4	2.3	143.55	347.4	416.5	699.4	680.3	19.14	36.547	
6,397.6	6,286.8	6,257.1	6,255.4	21.5	2.3	143.81	347.3	416.6	703.3	684.1	19.23	36.568	
6,400.0	6,289.2	6,259.5	6,257.8	21.5	2.3	143.81	347.3	416.6	703.4	684.1	19.24	36.566	
6,484.6	6,373.8	6,344.9	6,343.2	21.6	2.3	144.12	347.3	416.8	704.5	685.2	19.32	36.458	
6,496.0	6,385.3	6,356.6	6,354.9	21.7	2.3	144.12	347.3	416.8	704.5	685.2	19.34	36.423	
6,500.0	6,389.2	6,360.6	6,358.9	21.7	2.3	144.12	347.3	416.8	704.6	685.2	19.35	36.411	
6,514.6	6,403.8	6,375.5	6,373.8	21.7	2.3	144.12	347.3	416.9	704.6	685.2	19.38	36.363	
6,550.0	6,439.2	6,411.5	6,409.8	21.7	2.3	-35.96	347.3	416.9	703.8	684.4	19.40	36.287	
6,594.5	6,483.5	6,455.8	6,454.1	21.7	2.3	-36.27	347.3	416.9	700.9	681.4	19.46	36.018	
6,600.0	6,489.0	6,461.3	6,459.6	21.7	2.3	-36.33	347.3	416.9	700.4	680.9	19.47	35.969	
6,650.0	6,538.4	6,510.7	6,509.0	21.7	2.3	-37.01	347.4	416.9	694.2	674.6	19.60	35.419	
6,692.9	6,580.3	6,552.5	6,550.8	21.6	2.3	-37.85	347.4	416.9	686.6	666.9	19.73	34.795	
6,700.0	6,587.1	6,559.4	6,557.7	21.6	2.3	-38.01	347.4	416.9	685.2	665.5	19.76	34.676	
6,750.0	6,635.0	6,607.3	6,605.6	21.5	2.3	-39.35	347.4	416.8	673.7	653.7	19.95	33.763	
6,791.3	6,673.7	6,646.9	6,645.2	21.4	2.3	-40.75	347.4	416.7	662.3	642.1	20.13	32.893	
6,800.0	6,681.7	6,655.1	6,653.4	21.4	2.3	-41.08	347.5	416.7	659.6	639.5	20.18	32.696	
6,850.0	6,727.1	6,701.4	6,699.7	21.2	2.3	-43.22	347.5	416.5	643.3	622.8	20.42	31.508	
6,889.7	6,762.0	6,735.7	6,734.0	21.1	2.3	-45.18	347.6	416.4	628.7	608.1	20.61	30.506	
6,900.0	6,770.9	6,744.3	6,742.6	21.0	2.3	-45.73	347.6	416.3	624.8	604.1	20.66	30.237	
6,950.0	6,812.9	6,785.6	6,783.9	20.8	2.3	-48.68	347.5	416.2	604.6	583.7	20.92	28.904	
6,988.2	6,843.6	6,816.3	6,814.6	20.6	2.3	-51.26	347.5	416.1	588.2	567.1	21.11	27.862	
7,000.0	6,852.9	6,825.7	6,824.0	20.6	2.3	-52.13	347.5	416.0	583.0	561.8	21.17	27.536	
7,050.0	6,890.7	6,864.0	6,862.3	20.3	2.3	-56.05	347.4	415.8	560.2	538.8	21.40	26.176	
7,086.6	6,916.9	6,890.6	6,888.9	20.1	2.3	-59.18	347.4	415.7	543.2	521.6	21.54	25.216	
7,100.0	6,926.2	6,900.0	6,898.3	20.1	2.3	-60.37	347.4	415.6	536.9	515.3	21.58	24.875	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,150.0	6,959.1	6,932.6	6,930.9	19.8	2.4	-64.94	347.3	415.4	513.4	491.7	21.68	23.684	
7,185.0	6,980.5	6,953.8	6,952.1	19.6	2.4	-68.23	347.3	415.3	497.3	475.6	21.69	22.931	
7,200.0	6,989.3	6,962.5	6,960.8	19.5	2.4	-69.64	347.3	415.3	490.5	468.8	21.67	22.633	
7,250.0	7,016.6	6,989.6	6,987.9	19.3	2.4	-74.31	347.2	415.2	469.0	447.4	21.57	21.742	
7,283.4	7,033.3	7,006.3	7,004.6	19.1	2.4	-77.32	347.2	415.1	455.7	434.2	21.46	21.236	
7,300.0	7,041.0	7,014.2	7,012.5	19.1	2.4	-78.77	347.2	415.1	449.5	428.1	21.39	21.016	
7,350.0	7,062.2	7,035.8	7,034.1	18.8	2.4	-82.79	347.1	415.0	433.1	412.0	21.18	20.452	
7,381.9	7,074.1	7,047.9	7,046.2	18.7	2.4	-85.03	347.1	414.9	424.7	403.6	21.05	20.175	
7,400.0	7,080.3	7,054.1	7,052.4	18.7	2.4	-86.17	347.1	414.9	420.7	399.7	20.98	20.055	
7,450.0	7,095.0	7,069.1	7,067.4	18.5	2.4	-88.77	347.1	414.8	413.0	392.2	20.81	19.846	
7,480.3	7,102.4	7,076.4	7,074.7	18.4	2.4	-89.93	347.1	414.7	411.0	390.3	20.74	19.819 SF	
7,493.8	7,105.2	7,079.3	7,077.6	18.4	2.4	-90.34	347.1	414.7	410.8	390.1	20.71	19.839 CC, ES	
7,500.0	7,106.4	7,080.5	7,078.8	18.4	2.4	-90.50	347.1	414.7	410.9	390.2	20.69	19.855	
7,550.0	7,114.4	7,088.5	7,086.8	18.3	2.4	-91.31	347.2	414.7	414.6	393.9	20.62	20.104	
7,578.7	7,117.4	7,091.5	7,089.8	18.3	2.4	-91.34	347.2	414.7	419.3	398.7	20.60	20.354	
7,600.0	7,118.9	7,093.0	7,091.3	18.3	2.4	-91.15	347.2	414.6	424.1	403.5	20.59	20.598	
7,641.3	7,120.0	7,094.1	7,092.4	18.3	2.4	-90.28	347.2	414.6	436.3	415.7	20.60	21.178	
7,677.1	7,119.9	7,093.9	7,092.2	18.3	2.4	-90.26	347.2	414.6	449.6	428.9	20.64	21.781	
7,700.0	7,119.9	7,093.9	7,092.2	18.4	2.4	-90.25	347.2	414.6	459.4	438.7	20.67	22.227	
7,775.6	7,119.7	7,093.6	7,091.9	18.6	2.4	-90.21	347.2	414.6	497.8	476.9	20.87	23.850	
7,800.0	7,119.6	7,093.5	7,091.8	18.6	2.4	-90.20	347.2	414.6	512.0	491.1	20.94	24.453	
7,874.0	7,119.4	7,093.2	7,091.5	19.0	2.4	-90.16	347.2	414.6	559.3	538.0	21.28	26.285	
7,900.0	7,119.4	7,093.1	7,091.4	19.1	2.4	-90.15	347.2	414.6	577.3	555.9	21.40	26.977	
7,972.4	7,119.2	7,092.9	7,091.2	19.6	2.4	-90.12	347.2	414.6	630.3	608.4	21.86	28.831	
8,000.0	7,119.1	7,092.8	7,091.1	19.7	2.4	-90.10	347.2	414.6	651.5	629.4	22.04	29.561	
8,070.8	7,118.9	7,092.5	7,090.8	20.3	2.4	-90.07	347.2	414.6	707.9	685.3	22.60	31.316	
8,100.0	7,118.9	7,092.4	7,090.7	20.5	2.4	-90.05	347.2	414.6	731.8	709.0	22.84	32.044	
8,169.3	7,118.7	7,092.2	7,090.5	21.2	2.4	-90.02	347.2	414.6	790.1	766.6	23.49	33.636	
8,200.0	7,118.6	7,092.1	7,090.4	21.5	2.4	-90.00	347.2	414.6	816.5	792.7	23.78	34.337	
8,267.7	7,118.5	7,091.9	7,090.2	22.2	2.4	-89.97	347.2	414.6	875.7	851.2	24.50	35.741	
8,300.0	7,118.4	7,091.7	7,090.0	22.5	2.4	-89.96	347.2	414.6	904.3	879.5	24.84	36.399	
8,366.1	7,118.2	7,091.5	7,089.8	23.3	2.4	-89.92	347.2	414.7	963.7	938.1	25.62	37.614	
8,400.0	7,118.1	7,091.4	7,089.7	23.7	2.4	-89.91	347.2	414.7	994.4	968.4	26.02	38.220	
8,464.5	7,118.0	7,091.2	7,089.5	24.5	2.4	-89.88	347.2	414.7	1,053.6	1,026.7	26.84	39.259	
8,500.0	7,117.9	7,091.1	7,089.4	25.0	2.4	-89.86	347.2	414.7	1,086.3	1,059.0	27.29	39.813	
8,563.0	7,117.7	7,090.8	7,089.1	25.8	2.4	-89.83	347.2	414.7	1,144.8	1,116.7	28.13	40.694	
8,600.0	7,117.6	7,090.7	7,089.0	26.3	2.4	-89.81	347.2	414.7	1,179.5	1,150.9	28.63	41.195	
8,661.4	7,117.5	7,090.5	7,088.8	27.2	2.4	-89.78	347.2	414.7	1,237.2	1,207.7	29.50	41.941	
8,700.0	7,117.4	7,090.4	7,088.7	27.7	2.4	-89.76	347.2	414.7	1,273.7	1,243.7	30.05	42.393	
8,759.8	7,117.2	7,090.2	7,088.5	28.6	2.4	-89.74	347.2	414.7	1,330.5	1,299.5	30.93	43.022	
8,800.0	7,117.1	7,090.0	7,088.3	29.2	2.4	-89.72	347.2	414.7	1,368.7	1,337.2	31.52	43.429	
8,858.2	7,117.0	7,089.8	7,088.1	30.1	2.4	-89.69	347.2	414.7	1,424.4	1,392.0	32.40	43.959	
8,900.0	7,116.9	7,089.7	7,088.0	30.7	2.4	-89.67	347.2	414.7	1,464.4	1,431.4	33.04	44.326	
8,956.7	7,116.8	7,089.5	7,087.8	31.6	2.4	-89.64	347.2	414.7	1,518.9	1,485.0	33.92	44.774	
9,000.0	7,116.7	7,089.4	7,087.7	32.3	2.4	-89.62	347.2	414.7	1,560.7	1,526.1	34.60	45.104	
9,055.1	7,116.5	7,089.2	7,087.5	33.2	2.4	-89.60	347.2	414.7	1,613.9	1,578.4	35.48	45.483	
9,100.0	7,116.4	7,089.0	7,087.3	33.9	2.4	-89.57	347.2	414.7	1,657.4	1,621.2	36.20	45.780	
9,153.5	7,116.3	7,088.9	7,087.2	34.8	2.4	-89.55	347.2	414.7	1,709.3	1,672.2	37.08	46.101	
9,200.0	7,116.2	7,088.7	7,087.0	35.5	2.4	-89.53	347.2	414.7	1,754.4	1,716.6	37.83	46.370	
9,251.9	7,116.0	7,088.5	7,086.8	36.4	2.4	-89.50	347.2	414.7	1,805.0	1,766.3	38.70	46.643	
9,300.0	7,115.9	7,088.4	7,086.7	37.2	2.4	-89.48	347.2	414.7	1,851.8	1,812.3	39.49	46.887	
9,350.4	7,115.8	7,088.2	7,086.5	38.0	2.4	-89.46	347.2	414.7	1,900.9	1,860.6	40.34	47.120	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	7,115.7	7,088.1	7,086.4	38.9	2.4	-89.44	347.1	414.7	1,949.4	1,908.2	41.18	47.341	
9,448.8	7,115.5	7,087.9	7,086.2	39.7	2.4	-89.41	347.1	414.7	1,997.1	1,955.1	42.01	47.539	
9,500.0	7,115.4	7,087.7	7,086.0	40.6	2.4	-89.39	347.1	414.7	2,047.3	2,004.4	42.88	47.741	
9,547.2	7,115.3	7,087.6	7,085.9	41.4	2.4	-89.37	347.1	414.7	2,093.6	2,049.9	43.70	47.911	
9,600.0	7,115.2	7,087.4	7,085.7	42.3	2.4	-89.34	347.1	414.7	2,145.3	2,100.7	44.61	48.095	
9,645.6	7,115.1	7,087.3	7,085.6	43.1	2.4	-89.32	347.1	414.7	2,190.2	2,144.8	45.40	48.241	
9,700.0	7,114.9	7,087.1	7,085.4	44.0	2.4	-89.30	347.1	414.7	2,243.6	2,197.2	46.35	48.409	
9,744.1	7,114.8	7,086.9	7,085.2	44.8	2.4	-89.28	347.1	414.7	2,286.9	2,239.8	47.12	48.535	
9,800.0	7,114.7	7,086.8	7,085.1	45.8	2.4	-89.25	347.1	414.7	2,341.9	2,293.8	48.10	48.689	
9,842.5	7,114.6	7,086.6	7,084.9	46.5	2.4	-89.23	347.1	414.7	2,383.8	2,334.9	48.85	48.797	
9,900.0	7,114.4	7,086.4	7,084.7	47.6	2.4	-89.21	347.1	414.7	2,440.5	2,390.6	49.87	48.939	
9,940.9	7,114.3	7,086.3	7,084.6	48.3	2.4	-89.19	347.1	414.7	2,480.8	2,430.2	50.59	49.033	
10,000.0	7,114.2	7,086.1	7,084.4	49.3	2.4	-89.16	347.1	414.7	2,539.1	2,487.4	51.65	49.164	
10,039.3	7,114.1	7,086.0	7,084.3	50.0	2.4	-89.15	347.1	414.7	2,577.9	2,525.6	52.35	49.245	
10,100.0	7,113.9	7,085.8	7,084.1	51.1	2.4	-89.12	347.1	414.7	2,637.8	2,584.4	53.43	49.366	
10,137.8	7,113.8	7,085.7	7,084.0	51.8	2.4	-89.10	347.1	414.7	2,675.1	2,621.0	54.11	49.436	
10,200.0	7,113.7	7,085.5	7,083.8	52.9	2.4	-89.07	347.1	414.7	2,736.6	2,681.4	55.23	49.549	
10,236.2	7,113.6	7,085.4	7,083.7	53.6	2.4	-89.06	347.1	414.7	2,772.4	2,716.6	55.89	49.610	
10,300.0	7,113.4	7,085.2	7,083.5	54.7	2.4	-89.03	347.1	414.7	2,835.6	2,778.5	57.04	49.714	
10,334.6	7,113.3	7,085.1	7,083.4	55.4	2.4	-89.01	347.1	414.7	2,869.8	2,812.1	57.67	49.767	
10,400.0	7,113.2	7,084.9	7,083.2	56.5	2.4	-88.99	347.1	414.7	2,934.5	2,875.7	58.85	49.864	
10,433.0	7,113.1	7,084.8	7,083.1	57.1	2.4	-88.97	347.1	414.7	2,967.3	2,907.8	59.45	49.910	
10,500.0	7,112.9	7,084.6	7,082.9	58.4	2.4	-88.94	347.1	414.7	3,033.6	2,972.9	60.67	50.000	
10,531.5	7,112.8	7,084.5	7,082.8	58.9	2.4	-88.93	347.1	414.7	3,064.8	3,003.5	61.25	50.040	
10,600.0	7,112.7	7,084.3	7,082.6	60.2	2.4	-88.90	347.1	414.7	3,132.7	3,070.2	62.50	50.125	
10,629.9	7,112.6	7,084.2	7,082.5	60.7	2.4	-88.89	347.1	414.7	3,162.3	3,099.3	63.05	50.160	
10,700.0	7,112.4	7,084.0	7,082.3	62.0	2.4	-88.85	347.1	414.7	3,231.8	3,167.5	64.33	50.239	
10,728.3	7,112.3	7,083.9	7,082.2	62.5	2.4	-88.84	347.1	414.7	3,259.9	3,195.1	64.85	50.269	
10,800.0	7,112.2	7,083.7	7,082.0	63.9	2.4	-88.81	347.1	414.7	3,331.1	3,264.9	66.17	50.343	
10,826.7	7,112.1	7,083.6	7,081.9	64.4	2.4	-88.80	347.1	414.7	3,357.6	3,290.9	66.66	50.370	
10,900.0	7,111.9	7,083.4	7,081.7	65.7	2.4	-88.77	347.1	414.7	3,430.3	3,362.3	68.01	50.440	
10,925.2	7,111.8	7,083.3	7,081.6	66.2	2.4	-88.76	347.1	414.7	3,455.3	3,386.8	68.47	50.462	
11,000.0	7,111.7	7,083.1	7,081.4	67.6	2.4	-88.73	347.1	414.7	3,529.6	3,459.8	69.85	50.528	
11,023.6	7,111.6	7,083.0	7,081.3	68.0	2.4	-88.72	347.1	414.7	3,553.1	3,482.8	70.29	50.548	
11,100.0	7,111.4	7,082.8	7,081.1	69.4	2.4	-88.68	347.1	414.7	3,629.0	3,557.3	71.70	50.610	
11,122.0	7,111.3	7,082.7	7,081.0	69.8	2.4	-88.67	347.1	414.7	3,650.8	3,578.7	72.11	50.627	
11,200.0	7,111.2	7,082.5	7,080.8	71.3	2.4	-88.64	347.1	414.7	3,728.3	3,654.8	73.56	50.685	
11,220.4	7,111.1	7,082.4	7,080.7	71.6	2.4	-88.63	347.1	414.7	3,748.7	3,674.7	73.94	50.700	
11,300.0	7,110.9	7,082.2	7,080.5	73.1	2.4	-88.60	347.1	414.7	3,827.7	3,752.3	75.42	50.755	
11,318.9	7,110.9	7,082.1	7,080.4	73.5	2.4	-88.59	347.1	414.7	3,846.5	3,770.7	75.77	50.768	
11,400.0	7,110.6	7,081.9	7,080.2	75.0	2.4	-88.56	347.1	414.7	3,927.2	3,849.9	77.28	50.820	
11,417.3	7,110.6	7,081.8	7,080.1	75.3	2.4	-88.55	347.1	414.7	3,944.4	3,866.8	77.60	50.831	
11,500.0	7,110.4	7,081.6	7,079.9	76.8	2.4	-88.51	347.1	414.7	4,026.6	3,947.5	79.14	50.881	
11,515.7	7,110.4	7,081.5	7,079.8	77.1	2.4	-88.51	347.1	414.7	4,042.3	3,962.9	79.43	50.890	
11,600.0	7,110.1	7,081.3	7,079.6	78.7	2.4	-88.47	347.1	414.7	4,126.1	4,045.1	81.00	50.937	
11,614.1	7,110.1	7,081.3	7,079.5	79.0	2.4	-88.47	347.1	414.7	4,140.2	4,058.9	81.27	50.945	
11,655.0	7,110.0	7,081.1	7,079.4	79.7	2.4	-88.45	347.1	414.7	4,180.9	4,098.9	82.03	50.967	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	144.08	-2,381.8	1,725.4	2,941.1				
98.4	98.4	149.4	149.3	0.1	0.1	144.09	-2,380.3	1,723.7	2,939.7	2,939.5	0.22	N/A	
100.0	100.0	151.2	151.2	0.1	0.1	144.09	-2,380.3	1,723.6	2,939.6	2,939.4	0.23	N/A	
196.8	196.8	256.8	256.8	0.3	0.3	144.10	-2,378.3	1,721.7	2,937.1	2,936.6	0.58	5,089.643	
200.0	200.0	260.1	260.0	0.3	0.3	144.10	-2,378.2	1,721.6	2,937.1	2,936.5	0.59	5,002.704	
295.3	295.3	355.5	355.4	0.5	0.4	144.11	-2,376.5	1,719.6	2,934.5	2,933.6	0.88	3,346.464	
300.0	300.0	360.2	360.1	0.5	0.4	144.11	-2,376.4	1,719.5	2,934.3	2,933.4	0.89	3,293.990	
393.7	393.7	447.6	447.4	0.7	0.4	144.12	-2,374.8	1,717.9	2,931.9	2,930.7	1.16	2,529.358	
400.0	400.0	453.2	453.1	0.8	0.4	144.12	-2,374.7	1,717.8	2,931.7	2,930.5	1.18	2,491.319	
492.1	492.1	539.3	539.1	1.0	0.5	144.13	-2,373.3	1,716.2	2,929.6	2,928.2	1.43	2,041.853	
500.0	500.0	547.1	546.9	1.0	0.5	144.13	-2,373.2	1,716.1	2,929.4	2,928.0	1.46	2,010.805	
590.5	590.5	634.8	634.6	1.2	0.5	144.14	-2,372.0	1,714.4	2,927.4	2,925.7	1.71	1,713.925	
600.0	600.0	643.7	643.5	1.2	0.5	144.14	-2,371.9	1,714.3	2,927.2	2,925.5	1.73	1,688.281	
689.0	689.0	727.9	727.7	1.4	0.6	144.16	-2,371.0	1,712.5	2,925.4	2,923.4	1.98	1,480.180	
700.0	700.0	738.4	738.2	1.4	0.6	144.16	-2,370.9	1,712.3	2,925.2	2,923.2	2.01	1,458.019	
787.4	787.4	823.7	823.4	1.6	0.6	144.18	-2,370.1	1,710.8	2,923.5	2,921.3	2.24	1,302.928	
800.0	800.0	836.7	836.5	1.7	0.6	144.18	-2,369.9	1,710.5	2,923.3	2,921.0	2.28	1,283.110	
885.8	885.8	925.4	925.2	1.9	0.7	144.20	-2,369.0	1,708.9	2,921.6	2,919.1	2.51	1,162.931	
900.0	900.0	939.9	939.6	1.9	0.7	144.20	-2,368.8	1,708.6	2,921.3	2,918.8	2.55	1,145.352	
984.2	984.2	1,025.8	1,025.5	2.1	0.7	144.22	-2,368.1	1,706.7	2,919.6	2,916.8	2.78	1,051.035	
1,000.0	1,000.0	1,041.8	1,041.5	2.1	0.7	144.22	-2,367.9	1,706.3	2,919.3	2,916.4	2.82	1,035.162	
1,082.7	1,082.7	1,124.0	1,123.7	2.3	0.8	144.24	-2,367.1	1,704.5	2,917.5	2,914.5	3.04	959.451	
1,100.0	1,100.0	1,140.3	1,140.0	2.3	0.8	144.25	-2,366.9	1,704.1	2,917.2	2,914.1	3.09	945.138	
1,181.1	1,181.1	1,215.9	1,215.5	2.5	0.8	144.27	-2,366.3	1,702.5	2,915.6	2,912.3	3.30	883.630	
1,200.0	1,200.0	1,232.8	1,232.5	2.6	0.8	144.27	-2,366.2	1,702.1	2,915.3	2,911.9	3.35	870.596	
1,279.5	1,279.5	1,304.6	1,304.2	2.7	0.8	144.29	-2,365.9	1,700.6	2,914.0	2,910.4	3.55	819.696	
1,300.0	1,300.0	1,325.2	1,324.8	2.8	0.8	144.30	-2,365.8	1,700.2	2,913.7	2,910.1	3.61	807.408	
1,377.9	1,377.9	1,403.8	1,403.4	3.0	0.9	144.32	-2,365.4	1,698.6	2,912.5	2,908.7	3.81	763.770	
1,400.0	1,400.0	1,427.3	1,427.0	3.0	0.9	144.32	-2,365.3	1,698.2	2,912.2	2,908.3	3.87	752.151	
1,476.4	1,476.4	1,508.6	1,508.2	3.2	0.9	144.34	-2,364.8	1,696.6	2,910.9	2,906.8	4.07	714.499	
1,500.0	1,500.0	1,533.0	1,532.6	3.2	0.9	144.35	-2,364.6	1,696.1	2,910.5	2,906.3	4.14	703.690	
1,574.8	1,574.8	1,610.7	1,610.2	3.4	1.0	144.37	-2,364.2	1,694.2	2,909.1	2,904.8	4.33	671.484	
1,600.0	1,600.0	1,638.0	1,637.6	3.5	1.0	144.38	-2,364.1	1,693.5	2,908.6	2,904.2	4.40	661.250	
1,673.2	1,673.2	1,716.3	1,715.9	3.6	1.0	144.41	-2,363.6	1,691.4	2,907.1	2,902.5	4.59	633.227	
1,700.0	1,700.0	1,743.5	1,743.0	3.7	1.0	144.42	-2,363.5	1,690.6	2,906.6	2,901.9	4.66	623.630	
1,771.6	1,771.6	1,814.3	1,813.8	3.8	1.0	144.45	-2,363.0	1,688.7	2,905.0	2,900.2	4.85	599.406	
1,800.0	1,800.0	1,839.7	1,839.2	3.9	1.0	144.46	-2,362.8	1,688.0	2,904.4	2,899.5	4.92	590.471	
1,870.1	1,870.1	1,902.8	1,902.2	4.1	1.1	144.48	-2,362.5	1,686.5	2,903.1	2,898.0	5.10	569.479	
1,900.0	1,900.0	1,934.7	1,934.2	4.1	1.1	144.49	-2,362.3	1,685.7	2,902.6	2,897.4	5.18	560.788	
1,968.5	1,968.5	2,000.0	1,999.4	4.3	1.1	144.51	-2,361.9	1,684.1	2,901.3	2,895.9	5.35	542.102	
2,000.0	2,000.0	2,032.9	2,032.3	4.4	1.1	144.52	-2,361.7	1,683.4	2,900.7	2,895.3	5.43	533.850	
2,066.9	2,066.9	2,089.6	2,089.0	4.5	1.1	144.54	-2,361.5	1,682.2	2,899.6	2,894.0	5.60	517.548	
2,100.0	2,100.0	2,122.3	2,121.7	4.6	1.2	144.55	-2,361.4	1,681.5	2,899.2	2,893.5	5.69	509.730	
2,150.0	2,150.0	2,176.1	2,175.5	4.7	1.2	144.56	-2,361.1	1,680.5	2,898.4	2,892.6	5.82	498.224	
2,165.3	2,165.3	2,192.6	2,192.0	4.7	1.2	144.32	-2,361.0	1,680.2	2,898.2	2,892.4	5.86	494.890	
2,200.0	2,200.0	2,225.2	2,224.5	4.8	1.2	144.34	-2,360.9	1,679.6	2,898.0	2,892.1	5.94	487.566	
2,202.7	2,202.7	2,227.6	2,227.0	4.8	1.2	144.34	-2,360.8	1,679.5	2,898.0	2,892.1	5.95	487.013	
2,263.8	2,263.7	2,282.9	2,282.3	5.0	1.2	144.37	-2,360.6	1,678.4	2,898.6	2,892.5	6.10	474.861	
2,300.0	2,299.9	2,318.9	2,318.3	5.0	1.2	144.38	-2,360.6	1,677.8	2,899.5	2,893.3	6.20	467.966	
2,362.2	2,362.0	2,386.7	2,386.0	5.2	1.3	144.42	-2,360.3	1,676.5	2,901.8	2,895.5	6.36	456.569	
2,400.0	2,399.7	2,423.2	2,422.6	5.3	1.3	144.45	-2,360.2	1,675.8	2,903.8	2,897.3	6.45	450.117	
2,460.6	2,460.0	2,478.3	2,477.6	5.4	1.3	144.48	-2,360.0	1,674.7	2,907.8	2,901.2	6.60	440.290	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	2,499.1	2,516.8	2,516.1	5.5	1.3	144.50	-2,359.9	1,674.0	2,911.0	2,904.3	6.70	434.207		
2,559.0	2,557.7	2,581.1	2,580.4	5.6	1.3	144.55	-2,359.8	1,672.7	2,916.6	2,909.7	6.86	425.262		
2,600.0	2,598.2	2,622.2	2,621.5	5.7	1.3	144.58	-2,359.6	1,671.9	2,921.0	2,914.0	6.96	419.452		
2,657.5	2,654.8	2,676.0	2,675.3	5.9	1.4	144.62	-2,359.5	1,670.8	2,928.0	2,920.9	7.11	411.542		
2,700.0	2,696.6	2,714.4	2,713.7	6.0	1.4	144.64	-2,359.4	1,670.0	2,933.8	2,926.6	7.23	406.025		
2,755.9	2,751.4	2,761.9	2,761.2	6.1	1.4	144.66	-2,359.3	1,669.2	2,942.4	2,935.1	7.38	398.850		
2,800.0	2,794.4	2,800.0	2,799.3	6.2	1.4	144.68	-2,359.3	1,668.6	2,949.9	2,942.4	7.50	393.507		
2,854.3	2,847.3	2,854.7	2,854.0	6.4	1.4	144.72	-2,359.3	1,667.9	2,960.0	2,952.3	7.65	386.768		
2,888.8	2,880.6	2,889.8	2,889.1	6.5	1.4	144.74	-2,359.2	1,667.4	2,966.7	2,959.0	7.75	382.734		
2,900.0	2,891.5	2,901.1	2,900.4	6.6	1.4	144.78	-2,359.2	1,667.2	2,969.0	2,961.2	7.78	381.393		
2,952.7	2,942.5	2,952.3	2,951.5	6.7	1.5	144.94	-2,359.1	1,666.5	2,979.6	2,971.7	7.94	375.237		
3,000.0	2,988.2	2,998.0	2,997.3	6.9	1.5	145.08	-2,359.1	1,665.8	2,989.2	2,981.1	8.08	369.793		
3,051.2	3,037.6	3,046.3	3,045.6	7.1	1.5	145.23	-2,359.0	1,665.1	2,999.5	2,991.3	8.24	363.993		
3,100.0	3,084.9	3,092.4	3,091.7	7.3	1.5	145.37	-2,359.0	1,664.4	3,009.5	3,001.1	8.39	358.642		
3,149.6	3,132.8	3,144.5	3,143.8	7.5	1.5	145.52	-2,358.8	1,663.8	3,019.5	3,011.0	8.55	353.178		
3,200.0	3,181.5	3,198.7	3,197.9	7.6	1.5	145.68	-2,358.4	1,663.3	3,029.7	3,021.0	8.71	347.809		
3,248.0	3,228.0	3,245.5	3,244.7	7.8	1.6	145.81	-2,358.0	1,663.0	3,039.4	3,030.5	8.87	342.728		
3,300.0	3,278.2	3,296.0	3,295.2	8.0	1.6	145.95	-2,357.5	1,662.7	3,049.9	3,040.8	9.04	337.431		
3,346.4	3,323.2	3,347.6	3,346.8	8.2	1.6	146.09	-2,356.9	1,662.4	3,059.2	3,050.0	9.19	332.706		
3,400.0	3,374.9	3,407.6	3,406.8	8.5	1.6	146.24	-2,356.0	1,662.2	3,069.9	3,060.5	9.38	327.447		
3,444.9	3,418.3	3,456.3	3,455.6	8.6	1.6	146.36	-2,355.0	1,662.1	3,078.7	3,069.2	9.53	323.165		
3,500.0	3,471.6	3,515.1	3,514.3	8.9	1.6	146.50	-2,353.5	1,662.2	3,089.5	3,079.8	9.71	318.095		
3,543.3	3,513.5	3,558.6	3,557.8	9.1	1.6	146.61	-2,352.4	1,662.4	3,097.9	3,088.1	9.86	314.207		
3,600.0	3,568.3	3,613.4	3,612.6	9.3	1.6	146.73	-2,350.8	1,662.8	3,109.0	3,098.9	10.05	309.299		
3,641.7	3,608.7	3,649.4	3,648.6	9.5	1.7	146.81	-2,349.9	1,663.0	3,117.2	3,107.0	10.19	305.774		
3,700.0	3,665.0	3,700.0	3,699.1	9.7	1.7	146.93	-2,348.7	1,663.1	3,128.7	3,118.3	10.39	301.026		
3,740.1	3,703.8	3,737.0	3,736.1	9.9	1.7	147.02	-2,348.0	1,663.2	3,136.7	3,126.2	10.53	297.788		
3,800.0	3,761.7	3,792.6	3,791.7	10.2	1.7	147.15	-2,346.9	1,663.2	3,148.7	3,138.0	10.74	293.126		
3,838.6	3,799.0	3,825.5	3,824.6	10.4	1.7	147.23	-2,346.3	1,663.2	3,156.5	3,145.6	10.88	290.211		
3,900.0	3,858.4	3,876.7	3,875.8	10.7	1.7	147.35	-2,345.5	1,663.2	3,169.0	3,157.9	11.09	285.740		
3,937.0	3,894.2	3,908.6	3,907.7	10.8	1.7	147.43	-2,345.1	1,663.2	3,176.6	3,165.4	11.22	283.107		
4,000.0	3,955.1	3,969.4	3,968.5	11.1	1.7	147.57	-2,344.3	1,663.3	3,189.7	3,178.3	11.44	278.732		
4,035.4	3,989.3	4,003.5	4,002.6	11.3	1.7	147.65	-2,343.9	1,663.3	3,197.0	3,185.5	11.57	276.331		
4,100.0	4,051.8	4,064.5	4,063.6	11.6	1.7	147.80	-2,343.3	1,663.3	3,210.5	3,198.7	11.80	272.099		
4,133.8	4,084.5	4,096.5	4,095.6	11.7	1.8	147.88	-2,342.9	1,663.2	3,217.5	3,205.6	11.92	269.935		
4,200.0	4,148.5	4,169.0	4,168.0	12.1	1.8	148.05	-2,342.1	1,663.1	3,231.3	3,219.1	12.16	265.775		
4,232.3	4,179.7	4,200.0	4,199.1	12.2	1.8	148.12	-2,341.7	1,663.0	3,237.9	3,225.7	12.27	263.811		
4,300.0	4,245.2	4,263.6	4,262.7	12.5	1.8	148.27	-2,341.0	1,662.8	3,251.9	3,239.4	12.52	259.825		
4,330.7	4,274.9	4,290.7	4,289.8	12.7	1.8	148.34	-2,340.7	1,662.6	3,258.3	3,245.7	12.63	258.074		
4,400.0	4,341.9	4,349.5	4,348.6	13.0	1.8	148.48	-2,340.3	1,662.2	3,272.9	3,260.0	12.87	254.247		
4,429.1	4,370.0	4,374.1	4,373.1	13.1	1.8	148.54	-2,340.2	1,662.0	3,279.1	3,266.1	12.98	252.681		
4,500.0	4,438.6	4,433.7	4,432.8	13.5	1.9	148.69	-2,340.1	1,661.6	3,294.3	3,281.0	13.23	249.035		
4,527.5	4,465.2	4,456.9	4,456.0	13.6	1.9	148.75	-2,340.1	1,661.5	3,300.2	3,286.9	13.33	247.666		
4,600.0	4,535.3	4,500.0	4,499.1	14.0	1.9	148.85	-2,340.1	1,661.2	3,316.1	3,302.5	13.58	244.238		
4,626.0	4,560.4	4,529.5	4,528.6	14.1	1.9	148.92	-2,340.2	1,661.1	3,321.9	3,308.2	13.67	243.061		
4,700.0	4,631.9	4,575.7	4,574.7	14.5	1.9	149.04	-2,340.7	1,661.0	3,338.7	3,324.8	13.92	239.871		
4,724.4	4,655.5	4,600.0	4,599.1	14.6	1.9	149.10	-2,341.1	1,661.0	3,344.5	3,330.5	14.00	238.852		
4,800.0	4,728.6	4,660.2	4,659.3	15.0	1.9	149.24	-2,342.1	1,661.1	3,362.3	3,348.0	14.26	235.846		
4,822.8	4,750.7	4,682.8	4,681.9	15.1	1.9	149.30	-2,342.5	1,661.1	3,367.6	3,353.3	14.33	234.964		
4,900.0	4,825.3	4,769.4	4,768.4	15.4	1.9	149.50	-2,343.7	1,661.2	3,385.7	3,371.1	14.59	232.091		
4,921.2	4,845.9	4,794.0	4,793.1	15.6	1.9	149.56	-2,344.1	1,661.2	3,390.7	3,376.0	14.66	231.318		
5,000.0	4,922.0	4,876.2	4,875.2	15.9	1.9	149.76	-2,345.1	1,660.8	3,408.8	3,393.9	14.92	228.465		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	4,941.0	4,896.5	4,895.6	16.0	1.9	149.81	-2,345.3	1,660.7	3,413.4	3,398.4	14.99	227.765	
5,100.0	5,018.7	4,979.1	4,978.1	16.4	1.9	150.00	-2,346.2	1,660.3	3,431.8	3,416.5	15.26	224.928	
5,118.1	5,036.2	4,997.7	4,996.7	16.5	1.9	150.05	-2,346.4	1,660.2	3,435.9	3,420.6	15.32	224.301	
5,200.0	5,115.4	5,079.4	5,078.4	16.9	1.9	150.24	-2,347.2	1,659.7	3,454.6	3,439.0	15.60	221.507	
5,216.5	5,131.4	5,095.9	5,094.9	17.0	1.9	150.27	-2,347.4	1,659.6	3,458.4	3,442.8	15.65	220.954	
5,300.0	5,212.1	5,185.6	5,184.6	17.4	1.9	150.48	-2,348.0	1,659.2	3,477.4	3,461.4	15.94	218.200	
5,314.9	5,226.6	5,200.0	5,199.0	17.5	1.9	150.51	-2,348.1	1,659.1	3,480.8	3,464.8	15.99	217.716	
5,400.0	5,308.8	5,279.3	5,278.3	17.9	1.9	150.69	-2,348.5	1,658.7	3,500.0	3,483.7	16.28	215.008	
5,413.4	5,321.7	5,291.6	5,290.6	18.0	1.9	150.71	-2,348.6	1,658.6	3,503.1	3,486.7	16.32	214.591	
5,500.0	5,405.5	5,372.1	5,371.1	18.4	2.0	150.89	-2,349.1	1,658.4	3,522.8	3,506.2	16.62	211.972	
5,511.8	5,416.9	5,383.1	5,382.1	18.5	2.0	150.91	-2,349.1	1,658.4	3,525.5	3,508.9	16.66	211.622	
5,600.0	5,502.2	5,476.4	5,475.4	18.9	2.0	151.11	-2,349.6	1,658.3	3,545.7	3,528.7	16.96	209.098	
5,610.2	5,512.1	5,487.6	5,486.6	19.0	2.0	151.13	-2,349.6	1,658.3	3,548.0	3,531.0	16.99	208.811	
5,700.0	5,598.9	5,587.0	5,586.0	19.4	2.0	151.33	-2,349.6	1,658.3	3,568.2	3,550.9	17.29	206.324	
5,708.6	5,607.2	5,596.6	5,595.6	19.5	2.0	151.35	-2,349.6	1,658.3	3,570.2	3,552.8	17.32	206.088	
5,745.8	5,643.2	5,629.7	5,628.7	19.7	2.0	151.42	-2,349.5	1,658.2	3,578.5	3,561.0	17.45	205.046	
5,800.0	5,695.7	5,676.9	5,675.9	19.9	2.0	151.63	-2,349.6	1,658.1	3,590.3	3,572.7	17.58	204.262	
5,807.1	5,702.6	5,683.0	5,682.0	19.9	2.0	151.65	-2,349.6	1,658.0	3,591.7	3,574.1	17.59	204.195	
5,900.0	5,793.2	5,762.0	5,761.0	20.3	2.0	151.97	-2,350.0	1,657.6	3,609.9	3,592.1	17.76	203.285	
5,905.5	5,798.6	5,766.6	5,765.6	20.3	2.0	151.99	-2,350.1	1,657.6	3,610.9	3,593.1	17.77	203.239	
6,000.0	5,891.5	5,853.5	5,852.5	20.6	2.0	152.27	-2,350.7	1,657.2	3,626.9	3,608.9	17.92	202.442	
6,003.9	5,895.4	5,857.4	5,856.4	20.6	2.0	152.28	-2,350.8	1,657.2	3,627.5	3,609.5	17.92	202.415	
6,100.0	5,990.4	5,953.8	5,952.8	20.9	2.0	152.52	-2,351.3	1,657.2	3,640.8	3,622.8	18.05	201.699	
6,102.3	5,992.7	5,956.2	5,955.2	20.9	2.0	152.52	-2,351.4	1,657.2	3,641.1	3,623.1	18.05	201.685	
6,200.0	6,089.7	6,053.1	6,052.1	21.1	2.0	152.70	-2,351.7	1,657.7	3,651.7	3,633.5	18.17	200.958	
6,200.8	6,090.4	6,053.9	6,052.9	21.1	2.0	152.70	-2,351.7	1,657.7	3,651.7	3,633.6	18.17	200.953	
6,299.2	6,188.5	6,149.6	6,148.6	21.4	2.0	152.82	-2,351.9	1,658.5	3,659.4	3,641.2	18.28	200.150	
6,300.0	6,189.3	6,150.4	6,149.4	21.4	2.0	152.82	-2,351.9	1,658.5	3,659.5	3,641.2	18.28	200.142	
6,397.6	6,286.8	6,242.3	6,241.3	21.5	2.0	152.88	-2,351.9	1,659.6	3,664.2	3,645.8	18.39	199.255	
6,400.0	6,289.2	6,244.4	6,243.4	21.5	2.0	152.88	-2,351.9	1,659.6	3,664.3	3,645.9	18.39	199.230	
6,484.6	6,373.8	6,323.9	6,322.9	21.6	2.0	153.13	-2,352.1	1,660.8	3,666.1	3,647.6	18.48	198.374	
6,496.0	6,385.3	6,335.9	6,334.9	21.7	2.0	153.13	-2,352.1	1,661.0	3,666.2	3,647.7	18.50	198.168	
6,500.0	6,389.2	6,340.1	6,339.0	21.7	2.0	153.13	-2,352.1	1,661.1	3,666.2	3,647.7	18.51	198.097	
6,514.6	6,403.8	6,355.4	6,354.3	21.7	2.0	153.12	-2,352.1	1,661.4	3,666.4	3,647.8	18.54	197.806	
6,550.0	6,439.2	6,392.5	6,391.5	21.7	2.0	-26.91	-2,352.0	1,662.2	3,665.9	3,647.3	18.54	197.757	
6,594.5	6,483.5	6,436.6	6,435.5	21.7	2.0	-27.06	-2,351.9	1,663.3	3,663.0	3,644.5	18.56	197.345	
6,600.0	6,489.0	6,442.0	6,440.9	21.7	2.0	-27.08	-2,351.8	1,663.4	3,662.5	3,643.9	18.57	197.252	
6,650.0	6,538.4	6,490.5	6,489.5	21.7	2.0	-27.40	-2,351.5	1,664.8	3,656.1	3,637.4	18.63	196.217	
6,692.9	6,580.3	6,528.8	6,527.8	21.6	2.0	-27.78	-2,351.3	1,666.0	3,648.1	3,629.4	18.70	195.074	
6,700.0	6,587.1	6,535.0	6,533.9	21.6	2.0	-27.85	-2,351.3	1,666.1	3,646.6	3,627.9	18.71	194.855	
6,750.0	6,635.0	6,577.9	6,576.8	21.5	2.0	-28.44	-2,351.3	1,667.1	3,634.2	3,615.4	18.80	193.295	
6,791.3	6,673.7	6,612.4	6,611.3	21.4	2.0	-29.05	-2,351.4	1,667.7	3,621.8	3,602.9	18.87	191.937	
6,800.0	6,681.7	6,619.4	6,618.2	21.4	2.0	-29.19	-2,351.5	1,667.8	3,619.0	3,600.1	18.88	191.635	
6,850.0	6,727.1	6,659.1	6,658.0	21.2	2.0	-30.09	-2,351.9	1,668.2	3,600.9	3,582.0	18.96	189.888	
6,889.7	6,762.0	6,689.8	6,688.7	21.1	2.0	-30.95	-2,352.3	1,668.3	3,584.7	3,565.6	19.03	188.412	
6,900.0	6,770.9	6,700.0	6,698.9	21.0	1.9	-31.20	-2,352.5	1,668.3	3,580.2	3,561.2	19.05	187.974	
6,950.0	6,812.9	6,783.2	6,782.0	20.8	2.0	-32.75	-2,353.6	1,667.8	3,556.6	3,537.4	19.20	185.263	
6,988.2	6,843.6	6,822.1	6,821.0	20.6	2.0	-34.01	-2,354.0	1,667.3	3,536.7	3,517.4	19.30	183.292	
7,000.0	6,852.9	6,831.1	6,830.0	20.6	2.0	-34.41	-2,354.1	1,667.1	3,530.2	3,510.9	19.32	182.679	
7,050.0	6,890.7	6,868.0	6,866.9	20.3	2.0	-36.30	-2,354.4	1,666.5	3,501.5	3,482.0	19.46	179.942	
7,086.6	6,916.9	6,893.6	6,892.5	20.1	2.0	-37.89	-2,354.7	1,666.1	3,479.0	3,459.5	19.57	177.742	
7,100.0	6,926.2	6,900.0	6,898.8	20.1	2.0	-38.49	-2,354.8	1,666.0	3,470.6	3,450.9	19.61	176.940	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT BROWN MCCARTY 30-43 - Wellbore #1 - Wellbor												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,150.0	6,959.1	6,932.3	6,931.2	19.8	2.0	-41.06	-2,355.2	1,665.4	3,437.6	3,417.8	19.80	173.580	
7,185.0	6,980.5	6,951.8	6,950.7	19.6	2.0	-43.07	-2,355.4	1,665.1	3,413.5	3,393.5	19.95	171.081	
7,200.0	6,989.3	6,959.8	6,958.6	19.5	2.0	-44.00	-2,355.5	1,665.0	3,402.9	3,382.9	20.02	169.985	
7,250.0	7,016.6	6,984.7	6,983.6	19.3	2.0	-47.39	-2,355.8	1,664.7	3,366.6	3,346.3	20.25	166.219	
7,283.4	7,033.3	7,000.0	6,998.8	19.1	2.0	-49.93	-2,356.0	1,664.5	3,341.4	3,321.0	20.41	163.676	
7,300.0	7,041.0	7,007.2	7,006.1	19.1	2.0	-51.28	-2,356.1	1,664.4	3,328.8	3,308.3	20.49	162.458	
7,350.0	7,062.2	7,027.4	7,026.2	18.8	2.0	-55.69	-2,356.3	1,664.2	3,289.7	3,269.0	20.70	158.944	
7,381.9	7,074.1	7,038.7	7,037.5	18.7	2.0	-58.78	-2,356.5	1,664.0	3,264.3	3,243.5	20.80	156.939	
7,400.0	7,080.3	7,044.6	7,043.4	18.7	2.0	-60.63	-2,356.5	1,664.0	3,249.7	3,228.8	20.84	155.957	
7,450.0	7,095.0	7,058.8	7,057.6	18.5	2.0	-66.08	-2,356.7	1,663.8	3,208.8	3,187.9	20.87	153.741	
7,480.3	7,102.4	7,065.9	7,064.7	18.4	2.0	-69.59	-2,356.8	1,663.7	3,183.7	3,162.9	20.84	152.800	
7,500.0	7,106.4	7,069.9	7,068.7	18.4	2.0	-71.95	-2,356.9	1,663.7	3,167.3	3,146.5	20.78	152.414	
7,550.0	7,114.4	7,077.8	7,076.6	18.3	2.0	-78.12	-2,357.0	1,663.6	3,125.4	3,104.8	20.59	151.813	
7,578.7	7,117.4	7,081.0	7,079.8	18.3	2.0	-81.74	-2,357.0	1,663.6	3,101.3	3,080.8	20.47	151.526	
7,600.0	7,118.9	7,082.6	7,081.4	18.3	2.0	-84.42	-2,357.0	1,663.6	3,083.4	3,063.0	20.38	151.280	
7,641.3	7,120.0	7,084.1	7,082.9	18.3	2.0	-89.59	-2,357.1	1,663.6	3,048.6	3,028.3	20.31	150.112	
7,677.1	7,119.9	7,084.5	7,083.3	18.3	2.0	-89.60	-2,357.1	1,663.6	3,018.7	2,998.3	20.35	148.338	
7,700.0	7,119.9	7,084.7	7,083.5	18.4	2.0	-89.61	-2,357.1	1,663.6	2,999.6	2,979.2	20.38	147.213	
7,775.6	7,119.7	7,085.5	7,084.3	18.6	2.0	-89.64	-2,357.1	1,663.5	2,936.9	2,916.4	20.58	142.702	
7,800.0	7,119.6	7,085.7	7,084.5	18.6	2.0	-89.65	-2,357.1	1,663.5	2,916.8	2,896.2	20.65	141.270	
7,874.0	7,119.4	7,086.5	7,085.3	19.0	2.0	-89.67	-2,357.1	1,663.5	2,856.3	2,835.3	20.99	136.087	
7,900.0	7,119.4	7,086.7	7,085.6	19.1	2.0	-89.68	-2,357.1	1,663.5	2,835.2	2,814.1	21.11	134.313	
7,972.4	7,119.2	7,087.5	7,086.3	19.6	2.0	-89.71	-2,357.1	1,663.5	2,776.8	2,755.2	21.57	128.727	
8,000.0	7,119.1	7,087.8	7,086.6	19.7	2.0	-89.72	-2,357.1	1,663.5	2,754.7	2,733.0	21.75	126.671	
8,070.8	7,118.9	7,088.5	7,087.3	20.3	2.0	-89.74	-2,357.1	1,663.5	2,698.5	2,676.2	22.31	120.938	
8,100.0	7,118.9	7,088.8	7,087.6	20.5	2.0	-89.75	-2,357.1	1,663.5	2,675.6	2,653.0	22.55	118.672	
8,169.3	7,118.7	7,089.5	7,088.3	21.2	2.0	-89.78	-2,357.1	1,663.5	2,621.6	2,598.4	23.20	113.009	
8,200.0	7,118.6	7,089.8	7,088.6	21.5	2.0	-89.79	-2,357.1	1,663.5	2,597.9	2,574.4	23.49	110.608	
8,267.7	7,118.5	7,090.5	7,089.3	22.2	2.0	-89.81	-2,357.1	1,663.5	2,546.2	2,522.0	24.21	105.174	
8,300.0	7,118.4	7,090.8	7,089.6	22.5	2.0	-89.82	-2,357.2	1,663.5	2,521.8	2,497.2	24.55	102.705	
8,366.1	7,118.2	7,091.5	7,090.3	23.3	2.0	-89.85	-2,357.2	1,663.5	2,472.3	2,447.0	25.33	97.607	
8,400.0	7,118.1	7,091.8	7,090.7	23.7	2.0	-89.86	-2,357.2	1,663.5	2,447.3	2,421.6	25.73	95.127	
8,464.5	7,118.0	7,092.5	7,091.3	24.5	2.0	-89.88	-2,357.2	1,663.5	2,400.3	2,373.8	26.54	90.424	
8,500.0	7,117.9	7,092.9	7,091.7	25.0	2.0	-89.90	-2,357.2	1,663.5	2,374.8	2,347.8	26.99	87.976	
8,563.0	7,117.7	7,093.5	7,092.3	25.8	2.0	-89.92	-2,357.2	1,663.5	2,330.2	2,302.3	27.84	83.695	
8,600.0	7,117.6	7,093.9	7,092.7	26.3	2.0	-89.93	-2,357.2	1,663.5	2,304.3	2,276.0	28.34	81.311	
8,661.4	7,117.5	7,094.5	7,093.4	27.2	2.0	-89.95	-2,357.2	1,663.5	2,262.2	2,233.0	29.21	77.451	
8,700.0	7,117.4	7,094.9	7,093.7	27.7	2.0	-89.97	-2,357.2	1,663.5	2,236.1	2,206.4	29.75	75.155	
8,759.8	7,117.2	7,095.6	7,094.4	28.6	2.0	-89.99	-2,357.2	1,663.5	2,196.5	2,165.8	30.63	71.701	
8,800.0	7,117.1	7,096.0	7,094.8	29.2	2.0	-90.00	-2,357.2	1,663.4	2,170.4	2,139.2	31.23	69.508	
8,858.2	7,117.0	7,096.6	7,095.4	30.1	2.0	-90.02	-2,357.2	1,663.4	2,133.3	2,101.2	32.11	66.435	
8,900.0	7,116.9	7,097.0	7,095.8	30.7	2.0	-90.04	-2,357.2	1,663.4	2,107.3	2,074.6	32.75	64.353	
8,956.7	7,116.8	7,100.0	7,098.8	31.6	2.0	-90.14	-2,357.3	1,663.4	2,072.9	2,039.2	33.63	61.632	
9,000.0	7,116.7	7,100.0	7,098.8	32.3	2.0	-90.14	-2,357.3	1,663.4	2,047.2	2,012.9	34.31	59.667	
9,055.1	7,116.5	7,100.0	7,098.8	33.2	2.0	-90.14	-2,357.3	1,663.4	2,015.4	1,980.2	35.19	57.270	
9,100.0	7,116.4	7,100.0	7,098.8	33.9	2.0	-90.14	-2,357.3	1,663.4	1,990.3	1,954.4	35.91	55.424	
9,153.5	7,116.3	7,100.0	7,098.8	34.8	2.0	-90.14	-2,357.3	1,663.4	1,961.3	1,924.5	36.78	53.318	
9,200.0	7,116.2	7,100.0	7,098.8	35.5	2.0	-90.14	-2,357.3	1,663.4	1,936.9	1,899.3	37.54	51.591	
9,251.9	7,116.0	7,100.0	7,098.8	36.4	2.0	-90.14	-2,357.3	1,663.4	1,910.6	1,872.2	38.41	49.749	
9,300.0	7,115.9	7,100.0	7,098.8	37.2	2.0	-90.14	-2,357.3	1,663.4	1,887.3	1,848.1	39.20	48.142	
9,350.4	7,115.8	7,101.8	7,100.6	38.0	2.0	-90.20	-2,357.3	1,663.4	1,863.8	1,823.8	40.05	46.536	
9,400.0	7,115.7	7,102.3	7,101.1	38.9	2.0	-90.22	-2,357.3	1,663.4	1,841.7	1,800.9	40.89	45.045	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,448.8	7,115.5	7,102.8	7,101.6	39.7	2.0	-90.24	-2,357.3	1,663.4	1,821.1	1,779.4	41.72	43.652		
9,500.0	7,115.4	7,103.3	7,102.2	40.6	2.0	-90.26	-2,357.3	1,663.4	1,800.6	1,758.0	42.59	42.277		
9,547.2	7,115.3	7,103.8	7,102.7	41.4	2.0	-90.28	-2,357.3	1,663.4	1,782.8	1,739.4	43.41	41.074		
9,600.0	7,115.2	7,104.4	7,103.2	42.3	2.0	-90.29	-2,357.3	1,663.4	1,764.2	1,719.9	44.31	39.811		
9,645.6	7,115.1	7,104.9	7,103.7	43.1	2.0	-90.31	-2,357.3	1,663.4	1,749.3	1,704.1	45.11	38.779		
9,700.0	7,114.9	7,105.4	7,104.2	44.0	2.0	-90.33	-2,357.3	1,663.4	1,732.8	1,686.8	46.05	37.626		
9,744.1	7,114.8	7,105.9	7,104.7	44.8	2.0	-90.35	-2,357.4	1,663.4	1,720.7	1,673.8	46.83	36.745		
9,800.0	7,114.7	7,106.5	7,105.3	45.8	2.0	-90.37	-2,357.4	1,663.4	1,706.7	1,658.9	47.81	35.700		
9,842.5	7,114.6	7,106.9	7,105.7	46.5	2.0	-90.38	-2,357.4	1,663.3	1,697.3	1,648.8	48.56	34.953		
9,900.0	7,114.4	7,107.5	7,106.3	47.6	2.0	-90.40	-2,357.4	1,663.3	1,686.2	1,636.6	49.58	34.012		
9,940.9	7,114.3	7,107.9	7,106.7	48.3	2.0	-90.42	-2,357.4	1,663.3	1,679.4	1,629.1	50.30	33.386		
10,000.0	7,114.2	7,108.5	7,107.3	49.3	2.0	-90.44	-2,357.4	1,663.3	1,671.4	1,620.0	51.35	32.546		
10,039.3	7,114.1	7,108.9	7,107.7	50.0	2.0	-90.45	-2,357.4	1,663.3	1,667.1	1,615.1	52.06	32.025		
10,100.0	7,113.9	7,109.5	7,108.3	51.1	2.0	-90.47	-2,357.4	1,663.3	1,662.4	1,609.3	53.14	31.282		
10,137.8	7,113.8	7,109.8	7,108.7	51.8	2.0	-90.48	-2,357.4	1,663.3	1,660.6	1,606.8	53.82	30.854		
10,198.9	7,113.7	7,110.4	7,109.3	52.9	2.0	-90.50	-2,357.4	1,663.3	1,659.5	1,604.6	54.92	30.216 CC		
10,200.0	7,113.7	7,110.5	7,109.3	52.9	2.0	-90.50	-2,357.4	1,663.3	1,659.5	1,604.5	54.94	30.205		
10,236.2	7,113.6	7,110.8	7,109.6	53.6	2.0	-90.52	-2,357.4	1,663.3	1,659.9	1,604.3	55.59	29.857 ES		
10,300.0	7,113.4	7,111.4	7,110.2	54.7	2.0	-90.54	-2,357.4	1,663.3	1,662.6	1,605.8	56.75	29.298		
10,334.6	7,113.3	7,111.8	7,110.6	55.4	2.0	-90.55	-2,357.4	1,663.3	1,665.0	1,607.6	57.37	29.020		
10,400.0	7,113.2	7,112.4	7,111.2	56.5	2.0	-90.57	-2,357.4	1,663.3	1,671.6	1,613.1	58.56	28.545		
10,433.0	7,113.1	7,112.7	7,111.5	57.1	2.0	-90.58	-2,357.4	1,663.3	1,675.9	1,616.8	59.16	28.328		
10,500.0	7,112.9	7,113.4	7,112.2	58.4	2.0	-90.60	-2,357.5	1,663.3	1,686.6	1,626.2	60.38	27.932		
10,531.5	7,112.8	7,113.7	7,112.5	58.9	2.0	-90.61	-2,357.5	1,663.3	1,692.5	1,631.5	60.96	27.766		
10,600.0	7,112.7	7,114.3	7,113.1	60.2	2.0	-90.64	-2,357.5	1,663.3	1,707.3	1,645.1	62.21	27.445		
10,629.9	7,112.6	7,114.6	7,113.4	60.7	2.0	-90.65	-2,357.5	1,663.3	1,714.5	1,651.8	62.76	27.321		
10,700.0	7,112.4	7,115.2	7,114.1	62.0	2.0	-90.67	-2,357.5	1,663.3	1,733.5	1,669.4	64.04	27.069		
10,728.3	7,112.3	7,115.5	7,114.3	62.5	2.0	-90.68	-2,357.5	1,663.3	1,741.9	1,677.3	64.56	26.981		
10,800.0	7,112.2	7,116.2	7,115.0	63.9	2.0	-90.70	-2,357.5	1,663.3	1,765.0	1,699.1	65.88	26.792		
10,826.7	7,112.1	7,116.4	7,115.2	64.4	2.0	-90.71	-2,357.5	1,663.3	1,774.3	1,707.9	66.37	26.733		
10,900.0	7,111.9	7,117.1	7,115.9	65.7	2.0	-90.73	-2,357.5	1,663.3	1,801.5	1,733.8	67.72	26.602		
10,925.2	7,111.8	7,117.3	7,116.1	66.2	2.0	-90.74	-2,357.5	1,663.3	1,811.4	1,743.3	68.18	26.567		
11,000.0	7,111.7	7,118.0	7,116.8	67.6	2.0	-90.76	-2,357.5	1,663.2	1,842.7	1,773.1	69.57	26.489		
11,023.6	7,111.6	7,118.2	7,117.0	68.0	2.0	-90.77	-2,357.5	1,663.2	1,853.1	1,783.1	70.00	26.472		
11,100.0	7,111.4	7,118.9	7,117.7	69.4	2.0	-90.80	-2,357.5	1,663.2	1,888.3	1,816.9	71.42	26.441		
11,122.0	7,111.3	7,119.1	7,117.9	69.8	2.0	-90.80	-2,357.5	1,663.2	1,898.9	1,827.1	71.82	26.438 SF		
11,200.0	7,111.2	7,119.8	7,118.6	71.3	2.0	-90.83	-2,357.5	1,663.2	1,938.0	1,864.8	73.27	26.450		
11,220.4	7,111.1	7,120.0	7,118.8	71.6	2.0	-90.83	-2,357.5	1,663.2	1,948.7	1,875.0	73.65	26.458		
11,300.0	7,110.9	7,120.7	7,119.5	73.1	2.0	-90.86	-2,357.5	1,663.2	1,991.5	1,916.4	75.13	26.508		
11,318.9	7,110.9	7,120.9	7,119.7	73.5	2.0	-90.86	-2,357.5	1,663.2	2,002.0	1,926.5	75.48	26.524		
11,400.0	7,110.6	7,121.6	7,120.4	75.0	2.0	-90.89	-2,357.6	1,663.2	2,048.5	1,971.5	76.99	26.608		
11,417.3	7,110.6	7,121.7	7,120.5	75.3	2.0	-90.89	-2,357.6	1,663.2	2,058.7	1,981.4	77.31	26.629		
11,500.0	7,110.4	7,122.5	7,121.3	76.8	2.0	-90.92	-2,357.6	1,663.2	2,108.7	2,029.8	78.85	26.742		
11,515.7	7,110.4	7,122.6	7,121.4	77.1	2.0	-90.92	-2,357.6	1,663.2	2,118.4	2,039.3	79.15	26.766		
11,600.0	7,110.1	7,123.3	7,122.1	78.7	2.0	-90.95	-2,357.6	1,663.2	2,171.8	2,091.1	80.72	26.906		
11,614.1	7,110.1	7,123.4	7,122.2	79.0	2.0	-90.95	-2,357.6	1,663.2	2,181.0	2,100.0	80.98	26.931		
11,655.0	7,110.0	7,123.8	7,122.6	79.7	2.0	-90.96	-2,357.6	1,663.2	2,207.7	2,126.0	81.75	27.007		

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	120.64	-1,017.4	1,717.5	1,996.7				
98.4	98.4	53.4	53.4	0.1	0.0	120.64	-1,017.4	1,717.5	1,996.2	1,996.1	0.12	N/A	
100.0	100.0	55.0	55.0	0.1	0.0	120.64	-1,017.4	1,717.5	1,996.2	1,996.1	0.12	N/A	
196.8	196.8	153.2	153.2	0.3	0.1	120.63	-1,017.1	1,717.7	1,996.2	1,995.7	0.44	4,493.164	
200.0	200.0	156.4	156.4	0.3	0.1	120.63	-1,017.1	1,717.7	1,996.2	1,995.7	0.46	4,374.154	
295.3	295.3	255.8	255.8	0.5	0.3	120.62	-1,016.8	1,717.7	1,996.0	1,995.3	0.78	2,558.844	
300.0	300.0	260.8	260.8	0.5	0.3	120.62	-1,016.7	1,717.7	1,996.0	1,995.2	0.79	2,512.537	
393.7	393.7	356.6	356.6	0.7	0.3	120.62	-1,016.5	1,717.4	1,995.7	1,994.6	1.07	1,868.992	
400.0	400.0	362.9	362.9	0.8	0.3	120.62	-1,016.5	1,717.4	1,995.7	1,994.6	1.09	1,838.066	
492.1	492.1	451.6	451.6	1.0	0.4	120.63	-1,016.5	1,717.0	1,995.3	1,994.0	1.34	1,486.029	
500.0	500.0	459.0	459.0	1.0	0.4	120.63	-1,016.5	1,717.0	1,995.3	1,994.0	1.36	1,462.537	
590.5	590.5	550.4	550.4	1.2	0.4	120.64	-1,016.8	1,716.7	1,995.2	1,993.6	1.61	1,237.037	
600.0	600.0	560.5	560.5	1.2	0.4	120.64	-1,016.8	1,716.6	1,995.2	1,993.5	1.64	1,217.389	
689.0	689.0	653.0	653.0	1.4	0.5	120.65	-1,016.8	1,716.2	1,994.8	1,992.9	1.89	1,058.253	
700.0	700.0	664.1	664.1	1.4	0.5	120.65	-1,016.8	1,716.1	1,994.8	1,992.8	1.92	1,041.320	
787.4	787.4	754.7	754.7	1.6	0.5	120.65	-1,016.7	1,715.7	1,994.3	1,992.2	2.16	924.157	
800.0	800.0	768.0	768.0	1.7	0.5	120.65	-1,016.7	1,715.6	1,994.2	1,992.0	2.19	909.403	
885.8	885.8	853.4	853.4	1.9	0.6	120.65	-1,016.4	1,715.0	1,993.6	1,991.2	2.43	821.314	
900.0	900.0	867.0	867.0	1.9	0.6	120.65	-1,016.4	1,715.0	1,993.6	1,991.1	2.47	808.479	
984.2	984.2	952.0	952.0	2.1	0.6	120.65	-1,016.1	1,714.6	1,993.1	1,990.4	2.70	739.527	
1,000.0	1,000.0	968.4	968.4	2.1	0.6	120.65	-1,016.0	1,714.5	1,993.0	1,990.2	2.74	727.884	
1,082.7	1,082.7	1,053.0	1,053.0	2.3	0.7	120.65	-1,015.8	1,713.9	1,992.4	1,989.4	2.96	672.596	
1,100.0	1,100.0	1,070.6	1,070.5	2.3	0.7	120.65	-1,015.7	1,713.8	1,992.2	1,989.2	3.01	662.088	
1,181.1	1,181.1	1,153.0	1,153.0	2.5	0.7	120.65	-1,015.4	1,713.2	1,991.6	1,988.3	3.23	617.059	
1,200.0	1,200.0	1,172.2	1,172.2	2.6	0.7	120.65	-1,015.3	1,713.1	1,991.4	1,988.1	3.28	607.438	
1,279.5	1,279.5	1,248.1	1,248.0	2.7	0.8	120.66	-1,015.0	1,712.5	1,990.8	1,987.3	3.49	570.620	
1,300.0	1,300.0	1,266.9	1,266.9	2.8	0.8	120.66	-1,015.0	1,712.4	1,990.6	1,987.1	3.54	561.935	
1,377.9	1,377.9	1,342.6	1,342.6	3.0	0.8	120.66	-1,014.8	1,712.0	1,990.2	1,986.5	3.75	531.213	
1,400.0	1,400.0	1,365.0	1,365.0	3.0	0.8	120.66	-1,014.8	1,711.9	1,990.1	1,986.3	3.80	523.129	
1,476.4	1,476.4	1,444.6	1,444.6	3.2	0.8	120.65	-1,014.5	1,711.6	1,989.7	1,985.7	4.01	496.733	
1,500.0	1,500.0	1,469.8	1,469.8	3.2	0.8	120.65	-1,014.4	1,711.5	1,989.5	1,985.5	4.07	489.042	
1,574.8	1,574.8	1,546.0	1,546.0	3.4	0.9	120.66	-1,014.1	1,710.9	1,988.9	1,984.7	4.27	466.193	
1,600.0	1,600.0	1,570.9	1,570.9	3.5	0.9	120.66	-1,014.1	1,710.7	1,988.7	1,984.4	4.33	458.972	
1,673.2	1,673.2	1,642.0	1,642.0	3.6	0.9	120.66	-1,013.8	1,710.2	1,988.2	1,983.6	4.53	439.354	
1,700.0	1,700.0	1,667.7	1,667.7	3.7	0.9	120.66	-1,013.8	1,710.0	1,988.0	1,983.4	4.60	432.632	
1,771.6	1,771.6	1,740.5	1,740.5	3.8	0.9	120.67	-1,013.8	1,709.5	1,987.5	1,982.8	4.78	415.500	
1,800.0	1,800.0	1,770.8	1,770.7	3.9	1.0	120.67	-1,013.8	1,709.3	1,987.3	1,982.5	4.86	409.042	
1,870.1	1,870.1	1,841.8	1,841.7	4.1	1.0	120.68	-1,013.7	1,708.6	1,986.7	1,981.7	5.04	394.013	
1,900.0	1,900.0	1,871.1	1,871.1	4.1	1.0	120.68	-1,013.7	1,708.3	1,986.5	1,981.4	5.12	387.958	
1,968.5	1,968.5	1,940.0	1,940.0	4.3	1.0	120.69	-1,013.5	1,707.8	1,985.9	1,980.6	5.30	374.733	
2,000.0	2,000.0	1,972.3	1,972.3	4.4	1.0	120.69	-1,013.5	1,707.5	1,985.7	1,980.3	5.38	368.931	
2,066.9	2,066.9	2,039.8	2,039.7	4.5	1.1	120.70	-1,013.4	1,706.8	1,985.1	1,979.5	5.56	357.215	
2,100.0	2,100.0	2,072.6	2,072.6	4.6	1.1	120.70	-1,013.4	1,706.5	1,984.8	1,979.1	5.64	351.707	
2,150.0	2,150.0	2,121.6	2,121.6	4.7	1.1	120.71	-1,013.4	1,706.0	1,984.3	1,978.6	5.77	343.712	
2,165.3	2,165.3	2,136.4	2,136.3	4.7	1.1	120.47	-1,013.4	1,705.9	1,984.2	1,978.4	5.81	341.363	
2,192.5	2,192.5	2,162.5	2,162.4	4.8	1.1	120.48	-1,013.3	1,705.6	1,984.2	1,978.3	5.88	337.284	
2,200.0	2,200.0	2,169.7	2,169.6	4.8	1.1	120.49	-1,013.3	1,705.6	1,984.2	1,978.3	5.90	336.177	
2,263.8	2,263.7	2,234.6	2,234.6	5.0	1.1	120.53	-1,013.1	1,705.2	1,984.6	1,978.6	6.07	327.065	
2,300.0	2,299.9	2,273.5	2,273.5	5.0	1.1	120.56	-1,013.0	1,704.9	1,985.2	1,979.0	6.16	322.106	
2,362.2	2,362.0	2,335.5	2,335.4	5.2	1.2	120.63	-1,012.6	1,704.4	1,986.6	1,980.2	6.32	314.111	
2,400.0	2,399.7	2,371.1	2,371.1	5.3	1.2	120.68	-1,012.5	1,704.1	1,987.8	1,981.4	6.42	309.553	
2,460.6	2,460.0	2,431.9	2,431.8	5.4	1.2	120.79	-1,012.3	1,703.6	1,990.4	1,983.8	6.58	302.461	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	2,499.1	2,473.7	2,473.7	5.5	1.2	120.88	-1,012.2	1,703.3	1,992.3	1,985.6	6.68	298.049	
2,559.0	2,557.7	2,532.0	2,532.0	5.6	1.2	121.01	-1,011.8	1,702.8	1,995.8	1,988.9	6.84	291.643	
2,600.0	2,598.2	2,570.3	2,570.2	5.7	1.2	121.10	-1,011.6	1,702.5	1,998.6	1,991.6	6.95	287.478	
2,657.5	2,654.8	2,625.7	2,625.6	5.9	1.3	121.24	-1,011.3	1,702.2	2,003.1	1,996.0	7.11	281.613	
2,700.0	2,696.6	2,668.3	2,668.2	6.0	1.3	121.37	-1,011.0	1,701.9	2,006.9	1,999.6	7.23	277.478	
2,755.9	2,751.4	2,722.1	2,722.0	6.1	1.3	121.54	-1,010.8	1,701.6	2,012.3	2,004.9	7.40	271.952	
2,800.0	2,794.4	2,762.3	2,762.3	6.2	1.3	121.67	-1,010.6	1,701.3	2,017.1	2,009.6	7.53	267.860	
2,854.3	2,847.3	2,812.7	2,812.7	6.4	1.3	121.84	-1,010.5	1,701.1	2,023.7	2,015.9	7.70	262.656	
2,888.8	2,880.6	2,846.7	2,846.6	6.5	1.3	121.97	-1,010.4	1,701.0	2,028.1	2,020.3	7.81	259.528	
2,900.0	2,891.5	2,857.7	2,857.7	6.6	1.3	122.04	-1,010.3	1,700.9	2,029.6	2,021.7	7.85	258.481	
2,952.7	2,942.5	2,909.3	2,909.2	6.7	1.4	122.35	-1,010.1	1,700.7	2,036.6	2,028.6	8.03	253.556	
3,000.0	2,988.2	2,954.1	2,954.0	6.9	1.4	122.62	-1,009.9	1,700.5	2,043.0	2,034.8	8.19	249.341	
3,051.2	3,037.6	3,002.7	3,002.6	7.1	1.4	122.92	-1,009.8	1,700.3	2,050.0	2,041.6	8.38	244.756	
3,100.0	3,084.9	3,049.9	3,049.8	7.3	1.4	123.21	-1,009.7	1,700.1	2,056.7	2,048.1	8.55	240.590	
3,149.6	3,132.8	3,097.9	3,097.8	7.5	1.4	123.50	-1,009.8	1,699.7	2,063.6	2,054.8	8.73	236.371	
3,200.0	3,181.5	3,146.2	3,146.1	7.6	1.4	123.80	-1,009.9	1,699.4	2,070.6	2,061.7	8.91	232.311	
3,248.0	3,228.0	3,192.2	3,192.1	7.8	1.5	124.08	-1,010.1	1,699.0	2,077.4	2,068.3	9.09	228.467	
3,300.0	3,278.2	3,245.9	3,245.9	8.0	1.5	124.40	-1,010.2	1,698.6	2,084.7	2,075.5	9.29	224.475	
3,346.4	3,323.2	3,294.7	3,294.6	8.2	1.5	124.70	-1,010.4	1,698.1	2,091.3	2,081.8	9.47	220.947	
3,400.0	3,374.9	3,349.7	3,349.6	8.5	1.5	125.03	-1,010.5	1,697.4	2,098.8	2,089.1	9.67	217.045	
3,444.9	3,418.3	3,395.7	3,395.6	8.6	1.5	125.30	-1,010.6	1,696.8	2,105.1	2,095.2	9.84	213.827	
3,500.0	3,471.6	3,447.9	3,447.8	8.9	1.5	125.62	-1,010.7	1,696.0	2,112.9	2,102.8	10.06	210.049	
3,543.3	3,513.5	3,488.6	3,488.5	9.1	1.5	125.86	-1,010.8	1,695.4	2,119.0	2,108.8	10.23	207.145	
3,600.0	3,568.3	3,541.3	3,541.2	9.3	1.6	126.17	-1,010.9	1,694.7	2,127.2	2,116.7	10.45	203.512	
3,641.7	3,608.7	3,580.0	3,579.8	9.5	1.6	126.40	-1,011.0	1,694.3	2,133.3	2,122.7	10.62	200.903	
3,700.0	3,665.0	3,632.0	3,631.9	9.7	1.6	126.70	-1,011.2	1,693.7	2,141.9	2,131.1	10.85	197.446	
3,740.1	3,703.8	3,667.1	3,666.9	9.9	1.6	126.90	-1,011.4	1,693.4	2,148.0	2,137.0	11.01	195.138	
3,800.0	3,761.7	3,721.5	3,721.4	10.2	1.6	127.21	-1,011.7	1,692.9	2,157.2	2,146.0	11.24	191.850	
3,838.6	3,799.0	3,759.2	3,759.0	10.4	1.6	127.42	-1,011.8	1,692.7	2,163.3	2,151.9	11.40	189.787	
3,900.0	3,858.4	3,818.0	3,817.9	10.7	1.6	127.75	-1,012.0	1,692.4	2,172.9	2,161.2	11.64	186.642	
3,937.0	3,894.2	3,852.0	3,851.9	10.8	1.7	127.94	-1,012.2	1,692.2	2,178.7	2,166.9	11.79	184.811	
4,000.0	3,955.1	3,910.8	3,910.7	11.1	1.7	128.27	-1,012.7	1,691.7	2,188.8	2,176.8	12.04	181.826	
4,035.4	3,989.3	3,946.6	3,946.4	11.3	1.7	128.47	-1,013.0	1,691.5	2,194.5	2,182.3	12.18	180.199	
4,100.0	4,051.8	4,010.7	4,010.5	11.6	1.7	128.82	-1,013.4	1,691.0	2,204.9	2,192.5	12.43	177.341	
4,133.8	4,084.5	4,041.4	4,041.3	11.7	1.7	128.99	-1,013.6	1,690.7	2,210.4	2,197.8	12.57	175.886	
4,200.0	4,148.5	4,101.5	4,101.4	12.1	1.7	129.33	-1,014.3	1,690.1	2,221.3	2,208.4	12.83	173.154	
4,232.3	4,179.7	4,134.3	4,134.2	12.2	1.7	129.51	-1,014.8	1,689.8	2,226.6	2,213.7	12.96	171.868	
4,300.0	4,245.2	4,202.8	4,202.6	12.5	1.7	129.90	-1,015.8	1,688.9	2,237.8	2,224.6	13.22	169.261	
4,330.7	4,274.9	4,231.0	4,230.9	12.7	1.7	130.05	-1,016.2	1,688.5	2,242.9	2,229.6	13.34	168.110	
4,400.0	4,341.9	4,294.7	4,294.5	13.0	1.8	130.41	-1,017.3	1,687.5	2,254.6	2,241.0	13.61	165.607	
4,429.1	4,370.0	4,325.7	4,325.6	13.1	1.8	130.58	-1,017.8	1,687.1	2,259.5	2,245.8	13.73	164.588	
4,500.0	4,438.6	4,403.7	4,403.5	13.5	1.8	131.01	-1,019.0	1,685.8	2,271.4	2,257.4	14.01	162.183	
4,527.5	4,465.2	4,431.2	4,431.0	13.6	1.8	131.16	-1,019.4	1,685.3	2,276.0	2,261.9	14.11	161.261	
4,600.0	4,535.3	4,503.4	4,503.2	14.0	1.8	131.56	-1,020.3	1,683.9	2,288.0	2,273.6	14.40	158.914	
4,626.0	4,560.4	4,529.3	4,529.0	14.1	1.8	131.69	-1,020.6	1,683.4	2,292.4	2,277.9	14.50	158.089	
4,700.0	4,631.9	4,602.9	4,602.7	14.5	1.8	132.09	-1,021.4	1,682.0	2,304.7	2,289.9	14.79	155.813	
4,724.4	4,655.5	4,627.4	4,627.1	14.6	1.9	132.22	-1,021.7	1,681.5	2,308.8	2,293.9	14.89	155.080	
4,800.0	4,728.6	4,700.0	4,699.7	15.0	1.9	132.60	-1,022.5	1,680.0	2,321.5	2,306.3	15.18	152.882	
4,822.8	4,750.7	4,721.0	4,720.7	15.1	1.9	132.71	-1,022.8	1,679.5	2,325.3	2,310.0	15.27	152.237	
4,900.0	4,825.3	4,783.7	4,783.4	15.4	1.9	133.03	-1,023.4	1,678.5	2,338.6	2,323.1	15.58	150.126	
4,921.2	4,845.9	4,801.2	4,800.9	15.6	1.9	133.12	-1,023.6	1,678.4	2,342.4	2,326.7	15.66	149.563	
5,000.0	4,922.0	4,878.4	4,878.1	15.9	1.9	133.50	-1,024.4	1,677.5	2,356.4	2,340.4	15.97	147.571	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	4,941.0	4,897.7	4,897.4	16.0	1.9	133.60	-1,024.6	1,677.3	2,359.9	2,343.9	16.04	147.085		
5,100.0	5,018.7	4,980.2	4,979.9	16.4	2.0	134.00	-1,025.4	1,676.3	2,374.2	2,357.9	16.35	145.172		
5,118.1	5,036.2	4,998.9	4,998.5	16.5	2.0	134.09	-1,025.6	1,676.1	2,377.4	2,361.0	16.42	144.749		
5,200.0	5,115.4	5,074.8	5,074.5	16.9	2.0	134.45	-1,026.1	1,675.3	2,392.1	2,375.3	16.74	142.877		
5,216.5	5,131.4	5,090.1	5,089.8	17.0	2.0	134.52	-1,026.2	1,675.2	2,395.0	2,378.2	16.81	142.507		
5,300.0	5,212.1	5,171.9	5,171.6	17.4	2.0	134.90	-1,026.6	1,674.5	2,410.1	2,393.0	17.13	140.705		
5,314.9	5,226.6	5,186.7	5,186.4	17.5	2.0	134.97	-1,026.7	1,674.4	2,412.8	2,395.7	17.19	140.386		
5,400.0	5,308.8	5,266.8	5,266.4	17.9	2.0	135.33	-1,027.1	1,673.8	2,428.3	2,410.8	17.52	138.623		
5,413.4	5,321.7	5,279.2	5,278.9	18.0	2.0	135.39	-1,027.2	1,673.7	2,430.8	2,413.2	17.57	138.360		
5,500.0	5,405.5	5,379.4	5,379.0	18.4	2.1	135.85	-1,027.9	1,672.4	2,446.6	2,428.7	17.90	136.711		
5,511.8	5,416.9	5,394.0	5,393.6	18.5	2.1	135.92	-1,028.0	1,672.2	2,448.7	2,430.7	17.94	136.489		
5,600.0	5,502.2	5,480.3	5,480.0	18.9	2.1	136.30	-1,028.0	1,670.9	2,464.3	2,446.0	18.28	134.800		
5,610.2	5,512.1	5,490.2	5,489.8	19.0	2.1	136.34	-1,028.0	1,670.8	2,466.1	2,447.8	18.32	134.608		
5,700.0	5,598.9	5,594.5	5,594.1	19.4	2.1	136.79	-1,027.5	1,669.5	2,481.9	2,463.2	18.67	132.947		
5,708.6	5,607.2	5,605.0	5,604.6	19.5	2.1	136.83	-1,027.4	1,669.3	2,483.4	2,464.7	18.70	132.788		
5,745.8	5,643.2	5,651.7	5,651.3	19.7	2.2	137.03	-1,026.9	1,668.5	2,489.7	2,470.9	18.85	132.110		
5,800.0	5,695.7	5,700.0	5,699.6	19.9	2.2	137.35	-1,026.3	1,667.5	2,498.4	2,479.4	18.99	131.534		
5,807.1	5,702.6	5,716.6	5,716.2	19.9	2.2	137.43	-1,026.1	1,667.1	2,499.4	2,480.4	19.01	131.485		
5,900.0	5,793.2	5,784.1	5,783.6	20.3	2.2	137.85	-1,025.6	1,665.8	2,512.8	2,493.6	19.22	130.774		
5,905.5	5,798.6	5,800.0	5,799.6	20.3	2.2	137.92	-1,025.6	1,665.5	2,513.6	2,494.4	19.23	130.740		
6,000.0	5,891.5	5,870.0	5,869.6	20.6	2.2	138.28	-1,025.3	1,664.7	2,525.7	2,506.2	19.42	130.075		
6,003.9	5,895.4	5,873.5	5,873.1	20.6	2.2	138.30	-1,025.3	1,664.7	2,526.1	2,506.7	19.42	130.051		
6,100.0	5,990.4	5,957.3	5,956.9	20.9	2.2	138.62	-1,024.6	1,664.5	2,536.3	2,516.7	19.60	129.414		
6,102.3	5,992.7	5,959.3	5,958.9	20.9	2.2	138.63	-1,024.6	1,664.5	2,536.5	2,516.9	19.60	129.400		
6,200.0	6,089.7	6,048.7	6,048.3	21.1	2.2	138.88	-1,024.1	1,664.8	2,544.9	2,525.1	19.76	128.813		
6,200.8	6,090.4	6,049.5	6,049.0	21.1	2.2	138.88	-1,024.1	1,664.8	2,544.9	2,525.2	19.76	128.809		
6,299.2	6,188.5	6,142.5	6,142.1	21.4	2.2	139.07	-1,024.1	1,664.7	2,550.9	2,531.0	19.89	128.255		
6,300.0	6,189.3	6,143.2	6,142.8	21.4	2.2	139.07	-1,024.1	1,664.7	2,551.0	2,531.1	19.89	128.249		
6,397.6	6,286.8	6,259.0	6,258.5	21.5	2.3	139.20	-1,024.3	1,664.5	2,554.5	2,534.5	20.01	127.666		
6,400.0	6,289.2	6,262.9	6,262.4	21.5	2.3	139.21	-1,024.2	1,664.5	2,554.5	2,534.5	20.01	127.648		
6,484.6	6,373.8	6,350.8	6,350.4	21.6	2.3	139.47	-1,023.4	1,664.1	2,554.6	2,534.5	20.12	126.969		
6,496.0	6,385.3	6,360.2	6,359.8	21.7	2.3	139.47	-1,023.3	1,664.0	2,554.5	2,534.4	20.14	126.841		
6,500.0	6,389.2	6,363.5	6,363.0	21.7	2.3	139.47	-1,023.3	1,664.0	2,554.5	2,534.3	20.15	126.797		
6,514.6	6,403.8	6,375.4	6,375.0	21.7	2.3	139.47	-1,023.2	1,664.0	2,554.4	2,534.2	20.17	126.621		
6,550.0	6,439.2	6,405.1	6,404.7	21.7	2.3	-40.59	-1,023.1	1,663.8	2,553.5	2,533.3	20.20	126.418		
6,594.5	6,483.5	6,446.9	6,446.4	21.7	2.3	-40.78	-1,023.1	1,663.6	2,550.7	2,530.4	20.24	125.995		
6,600.0	6,489.0	6,452.1	6,451.6	21.7	2.3	-40.82	-1,023.1	1,663.6	2,550.2	2,529.9	20.25	125.918		
6,650.0	6,538.4	6,500.0	6,499.6	21.7	2.3	-41.24	-1,023.2	1,663.4	2,544.2	2,523.9	20.33	125.132		
6,692.9	6,580.3	6,540.1	6,539.6	21.6	2.3	-41.75	-1,023.2	1,663.2	2,537.1	2,516.7	20.41	124.282		
6,700.0	6,587.1	6,546.9	6,546.5	21.6	2.3	-41.85	-1,023.2	1,663.2	2,535.7	2,515.3	20.43	124.115		
6,750.0	6,635.0	6,594.4	6,593.9	21.5	2.4	-42.67	-1,023.3	1,663.0	2,524.7	2,504.2	20.54	122.906		
6,791.3	6,673.7	6,631.7	6,631.2	21.4	2.4	-43.50	-1,023.3	1,662.9	2,513.8	2,493.1	20.63	121.823		
6,800.0	6,681.7	6,639.4	6,638.9	21.4	2.4	-43.69	-1,023.3	1,662.8	2,511.3	2,490.6	20.66	121.574		
6,850.0	6,727.1	6,682.9	6,682.5	21.2	2.4	-44.92	-1,023.4	1,662.7	2,495.5	2,474.8	20.77	120.138		
6,889.7	6,762.0	6,716.6	6,716.1	21.1	2.4	-46.06	-1,023.6	1,662.6	2,481.4	2,460.6	20.86	118.951		
6,900.0	6,770.9	6,725.1	6,724.7	21.0	2.4	-46.37	-1,023.6	1,662.5	2,477.6	2,456.7	20.89	118.629		
6,950.0	6,812.9	6,765.7	6,765.2	20.8	2.4	-48.06	-1,023.7	1,662.4	2,457.5	2,436.6	21.00	117.051		
6,988.2	6,843.6	6,795.4	6,794.9	20.6	2.4	-49.52	-1,023.8	1,662.4	2,440.9	2,419.9	21.08	115.812		
7,000.0	6,852.9	6,804.7	6,804.3	20.6	2.4	-50.00	-1,023.8	1,662.4	2,435.6	2,414.5	21.10	115.410		
7,050.0	6,890.7	6,844.7	6,844.3	20.3	2.4	-52.23	-1,023.9	1,662.4	2,411.8	2,390.6	21.21	113.696		
7,086.6	6,916.9	6,872.4	6,871.9	20.1	2.4	-54.03	-1,023.9	1,662.4	2,393.3	2,372.0	21.28	112.445		
7,100.0	6,926.2	6,882.1	6,881.7	20.1	2.4	-54.72	-1,023.9	1,662.3	2,386.3	2,365.0	21.31	111.988		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,150.0	6,959.1	6,916.9	6,916.5	19.8	2.4	-57.46	-1,024.0	1,662.3	2,359.4	2,338.0	21.39	110.313	
7,185.0	6,980.5	6,939.7	6,939.2	19.6	2.4	-59.53	-1,024.0	1,662.2	2,339.7	2,318.3	21.43	109.179	
7,200.0	6,989.3	6,949.0	6,948.5	19.5	2.4	-60.45	-1,024.0	1,662.2	2,331.2	2,309.7	21.44	108.717	
7,250.0	7,016.6	6,978.0	6,977.6	19.3	2.4	-63.65	-1,024.0	1,662.1	2,301.9	2,280.4	21.46	107.263	
7,283.4	7,033.3	6,995.7	6,995.3	19.1	2.5	-65.90	-1,024.1	1,662.0	2,281.8	2,260.4	21.45	106.379	
7,300.0	7,041.0	7,000.0	6,999.5	19.1	2.5	-66.94	-1,024.1	1,662.0	2,271.8	2,250.3	21.43	106.015	
7,350.0	7,062.2	7,022.2	7,021.7	18.8	2.5	-70.44	-1,024.1	1,661.8	2,241.0	2,219.7	21.36	104.939	
7,381.9	7,074.1	7,032.8	7,032.3	18.7	2.5	-72.66	-1,024.1	1,661.8	2,221.2	2,199.9	21.29	104.335	
7,400.0	7,080.3	7,038.3	7,037.8	18.7	2.5	-73.94	-1,024.2	1,661.8	2,209.9	2,188.7	21.24	104.042	
7,450.0	7,095.0	7,051.5	7,051.0	18.5	2.5	-77.45	-1,024.2	1,661.7	2,178.6	2,157.5	21.10	103.245	
7,480.3	7,102.4	7,058.1	7,057.6	18.4	2.5	-79.57	-1,024.2	1,661.7	2,159.6	2,138.6	21.02	102.749	
7,500.0	7,106.4	7,061.7	7,061.3	18.4	2.5	-80.93	-1,024.2	1,661.7	2,147.3	2,126.4	20.96	102.452	
7,550.0	7,114.4	7,069.0	7,068.5	18.3	2.5	-84.32	-1,024.3	1,661.7	2,116.3	2,095.5	20.84	101.544	
7,578.7	7,117.4	7,071.8	7,071.3	18.3	2.5	-86.19	-1,024.3	1,661.7	2,098.7	2,077.9	20.80	100.900	
7,600.0	7,118.9	7,073.2	7,072.7	18.3	2.5	-87.54	-1,024.3	1,661.6	2,085.7	2,065.0	20.77	100.412	
7,641.3	7,120.0	7,074.3	7,073.9	18.3	2.5	-90.06	-1,024.3	1,661.6	2,060.9	2,040.1	20.76	99.262	
7,677.1	7,119.9	7,074.4	7,073.9	18.3	2.5	-90.07	-1,024.3	1,661.6	2,039.8	2,019.0	20.80	98.055	
7,700.0	7,119.9	7,074.4	7,074.0	18.4	2.5	-90.07	-1,024.3	1,661.6	2,026.6	2,005.8	20.83	97.297	
7,775.6	7,119.7	7,074.5	7,074.1	18.6	2.5	-90.07	-1,024.3	1,661.6	1,984.1	1,963.1	21.03	94.328	
7,800.0	7,119.6	7,074.6	7,074.1	18.6	2.5	-90.07	-1,024.3	1,661.6	1,970.8	1,949.7	21.10	93.401	
7,874.0	7,119.4	7,074.7	7,074.2	19.0	2.5	-90.08	-1,024.3	1,661.6	1,931.8	1,910.3	21.44	90.094	
7,900.0	7,119.4	7,074.7	7,074.3	19.1	2.5	-90.08	-1,024.3	1,661.6	1,918.6	1,897.0	21.56	88.979	
7,972.4	7,119.2	7,074.8	7,074.4	19.6	2.5	-90.08	-1,024.3	1,661.6	1,883.1	1,861.1	22.02	85.503	
8,000.0	7,119.1	7,074.9	7,074.4	19.7	2.5	-90.08	-1,024.3	1,661.6	1,870.2	1,848.0	22.20	84.243	
8,070.8	7,118.9	7,075.0	7,074.5	20.3	2.5	-90.09	-1,024.3	1,661.6	1,838.5	1,815.7	22.77	80.756	
8,100.0	7,118.9	7,075.0	7,074.6	20.5	2.5	-90.09	-1,024.3	1,661.6	1,826.1	1,803.1	23.00	79.398	
8,169.3	7,118.7	7,075.2	7,074.7	21.2	2.5	-90.09	-1,024.3	1,661.6	1,798.1	1,774.5	23.65	76.027	
8,200.0	7,118.6	7,075.2	7,074.7	21.5	2.5	-90.10	-1,024.3	1,661.6	1,786.4	1,762.5	23.94	74.621	
8,267.7	7,118.5	7,075.3	7,074.9	22.2	2.5	-90.10	-1,024.3	1,661.6	1,762.3	1,737.7	24.66	71.460	
8,300.0	7,118.4	7,075.4	7,074.9	22.5	2.5	-90.10	-1,024.3	1,661.6	1,751.6	1,726.6	25.01	70.048	
8,366.1	7,118.2	7,075.5	7,075.0	23.3	2.5	-90.10	-1,024.3	1,661.6	1,731.4	1,705.6	25.78	67.155	
8,400.0	7,118.1	7,075.5	7,075.1	23.7	2.5	-90.11	-1,024.3	1,661.6	1,721.9	1,695.8	26.18	65.773	
8,464.5	7,118.0	7,075.6	7,075.2	24.5	2.5	-90.11	-1,024.3	1,661.6	1,705.6	1,678.6	27.00	63.176	
8,500.0	7,117.9	7,075.7	7,075.2	25.0	2.5	-90.11	-1,024.3	1,661.6	1,697.6	1,670.2	27.45	61.852	
8,563.0	7,117.7	7,075.8	7,075.3	25.8	2.5	-90.12	-1,024.3	1,661.6	1,685.2	1,656.9	28.29	59.559	
8,600.0	7,117.6	7,075.8	7,075.4	26.3	2.5	-90.12	-1,024.3	1,661.6	1,678.9	1,650.1	28.79	58.311	
8,661.4	7,117.5	7,075.9	7,075.5	27.2	2.5	-90.12	-1,024.3	1,661.6	1,670.3	1,640.6	29.66	56.314	
8,700.0	7,117.4	7,076.0	7,075.6	27.7	2.5	-90.12	-1,024.3	1,661.6	1,666.0	1,635.8	30.21	55.155	
8,759.8	7,117.2	7,076.1	7,075.7	28.6	2.5	-90.13	-1,024.3	1,661.6	1,661.1	1,630.0	31.09	53.436	
8,800.0	7,117.1	7,076.2	7,075.7	29.2	2.5	-90.13	-1,024.3	1,661.6	1,659.0	1,627.4	31.68	52.373	
8,858.2	7,117.0	7,076.3	7,075.8	30.1	2.5	-90.13	-1,024.3	1,661.6	1,657.8	1,625.2	32.56	50.909	
8,865.8	7,117.0	7,076.3	7,075.8	30.2	2.5	-90.13	-1,024.3	1,661.6	1,657.7	1,625.1	32.68	50.729 CC	
8,900.0	7,116.9	7,076.3	7,075.9	30.7	2.5	-90.14	-1,024.3	1,661.6	1,658.1	1,624.9	33.20	49.945 ES	
8,956.7	7,116.8	7,076.4	7,076.0	31.6	2.5	-90.14	-1,024.3	1,661.6	1,660.2	1,626.1	34.08	48.709	
9,000.0	7,116.7	7,076.5	7,076.1	32.3	2.5	-90.14	-1,024.3	1,661.6	1,663.2	1,628.4	34.76	47.844	
9,055.1	7,116.5	7,076.6	7,076.2	33.2	2.5	-90.14	-1,024.3	1,661.6	1,668.5	1,632.9	35.64	46.811	
9,100.0	7,116.4	7,076.7	7,076.2	33.9	2.5	-90.15	-1,024.3	1,661.6	1,674.2	1,637.8	36.36	46.042	
9,153.5	7,116.3	7,076.8	7,076.3	34.8	2.5	-90.15	-1,024.3	1,661.6	1,682.5	1,645.3	37.24	45.185	
9,200.0	7,116.2	7,076.8	7,076.4	35.5	2.5	-90.15	-1,024.3	1,661.6	1,691.1	1,653.1	37.99	44.509	
9,251.9	7,116.0	7,076.9	7,076.5	36.4	2.5	-90.16	-1,024.3	1,661.6	1,702.1	1,663.3	38.86	43.805	
9,300.0	7,115.9	7,077.0	7,076.6	37.2	2.5	-90.16	-1,024.3	1,661.6	1,713.7	1,674.0	39.65	43.215	
9,350.4	7,115.8	7,077.1	7,076.7	38.0	2.5	-90.16	-1,024.3	1,661.6	1,727.1	1,686.6	40.50	42.642	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT BROWN-MCCARTY 30-5 - Wellbore #1 - Wellbore												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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
9,400.0	7,115.7	7,077.2	7,076.7	38.9	2.5	-90.16	-1,024.3	1,661.6	1,741.7	1,700.4	41.34	42.133	
9,448.8	7,115.5	7,077.3	7,076.8	39.7	2.5	-90.17	-1,024.3	1,661.6	1,757.3	1,715.1	42.17	41.671	
9,500.0	7,115.4	7,077.4	7,076.9	40.6	2.5	-90.17	-1,024.3	1,661.6	1,774.9	1,731.9	43.04	41.236	
9,547.2	7,115.3	7,077.4	7,077.0	41.4	2.5	-90.17	-1,024.3	1,661.6	1,792.3	1,748.5	43.86	40.868	
9,600.0	7,115.2	7,077.5	7,077.1	42.3	2.5	-90.18	-1,024.3	1,661.6	1,813.1	1,768.3	44.77	40.501	
9,645.6	7,115.1	7,077.6	7,077.2	43.1	2.5	-90.18	-1,024.3	1,661.6	1,832.0	1,786.5	45.56	40.211	
9,700.0	7,114.9	7,077.7	7,077.3	44.0	2.5	-90.18	-1,024.3	1,661.6	1,855.8	1,809.3	46.51	39.905	
9,744.1	7,114.8	7,077.8	7,077.3	44.8	2.5	-90.18	-1,024.3	1,661.6	1,876.0	1,828.8	47.28	39.680	
9,800.0	7,114.7	7,077.9	7,077.4	45.8	2.5	-90.19	-1,024.3	1,661.6	1,902.9	1,854.6	48.26	39.429	
9,842.5	7,114.6	7,078.0	7,077.5	46.5	2.5	-90.19	-1,024.3	1,661.6	1,924.1	1,875.1	49.01	39.258	
9,900.0	7,114.4	7,078.1	7,077.6	47.6	2.5	-90.19	-1,024.3	1,661.6	1,953.9	1,903.9	50.03	39.057	
9,940.9	7,114.3	7,078.1	7,077.7	48.3	2.5	-90.20	-1,024.3	1,661.6	1,975.9	1,925.1	50.75	38.930	
10,000.0	7,114.2	7,078.2	7,077.8	49.3	2.5	-90.20	-1,024.3	1,661.6	2,008.6	1,956.8	51.81	38.773	
10,039.3	7,114.1	7,078.3	7,077.9	50.0	2.5	-90.20	-1,024.3	1,661.6	2,031.1	1,978.6	52.51	38.681	
10,100.0	7,113.9	7,078.4	7,078.0	51.1	2.5	-90.21	-1,024.3	1,661.6	2,066.7	2,013.1	53.59	38.563	
10,137.8	7,113.8	7,078.5	7,078.0	51.8	2.5	-90.21	-1,024.3	1,661.6	2,089.5	2,035.2	54.27	38.500	
10,200.0	7,113.7	7,078.6	7,078.1	52.9	2.5	-90.21	-1,024.3	1,661.6	2,128.0	2,072.6	55.39	38.417	
10,236.2	7,113.6	7,078.7	7,078.2	53.6	2.5	-90.21	-1,024.3	1,661.6	2,150.8	2,094.8	56.05	38.377	
10,300.0	7,113.4	7,078.8	7,078.3	54.7	2.5	-90.22	-1,024.3	1,661.6	2,192.0	2,134.8	57.20	38.324	
10,334.6	7,113.3	7,078.8	7,078.4	55.4	2.5	-90.22	-1,024.3	1,661.6	2,214.9	2,157.0	57.83	38.302	
10,400.0	7,113.2	7,078.9	7,078.5	56.5	2.5	-90.22	-1,024.3	1,661.6	2,258.7	2,199.7	59.01	38.276	
10,433.0	7,113.1	7,079.0	7,078.6	57.1	2.5	-90.23	-1,024.3	1,661.6	2,281.3	2,221.7	59.61	38.269	
10,500.0	7,112.9	7,079.1	7,078.7	58.4	2.5	-90.23	-1,024.3	1,661.6	2,327.8	2,267.0	60.83	38.266 SF	
10,531.5	7,112.8	7,079.2	7,078.7	58.9	2.5	-90.23	-1,024.3	1,661.6	2,350.0	2,288.6	61.41	38.269	
10,600.0	7,112.7	7,079.3	7,078.9	60.2	2.5	-90.24	-1,024.3	1,661.6	2,399.1	2,336.4	62.66	38.288	
10,629.9	7,112.6	7,079.4	7,078.9	60.7	2.5	-90.24	-1,024.3	1,661.6	2,420.8	2,357.6	63.21	38.299	
10,700.0	7,112.4	7,079.5	7,079.0	62.0	2.5	-90.24	-1,024.3	1,661.6	2,472.3	2,407.8	64.49	38.336	
10,728.3	7,112.3	7,079.5	7,079.1	62.5	2.5	-90.24	-1,024.3	1,661.6	2,493.4	2,428.4	65.01	38.353	
10,800.0	7,112.2	7,079.7	7,079.2	63.9	2.5	-90.25	-1,024.3	1,661.6	2,547.4	2,481.1	66.33	38.405	
10,826.7	7,112.1	7,079.7	7,079.3	64.4	2.5	-90.25	-1,024.3	1,661.6	2,567.8	2,501.0	66.82	38.427	
10,900.0	7,111.9	7,079.9	7,079.4	65.7	2.5	-90.25	-1,024.3	1,661.6	2,624.1	2,556.0	68.17	38.493	
10,925.2	7,111.8	7,079.9	7,079.5	66.2	2.5	-90.26	-1,024.3	1,661.6	2,643.7	2,575.1	68.64	38.517	
11,000.0	7,111.7	7,080.0	7,079.6	67.6	2.5	-90.26	-1,024.3	1,661.6	2,702.4	2,632.4	70.02	38.596	
11,023.6	7,111.6	7,080.1	7,079.6	68.0	2.5	-90.26	-1,024.3	1,661.6	2,721.1	2,650.6	70.46	38.621	
11,100.0	7,111.4	7,080.2	7,079.8	69.4	2.5	-90.27	-1,024.3	1,661.6	2,782.0	2,710.2	71.87	38.710	
11,122.0	7,111.3	7,080.3	7,079.8	69.8	2.5	-90.27	-1,024.3	1,661.6	2,799.8	2,727.5	72.28	38.736	
11,200.0	7,111.2	7,080.4	7,080.0	71.3	2.5	-90.27	-1,024.3	1,661.6	2,863.0	2,789.3	73.72	38.834	
11,220.4	7,111.1	7,080.5	7,080.0	71.6	2.5	-90.28	-1,024.3	1,661.6	2,879.7	2,805.6	74.10	38.860	
11,300.0	7,110.9	7,080.6	7,080.2	73.1	2.5	-90.28	-1,024.3	1,661.6	2,945.1	2,869.5	75.58	38.966	
11,318.9	7,110.9	7,080.7	7,080.2	73.5	2.5	-90.28	-1,024.3	1,661.6	2,960.7	2,884.8	75.93	38.991	
11,400.0	7,110.6	7,080.8	7,080.4	75.0	2.5	-90.29	-1,024.3	1,661.6	3,028.3	2,950.8	77.44	39.103	
11,417.3	7,110.6	7,080.8	7,080.4	75.3	2.5	-90.29	-1,024.3	1,661.6	3,042.7	2,965.0	77.76	39.128	
11,500.0	7,110.4	7,081.0	7,080.5	76.8	2.5	-90.29	-1,024.3	1,661.6	3,112.4	3,033.1	79.31	39.246	
11,515.7	7,110.4	7,081.0	7,080.6	77.1	2.5	-90.29	-1,024.3	1,661.6	3,125.7	3,046.1	79.60	39.268	
11,600.0	7,110.1	7,081.2	7,080.7	78.7	2.5	-90.30	-1,024.3	1,661.6	3,197.5	3,116.3	81.17	39.391	
11,614.1	7,110.1	7,081.2	7,080.8	79.0	2.5	-90.30	-1,024.3	1,661.6	3,209.6	3,128.2	81.44	39.412	
11,655.0	7,110.0	7,081.3	7,080.8	79.7	2.5	-90.30	-1,024.3	1,661.6	3,244.7	3,162.5	82.20	39.472	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	155.45	-3,685.6	1,683.3	4,051.8				
98.4	98.4	131.4	131.4	0.1	0.1	155.45	-3,685.1	1,683.1	4,051.3	4,051.2	0.16	N/A	
100.0	100.0	132.8	132.8	0.1	0.1	155.45	-3,685.1	1,683.1	4,051.3	4,051.2	0.17	N/A	
196.8	196.8	220.9	220.9	0.3	0.2	155.45	-3,684.5	1,683.0	4,050.8	4,050.2	0.53	7,618.108	
200.0	200.0	223.6	223.6	0.3	0.2	155.45	-3,684.5	1,683.0	4,050.8	4,050.2	0.54	7,484.492	
295.3	295.3	308.6	308.6	0.5	0.3	155.45	-3,684.2	1,683.1	4,050.5	4,049.7	0.83	4,890.166	
300.0	300.0	313.7	313.7	0.5	0.3	155.45	-3,684.2	1,683.1	4,050.5	4,049.6	0.84	4,807.741	
393.7	393.7	411.5	411.5	0.7	0.4	155.44	-3,683.9	1,683.2	4,050.2	4,049.1	1.12	3,614.034	
400.0	400.0	417.3	417.3	0.8	0.4	155.44	-3,683.9	1,683.2	4,050.2	4,049.1	1.14	3,558.906	
492.1	492.1	501.1	501.1	1.0	0.4	155.44	-3,683.7	1,683.3	4,050.0	4,048.7	1.39	2,910.850	
500.0	500.0	509.3	509.3	1.0	0.4	155.44	-3,683.7	1,683.3	4,050.0	4,048.6	1.41	2,868.594	
590.5	590.5	600.0	600.0	1.2	0.5	155.44	-3,683.5	1,683.3	4,049.9	4,048.3	1.65	2,460.076	
600.0	600.0	611.5	611.4	1.2	0.5	155.44	-3,683.5	1,683.3	4,049.9	4,048.2	1.67	2,428.044	
648.3	648.3	654.3	654.3	1.3	0.5	155.44	-3,683.5	1,683.3	4,049.9	4,048.1	1.78	2,277.547	
689.0	689.0	690.4	690.4	1.4	0.5	155.44	-3,683.5	1,683.3	4,049.9	4,048.0	1.87	2,164.359	
700.0	700.0	700.2	700.2	1.4	0.5	155.44	-3,683.5	1,683.3	4,049.9	4,048.0	1.90	2,135.558	
787.4	787.4	789.8	789.8	1.6	0.5	155.44	-3,683.5	1,683.5	4,050.0	4,047.9	2.13	1,903.179	
800.0	800.0	803.0	802.9	1.7	0.5	155.44	-3,683.5	1,683.5	4,050.0	4,047.9	2.16	1,874.558	
885.8	885.8	897.6	897.6	1.9	0.5	155.44	-3,683.5	1,683.5	4,050.0	4,047.6	2.36	1,715.886	
900.0	900.0	911.8	911.8	1.9	0.5	155.44	-3,683.5	1,683.5	4,050.0	4,047.6	2.40	1,690.417	
984.2	984.2	994.7	994.7	2.1	0.6	155.44	-3,683.4	1,683.5	4,049.9	4,047.3	2.61	1,551.718	
1,000.0	1,000.0	1,010.4	1,010.4	2.1	0.6	155.44	-3,683.3	1,683.6	4,049.9	4,047.2	2.65	1,529.136	
1,082.7	1,082.7	1,092.9	1,092.9	2.3	0.6	155.44	-3,683.3	1,683.5	4,049.8	4,046.9	2.85	1,422.626	
1,100.0	1,100.0	1,110.9	1,110.9	2.3	0.6	155.44	-3,683.2	1,683.5	4,049.8	4,046.9	2.89	1,401.158	
1,181.1	1,181.1	1,197.9	1,197.9	2.5	0.6	155.44	-3,683.1	1,683.4	4,049.6	4,046.5	3.10	1,305.946	
1,200.0	1,200.0	1,216.8	1,216.8	2.6	0.6	155.44	-3,683.1	1,683.4	4,049.5	4,046.4	3.15	1,284.804	
1,279.5	1,279.5	1,295.9	1,295.9	2.7	0.6	155.44	-3,682.8	1,683.4	4,049.3	4,046.0	3.37	1,202.530	
1,300.0	1,300.0	1,317.0	1,317.0	2.8	0.7	155.44	-3,682.8	1,683.3	4,049.3	4,045.9	3.42	1,182.980	
1,377.9	1,377.9	1,398.5	1,398.5	3.0	0.7	155.43	-3,682.5	1,683.3	4,049.0	4,045.4	3.63	1,113.991	
1,400.0	1,400.0	1,419.8	1,419.8	3.0	0.7	155.43	-3,682.5	1,683.3	4,049.0	4,045.3	3.69	1,096.563	
1,476.4	1,476.4	1,493.0	1,493.0	3.2	0.7	155.44	-3,682.3	1,683.1	4,048.7	4,044.8	3.89	1,040.531	
1,500.0	1,500.0	1,515.0	1,515.0	3.2	0.7	155.44	-3,682.3	1,683.0	4,048.7	4,044.7	3.95	1,025.097	
1,574.8	1,574.8	1,583.8	1,583.8	3.4	0.7	155.44	-3,682.2	1,683.0	4,048.6	4,044.4	4.13	980.064	
1,600.0	1,600.0	1,608.9	1,608.9	3.5	0.7	155.44	-3,682.2	1,683.0	4,048.5	4,044.4	4.19	965.462	
1,673.2	1,673.2	1,695.5	1,695.5	3.6	0.8	155.44	-3,682.0	1,682.9	4,048.4	4,044.0	4.38	923.380	
1,700.0	1,700.0	1,721.9	1,721.9	3.7	0.8	155.44	-3,681.9	1,682.9	4,048.3	4,043.8	4.45	908.947	
1,771.6	1,771.6	1,790.4	1,790.4	3.8	0.8	155.43	-3,681.6	1,682.9	4,048.0	4,043.4	4.64	872.486	
1,800.0	1,800.0	1,818.1	1,818.1	3.9	0.8	155.43	-3,681.5	1,682.9	4,047.9	4,043.2	4.71	858.760	
1,870.1	1,870.1	1,887.6	1,887.5	4.1	0.9	155.43	-3,681.3	1,682.9	4,047.7	4,042.8	4.90	826.504	
1,900.0	1,900.0	1,917.7	1,917.6	4.1	0.9	155.43	-3,681.2	1,682.9	4,047.6	4,042.7	4.98	813.513	
1,968.5	1,968.5	1,987.3	1,987.3	4.3	0.9	155.43	-3,680.9	1,683.0	4,047.4	4,042.3	5.15	785.358	
2,000.0	2,000.0	2,017.7	2,017.7	4.4	0.9	155.43	-3,680.7	1,683.1	4,047.3	4,042.1	5.23	773.227	
2,066.9	2,066.9	2,079.8	2,079.8	4.5	0.9	155.42	-3,680.5	1,683.3	4,047.2	4,041.8	5.40	748.941	
2,100.0	2,100.0	2,111.8	2,111.8	4.6	0.9	155.42	-3,680.4	1,683.4	4,047.1	4,041.6	5.49	737.477	
2,150.0	2,150.0	2,163.9	2,163.9	4.7	1.0	155.42	-3,680.2	1,683.6	4,047.0	4,041.4	5.62	720.685	
2,156.4	2,156.4	2,170.6	2,170.6	4.7	1.0	155.17	-3,680.2	1,683.6	4,047.0	4,041.4	5.63	718.537	
2,165.3	2,165.3	2,179.9	2,179.9	4.7	1.0	155.17	-3,680.2	1,683.6	4,047.0	4,041.4	5.66	715.635	
2,200.0	2,200.0	2,213.5	2,213.5	4.8	1.0	155.17	-3,680.0	1,683.7	4,047.3	4,041.6	5.74	704.941	
2,263.8	2,263.7	2,269.3	2,269.3	5.0	1.0	155.16	-3,679.9	1,683.9	4,048.9	4,043.0	5.90	686.799	
2,300.0	2,299.9	2,300.0	2,300.0	5.0	1.0	155.16	-3,679.9	1,684.0	4,050.5	4,044.5	5.98	677.030	
2,362.2	2,362.0	2,358.9	2,358.9	5.2	1.0	155.15	-3,680.0	1,684.1	4,054.1	4,048.0	6.13	661.808	
2,400.0	2,399.7	2,393.9	2,393.9	5.3	1.0	155.14	-3,680.1	1,684.1	4,057.0	4,050.8	6.21	652.972	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,460.6	2,460.0	2,451.9	2,451.9	5.4	1.0	155.13	-3,680.3	1,684.0	4,062.6	4,056.2	6.36	638.705	
2,500.0	2,499.1	2,489.7	2,489.7	5.5	1.0	155.12	-3,680.5	1,683.9	4,066.8	4,060.4	6.46	629.840	
2,559.0	2,557.7	2,545.4	2,545.4	5.6	1.0	155.11	-3,680.8	1,683.7	4,074.2	4,067.6	6.60	616.849	
2,600.0	2,598.2	2,583.9	2,583.9	5.7	1.0	155.10	-3,681.1	1,683.5	4,079.9	4,073.2	6.71	608.260	
2,657.5	2,654.8	2,642.8	2,642.8	5.9	1.0	155.09	-3,681.6	1,683.1	4,088.9	4,082.0	6.86	596.386	
2,700.0	2,696.6	2,687.8	2,687.8	6.0	1.0	155.08	-3,681.9	1,682.8	4,096.2	4,089.2	6.97	588.007	
2,755.9	2,751.4	2,739.9	2,739.8	6.1	1.0	155.06	-3,682.3	1,682.5	4,106.6	4,099.4	7.11	577.216	
2,800.0	2,794.4	2,779.3	2,779.3	6.2	1.0	155.04	-3,682.7	1,682.2	4,115.5	4,108.3	7.23	569.177	
2,854.3	2,847.3	2,832.3	2,832.2	6.4	1.0	155.02	-3,683.2	1,681.8	4,127.4	4,120.0	7.38	559.213	
2,888.8	2,880.6	2,867.9	2,867.8	6.5	1.0	155.01	-3,683.5	1,681.5	4,135.4	4,127.9	7.48	553.221	
2,900.0	2,891.5	2,879.4	2,879.4	6.6	1.0	155.03	-3,683.6	1,681.4	4,138.0	4,130.5	7.51	551.311	
2,952.7	2,942.5	2,942.6	2,942.6	6.7	1.0	155.14	-3,684.0	1,680.9	4,150.5	4,142.8	7.65	542.510	
3,000.0	2,988.2	3,003.7	3,003.7	6.9	1.1	155.24	-3,684.2	1,680.3	4,161.4	4,153.6	7.79	534.505	
3,051.2	3,037.6	3,064.4	3,064.3	7.1	1.1	155.34	-3,684.3	1,679.6	4,173.2	4,165.2	7.93	526.067	
3,100.0	3,084.9	3,122.4	3,122.3	7.3	1.1	155.44	-3,684.3	1,678.8	4,184.3	4,176.2	8.08	518.159	
3,149.6	3,132.8	3,181.5	3,181.4	7.5	1.1	155.54	-3,684.1	1,677.8	4,195.4	4,187.2	8.22	510.146	
3,200.0	3,181.5	3,254.5	3,254.4	7.6	1.1	155.66	-3,683.6	1,676.6	4,206.6	4,198.2	8.38	502.119	
3,248.0	3,228.0	3,322.8	3,322.7	7.8	1.1	155.76	-3,682.7	1,675.5	4,216.9	4,208.4	8.53	494.588	
3,300.0	3,278.2	3,385.5	3,385.4	8.0	1.2	155.86	-3,681.5	1,674.7	4,227.9	4,219.2	8.69	486.778	
3,346.4	3,323.2	3,427.9	3,427.8	8.2	1.2	155.92	-3,680.6	1,674.3	4,237.7	4,228.9	8.83	480.019	
3,400.0	3,374.9	3,471.3	3,471.2	8.5	1.2	155.98	-3,679.6	1,674.1	4,249.1	4,240.1	8.99	472.525	
3,444.9	3,418.3	3,508.1	3,508.0	8.6	1.2	156.03	-3,678.8	1,674.0	4,258.7	4,249.5	9.13	466.360	
3,500.0	3,471.6	3,555.1	3,554.9	8.9	1.2	156.09	-3,677.9	1,674.0	4,270.6	4,261.3	9.31	458.939	
3,543.3	3,513.5	3,591.9	3,591.8	9.1	1.2	156.14	-3,677.2	1,674.0	4,280.0	4,270.5	9.44	453.250	
3,600.0	3,568.3	3,643.7	3,643.5	9.3	1.2	156.21	-3,676.2	1,674.1	4,292.4	4,282.7	9.62	446.013	
3,641.7	3,608.7	3,682.2	3,682.1	9.5	1.2	156.26	-3,675.5	1,674.2	4,301.5	4,291.7	9.76	440.801	
3,700.0	3,665.0	3,735.5	3,735.3	9.7	1.3	156.33	-3,674.6	1,674.2	4,314.3	4,304.4	9.95	433.780	
3,740.1	3,703.8	3,771.9	3,771.7	9.9	1.3	156.37	-3,674.0	1,674.3	4,323.2	4,313.1	10.08	429.060	
3,800.0	3,761.7	3,824.3	3,824.1	10.2	1.3	156.44	-3,673.1	1,674.5	4,336.4	4,326.2	10.27	422.263	
3,838.6	3,799.0	3,856.6	3,856.4	10.4	1.3	156.48	-3,672.7	1,674.6	4,345.0	4,334.6	10.39	417.999	
3,900.0	3,858.4	3,910.0	3,909.8	10.7	1.3	156.55	-3,672.0	1,674.8	4,358.8	4,348.2	10.59	411.413	
3,937.0	3,894.2	3,948.2	3,948.0	10.8	1.3	156.59	-3,671.5	1,674.9	4,367.1	4,356.4	10.72	407.473	
4,000.0	3,955.1	4,012.0	4,011.8	11.1	1.3	156.67	-3,670.6	1,675.1	4,381.2	4,370.3	10.93	400.982	
4,035.4	3,989.3	4,044.9	4,044.7	11.3	1.3	156.71	-3,670.1	1,675.3	4,389.2	4,378.1	11.04	397.459	
4,100.0	4,051.8	4,100.0	4,099.8	11.6	1.4	156.78	-3,669.4	1,675.5	4,403.7	4,392.5	11.25	391.280	
4,133.8	4,084.5	4,132.3	4,132.1	11.7	1.4	156.82	-3,669.0	1,675.7	4,411.4	4,400.0	11.37	388.077	
4,200.0	4,148.5	4,186.9	4,186.6	12.1	1.4	156.89	-3,668.3	1,676.0	4,426.4	4,414.8	11.58	382.091	
4,232.3	4,179.7	4,214.2	4,214.0	12.2	1.4	156.92	-3,668.0	1,676.2	4,433.8	4,422.1	11.69	379.240	
4,300.0	4,245.2	4,273.2	4,272.9	12.5	1.4	156.99	-3,667.5	1,676.7	4,449.4	4,437.5	11.92	373.426	
4,330.7	4,274.9	4,300.0	4,299.8	12.7	1.4	157.02	-3,667.3	1,676.9	4,456.5	4,444.5	12.02	370.850	
4,400.0	4,341.9	4,370.4	4,370.1	13.0	1.4	157.10	-3,666.7	1,677.4	4,472.6	4,460.3	12.25	365.162	
4,429.1	4,370.0	4,400.0	4,399.8	13.1	1.4	157.14	-3,666.4	1,677.7	4,479.3	4,466.9	12.35	362.820	
4,500.0	4,438.6	4,466.9	4,466.7	13.5	1.5	157.21	-3,665.8	1,678.3	4,495.7	4,483.1	12.58	357.325	
4,527.5	4,465.2	4,492.9	4,492.6	13.6	1.5	157.24	-3,665.6	1,678.5	4,502.1	4,489.4	12.67	355.234	
4,600.0	4,535.3	4,560.2	4,560.0	14.0	1.5	157.32	-3,665.1	1,678.9	4,518.9	4,505.9	12.92	349.887	
4,626.0	4,560.4	4,584.3	4,584.1	14.1	1.5	157.35	-3,664.9	1,679.1	4,524.9	4,511.9	13.00	348.007	
4,700.0	4,631.9	4,653.4	4,653.2	14.5	1.5	157.43	-3,664.5	1,679.5	4,542.2	4,528.9	13.25	342.766	
4,724.4	4,655.5	4,676.3	4,676.0	14.6	1.5	157.46	-3,664.4	1,679.6	4,547.9	4,534.5	13.33	341.088	
4,800.0	4,728.6	4,746.3	4,746.0	15.0	1.5	157.54	-3,664.0	1,679.9	4,565.5	4,552.0	13.59	336.045	
4,822.8	4,750.7	4,767.3	4,767.0	15.1	1.5	157.57	-3,664.0	1,680.0	4,570.9	4,557.2	13.66	334.552	
4,900.0	4,825.3	4,846.5	4,846.2	15.4	1.6	157.67	-3,663.8	1,679.9	4,589.0	4,575.1	13.93	329.499	
4,921.2	4,845.9	4,870.2	4,870.0	15.6	1.6	157.70	-3,663.7	1,679.9	4,594.0	4,580.0	14.00	328.107	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	4,922.0	4,952.3	4,952.1	15.9	1.6	157.80	-3,663.3	1,679.8	4,612.3	4,598.0	14.27	323.114	
5,019.7	4,941.0	4,972.1	4,971.8	16.0	1.6	157.82	-3,663.2	1,679.8	4,616.8	4,602.5	14.34	321.902	
5,100.0	5,018.7	5,044.0	5,043.8	16.4	1.6	157.91	-3,662.9	1,679.7	4,635.5	4,620.9	14.62	317.125	
5,118.1	5,036.2	5,059.2	5,059.0	16.5	1.6	157.93	-3,662.8	1,679.7	4,639.7	4,625.1	14.68	316.077	
5,200.0	5,115.4	5,131.0	5,130.7	16.9	1.6	158.01	-3,662.6	1,679.7	4,659.0	4,644.0	14.96	311.426	
5,216.5	5,131.4	5,146.4	5,146.1	17.0	1.6	158.03	-3,662.6	1,679.7	4,662.9	4,647.9	15.02	310.499	
5,300.0	5,212.1	5,225.4	5,225.1	17.4	1.7	158.13	-3,662.4	1,679.7	4,682.6	4,667.3	15.31	305.918	
5,314.9	5,226.6	5,240.0	5,239.7	17.5	1.7	158.14	-3,662.4	1,679.7	4,686.1	4,670.8	15.36	305.113	
5,400.0	5,308.8	5,325.1	5,324.9	17.9	1.7	158.24	-3,662.3	1,679.7	4,706.2	4,690.5	15.65	300.638	
5,413.4	5,321.7	5,339.3	5,339.0	18.0	1.7	158.26	-3,662.2	1,679.7	4,709.4	4,693.7	15.70	299.950	
5,500.0	5,405.5	5,429.9	5,429.7	18.4	1.7	158.37	-3,662.0	1,679.5	4,729.7	4,713.7	16.00	295.572	
5,511.8	5,416.9	5,441.9	5,441.7	18.5	1.7	158.38	-3,661.9	1,679.5	4,732.5	4,716.4	16.04	294.984	
5,600.0	5,502.2	5,531.7	5,531.4	18.9	1.8	158.49	-3,661.6	1,679.2	4,753.1	4,736.7	16.35	290.688	
5,610.2	5,512.1	5,542.0	5,541.8	19.0	1.8	158.50	-3,661.6	1,679.2	4,755.5	4,739.1	16.39	290.202	
5,700.0	5,598.9	5,625.8	5,625.5	19.4	1.8	158.59	-3,661.1	1,679.3	4,776.4	4,759.7	16.70	286.075	
5,708.6	5,607.2	5,632.6	5,632.3	19.5	1.8	158.60	-3,661.0	1,679.3	4,778.5	4,761.7	16.73	285.695	
5,745.8	5,643.2	5,662.0	5,661.7	19.7	1.8	158.63	-3,660.9	1,679.4	4,787.2	4,770.4	16.85	284.081	
5,800.0	5,695.7	5,706.1	5,705.8	19.9	1.8	158.77	-3,660.8	1,679.5	4,799.6	4,782.6	16.98	282.735	
5,807.1	5,702.6	5,713.1	5,712.9	19.9	1.8	158.79	-3,660.8	1,679.5	4,801.1	4,784.2	16.99	282.600	
5,900.0	5,793.2	5,806.2	5,805.9	20.3	1.8	159.02	-3,660.6	1,679.6	4,820.0	4,802.9	17.17	280.798	
5,905.5	5,798.6	5,811.9	5,811.6	20.3	1.8	159.03	-3,660.6	1,679.6	4,821.1	4,803.9	17.18	280.695	
6,000.0	5,891.5	5,907.9	5,907.7	20.6	1.9	159.22	-3,660.4	1,679.6	4,837.2	4,819.9	17.34	278.927	
6,003.9	5,895.4	5,911.3	5,911.0	20.6	1.9	159.23	-3,660.4	1,679.6	4,837.8	4,820.5	17.35	278.872	
6,100.0	5,990.4	6,000.0	5,999.7	20.9	1.9	159.38	-3,660.3	1,679.7	4,851.3	4,833.8	17.48	277.485	
6,102.3	5,992.7	6,000.0	5,999.7	20.9	1.9	159.38	-3,660.3	1,679.7	4,851.6	4,834.1	17.49	277.458	
6,200.0	6,089.7	6,076.0	6,075.7	21.1	1.9	159.49	-3,660.5	1,679.9	4,862.5	4,844.9	17.60	276.275	
6,200.8	6,090.4	6,076.6	6,076.3	21.1	1.9	159.49	-3,660.5	1,679.9	4,862.5	4,844.9	17.60	276.266	
6,299.2	6,188.5	6,182.5	6,182.3	21.4	1.9	159.58	-3,660.8	1,680.1	4,870.5	4,852.8	17.70	275.136	
6,300.0	6,189.3	6,183.5	6,183.2	21.4	1.9	159.58	-3,660.8	1,680.1	4,870.5	4,852.8	17.70	275.126	
6,397.6	6,286.8	6,279.2	6,278.9	21.5	1.9	159.63	-3,661.0	1,680.2	4,875.1	4,857.3	17.79	273.984	
6,400.0	6,289.2	6,281.4	6,281.2	21.5	1.9	159.64	-3,661.0	1,680.2	4,875.2	4,857.4	17.80	273.952	
6,484.6	6,373.8	6,363.3	6,363.1	21.6	1.9	159.90	-3,661.4	1,680.1	4,876.6	4,858.7	17.87	272.866	
6,496.0	6,385.3	6,374.5	6,374.2	21.7	1.9	159.90	-3,661.4	1,680.1	4,876.7	4,858.8	17.89	272.580	
6,500.0	6,389.2	6,378.3	6,378.1	21.7	1.9	159.90	-3,661.4	1,680.1	4,876.7	4,858.8	17.90	272.481	
6,514.6	6,403.8	6,392.5	6,392.3	21.7	1.9	159.90	-3,661.5	1,680.1	4,876.7	4,858.8	17.92	272.076	
6,550.0	6,439.2	6,430.3	6,430.0	21.7	1.9	-20.13	-3,661.6	1,680.1	4,876.0	4,858.1	17.91	272.193	
6,594.5	6,483.5	6,478.6	6,478.4	21.7	1.8	-20.23	-3,661.7	1,680.1	4,872.8	4,854.9	17.92	271.885	
6,600.0	6,489.0	6,484.6	6,484.4	21.7	1.8	-20.25	-3,661.8	1,680.1	4,872.2	4,854.3	17.93	271.792	
6,650.0	6,538.4	6,540.5	6,540.2	21.7	1.8	-20.48	-3,661.9	1,680.0	4,865.1	4,847.1	17.98	270.618	
6,692.9	6,580.3	6,588.5	6,588.2	21.6	1.8	-20.78	-3,662.0	1,679.8	4,856.3	4,838.3	18.04	269.241	
6,700.0	6,587.1	6,596.4	6,596.1	21.6	1.8	-20.84	-3,662.0	1,679.8	4,854.7	4,836.6	18.05	268.977	
6,750.0	6,635.0	6,636.7	6,636.5	21.5	1.8	-21.29	-3,662.0	1,679.7	4,841.1	4,823.0	18.11	267.261	
6,791.3	6,673.7	6,668.6	6,668.4	21.4	1.8	-21.76	-3,662.1	1,679.7	4,827.6	4,809.4	18.16	265.846	
6,800.0	6,681.7	6,675.2	6,675.0	21.4	1.8	-21.87	-3,662.1	1,679.6	4,824.5	4,806.3	18.17	265.534	
6,850.0	6,727.1	6,718.4	6,718.2	21.2	1.8	-22.60	-3,662.3	1,679.5	4,805.0	4,786.7	18.22	263.754	
6,889.7	6,762.0	6,760.4	6,760.2	21.1	1.8	-23.32	-3,662.5	1,679.4	4,787.3	4,769.1	18.26	262.212	
6,900.0	6,770.9	6,771.0	6,770.8	21.0	1.8	-23.52	-3,662.5	1,679.3	4,782.5	4,764.2	18.27	261.789	
6,950.0	6,812.9	6,814.9	6,814.7	20.8	1.8	-24.61	-3,662.6	1,679.1	4,757.1	4,738.8	18.31	259.775	
6,988.2	6,843.6	6,840.7	6,840.4	20.6	1.8	-25.56	-3,662.7	1,679.0	4,736.0	4,717.6	18.34	258.204	
7,000.0	6,852.9	6,848.4	6,848.1	20.6	1.8	-25.89	-3,662.7	1,679.0	4,729.1	4,710.8	18.35	257.669	
7,050.0	6,890.7	6,880.1	6,879.9	20.3	1.8	-27.40	-3,662.9	1,678.8	4,698.7	4,680.3	18.41	255.178	
7,086.6	6,916.9	6,903.0	6,902.7	20.1	1.8	-28.70	-3,663.0	1,678.7	4,674.9	4,656.5	18.48	252.990	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT MCCART 30-2 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	0.0 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,926.2	6,913.6	6,913.4	20.1	1.8	-29.23	-3,663.1	1,678.7	4,665.9	4,647.4	18.51	252.029	
7,150.0	6,959.1	6,951.7	6,951.4	19.8	1.8	-31.45	-3,663.3	1,678.5	4,630.9	4,612.3	18.68	247.948	
7,185.0	6,980.5	6,976.5	6,976.2	19.6	1.8	-33.27	-3,663.5	1,678.2	4,605.2	4,586.4	18.83	244.569	
7,200.0	6,989.3	6,986.6	6,986.3	19.5	1.8	-34.12	-3,663.5	1,678.1	4,593.9	4,575.0	18.90	243.001	
7,250.0	7,016.6	7,025.0	7,024.7	19.3	1.9	-37.38	-3,663.7	1,677.7	4,555.0	4,535.8	19.22	236.994	
7,283.4	7,033.3	7,051.2	7,050.9	19.1	1.9	-39.96	-3,663.8	1,677.3	4,528.0	4,508.5	19.48	232.491	
7,300.0	7,041.0	7,063.3	7,063.0	19.1	1.9	-41.37	-3,663.9	1,677.1	4,514.4	4,494.8	19.61	230.224	
7,350.0	7,062.2	7,096.5	7,096.2	18.8	1.9	-46.17	-3,663.9	1,676.6	4,472.3	4,452.2	20.03	223.306	
7,381.9	7,074.1	7,117.6	7,117.3	18.7	1.9	-49.76	-3,663.9	1,676.3	4,444.8	4,424.5	20.29	219.026	
7,400.0	7,080.3	7,128.8	7,128.5	18.7	1.9	-52.00	-3,663.8	1,676.1	4,428.9	4,408.5	20.43	216.828	
7,450.0	7,095.0	7,155.3	7,155.0	18.5	1.9	-58.90	-3,663.7	1,675.7	4,384.6	4,363.9	20.69	211.875	
7,480.3	7,102.4	7,168.1	7,167.8	18.4	1.9	-63.61	-3,663.6	1,675.5	4,357.3	4,336.6	20.75	210.000	
7,500.0	7,106.4	7,175.2	7,174.9	18.4	1.9	-66.86	-3,663.6	1,675.3	4,339.5	4,318.8	20.72	209.435	
7,550.0	7,114.4	7,188.6	7,188.3	18.3	1.9	-75.70	-3,663.4	1,675.1	4,293.9	4,273.4	20.44	210.042	
7,578.7	7,117.4	7,193.5	7,193.2	18.3	1.9	-81.03	-3,663.4	1,675.0	4,267.5	4,247.3	20.20	211.312	
7,600.0	7,118.9	7,195.7	7,195.4	18.3	1.9	-85.03	-3,663.4	1,675.0	4,248.0	4,228.0	20.02	212.187	
7,641.3	7,120.0	7,196.9	7,196.6	18.3	1.9	-92.74	-3,663.3	1,675.0	4,210.0	4,190.0	19.95	211.020	
7,677.1	7,119.9	7,196.1	7,195.8	18.3	1.9	-92.71	-3,663.4	1,675.0	4,177.2	4,157.2	19.99	208.952	
7,700.0	7,119.9	7,195.6	7,195.3	18.4	1.9	-92.70	-3,663.4	1,675.0	4,156.2	4,136.2	20.02	207.638	
7,775.6	7,119.7	7,193.9	7,193.6	18.6	1.9	-92.64	-3,663.4	1,675.0	4,087.2	4,067.0	20.22	202.130	
7,800.0	7,119.6	7,193.4	7,193.1	18.6	1.9	-92.62	-3,663.4	1,675.0	4,064.9	4,044.6	20.29	200.376	
7,874.0	7,119.4	7,191.8	7,191.5	19.0	1.9	-92.57	-3,663.4	1,675.1	3,997.6	3,976.9	20.63	193.807	
7,900.0	7,119.4	7,191.2	7,190.9	19.1	1.9	-92.55	-3,663.4	1,675.1	3,974.0	3,953.2	20.75	191.553	
7,972.4	7,119.2	7,189.8	7,189.5	19.6	1.9	-92.50	-3,663.4	1,675.1	3,908.4	3,887.2	21.21	184.296	
8,000.0	7,119.1	7,189.2	7,188.9	19.7	1.9	-92.48	-3,663.4	1,675.1	3,883.5	3,862.1	21.38	181.619	
8,070.8	7,118.9	7,187.8	7,187.5	20.3	1.9	-92.43	-3,663.4	1,675.1	3,819.7	3,797.7	21.95	174.038	
8,100.0	7,118.9	7,187.2	7,186.9	20.5	1.9	-92.41	-3,663.4	1,675.1	3,793.5	3,771.3	22.18	171.035	
8,169.3	7,118.7	7,185.9	7,185.6	21.2	1.9	-92.37	-3,663.5	1,675.2	3,731.4	3,708.6	22.83	163.441	
8,200.0	7,118.6	7,185.3	7,185.0	21.5	1.9	-92.35	-3,663.5	1,675.2	3,704.0	3,680.9	23.12	160.213	
8,267.7	7,118.5	7,184.0	7,183.7	22.2	1.9	-92.30	-3,663.5	1,675.2	3,643.7	3,619.9	23.84	152.843	
8,300.0	7,118.4	7,183.4	7,183.1	22.5	1.9	-92.28	-3,663.5	1,675.2	3,615.1	3,590.9	24.18	149.485	
8,366.1	7,118.2	7,182.3	7,182.0	23.3	1.9	-92.24	-3,663.5	1,675.2	3,556.6	3,531.6	24.96	142.500	
8,400.0	7,118.1	7,181.6	7,181.3	23.7	1.9	-92.22	-3,663.5	1,675.2	3,526.7	3,501.4	25.36	139.091	
8,464.5	7,118.0	7,180.5	7,180.2	24.5	1.9	-92.18	-3,663.5	1,675.3	3,470.0	3,443.8	26.17	132.586	
8,500.0	7,117.9	7,179.9	7,179.6	25.0	1.9	-92.16	-3,663.5	1,675.3	3,439.0	3,412.4	26.62	129.187	
8,563.0	7,117.7	7,178.8	7,178.5	25.8	1.9	-92.13	-3,663.5	1,675.3	3,384.1	3,356.6	27.47	123.208	
8,600.0	7,117.6	7,178.2	7,177.9	26.3	1.9	-92.11	-3,663.5	1,675.3	3,352.0	3,324.0	27.96	119.866	
8,661.4	7,117.5	7,177.2	7,176.9	27.2	1.9	-92.07	-3,663.5	1,675.3	3,298.9	3,270.1	28.83	114.421	
8,700.0	7,117.4	7,176.6	7,176.3	27.7	1.9	-92.05	-3,663.5	1,675.3	3,265.7	3,236.3	29.38	111.167	
8,759.8	7,117.2	7,175.6	7,175.3	28.6	1.9	-92.02	-3,663.6	1,675.3	3,214.5	3,184.2	30.26	106.242	
8,800.0	7,117.1	7,175.0	7,174.7	29.2	1.9	-91.99	-3,663.6	1,675.4	3,180.2	3,149.4	30.85	103.098	
8,858.2	7,117.0	7,174.1	7,173.8	30.1	1.9	-91.96	-3,663.6	1,675.4	3,130.8	3,099.1	31.73	98.665	
8,900.0	7,116.9	7,173.4	7,173.1	30.7	1.9	-91.94	-3,663.6	1,675.4	3,095.6	3,063.2	32.37	95.643	
8,956.7	7,116.8	7,172.6	7,172.3	31.6	1.9	-91.91	-3,663.6	1,675.4	3,048.1	3,014.8	33.25	91.667	
9,000.0	7,116.7	7,171.9	7,171.6	32.3	1.9	-91.89	-3,663.6	1,675.4	3,011.9	2,978.0	33.93	88.773	
9,055.1	7,116.5	7,171.1	7,170.8	33.2	1.9	-91.86	-3,663.6	1,675.4	2,966.3	2,931.5	34.81	85.214	
9,100.0	7,116.4	7,170.5	7,170.2	33.9	1.9	-91.84	-3,663.6	1,675.4	2,929.3	2,893.8	35.53	82.451	
9,153.5	7,116.3	7,169.7	7,169.4	34.8	1.9	-91.81	-3,663.6	1,675.4	2,885.5	2,849.1	36.40	79.271	
9,200.0	7,116.2	7,169.1	7,168.8	35.5	1.9	-91.79	-3,663.6	1,675.5	2,847.8	2,810.6	37.16	76.638	
9,251.9	7,116.0	7,168.3	7,168.0	36.4	1.9	-91.77	-3,663.6	1,675.5	2,805.9	2,767.9	38.02	73.800	
9,300.0	7,115.9	7,167.7	7,167.4	37.2	1.9	-91.75	-3,663.6	1,675.5	2,767.5	2,728.6	38.82	71.294	
9,350.4	7,115.8	7,167.0	7,166.7	38.0	1.9	-91.72	-3,663.6	1,675.5	2,727.5	2,687.8	39.67	68.763	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT MCCART 30-2 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	0.0 usft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	7,115.7	7,166.3	7,166.0	38.9	1.9	-91.70	-3,663.6	1,675.5	2,688.5	2,648.0	40.50	66.381	
9,448.8	7,115.5	7,165.7	7,165.4	39.7	1.9	-91.68	-3,663.6	1,675.5	2,650.4	2,609.1	41.33	64.126	
9,500.0	7,115.4	7,165.0	7,164.7	40.6	1.9	-91.65	-3,663.6	1,675.5	2,610.9	2,568.7	42.20	61.864	
9,547.2	7,115.3	7,164.4	7,164.1	41.4	1.9	-91.63	-3,663.6	1,675.5	2,574.8	2,531.8	43.02	59.855	
9,600.0	7,115.2	7,163.7	7,163.5	42.3	1.9	-91.61	-3,663.6	1,675.5	2,534.9	2,491.0	43.93	57.708	
9,645.6	7,115.1	7,163.2	7,162.9	43.1	1.9	-91.59	-3,663.6	1,675.6	2,500.8	2,456.1	44.72	55.921	
9,700.0	7,114.9	7,162.5	7,162.2	44.0	1.9	-91.57	-3,663.7	1,675.6	2,460.6	2,415.0	45.67	53.884	
9,744.1	7,114.8	7,162.0	7,161.7	44.8	1.9	-91.55	-3,663.7	1,675.6	2,428.5	2,382.1	46.44	52.295	
9,800.0	7,114.7	7,161.3	7,161.0	45.8	1.9	-91.53	-3,663.7	1,675.6	2,388.3	2,340.8	47.42	50.365	
9,842.5	7,114.6	7,160.8	7,160.5	46.5	1.9	-91.51	-3,663.7	1,675.6	2,358.1	2,309.9	48.17	48.955	
9,900.0	7,114.4	7,160.1	7,159.8	47.6	1.9	-91.49	-3,663.7	1,675.6	2,317.9	2,268.7	49.18	47.127	
9,940.9	7,114.3	7,159.6	7,159.3	48.3	1.9	-91.47	-3,663.7	1,675.6	2,289.8	2,239.9	49.91	45.876	
10,000.0	7,114.2	7,159.0	7,158.7	49.3	1.9	-91.45	-3,663.7	1,675.6	2,249.8	2,198.9	50.96	44.147	
10,039.3	7,114.1	7,158.5	7,158.2	50.0	1.9	-91.43	-3,663.7	1,675.6	2,223.7	2,172.0	51.67	43.040	
10,100.0	7,113.9	7,157.8	7,157.5	51.1	1.9	-91.41	-3,663.7	1,675.6	2,184.2	2,131.4	52.75	41.406	
10,137.8	7,113.8	7,157.4	7,157.1	51.8	1.9	-91.40	-3,663.7	1,675.7	2,160.1	2,106.7	53.43	40.429	
10,200.0	7,113.7	7,156.7	7,156.5	52.9	1.9	-91.37	-3,663.7	1,675.7	2,121.2	2,066.7	54.55	38.888	
10,236.2	7,113.6	7,156.4	7,156.1	53.6	1.9	-91.36	-3,663.7	1,675.7	2,099.2	2,044.0	55.20	38.027	
10,300.0	7,113.4	7,155.7	7,155.4	54.7	1.9	-91.34	-3,663.7	1,675.7	2,061.2	2,004.9	56.35	36.576	
10,334.6	7,113.3	7,155.3	7,155.0	55.4	1.9	-91.32	-3,663.7	1,675.7	2,041.2	1,984.2	56.98	35.822	
10,400.0	7,113.2	7,154.6	7,154.3	56.5	1.9	-91.30	-3,663.7	1,675.7	2,004.4	1,946.2	58.17	34.459	
10,433.0	7,113.1	7,154.3	7,154.0	57.1	1.9	-91.29	-3,663.7	1,675.7	1,986.4	1,927.6	58.77	33.800	
10,500.0	7,112.9	7,153.6	7,153.3	58.4	1.9	-91.27	-3,663.7	1,675.7	1,951.1	1,891.1	59.99	32.524	
10,531.5	7,112.8	7,153.3	7,153.0	58.9	1.9	-91.25	-3,663.7	1,675.7	1,935.0	1,874.5	60.56	31.951	
10,600.0	7,112.7	7,152.6	7,152.3	60.2	1.9	-91.23	-3,663.7	1,675.7	1,901.5	1,839.7	61.81	30.761	
10,629.9	7,112.6	7,152.3	7,152.0	60.7	1.9	-91.22	-3,663.7	1,675.7	1,887.4	1,825.1	62.36	30.266	
10,700.0	7,112.4	7,151.7	7,151.4	62.0	1.9	-91.20	-3,663.7	1,675.8	1,856.0	1,792.3	63.65	29.160	
10,728.3	7,112.3	7,151.4	7,151.1	62.5	1.9	-91.19	-3,663.7	1,675.8	1,843.8	1,779.7	64.17	28.735	
10,800.0	7,112.2	7,150.7	7,150.4	63.9	1.9	-91.17	-3,663.7	1,675.8	1,814.8	1,749.3	65.48	27.714	
10,826.7	7,112.1	7,150.4	7,150.2	64.4	1.9	-91.16	-3,663.7	1,675.8	1,804.6	1,738.6	65.98	27.352	
10,900.0	7,111.9	7,149.8	7,149.5	65.7	1.9	-91.13	-3,663.7	1,675.8	1,778.3	1,711.0	67.33	26.414	
10,925.2	7,111.8	7,149.5	7,149.2	66.2	1.9	-91.13	-3,663.7	1,675.8	1,769.9	1,702.1	67.79	26.109	
11,000.0	7,111.7	7,148.9	7,148.6	67.6	1.9	-91.10	-3,663.7	1,675.8	1,746.8	1,677.7	69.17	25.253	
11,023.6	7,111.6	7,148.6	7,148.4	68.0	1.9	-91.10	-3,663.7	1,675.8	1,740.2	1,670.6	69.61	24.999	
11,100.0	7,111.4	7,148.0	7,147.7	69.4	1.9	-91.07	-3,663.7	1,675.8	1,720.6	1,649.6	71.02	24.226	
11,122.0	7,111.3	7,147.8	7,147.5	69.8	1.9	-91.07	-3,663.7	1,675.8	1,715.5	1,644.1	71.43	24.017	
11,200.0	7,111.2	7,147.1	7,146.8	71.3	1.9	-91.04	-3,663.7	1,675.8	1,699.8	1,626.9	72.88	23.324	
11,220.4	7,111.1	7,146.9	7,146.6	71.6	1.9	-91.04	-3,663.7	1,675.8	1,696.3	1,623.0	73.26	23.155	
11,300.0	7,110.9	7,146.3	7,146.0	73.1	1.9	-91.01	-3,663.8	1,675.8	1,684.7	1,610.0	74.73	22.543	
11,318.9	7,110.9	7,146.1	7,145.8	73.5	1.9	-91.01	-3,663.8	1,675.8	1,682.5	1,607.5	75.09	22.408	
11,400.0	7,110.6	7,145.4	7,145.1	75.0	1.9	-90.98	-3,663.8	1,675.9	1,675.5	1,598.9	76.60	21.875	
11,417.3	7,110.6	7,145.3	7,145.0	75.3	1.9	-90.98	-3,663.8	1,675.9	1,674.5	1,597.6	76.92	21.770	
11,500.0	7,110.4	7,144.6	7,144.3	76.8	1.9	-90.96	-3,663.8	1,675.9	1,672.2	1,593.7	78.46	21.313	
11,505.2	7,110.4	7,144.6	7,144.3	76.9	1.9	-90.96	-3,663.8	1,675.9	1,672.2	1,593.6	78.56	21.286 CC	
11,515.7	7,110.4	7,144.5	7,144.2	77.1	1.9	-90.95	-3,663.8	1,675.9	1,672.2	1,593.5	78.75	21.234 ES	
11,600.0	7,110.1	7,143.8	7,143.5	78.7	1.9	-90.93	-3,663.8	1,675.9	1,674.9	1,594.6	80.33	20.851	
11,614.1	7,110.1	7,143.7	7,143.4	79.0	1.9	-90.93	-3,663.8	1,675.9	1,675.7	1,595.2	80.59	20.793	
11,655.0	7,110.0	7,143.4	7,143.1	79.7	1.9	-90.91	-3,663.8	1,675.9	1,678.9	1,597.5	81.35	20.637 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	-78.36	228.8	-1,110.9	1,134.2				
98.4	98.4	98.4	98.4	0.1	0.1	-78.36	228.8	-1,110.9	1,134.2	1,134.0	0.22	5,255.670	
100.0	100.0	100.0	100.0	0.1	0.1	-78.36	228.8	-1,110.9	1,134.2	1,134.0	0.22	5,163.153	
196.8	196.8	196.8	196.8	0.3	2.7	-78.36	228.8	-1,110.9	1,134.2	1,131.2	2.96	382.799	
200.0	200.0	200.0	200.0	0.3	2.7	-78.36	228.8	-1,110.9	1,134.2	1,131.1	3.05	371.609	
295.3	295.3	295.3	295.3	0.5	4.7	-78.36	228.8	-1,110.9	1,134.2	1,129.0	5.23	216.718	
300.0	300.0	300.0	300.0	0.5	4.8	-78.36	228.8	-1,110.9	1,134.2	1,128.9	5.34	212.329	
393.7	393.7	393.7	393.7	0.7	6.7	-78.36	228.8	-1,110.9	1,134.2	1,126.7	7.46	152.098	
400.0	400.0	400.0	400.0	0.8	6.8	-78.36	228.8	-1,110.9	1,134.2	1,126.6	7.60	149.251	
492.1	492.1	492.1	492.1	1.0	8.7	-78.36	228.8	-1,110.9	1,134.2	1,124.5	9.67	117.292	
500.0	500.0	500.0	500.0	1.0	8.9	-78.36	228.8	-1,110.9	1,134.2	1,124.4	9.85	115.184	
590.5	590.5	590.5	590.5	1.2	10.7	-78.36	228.8	-1,110.9	1,134.2	1,122.3	11.88	95.487	
600.0	600.0	600.0	600.0	1.2	10.9	-78.36	228.8	-1,110.9	1,134.2	1,122.1	12.09	93.813	
689.0	689.0	689.0	689.0	1.4	12.7	-78.36	228.8	-1,110.9	1,134.2	1,120.1	14.08	80.532	
700.0	700.0	700.0	700.0	1.4	12.9	-78.36	228.8	-1,110.9	1,134.2	1,119.9	14.33	79.144	
787.4	787.4	787.4	787.4	1.6	14.7	-78.36	228.8	-1,110.9	1,134.2	1,117.9	16.29	69.633	
800.0	800.0	800.0	800.0	1.7	14.9	-78.36	228.8	-1,110.9	1,134.2	1,117.6	16.57	68.448	
885.8	885.8	885.8	885.8	1.9	16.6	-78.36	228.8	-1,110.9	1,134.2	1,115.7	18.49	61.336	
900.0	900.0	900.0	900.0	1.9	16.9	-78.36	228.8	-1,110.9	1,134.2	1,115.4	18.81	60.301	
984.2	984.2	984.2	984.2	2.1	18.6	-78.36	228.8	-1,110.9	1,134.2	1,113.5	20.69	54.807	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	18.9	-78.36	228.8	-1,110.9	1,134.2	1,113.2	21.05	53.889	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	20.6	-78.36	228.8	-1,110.9	1,134.2	1,111.3	22.90	49.535	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	21.0	-78.36	228.8	-1,110.9	1,134.2	1,110.9	23.28	48.711	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	22.6	-78.36	228.8	-1,110.9	1,134.2	1,109.1	25.10	45.190	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	23.0	-78.36	228.8	-1,110.9	1,134.2	1,108.7	25.52	44.441	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	24.6	-78.36	228.8	-1,110.9	1,134.2	1,106.9	27.30	41.545	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	25.0	-78.36	228.8	-1,110.9	1,134.2	1,106.4	27.76	40.860	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	26.5	-78.36	228.8	-1,110.9	1,134.2	1,104.7	29.50	38.445	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	27.0	-78.36	228.8	-1,110.9	1,134.2	1,104.2	30.00	37.813	
1,476.4	1,476.4	1,476.4	1,476.4	3.2	28.5	-78.36	228.8	-1,110.9	1,134.2	1,102.5	31.70	35.775	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	29.0	-78.36	228.8	-1,110.9	1,134.2	1,102.0	32.23	35.189	
1,574.8	1,574.8	1,574.8	1,574.8	3.4	30.5	-78.36	228.8	-1,110.9	1,134.2	1,100.3	33.90	33.452	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	31.0	-78.36	228.8	-1,110.9	1,134.2	1,099.7	34.47	32.905	
1,673.2	1,673.2	1,673.2	1,673.2	3.6	32.5	-78.36	228.8	-1,110.9	1,134.2	1,098.1	36.11	31.413	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	33.0	-78.36	228.8	-1,110.9	1,134.2	1,097.5	36.70	30.901	
1,771.6	1,771.6	1,771.6	1,771.6	3.8	34.5	-78.36	228.8	-1,110.9	1,134.2	1,095.9	38.31	29.608	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	35.0	-78.36	228.8	-1,110.9	1,134.2	1,095.3	38.94	29.126	
1,870.1	1,870.1	1,870.1	1,870.1	4.1	36.4	-78.36	228.8	-1,110.9	1,134.2	1,093.7	40.51	27.999	
1,900.0	1,900.0	1,900.0	1,900.0	4.1	37.0	-78.36	228.8	-1,110.9	1,134.2	1,093.0	41.18	27.544	
1,968.5	1,968.5	1,968.5	1,968.5	4.3	38.4	-78.36	228.8	-1,110.9	1,134.2	1,091.5	42.71	26.556	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	39.1	-78.36	228.8	-1,110.9	1,134.2	1,090.8	43.41	26.125	
2,066.9	2,066.9	2,066.9	2,066.9	4.5	40.4	-78.36	228.8	-1,110.9	1,134.2	1,089.3	44.91	25.255	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	41.1	-78.36	228.8	-1,110.9	1,134.2	1,088.6	45.65	24.846	
2,150.0	2,150.0	2,150.0	2,150.0	4.7	42.1	-78.36	228.8	-1,110.9	1,134.2	1,087.4	46.77	24.252	
2,165.3	2,165.3	2,165.3	2,165.3	4.7	42.4	-78.61	228.8	-1,110.9	1,134.2	1,087.1	47.11	24.075	
2,200.0	2,200.0	2,200.0	2,200.0	4.8	43.1	-78.63	228.8	-1,110.9	1,134.1	1,086.2	47.89	23.684	
2,263.8	2,263.7	2,263.7	2,263.7	5.0	44.4	-78.73	228.8	-1,110.9	1,133.8	1,084.4	49.31	22.993	
2,300.0	2,299.9	2,299.9	2,299.9	5.0	45.1	-78.81	228.8	-1,110.9	1,133.4	1,083.3	50.12	22.616	
2,362.2	2,362.0	2,362.0	2,362.0	5.2	46.3	-79.02	228.8	-1,110.9	1,132.7	1,081.2	51.50	21.993	
2,400.0	2,399.7	2,399.7	2,399.7	5.3	47.1	-79.19	228.8	-1,110.9	1,132.1	1,079.8	52.34	21.629	
2,460.6	2,460.0	2,460.0	2,460.0	5.4	48.3	-79.50	228.8	-1,110.9	1,131.0	1,077.3	53.69	21.066	
2,500.0	2,499.1	2,499.1	2,499.1	5.5	49.1	-79.74	228.8	-1,110.9	1,130.2	1,075.6	54.56	20.714	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,557.7	2,557.7	2,557.7	5.6	50.3	-80.15	228.8	-1,110.9	1,128.8	1,072.9	55.88	20.202	
2,600.0	2,598.2	2,598.2	2,598.2	5.7	51.1	-80.48	228.8	-1,110.9	1,127.8	1,071.0	56.78	19.860	
2,657.5	2,654.8	2,654.8	2,654.8	5.9	52.2	-80.98	228.8	-1,110.9	1,126.2	1,068.1	58.07	19.395	
2,700.0	2,696.6	2,696.6	2,696.6	6.0	53.1	-81.39	228.8	-1,110.9	1,125.0	1,066.0	59.01	19.063	
2,755.9	2,751.4	2,751.4	2,751.4	6.1	54.2	-81.98	228.8	-1,110.9	1,123.3	1,063.1	60.27	18.639	
2,800.0	2,794.4	2,794.4	2,794.4	6.2	55.0	-82.48	228.8	-1,110.9	1,122.0	1,060.7	61.26	18.317	
2,854.3	2,847.3	2,847.3	2,847.3	6.4	56.1	-83.14	228.8	-1,110.9	1,120.4	1,057.9	62.49	17.930	
2,888.8	2,880.6	2,880.6	2,880.6	6.5	56.8	-83.58	228.8	-1,110.9	1,119.3	1,056.1	63.26	17.693	
2,900.0	2,891.5	2,891.5	2,891.5	6.6	57.0	-83.72	228.8	-1,110.9	1,119.0	1,055.5	63.52	17.617	
2,952.7	2,942.5	2,942.5	2,942.5	6.7	58.0	-84.39	228.8	-1,110.9	1,117.6	1,052.8	64.73	17.265	
3,000.0	2,988.2	2,988.2	2,988.2	6.9	58.9	-84.98	228.8	-1,110.9	1,116.4	1,050.6	65.81	16.964	
3,051.2	3,037.6	3,037.6	3,037.6	7.1	59.9	-85.63	228.8	-1,110.9	1,115.3	1,048.3	67.00	16.647	
3,100.0	3,084.9	3,084.9	3,084.9	7.3	60.9	-86.24	228.8	-1,110.9	1,114.4	1,046.3	68.13	16.358	
3,149.6	3,132.8	3,132.8	3,132.8	7.5	61.8	-86.87	228.8	-1,110.9	1,113.6	1,044.3	69.28	16.074	
3,200.0	3,181.5	3,181.5	3,181.5	7.6	62.8	-87.51	228.8	-1,110.9	1,113.0	1,042.5	70.46	15.796	
3,248.0	3,228.0	3,228.0	3,228.0	7.8	63.8	-88.12	228.8	-1,110.9	1,112.5	1,040.9	71.58	15.541	
3,300.0	3,278.2	3,278.2	3,278.2	8.0	64.8	-88.78	228.8	-1,110.9	1,112.1	1,039.3	72.80	15.276	
3,346.4	3,323.2	3,323.2	3,323.2	8.2	65.7	-89.37	228.8	-1,110.9	1,111.9	1,038.0	73.90	15.047	
3,396.0	3,371.1	3,371.1	3,371.1	8.4	66.6	-90.00	228.8	-1,110.9	1,111.8	1,036.8	75.06	14.812 CC	
3,400.0	3,374.9	3,374.9	3,374.9	8.5	66.7	-90.05	228.8	-1,110.9	1,111.8	1,036.7	75.16	14.793	
3,444.9	3,418.3	3,418.3	3,418.3	8.6	67.6	-90.62	228.8	-1,110.9	1,111.9	1,035.7	76.22	14.588	
3,500.0	3,471.6	3,471.6	3,471.6	8.9	68.7	-91.32	228.8	-1,110.9	1,112.2	1,034.6	77.52	14.346	
3,543.3	3,513.5	3,513.5	3,513.5	9.1	69.5	-91.87	228.8	-1,110.9	1,112.5	1,033.9	78.55	14.162	
3,600.0	3,568.3	3,568.3	3,568.3	9.3	70.6	-92.59	228.8	-1,110.9	1,113.1	1,033.2	79.90	13.931	
3,641.7	3,608.7	3,608.7	3,608.7	9.5	71.4	-93.12	228.8	-1,110.9	1,113.6	1,032.7	80.89	13.767	
3,700.0	3,665.0	3,665.0	3,665.0	9.7	72.5	-93.86	228.8	-1,110.9	1,114.5	1,032.3	82.27	13.547	
3,740.1	3,703.8	3,703.8	3,703.8	9.9	73.3	-94.37	228.8	-1,110.9	1,115.3	1,032.1	83.23	13.400	
3,800.0	3,761.7	3,761.7	3,761.7	10.2	74.5	-95.12	228.8	-1,110.9	1,116.6	1,032.0	84.65	13.190	
3,838.6	3,799.0	3,799.0	3,799.0	10.4	75.2	-95.61	228.8	-1,110.9	1,117.6	1,032.0	85.57	13.060	
3,900.0	3,858.4	3,858.4	3,858.4	10.7	76.4	-96.38	228.8	-1,110.9	1,119.2	1,032.2	87.04	12.860	
3,937.0	3,894.2	3,894.2	3,894.2	10.8	77.2	-96.84	228.8	-1,110.9	1,120.4	1,032.5	87.92	12.744	
4,000.0	3,955.1	3,955.1	3,955.1	11.1	78.4	-97.63	228.8	-1,110.9	1,122.5	1,033.0	89.42	12.553	
4,035.4	3,989.3	3,989.3	3,989.3	11.3	79.1	-98.07	228.8	-1,110.9	1,123.7	1,033.5	90.26	12.450	
4,100.0	4,051.8	4,051.8	4,051.8	11.6	80.3	-98.87	228.8	-1,110.9	1,126.2	1,034.5	91.80	12.269	
4,133.8	4,084.5	4,084.5	4,084.5	11.7	81.0	-99.29	228.8	-1,110.9	1,127.7	1,035.1	92.60	12.178	
4,200.0	4,148.5	4,148.5	4,148.5	12.1	82.3	-100.11	228.8	-1,110.9	1,130.6	1,036.4	94.17	12.006	
4,232.3	4,179.7	4,179.7	4,179.7	12.2	82.9	-100.51	228.8	-1,110.9	1,132.1	1,037.2	94.94	11.925	
4,300.0	4,245.2	4,245.2	4,245.2	12.5	84.2	-101.34	228.8	-1,110.9	1,135.5	1,038.9	96.55	11.761	
4,330.7	4,274.9	4,274.9	4,274.9	12.7	84.8	-101.71	228.8	-1,110.9	1,137.1	1,039.8	97.27	11.690	
4,400.0	4,341.9	4,341.9	4,341.9	13.0	86.2	-102.55	228.8	-1,110.9	1,140.9	1,042.0	98.92	11.535	
4,429.1	4,370.0	4,370.0	4,370.0	13.1	86.7	-102.91	228.8	-1,110.9	1,142.6	1,043.0	99.61	11.472	
4,500.0	4,438.6	4,438.6	4,438.6	13.5	88.1	-103.76	228.8	-1,110.9	1,146.9	1,045.7	101.28	11.324	
4,527.5	4,465.2	4,465.2	4,465.2	13.6	88.6	-104.09	228.8	-1,110.9	1,148.7	1,046.8	101.93	11.269	
4,600.0	4,535.3	4,535.3	4,535.3	14.0	90.0	-104.95	228.8	-1,110.9	1,153.5	1,049.8	103.64	11.130	
4,626.0	4,560.4	4,560.4	4,560.4	14.1	90.5	-105.26	228.8	-1,110.9	1,155.2	1,051.0	104.25	11.081	
4,700.0	4,631.9	4,631.9	4,631.9	14.5	92.0	-106.13	228.8	-1,110.9	1,160.5	1,054.5	105.99	10.949	
4,724.4	4,655.5	4,655.5	4,655.5	14.6	92.5	-106.42	228.8	-1,110.9	1,162.3	1,055.7	106.56	10.907	
4,800.0	4,728.6	4,728.6	4,728.6	15.0	93.9	-107.30	228.8	-1,110.9	1,168.1	1,059.7	108.34	10.782	
4,822.8	4,750.7	4,750.7	4,750.7	15.1	94.4	-107.56	228.8	-1,110.9	1,169.9	1,061.0	108.87	10.745	
4,900.0	4,825.3	4,825.3	4,825.3	15.4	95.9	-108.45	228.8	-1,110.9	1,176.1	1,065.5	110.68	10.627	
4,921.2	4,845.9	4,845.9	4,845.9	15.6	96.3	-108.69	228.8	-1,110.9	1,177.9	1,066.8	111.17	10.596	
5,000.0	4,922.0	4,922.0	4,922.0	15.9	97.8	-109.58	228.8	-1,110.9	1,184.7	1,071.7	113.01	10.483	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	4,941.0	4,941.0	4,941.0	16.0	98.2	-109.81	228.8	-1,110.9	1,186.5	1,073.0	113.47	10.457	
5,100.0	5,018.7	5,018.7	5,018.7	16.4	99.8	-110.70	228.8	-1,110.9	1,193.8	1,078.4	115.33	10.351	
5,118.1	5,036.2	5,036.2	5,036.2	16.5	100.1	-110.90	228.8	-1,110.9	1,195.4	1,079.7	115.75	10.328	
5,200.0	5,115.4	5,115.4	5,115.4	16.9	101.7	-111.81	228.8	-1,110.9	1,203.3	1,085.6	117.65	10.228	
5,216.5	5,131.4	5,131.4	5,131.4	17.0	102.0	-111.99	228.8	-1,110.9	1,204.9	1,086.9	118.03	10.208	
5,300.0	5,212.1	5,212.1	5,212.1	17.4	103.7	-112.89	228.8	-1,110.9	1,213.3	1,093.3	119.96	10.114	
5,314.9	5,226.6	5,226.6	5,226.6	17.5	103.9	-113.06	228.8	-1,110.9	1,214.8	1,094.5	120.30	10.098	
5,400.0	5,308.8	5,308.8	5,308.8	17.9	105.6	-113.96	228.8	-1,110.9	1,223.7	1,101.4	122.26	10.009	
5,413.4	5,321.7	5,321.7	5,321.7	18.0	105.9	-114.11	228.8	-1,110.9	1,225.1	1,102.6	122.56	9.996	
5,500.0	5,405.5	5,405.5	5,405.5	18.4	107.5	-115.02	228.8	-1,110.9	1,234.6	1,110.0	124.55	9.912	
5,511.8	5,416.9	5,416.9	5,416.9	18.5	107.8	-115.14	228.8	-1,110.9	1,235.9	1,111.0	124.82	9.901	
5,600.0	5,502.2	5,502.2	5,502.2	18.9	109.5	-116.05	228.8	-1,110.9	1,245.9	1,119.0	126.83	9.823	
5,610.2	5,512.1	5,512.1	5,512.1	19.0	109.7	-116.16	228.8	-1,110.9	1,247.0	1,120.0	127.07	9.814	
5,700.0	5,598.9	5,598.9	5,598.9	19.4	111.4	-117.07	228.8	-1,110.9	1,257.6	1,128.5	129.11	9.740	
5,708.6	5,607.2	5,607.2	5,607.2	19.5	111.6	-117.15	228.8	-1,110.9	1,258.6	1,129.3	129.31	9.733	
5,745.8	5,643.2	5,643.2	5,643.2	19.7	112.3	-117.53	228.8	-1,110.9	1,263.1	1,132.9	130.15	9.705	
5,800.0	5,695.7	5,695.7	5,695.7	19.9	113.4	-118.16	228.8	-1,110.9	1,269.4	1,138.0	131.45	9.657	
5,807.1	5,702.6	5,702.6	5,702.6	19.9	113.5	-118.24	228.8	-1,110.9	1,270.2	1,138.6	131.62	9.651	
5,900.0	5,793.2	5,793.2	5,793.2	20.3	115.3	-119.20	228.8	-1,110.9	1,280.2	1,146.4	133.82	9.567	
5,905.5	5,798.6	5,798.6	5,798.6	20.3	115.5	-119.25	228.8	-1,110.9	1,280.7	1,146.8	133.94	9.562	
6,000.0	5,891.5	5,891.5	5,891.5	20.6	117.3	-120.07	228.8	-1,110.9	1,289.5	1,153.3	136.17	9.470	
6,003.9	5,895.4	5,895.4	5,895.4	20.6	117.4	-120.10	228.8	-1,110.9	1,289.8	1,153.6	136.26	9.466	
6,100.0	5,990.4	5,990.4	5,990.4	20.9	119.3	-120.78	228.8	-1,110.9	1,297.2	1,158.7	138.50	9.366	
6,102.3	5,992.7	5,992.7	5,992.7	20.9	119.4	-120.79	228.8	-1,110.9	1,297.4	1,158.8	138.56	9.363	
6,200.0	6,089.7	6,089.7	6,089.7	21.1	121.3	-121.32	228.8	-1,110.9	1,303.2	1,162.4	140.80	9.256	
6,200.8	6,090.4	6,090.4	6,090.4	21.1	121.3	-121.32	228.8	-1,110.9	1,303.3	1,162.5	140.82	9.255	
6,299.2	6,188.5	6,188.5	6,188.5	21.4	123.3	-121.70	228.8	-1,110.9	1,307.5	1,164.5	143.04	9.141	
6,300.0	6,189.3	6,189.3	6,189.3	21.4	123.3	-121.70	228.8	-1,110.9	1,307.5	1,164.5	143.06	9.140	
6,397.6	6,286.8	6,286.8	6,286.8	21.5	125.3	-121.91	228.8	-1,110.9	1,310.0	1,164.8	145.21	9.021	
6,400.0	6,289.2	6,289.2	6,289.2	21.5	125.3	-121.92	228.8	-1,110.9	1,310.0	1,164.8	145.26	9.018	
6,484.6	6,373.8	6,373.8	6,373.8	21.6	127.0	-121.73	228.8	-1,110.9	1,310.7	1,163.6	147.08	8.911	
6,496.0	6,385.3	6,385.3	6,385.3	21.7	127.2	-121.73	228.8	-1,110.9	1,310.7	1,163.3	147.32	8.897	
6,500.0	6,389.2	6,389.2	6,389.2	21.7	127.3	-121.73	228.8	-1,110.9	1,310.7	1,163.3	147.41	8.891	
6,514.6	6,403.8	6,403.8	6,403.8	21.7	127.6	-121.73	228.8	-1,110.9	1,310.7	1,162.9	147.72	8.872	
6,550.0	6,439.2	6,439.2	6,439.2	21.7	128.3	58.33	228.8	-1,110.9	1,310.2	1,161.8	148.41	8.828	
6,594.5	6,483.5	6,483.5	6,483.5	21.7	129.2	58.60	228.8	-1,110.9	1,308.3	1,159.2	149.14	8.773	
6,600.0	6,489.0	6,489.0	6,489.0	21.7	129.3	58.64	228.8	-1,110.9	1,308.0	1,158.8	149.22	8.766	
6,650.0	6,538.4	6,538.4	6,538.4	21.7	130.3	59.20	228.8	-1,110.9	1,304.0	1,154.2	149.84	8.702	
6,692.9	6,580.3	6,580.3	6,580.3	21.6	131.2	59.88	228.8	-1,110.9	1,299.2	1,148.9	150.26	8.646	
6,700.0	6,587.1	6,587.1	6,587.1	21.6	131.3	60.01	228.8	-1,110.9	1,298.3	1,148.0	150.32	8.637	
6,750.0	6,635.0	6,635.0	6,635.0	21.5	132.3	61.07	228.8	-1,110.9	1,290.9	1,140.2	150.70	8.566	
6,791.3	6,673.7	6,673.7	6,673.7	21.4	133.0	62.13	228.8	-1,110.9	1,283.7	1,132.7	150.98	8.502	
6,800.0	6,681.7	6,681.7	6,681.7	21.4	133.2	62.37	228.8	-1,110.9	1,282.0	1,131.0	151.04	8.488	
6,850.0	6,727.1	6,727.1	6,727.1	21.2	134.1	63.89	228.8	-1,110.9	1,271.8	1,120.4	151.40	8.401	
6,889.7	6,762.0	6,762.0	6,762.0	21.1	134.8	65.26	228.8	-1,110.9	1,262.8	1,111.1	151.73	8.323	
6,900.0	6,770.9	6,770.9	6,770.9	21.0	135.0	65.63	228.8	-1,110.9	1,260.4	1,108.6	151.83	8.301	
6,950.0	6,812.9	6,812.9	6,812.9	20.8	135.8	67.56	228.8	-1,110.9	1,248.0	1,095.6	152.38	8.190	
6,988.2	6,843.6	6,843.6	6,843.6	20.6	136.5	69.14	228.8	-1,110.9	1,238.0	1,085.1	152.90	8.096	
7,000.0	6,852.9	6,852.9	6,852.9	20.6	136.7	69.64	228.8	-1,110.9	1,234.8	1,081.7	153.08	8.066	
7,050.0	6,890.7	6,890.7	6,890.7	20.3	137.4	71.85	228.8	-1,110.9	1,221.1	1,067.2	153.92	7.933	
7,086.6	6,916.9	6,916.9	6,916.9	20.1	137.9	73.52	228.8	-1,110.9	1,210.9	1,056.3	154.61	7.832	
7,100.0	6,926.2	6,926.2	6,926.2	20.1	138.1	74.14	228.8	-1,110.9	1,207.1	1,052.3	154.87	7.794	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
7,150.0	6,959.1	6,959.1	6,959.1	19.8	138.8	76.45	228.8	-1,110.9	1,193.2	1,037.3	155.87	7.655	
7,185.0	6,980.5	6,980.5	6,980.5	19.6	139.2	78.05	228.8	-1,110.9	1,183.6	1,027.0	156.57	7.560	
7,200.0	6,989.3	6,989.3	6,989.3	19.5	139.4	78.73	228.8	-1,110.9	1,179.6	1,022.7	156.86	7.520	
7,250.0	7,016.6	7,016.6	7,016.6	19.3	139.9	80.93	228.8	-1,110.9	1,166.6	1,008.8	157.77	7.394	
7,283.4	7,033.3	7,033.3	7,033.3	19.1	140.3	82.33	228.8	-1,110.9	1,158.4	1,000.1	158.31	7.317	
7,300.0	7,041.0	7,041.0	7,041.0	19.1	140.4	82.99	228.8	-1,110.9	1,154.5	995.9	158.55	7.281	
7,350.0	7,062.2	7,062.2	7,062.2	18.8	140.9	84.86	228.8	-1,110.9	1,143.5	984.4	159.17	7.185	
7,381.9	7,074.1	7,074.1	7,074.1	18.7	141.1	85.93	228.8	-1,110.9	1,137.3	977.8	159.48	7.132	
7,400.0	7,080.3	7,080.3	7,080.3	18.7	141.2	86.49	228.8	-1,110.9	1,134.1	974.4	159.62	7.105	
7,450.0	7,095.0	7,095.0	7,095.0	18.5	141.5	87.84	228.8	-1,110.9	1,126.3	966.3	159.92	7.043	
7,480.3	7,102.4	7,102.4	7,102.4	18.4	141.7	88.51	228.8	-1,110.9	1,122.5	962.4	160.06	7.013	
7,500.0	7,106.4	7,106.4	7,106.4	18.4	141.8	88.89	228.8	-1,110.9	1,120.4	960.3	160.11	6.997	
7,550.0	7,114.4	7,114.4	7,114.4	18.3	141.9	89.60	228.8	-1,110.9	1,116.5	956.3	160.23	6.968	
7,578.7	7,117.4	7,117.4	7,117.4	18.3	142.0	89.85	228.8	-1,110.9	1,115.3	955.0	160.27	6.959	
7,600.0	7,118.9	7,118.9	7,118.9	18.3	142.0	89.96	228.8	-1,110.9	1,114.9	954.6	160.29	6.955	
7,612.7	7,119.5	7,119.5	7,119.5	18.3	142.0	90.00	228.8	-1,110.9	1,114.8	954.5	160.30	6.954 ES, SF	
7,641.3	7,120.0	7,120.0	7,120.0	18.3	142.0	90.00	228.8	-1,110.9	1,115.1	954.8	160.32	6.956	
7,677.1	7,119.9	7,119.9	7,119.9	18.3	142.0	89.99	228.8	-1,110.9	1,116.6	956.3	160.36	6.963	
7,700.0	7,119.9	7,119.9	7,119.9	18.4	142.0	89.99	228.8	-1,110.9	1,118.2	957.8	160.38	6.972	
7,775.6	7,119.7	7,119.7	7,119.7	18.6	142.0	89.98	228.8	-1,110.9	1,126.6	966.0	160.58	7.016	
7,800.0	7,119.6	7,119.6	7,119.6	18.6	142.0	89.98	228.8	-1,110.9	1,130.4	969.8	160.65	7.037	
7,874.0	7,119.4	7,119.4	7,119.4	19.0	142.0	89.97	228.8	-1,110.9	1,145.0	984.0	160.99	7.112	
7,900.0	7,119.4	7,119.4	7,119.4	19.1	142.0	89.96	228.8	-1,110.9	1,151.2	990.1	161.10	7.146	
7,972.4	7,119.2	7,119.2	7,119.2	19.6	142.0	89.95	228.8	-1,110.9	1,171.4	1,009.8	161.56	7.250	
8,000.0	7,119.1	7,119.1	7,119.1	19.7	142.0	89.95	228.8	-1,110.9	1,180.1	1,018.4	161.74	7.297	
8,070.8	7,118.9	7,118.9	7,118.9	20.3	142.0	89.94	228.8	-1,110.9	1,205.3	1,043.0	162.30	7.426	
8,100.0	7,118.9	7,118.9	7,118.9	20.5	142.0	89.94	228.8	-1,110.9	1,216.6	1,054.1	162.53	7.486	
8,169.3	7,118.7	7,118.7	7,118.7	21.2	142.0	89.93	228.8	-1,110.9	1,246.0	1,082.8	163.18	7.636	
8,200.0	7,118.6	7,118.6	7,118.6	21.5	142.0	89.93	228.8	-1,110.9	1,260.0	1,096.6	163.47	7.708	
8,267.7	7,118.5	7,118.5	7,118.5	22.2	142.0	89.92	228.8	-1,110.9	1,293.0	1,128.8	164.19	7.875	
8,300.0	7,118.4	7,118.4	7,118.4	22.5	142.0	89.91	228.8	-1,110.9	1,309.6	1,145.1	164.53	7.960	
8,366.1	7,118.2	7,118.2	7,118.2	23.3	142.0	89.90	228.8	-1,110.9	1,345.5	1,180.2	165.30	8.140	
8,400.0	7,118.1	7,118.1	7,118.1	23.7	142.0	89.90	228.8	-1,110.9	1,364.8	1,199.1	165.70	8.236	
8,464.5	7,118.0	7,118.0	7,118.0	24.5	142.0	89.89	228.8	-1,110.9	1,403.0	1,236.5	166.51	8.426	
8,500.0	7,117.9	7,117.9	7,117.9	25.0	142.0	89.89	228.8	-1,110.9	1,424.8	1,257.8	166.96	8.534	
8,563.0	7,117.7	7,117.7	7,117.7	25.8	142.0	89.88	228.8	-1,110.9	1,464.8	1,297.0	167.80	8.729	
8,600.0	7,117.6	7,117.6	7,117.6	26.3	142.0	89.87	228.8	-1,110.9	1,489.1	1,320.8	168.30	8.848	
8,661.4	7,117.5	7,117.5	7,117.5	27.2	142.0	89.87	228.8	-1,110.9	1,530.5	1,361.4	169.17	9.048	
8,700.0	7,117.4	7,117.4	7,117.4	27.7	142.0	89.86	228.8	-1,110.9	1,557.2	1,387.5	169.71	9.176	
8,759.8	7,117.2	7,117.2	7,117.2	28.6	142.0	89.85	228.8	-1,110.9	1,599.6	1,429.0	170.59	9.377	
8,800.0	7,117.1	7,117.1	7,117.1	29.2	142.0	89.85	228.8	-1,110.9	1,628.6	1,457.5	171.18	9.514	
8,858.2	7,117.0	7,117.0	7,117.0	30.1	142.0	89.84	228.8	-1,110.9	1,671.6	1,499.5	172.06	9.715	
8,900.0	7,116.9	7,116.9	7,116.9	30.7	142.0	89.84	228.8	-1,110.9	1,702.9	1,530.2	172.69	9.861	
8,956.7	7,116.8	7,116.8	7,116.8	31.6	142.0	89.83	228.8	-1,110.9	1,746.1	1,572.6	173.57	10.060	
9,000.0	7,116.7	7,116.7	7,116.7	32.3	142.0	89.82	228.8	-1,110.9	1,779.7	1,605.5	174.25	10.214	
9,055.1	7,116.5	7,116.5	7,116.5	33.2	142.0	89.82	228.8	-1,110.9	1,823.0	1,647.9	175.13	10.409	
9,100.0	7,116.4	7,116.4	7,116.4	33.9	142.0	89.81	228.8	-1,110.9	1,858.7	1,682.9	175.85	10.570	
9,153.5	7,116.3	7,116.3	7,116.3	34.8	141.9	89.80	228.8	-1,110.9	1,901.8	1,725.1	176.72	10.762	
9,200.0	7,116.2	7,116.2	7,116.2	35.5	141.9	89.80	228.8	-1,110.9	1,939.7	1,762.2	177.47	10.929	
9,251.9	7,116.0	7,116.0	7,116.0	36.4	141.9	89.79	228.8	-1,110.9	1,982.4	1,804.1	178.33	11.116	
9,300.0	7,115.9	7,115.9	7,115.9	37.2	141.9	89.78	228.8	-1,110.9	2,022.3	1,843.2	179.13	11.290	
9,350.4	7,115.8	7,115.8	7,115.8	38.0	141.9	89.78	228.8	-1,110.9	2,064.5	1,884.6	179.97	11.471	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
9,400.0	7,115.7	7,115.7	7,115.7	38.9	141.9	89.77	228.8	-1,110.9	2,106.5	1,925.7	180.81	11.650	
9,448.8	7,115.5	7,115.5	7,115.5	39.7	141.9	89.77	228.8	-1,110.9	2,148.0	1,966.4	181.63	11.826	
9,500.0	7,115.4	7,115.4	7,115.4	40.6	141.9	89.76	228.8	-1,110.9	2,191.9	2,009.4	182.50	12.010	
9,547.2	7,115.3	7,115.3	7,115.3	41.4	141.9	89.75	228.8	-1,110.9	2,232.7	2,049.4	183.32	12.180	
9,600.0	7,115.2	7,115.2	7,115.2	42.3	141.9	89.75	228.8	-1,110.9	2,278.6	2,094.4	184.22	12.369	
9,645.6	7,115.1	7,115.1	7,115.1	43.1	141.9	89.74	228.8	-1,110.9	2,318.5	2,133.5	185.01	12.532	
9,700.0	7,114.9	7,114.9	7,114.9	44.0	141.9	89.73	228.8	-1,110.9	2,366.3	2,180.4	185.96	12.725	
9,744.1	7,114.8	7,114.8	7,114.8	44.8	141.9	89.73	228.8	-1,110.9	2,405.3	2,218.6	186.73	12.881	
9,800.0	7,114.7	7,114.7	7,114.7	45.8	141.9	89.72	228.8	-1,110.9	2,455.0	2,267.3	187.71	13.079	
9,842.5	7,114.6	7,114.6	7,114.6	46.5	141.9	89.71	228.8	-1,110.9	2,492.9	2,304.5	188.45	13.228	
9,900.0	7,114.4	7,114.4	7,114.4	47.6	141.9	89.71	228.8	-1,110.9	2,544.5	2,355.0	189.47	13.430	
9,940.9	7,114.3	7,114.3	7,114.3	48.3	141.9	89.70	228.8	-1,110.9	2,581.4	2,391.2	190.19	13.572	
10,000.0	7,114.2	7,114.2	7,114.2	49.3	141.9	89.69	228.8	-1,110.9	2,634.8	2,443.5	191.24	13.777	
10,039.3	7,114.1	7,114.1	7,114.1	50.0	141.9	89.69	228.8	-1,110.9	2,670.5	2,478.5	191.94	13.913	
10,100.0	7,113.9	7,113.9	7,113.9	51.1	141.9	89.68	228.8	-1,110.9	2,725.7	2,532.7	193.02	14.121	
10,137.8	7,113.8	7,113.8	7,113.8	51.8	141.9	89.68	228.8	-1,110.9	2,760.2	2,566.5	193.70	14.250	
10,200.0	7,113.7	7,113.7	7,113.7	52.9	141.9	89.67	228.8	-1,110.9	2,817.2	2,622.4	194.82	14.461	
10,236.2	7,113.6	7,113.6	7,113.6	53.6	141.9	89.66	228.8	-1,110.9	2,850.5	2,655.1	195.47	14.583	
10,300.0	7,113.4	7,113.4	7,113.4	54.7	141.9	89.65	228.8	-1,110.9	2,909.3	2,712.7	196.62	14.797	
10,334.6	7,113.3	7,113.3	7,113.3	55.4	141.9	89.65	228.8	-1,110.9	2,941.4	2,744.1	197.24	14.912	
10,400.0	7,113.2	7,113.2	7,113.2	56.5	141.9	89.64	228.8	-1,110.9	3,002.0	2,803.5	198.43	15.129	
10,433.0	7,113.1	7,113.1	7,113.1	57.1	141.9	89.64	228.8	-1,110.9	3,032.7	2,833.6	199.03	15.238	
10,500.0	7,112.9	7,112.9	7,112.9	58.4	141.9	89.63	228.8	-1,110.9	3,095.0	2,894.8	200.24	15.456	
10,531.5	7,112.8	7,112.8	7,112.8	58.9	141.9	89.62	228.8	-1,110.9	3,124.4	2,923.6	200.81	15.559	
10,600.0	7,112.7	7,112.7	7,112.7	60.2	141.9	89.61	228.8	-1,110.9	3,188.5	2,986.5	202.06	15.780	
10,629.9	7,112.6	7,112.6	7,112.6	60.7	141.9	89.61	228.8	-1,110.9	3,216.6	3,013.9	202.61	15.876	
10,700.0	7,112.4	7,112.4	7,112.4	62.0	141.9	89.60	228.8	-1,110.9	3,282.4	3,078.5	203.89	16.099	
10,728.3	7,112.3	7,112.3	7,112.3	62.5	141.9	89.60	228.8	-1,110.9	3,309.1	3,104.6	204.41	16.188	
10,800.0	7,112.2	7,112.2	7,112.2	63.9	141.9	89.59	228.8	-1,110.9	3,376.6	3,170.9	205.72	16.414	
10,826.7	7,112.1	7,112.1	7,112.1	64.4	141.9	89.58	228.8	-1,110.9	3,401.9	3,195.7	206.21	16.497	
10,900.0	7,111.9	7,111.9	7,111.9	65.7	141.9	89.57	228.8	-1,110.9	3,471.2	3,263.6	207.56	16.724	
10,925.2	7,111.8	7,111.8	7,111.8	66.2	141.9	89.57	228.8	-1,110.9	3,495.0	3,287.0	208.02	16.801	
11,000.0	7,111.7	7,111.7	7,111.7	67.6	141.9	89.56	228.8	-1,110.9	3,566.0	3,356.6	209.40	17.030	
11,023.6	7,111.6	7,111.6	7,111.6	68.0	141.9	89.56	228.8	-1,110.9	3,588.4	3,378.6	209.84	17.101	
11,100.0	7,111.4	7,111.4	7,111.4	69.4	141.9	89.55	228.8	-1,110.9	3,661.1	3,449.9	211.25	17.331	
11,122.0	7,111.3	7,111.3	7,111.3	69.8	141.8	89.54	228.8	-1,110.9	3,682.1	3,470.5	211.65	17.397	
11,200.0	7,111.2	7,111.2	7,111.2	71.3	141.8	89.53	228.8	-1,110.9	3,756.5	3,543.4	213.09	17.628	
11,220.4	7,111.1	7,111.1	7,111.1	71.6	141.8	89.53	228.8	-1,110.9	3,776.1	3,562.6	213.47	17.689	
11,300.0	7,110.9	7,110.9	7,110.9	73.1	141.8	89.52	228.8	-1,110.9	3,852.1	3,637.2	214.95	17.921	
11,318.9	7,110.9	7,110.9	7,110.9	73.5	141.8	89.52	228.8	-1,110.9	3,870.2	3,654.9	215.30	17.976	
11,400.0	7,110.6	7,110.6	7,110.6	75.0	141.8	89.51	228.8	-1,110.9	3,948.0	3,731.2	216.80	18.210	
11,417.3	7,110.6	7,110.6	7,110.6	75.3	141.8	89.51	228.8	-1,110.9	3,964.6	3,747.4	217.12	18.259	
11,500.0	7,110.4	7,110.4	7,110.4	76.8	141.8	89.49	228.8	-1,110.9	4,044.0	3,825.3	218.66	18.494	
11,515.7	7,110.4	7,110.4	7,110.4	77.1	141.8	89.49	228.8	-1,110.9	4,059.1	3,840.1	218.95	18.539	
11,600.0	7,110.1	7,110.1	7,110.1	78.7	141.8	89.48	228.8	-1,110.9	4,140.2	3,919.7	220.52	18.775	
11,614.1	7,110.1	7,110.1	7,110.1	79.0	141.8	89.48	228.8	-1,110.9	4,153.8	3,933.0	220.79	18.814	
11,655.0	7,110.0	7,110.0	7,110.0	79.7	141.8	89.47	228.8	-1,110.9	4,193.2	3,971.7	221.55	18.927	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	-137.10	-783.2	-727.9	1,069.3				
98.4	98.4	93.4	93.4	0.1	0.2	-137.10	-783.2	-727.9	1,069.2	1,069.0	0.27	3,940.605	
100.0	100.0	95.0	95.0	0.1	0.2	-137.10	-783.2	-727.9	1,069.2	1,069.0	0.28	3,870.490	
196.8	196.8	191.8	191.8	0.3	2.6	-137.10	-783.2	-727.9	1,069.2	1,066.4	2.88	371.875	
200.0	200.0	195.0	195.0	0.3	2.7	-137.10	-783.2	-727.9	1,069.2	1,066.3	2.96	360.783	
295.3	295.3	290.3	290.3	0.5	4.6	-137.10	-783.2	-727.9	1,069.2	1,064.1	5.17	206.651	
300.0	300.0	295.0	295.0	0.5	4.7	-137.10	-783.2	-727.9	1,069.2	1,064.0	5.28	202.413	
393.7	393.7	388.7	388.7	0.7	6.7	-137.10	-783.2	-727.9	1,069.2	1,061.8	7.40	144.472	
400.0	400.0	395.0	395.0	0.8	6.8	-137.10	-783.2	-727.9	1,069.2	1,061.7	7.54	141.746	
492.1	492.1	487.1	487.1	1.0	8.6	-137.10	-783.2	-727.9	1,069.2	1,059.6	9.62	111.201	
500.0	500.0	495.0	495.0	1.0	8.8	-137.10	-783.2	-727.9	1,069.2	1,059.4	9.79	109.191	
590.5	590.5	585.5	585.5	1.2	10.6	-137.10	-783.2	-727.9	1,069.2	1,057.4	11.82	90.426	
600.0	600.0	595.0	595.0	1.2	10.8	-137.10	-783.2	-727.9	1,069.2	1,057.2	12.04	88.834	
689.0	689.0	684.0	684.0	1.4	12.6	-137.10	-783.2	-727.9	1,069.2	1,055.2	14.03	76.207	
700.0	700.0	695.0	695.0	1.4	12.8	-137.10	-783.2	-727.9	1,069.2	1,055.0	14.28	74.888	
787.4	787.4	782.4	782.4	1.6	14.6	-137.10	-783.2	-727.9	1,069.2	1,053.0	16.24	65.858	
800.0	800.0	795.0	795.0	1.7	14.9	-137.10	-783.2	-727.9	1,069.2	1,052.7	16.52	64.733	
885.8	885.8	880.8	880.8	1.9	16.6	-137.10	-783.2	-727.9	1,069.2	1,050.8	18.44	57.987	
900.0	900.0	895.0	895.0	1.9	16.9	-137.10	-783.2	-727.9	1,069.2	1,050.5	18.76	57.006	
984.2	984.2	979.2	979.2	2.1	18.6	-137.10	-783.2	-727.9	1,069.2	1,048.6	20.64	51.799	
1,000.0	1,000.0	995.0	995.0	2.1	18.9	-137.10	-783.2	-727.9	1,069.2	1,048.2	20.99	50.929	
1,082.7	1,082.7	1,077.7	1,077.7	2.3	20.5	-137.10	-783.2	-727.9	1,069.2	1,046.4	22.84	46.805	
1,100.0	1,100.0	1,095.0	1,095.0	2.3	20.9	-137.10	-783.2	-727.9	1,069.2	1,046.0	23.23	46.024	
1,181.1	1,181.1	1,176.1	1,176.1	2.5	22.5	-137.10	-783.2	-727.9	1,069.2	1,044.2	25.05	42.689	
1,200.0	1,200.0	1,195.0	1,195.0	2.6	22.9	-137.10	-783.2	-727.9	1,069.2	1,043.8	25.47	41.981	
1,279.5	1,279.5	1,274.5	1,274.5	2.7	24.5	-137.10	-783.2	-727.9	1,069.2	1,042.0	27.25	39.240	
1,300.0	1,300.0	1,295.0	1,295.0	2.8	24.9	-137.10	-783.2	-727.9	1,069.2	1,041.5	27.71	38.591	
1,377.9	1,377.9	1,372.9	1,372.9	3.0	26.5	-137.10	-783.2	-727.9	1,069.2	1,039.8	29.45	36.306	
1,400.0	1,400.0	1,395.0	1,395.0	3.0	26.9	-137.10	-783.2	-727.9	1,069.2	1,039.3	29.94	35.708	
1,476.4	1,476.4	1,471.4	1,471.4	3.2	28.5	-137.10	-783.2	-727.9	1,069.2	1,037.6	31.65	33.781	
1,500.0	1,500.0	1,495.0	1,495.0	3.2	28.9	-137.10	-783.2	-727.9	1,069.2	1,037.1	32.18	33.226	
1,574.8	1,574.8	1,569.8	1,569.8	3.4	30.5	-137.10	-783.2	-727.9	1,069.2	1,035.4	33.85	31.584	
1,600.0	1,600.0	1,595.0	1,595.0	3.5	31.0	-137.10	-783.2	-727.9	1,069.2	1,034.8	34.42	31.067	
1,673.2	1,673.2	1,668.2	1,668.2	3.6	32.4	-137.10	-783.2	-727.9	1,069.2	1,033.2	36.05	29.656	
1,700.0	1,700.0	1,695.0	1,695.0	3.7	33.0	-137.10	-783.2	-727.9	1,069.2	1,032.6	36.65	29.172	
1,771.6	1,771.6	1,766.6	1,766.6	3.8	34.4	-137.10	-783.2	-727.9	1,069.2	1,031.0	38.26	27.950	
1,800.0	1,800.0	1,795.0	1,795.0	3.9	35.0	-137.10	-783.2	-727.9	1,069.2	1,030.4	38.89	27.494	
1,870.1	1,870.1	1,865.1	1,865.1	4.1	36.4	-137.10	-783.2	-727.9	1,069.2	1,028.8	40.46	26.429	
1,900.0	1,900.0	1,895.0	1,895.0	4.1	37.0	-137.10	-783.2	-727.9	1,069.2	1,028.1	41.13	25.999	
1,968.5	1,968.5	1,963.5	1,963.5	4.3	38.4	-137.10	-783.2	-727.9	1,069.2	1,026.6	42.66	25.065	
2,000.0	2,000.0	1,995.0	1,995.0	4.4	39.0	-137.10	-783.2	-727.9	1,069.2	1,025.9	43.36	24.658	
2,066.9	2,066.9	2,061.9	2,061.9	4.5	40.4	-137.10	-783.2	-727.9	1,069.2	1,024.4	44.86	23.836	
2,100.0	2,100.0	2,095.0	2,095.0	4.6	41.0	-137.10	-783.2	-727.9	1,069.2	1,023.6	45.60	23.449	
2,150.0	2,150.0	2,145.0	2,145.0	4.7	42.0	-137.10	-783.2	-727.9	1,069.2	1,022.5	46.72	22.888	
2,165.3	2,165.3	2,160.3	2,160.3	4.7	42.3	-137.34	-783.2	-727.9	1,069.3	1,022.2	47.06	22.722	
2,200.0	2,200.0	2,195.0	2,195.0	4.8	43.0	-137.35	-783.2	-727.9	1,069.6	1,021.7	47.83	22.361	
2,263.8	2,263.7	2,258.7	2,258.7	5.0	44.3	-137.40	-783.2	-727.9	1,070.9	1,021.7	49.24	21.749	
2,300.0	2,299.9	2,294.9	2,294.9	5.0	45.0	-137.44	-783.2	-727.9	1,072.1	1,022.1	50.03	21.429	
2,362.2	2,362.0	2,357.0	2,357.0	5.2	46.3	-137.55	-783.2	-727.9	1,075.0	1,023.6	51.38	20.922	
2,400.0	2,399.7	2,394.7	2,394.7	5.3	47.0	-137.63	-783.2	-727.9	1,077.3	1,025.1	52.19	20.640	
2,460.6	2,460.0	2,455.0	2,455.0	5.4	48.3	-137.78	-783.2	-727.9	1,081.7	1,028.2	53.48	20.225	
2,500.0	2,499.1	2,494.1	2,494.1	5.5	49.0	-137.89	-783.2	-727.9	1,085.0	1,030.7	54.31	19.980	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,559.0	2,557.7	2,552.7	2,552.7	5.6	50.2	-138.09	-783.2	-727.9	1,090.9	1,035.3	55.53	19.643	
2,600.0	2,598.2	2,593.2	2,593.2	5.7	51.0	-138.24	-783.2	-727.9	1,095.4	1,039.1	56.37	19.433	
2,657.5	2,654.8	2,649.8	2,649.8	5.9	52.2	-138.47	-783.2	-727.9	1,102.6	1,045.1	57.53	19.165	
2,700.0	2,696.6	2,691.6	2,691.6	6.0	53.0	-138.66	-783.2	-727.9	1,108.5	1,050.1	58.38	18.989	
2,755.9	2,751.4	2,746.4	2,746.4	6.1	54.1	-138.92	-783.2	-727.9	1,117.0	1,057.5	59.47	18.782	
2,800.0	2,794.4	2,789.4	2,789.4	6.2	55.0	-139.14	-783.2	-727.9	1,124.3	1,064.0	60.32	18.639	
2,854.3	2,847.3	2,842.3	2,842.3	6.4	56.0	-139.43	-783.2	-727.9	1,134.1	1,072.7	61.35	18.485	
2,888.8	2,880.6	2,875.6	2,875.6	6.5	56.7	-139.62	-783.2	-727.9	1,140.7	1,078.7	61.99	18.401	
2,900.0	2,891.5	2,886.5	2,886.5	6.6	56.9	-139.71	-783.2	-727.9	1,142.9	1,080.7	62.23	18.365	
2,952.7	2,942.5	2,937.5	2,937.5	6.7	58.0	-140.14	-783.2	-727.9	1,153.4	1,090.0	63.37	18.200	
3,000.0	2,988.2	2,983.2	2,983.2	6.9	58.9	-140.51	-783.2	-727.9	1,162.8	1,098.4	64.39	18.058	
3,051.2	3,037.6	3,032.6	3,032.6	7.1	59.9	-140.91	-783.2	-727.9	1,173.0	1,107.5	65.50	17.908	
3,100.0	3,084.9	3,079.9	3,079.9	7.3	60.8	-141.29	-783.2	-727.9	1,182.8	1,116.3	66.56	17.771	
3,149.6	3,132.8	3,127.8	3,127.8	7.5	61.8	-141.66	-783.2	-727.9	1,192.8	1,125.2	67.64	17.636	
3,200.0	3,181.5	3,176.5	3,176.5	7.6	62.8	-142.04	-783.2	-727.9	1,203.1	1,134.3	68.73	17.504	
3,248.0	3,228.0	3,223.0	3,223.0	7.8	63.7	-142.39	-783.2	-727.9	1,212.9	1,143.1	69.78	17.382	
3,300.0	3,278.2	3,273.2	3,273.2	8.0	64.7	-142.76	-783.2	-727.9	1,223.5	1,152.6	70.91	17.255	
3,346.4	3,323.2	3,318.2	3,318.2	8.2	65.6	-143.09	-783.2	-727.9	1,233.1	1,161.2	71.92	17.144	
3,400.0	3,374.9	3,369.9	3,369.9	8.5	66.7	-143.47	-783.2	-727.9	1,244.2	1,171.1	73.09	17.022	
3,444.9	3,418.3	3,413.3	3,413.3	8.6	67.5	-143.78	-783.2	-727.9	1,253.5	1,179.4	74.07	16.922	
3,500.0	3,471.6	3,466.6	3,466.6	8.9	68.6	-144.15	-783.2	-727.9	1,265.0	1,189.7	75.28	16.805	
3,543.3	3,513.5	3,508.5	3,508.5	9.1	69.4	-144.43	-783.2	-727.9	1,274.1	1,197.8	76.22	16.715	
3,600.0	3,568.3	3,563.3	3,563.3	9.3	70.5	-144.81	-783.2	-727.9	1,286.0	1,208.5	77.46	16.601	
3,641.7	3,608.7	3,603.7	3,603.7	9.5	71.4	-145.07	-783.2	-727.9	1,294.8	1,216.4	78.38	16.520	
3,700.0	3,665.0	3,660.0	3,660.0	9.7	72.5	-145.44	-783.2	-727.9	1,307.1	1,227.5	79.65	16.411	
3,740.1	3,703.8	3,698.8	3,698.8	9.9	73.3	-145.69	-783.2	-727.9	1,315.7	1,235.1	80.53	16.338	
3,800.0	3,761.7	3,756.7	3,756.7	10.2	74.4	-146.06	-783.2	-727.9	1,328.4	1,246.6	81.84	16.232	
3,838.6	3,799.0	3,794.0	3,794.0	10.4	75.2	-146.29	-783.2	-727.9	1,336.7	1,254.0	82.68	16.166	
3,900.0	3,858.4	3,853.4	3,853.4	10.7	76.4	-146.66	-783.2	-727.9	1,349.9	1,265.9	84.03	16.065	
3,937.0	3,894.2	3,889.2	3,889.2	10.8	77.1	-146.88	-783.2	-727.9	1,357.9	1,273.0	84.84	16.005	
4,000.0	3,955.1	3,950.1	3,950.1	11.1	78.3	-147.24	-783.2	-727.9	1,371.5	1,285.3	86.22	15.907	
4,035.4	3,989.3	3,984.3	3,984.3	11.3	79.0	-147.44	-783.2	-727.9	1,379.1	1,292.2	86.99	15.854	
4,100.0	4,051.8	4,046.8	4,046.8	11.6	80.3	-147.80	-783.2	-727.9	1,393.2	1,304.8	88.40	15.759	
4,133.8	4,084.5	4,079.5	4,079.5	11.7	80.9	-147.99	-783.2	-727.9	1,400.6	1,311.4	89.14	15.711	
4,200.0	4,148.5	4,143.5	4,143.5	12.1	82.2	-148.35	-783.2	-727.9	1,415.0	1,324.4	90.59	15.620	
4,232.3	4,179.7	4,174.7	4,174.7	12.2	82.8	-148.52	-783.2	-727.9	1,422.1	1,330.8	91.30	15.577	
4,300.0	4,245.2	4,240.2	4,240.2	12.5	84.2	-148.88	-783.2	-727.9	1,437.0	1,344.2	92.78	15.489	
4,330.7	4,274.9	4,269.9	4,269.9	12.7	84.8	-149.03	-783.2	-727.9	1,443.8	1,350.3	93.45	15.450	
4,400.0	4,341.9	4,336.9	4,336.9	13.0	86.1	-149.39	-783.2	-727.9	1,459.1	1,364.1	94.96	15.365	
4,429.1	4,370.0	4,365.0	4,365.0	13.1	86.7	-149.54	-783.2	-727.9	1,465.5	1,369.9	95.60	15.330	
4,500.0	4,438.6	4,433.6	4,433.6	13.5	88.0	-149.89	-783.2	-727.9	1,481.3	1,384.1	97.15	15.247	
4,527.5	4,465.2	4,460.2	4,460.2	13.6	88.6	-150.02	-783.2	-727.9	1,487.4	1,389.7	97.75	15.216	
4,600.0	4,535.3	4,530.3	4,530.3	14.0	90.0	-150.37	-783.2	-727.9	1,503.6	1,404.2	99.33	15.136	
4,626.0	4,560.4	4,555.4	4,555.4	14.1	90.5	-150.49	-783.2	-727.9	1,509.4	1,409.5	99.90	15.109	
4,700.0	4,631.9	4,626.9	4,626.9	14.5	91.9	-150.84	-783.2	-727.9	1,526.0	1,424.4	101.52	15.032	
4,724.4	4,655.5	4,650.5	4,650.5	14.6	92.4	-150.95	-783.2	-727.9	1,531.4	1,429.4	102.05	15.007	
4,800.0	4,728.6	4,723.6	4,723.6	15.0	93.9	-151.30	-783.2	-727.9	1,548.5	1,444.8	103.70	14.932	
4,822.8	4,750.7	4,745.7	4,745.7	15.1	94.3	-151.40	-783.2	-727.9	1,553.6	1,449.4	104.20	14.910	
4,900.0	4,825.3	4,820.3	4,820.3	15.4	95.8	-151.74	-783.2	-727.9	1,571.0	1,465.2	105.88	14.838	
4,921.2	4,845.9	4,840.9	4,840.9	15.6	96.2	-151.83	-783.2	-727.9	1,575.9	1,469.5	106.35	14.818	
5,000.0	4,922.0	4,917.0	4,917.0	15.9	97.8	-152.17	-783.2	-727.9	1,593.7	1,485.7	108.06	14.748	
5,019.7	4,941.0	4,936.0	4,936.0	16.0	98.2	-152.25	-783.2	-727.9	1,598.2	1,489.7	108.49	14.731	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,018.7	5,013.7	5,013.7	16.4	99.7	-152.59	-783.2	-727.9	1,616.5	1,506.2	110.24	14.663	
5,118.1	5,036.2	5,031.2	5,031.2	16.5	100.1	-152.67	-783.2	-727.9	1,620.6	1,510.0	110.64	14.648	
5,200.0	5,115.4	5,110.4	5,110.4	16.9	101.7	-153.00	-783.2	-727.9	1,639.3	1,526.9	112.42	14.582	
5,216.5	5,131.4	5,126.4	5,126.4	17.0	102.0	-153.06	-783.2	-727.9	1,643.1	1,530.3	112.78	14.569	
5,300.0	5,212.1	5,207.1	5,207.1	17.4	103.6	-153.39	-783.2	-727.9	1,662.2	1,547.6	114.60	14.505	
5,314.9	5,226.6	5,221.6	5,221.6	17.5	103.9	-153.45	-783.2	-727.9	1,665.7	1,550.7	114.92	14.494	
5,400.0	5,308.8	5,303.8	5,303.8	17.9	105.5	-153.78	-783.2	-727.9	1,685.2	1,568.4	116.78	14.431	
5,413.4	5,321.7	5,316.7	5,316.7	18.0	105.8	-153.83	-783.2	-727.9	1,688.3	1,571.2	117.07	14.422	
5,500.0	5,405.5	5,400.5	5,400.5	18.4	107.5	-154.16	-783.2	-727.9	1,708.3	1,589.3	118.95	14.361	
5,511.8	5,416.9	5,411.9	5,411.9	18.5	107.7	-154.20	-783.2	-727.9	1,711.0	1,591.8	119.21	14.353	
5,600.0	5,502.2	5,497.2	5,497.2	18.9	109.4	-154.52	-783.2	-727.9	1,731.4	1,610.3	121.13	14.294	
5,610.2	5,512.1	5,507.1	5,507.1	19.0	109.6	-154.56	-783.2	-727.9	1,733.8	1,612.4	121.35	14.287	
5,700.0	5,598.9	5,593.9	5,593.9	19.4	111.4	-154.88	-783.2	-727.9	1,754.6	1,631.3	123.30	14.230	
5,708.6	5,607.2	5,602.2	5,602.2	19.5	111.6	-154.91	-783.2	-727.9	1,756.6	1,633.1	123.49	14.225	
5,745.8	5,643.2	5,638.2	5,638.2	19.7	112.3	-155.04	-783.2	-727.9	1,765.3	1,641.0	124.30	14.202	
5,800.0	5,695.7	5,690.7	5,690.7	19.9	113.3	-155.32	-783.2	-727.9	1,777.4	1,651.5	125.89	14.119	
5,807.1	5,702.6	5,697.6	5,697.6	19.9	113.5	-155.36	-783.2	-727.9	1,778.9	1,652.8	126.09	14.108	
5,900.0	5,793.2	5,788.2	5,788.2	20.3	115.3	-155.78	-783.2	-727.9	1,797.5	1,668.7	128.74	13.962	
5,905.5	5,798.6	5,793.6	5,793.6	20.3	115.4	-155.81	-783.2	-727.9	1,798.5	1,669.6	128.90	13.953	
6,000.0	5,891.5	5,886.5	5,886.5	20.6	117.3	-156.16	-783.2	-727.9	1,814.5	1,683.0	131.51	13.797	
6,003.9	5,895.4	5,890.4	5,890.4	20.6	117.3	-156.18	-783.2	-727.9	1,815.1	1,683.5	131.62	13.791	
6,100.0	5,990.4	5,985.4	5,985.4	20.9	119.3	-156.46	-783.2	-727.9	1,828.3	1,694.2	134.18	13.626	
6,102.3	5,992.7	5,987.7	5,987.7	20.9	119.3	-156.47	-783.2	-727.9	1,828.6	1,694.4	134.24	13.622	
6,200.0	6,089.7	6,084.7	6,084.7	21.1	121.3	-156.70	-783.2	-727.9	1,839.1	1,702.3	136.74	13.449	
6,200.8	6,090.4	6,085.4	6,085.4	21.1	121.3	-156.70	-783.2	-727.9	1,839.1	1,702.4	136.76	13.448	
6,299.2	6,188.5	6,183.5	6,183.5	21.4	123.2	-156.85	-783.2	-727.9	1,846.5	1,707.4	139.15	13.270	
6,300.0	6,189.3	6,184.3	6,184.3	21.4	123.3	-156.85	-783.2	-727.9	1,846.6	1,707.4	139.17	13.268	
6,397.6	6,286.8	6,281.8	6,281.8	21.5	125.2	-156.94	-783.2	-727.9	1,850.8	1,709.4	141.42	13.087	
6,400.0	6,289.2	6,284.2	6,284.2	21.5	125.3	-156.95	-783.2	-727.9	1,850.9	1,709.4	141.47	13.083	
6,484.6	6,373.8	6,368.8	6,368.8	21.6	127.0	-156.73	-783.2	-727.9	1,852.0	1,708.7	143.31	12.924	
6,496.0	6,385.3	6,380.3	6,380.3	21.7	127.2	-156.73	-783.2	-727.9	1,852.0	1,708.5	143.56	12.901	
6,500.0	6,389.2	6,384.2	6,384.2	21.7	127.3	-156.73	-783.2	-727.9	1,852.0	1,708.4	143.64	12.893	
6,514.6	6,403.8	6,398.8	6,398.8	21.7	127.6	-156.73	-783.2	-727.9	1,852.0	1,708.1	143.96	12.865	
6,550.0	6,439.2	6,434.2	6,434.2	21.7	128.3	23.31	-783.2	-727.9	1,851.2	1,706.7	144.51	12.810	
6,594.5	6,483.5	6,478.5	6,478.5	21.7	129.2	23.46	-783.2	-727.9	1,848.0	1,703.2	144.78	12.764	
6,600.0	6,489.0	6,484.0	6,484.0	21.7	129.3	23.48	-783.2	-727.9	1,847.4	1,702.6	144.78	12.760	
6,650.0	6,538.4	6,533.4	6,533.4	21.7	130.3	23.81	-783.2	-727.9	1,840.3	1,695.9	144.47	12.738	
6,692.9	6,580.3	6,575.3	6,575.3	21.6	131.1	24.21	-783.2	-727.9	1,831.8	1,688.0	143.75	12.743	
6,700.0	6,587.1	6,582.1	6,582.1	21.6	131.3	24.29	-783.2	-727.9	1,830.1	1,686.6	143.59	12.745	
6,750.0	6,635.0	6,630.0	6,630.0	21.5	132.2	24.93	-783.2	-727.9	1,816.9	1,674.7	142.18	12.778	
6,791.3	6,673.7	6,668.7	6,668.7	21.4	133.0	25.60	-783.2	-727.9	1,803.7	1,663.0	140.65	12.823	
6,800.0	6,681.7	6,676.7	6,676.7	21.4	133.2	25.76	-783.2	-727.9	1,800.6	1,660.3	140.30	12.834	
6,850.0	6,727.1	6,722.1	6,722.1	21.2	134.1	26.79	-783.2	-727.9	1,781.5	1,643.5	138.01	12.908	
6,889.7	6,762.0	6,757.0	6,757.0	21.1	134.8	27.76	-783.2	-727.9	1,764.2	1,628.3	135.98	12.974	
6,900.0	6,770.9	6,765.9	6,765.9	21.0	135.0	28.04	-783.2	-727.9	1,759.5	1,624.1	135.44	12.991	
6,950.0	6,812.9	6,807.9	6,807.9	20.8	135.8	29.54	-783.2	-727.9	1,734.9	1,602.2	132.73	13.071	
6,988.2	6,843.6	6,838.6	6,838.6	20.6	136.4	30.88	-783.2	-727.9	1,714.4	1,583.7	130.70	13.117	
7,000.0	6,852.9	6,847.9	6,847.9	20.6	136.6	31.33	-783.2	-727.9	1,707.8	1,577.7	130.10	13.127	
7,050.0	6,890.7	6,885.7	6,885.7	20.3	137.4	33.45	-783.2	-727.9	1,678.3	1,550.5	127.78	13.134	
7,086.6	6,916.9	6,911.9	6,911.9	20.1	137.9	35.24	-783.2	-727.9	1,655.3	1,528.9	126.47	13.088	
7,100.0	6,926.2	6,921.2	6,921.2	20.1	138.1	35.95	-783.2	-727.9	1,646.7	1,520.6	126.10	13.058	
7,150.0	6,959.1	6,954.1	6,954.1	19.8	138.7	38.87	-783.2	-727.9	1,613.0	1,487.6	125.39	12.864	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
7,185.0	6,980.5	6,975.5	6,975.5	19.6	139.2	41.20	-783.2	-727.9	1,588.4	1,462.8	125.65	12.641	
7,200.0	6,989.3	6,984.3	6,984.3	19.5	139.3	42.27	-783.2	-727.9	1,577.6	1,451.7	125.98	12.523	
7,250.0	7,016.6	7,011.6	7,011.6	19.3	139.9	46.20	-783.2	-727.9	1,540.7	1,412.6	128.09	12.028	
7,283.4	7,033.3	7,028.3	7,028.3	19.1	140.2	49.14	-783.2	-727.9	1,515.2	1,384.8	130.40	11.620	
7,300.0	7,041.0	7,036.0	7,036.0	19.1	140.4	50.69	-783.2	-727.9	1,502.4	1,370.6	131.79	11.400	
7,350.0	7,062.2	7,057.2	7,057.2	18.8	140.8	55.74	-783.2	-727.9	1,463.1	1,326.2	136.83	10.692	
7,381.9	7,074.1	7,069.1	7,069.1	18.7	141.1	59.23	-783.2	-727.9	1,437.5	1,297.0	140.53	10.230	
7,400.0	7,080.3	7,075.3	7,075.3	18.7	141.2	61.30	-783.2	-727.9	1,422.9	1,280.2	142.70	9.971	
7,450.0	7,095.0	7,090.0	7,090.0	18.5	141.5	67.25	-783.2	-727.9	1,382.2	1,233.5	148.65	9.298	
7,480.3	7,102.4	7,097.4	7,097.4	18.4	141.6	70.99	-783.2	-727.9	1,357.3	1,205.4	151.94	8.933	
7,500.0	7,106.4	7,101.4	7,101.4	18.4	141.7	73.43	-783.2	-727.9	1,341.1	1,187.3	153.85	8.717	
7,550.0	7,114.4	7,109.4	7,109.4	18.3	141.9	79.62	-783.2	-727.9	1,300.0	1,142.4	157.66	8.246	
7,578.7	7,117.4	7,112.4	7,112.4	18.3	141.9	83.08	-783.2	-727.9	1,276.5	1,117.4	159.09	8.024	
7,600.0	7,118.9	7,113.9	7,113.9	18.3	142.0	85.57	-783.2	-727.9	1,259.2	1,099.4	159.77	7.881	
7,641.3	7,120.0	7,115.0	7,115.0	18.3	142.0	90.19	-783.2	-727.9	1,225.8	1,065.5	160.27	7.648	
7,677.1	7,119.9	7,114.9	7,114.9	18.3	142.0	90.18	-783.2	-727.9	1,197.3	1,037.0	160.31	7.469	
7,700.0	7,119.9	7,114.9	7,114.9	18.4	142.0	90.18	-783.2	-727.9	1,179.3	1,018.9	160.33	7.355	
7,775.6	7,119.7	7,114.7	7,114.7	18.6	142.0	90.16	-783.2	-727.9	1,121.0	960.4	160.53	6.983	
7,800.0	7,119.6	7,114.6	7,114.6	18.6	142.0	90.16	-783.2	-727.9	1,102.6	942.0	160.60	6.866	
7,874.0	7,119.4	7,114.4	7,114.4	19.0	142.0	90.14	-783.2	-727.9	1,048.4	887.5	160.94	6.514	
7,900.0	7,119.4	7,114.4	7,114.4	19.1	142.0	90.14	-783.2	-727.9	1,029.9	868.9	161.05	6.395	
7,972.4	7,119.2	7,114.2	7,114.2	19.6	142.0	90.13	-783.2	-727.9	980.3	818.8	161.51	6.070	
8,000.0	7,119.1	7,114.1	7,114.1	19.7	142.0	90.12	-783.2	-727.9	962.2	800.5	161.69	5.951	
8,070.8	7,118.9	7,113.9	7,113.9	20.3	142.0	90.11	-783.2	-727.9	917.8	755.5	162.25	5.657	
8,100.0	7,118.9	7,113.9	7,113.9	20.5	141.9	90.10	-783.2	-727.9	900.5	738.0	162.48	5.542	
8,169.3	7,118.7	7,113.7	7,113.7	21.2	141.9	90.09	-783.2	-727.9	861.9	698.8	163.13	5.284	
8,200.0	7,118.6	7,113.6	7,113.6	21.5	141.9	90.08	-783.2	-727.9	846.1	682.7	163.42	5.178	
8,267.7	7,118.5	7,113.5	7,113.5	22.2	141.9	90.07	-783.2	-727.9	814.2	650.1	164.14	4.961	
8,300.0	7,118.4	7,113.4	7,113.4	22.5	141.9	90.06	-783.2	-727.9	800.6	636.1	164.48	4.867	
8,366.1	7,118.2	7,113.2	7,113.2	23.3	141.9	90.05	-783.2	-727.9	776.1	610.9	165.25	4.697	
8,400.0	7,118.1	7,113.1	7,113.1	23.7	141.9	90.04	-783.2	-727.9	765.5	599.9	165.65	4.621	
8,464.5	7,118.0	7,113.0	7,113.0	24.5	141.9	90.03	-783.2	-727.9	749.1	582.6	166.46	4.500	
8,500.0	7,117.9	7,112.9	7,112.9	25.0	141.9	90.02	-783.2	-727.9	742.3	575.4	166.91	4.448	
8,563.0	7,117.7	7,112.7	7,112.7	25.8	141.9	90.01	-783.2	-727.9	734.4	566.6	167.75	4.378	
8,600.0	7,117.6	7,112.6	7,112.6	26.3	141.9	90.00	-783.2	-727.9	732.2	563.9	168.25	4.352	
8,624.7	7,117.6	7,112.6	7,112.6	26.7	141.9	90.00	-783.2	-727.9	731.8	563.2	168.60	4.340 CC, ES	
8,661.4	7,117.5	7,112.5	7,112.5	27.2	141.9	89.99	-783.2	-727.9	732.7	563.6	169.12	4.333 SF	
8,700.0	7,117.4	7,112.4	7,112.4	27.7	141.9	89.99	-783.2	-727.9	735.6	566.0	169.66	4.336	
8,759.8	7,117.2	7,112.2	7,112.2	28.6	141.9	89.97	-783.2	-727.9	744.1	573.6	170.54	4.364	
8,800.0	7,117.1	7,112.1	7,112.1	29.2	141.9	89.97	-783.2	-727.9	752.5	581.3	171.13	4.397	
8,858.2	7,117.0	7,112.0	7,112.0	30.1	141.9	89.95	-783.2	-727.9	768.1	596.1	172.01	4.466	
8,900.0	7,116.9	7,111.9	7,111.9	30.7	141.9	89.95	-783.2	-727.9	781.8	609.2	172.64	4.529	
8,956.7	7,116.8	7,111.8	7,111.8	31.6	141.9	89.94	-783.2	-727.9	803.5	630.0	173.52	4.631	
9,000.0	7,116.7	7,111.7	7,111.7	32.3	141.9	89.93	-783.2	-727.9	822.4	648.2	174.20	4.721	
9,055.1	7,116.5	7,111.5	7,111.5	33.2	141.9	89.92	-783.2	-727.9	848.9	673.9	175.08	4.849	
9,100.0	7,116.4	7,111.4	7,111.4	33.9	141.9	89.91	-783.2	-727.9	872.6	696.8	175.80	4.963	
9,153.5	7,116.3	7,111.3	7,111.3	34.8	141.9	89.90	-783.2	-727.9	902.8	726.2	176.67	5.110	
9,200.0	7,116.2	7,111.2	7,111.2	35.5	141.9	89.89	-783.2	-727.9	930.8	753.4	177.42	5.246	
9,251.9	7,116.0	7,111.0	7,111.0	36.4	141.9	89.88	-783.2	-727.9	963.8	785.5	178.28	5.406	
9,300.0	7,115.9	7,110.9	7,110.9	37.2	141.9	89.87	-783.2	-727.9	995.7	816.6	179.08	5.560	
9,350.4	7,115.8	7,110.8	7,110.8	38.0	141.9	89.86	-783.2	-727.9	1,030.5	850.6	179.92	5.728	
9,400.0	7,115.7	7,110.7	7,110.7	38.9	141.9	89.85	-783.2	-727.9	1,066.1	885.3	180.76	5.898	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT SHULTZ 22-30 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	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	7,115.5	7,110.5	7,110.5	39.7	141.9	89.84	-783.2	-727.9	1,102.1	920.5	181.59	6.069	
9,500.0	7,115.4	7,110.4	7,110.4	40.6	141.9	89.83	-783.2	-727.9	1,140.9	958.4	182.46	6.253	
9,547.2	7,115.3	7,110.3	7,110.3	41.4	141.9	89.82	-783.2	-727.9	1,177.5	994.2	183.27	6.425	
9,600.0	7,115.2	7,110.2	7,110.2	42.3	141.9	89.81	-783.2	-727.9	1,219.3	1,035.1	184.17	6.620	
9,645.6	7,115.1	7,110.1	7,110.1	43.1	141.9	89.80	-783.2	-727.9	1,256.1	1,071.1	184.97	6.791	
9,700.0	7,114.9	7,109.9	7,109.9	44.0	141.9	89.79	-783.2	-727.9	1,300.6	1,114.7	185.91	6.996	
9,744.1	7,114.8	7,109.8	7,109.8	44.8	141.9	89.78	-783.2	-727.9	1,337.3	1,150.6	186.68	7.164	
9,800.0	7,114.7	7,109.7	7,109.7	45.8	141.9	89.77	-783.2	-727.9	1,384.5	1,196.8	187.66	7.378	
9,842.5	7,114.6	7,109.6	7,109.6	46.5	141.9	89.76	-783.2	-727.9	1,420.7	1,232.3	188.41	7.541	
9,900.0	7,114.4	7,109.4	7,109.4	47.6	141.9	89.75	-783.2	-727.9	1,470.3	1,280.9	189.42	7.762	
9,940.9	7,114.3	7,109.3	7,109.3	48.3	141.9	89.74	-783.2	-727.9	1,505.9	1,315.8	190.14	7.920	
10,000.0	7,114.2	7,109.2	7,109.2	49.3	141.9	89.73	-783.2	-727.9	1,557.8	1,366.6	191.19	8.148	
10,039.3	7,114.1	7,109.1	7,109.1	50.0	141.9	89.72	-783.2	-727.9	1,592.7	1,400.8	191.89	8.300	
10,100.0	7,113.9	7,108.9	7,108.9	51.1	141.9	89.71	-783.2	-727.9	1,646.8	1,453.8	192.97	8.534	
10,137.8	7,113.8	7,108.8	7,108.8	51.8	141.8	89.70	-783.2	-727.9	1,680.7	1,487.0	193.65	8.679	
10,200.0	7,113.7	7,108.7	7,108.7	52.9	141.8	89.69	-783.2	-727.9	1,736.9	1,542.2	194.77	8.918	
10,236.2	7,113.6	7,108.6	7,108.6	53.6	141.8	89.68	-783.2	-727.9	1,769.8	1,574.4	195.42	9.057	
10,300.0	7,113.4	7,108.4	7,108.4	54.7	141.8	89.67	-783.2	-727.9	1,828.1	1,631.5	196.57	9.300	
10,334.6	7,113.3	7,108.3	7,108.3	55.4	141.8	89.66	-783.2	-727.9	1,859.9	1,662.7	197.19	9.432	
10,400.0	7,113.2	7,108.2	7,108.2	56.5	141.8	89.65	-783.2	-727.9	1,920.2	1,721.8	198.38	9.679	
10,433.0	7,113.1	7,108.1	7,108.1	57.1	141.8	89.64	-783.2	-727.9	1,950.8	1,751.8	198.98	9.804	
10,500.0	7,112.9	7,107.9	7,107.9	58.4	141.8	89.63	-783.2	-727.9	2,013.0	1,812.8	200.19	10.055	
10,531.5	7,112.8	7,107.8	7,107.8	58.9	141.8	89.63	-783.2	-727.9	2,042.3	1,841.6	200.76	10.173	
10,600.0	7,112.7	7,107.7	7,107.7	60.2	141.8	89.61	-783.2	-727.9	2,106.4	1,904.4	202.01	10.427	
10,629.9	7,112.6	7,107.6	7,107.6	60.7	141.8	89.61	-783.2	-727.9	2,134.5	1,931.9	202.56	10.538	
10,700.0	7,112.4	7,107.4	7,107.4	62.0	141.8	89.59	-783.2	-727.9	2,200.5	1,996.6	203.84	10.795	
10,728.3	7,112.3	7,107.3	7,107.3	62.5	141.8	89.59	-783.2	-727.9	2,227.2	2,022.9	204.36	10.899	
10,800.0	7,112.2	7,107.2	7,107.2	63.9	141.8	89.57	-783.2	-727.9	2,295.0	2,089.4	205.67	11.159	
10,826.7	7,112.1	7,107.1	7,107.1	64.4	141.8	89.57	-783.2	-727.9	2,320.4	2,114.2	206.16	11.255	
10,900.0	7,111.9	7,106.9	7,106.9	65.7	141.8	89.55	-783.2	-727.9	2,390.0	2,182.5	207.51	11.518	
10,925.2	7,111.8	7,106.8	7,106.8	66.2	141.8	89.55	-783.2	-727.9	2,414.0	2,206.0	207.97	11.607	
11,000.0	7,111.7	7,106.7	7,106.7	67.6	141.8	89.53	-783.2	-727.9	2,485.4	2,276.1	209.35	11.872	
11,023.6	7,111.6	7,106.6	7,106.6	68.0	141.8	89.53	-783.2	-727.9	2,508.0	2,298.2	209.78	11.955	
11,100.0	7,111.4	7,106.4	7,106.4	69.4	141.8	89.51	-783.2	-727.9	2,581.2	2,370.0	211.19	12.222	
11,122.0	7,111.3	7,106.3	7,106.3	69.8	141.8	89.51	-783.2	-727.9	2,602.3	2,390.7	211.60	12.298	
11,200.0	7,111.2	7,106.2	7,106.2	71.3	141.8	89.49	-783.2	-727.9	2,677.2	2,464.2	213.04	12.566	
11,220.4	7,111.1	7,106.1	7,106.1	71.6	141.8	89.49	-783.2	-727.9	2,696.9	2,483.5	213.42	12.636	
11,300.0	7,110.9	7,105.9	7,105.9	73.1	141.8	89.47	-783.2	-727.9	2,773.5	2,558.6	214.89	12.906	
11,318.9	7,110.9	7,105.9	7,105.9	73.5	141.8	89.47	-783.2	-727.9	2,791.7	2,576.5	215.25	12.970	
11,400.0	7,110.6	7,105.6	7,105.6	75.0	141.8	89.45	-783.2	-727.9	2,870.1	2,653.4	216.75	13.242	
11,417.3	7,110.6	7,105.6	7,105.6	75.3	141.8	89.45	-783.2	-727.9	2,886.8	2,669.8	217.07	13.299	
11,500.0	7,110.4	7,105.4	7,105.4	76.8	141.8	89.43	-783.2	-727.9	2,966.9	2,748.3	218.61	13.572	
11,515.7	7,110.4	7,105.4	7,105.4	77.1	141.8	89.43	-783.2	-727.9	2,982.1	2,763.2	218.90	13.623	
11,600.0	7,110.1	7,105.1	7,105.1	78.7	141.8	89.41	-783.2	-727.9	3,063.9	2,843.4	220.47	13.897	
11,614.1	7,110.1	7,105.1	7,105.1	79.0	141.8	89.41	-783.2	-727.9	3,077.7	2,856.9	220.73	13.943	
11,655.0	7,110.0	7,105.0	7,105.0	79.7	141.8	89.40	-783.2	-727.9	3,117.4	2,895.9	221.49	14.074	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	-160.31	-2,116.2	-757.2	2,247.6				
98.4	98.4	95.4	95.4	0.1	0.2	-160.31	-2,116.2	-757.2	2,247.6	2,247.4	0.25	8,993.209	
100.0	100.0	97.0	97.0	0.1	0.2	-160.31	-2,116.2	-757.2	2,247.6	2,247.4	0.25	8,834.285	
196.8	196.8	193.8	193.8	0.3	2.6	-160.31	-2,116.2	-757.2	2,247.6	2,244.7	2.91	772.406	
200.0	200.0	197.0	197.0	0.3	2.7	-160.31	-2,116.2	-757.2	2,247.6	2,244.6	3.00	749.550	
295.3	295.3	292.3	292.3	0.5	4.7	-160.31	-2,116.2	-757.2	2,247.6	2,242.4	5.20	432.412	
300.0	300.0	297.0	297.0	0.5	4.8	-160.31	-2,116.2	-757.2	2,247.6	2,242.3	5.31	423.588	
393.7	393.7	390.7	390.7	0.7	6.7	-160.31	-2,116.2	-757.2	2,247.6	2,240.2	7.42	302.775	
400.0	400.0	397.0	397.0	0.8	6.8	-160.31	-2,116.2	-757.2	2,247.6	2,240.1	7.57	297.080	
492.1	492.1	489.1	489.1	1.0	8.7	-160.31	-2,116.2	-757.2	2,247.6	2,238.0	9.64	233.225	
500.0	500.0	497.0	497.0	1.0	8.8	-160.31	-2,116.2	-757.2	2,247.6	2,237.8	9.81	229.018	
590.5	590.5	587.5	587.5	1.2	10.7	-160.31	-2,116.2	-757.2	2,247.6	2,235.8	11.85	189.739	
600.0	600.0	597.0	597.0	1.2	10.8	-160.31	-2,116.2	-757.2	2,247.6	2,235.6	12.06	186.403	
689.0	689.0	686.0	686.0	1.4	12.6	-160.31	-2,116.2	-757.2	2,247.6	2,233.6	14.05	159.951	
700.0	700.0	697.0	697.0	1.4	12.9	-160.31	-2,116.2	-757.2	2,247.6	2,233.3	14.30	157.187	
787.4	787.4	784.4	784.4	1.6	14.6	-160.31	-2,116.2	-757.2	2,247.6	2,231.4	16.26	138.259	
800.0	800.0	797.0	797.0	1.7	14.9	-160.31	-2,116.2	-757.2	2,247.6	2,231.1	16.54	135.900	
885.8	885.8	882.8	882.8	1.9	16.6	-160.31	-2,116.2	-757.2	2,247.6	2,229.2	18.46	121.755	
900.0	900.0	897.0	897.0	1.9	16.9	-160.31	-2,116.2	-757.2	2,247.6	2,228.8	18.78	119.698	
984.2	984.2	981.2	981.2	2.1	18.6	-160.31	-2,116.2	-757.2	2,247.6	2,227.0	20.66	108.775	
1,000.0	1,000.0	997.0	997.0	2.1	18.9	-160.31	-2,116.2	-757.2	2,247.6	2,226.6	21.02	106.950	
1,082.7	1,082.7	1,079.7	1,079.7	2.3	20.6	-160.31	-2,116.2	-757.2	2,247.6	2,224.8	22.87	98.297	
1,100.0	1,100.0	1,097.0	1,097.0	2.3	20.9	-160.31	-2,116.2	-757.2	2,247.6	2,224.4	23.25	96.659	
1,181.1	1,181.1	1,178.1	1,178.1	2.5	22.6	-160.31	-2,116.2	-757.2	2,247.6	2,222.6	25.07	89.662	
1,200.0	1,200.0	1,197.0	1,197.0	2.6	22.9	-160.31	-2,116.2	-757.2	2,247.6	2,222.1	25.49	88.175	
1,279.5	1,279.5	1,276.5	1,276.5	2.7	24.5	-160.31	-2,116.2	-757.2	2,247.6	2,220.4	27.27	82.423	
1,300.0	1,300.0	1,297.0	1,297.0	2.8	24.9	-160.31	-2,116.2	-757.2	2,247.6	2,219.9	27.73	81.061	
1,377.9	1,377.9	1,374.9	1,374.9	3.0	26.5	-160.31	-2,116.2	-757.2	2,247.6	2,218.2	29.47	76.265	
1,400.0	1,400.0	1,397.0	1,397.0	3.0	27.0	-160.31	-2,116.2	-757.2	2,247.6	2,217.7	29.96	75.010	
1,476.4	1,476.4	1,473.4	1,473.4	3.2	28.5	-160.31	-2,116.2	-757.2	2,247.6	2,215.9	31.67	70.964	
1,500.0	1,500.0	1,497.0	1,497.0	3.2	29.0	-160.31	-2,116.2	-757.2	2,247.6	2,215.4	32.20	69.800	
1,574.8	1,574.8	1,571.8	1,571.8	3.4	30.5	-160.31	-2,116.2	-757.2	2,247.6	2,213.7	33.87	66.352	
1,600.0	1,600.0	1,597.0	1,597.0	3.5	31.0	-160.31	-2,116.2	-757.2	2,247.6	2,213.2	34.44	65.266	
1,673.2	1,673.2	1,670.2	1,670.2	3.6	32.5	-160.31	-2,116.2	-757.2	2,247.6	2,211.5	36.08	62.304	
1,700.0	1,700.0	1,697.0	1,697.0	3.7	33.0	-160.31	-2,116.2	-757.2	2,247.6	2,210.9	36.67	61.286	
1,771.6	1,771.6	1,768.6	1,768.6	3.8	34.4	-160.31	-2,116.2	-757.2	2,247.6	2,209.3	38.28	58.721	
1,800.0	1,800.0	1,797.0	1,797.0	3.9	35.0	-160.31	-2,116.2	-757.2	2,247.6	2,208.7	38.91	57.764	
1,870.1	1,870.1	1,867.1	1,867.1	4.1	36.4	-160.31	-2,116.2	-757.2	2,247.6	2,207.1	40.48	55.528	
1,900.0	1,900.0	1,897.0	1,897.0	4.1	37.0	-160.31	-2,116.2	-757.2	2,247.6	2,206.5	41.15	54.625	
1,968.5	1,968.5	1,965.5	1,965.5	4.3	38.4	-160.31	-2,116.2	-757.2	2,247.6	2,204.9	42.68	52.664	
2,000.0	2,000.0	1,997.0	1,997.0	4.4	39.0	-160.31	-2,116.2	-757.2	2,247.6	2,204.2	43.38	51.809	
2,066.9	2,066.9	2,063.9	2,063.9	4.5	40.4	-160.31	-2,116.2	-757.2	2,247.6	2,202.7	44.88	50.081	
2,100.0	2,100.0	2,097.0	2,097.0	4.6	41.0	-160.31	-2,116.2	-757.2	2,247.6	2,202.0	45.62	49.269	
2,150.0	2,150.0	2,147.0	2,147.0	4.7	42.0	-160.31	-2,116.2	-757.2	2,247.6	2,200.9	46.74	48.091	
2,165.3	2,165.3	2,162.3	2,162.3	4.7	42.4	-160.56	-2,116.2	-757.2	2,247.7	2,200.6	47.08	47.741	
2,200.0	2,200.0	2,197.0	2,197.0	4.8	43.0	-160.56	-2,116.2	-757.2	2,248.0	2,200.2	47.85	46.982	
2,263.8	2,263.7	2,260.7	2,260.7	5.0	44.3	-160.56	-2,116.2	-757.2	2,249.8	2,200.5	49.25	45.683	
2,300.0	2,299.9	2,296.9	2,296.9	5.0	45.1	-160.56	-2,116.2	-757.2	2,251.3	2,201.3	50.03	44.999	
2,362.2	2,362.0	2,359.0	2,359.0	5.2	46.3	-160.57	-2,116.2	-757.2	2,255.0	2,203.7	51.36	43.910	
2,400.0	2,399.7	2,396.7	2,396.7	5.3	47.1	-160.58	-2,116.2	-757.2	2,257.9	2,205.8	52.15	43.298	
2,460.6	2,460.0	2,457.0	2,457.0	5.4	48.3	-160.59	-2,116.2	-757.2	2,263.5	2,210.1	53.40	42.390	
2,500.0	2,499.1	2,496.1	2,496.1	5.5	49.1	-160.60	-2,116.2	-757.2	2,267.8	2,213.6	54.19	41.846	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,557.7	2,554.7	2,554.7	5.6	50.2	-160.62	-2,116.2	-757.2	2,275.1	2,219.8	55.36	41.094	
2,600.0	2,598.2	2,595.2	2,595.2	5.7	51.1	-160.63	-2,116.2	-757.2	2,280.9	2,224.8	56.16	40.615	
2,657.5	2,654.8	2,651.8	2,651.8	5.9	52.2	-160.65	-2,116.2	-757.2	2,289.9	2,232.7	57.25	39.998	
2,700.0	2,696.6	2,693.6	2,693.6	6.0	53.0	-160.66	-2,116.2	-757.2	2,297.3	2,239.3	58.04	39.583	
2,755.9	2,751.4	2,748.4	2,748.4	6.1	54.1	-160.68	-2,116.2	-757.2	2,307.9	2,248.9	59.05	39.084	
2,800.0	2,794.4	2,791.4	2,791.4	6.2	55.0	-160.70	-2,116.2	-757.2	2,317.0	2,257.2	59.82	38.730	
2,854.3	2,847.3	2,844.3	2,844.3	6.4	56.1	-160.72	-2,116.2	-757.2	2,329.0	2,268.3	60.76	38.335	
2,888.8	2,880.6	2,877.6	2,877.6	6.5	56.7	-160.74	-2,116.2	-757.2	2,337.2	2,275.8	61.33	38.110	
2,900.0	2,891.5	2,888.5	2,888.5	6.6	57.0	-160.76	-2,116.2	-757.2	2,339.9	2,278.3	61.57	38.006	
2,952.7	2,942.5	2,939.5	2,939.5	6.7	58.0	-160.87	-2,116.2	-757.2	2,352.6	2,289.9	62.69	37.528	
3,000.0	2,988.2	2,985.2	2,985.2	6.9	58.9	-160.96	-2,116.2	-757.2	2,364.1	2,300.4	63.70	37.112	
3,051.2	3,037.6	3,034.6	3,034.6	7.1	59.9	-161.06	-2,116.2	-757.2	2,376.4	2,311.6	64.79	36.676	
3,100.0	3,084.9	3,081.9	3,081.9	7.3	60.8	-161.16	-2,116.2	-757.2	2,388.3	2,322.4	65.84	36.274	
3,149.6	3,132.8	3,129.8	3,129.8	7.5	61.8	-161.26	-2,116.2	-757.2	2,400.3	2,333.4	66.90	35.877	
3,200.0	3,181.5	3,178.5	3,178.5	7.6	62.8	-161.36	-2,116.2	-757.2	2,412.5	2,344.5	67.98	35.486	
3,248.0	3,228.0	3,225.0	3,225.0	7.8	63.7	-161.45	-2,116.2	-757.2	2,424.1	2,355.1	69.01	35.125	
3,300.0	3,278.2	3,275.2	3,275.2	8.0	64.7	-161.55	-2,116.2	-757.2	2,436.8	2,366.6	70.13	34.746	
3,346.4	3,323.2	3,320.2	3,320.2	8.2	65.6	-161.63	-2,116.2	-757.2	2,448.0	2,376.9	71.13	34.416	
3,400.0	3,374.9	3,371.9	3,371.9	8.5	66.7	-161.73	-2,116.2	-757.2	2,461.0	2,388.8	72.28	34.047	
3,444.9	3,418.3	3,415.3	3,415.3	8.6	67.6	-161.82	-2,116.2	-757.2	2,471.9	2,398.7	73.25	33.747	
3,500.0	3,471.6	3,468.6	3,468.6	8.9	68.6	-161.92	-2,116.2	-757.2	2,485.3	2,410.9	74.44	33.389	
3,543.3	3,513.5	3,510.5	3,510.5	9.1	69.5	-162.00	-2,116.2	-757.2	2,495.9	2,420.5	75.37	33.115	
3,600.0	3,568.3	3,565.3	3,565.3	9.3	70.6	-162.10	-2,116.2	-757.2	2,509.7	2,433.1	76.59	32.766	
3,641.7	3,608.7	3,605.7	3,605.7	9.5	71.4	-162.17	-2,116.2	-757.2	2,519.8	2,442.3	77.49	32.516	
3,700.0	3,665.0	3,662.0	3,662.0	9.7	72.5	-162.28	-2,116.2	-757.2	2,534.0	2,455.3	78.75	32.177	
3,740.1	3,703.8	3,700.8	3,700.8	9.9	73.3	-162.35	-2,116.2	-757.2	2,543.8	2,464.2	79.62	31.949	
3,800.0	3,761.7	3,758.7	3,758.7	10.2	74.5	-162.45	-2,116.2	-757.2	2,558.4	2,477.5	80.91	31.619	
3,838.6	3,799.0	3,796.0	3,796.0	10.4	75.2	-162.51	-2,116.2	-757.2	2,567.8	2,486.1	81.75	31.411	
3,900.0	3,858.4	3,855.4	3,855.4	10.7	76.4	-162.62	-2,116.2	-757.2	2,582.8	2,499.7	83.08	31.089	
3,937.0	3,894.2	3,891.2	3,891.2	10.8	77.1	-162.68	-2,116.2	-757.2	2,591.8	2,508.0	83.88	30.900	
4,000.0	3,955.1	3,952.1	3,952.1	11.1	78.3	-162.79	-2,116.2	-757.2	2,607.2	2,522.0	85.24	30.587	
4,035.4	3,989.3	3,986.3	3,986.3	11.3	79.0	-162.84	-2,116.2	-757.2	2,615.9	2,529.9	86.01	30.415	
4,100.0	4,051.8	4,048.8	4,048.8	11.6	80.3	-162.95	-2,116.2	-757.2	2,631.7	2,544.3	87.41	30.109	
4,133.8	4,084.5	4,081.5	4,081.5	11.7	80.9	-163.00	-2,116.2	-757.2	2,639.9	2,551.8	88.14	29.952	
4,200.0	4,148.5	4,145.5	4,145.5	12.1	82.2	-163.11	-2,116.2	-757.2	2,656.1	2,566.6	89.57	29.654	
4,232.3	4,179.7	4,176.7	4,176.7	12.2	82.9	-163.16	-2,116.2	-757.2	2,664.0	2,573.8	90.27	29.511	
4,300.0	4,245.2	4,242.2	4,242.2	12.5	84.2	-163.27	-2,116.2	-757.2	2,680.6	2,588.9	91.74	29.220	
4,330.7	4,274.9	4,271.9	4,271.9	12.7	84.8	-163.32	-2,116.2	-757.2	2,688.1	2,595.7	92.41	29.091	
4,400.0	4,341.9	4,338.9	4,338.9	13.0	86.1	-163.42	-2,116.2	-757.2	2,705.1	2,611.2	93.91	28.806	
4,429.1	4,370.0	4,367.0	4,367.0	13.1	86.7	-163.47	-2,116.2	-757.2	2,712.2	2,617.7	94.54	28.689	
4,500.0	4,438.6	4,435.6	4,435.6	13.5	88.1	-163.58	-2,116.2	-757.2	2,729.6	2,633.6	96.08	28.411	
4,527.5	4,465.2	4,462.2	4,462.2	13.6	88.6	-163.62	-2,116.2	-757.2	2,736.4	2,639.7	96.67	28.305	
4,600.0	4,535.3	4,532.3	4,532.3	14.0	90.0	-163.73	-2,116.2	-757.2	2,754.2	2,655.9	98.25	28.033	
4,626.0	4,560.4	4,557.4	4,557.4	14.1	90.5	-163.76	-2,116.2	-757.2	2,760.5	2,661.7	98.81	27.938	
4,700.0	4,631.9	4,628.9	4,628.9	14.5	92.0	-163.87	-2,116.2	-757.2	2,778.7	2,678.3	100.42	27.672	
4,724.4	4,655.5	4,652.5	4,652.5	14.6	92.4	-163.91	-2,116.2	-757.2	2,784.7	2,683.8	100.94	27.586	
4,800.0	4,728.6	4,725.6	4,725.6	15.0	93.9	-164.02	-2,116.2	-757.2	2,803.3	2,700.7	102.59	27.326	
4,822.8	4,750.7	4,747.7	4,747.7	15.1	94.3	-164.05	-2,116.2	-757.2	2,808.9	2,705.8	103.08	27.249	
4,900.0	4,825.3	4,822.3	4,822.3	15.4	95.8	-164.16	-2,116.2	-757.2	2,827.9	2,723.1	104.76	26.995	
4,921.2	4,845.9	4,842.9	4,842.9	15.6	96.3	-164.19	-2,116.2	-757.2	2,833.1	2,727.9	105.22	26.926	
5,000.0	4,922.0	4,919.0	4,919.0	15.9	97.8	-164.30	-2,116.2	-757.2	2,852.5	2,745.5	106.93	26.677	
5,019.7	4,941.0	4,938.0	4,938.0	16.0	98.2	-164.33	-2,116.2	-757.2	2,857.3	2,750.0	107.35	26.616	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	5,018.7	5,015.7	5,015.7	16.4	99.7	-164.44	-2,116.2	-757.2	2,877.1	2,768.0	109.10	26.372	
5,118.1	5,036.2	5,033.2	5,033.2	16.5	100.1	-164.46	-2,116.2	-757.2	2,881.5	2,772.1	109.49	26.318	
5,200.0	5,115.4	5,112.4	5,112.4	16.9	101.7	-164.57	-2,116.2	-757.2	2,901.7	2,790.5	111.27	26.078	
5,216.5	5,131.4	5,128.4	5,128.4	17.0	102.0	-164.59	-2,116.2	-757.2	2,905.8	2,794.2	111.63	26.031	
5,300.0	5,212.1	5,209.1	5,209.1	17.4	103.6	-164.70	-2,116.2	-757.2	2,926.4	2,812.9	113.44	25.797	
5,314.9	5,226.6	5,223.6	5,223.6	17.5	103.9	-164.72	-2,116.2	-757.2	2,930.1	2,816.3	113.77	25.755	
5,400.0	5,308.8	5,305.8	5,305.8	17.9	105.6	-164.83	-2,116.2	-757.2	2,951.0	2,835.4	115.61	25.525	
5,413.4	5,321.7	5,318.7	5,318.7	18.0	105.8	-164.85	-2,116.2	-757.2	2,954.3	2,838.4	115.90	25.490	
5,500.0	5,405.5	5,402.5	5,402.5	18.4	107.5	-164.96	-2,116.2	-757.2	2,975.7	2,857.9	117.78	25.264	
5,511.8	5,416.9	5,413.9	5,413.9	18.5	107.7	-164.98	-2,116.2	-757.2	2,978.6	2,860.6	118.04	25.234	
5,600.0	5,502.2	5,499.2	5,499.2	18.9	109.5	-165.09	-2,116.2	-757.2	3,000.4	2,880.4	119.96	25.013	
5,610.2	5,512.1	5,509.1	5,509.1	19.0	109.7	-165.10	-2,116.2	-757.2	3,002.9	2,882.8	120.18	24.987	
5,700.0	5,598.9	5,595.9	5,595.9	19.4	111.4	-165.21	-2,116.2	-757.2	3,025.1	2,903.0	122.13	24.770	
5,708.6	5,607.2	5,604.2	5,604.2	19.5	111.6	-165.22	-2,116.2	-757.2	3,027.2	2,904.9	122.32	24.750	
5,745.8	5,643.2	5,640.2	5,640.2	19.7	112.3	-165.27	-2,116.2	-757.2	3,036.4	2,913.3	123.12	24.662	
5,800.0	5,695.7	5,692.7	5,692.7	19.9	113.4	-165.40	-2,116.2	-757.2	3,049.3	2,924.6	124.79	24.436	
5,807.1	5,702.6	5,699.6	5,699.6	19.9	113.5	-165.41	-2,116.2	-757.2	3,051.0	2,926.0	125.00	24.408	
5,900.0	5,793.2	5,790.2	5,790.2	20.3	115.3	-165.61	-2,116.2	-757.2	3,070.6	2,942.9	127.76	24.035	
5,905.5	5,798.6	5,795.6	5,795.6	20.3	115.4	-165.62	-2,116.2	-757.2	3,071.7	2,943.8	127.92	24.013	
6,000.0	5,891.5	5,888.5	5,888.5	20.6	117.3	-165.79	-2,116.2	-757.2	3,088.6	2,958.0	130.62	23.646	
6,003.9	5,895.4	5,892.4	5,892.4	20.6	117.4	-165.79	-2,116.2	-757.2	3,089.3	2,958.6	130.73	23.631	
6,100.0	5,990.4	5,987.4	5,987.4	20.9	119.3	-165.93	-2,116.2	-757.2	3,103.3	2,969.9	133.36	23.270	
6,102.3	5,992.7	5,989.7	5,989.7	20.9	119.3	-165.93	-2,116.2	-757.2	3,103.6	2,970.2	133.43	23.261	
6,200.0	6,089.7	6,086.7	6,086.7	21.1	121.3	-166.03	-2,116.2	-757.2	3,114.6	2,978.6	135.98	22.906	
6,200.8	6,090.4	6,087.4	6,087.4	21.1	121.3	-166.03	-2,116.2	-757.2	3,114.7	2,978.7	136.00	22.903	
6,299.2	6,188.5	6,185.5	6,185.5	21.4	123.3	-166.11	-2,116.2	-757.2	3,122.5	2,984.1	138.43	22.557	
6,300.0	6,189.3	6,186.3	6,186.3	21.4	123.3	-166.11	-2,116.2	-757.2	3,122.6	2,984.1	138.45	22.554	
6,397.6	6,286.8	6,283.8	6,283.8	21.5	125.2	-166.15	-2,116.2	-757.2	3,127.0	2,986.3	140.71	22.223	
6,400.0	6,289.2	6,286.2	6,286.2	21.5	125.3	-166.15	-2,116.2	-757.2	3,127.1	2,986.4	140.77	22.215	
6,484.6	6,373.8	6,370.8	6,370.8	21.6	127.0	-165.92	-2,116.2	-757.2	3,128.3	2,985.7	142.60	21.937	
6,496.0	6,385.3	6,382.3	6,382.3	21.7	127.2	-165.92	-2,116.2	-757.2	3,128.3	2,985.5	142.85	21.899	
6,500.0	6,389.2	6,386.2	6,386.2	21.7	127.3	-165.92	-2,116.2	-757.2	3,128.3	2,985.4	142.94	21.886	
6,514.6	6,403.8	6,400.8	6,400.8	21.7	127.6	-165.92	-2,116.2	-757.2	3,128.3	2,985.1	143.26	21.836	
6,550.0	6,439.2	6,436.2	6,436.2	21.7	128.3	14.10	-2,116.2	-757.2	3,127.5	2,983.7	143.78	21.751	
6,594.5	6,483.5	6,480.5	6,480.5	21.7	129.2	14.19	-2,116.2	-757.2	3,124.0	2,980.1	143.96	21.701	
6,600.0	6,489.0	6,486.0	6,486.0	21.7	129.3	14.20	-2,116.2	-757.2	3,123.4	2,979.5	143.95	21.698	
6,650.0	6,538.4	6,535.4	6,535.4	21.7	130.3	14.38	-2,116.2	-757.2	3,116.0	2,972.5	143.44	21.722	
6,692.9	6,580.3	6,577.3	6,577.3	21.6	131.1	14.61	-2,116.2	-757.2	3,106.9	2,964.4	142.48	21.805	
6,700.0	6,587.1	6,584.1	6,584.1	21.6	131.3	14.66	-2,116.2	-757.2	3,105.2	2,962.9	142.28	21.825	
6,750.0	6,635.0	6,632.0	6,632.0	21.5	132.2	15.02	-2,116.2	-757.2	3,091.2	2,950.7	140.46	22.008	
6,791.3	6,673.7	6,670.7	6,670.7	21.4	133.0	15.41	-2,116.2	-757.2	3,077.1	2,938.7	138.48	22.221	
6,800.0	6,681.7	6,678.7	6,678.7	21.4	133.2	15.50	-2,116.2	-757.2	3,073.9	2,935.9	138.01	22.274	
6,850.0	6,727.1	6,724.1	6,724.1	21.2	134.1	16.09	-2,116.2	-757.2	3,053.6	2,918.6	134.96	22.625	
6,889.7	6,762.0	6,759.0	6,759.0	21.1	134.8	16.65	-2,116.2	-757.2	3,035.3	2,903.1	132.16	22.967	
6,900.0	6,770.9	6,767.9	6,767.9	21.0	135.0	16.81	-2,116.2	-757.2	3,030.3	2,898.9	131.38	23.064	
6,950.0	6,812.9	6,809.9	6,809.9	20.8	135.8	17.70	-2,116.2	-757.2	3,004.0	2,876.7	127.35	23.589	
6,988.2	6,843.6	6,840.6	6,840.6	20.6	136.4	18.49	-2,116.2	-757.2	2,982.1	2,858.1	124.03	24.043	
7,000.0	6,852.9	6,849.9	6,849.9	20.6	136.6	18.76	-2,116.2	-757.2	2,975.0	2,852.1	122.98	24.192	
7,050.0	6,890.7	6,887.7	6,887.7	20.3	137.4	20.05	-2,116.2	-757.2	2,943.5	2,825.0	118.44	24.853	
7,086.6	6,916.9	6,913.9	6,913.9	20.1	137.9	21.16	-2,116.2	-757.2	2,918.8	2,803.6	115.14	25.350	
7,100.0	6,926.2	6,923.2	6,923.2	20.1	138.1	21.61	-2,116.2	-757.2	2,909.4	2,795.5	113.96	25.530	
7,150.0	6,959.1	6,956.1	6,956.1	19.8	138.8	23.51	-2,116.2	-757.2	2,873.1	2,763.2	109.88	26.148	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
7,185.0	6,980.5	6,977.5	6,977.5	19.6	139.2	25.08	-2,116.2	-757.2	2,846.4	2,738.9	107.49	26.480	
7,200.0	6,989.3	6,986.3	6,986.3	19.5	139.4	25.82	-2,116.2	-757.2	2,834.7	2,728.1	106.64	26.582	
7,250.0	7,016.6	7,013.6	7,013.6	19.3	139.9	28.68	-2,116.2	-757.2	2,794.4	2,689.6	104.84	26.655	
7,283.4	7,033.3	7,030.3	7,030.3	19.1	140.2	30.96	-2,116.2	-757.2	2,766.5	2,661.8	104.79	26.402	
7,300.0	7,041.0	7,038.0	7,038.0	19.1	140.4	32.22	-2,116.2	-757.2	2,752.5	2,647.3	105.18	26.168	
7,350.0	7,062.2	7,059.2	7,059.2	18.8	140.8	36.65	-2,116.2	-757.2	2,709.0	2,600.6	108.41	24.989	
7,381.9	7,074.1	7,071.1	7,071.1	18.7	141.1	40.06	-2,116.2	-757.2	2,680.7	2,568.4	112.23	23.885	
7,400.0	7,080.3	7,077.3	7,077.3	18.7	141.2	42.24	-2,116.2	-757.2	2,664.3	2,549.3	115.04	23.160	
7,450.0	7,095.0	7,092.0	7,092.0	18.5	141.5	49.26	-2,116.2	-757.2	2,618.6	2,493.5	125.04	20.943	
7,480.3	7,102.4	7,099.4	7,099.4	18.4	141.6	54.33	-2,116.2	-757.2	2,590.5	2,458.1	132.34	19.574	
7,500.0	7,106.4	7,103.4	7,103.4	18.4	141.7	57.99	-2,116.2	-757.2	2,572.0	2,434.7	137.33	18.729	
7,550.0	7,114.4	7,111.4	7,111.4	18.3	141.9	68.46	-2,116.2	-757.2	2,524.9	2,375.5	149.49	16.890	
7,578.7	7,117.4	7,114.4	7,114.4	18.3	141.9	75.14	-2,116.2	-757.2	2,497.7	2,342.7	155.07	16.107	
7,600.0	7,118.9	7,115.9	7,115.9	18.3	142.0	80.29	-2,116.2	-757.2	2,477.5	2,319.5	158.03	15.677	
7,641.3	7,120.0	7,117.0	7,117.0	18.3	142.0	90.43	-2,116.2	-757.2	2,438.2	2,277.9	160.28	15.212	
7,677.1	7,119.9	7,116.9	7,116.9	18.3	142.0	90.42	-2,116.2	-757.2	2,404.2	2,243.9	160.32	14.996	
7,700.0	7,119.9	7,116.9	7,116.9	18.4	142.0	90.42	-2,116.2	-757.2	2,382.6	2,222.2	160.35	14.859	
7,775.6	7,119.7	7,116.7	7,116.7	18.6	142.0	90.40	-2,116.2	-757.2	2,311.1	2,150.5	160.55	14.395	
7,800.0	7,119.6	7,116.6	7,116.6	18.6	142.0	90.40	-2,116.2	-757.2	2,288.0	2,127.4	160.61	14.245	
7,874.0	7,119.4	7,116.4	7,116.4	19.0	142.0	90.38	-2,116.2	-757.2	2,218.4	2,057.4	160.95	13.783	
7,900.0	7,119.4	7,116.4	7,116.4	19.1	142.0	90.38	-2,116.2	-757.2	2,194.0	2,032.9	161.07	13.621	
7,972.4	7,119.2	7,116.2	7,116.2	19.6	142.0	90.37	-2,116.2	-757.2	2,126.2	1,964.7	161.53	13.163	
8,000.0	7,119.1	7,116.1	7,116.1	19.7	142.0	90.36	-2,116.2	-757.2	2,100.5	1,938.8	161.71	12.990	
8,070.8	7,118.9	7,115.9	7,115.9	20.3	142.0	90.35	-2,116.2	-757.2	2,034.6	1,872.3	162.27	12.539	
8,100.0	7,118.9	7,115.9	7,115.9	20.5	142.0	90.34	-2,116.2	-757.2	2,007.6	1,845.1	162.50	12.355	
8,169.3	7,118.7	7,115.7	7,115.7	21.2	142.0	90.33	-2,116.2	-757.2	1,943.7	1,780.5	163.15	11.914	
8,200.0	7,118.6	7,115.6	7,115.6	21.5	142.0	90.33	-2,116.2	-757.2	1,915.4	1,752.0	163.44	11.720	
8,267.7	7,118.5	7,115.5	7,115.5	22.2	142.0	90.31	-2,116.2	-757.2	1,853.5	1,689.4	164.15	11.291	
8,300.0	7,118.4	7,115.4	7,115.4	22.5	142.0	90.31	-2,116.2	-757.2	1,824.1	1,659.6	164.50	11.089	
8,366.1	7,118.2	7,115.2	7,115.2	23.3	142.0	90.29	-2,116.2	-757.2	1,764.2	1,599.0	165.27	10.675	
8,400.0	7,118.1	7,115.1	7,115.1	23.7	142.0	90.29	-2,116.2	-757.2	1,733.7	1,568.1	165.67	10.465	
8,464.5	7,118.0	7,115.0	7,115.0	24.5	142.0	90.28	-2,116.2	-757.2	1,676.0	1,509.5	166.48	10.067	
8,500.0	7,117.9	7,114.9	7,114.9	25.0	142.0	90.27	-2,116.2	-757.2	1,644.5	1,477.5	166.93	9.851	
8,563.0	7,117.7	7,114.7	7,114.7	25.8	141.9	90.26	-2,116.2	-757.2	1,588.9	1,421.1	167.77	9.471	
8,600.0	7,117.6	7,114.6	7,114.6	26.3	141.9	90.25	-2,116.2	-757.2	1,556.5	1,388.2	168.27	9.250	
8,661.4	7,117.5	7,114.5	7,114.5	27.2	141.9	90.24	-2,116.2	-757.2	1,503.3	1,334.1	169.13	8.888	
8,700.0	7,117.4	7,114.4	7,114.4	27.7	141.9	90.23	-2,116.2	-757.2	1,470.1	1,300.4	169.68	8.664	
8,759.8	7,117.2	7,114.2	7,114.2	28.6	141.9	90.22	-2,116.2	-757.2	1,419.3	1,248.7	170.56	8.321	
8,800.0	7,117.1	7,114.1	7,114.1	29.2	141.9	90.22	-2,116.2	-757.2	1,385.5	1,214.4	171.14	8.096	
8,858.2	7,117.0	7,114.0	7,114.0	30.1	141.9	90.20	-2,116.2	-757.2	1,337.2	1,165.2	172.03	7.773	
8,900.0	7,116.9	7,113.9	7,113.9	30.7	141.9	90.20	-2,116.2	-757.2	1,303.1	1,130.5	172.66	7.547	
8,956.7	7,116.8	7,113.8	7,113.8	31.6	141.9	90.19	-2,116.2	-757.2	1,257.5	1,084.0	173.54	7.246	
9,000.0	7,116.7	7,113.7	7,113.7	32.3	141.9	90.18	-2,116.2	-757.2	1,223.3	1,049.1	174.22	7.022	
9,055.1	7,116.5	7,113.5	7,113.5	33.2	141.9	90.17	-2,116.2	-757.2	1,180.7	1,005.6	175.10	6.743	
9,100.0	7,116.4	7,113.4	7,113.4	33.9	141.9	90.16	-2,116.2	-757.2	1,146.7	970.9	175.82	6.522	
9,153.5	7,116.3	7,113.3	7,113.3	34.8	141.9	90.15	-2,116.2	-757.2	1,107.3	930.6	176.69	6.267	
9,200.0	7,116.2	7,113.2	7,113.2	35.5	141.9	90.14	-2,116.2	-757.2	1,074.0	896.5	177.44	6.053	
9,251.9	7,116.0	7,113.0	7,113.0	36.4	141.9	90.13	-2,116.2	-757.2	1,038.0	859.7	178.30	5.822	
9,300.0	7,115.9	7,112.9	7,112.9	37.2	141.9	90.12	-2,116.2	-757.2	1,005.9	826.8	179.10	5.617	
9,350.4	7,115.8	7,112.8	7,112.8	38.0	141.9	90.11	-2,116.2	-757.2	973.7	793.8	179.94	5.411	
9,400.0	7,115.7	7,112.7	7,112.7	38.9	141.9	90.10	-2,116.2	-757.2	943.6	762.8	180.78	5.220	
9,448.8	7,115.5	7,112.5	7,112.5	39.7	141.9	90.10	-2,116.2	-757.2	915.6	734.0	181.61	5.042	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	7,115.4	7,112.4	7,112.4	40.6	141.9	90.09	-2,116.2	-757.2	888.2	705.7	182.48	4.867	
9,547.2	7,115.3	7,112.3	7,112.3	41.4	141.9	90.08	-2,116.2	-757.2	864.8	681.5	183.29	4.718	
9,600.0	7,115.2	7,112.2	7,112.2	42.3	141.9	90.07	-2,116.2	-757.2	841.0	656.8	184.19	4.566	
9,645.6	7,115.1	7,112.1	7,112.1	43.1	141.9	90.06	-2,116.2	-757.2	822.6	637.6	184.99	4.447	
9,700.0	7,114.9	7,111.9	7,111.9	44.0	141.9	90.05	-2,116.2	-757.2	803.6	617.6	185.93	4.322	
9,744.1	7,114.8	7,111.8	7,111.8	44.8	141.9	90.04	-2,116.2	-757.2	790.5	603.8	186.70	4.234	
9,800.0	7,114.7	7,111.7	7,111.7	45.8	141.9	90.03	-2,116.2	-757.2	777.3	589.6	187.68	4.142	
9,842.5	7,114.6	7,111.6	7,111.6	46.5	141.9	90.02	-2,116.2	-757.2	769.8	581.4	188.43	4.085	
9,900.0	7,114.4	7,111.4	7,111.4	47.6	141.9	90.01	-2,116.2	-757.2	763.3	573.9	189.44	4.029	
9,940.9	7,114.3	7,111.3	7,111.3	48.3	141.9	90.00	-2,116.2	-757.2	761.3	571.1	190.17	4.003	
9,957.7	7,114.3	7,111.3	7,111.3	48.6	141.9	90.00	-2,116.2	-757.2	761.1	570.6	190.46	3.996 CC, ES	
10,000.0	7,114.2	7,111.2	7,111.2	49.3	141.9	89.99	-2,116.2	-757.2	762.3	571.1	191.21	3.987 SF	
10,039.3	7,114.1	7,111.1	7,111.1	50.0	141.9	89.98	-2,116.2	-757.2	765.5	573.6	191.92	3.989	
10,100.0	7,113.9	7,110.9	7,110.9	51.1	141.9	89.97	-2,116.2	-757.2	774.3	581.3	193.00	4.012	
10,137.8	7,113.8	7,110.8	7,110.8	51.8	141.9	89.97	-2,116.2	-757.2	782.1	588.4	193.67	4.038	
10,200.0	7,113.7	7,110.7	7,110.7	52.9	141.9	89.95	-2,116.2	-757.2	798.7	603.9	194.79	4.101	
10,236.2	7,113.6	7,110.6	7,110.6	53.6	141.9	89.95	-2,116.2	-757.2	810.5	615.0	195.44	4.147	
10,300.0	7,113.4	7,110.4	7,110.4	54.7	141.9	89.94	-2,116.2	-757.2	834.5	637.9	196.59	4.245	
10,334.6	7,113.3	7,110.3	7,110.3	55.4	141.9	89.93	-2,116.2	-757.2	849.3	652.1	197.22	4.306	
10,400.0	7,113.2	7,110.2	7,110.2	56.5	141.9	89.92	-2,116.2	-757.2	880.3	681.9	198.40	4.437	
10,433.0	7,113.1	7,110.1	7,110.1	57.1	141.9	89.91	-2,116.2	-757.2	897.3	698.3	199.00	4.509	
10,500.0	7,112.9	7,109.9	7,109.9	58.4	141.9	89.90	-2,116.2	-757.2	934.5	734.3	200.22	4.668	
10,531.5	7,112.8	7,109.8	7,109.8	58.9	141.8	89.89	-2,116.2	-757.2	953.1	752.3	200.79	4.747	
10,600.0	7,112.7	7,109.7	7,109.7	60.2	141.8	89.88	-2,116.2	-757.2	995.9	793.9	202.04	4.929	
10,629.9	7,112.6	7,109.6	7,109.6	60.7	141.8	89.87	-2,116.2	-757.2	1,015.4	812.8	202.58	5.012	
10,700.0	7,112.4	7,109.4	7,109.4	62.0	141.8	89.86	-2,116.2	-757.2	1,063.1	859.3	203.86	5.215	
10,728.3	7,112.3	7,109.3	7,109.3	62.5	141.8	89.85	-2,116.2	-757.2	1,083.1	878.7	204.38	5.299	
10,800.0	7,112.2	7,109.2	7,109.2	63.9	141.8	89.84	-2,116.2	-757.2	1,135.2	929.5	205.70	5.519	
10,826.7	7,112.1	7,109.1	7,109.1	64.4	141.8	89.84	-2,116.2	-757.2	1,155.2	949.0	206.19	5.603	
10,900.0	7,111.9	7,108.9	7,108.9	65.7	141.8	89.82	-2,116.2	-757.2	1,211.3	1,003.7	207.53	5.836	
10,925.2	7,111.8	7,108.8	7,108.8	66.2	141.8	89.82	-2,116.2	-757.2	1,230.9	1,022.9	208.00	5.918	
11,000.0	7,111.7	7,108.7	7,108.7	67.6	141.8	89.80	-2,116.2	-757.2	1,290.6	1,081.2	209.38	6.164	
11,023.6	7,111.6	7,108.6	7,108.6	68.0	141.8	89.80	-2,116.2	-757.2	1,309.7	1,099.9	209.81	6.242	
11,100.0	7,111.4	7,108.4	7,108.4	69.4	141.8	89.78	-2,116.2	-757.2	1,372.6	1,161.4	211.22	6.498	
11,122.0	7,111.3	7,108.3	7,108.3	69.8	141.8	89.78	-2,116.2	-757.2	1,391.0	1,179.4	211.63	6.573	
11,200.0	7,111.2	7,108.2	7,108.2	71.3	141.8	89.76	-2,116.2	-757.2	1,456.9	1,243.8	213.07	6.838	
11,220.4	7,111.1	7,108.1	7,108.1	71.6	141.8	89.76	-2,116.2	-757.2	1,474.4	1,260.9	213.45	6.907	
11,300.0	7,110.9	7,107.9	7,107.9	73.1	141.8	89.74	-2,116.2	-757.2	1,543.0	1,328.1	214.92	7.179	
11,318.9	7,110.9	7,107.9	7,107.9	73.5	141.8	89.74	-2,116.2	-757.2	1,559.5	1,344.2	215.27	7.244	
11,400.0	7,110.6	7,107.6	7,107.6	75.0	141.8	89.73	-2,116.2	-757.2	1,630.8	1,414.0	216.78	7.523	
11,417.3	7,110.6	7,107.6	7,107.6	75.3	141.8	89.72	-2,116.2	-757.2	1,646.1	1,429.0	217.10	7.582	
11,500.0	7,110.4	7,107.4	7,107.4	76.8	141.8	89.71	-2,116.2	-757.2	1,719.8	1,501.2	218.64	7.866	
11,515.7	7,110.4	7,107.4	7,107.4	77.1	141.8	89.70	-2,116.2	-757.2	1,734.0	1,515.0	218.93	7.920	
11,600.0	7,110.1	7,107.1	7,107.1	78.7	141.8	89.69	-2,116.2	-757.2	1,810.1	1,589.6	220.50	8.209	
11,614.1	7,110.1	7,107.1	7,107.1	79.0	141.8	89.68	-2,116.2	-757.2	1,822.9	1,602.1	220.76	8.257	
11,655.0	7,110.0	7,107.0	7,107.0	79.7	141.8	89.68	-2,116.2	-757.2	1,860.1	1,638.6	221.52	8.397	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT SHULTZ FARM 30-32 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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	173.25	-1,235.0	146.2	1,244.0				
98.4	98.4	67.7	67.7	0.1	0.0	173.25	-1,235.0	146.2	1,243.7	1,243.5	0.11	N/A	
100.0	100.0	69.2	69.2	0.1	0.0	173.25	-1,235.0	146.2	1,243.7	1,243.5	0.12	N/A	
196.8	196.8	163.9	163.9	0.3	0.1	173.25	-1,235.3	146.2	1,243.9	1,243.4	0.45	2,743.981	
200.0	200.0	167.0	167.0	0.3	0.2	173.25	-1,235.3	146.2	1,243.9	1,243.4	0.47	2,671.706	
295.3	295.3	262.7	262.7	0.5	0.3	173.26	-1,235.6	146.1	1,244.2	1,243.4	0.79	1,576.518	
300.0	300.0	267.5	267.5	0.5	0.3	173.26	-1,235.6	146.1	1,244.2	1,243.4	0.80	1,547.607	
393.7	393.7	361.0	361.0	0.7	0.3	173.27	-1,235.9	145.9	1,244.5	1,243.4	1.09	1,146.185	
400.0	400.0	367.2	367.2	0.8	0.3	173.27	-1,235.9	145.9	1,244.5	1,243.4	1.10	1,126.925	
492.1	492.1	458.7	458.7	1.0	0.4	173.29	-1,236.3	145.5	1,244.8	1,243.4	1.37	909.527	
500.0	500.0	466.5	466.5	1.0	0.4	173.29	-1,236.3	145.4	1,244.8	1,243.5	1.39	895.005	
590.5	590.5	554.6	554.6	1.2	0.5	173.33	-1,236.8	144.7	1,245.2	1,243.6	1.64	758.234	
600.0	600.0	563.6	563.6	1.2	0.5	173.33	-1,236.8	144.6	1,245.3	1,243.6	1.67	746.463	
689.0	689.0	652.0	652.0	1.4	0.5	173.38	-1,237.5	143.7	1,245.9	1,244.0	1.91	651.564	
700.0	700.0	663.3	663.3	1.4	0.5	173.38	-1,237.6	143.6	1,246.0	1,244.0	1.94	641.482	
787.4	787.4	750.4	750.4	1.6	0.6	173.43	-1,238.3	142.6	1,246.5	1,244.3	2.18	572.151	
800.0	800.0	762.7	762.7	1.7	0.6	173.44	-1,238.4	142.5	1,246.6	1,244.3	2.21	563.454	
885.8	885.8	846.7	846.7	1.9	0.6	173.48	-1,239.1	141.7	1,247.2	1,244.7	2.44	510.844	
900.0	900.0	860.6	860.6	1.9	0.6	173.48	-1,239.2	141.5	1,247.3	1,244.8	2.48	503.121	
984.2	984.2	942.7	942.7	2.1	0.7	173.55	-1,240.1	140.3	1,248.1	1,245.4	2.70	461.889	
1,000.0	1,000.0	958.0	958.0	2.1	0.7	173.56	-1,240.3	140.0	1,248.2	1,245.5	2.74	454.963	
1,082.7	1,082.7	1,038.4	1,038.3	2.3	0.7	173.63	-1,241.4	138.6	1,249.2	1,246.2	2.96	421.890	
1,100.0	1,100.0	1,055.2	1,055.1	2.3	0.7	173.64	-1,241.6	138.3	1,249.4	1,246.4	3.01	415.587	
1,181.1	1,181.1	1,134.4	1,134.3	2.5	0.7	173.71	-1,242.8	137.0	1,250.5	1,247.3	3.22	388.487	
1,200.0	1,200.0	1,153.0	1,152.9	2.6	0.8	173.72	-1,243.1	136.7	1,250.8	1,247.5	3.27	382.687	
1,279.5	1,279.5	1,230.2	1,230.1	2.7	0.8	173.79	-1,244.5	135.4	1,252.0	1,248.5	3.48	360.170	
1,300.0	1,300.0	1,249.7	1,249.6	2.8	0.8	173.81	-1,244.8	135.1	1,252.3	1,248.8	3.53	354.834	
1,377.9	1,377.9	1,325.6	1,325.5	3.0	0.8	173.88	-1,246.4	133.7	1,253.7	1,250.0	3.73	335.918	
1,400.0	1,400.0	1,348.1	1,347.9	3.0	0.8	173.90	-1,246.8	133.3	1,254.2	1,250.4	3.79	330.922	
1,476.4	1,476.4	1,425.5	1,425.3	3.2	0.9	173.97	-1,248.4	131.8	1,255.5	1,251.5	3.99	314.747	
1,500.0	1,500.0	1,449.3	1,449.1	3.2	0.9	174.00	-1,248.9	131.3	1,255.9	1,251.9	4.05	310.081	
1,574.8	1,574.8	1,523.2	1,523.0	3.4	0.9	174.06	-1,250.3	130.1	1,257.2	1,253.0	4.24	296.232	
1,600.0	1,600.0	1,547.1	1,546.9	3.5	0.9	174.08	-1,250.8	129.7	1,257.7	1,253.4	4.31	291.876	
1,673.2	1,673.2	1,620.6	1,620.3	3.6	1.0	174.15	-1,252.4	128.3	1,259.2	1,254.7	4.50	279.934	
1,700.0	1,700.0	1,652.0	1,651.7	3.7	1.0	174.18	-1,253.0	127.6	1,259.7	1,255.1	4.57	275.766	
1,771.6	1,771.6	1,732.2	1,731.9	3.8	1.0	174.28	-1,254.1	125.5	1,260.4	1,255.7	4.75	265.237	
1,800.0	1,800.0	1,761.8	1,761.4	3.9	1.0	174.33	-1,254.5	124.6	1,260.7	1,255.9	4.82	261.334	
1,870.1	1,870.1	1,839.9	1,839.6	4.1	1.0	174.44	-1,255.1	122.1	1,261.1	1,256.1	5.00	252.139	
1,900.0	1,900.0	1,875.7	1,875.3	4.1	1.0	174.50	-1,255.2	120.8	1,261.0	1,255.9	5.08	248.372	
1,968.5	1,968.5	1,946.6	1,946.2	4.3	1.1	174.62	-1,255.1	118.1	1,260.6	1,255.4	5.25	240.247	
2,000.0	2,000.0	1,977.2	1,976.7	4.4	1.1	174.68	-1,255.0	116.9	1,260.5	1,255.2	5.32	236.717	
2,066.9	2,066.9	2,043.0	2,042.5	4.5	1.1	174.79	-1,255.0	114.5	1,260.2	1,254.7	5.49	229.552	
2,100.0	2,100.0	2,075.7	2,075.2	4.6	1.1	174.85	-1,255.0	113.1	1,260.1	1,254.5	5.57	226.169	
2,150.0	2,150.0	2,126.1	2,125.5	4.7	1.1	174.94	-1,255.0	111.1	1,259.9	1,254.3	5.70	221.237	
2,160.7	2,160.7	2,137.0	2,136.4	4.7	1.1	174.72	-1,255.0	110.6	1,259.9	1,254.2	5.72	220.180	
2,165.3	2,165.3	2,141.8	2,141.2	4.7	1.1	174.73	-1,255.0	110.4	1,259.9	1,254.2	5.73	219.744	
2,200.0	2,200.0	2,177.2	2,176.6	4.8	1.1	174.79	-1,255.0	109.0	1,260.2	1,254.4	5.82	216.557	
2,263.8	2,263.7	2,236.5	2,235.9	5.0	1.2	174.90	-1,255.0	106.8	1,261.8	1,255.8	5.98	211.129	
2,300.0	2,299.9	2,268.4	2,267.7	5.0	1.2	174.95	-1,255.1	105.8	1,263.5	1,257.4	6.07	208.303	
2,362.2	2,362.0	2,325.4	2,324.7	5.2	1.2	175.03	-1,255.5	104.1	1,267.7	1,261.5	6.22	203.756	
2,400.0	2,399.7	2,361.9	2,361.2	5.3	1.2	175.09	-1,255.9	103.0	1,271.0	1,264.7	6.32	201.182	
2,460.6	2,460.0	2,419.9	2,419.1	5.4	1.2	175.17	-1,256.5	101.5	1,277.4	1,270.9	6.47	197.344	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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				
2,500.0	2,499.1	2,456.8	2,456.0	5.5	1.2	175.22	-1,256.9	100.5	1,282.3	1,275.7	6.57	195.077				
2,559.0	2,557.7	2,512.2	2,511.4	5.6	1.3	175.31	-1,257.7	99.0	1,290.8	1,284.1	6.73	191.929				
2,600.0	2,598.2	2,550.9	2,550.1	5.7	1.3	175.36	-1,258.4	98.0	1,297.5	1,290.6	6.83	189.934				
2,657.5	2,654.8	2,605.3	2,604.5	5.9	1.3	175.45	-1,259.3	96.6	1,307.9	1,300.9	6.98	187.344				
2,700.0	2,696.6	2,646.4	2,645.5	6.0	1.3	175.51	-1,260.1	95.5	1,316.3	1,309.3	7.09	185.620				
2,755.9	2,751.4	2,700.0	2,699.1	6.1	1.3	175.59	-1,261.1	94.0	1,328.4	1,321.2	7.24	183.516				
2,800.0	2,794.4	2,741.3	2,740.4	6.2	1.4	175.66	-1,261.9	92.9	1,338.8	1,331.4	7.35	182.051				
2,854.3	2,847.3	2,791.7	2,790.8	6.4	1.4	175.75	-1,263.0	91.4	1,352.5	1,345.0	7.50	180.366				
2,888.8	2,880.6	2,824.2	2,823.2	6.5	1.4	175.80	-1,263.7	90.4	1,361.8	1,354.2	7.59	179.438				
2,900.0	2,891.5	2,834.8	2,833.8	6.6	1.4	175.83	-1,264.0	90.1	1,364.8	1,357.2	7.62	179.137				
2,952.7	2,942.5	2,884.6	2,883.6	6.7	1.4	175.94	-1,265.2	88.6	1,379.3	1,371.6	7.76	177.785				
3,000.0	2,988.2	2,932.0	2,931.0	6.9	1.4	176.04	-1,266.3	87.1	1,392.3	1,384.4	7.89	176.519				
3,051.2	3,037.6	2,985.1	2,984.0	7.1	1.4	176.15	-1,267.4	85.6	1,406.3	1,398.3	8.03	175.212				
3,100.0	3,084.9	3,035.4	3,034.3	7.3	1.5	176.24	-1,268.3	84.2	1,419.5	1,411.3	8.16	173.998				
3,149.6	3,132.8	3,086.5	3,085.3	7.5	1.5	176.34	-1,269.1	82.7	1,432.8	1,424.5	8.29	172.784				
3,200.0	3,181.5	3,141.7	3,140.6	7.6	1.5	176.45	-1,269.8	80.9	1,446.1	1,437.7	8.43	171.579				
3,248.0	3,228.0	3,195.7	3,194.5	7.8	1.5	176.55	-1,270.2	79.4	1,458.6	1,450.1	8.56	170.421				
3,300.0	3,278.2	3,258.0	3,256.8	8.0	1.5	176.65	-1,270.2	77.9	1,471.8	1,463.1	8.70	169.269				
3,346.4	3,323.2	3,312.0	3,310.7	8.2	1.6	176.73	-1,269.8	76.7	1,483.3	1,474.4	8.82	168.172				
3,400.0	3,374.9	3,366.7	3,365.4	8.5	1.6	176.80	-1,269.2	75.6	1,496.3	1,487.3	8.96	166.927				
3,444.9	3,418.3	3,411.6	3,410.3	8.6	1.6	176.86	-1,268.6	74.7	1,507.1	1,498.0	9.08	165.947				
3,500.0	3,471.6	3,463.5	3,462.2	8.9	1.6	176.92	-1,267.9	73.8	1,520.4	1,511.2	9.23	164.692				
3,543.3	3,513.5	3,504.2	3,502.9	9.1	1.6	176.97	-1,267.5	73.2	1,530.9	1,521.6	9.35	163.723				
3,600.0	3,568.3	3,557.5	3,556.2	9.3	1.6	177.03	-1,266.9	72.4	1,544.7	1,535.2	9.51	162.465				
3,641.7	3,608.7	3,596.8	3,595.5	9.5	1.6	177.07	-1,266.5	71.7	1,554.9	1,545.3	9.62	161.559				
3,700.0	3,665.0	3,650.1	3,648.8	9.7	1.6	177.13	-1,266.1	70.8	1,569.3	1,559.5	9.79	160.316				
3,740.1	3,703.8	3,686.8	3,685.5	9.9	1.6	177.17	-1,265.8	70.2	1,579.2	1,569.3	9.90	159.482				
3,800.0	3,761.7	3,742.7	3,741.4	10.2	1.7	177.22	-1,265.5	69.4	1,594.1	1,584.0	10.07	158.257				
3,838.6	3,799.0	3,778.9	3,777.6	10.4	1.7	177.26	-1,265.3	68.8	1,603.7	1,593.6	10.18	157.488				
3,900.0	3,858.4	3,837.1	3,835.8	10.7	1.7	177.32	-1,265.1	67.8	1,619.1	1,608.8	10.36	156.304				
3,937.0	3,894.2	3,872.3	3,870.9	10.8	1.7	177.36	-1,265.0	67.2	1,628.4	1,618.0	10.47	155.596				
4,000.0	3,955.1	3,932.8	3,931.5	11.1	1.7	177.43	-1,264.9	66.1	1,644.3	1,633.6	10.65	154.418				
4,035.4	3,989.3	3,967.1	3,965.8	11.3	1.7	177.46	-1,264.8	65.4	1,653.2	1,642.4	10.75	153.769				
4,100.0	4,051.8	4,035.2	4,033.8	11.6	1.7	177.54	-1,264.6	64.0	1,669.4	1,658.5	10.94	152.624				
4,133.8	4,084.5	4,074.1	4,072.7	11.7	1.8	177.59	-1,264.3	63.1	1,677.7	1,666.7	11.04	152.009				
4,200.0	4,148.5	4,146.5	4,145.1	12.1	1.8	177.68	-1,263.4	61.2	1,693.8	1,682.5	11.23	150.859				
4,232.3	4,179.7	4,181.0	4,179.6	12.2	1.8	177.72	-1,262.9	60.3	1,701.5	1,690.2	11.32	150.309				
4,300.0	4,245.2	4,248.9	4,247.4	12.5	1.8	177.80	-1,261.7	58.6	1,717.6	1,706.1	11.51	149.161				
4,330.7	4,274.9	4,278.9	4,277.4	12.7	1.8	177.84	-1,261.2	57.9	1,724.8	1,713.2	11.60	148.645				
4,400.0	4,341.9	4,348.7	4,347.2	13.0	1.8	177.91	-1,259.9	56.3	1,741.2	1,729.4	11.81	147.495				
4,429.1	4,370.0	4,378.4	4,376.9	13.1	1.8	177.94	-1,259.3	55.7	1,748.1	1,736.2	11.89	147.015				
4,500.0	4,438.6	4,442.5	4,441.0	13.5	1.9	178.00	-1,258.1	54.6	1,764.8	1,752.7	12.10	145.879				
4,527.5	4,465.2	4,466.1	4,464.5	13.6	1.9	178.01	-1,257.7	54.2	1,771.4	1,759.2	12.18	145.452				
4,600.0	4,535.3	4,533.1	4,531.6	14.0	1.9	178.07	-1,256.8	53.3	1,788.8	1,776.4	12.39	144.350				
4,626.0	4,560.4	4,559.5	4,557.9	14.1	1.9	178.09	-1,256.4	52.9	1,795.1	1,782.6	12.47	143.953				
4,700.0	4,631.9	4,638.7	4,637.1	14.5	1.9	178.14	-1,255.2	51.8	1,812.8	1,800.1	12.69	142.857				
4,724.4	4,655.5	4,666.4	4,664.8	14.6	1.9	178.15	-1,254.6	51.7	1,818.6	1,805.8	12.76	142.504				
4,800.0	4,728.6	4,743.4	4,741.8	15.0	1.9	178.17	-1,252.8	51.6	1,836.1	1,823.2	12.98	141.417				
4,822.8	4,750.7	4,764.9	4,763.3	15.1	1.9	178.18	-1,252.4	51.6	1,841.5	1,828.4	13.05	141.094				
4,900.0	4,825.3	4,837.7	4,836.0	15.4	1.9	178.19	-1,250.8	51.7	1,859.5	1,846.2	13.28	140.016				
4,921.2	4,845.9	4,857.7	4,856.1	15.6	1.9	178.20	-1,250.3	51.7	1,864.5	1,851.1	13.34	139.721				
5,000.0	4,922.0	4,926.9	4,925.3	15.9	1.9	178.21	-1,248.9	51.8	1,883.0	1,869.4	13.58	138.661				

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	4,941.0	4,942.5	4,940.9	16.0	1.9	178.22	-1,248.7	51.7	1,887.7	1,874.1	13.64	138.406		
5,100.0	5,018.7	5,006.9	5,005.2	16.4	1.9	178.24	-1,248.0	51.5	1,907.3	1,893.4	13.88	137.413		
5,118.1	5,036.2	5,023.0	5,021.4	16.5	1.9	178.25	-1,247.8	51.4	1,911.8	1,897.9	13.94	137.186		
5,200.0	5,115.4	5,100.0	5,098.3	16.9	1.9	178.27	-1,247.4	51.1	1,932.2	1,918.0	14.19	136.184		
5,216.5	5,131.4	5,111.2	5,109.5	17.0	1.9	178.28	-1,247.4	51.1	1,936.4	1,922.1	14.24	136.004		
5,300.0	5,212.1	5,188.0	5,186.3	17.4	2.0	178.30	-1,247.2	50.7	1,957.4	1,942.9	14.49	135.063		
5,314.9	5,226.6	5,201.7	5,200.1	17.5	2.0	178.31	-1,247.2	50.6	1,961.2	1,946.7	14.54	134.899		
5,400.0	5,308.8	5,281.4	5,279.8	17.9	2.0	178.35	-1,247.1	50.1	1,982.8	1,968.0	14.80	133.969		
5,413.4	5,321.7	5,294.0	5,292.3	18.0	2.0	178.35	-1,247.1	50.0	1,986.3	1,971.4	14.84	133.826		
5,500.0	5,405.5	5,368.4	5,366.8	18.4	2.0	178.39	-1,247.3	49.3	2,008.5	1,993.4	15.11	132.936		
5,511.8	5,416.9	5,378.5	5,376.8	18.5	2.0	178.39	-1,247.4	49.2	2,011.6	1,996.5	15.15	132.819		
5,600.0	5,502.2	5,462.7	5,461.0	18.9	2.1	178.44	-1,247.9	48.3	2,034.6	2,019.2	15.42	131.938		
5,610.2	5,512.1	5,472.9	5,471.2	19.0	2.1	178.44	-1,248.0	48.2	2,037.3	2,021.9	15.45	131.837		
5,700.0	5,598.9	5,545.7	5,544.1	19.4	2.1	178.48	-1,248.6	47.2	2,060.9	2,045.2	15.73	131.007		
5,708.6	5,607.2	5,552.1	5,550.4	19.5	2.1	178.49	-1,248.7	47.2	2,063.2	2,047.4	15.76	130.932		
5,745.8	5,643.2	5,579.2	5,577.5	19.7	2.1	178.50	-1,249.1	46.8	2,073.2	2,057.4	15.87	130.617		
5,800.0	5,695.7	5,621.0	5,619.2	19.9	2.1	178.54	-1,250.0	46.1	2,087.6	2,071.6	15.98	130.606		
5,807.1	5,702.6	5,626.8	5,625.0	19.9	2.1	178.54	-1,250.1	46.0	2,089.4	2,073.5	16.00	130.619		
5,900.0	5,793.2	5,704.9	5,703.1	20.3	2.1	178.63	-1,252.2	43.8	2,112.1	2,096.0	16.15	130.759		
5,905.5	5,798.6	5,711.9	5,710.2	20.3	2.1	178.64	-1,252.4	43.5	2,113.4	2,097.2	16.16	130.765		
6,000.0	5,891.5	5,838.0	5,836.1	20.6	2.2	178.76	-1,255.1	40.0	2,132.8	2,116.5	16.31	130.798		
6,003.9	5,895.4	5,843.7	5,841.8	20.6	2.2	178.77	-1,255.2	39.9	2,133.5	2,117.2	16.31	130.799		
6,100.0	5,990.4	5,960.3	5,958.5	20.9	2.2	178.82	-1,255.7	38.6	2,148.3	2,131.9	16.43	130.739		
6,102.3	5,992.7	5,962.8	5,960.9	20.9	2.2	178.82	-1,255.7	38.6	2,148.7	2,132.2	16.43	130.737		
6,200.0	6,089.7	6,055.9	6,054.0	21.1	2.2	178.84	-1,255.9	38.1	2,160.1	2,143.6	16.54	130.579		
6,200.8	6,090.4	6,056.6	6,054.7	21.1	2.2	178.84	-1,255.9	38.1	2,160.2	2,143.7	16.54	130.577		
6,299.2	6,188.5	6,148.7	6,146.9	21.4	2.3	178.86	-1,256.3	37.9	2,168.7	2,152.1	16.65	130.284		
6,300.0	6,189.3	6,149.5	6,147.6	21.4	2.3	178.86	-1,256.3	37.9	2,168.8	2,152.1	16.65	130.280		
6,397.6	6,286.8	6,245.5	6,243.7	21.5	2.3	178.86	-1,256.9	37.9	2,174.0	2,157.3	16.75	129.809		
6,400.0	6,289.2	6,247.9	6,246.0	21.5	2.3	178.86	-1,256.9	37.9	2,174.1	2,157.4	16.75	129.794		
6,484.6	6,373.8	6,329.9	6,328.1	21.6	2.3	179.10	-1,257.5	38.1	2,175.9	2,159.1	16.84	129.225		
6,496.0	6,385.3	6,340.5	6,338.7	21.7	2.3	179.10	-1,257.6	38.1	2,176.0	2,159.2	16.86	129.057		
6,500.0	6,389.2	6,344.2	6,342.3	21.7	2.3	179.10	-1,257.6	38.1	2,176.1	2,159.2	16.87	128.999		
6,514.6	6,403.8	6,357.7	6,355.8	21.7	2.3	179.10	-1,257.7	38.2	2,176.2	2,159.3	16.90	128.763		
6,550.0	6,439.2	6,390.4	6,388.6	21.7	2.3	-0.90	-1,258.0	38.2	2,175.6	2,158.8	16.88	128.878		
6,594.5	6,483.5	6,434.3	6,432.4	21.7	2.3	-0.91	-1,258.5	38.2	2,172.5	2,155.6	16.88	128.702		
6,600.0	6,489.0	6,439.8	6,437.9	21.7	2.3	-0.91	-1,258.5	38.2	2,171.9	2,155.0	16.88	128.649		
6,650.0	6,538.4	6,489.6	6,487.8	21.7	2.3	-0.93	-1,259.0	38.3	2,164.8	2,147.8	16.91	128.001		
6,692.9	6,580.3	6,535.4	6,533.5	21.6	2.3	-0.94	-1,259.5	38.4	2,155.8	2,138.9	16.94	127.236		
6,700.0	6,587.1	6,543.1	6,541.2	21.6	2.3	-0.95	-1,259.5	38.4	2,154.1	2,137.2	16.95	127.093		
6,750.0	6,635.0	6,596.7	6,594.8	21.5	2.3	-0.98	-1,259.9	38.5	2,139.9	2,123.0	16.97	126.079		
6,791.3	6,673.7	6,631.6	6,629.7	21.4	2.3	-1.00	-1,260.1	38.4	2,125.7	2,108.7	16.97	125.288		
6,800.0	6,681.7	6,638.7	6,636.8	21.4	2.3	-1.01	-1,260.1	38.4	2,122.5	2,105.5	16.96	125.122		
6,850.0	6,727.1	6,678.9	6,677.0	21.2	2.3	-1.05	-1,260.5	38.3	2,101.9	2,084.9	16.92	124.241		
6,889.7	6,762.0	6,710.2	6,708.3	21.1	2.3	-1.08	-1,260.8	38.1	2,083.3	2,066.5	16.85	123.609		
6,900.0	6,770.9	6,718.2	6,716.4	21.0	2.3	-1.09	-1,260.9	38.0	2,078.2	2,061.4	16.83	123.450		
6,950.0	6,812.9	6,756.5	6,754.6	20.8	2.3	-1.14	-1,261.4	37.7	2,051.7	2,035.0	16.72	122.739		
6,988.2	6,843.6	6,784.6	6,782.7	20.6	2.3	-1.19	-1,261.9	37.4	2,029.5	2,012.9	16.60	122.236		
7,000.0	6,852.9	6,793.1	6,791.2	20.6	2.3	-1.20	-1,262.0	37.3	2,022.4	2,005.8	16.57	122.079		
7,050.0	6,890.7	6,833.0	6,831.1	20.3	2.4	-1.28	-1,262.7	36.9	1,990.3	1,973.9	16.40	121.366		
7,086.6	6,916.9	6,861.5	6,859.6	20.1	2.4	-1.35	-1,263.1	36.6	1,965.1	1,948.9	16.27	120.793		
7,100.0	6,926.2	6,871.6	6,869.6	20.1	2.4	-1.38	-1,263.2	36.5	1,955.6	1,939.4	16.22	120.565		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	
7,150.0	6,959.1	6,907.8	6,905.8	19.8	2.4	-1.51	-1,263.7	36.3	1,918.4	1,902.4	16.04	119.593		
7,185.0	6,980.5	6,932.3	6,930.4	19.6	2.4	-1.62	-1,264.0	36.2	1,891.0	1,875.0	15.93	118.734		
7,200.0	6,989.3	6,942.3	6,940.4	19.5	2.4	-1.68	-1,264.1	36.1	1,878.9	1,863.0	15.88	118.318		
7,250.0	7,016.6	6,973.4	6,971.5	19.3	2.4	-1.90	-1,264.4	35.9	1,837.3	1,821.6	15.75	116.636		
7,283.4	7,033.3	6,992.4	6,990.4	19.1	2.4	-2.09	-1,264.6	35.8	1,808.5	1,792.8	15.70	115.209		
7,300.0	7,041.0	7,001.0	6,999.1	19.1	2.4	-2.20	-1,264.6	35.8	1,793.9	1,778.2	15.68	114.410		
7,350.0	7,062.2	7,022.5	7,020.6	18.8	2.4	-2.60	-1,264.8	35.6	1,748.8	1,733.1	15.68	111.542		
7,381.9	7,074.1	7,034.6	7,032.7	18.7	2.4	-2.94	-1,264.9	35.6	1,719.3	1,703.6	15.73	109.316		
7,400.0	7,080.3	7,040.9	7,039.0	18.7	2.4	-3.17	-1,264.9	35.5	1,702.3	1,686.6	15.77	107.924		
7,450.0	7,095.0	7,055.9	7,054.0	18.5	2.4	-4.06	-1,265.1	35.4	1,654.7	1,638.7	15.98	103.543		
7,480.3	7,102.4	7,063.5	7,061.5	18.4	2.4	-4.86	-1,265.1	35.4	1,625.3	1,609.2	16.17	100.521		
7,500.0	7,106.4	7,067.7	7,065.7	18.4	2.4	-5.57	-1,265.1	35.3	1,606.1	1,589.8	16.32	98.427		
7,550.0	7,114.4	7,076.0	7,074.0	18.3	2.4	-8.68	-1,265.2	35.3	1,556.8	1,540.0	16.84	92.451		
7,578.7	7,117.4	7,079.2	7,077.3	18.3	2.4	-12.54	-1,265.2	35.2	1,528.3	1,511.0	17.33	88.185		
7,600.0	7,118.9	7,080.8	7,078.9	18.3	2.4	-18.38	-1,265.2	35.2	1,507.1	1,489.1	17.98	83.830		
7,641.3	7,120.0	7,082.2	7,080.3	18.3	2.4	-77.21	-1,265.2	35.2	1,465.8	1,444.9	20.91	70.089		
7,677.1	7,119.9	7,082.4	7,080.5	18.3	2.4	-77.53	-1,265.2	35.2	1,430.0	1,409.0	20.95	68.261		
7,700.0	7,119.9	7,082.5	7,080.6	18.4	2.4	-77.73	-1,265.2	35.2	1,407.1	1,386.2	20.97	67.098		
7,775.6	7,119.7	7,082.9	7,081.0	18.6	2.4	-78.39	-1,265.3	35.2	1,331.6	1,310.4	21.16	62.925		
7,800.0	7,119.6	7,083.0	7,081.1	18.6	2.4	-78.61	-1,265.3	35.2	1,307.2	1,285.9	21.22	61.593		
7,874.0	7,119.4	7,083.4	7,081.5	19.0	2.4	-79.26	-1,265.3	35.2	1,233.2	1,211.6	21.55	57.236		
7,900.0	7,119.4	7,083.5	7,081.6	19.1	2.4	-79.50	-1,265.3	35.2	1,207.2	1,185.5	21.66	55.736		
7,972.4	7,119.2	7,083.9	7,082.0	19.6	2.4	-80.14	-1,265.3	35.2	1,134.8	1,112.7	22.10	51.345		
8,000.0	7,119.1	7,084.0	7,082.1	19.7	2.4	-80.39	-1,265.3	35.2	1,107.2	1,085.0	22.27	49.718		
8,070.8	7,118.9	7,084.4	7,082.5	20.3	2.4	-81.02	-1,265.3	35.2	1,036.4	1,013.6	22.82	45.425		
8,100.0	7,118.9	7,084.5	7,082.6	20.5	2.4	-81.29	-1,265.3	35.2	1,007.3	984.2	23.04	43.718		
8,169.3	7,118.7	7,084.9	7,083.0	21.2	2.4	-81.91	-1,265.3	35.2	938.0	914.4	23.67	39.624		
8,200.0	7,118.6	7,085.0	7,083.1	21.5	2.4	-82.19	-1,265.3	35.2	907.3	883.4	23.95	37.877		
8,267.7	7,118.5	7,085.4	7,083.4	22.2	2.4	-82.80	-1,265.3	35.2	839.7	815.0	24.66	34.052		
8,300.0	7,118.4	7,085.5	7,083.6	22.5	2.4	-83.09	-1,265.3	35.2	807.4	782.4	25.00	32.302		
8,366.1	7,118.2	7,085.9	7,083.9	23.3	2.4	-83.69	-1,265.3	35.2	741.3	715.6	25.76	28.783		
8,400.0	7,118.1	7,086.0	7,084.1	23.7	2.4	-84.00	-1,265.3	35.2	707.5	681.3	26.15	27.059		
8,464.5	7,118.0	7,086.4	7,084.4	24.5	2.4	-84.59	-1,265.3	35.2	643.0	616.1	26.95	23.858		
8,500.0	7,117.9	7,086.5	7,084.6	25.0	2.4	-84.91	-1,265.3	35.2	607.6	580.2	27.39	22.180		
8,563.0	7,117.7	7,086.9	7,084.9	25.8	2.4	-85.49	-1,265.3	35.2	544.7	516.5	28.23	19.295		
8,600.0	7,117.6	7,087.0	7,085.1	26.3	2.4	-85.83	-1,265.3	35.2	507.8	479.0	28.72	17.678		
8,661.4	7,117.5	7,087.3	7,085.4	27.2	2.4	-86.39	-1,265.3	35.2	446.5	416.9	29.58	15.093		
8,700.0	7,117.4	7,087.5	7,085.6	27.7	2.4	-86.74	-1,265.3	35.2	408.0	377.9	30.12	13.544		
8,759.8	7,117.2	7,087.8	7,085.9	28.6	2.4	-87.29	-1,265.3	35.2	348.4	317.4	31.00	11.239		
8,800.0	7,117.1	7,088.0	7,086.1	29.2	2.4	-87.66	-1,265.3	35.2	308.4	276.8	31.59	9.764		
8,858.2	7,117.0	7,088.3	7,086.4	30.1	2.4	-88.19	-1,265.3	35.2	250.5	218.0	32.47	7.716		
8,900.0	7,116.9	7,088.5	7,086.6	30.7	2.4	-88.57	-1,265.3	35.2	209.2	176.1	33.10	6.319		
8,956.7	7,116.8	7,088.8	7,086.9	31.6	2.4	-89.09	-1,265.3	35.2	153.3	119.4	33.98	4.513		
9,000.0	7,116.7	7,089.0	7,087.1	32.3	2.4	-89.49	-1,265.3	35.2	111.3	76.6	34.66	3.211		
9,055.1	7,116.5	7,089.3	7,087.4	33.2	2.4	-90.00	-1,265.3	35.2	60.4	24.9	35.53	1.700		
9,100.0	7,116.4	7,089.5	7,087.6	33.9	2.4	-90.41	-1,265.3	35.1	32.0	-4.3	36.25	0.882 Level 1		
9,106.8	7,116.4	7,089.6	7,087.6	34.0	2.4	-90.47	-1,265.3	35.1	31.2	-5.1	36.36	0.859 Level 1, CC, ES, SF		
9,153.5	7,116.3	7,089.8	7,087.9	34.8	2.4	-90.90	-1,265.3	35.1	56.2	19.1	37.12	1.514		
9,200.0	7,116.2	7,090.0	7,088.1	35.5	2.4	-91.33	-1,265.3	35.1	98.3	60.4	37.88	2.595		
9,251.9	7,116.0	7,090.3	7,088.4	36.4	2.4	-91.80	-1,265.3	35.1	148.5	109.7	38.74	3.833		
9,300.0	7,115.9	7,090.5	7,088.6	37.2	2.4	-92.24	-1,265.3	35.1	195.7	156.2	39.53	4.951		
9,350.4	7,115.8	7,090.8	7,088.9	38.0	2.4	-92.71	-1,265.3	35.1	245.6	205.2	40.37	6.082		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT SHULTZ FARM 30-32 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,400.0	7,115.7	7,091.0	7,089.1	38.9	2.4	-93.16	-1,265.3	35.1	294.9	253.6	41.20	7.156	
9,448.8	7,115.5	7,091.3	7,089.4	39.7	2.4	-93.61	-1,265.3	35.1	343.4	301.4	42.03	8.171	
9,500.0	7,115.4	7,091.5	7,089.6	40.6	2.4	-94.07	-1,265.3	35.1	394.4	351.5	42.89	9.196	
9,547.2	7,115.3	7,091.8	7,089.9	41.4	2.4	-94.50	-1,265.3	35.1	441.5	397.8	43.70	10.104	
9,600.0	7,115.2	7,092.0	7,090.1	42.3	2.4	-94.98	-1,265.3	35.1	494.2	449.6	44.60	11.081	
9,645.6	7,115.1	7,092.3	7,090.3	43.1	2.4	-95.40	-1,265.3	35.1	539.7	494.4	45.38	11.894	
9,700.0	7,114.9	7,092.5	7,090.6	44.0	2.4	-95.89	-1,265.3	35.1	594.0	547.7	46.31	12.826	
9,744.1	7,114.8	7,092.8	7,090.8	44.8	2.4	-96.29	-1,265.3	35.1	638.0	591.0	47.07	13.555	
9,800.0	7,114.7	7,093.0	7,091.1	45.8	2.4	-96.80	-1,265.3	35.1	693.9	645.9	48.03	14.446	
9,842.5	7,114.6	7,093.3	7,091.3	46.5	2.4	-97.18	-1,265.3	35.1	736.3	687.6	48.77	15.100	
9,900.0	7,114.4	7,093.5	7,091.6	47.6	2.4	-97.70	-1,265.3	35.1	793.8	744.0	49.76	15.954	
9,940.9	7,114.3	7,093.7	7,091.8	48.3	2.4	-98.07	-1,265.3	35.1	834.7	784.2	50.46	16.540	
10,000.0	7,114.2	7,094.0	7,092.1	49.3	2.4	-98.59	-1,265.3	35.1	893.7	842.2	51.48	17.360	
10,039.3	7,114.1	7,094.2	7,092.3	50.0	2.4	-98.95	-1,265.3	35.1	933.1	880.9	52.16	17.888	
10,100.0	7,113.9	7,094.5	7,092.6	51.1	2.4	-99.49	-1,265.3	35.1	993.7	940.5	53.21	18.676	
10,137.8	7,113.8	7,094.7	7,092.8	51.8	2.4	-99.83	-1,265.3	35.1	1,031.4	977.6	53.86	19.151	
10,200.0	7,113.7	7,095.0	7,093.1	52.9	2.4	-100.38	-1,265.3	35.1	1,093.6	1,038.7	54.93	19.910	
10,236.2	7,113.6	7,095.2	7,093.3	53.6	2.4	-100.70	-1,265.3	35.1	1,129.8	1,074.3	55.55	20.339	
10,300.0	7,113.4	7,095.5	7,093.6	54.7	2.4	-101.26	-1,265.3	35.1	1,193.6	1,136.9	56.64	21.072	
10,334.6	7,113.3	7,095.7	7,093.8	55.4	2.4	-101.56	-1,265.3	35.1	1,228.2	1,171.0	57.23	21.459	
10,400.0	7,113.2	7,096.0	7,094.1	56.5	2.4	-102.14	-1,265.3	35.1	1,293.6	1,235.2	58.35	22.169	
10,433.0	7,113.1	7,096.2	7,094.3	57.1	2.4	-102.43	-1,265.4	35.1	1,326.6	1,267.7	58.91	22.518	
10,500.0	7,112.9	7,096.5	7,094.6	58.4	2.4	-103.01	-1,265.4	35.1	1,393.5	1,333.5	60.05	23.207	
10,531.5	7,112.8	7,096.7	7,094.8	58.9	2.4	-103.28	-1,265.4	35.1	1,425.0	1,364.4	60.58	23.523	
10,600.0	7,112.7	7,097.0	7,095.1	60.2	2.4	-103.87	-1,265.4	35.1	1,493.5	1,431.8	61.73	24.193	
10,629.9	7,112.6	7,097.2	7,095.3	60.7	2.4	-104.13	-1,265.4	35.1	1,523.4	1,461.2	62.24	24.478	
10,700.0	7,112.4	7,097.5	7,095.6	62.0	2.4	-104.73	-1,265.4	35.1	1,593.5	1,530.1	63.41	25.130	
10,728.3	7,112.3	7,097.7	7,095.8	62.5	2.4	-104.97	-1,265.4	35.1	1,621.8	1,557.9	63.88	25.388	
10,800.0	7,112.2	7,098.0	7,096.1	63.9	2.4	-105.58	-1,265.4	35.1	1,693.5	1,628.4	65.07	26.026	
10,826.7	7,112.1	7,098.2	7,096.2	64.4	2.4	-105.81	-1,265.4	35.1	1,720.2	1,654.7	65.51	26.258	
10,900.0	7,111.9	7,098.5	7,096.6	65.7	2.4	-106.42	-1,265.4	35.1	1,793.4	1,726.7	66.71	26.882	
10,925.2	7,111.8	7,098.7	7,096.7	66.2	2.4	-106.64	-1,265.4	35.1	1,818.6	1,751.5	67.13	27.093	
11,000.0	7,111.7	7,099.0	7,097.1	67.6	2.4	-107.26	-1,265.4	35.1	1,893.4	1,825.1	68.34	27.705	
11,023.6	7,111.6	7,099.2	7,097.2	68.0	2.4	-107.46	-1,265.4	35.1	1,917.0	1,848.3	68.73	27.894	
11,100.0	7,111.4	7,099.5	7,097.6	69.4	2.4	-108.09	-1,265.4	35.1	1,993.4	1,923.5	69.96	28.495	
11,122.0	7,111.3	7,099.7	7,097.7	69.8	2.4	-108.27	-1,265.4	35.1	2,015.4	1,945.1	70.31	28.666	
11,200.0	7,111.2	7,100.0	7,098.1	71.3	2.4	-108.84	-1,265.4	35.1	2,093.4	2,021.8	71.57	29.251	
11,220.4	7,111.1	7,100.0	7,098.1	71.6	2.4	-108.84	-1,265.4	35.1	2,113.8	2,041.9	71.93	29.388	
11,300.0	7,110.9	7,100.0	7,098.1	73.1	2.4	-108.83	-1,265.4	35.1	2,193.4	2,120.0	73.34	29.907	
11,318.9	7,110.9	7,100.0	7,098.1	73.5	2.4	-108.83	-1,265.4	35.1	2,212.3	2,138.6	73.68	30.027	
11,400.0	7,110.6	7,101.0	7,099.1	75.0	2.4	-110.49	-1,265.4	35.1	2,293.4	2,218.7	74.69	30.704	
11,417.3	7,110.6	7,101.1	7,099.2	75.3	2.4	-110.63	-1,265.4	35.1	2,310.7	2,235.7	74.96	30.825	
11,500.0	7,110.4	7,101.5	7,099.6	76.8	2.4	-111.27	-1,265.4	35.0	2,393.4	2,317.1	76.24	31.394	
11,515.7	7,110.4	7,101.6	7,099.7	77.1	2.4	-111.39	-1,265.4	35.0	2,409.1	2,332.6	76.48	31.501	
11,600.0	7,110.1	7,102.0	7,100.1	78.7	2.4	-112.03	-1,265.4	35.0	2,493.4	2,415.6	77.76	32.065	
11,614.1	7,110.1	7,102.1	7,100.1	79.0	2.4	-112.14	-1,265.4	35.0	2,507.5	2,429.5	77.97	32.158	
11,655.0	7,110.0	7,102.3	7,100.3	79.7	2.4	-112.45	-1,265.4	35.0	2,548.4	2,469.8	78.59	32.426	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - EXIST VERT SHULTZ FARM 30-33 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	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	168.59	-2,371.3	478.5	2,419.1				
98.4	98.4	73.3	73.3	0.1	0.0	168.59	-2,371.4	478.5	2,419.2	2,419.1	0.11	N/A	
100.0	100.0	74.7	74.7	0.1	0.0	168.59	-2,371.4	478.5	2,419.2	2,419.1	0.11	N/A	
196.8	196.8	177.0	177.0	0.3	0.2	168.60	-2,371.8	478.2	2,419.5	2,419.0	0.45	5,336.773	
200.0	200.0	180.6	180.6	0.3	0.2	168.60	-2,371.8	478.2	2,419.5	2,419.0	0.47	5,193.347	
295.3	295.3	275.6	275.6	0.5	0.3	168.61	-2,371.9	477.8	2,419.6	2,418.8	0.78	3,104.115	
300.0	300.0	280.2	280.2	0.5	0.3	168.61	-2,371.9	477.8	2,419.6	2,418.8	0.79	3,046.161	
393.7	393.7	369.8	369.8	0.7	0.3	168.62	-2,372.1	477.6	2,419.8	2,418.7	1.06	2,275.503	
400.0	400.0	375.8	375.8	0.8	0.3	168.62	-2,372.2	477.6	2,419.8	2,418.7	1.08	2,238.428	
492.1	492.1	463.5	463.5	1.0	0.4	168.62	-2,372.5	477.6	2,420.1	2,418.8	1.34	1,801.310	
500.0	500.0	471.0	471.0	1.0	0.4	168.62	-2,372.5	477.6	2,420.2	2,418.8	1.37	1,771.540	
590.5	590.5	563.1	563.1	1.2	0.4	168.62	-2,373.0	477.7	2,420.6	2,419.0	1.62	1,490.462	
600.0	600.0	573.0	573.0	1.2	0.4	168.62	-2,373.0	477.7	2,420.7	2,419.0	1.65	1,466.274	
689.0	689.0	665.9	665.9	1.4	0.5	168.62	-2,373.4	477.6	2,421.0	2,419.1	1.90	1,276.564	
700.0	700.0	677.4	677.4	1.4	0.5	168.62	-2,373.4	477.6	2,421.0	2,419.1	1.93	1,256.649	
787.4	787.4	762.2	762.2	1.6	0.5	168.63	-2,373.7	477.4	2,421.2	2,419.0	2.15	1,123.802	
800.0	800.0	774.1	774.1	1.7	0.5	168.63	-2,373.7	477.4	2,421.2	2,419.1	2.19	1,107.192	
885.8	885.8	861.6	861.6	1.9	0.6	168.63	-2,374.0	477.6	2,421.6	2,419.2	2.42	1,002.319	
900.0	900.0	876.6	876.6	1.9	0.6	168.63	-2,374.0	477.6	2,421.6	2,419.2	2.45	986.613	
984.2	984.2	960.7	960.7	2.1	0.6	168.62	-2,374.2	477.8	2,421.8	2,419.1	2.68	903.639	
1,000.0	1,000.0	976.1	976.1	2.1	0.6	168.62	-2,374.2	477.8	2,421.9	2,419.1	2.72	889.732	
1,082.7	1,082.7	1,057.1	1,057.1	2.3	0.6	168.62	-2,374.5	477.8	2,422.1	2,419.2	2.94	824.765	
1,100.0	1,100.0	1,074.1	1,074.1	2.3	0.7	168.62	-2,374.6	477.8	2,422.2	2,419.2	2.98	812.468	
1,181.1	1,181.1	1,159.8	1,159.8	2.5	0.7	168.63	-2,374.9	477.4	2,422.4	2,419.2	3.19	758.733	
1,200.0	1,200.0	1,180.5	1,180.5	2.6	0.7	168.64	-2,375.0	477.3	2,422.5	2,419.2	3.24	747.136	
1,279.5	1,279.5	1,256.7	1,256.7	2.7	0.7	168.64	-2,375.1	477.1	2,422.6	2,419.1	3.44	703.218	
1,300.0	1,300.0	1,275.6	1,275.6	2.8	0.7	168.64	-2,375.2	477.0	2,422.6	2,419.1	3.50	692.834	
1,377.9	1,377.9	1,353.3	1,353.3	3.0	0.8	168.65	-2,375.5	476.9	2,422.9	2,419.2	3.70	655.049	
1,400.0	1,400.0	1,376.2	1,376.1	3.0	0.8	168.65	-2,375.6	476.8	2,423.0	2,419.2	3.76	644.964	
1,476.4	1,476.4	1,452.9	1,452.8	3.2	0.8	168.66	-2,375.8	476.5	2,423.2	2,419.2	3.96	612.630	
1,500.0	1,500.0	1,476.3	1,476.2	3.2	0.8	168.66	-2,375.9	476.4	2,423.2	2,419.2	4.02	603.321	
1,574.8	1,574.8	1,553.4	1,553.4	3.4	0.8	168.67	-2,376.2	476.0	2,423.4	2,419.2	4.21	575.764	
1,600.0	1,600.0	1,579.8	1,579.8	3.5	0.8	168.68	-2,376.3	475.9	2,423.5	2,419.2	4.27	567.057	
1,673.2	1,673.2	1,658.0	1,658.0	3.6	0.9	168.69	-2,376.4	475.4	2,423.5	2,419.0	4.46	543.509	
1,700.0	1,700.0	1,686.7	1,686.7	3.7	0.9	168.69	-2,376.4	475.2	2,423.4	2,418.9	4.53	535.414	
1,762.4	1,762.4	1,745.4	1,745.4	3.8	0.9	168.71	-2,376.4	474.6	2,423.4	2,418.7	4.68	517.713	
1,771.6	1,771.6	1,753.8	1,753.8	3.8	0.9	168.71	-2,376.5	474.5	2,423.4	2,418.7	4.70	515.202	
1,800.0	1,800.0	1,779.5	1,779.5	3.9	0.9	168.72	-2,376.6	474.2	2,423.4	2,418.6	4.77	507.655	
1,870.1	1,870.1	1,853.9	1,853.9	4.1	0.9	168.74	-2,376.8	473.2	2,423.5	2,418.5	4.95	489.672	
1,900.0	1,900.0	1,887.8	1,887.8	4.1	0.9	168.75	-2,376.9	472.8	2,423.5	2,418.4	5.02	482.313	
1,957.9	1,957.9	1,941.0	1,940.9	4.3	1.0	168.77	-2,377.0	472.0	2,423.4	2,418.2	5.17	468.964	
1,968.5	1,968.5	1,950.1	1,950.1	4.3	1.0	168.77	-2,377.0	471.8	2,423.4	2,418.2	5.19	466.626	
2,000.0	2,000.0	1,977.5	1,977.4	4.4	1.0	168.78	-2,377.1	471.4	2,423.4	2,418.2	5.27	459.795	
2,066.9	2,066.9	2,045.9	2,045.8	4.5	1.0	168.81	-2,377.6	470.2	2,423.6	2,418.2	5.44	445.716	
2,100.0	2,100.0	2,082.9	2,082.9	4.6	1.0	168.83	-2,377.7	469.5	2,423.6	2,418.1	5.52	438.992	
2,142.8	2,142.8	2,125.9	2,125.8	4.7	1.0	168.85	-2,377.9	468.7	2,423.6	2,418.0	5.63	430.689	
2,150.0	2,150.0	2,132.6	2,132.6	4.7	1.0	168.85	-2,377.9	468.6	2,423.6	2,418.0	5.65	429.332	
2,165.3	2,165.3	2,147.1	2,147.0	4.7	1.0	168.61	-2,378.0	468.3	2,423.7	2,418.0	5.68	426.428	
2,200.0	2,200.0	2,179.6	2,179.5	4.8	1.0	168.63	-2,378.1	467.8	2,424.1	2,418.3	5.77	420.160	
2,263.8	2,263.7	2,237.1	2,237.0	5.0	1.1	168.65	-2,378.4	466.8	2,426.0	2,420.1	5.93	409.223	
2,300.0	2,299.9	2,269.1	2,269.0	5.0	1.1	168.67	-2,378.7	466.3	2,427.9	2,421.8	6.02	403.361	
2,362.2	2,362.0	2,328.3	2,328.2	5.2	1.1	168.69	-2,379.3	465.2	2,432.1	2,426.0	6.18	393.743	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	2,399.7	2,367.7	2,367.6	5.3	1.1	168.72	-2,379.7	464.4	2,435.4	2,429.1	6.27	388.185		
2,460.6	2,460.0	2,430.1	2,430.0	5.4	1.1	168.76	-2,380.4	463.0	2,441.5	2,435.1	6.43	379.766		
2,500.0	2,499.1	2,470.2	2,470.1	5.5	1.2	168.78	-2,380.8	462.1	2,446.2	2,439.6	6.53	374.663		
2,559.0	2,557.7	2,526.2	2,526.0	5.6	1.2	168.81	-2,381.3	460.9	2,454.1	2,447.4	6.68	367.397		
2,600.0	2,598.2	2,562.1	2,562.0	5.7	1.2	168.83	-2,381.7	460.2	2,460.4	2,453.6	6.78	362.681		
2,657.5	2,654.8	2,615.8	2,615.7	5.9	1.2	168.86	-2,382.4	459.0	2,470.3	2,463.4	6.93	356.334		
2,700.0	2,696.6	2,663.1	2,662.9	6.0	1.2	168.90	-2,383.0	457.9	2,478.3	2,471.2	7.04	351.854		
2,755.9	2,751.4	2,718.7	2,718.5	6.1	1.2	168.94	-2,383.5	456.7	2,489.6	2,482.4	7.19	346.239		
2,800.0	2,794.4	2,755.1	2,754.9	6.2	1.3	168.96	-2,384.0	455.8	2,499.3	2,492.0	7.30	342.196		
2,854.3	2,847.3	2,800.0	2,799.7	6.4	1.3	168.98	-2,384.6	454.8	2,512.4	2,505.0	7.45	337.362		
2,888.8	2,880.6	2,832.6	2,832.3	6.5	1.3	169.00	-2,385.2	454.1	2,521.3	2,513.7	7.54	334.435		
2,900.0	2,891.5	2,843.3	2,843.0	6.6	1.3	169.02	-2,385.4	453.8	2,524.2	2,516.6	7.57	333.487		
2,952.7	2,942.5	2,893.7	2,893.4	6.7	1.3	169.11	-2,386.2	452.6	2,538.1	2,530.4	7.71	329.168		
3,000.0	2,988.2	2,942.5	2,942.2	6.9	1.3	169.19	-2,387.0	451.4	2,550.5	2,542.6	7.84	325.295		
3,051.2	3,037.6	2,996.0	2,995.7	7.1	1.3	169.29	-2,387.9	450.0	2,563.8	2,555.9	7.98	321.280		
3,100.0	3,084.9	3,055.8	3,055.4	7.3	1.4	169.39	-2,388.6	448.4	2,576.4	2,568.3	8.11	317.569		
3,149.6	3,132.8	3,116.7	3,116.3	7.5	1.4	169.50	-2,389.0	446.8	2,589.0	2,580.7	8.25	313.886		
3,200.0	3,181.5	3,176.7	3,176.3	7.6	1.4	169.60	-2,389.2	445.1	2,601.5	2,593.1	8.38	310.289		
3,248.0	3,228.0	3,231.0	3,230.6	7.8	1.4	169.69	-2,389.1	443.5	2,613.3	2,604.8	8.51	306.954		
3,300.0	3,278.2	3,287.8	3,287.3	8.0	1.4	169.78	-2,388.9	442.0	2,625.9	2,617.3	8.66	303.349		
3,346.4	3,323.2	3,338.2	3,337.7	8.2	1.4	169.86	-2,388.5	440.7	2,637.1	2,628.3	8.78	300.206		
3,400.0	3,374.9	3,396.3	3,395.8	8.5	1.5	169.95	-2,388.0	439.3	2,649.9	2,640.9	8.93	296.690		
3,444.9	3,418.3	3,459.2	3,458.7	8.6	1.5	170.04	-2,387.2	437.5	2,660.4	2,651.3	9.06	293.762		
3,500.0	3,471.6	3,528.2	3,527.6	8.9	1.5	170.16	-2,385.8	435.1	2,672.9	2,663.7	9.21	290.271		
3,543.3	3,513.5	3,574.1	3,573.5	9.1	1.5	170.23	-2,384.8	433.4	2,682.6	2,673.3	9.33	287.595		
3,600.0	3,568.3	3,625.6	3,625.0	9.3	1.5	170.32	-2,383.6	431.6	2,695.3	2,685.8	9.49	284.149		
3,641.7	3,608.7	3,658.7	3,658.0	9.5	1.5	170.37	-2,382.9	430.4	2,704.7	2,695.1	9.60	281.652		
3,700.0	3,665.0	3,705.8	3,705.0	9.7	1.5	170.45	-2,382.1	428.7	2,718.1	2,708.3	9.77	278.272		
3,740.1	3,703.8	3,743.1	3,742.4	9.9	1.5	170.51	-2,381.5	427.4	2,727.4	2,717.5	9.88	275.936		
3,800.0	3,761.7	3,800.0	3,799.2	10.2	1.6	170.60	-2,380.7	425.4	2,741.3	2,731.3	10.06	272.553		
3,838.6	3,799.0	3,832.3	3,831.4	10.4	1.6	170.65	-2,380.2	424.2	2,750.3	2,740.2	10.17	270.456		
3,900.0	3,858.4	3,885.4	3,884.5	10.7	1.6	170.73	-2,379.6	422.4	2,764.8	2,754.5	10.35	267.209		
3,937.0	3,894.2	3,919.6	3,918.7	10.8	1.6	170.79	-2,379.3	421.3	2,773.6	2,763.1	10.46	265.286		
4,000.0	3,955.1	3,981.1	3,980.2	11.1	1.6	170.88	-2,378.6	419.4	2,788.6	2,777.9	10.64	262.083		
4,035.4	3,989.3	4,015.5	4,014.6	11.3	1.6	170.93	-2,378.3	418.3	2,797.0	2,786.2	10.74	260.328		
4,100.0	4,051.8	4,077.5	4,076.6	11.6	1.6	171.01	-2,377.6	416.7	2,812.3	2,801.4	10.93	257.232		
4,133.8	4,084.5	4,110.2	4,109.2	11.7	1.6	171.05	-2,377.2	416.0	2,820.3	2,809.3	11.03	255.643		
4,200.0	4,148.5	4,174.5	4,173.5	12.1	1.7	171.12	-2,376.4	415.0	2,836.1	2,824.8	11.23	252.621		
4,232.3	4,179.7	4,207.1	4,206.2	12.2	1.7	171.16	-2,375.9	414.6	2,843.7	2,832.4	11.32	251.174		
4,300.0	4,245.2	4,286.8	4,285.8	12.5	1.7	171.23	-2,374.6	413.8	2,859.7	2,848.1	11.52	248.175		
4,330.7	4,274.9	4,317.7	4,316.7	12.7	1.7	171.26	-2,374.0	413.4	2,866.8	2,855.2	11.61	246.851		
4,400.0	4,341.9	4,380.5	4,379.4	13.0	1.7	171.33	-2,372.9	412.6	2,882.9	2,871.1	11.82	243.960		
4,429.1	4,370.0	4,400.0	4,399.0	13.1	1.7	171.35	-2,372.6	412.4	2,889.8	2,877.9	11.90	242.802		
4,500.0	4,438.6	4,462.2	4,461.2	13.5	1.7	171.41	-2,371.7	411.5	2,906.6	2,894.5	12.11	239.924		
4,527.5	4,465.2	4,484.0	4,483.0	13.6	1.7	171.43	-2,371.5	411.1	2,913.2	2,901.0	12.20	238.849		
4,600.0	4,535.3	4,536.7	4,535.6	14.0	1.7	171.49	-2,371.1	410.4	2,930.8	2,918.4	12.41	236.092		
4,626.0	4,560.4	4,554.9	4,553.8	14.1	1.7	171.50	-2,371.0	410.2	2,937.3	2,924.8	12.49	235.132		
4,700.0	4,631.9	4,608.4	4,607.3	14.5	1.8	171.56	-2,371.1	409.6	2,955.9	2,943.2	12.72	232.476		
4,724.4	4,655.5	4,629.9	4,628.8	14.6	1.8	171.58	-2,371.2	409.5	2,962.2	2,949.4	12.79	231.584		
4,800.0	4,728.6	4,700.0	4,698.9	15.0	1.8	171.64	-2,371.6	408.9	2,981.6	2,968.5	13.03	228.903		
4,822.8	4,750.7	4,719.1	4,718.1	15.1	1.8	171.66	-2,371.7	408.8	2,987.5	2,974.4	13.10	228.134		
4,900.0	4,825.3	4,797.8	4,796.7	15.4	1.8	171.73	-2,372.1	408.2	3,007.3	2,993.9	13.33	225.523		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,921.2	4,845.9	4,818.9	4,817.8	15.6	1.8	171.74	-2,372.2	408.1	3,012.7	2,999.3	13.40	224.823	
5,000.0	4,922.0	4,896.8	4,895.8	15.9	1.8	171.81	-2,372.6	407.5	3,032.9	3,019.2	13.64	222.292	
5,019.7	4,941.0	4,916.3	4,915.2	16.0	1.9	171.83	-2,372.6	407.4	3,037.9	3,024.2	13.70	221.669	
5,100.0	5,018.7	4,995.9	4,994.9	16.4	1.9	171.90	-2,372.9	406.8	3,058.4	3,044.4	13.95	219.183	
5,118.1	5,036.2	5,014.2	5,013.1	16.5	1.9	171.91	-2,373.0	406.6	3,063.0	3,049.0	14.01	218.632	
5,200.0	5,115.4	5,097.2	5,096.2	16.9	1.9	171.98	-2,373.2	406.0	3,083.8	3,069.5	14.26	216.190	
5,216.5	5,131.4	5,113.2	5,112.2	17.0	1.9	172.00	-2,373.2	405.9	3,088.0	3,073.7	14.32	215.707	
5,300.0	5,212.1	5,193.3	5,192.2	17.4	1.9	172.06	-2,373.4	405.3	3,109.2	3,094.6	14.57	213.326	
5,314.9	5,226.6	5,208.0	5,206.9	17.5	2.0	172.07	-2,373.4	405.1	3,112.9	3,098.3	14.62	212.905	
5,400.0	5,308.8	5,293.7	5,292.6	17.9	2.0	172.14	-2,373.5	404.5	3,134.5	3,119.6	14.89	210.551	
5,413.4	5,321.7	5,307.5	5,306.5	18.0	2.0	172.15	-2,373.5	404.4	3,137.8	3,122.9	14.93	210.187	
5,500.0	5,405.5	5,399.0	5,397.9	18.4	2.0	172.23	-2,373.4	403.7	3,159.6	3,144.4	15.20	207.874	
5,511.8	5,416.9	5,408.9	5,407.8	18.5	2.0	172.23	-2,373.4	403.6	3,162.5	3,147.3	15.24	207.570	
5,600.0	5,502.2	5,480.9	5,479.8	18.9	2.0	172.29	-2,373.5	403.0	3,184.8	3,169.3	15.51	205.364	
5,610.2	5,512.1	5,489.3	5,488.2	19.0	2.0	172.30	-2,373.5	402.9	3,187.4	3,171.9	15.54	205.114	
5,700.0	5,598.9	5,577.1	5,576.1	19.4	2.1	172.37	-2,373.8	401.9	3,210.3	3,194.5	15.82	202.881	
5,708.6	5,607.2	5,585.9	5,584.8	19.5	2.1	172.38	-2,373.8	401.7	3,212.5	3,196.7	15.85	202.669	
5,745.8	5,643.2	5,618.3	5,617.2	19.7	2.1	172.41	-2,374.0	401.2	3,222.0	3,206.0	15.97	201.779	
5,800.0	5,695.7	5,661.1	5,660.0	19.9	2.1	172.49	-2,374.3	400.5	3,235.4	3,219.4	16.08	201.250	
5,807.1	5,702.6	5,666.7	5,665.6	19.9	2.1	172.50	-2,374.3	400.4	3,237.1	3,221.0	16.09	201.210	
5,900.0	5,793.2	5,756.9	5,755.8	20.3	2.1	172.63	-2,375.2	398.6	3,257.9	3,241.7	16.24	200.594	
5,905.5	5,798.6	5,763.1	5,762.0	20.3	2.1	172.64	-2,375.2	398.4	3,259.1	3,242.8	16.25	200.559	
6,000.0	5,891.5	5,854.2	5,853.1	20.6	2.2	172.76	-2,376.0	396.7	3,276.9	3,260.5	16.39	199.974	
6,003.9	5,895.4	5,857.7	5,856.5	20.6	2.2	172.76	-2,376.0	396.6	3,277.6	3,261.2	16.39	199.954	
6,100.0	5,990.4	5,946.6	5,945.4	20.9	2.2	172.86	-2,376.9	394.9	3,292.7	3,276.1	16.51	199.385	
6,102.3	5,992.7	5,948.9	5,947.7	20.9	2.2	172.87	-2,376.9	394.9	3,293.0	3,276.5	16.52	199.372	
6,200.0	6,089.7	6,033.4	6,032.2	21.1	2.2	172.95	-2,377.9	393.1	3,305.2	3,288.5	16.63	198.767	
6,200.8	6,090.4	6,034.0	6,032.8	21.1	2.2	172.95	-2,377.9	393.1	3,305.3	3,288.6	16.63	198.763	
6,299.2	6,188.5	6,111.2	6,110.0	21.4	2.2	173.01	-2,379.3	392.0	3,314.8	3,298.1	16.73	198.110	
6,300.0	6,189.3	6,112.1	6,110.9	21.4	2.2	173.01	-2,379.3	392.0	3,314.9	3,298.1	16.73	198.103	
6,397.6	6,286.8	6,223.1	6,221.8	21.5	2.3	173.07	-2,381.4	390.4	3,321.1	3,304.2	16.84	197.240	
6,400.0	6,289.2	6,225.7	6,224.5	21.5	2.3	173.07	-2,381.4	390.3	3,321.2	3,304.3	16.84	197.216	
6,484.6	6,373.8	6,320.1	6,318.8	21.6	2.3	173.36	-2,382.9	388.3	3,323.5	3,306.6	16.93	196.327	
6,496.0	6,385.3	6,333.0	6,331.7	21.7	2.3	173.36	-2,383.1	388.0	3,323.6	3,306.7	16.95	196.076	
6,500.0	6,389.2	6,337.4	6,336.2	21.7	2.3	173.36	-2,383.1	387.9	3,323.7	3,306.7	16.96	195.989	
6,514.6	6,403.8	6,353.9	6,352.6	21.7	2.3	173.37	-2,383.3	387.5	3,323.8	3,306.8	16.99	195.634	
6,550.0	6,439.2	6,393.8	6,392.5	21.7	2.3	-6.62	-2,383.8	386.6	3,323.3	3,306.3	16.97	195.794	
6,594.5	6,483.5	6,434.8	6,433.4	21.7	2.3	-6.63	-2,384.3	385.6	3,320.2	3,303.2	16.97	195.599	
6,600.0	6,489.0	6,439.7	6,438.3	21.7	2.3	-6.64	-2,384.4	385.5	3,319.6	3,302.6	16.98	195.533	
6,650.0	6,538.4	6,483.9	6,482.6	21.7	2.4	-6.70	-2,385.0	384.3	3,312.5	3,295.5	17.01	194.749	
6,692.9	6,580.3	6,525.5	6,524.2	21.6	2.4	-6.78	-2,385.7	383.2	3,303.7	3,286.7	17.04	193.856	
6,700.0	6,587.1	6,532.9	6,531.5	21.6	2.4	-6.80	-2,385.8	383.0	3,302.1	3,285.0	17.05	193.689	
6,750.0	6,635.0	6,584.0	6,582.6	21.5	2.4	-6.94	-2,386.5	381.5	3,288.2	3,271.1	17.08	192.562	
6,791.3	6,673.7	6,624.7	6,623.3	21.4	2.4	-7.09	-2,387.1	380.4	3,274.3	3,257.2	17.08	191.693	
6,800.0	6,681.7	6,633.1	6,631.7	21.4	2.4	-7.13	-2,387.2	380.1	3,271.0	3,254.0	17.08	191.512	
6,850.0	6,727.1	6,680.4	6,679.0	21.2	2.4	-7.38	-2,387.8	378.7	3,250.6	3,233.6	17.05	190.607	
6,889.7	6,762.0	6,716.0	6,714.6	21.1	2.4	-7.62	-2,388.3	377.7	3,232.2	3,215.2	17.01	190.020	
6,900.0	6,770.9	6,724.8	6,723.3	21.0	2.4	-7.69	-2,388.4	377.4	3,227.1	3,210.1	17.00	189.880	
6,950.0	6,812.9	6,766.3	6,764.8	20.8	2.5	-8.06	-2,388.9	376.1	3,200.6	3,183.7	16.91	189.306	
6,988.2	6,843.6	6,796.8	6,795.3	20.6	2.5	-8.41	-2,389.4	375.1	3,178.4	3,161.6	16.82	188.936	
7,000.0	6,852.9	6,806.9	6,805.4	20.6	2.5	-8.53	-2,389.5	374.8	3,171.2	3,154.4	16.80	188.805	
7,050.0	6,890.7	6,850.3	6,848.8	20.3	2.5	-9.12	-2,390.0	373.4	3,139.1	3,122.4	16.68	188.200	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
7,086.6	6,916.9	6,880.4	6,878.8	20.1	2.5	-9.63	-2,390.4	372.6	3,113.9	3,097.3	16.59	187.654		
7,100.0	6,926.2	6,891.0	6,889.4	20.1	2.5	-9.84	-2,390.5	372.3	3,104.3	3,087.8	16.56	187.414		
7,150.0	6,959.1	6,930.8	6,929.2	19.8	2.5	-10.76	-2,390.8	371.4	3,067.2	3,050.7	16.47	186.196		
7,185.0	6,980.5	6,957.1	6,955.5	19.6	2.5	-11.55	-2,390.9	370.8	3,039.8	3,023.3	16.43	184.961		
7,200.0	6,989.3	6,967.8	6,966.2	19.5	2.5	-11.93	-2,391.0	370.7	3,027.7	3,011.3	16.43	184.316		
7,250.0	7,016.6	7,000.9	6,999.3	19.3	2.5	-13.43	-2,391.1	370.2	2,986.2	2,969.8	16.45	181.482		
7,283.4	7,033.3	7,017.8	7,016.3	19.1	2.5	-14.65	-2,391.1	369.9	2,957.4	2,940.9	16.53	178.945		
7,300.0	7,041.0	7,025.7	7,024.1	19.1	2.5	-15.35	-2,391.1	369.8	2,942.9	2,926.3	16.58	177.461		
7,350.0	7,062.2	7,047.4	7,045.8	18.8	2.5	-17.92	-2,391.2	369.5	2,898.0	2,881.1	16.87	171.829		
7,381.9	7,074.1	7,059.5	7,057.9	18.7	2.6	-20.05	-2,391.2	369.3	2,868.7	2,851.5	17.15	167.260		
7,400.0	7,080.3	7,065.8	7,064.2	18.7	2.6	-21.49	-2,391.2	369.2	2,851.8	2,834.4	17.35	164.333		
7,450.0	7,095.0	7,080.8	7,079.2	18.5	2.6	-26.68	-2,391.2	369.0	2,804.4	2,786.3	18.11	154.876		
7,480.3	7,102.4	7,088.3	7,086.7	18.4	2.6	-31.08	-2,391.2	368.8	2,775.2	2,756.5	18.72	148.251		
7,500.0	7,106.4	7,092.5	7,090.9	18.4	2.6	-34.66	-2,391.2	368.8	2,756.1	2,737.0	19.18	143.723		
7,550.0	7,114.4	7,100.8	7,099.2	18.3	2.6	-47.61	-2,391.3	368.6	2,707.2	2,686.8	20.46	132.329		
7,578.7	7,117.4	7,104.5	7,102.9	18.3	2.6	-58.57	-2,391.3	368.5	2,678.9	2,657.9	21.03	127.371		
7,600.0	7,118.9	7,106.3	7,104.7	18.3	2.6	-68.63	-2,391.3	368.5	2,657.9	2,636.7	21.15	125.686		
7,641.3	7,120.0	7,107.7	7,106.1	18.3	2.6	-91.48	-2,391.3	368.5	2,617.0	2,596.2	20.77	125.987		
7,677.1	7,119.9	7,107.7	7,106.1	18.3	2.6	-91.48	-2,391.3	368.5	2,581.5	2,560.7	20.81	124.037		
7,700.0	7,119.9	7,107.6	7,106.0	18.4	2.6	-91.47	-2,391.3	368.5	2,558.9	2,538.0	20.84	122.796		
7,775.6	7,119.7	7,107.5	7,105.9	18.6	2.6	-91.46	-2,391.3	368.5	2,484.1	2,463.1	21.04	118.047		
7,800.0	7,119.6	7,107.5	7,105.9	18.6	2.6	-91.45	-2,391.3	368.5	2,459.9	2,438.8	21.11	116.532		
7,874.0	7,119.4	7,107.4	7,105.8	19.0	2.6	-91.44	-2,391.3	368.5	2,386.8	2,365.3	21.45	111.267		
7,900.0	7,119.4	7,107.4	7,105.8	19.1	2.6	-91.43	-2,391.3	368.5	2,361.1	2,339.5	21.57	109.457		
7,972.4	7,119.2	7,107.3	7,105.7	19.6	2.6	-91.42	-2,391.3	368.5	2,289.6	2,267.5	22.03	103.914		
8,000.0	7,119.1	7,107.2	7,105.6	19.7	2.6	-91.41	-2,391.3	368.5	2,262.4	2,240.1	22.21	101.865		
8,070.8	7,118.9	7,107.1	7,105.5	20.3	2.6	-91.40	-2,391.3	368.5	2,192.5	2,169.7	22.78	96.266		
8,100.0	7,118.9	7,107.1	7,105.5	20.5	2.6	-91.39	-2,391.3	368.5	2,163.7	2,140.7	23.01	94.043		
8,169.3	7,118.7	7,107.0	7,105.4	21.2	2.6	-91.38	-2,391.3	368.5	2,095.5	2,071.8	23.66	88.567		
8,200.0	7,118.6	7,107.0	7,105.4	21.5	2.6	-91.38	-2,391.3	368.5	2,065.2	2,041.3	23.95	86.234		
8,267.7	7,118.5	7,106.9	7,105.3	22.2	2.6	-91.36	-2,391.3	368.5	1,998.6	1,974.0	24.67	81.013		
8,300.0	7,118.4	7,106.9	7,105.3	22.5	2.6	-91.36	-2,391.3	368.5	1,966.9	1,941.9	25.01	78.628		
8,366.1	7,118.2	7,106.8	7,105.2	23.3	2.6	-91.34	-2,391.3	368.5	1,901.9	1,876.1	25.79	73.745		
8,400.0	7,118.1	7,106.7	7,105.1	23.7	2.6	-91.34	-2,391.3	368.5	1,868.7	1,842.5	26.19	71.356		
8,464.5	7,118.0	7,106.7	7,105.1	24.5	2.6	-91.33	-2,391.3	368.5	1,805.4	1,778.4	27.01	66.854		
8,500.0	7,117.9	7,106.6	7,105.0	25.0	2.6	-91.32	-2,391.3	368.5	1,770.7	1,743.3	27.45	64.496		
8,563.0	7,117.7	7,106.6	7,105.0	25.8	2.6	-91.31	-2,391.3	368.5	1,709.2	1,680.9	28.30	60.390		
8,600.0	7,117.6	7,106.5	7,104.9	26.3	2.6	-91.30	-2,391.3	368.5	1,673.0	1,644.2	28.80	58.090		
8,661.4	7,117.5	7,106.4	7,104.8	27.2	2.6	-91.29	-2,391.3	368.5	1,613.1	1,583.5	29.67	54.373		
8,700.0	7,117.4	7,106.4	7,104.8	27.7	2.6	-91.29	-2,391.3	368.5	1,575.6	1,545.3	30.21	52.147		
8,759.8	7,117.2	7,106.3	7,104.7	28.6	2.6	-91.28	-2,391.3	368.5	1,517.4	1,486.3	31.09	48.801		
8,800.0	7,117.1	7,106.3	7,104.7	29.2	2.6	-91.27	-2,391.3	368.5	1,478.5	1,446.8	31.68	46.661		
8,858.2	7,117.0	7,106.2	7,104.6	30.1	2.6	-91.26	-2,391.3	368.5	1,422.1	1,389.5	32.57	43.661		
8,900.0	7,116.9	7,106.2	7,104.6	30.7	2.6	-91.25	-2,391.3	368.5	1,381.8	1,348.6	33.21	41.612		
8,956.7	7,116.8	7,106.1	7,104.5	31.6	2.6	-91.24	-2,391.3	368.5	1,327.2	1,293.1	34.09	38.930		
9,000.0	7,116.7	7,106.1	7,104.5	32.3	2.6	-91.24	-2,391.3	368.5	1,285.6	1,250.8	34.77	36.975		
9,055.1	7,116.5	7,106.0	7,104.4	33.2	2.6	-91.23	-2,391.3	368.5	1,232.8	1,197.2	35.65	34.581		
9,100.0	7,116.4	7,106.0	7,104.4	33.9	2.6	-91.22	-2,391.3	368.5	1,190.0	1,153.7	36.37	32.721		
9,153.5	7,116.3	7,105.9	7,104.3	34.8	2.6	-91.21	-2,391.3	368.5	1,139.2	1,102.0	37.24	30.588		
9,200.0	7,116.2	7,105.8	7,104.2	35.5	2.6	-91.20	-2,391.3	368.5	1,095.3	1,057.3	38.00	28.822		
9,251.9	7,116.0	7,105.8	7,104.2	36.4	2.6	-91.19	-2,391.3	368.5	1,046.4	1,007.6	38.86	26.926		
9,300.0	7,115.9	7,105.7	7,104.1	37.2	2.6	-91.19	-2,391.3	368.5	1,001.5	961.9	39.66	25.252		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
9,350.4	7,115.8	7,105.7	7,104.1	38.0	2.6	-91.18	-2,391.3	368.5	954.8	914.3	40.51	23.570			
9,400.0	7,115.7	7,105.6	7,104.0	38.9	2.6	-91.17	-2,391.3	368.5	909.1	867.8	41.34	21.989			
9,448.8	7,115.5	7,105.6	7,104.0	39.7	2.6	-91.16	-2,391.3	368.5	864.6	822.5	42.18	20.501			
9,500.0	7,115.4	7,105.5	7,103.9	40.6	2.6	-91.15	-2,391.3	368.5	818.5	775.5	43.05	19.013			
9,547.2	7,115.3	7,105.5	7,103.9	41.4	2.6	-91.15	-2,391.3	368.5	776.5	732.7	43.86	17.703			
9,600.0	7,115.2	7,105.4	7,103.8	42.3	2.6	-91.14	-2,391.3	368.5	730.3	685.6	44.77	16.312			
9,645.6	7,115.1	7,105.4	7,103.8	43.1	2.6	-91.13	-2,391.3	368.5	691.2	645.6	45.57	15.168			
9,700.0	7,114.9	7,105.3	7,103.7	44.0	2.6	-91.12	-2,391.3	368.5	645.6	599.1	46.51	13.881			
9,744.1	7,114.8	7,105.3	7,103.7	44.8	2.6	-91.11	-2,391.3	368.5	609.8	562.5	47.28	12.896			
9,800.0	7,114.7	7,105.2	7,103.6	45.8	2.6	-91.11	-2,391.3	368.5	565.9	517.7	48.27	11.726			
9,842.5	7,114.6	7,105.2	7,103.6	46.5	2.6	-91.10	-2,391.3	368.5	534.1	485.1	49.02	10.897			
9,900.0	7,114.4	7,105.1	7,103.5	47.6	2.6	-91.09	-2,391.3	368.5	493.7	443.7	50.03	9.868			
9,940.9	7,114.3	7,105.1	7,103.5	48.3	2.6	-91.08	-2,391.3	368.5	467.1	416.3	50.76	9.202			
10,000.0	7,114.2	7,105.0	7,103.4	49.3	2.6	-91.08	-2,391.3	368.5	432.7	380.8	51.81	8.351			
10,039.3	7,114.1	7,105.0	7,103.4	50.0	2.6	-91.07	-2,391.3	368.5	412.8	360.3	52.51	7.861			
10,100.0	7,113.9	7,104.9	7,103.3	51.1	2.6	-91.06	-2,391.3	368.5	388.1	334.5	53.60	7.241			
10,137.8	7,113.8	7,104.9	7,103.3	51.8	2.6	-91.06	-2,391.3	368.5	376.9	322.6	54.28	6.943			
10,200.0	7,113.7	7,104.8	7,103.2	52.9	2.6	-91.05	-2,391.3	368.5	366.2	310.8	55.40	6.610			
10,232.8	7,113.6	7,104.8	7,103.2	53.5	2.6	-91.04	-2,391.3	368.5	364.7	308.7	55.99	6.514 CC			
10,236.2	7,113.6	7,104.8	7,103.2	53.6	2.6	-91.04	-2,391.3	368.5	364.7	308.7	56.05	6.507 ES			
10,300.0	7,113.4	7,104.7	7,103.1	54.7	2.6	-91.03	-2,391.3	368.5	370.8	313.6	57.20	6.483 SF			
10,334.6	7,113.3	7,104.7	7,103.1	55.4	2.6	-91.03	-2,391.3	368.5	378.7	320.8	57.83	6.548			
10,400.0	7,113.2	7,104.7	7,103.1	56.5	2.6	-91.02	-2,391.3	368.5	401.2	342.2	59.02	6.798			
10,433.0	7,113.1	7,104.6	7,103.0	57.1	2.6	-91.01	-2,391.3	368.5	416.1	356.5	59.62	6.979			
10,500.0	7,112.9	7,104.6	7,103.0	58.4	2.6	-91.00	-2,391.3	368.5	452.1	391.3	60.84	7.432			
10,531.5	7,112.8	7,104.5	7,102.9	58.9	2.6	-91.00	-2,391.3	368.5	471.4	410.0	61.41	7.676			
10,600.0	7,112.7	7,104.5	7,102.9	60.2	2.6	-90.99	-2,391.3	368.5	517.6	454.9	62.66	8.259			
10,629.9	7,112.6	7,104.4	7,102.8	60.7	2.6	-90.98	-2,391.3	368.6	539.2	476.0	63.21	8.530			
10,700.0	7,112.4	7,104.4	7,102.8	62.0	2.6	-90.97	-2,391.3	368.6	592.7	528.2	64.50	9.190			
10,728.3	7,112.3	7,104.4	7,102.8	62.5	2.6	-90.97	-2,391.3	368.6	615.3	550.3	65.02	9.464			
10,800.0	7,112.2	7,104.3	7,102.7	63.9	2.6	-90.96	-2,391.3	368.6	674.4	608.0	66.33	10.166			
10,826.7	7,112.1	7,104.3	7,102.7	64.4	2.6	-90.96	-2,391.3	368.6	697.0	630.2	66.83	10.430			
10,900.0	7,111.9	7,104.2	7,102.6	65.7	2.6	-90.94	-2,391.3	368.6	760.4	692.2	68.18	11.153			
10,925.2	7,111.8	7,104.2	7,102.6	66.2	2.6	-90.94	-2,391.3	368.6	782.6	713.9	68.64	11.401			
11,000.0	7,111.7	7,104.1	7,102.5	67.6	2.6	-90.93	-2,391.3	368.6	849.5	779.5	70.02	12.132			
11,023.6	7,111.6	7,104.1	7,102.5	68.0	2.6	-90.93	-2,391.3	368.6	870.9	800.4	70.46	12.360			
11,100.0	7,111.4	7,104.0	7,102.4	69.4	2.6	-90.92	-2,391.3	368.6	940.8	868.9	71.87	13.090			
11,122.0	7,111.3	7,104.0	7,102.4	69.8	2.6	-90.91	-2,391.3	368.6	961.1	888.9	72.28	13.297			
11,200.0	7,111.2	7,100.0	7,098.4	71.3	2.6	-90.28	-2,391.3	368.6	1,033.7	960.0	73.74	14.019			
11,220.4	7,111.1	7,100.0	7,098.4	71.6	2.6	-90.28	-2,391.3	368.6	1,052.9	978.8	74.12	14.206			
11,300.0	7,110.9	7,100.0	7,098.4	73.1	2.6	-90.28	-2,391.3	368.6	1,127.8	1,052.2	75.59	14.920			
11,318.9	7,110.9	7,100.0	7,098.4	73.5	2.6	-90.28	-2,391.3	368.6	1,145.7	1,069.8	75.94	15.086			
11,400.0	7,110.6	7,100.0	7,098.4	75.0	2.6	-90.28	-2,391.3	368.6	1,222.9	1,145.4	77.45	15.788			
11,417.3	7,110.6	7,100.0	7,098.4	75.3	2.6	-90.28	-2,391.3	368.6	1,239.4	1,161.6	77.78	15.935			
11,500.0	7,110.4	7,100.0	7,098.4	76.8	2.6	-90.28	-2,391.3	368.6	1,318.7	1,239.4	79.32	16.625			
11,515.7	7,110.4	7,100.0	7,098.4	77.1	2.6	-90.28	-2,391.3	368.6	1,333.8	1,254.2	79.61	16.754			
11,600.0	7,110.1	7,100.0	7,098.4	78.7	2.6	-90.28	-2,391.3	368.6	1,415.0	1,333.9	81.19	17.430			
11,614.1	7,110.1	7,100.0	7,098.4	79.0	2.6	-90.28	-2,391.3	368.6	1,428.7	1,347.3	81.45	17.541			
11,655.0	7,110.0	7,100.0	7,098.4	79.7	2.6	-90.28	-2,391.3	368.6	1,468.3	1,386.1	82.21	17.859			

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	91.39	-0.4	15.1	15.1				
98.4	98.4	98.4	98.4	0.1	0.1	91.39	-0.4	15.1	15.1	14.9	0.17	88.675	
100.0	100.0	100.0	100.0	0.1	0.1	91.39	-0.4	15.1	15.1	14.9	0.17	87.070	
196.8	196.8	196.8	196.8	0.3	0.3	91.39	-0.4	15.1	15.1	14.5	0.61	24.767	
200.0	200.0	200.0	200.0	0.3	0.3	91.39	-0.4	15.1	15.1	14.4	0.62	24.204	
295.3	295.3	295.3	295.3	0.5	0.5	91.39	-0.4	15.1	15.1	14.0	1.05	14.339	
300.0	300.0	300.0	300.0	0.5	0.5	91.39	-0.4	15.1	15.1	14.0	1.07	14.055	
393.7	393.7	393.7	393.7	0.7	0.7	91.39	-0.4	15.1	15.1	13.6	1.49	10.091	
400.0	400.0	400.0	400.0	0.8	0.8	91.39	-0.4	15.1	15.1	13.5	1.52	9.903	
492.1	492.1	492.1	492.1	1.0	1.0	91.39	-0.4	15.1	15.1	13.1	1.94	7.785	
500.0	500.0	500.0	500.0	1.0	1.0	91.39	-0.4	15.1	15.1	13.1	1.97	7.645	
590.5	590.5	590.5	590.5	1.2	1.2	91.39	-0.4	15.1	15.1	12.7	2.38	6.336	
600.0	600.0	600.0	600.0	1.2	1.2	91.39	-0.4	15.1	15.1	12.6	2.42	6.225	
689.0	689.0	689.0	689.0	1.4	1.4	91.39	-0.4	15.1	15.1	12.2	2.82	5.342	
700.0	700.0	700.0	700.0	1.4	1.4	91.39	-0.4	15.1	15.1	12.2	2.87	5.250	
787.4	787.4	787.4	787.4	1.6	1.6	91.39	-0.4	15.1	15.1	11.8	3.26	4.618	
800.0	800.0	800.0	800.0	1.7	1.7	91.39	-0.4	15.1	15.1	11.7	3.32	4.539	
885.8	885.8	885.8	885.8	1.9	1.9	91.39	-0.4	15.1	15.1	11.4	3.71	4.067	
900.0	900.0	900.0	900.0	1.9	1.9	91.39	-0.4	15.1	15.1	11.3	3.77	3.998	
984.2	984.2	984.2	984.2	2.1	2.1	91.39	-0.4	15.1	15.1	10.9	4.15	3.633	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	91.39	-0.4	15.1	15.1	10.9	4.22	3.572	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	91.39	-0.4	15.1	15.1	10.5	4.59	3.283	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	91.39	-0.4	15.1	15.1	10.4	4.67	3.228	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	91.39	-0.4	15.1	15.1	10.0	5.03	2.994	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	91.39	-0.4	15.1	15.1	10.0	5.12	2.944	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	91.39	-0.4	15.1	15.1	9.6	5.48	2.752	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	91.39	-0.4	15.1	15.1	9.5	5.57	2.707	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	91.39	-0.4	15.1	15.1	9.2	5.92	2.546	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	91.39	-0.4	15.1	15.1	9.1	6.02	2.504	
1,476.4	1,476.4	1,476.4	1,476.4	3.2	3.2	91.39	-0.4	15.1	15.1	8.7	6.36	2.369	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	91.39	-0.4	15.1	15.1	8.6	6.47	2.330	
1,574.8	1,574.8	1,574.8	1,574.8	3.4	3.4	91.39	-0.4	15.1	15.1	8.3	6.80	2.215	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	91.39	-0.4	15.1	15.1	8.2	6.92	2.179	
1,673.2	1,673.2	1,673.2	1,673.2	3.6	3.6	91.39	-0.4	15.1	15.1	7.8	7.25	2.080	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	91.39	-0.4	15.1	15.1	7.7	7.37	2.046	
1,771.6	1,771.6	1,771.6	1,771.6	3.8	3.8	91.39	-0.4	15.1	15.1	7.4	7.69	1.960	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	91.39	-0.4	15.1	15.1	7.3	7.82	1.928	
1,870.1	1,870.1	1,870.1	1,870.1	4.1	4.1	91.39	-0.4	15.1	15.1	6.9	8.13	1.854	
1,900.0	1,900.0	1,900.0	1,900.0	4.1	4.1	91.39	-0.4	15.1	15.1	6.8	8.26	1.823	
1,968.5	1,968.5	1,968.5	1,968.5	4.3	4.3	91.39	-0.4	15.1	15.1	6.5	8.57	1.758	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	91.39	-0.4	15.1	15.1	6.4	8.71	1.729	
2,037.1	2,037.1	2,037.1	2,037.1	4.4	4.4	91.39	-0.4	15.1	15.1	6.2	8.88	1.697 CC	
2,066.9	2,066.9	2,066.9	2,066.9	4.5	4.5	91.20	-0.3	15.1	15.1	6.1	9.01	1.673	
2,100.0	2,100.0	2,099.9	2,099.9	4.6	4.6	89.79	0.1	15.2	15.2	6.0	9.16	1.656 ES, SF	
2,150.0	2,150.0	2,149.8	2,149.8	4.7	4.7	85.15	1.3	15.5	15.6	6.2	9.39	1.659	
2,165.3	2,165.3	2,165.1	2,165.1	4.7	4.7	83.09	1.9	15.7	15.8	6.3	9.45	1.668	
2,200.0	2,200.0	2,199.7	2,199.6	4.8	4.8	79.25	3.4	16.1	16.4	6.7	9.61	1.702	
2,263.8	2,263.7	2,263.2	2,263.1	5.0	4.9	73.27	7.3	17.1	17.8	8.0	9.89	1.804	
2,300.0	2,299.9	2,299.3	2,299.0	5.0	5.0	70.55	10.1	17.9	18.9	8.9	10.05	1.882	
2,362.2	2,362.0	2,361.2	2,360.6	5.2	5.2	66.92	15.9	19.4	21.1	10.7	10.33	2.040	
2,400.0	2,399.7	2,398.8	2,397.9	5.3	5.3	65.28	20.1	20.6	22.6	12.1	10.50	2.149	
2,460.6	2,460.0	2,459.0	2,457.7	5.4	5.4	63.42	27.8	22.6	25.2	14.4	10.77	2.338	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,500.0	2,499.1	2,498.1	2,496.3	5.5	5.5	62.61	33.4	24.1	27.0	16.1	10.95	2.470	
2,559.0	2,557.7	2,556.7	2,554.1	5.6	5.6	61.88	42.8	26.6	30.0	18.8	11.22	2.677	
2,600.0	2,598.2	2,597.3	2,594.0	5.7	5.7	61.65	50.0	28.6	32.3	20.9	11.41	2.828	
2,657.5	2,654.8	2,654.2	2,649.8	5.9	5.9	61.60	61.0	31.5	35.6	23.9	11.69	3.044	
2,700.0	2,696.6	2,696.3	2,690.8	6.0	6.0	61.73	69.8	33.9	38.2	26.3	11.90	3.209	
2,755.9	2,751.4	2,751.6	2,744.6	6.1	6.2	62.07	82.2	37.2	41.8	29.6	12.19	3.428	
2,800.0	2,794.4	2,795.5	2,787.1	6.2	6.3	62.62	92.6	40.0	44.7	32.2	12.43	3.594	
2,854.3	2,847.3	2,849.7	2,839.7	6.4	6.5	64.18	105.5	43.5	47.8	35.1	12.76	3.750	
2,888.8	2,880.6	2,884.1	2,873.0	6.5	6.6	65.63	113.7	45.6	49.6	36.7	12.97	3.828	
2,900.0	2,891.5	2,895.3	2,883.8	6.6	6.7	66.15	116.4	46.4	50.2	37.2	13.04	3.849	
2,952.7	2,942.5	2,947.9	2,934.9	6.7	6.9	68.49	128.9	49.7	52.9	39.5	13.41	3.947	
3,000.0	2,988.2	2,995.0	2,980.6	6.9	7.0	70.38	140.1	52.7	55.4	41.7	13.74	4.035	
3,051.2	3,037.6	3,046.1	3,030.1	7.1	7.2	72.24	152.2	56.0	58.2	44.1	14.11	4.123	
3,100.0	3,084.9	3,094.8	3,077.3	7.3	7.4	73.86	163.8	59.1	60.9	46.4	14.47	4.207	
3,149.6	3,132.8	3,144.3	3,125.2	7.5	7.6	75.37	175.6	62.2	63.7	48.8	14.85	4.286	
3,200.0	3,181.5	3,194.6	3,174.0	7.6	7.8	76.77	187.6	65.4	66.5	51.3	15.24	4.364	
3,248.0	3,228.0	3,242.5	3,220.4	7.8	8.0	77.99	199.0	68.5	69.3	53.7	15.63	4.434	
3,300.0	3,278.2	3,294.4	3,270.7	8.0	8.2	79.21	211.3	71.8	72.3	56.3	16.05	4.507	
3,346.4	3,323.2	3,340.8	3,315.6	8.2	8.4	80.22	222.3	74.8	75.0	58.6	16.43	4.567	
3,400.0	3,374.9	3,394.2	3,367.4	8.5	8.6	81.29	235.0	78.2	78.2	61.3	16.87	4.635	
3,444.9	3,418.3	3,439.0	3,410.8	8.6	8.8	82.12	245.7	81.0	80.9	63.6	17.26	4.688	
3,500.0	3,471.6	3,494.0	3,464.1	8.9	9.0	83.07	258.8	84.5	84.2	66.5	17.73	4.750	
3,543.3	3,513.5	3,537.2	3,506.0	9.1	9.2	83.77	269.0	87.3	86.8	68.7	18.10	4.796	
3,600.0	3,568.3	3,593.8	3,560.8	9.3	9.5	84.62	282.5	90.9	90.3	71.7	18.60	4.854	
3,641.7	3,608.7	3,635.4	3,601.2	9.5	9.6	85.21	292.4	93.6	92.8	73.8	18.96	4.894	
3,700.0	3,665.0	3,693.6	3,657.6	9.7	9.9	85.97	306.2	97.3	96.4	76.9	19.48	4.948	
3,740.1	3,703.8	3,733.6	3,696.4	9.9	10.1	86.47	315.8	99.8	98.9	79.0	19.84	4.982	
3,800.0	3,761.7	3,793.3	3,754.3	10.2	10.3	87.16	330.0	103.6	102.5	82.2	20.38	5.032	
3,838.6	3,799.0	3,831.8	3,791.6	10.4	10.5	87.58	339.1	106.1	104.9	84.2	20.73	5.062	
3,900.0	3,858.4	3,893.1	3,851.0	10.7	10.8	88.22	353.7	110.0	108.8	87.5	21.29	5.108	
3,937.0	3,894.2	3,930.1	3,886.8	10.8	11.0	88.58	362.5	112.3	111.1	89.4	21.63	5.134	
4,000.0	3,955.1	3,992.9	3,947.7	11.1	11.3	89.16	377.4	116.4	115.0	92.8	22.21	5.177	
4,035.4	3,989.3	4,028.3	3,982.0	11.3	11.4	89.47	385.9	118.6	117.2	94.7	22.54	5.200	
4,100.0	4,051.8	4,092.7	4,044.4	11.6	11.7	90.00	401.2	122.7	121.3	98.1	23.14	5.240	
4,133.8	4,084.5	4,126.5	4,077.2	11.7	11.9	90.27	409.2	124.9	123.4	99.9	23.46	5.260	
4,200.0	4,148.5	4,192.5	4,141.1	12.1	12.2	90.76	424.9	129.1	127.5	103.5	24.08	5.297	
4,232.3	4,179.7	4,224.7	4,172.4	12.2	12.3	90.99	432.6	131.1	129.6	105.2	24.38	5.314	
4,300.0	4,245.2	4,292.3	4,237.9	12.5	12.6	91.45	448.6	135.4	133.9	108.8	25.02	5.349	
4,330.7	4,274.9	4,322.9	4,267.5	12.7	12.8	91.65	455.9	137.4	135.8	110.5	25.31	5.365	
4,400.0	4,341.9	4,392.1	4,334.6	13.0	13.1	92.08	472.4	141.8	140.2	114.2	25.97	5.398	
4,429.1	4,370.0	4,421.1	4,362.7	13.1	13.2	92.25	479.3	143.7	142.0	115.8	26.25	5.411	
4,500.0	4,438.6	4,491.9	4,431.3	13.5	13.6	92.65	496.1	148.2	146.5	119.6	26.93	5.442	
4,527.5	4,465.2	4,519.4	4,457.9	13.6	13.7	92.80	502.7	149.9	148.3	121.1	27.19	5.453	
4,600.0	4,535.3	4,591.7	4,528.0	14.0	14.1	93.17	519.9	154.5	152.9	125.0	27.88	5.482	
4,626.0	4,560.4	4,617.6	4,553.1	14.1	14.2	93.30	526.0	156.2	154.5	126.4	28.13	5.492	
4,700.0	4,631.9	4,691.4	4,624.7	14.5	14.5	93.66	543.6	160.9	159.2	130.4	28.85	5.520	
4,724.4	4,655.5	4,715.8	4,648.3	14.6	14.7	93.77	549.4	162.5	160.8	131.7	29.08	5.529	
4,800.0	4,728.6	4,791.2	4,721.4	15.0	15.0	94.10	567.3	167.3	165.6	135.8	29.81	5.555	
4,822.8	4,750.7	4,814.0	4,743.5	15.1	15.1	94.20	572.7	168.7	167.1	137.0	30.04	5.562	
4,900.0	4,825.3	4,891.0	4,818.1	15.4	15.5	94.52	591.1	173.6	172.0	141.2	30.79	5.587	
4,921.2	4,845.9	4,912.2	4,838.7	15.6	15.6	94.60	596.1	175.0	173.4	142.4	30.99	5.594	
5,000.0	4,922.0	4,990.8	4,914.9	15.9	16.0	94.90	614.8	180.0	178.4	146.6	31.76	5.617	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	4,941.0	5,010.4	4,933.9	16.0	16.1	94.97	619.5	181.2	179.7	147.7	31.95	5.623	
5,100.0	5,018.7	5,090.6	5,011.6	16.4	16.5	95.26	638.5	186.4	184.8	152.1	32.74	5.645	
5,118.1	5,036.2	5,108.7	5,029.1	16.5	16.5	95.32	642.8	187.5	186.0	153.0	32.91	5.650	
5,200.0	5,115.4	5,190.4	5,108.3	16.9	16.9	95.59	662.3	192.7	191.2	157.5	33.71	5.671	
5,216.5	5,131.4	5,206.9	5,124.3	17.0	17.0	95.64	666.2	193.8	192.3	158.4	33.88	5.676	
5,300.0	5,212.1	5,290.2	5,205.0	17.4	17.4	95.90	686.0	199.1	197.6	162.9	34.69	5.696	
5,314.9	5,226.6	5,305.1	5,219.5	17.5	17.5	95.94	689.6	200.0	198.6	163.7	34.84	5.699	
5,400.0	5,308.8	5,390.0	5,301.7	17.9	17.9	96.19	709.7	205.4	204.0	168.4	35.68	5.719	
5,413.4	5,321.7	5,403.3	5,314.7	18.0	18.0	96.23	712.9	206.3	204.9	169.1	35.81	5.722	
5,500.0	5,405.5	5,489.8	5,398.4	18.4	18.4	96.46	733.5	211.8	210.5	173.8	36.66	5.741	
5,511.8	5,416.9	5,501.5	5,409.9	18.5	18.5	96.50	736.3	212.6	211.2	174.4	36.78	5.743	
5,600.0	5,502.2	5,589.5	5,495.2	18.9	18.9	96.72	757.2	218.2	216.9	179.2	37.65	5.761	
5,610.2	5,512.1	5,599.7	5,505.0	19.0	18.9	96.75	759.6	218.8	217.5	179.8	37.75	5.763	
5,700.0	5,598.9	5,689.3	5,591.9	19.4	19.4	96.97	780.9	224.5	223.3	184.7	38.64	5.780	
5,708.6	5,607.2	5,698.0	5,600.2	19.5	19.4	96.99	783.0	225.1	223.9	185.2	38.72	5.782	
5,745.8	5,643.2	5,735.1	5,636.2	19.7	19.6	97.07	791.8	227.5	226.3	187.2	39.09	5.788	
5,800.0	5,695.7	5,789.1	5,688.6	19.9	19.9	97.14	804.7	230.9	229.7	190.1	39.60	5.801	
5,807.1	5,702.6	5,796.2	5,695.4	19.9	19.9	97.12	806.4	231.4	230.1	190.5	39.66	5.803	
5,900.0	5,793.2	5,889.2	5,785.6	20.3	20.4	96.62	828.4	237.3	235.7	195.3	40.44	5.829	
5,905.5	5,798.6	5,894.7	5,791.0	20.3	20.4	96.57	829.7	237.6	236.0	195.5	40.48	5.830	
6,000.0	5,891.5	5,990.2	5,884.1	20.6	20.7	95.86	850.0	243.0	241.0	199.8	41.13	5.859	
6,003.9	5,895.4	5,994.1	5,888.0	20.6	20.7	95.83	850.8	243.3	241.2	200.0	41.16	5.860	
6,100.0	5,990.4	6,091.4	5,983.5	20.9	21.1	95.13	868.2	247.9	245.4	203.7	41.74	5.880	
6,102.3	5,992.7	6,093.8	5,985.8	20.9	21.1	95.11	868.6	248.0	245.5	203.8	41.75	5.880	
6,200.0	6,089.7	6,192.8	6,083.7	21.1	21.4	94.40	883.1	251.9	249.0	206.8	42.27	5.891	
6,200.8	6,090.4	6,193.5	6,084.5	21.1	21.4	94.40	883.2	252.0	249.1	206.8	42.28	5.891	
6,299.2	6,188.5	6,293.5	6,183.7	21.4	21.6	93.69	894.5	255.0	251.8	209.1	42.72	5.894	
6,300.0	6,189.3	6,294.3	6,184.5	21.4	21.6	93.68	894.6	255.0	251.8	209.1	42.72	5.893	
6,397.6	6,286.8	6,393.6	6,283.5	21.5	21.8	92.97	902.4	257.1	253.6	210.6	43.08	5.888	
6,400.0	6,289.2	6,396.0	6,285.9	21.5	21.8	92.96	902.6	257.2	253.7	210.6	43.09	5.887	
6,484.6	6,373.8	6,482.2	6,371.9	21.6	22.0	92.58	906.7	258.2	254.6	211.3	43.33	5.876	
6,496.0	6,385.3	6,493.8	6,383.6	21.7	22.0	92.50	907.0	258.3	254.7	211.3	43.36	5.873	
6,500.0	6,389.2	6,497.9	6,387.6	21.7	22.0	92.47	907.1	258.4	254.7	211.3	43.37	5.873	
6,514.6	6,403.8	6,512.7	6,402.5	21.7	22.0	92.39	907.5	258.5	254.8	211.4	43.41	5.869	
6,550.0	6,439.2	6,548.8	6,438.6	21.7	22.1	-87.94	908.1	258.6	254.9	211.4	43.48	5.862	
6,594.5	6,483.5	6,593.7	6,483.5	21.7	22.1	-88.79	908.2	258.7	254.8	211.3	43.52	5.856	
6,600.0	6,489.0	6,599.2	6,489.0	21.7	22.1	-88.93	908.2	258.7	254.8	211.3	43.52	5.855	
6,636.5	6,525.1	6,635.3	6,525.1	21.7	22.2	-90.00	907.8	258.7	254.8	211.3	43.48	5.859	
6,650.0	6,538.4	6,648.8	6,538.5	21.7	22.2	-90.40	907.1	258.7	254.8	211.3	43.47	5.861	
6,692.9	6,580.3	6,691.5	6,581.1	21.6	22.2	-91.68	903.5	258.7	254.9	211.5	43.34	5.880	
6,700.0	6,587.1	6,698.7	6,588.2	21.6	22.2	-91.89	902.6	258.7	254.9	211.6	43.32	5.884	
6,750.0	6,635.0	6,749.0	6,637.9	21.5	22.2	-93.37	894.6	258.7	255.2	212.1	43.08	5.924	
6,791.3	6,673.7	6,791.1	6,678.9	21.4	22.1	-94.58	885.2	258.7	255.6	212.8	42.82	5.969	
6,800.0	6,681.7	6,799.9	6,687.4	21.4	22.1	-94.83	882.9	258.7	255.7	212.9	42.76	5.979	
6,850.0	6,727.1	6,851.3	6,736.5	21.2	22.0	-96.28	867.7	258.7	256.3	214.0	42.36	6.051	
6,889.7	6,762.0	6,892.5	6,774.9	21.1	21.9	-97.41	852.9	258.7	256.9	215.0	41.98	6.121	
6,900.0	6,770.9	6,903.2	6,784.7	21.0	21.8	-97.69	848.7	258.7	257.1	215.2	41.88	6.139	
6,950.0	6,812.9	6,955.5	6,831.9	20.8	21.7	-99.07	826.0	258.7	258.0	216.7	41.33	6.243	
6,988.2	6,843.6	6,995.8	6,867.1	20.6	21.5	-100.08	806.3	258.7	258.8	217.9	40.88	6.332	
7,000.0	6,852.9	7,008.4	6,877.8	20.6	21.5	-100.39	799.7	258.7	259.1	218.3	40.73	6.360	
7,050.0	6,890.7	7,061.8	6,922.0	20.3	21.2	-101.66	769.8	258.7	260.2	220.1	40.09	6.491	
7,086.6	6,916.9	7,101.2	6,953.1	20.1	21.0	-102.55	745.7	258.7	261.1	221.5	39.59	6.594	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
7,100.0	6,926.2	7,115.7	6,964.2	20.1	21.0	-102.87	736.4	258.7	261.4	222.0	39.41	6.633	
7,150.0	6,959.1	7,170.0	7,004.2	19.8	20.7	-104.01	699.5	258.7	262.7	223.9	38.72	6.784	
7,185.0	6,980.5	7,208.4	7,030.6	19.6	20.5	-104.76	671.7	258.7	263.5	225.3	38.23	6.893	
7,200.0	6,989.3	7,224.9	7,041.5	19.5	20.4	-105.07	659.4	258.7	263.9	225.9	38.03	6.941	
7,250.0	7,016.6	7,280.1	7,075.9	19.3	20.1	-106.05	616.2	258.7	265.2	227.8	37.35	7.099	
7,283.4	7,033.3	7,317.4	7,097.2	19.1	19.9	-106.66	585.6	258.7	266.0	229.1	36.93	7.203	
7,300.0	7,041.0	7,335.9	7,107.1	19.1	19.8	-106.94	570.0	258.7	266.4	229.7	36.72	7.255	
7,350.0	7,062.2	7,392.0	7,134.8	18.8	19.5	-107.75	521.3	258.7	267.6	231.4	36.14	7.403	
7,381.9	7,074.1	7,427.9	7,150.6	18.7	19.4	-108.21	488.9	258.7	268.3	232.4	35.82	7.489	
7,400.0	7,080.3	7,448.4	7,158.8	18.7	19.3	-108.45	470.1	258.7	268.6	233.0	35.64	7.537	
7,450.0	7,095.0	7,505.2	7,178.8	18.5	19.1	-109.06	417.0	258.7	269.6	234.4	35.23	7.652	
7,480.3	7,102.4	7,539.8	7,188.8	18.4	18.9	-109.38	383.9	258.7	270.1	235.1	35.04	7.708	
7,500.0	7,106.4	7,562.3	7,194.5	18.4	18.9	-109.57	362.2	258.7	270.4	235.5	34.93	7.742	
7,550.0	7,114.4	7,619.6	7,205.9	18.3	18.7	-109.97	306.0	258.7	271.1	236.3	34.74	7.802	
7,578.7	7,117.4	7,652.6	7,210.4	18.3	18.6	-110.16	273.3	258.7	271.4	236.7	34.69	7.823	
7,600.0	7,118.9	7,677.1	7,212.7	18.3	18.6	-110.27	249.0	258.7	271.6	236.9	34.68	7.832	
7,641.3	7,120.0	7,724.7	7,214.9	18.3	18.5	-110.44	201.4	258.7	271.9	237.2	34.72	7.831	
7,677.1	7,119.9	7,762.8	7,214.7	18.3	18.5	-110.41	163.3	258.7	271.8	237.0	34.80	7.811	
7,700.0	7,119.9	7,785.6	7,214.5	18.4	18.5	-110.37	140.4	258.7	271.8	236.9	34.87	7.794	
7,775.6	7,119.7	7,861.2	7,213.6	18.6	18.7	-110.24	64.9	258.7	271.5	236.3	35.29	7.695	
7,800.0	7,119.6	7,885.6	7,213.3	18.6	18.7	-110.20	40.5	258.7	271.5	236.0	35.43	7.662	
7,874.0	7,119.4	7,959.6	7,212.5	19.0	19.0	-110.07	-33.5	258.7	271.2	235.1	36.10	7.514	
7,900.0	7,119.4	7,985.6	7,212.2	19.1	19.2	-110.03	-59.5	258.7	271.2	234.8	36.34	7.461	
7,972.4	7,119.2	8,058.0	7,211.4	19.6	19.6	-109.90	-132.0	258.7	270.9	233.7	37.24	7.276	
8,000.0	7,119.1	8,085.6	7,211.1	19.7	19.8	-109.86	-159.5	258.7	270.9	233.3	37.59	7.206	
8,070.8	7,118.9	8,156.5	7,210.3	20.3	20.3	-109.73	-230.4	258.7	270.7	232.0	38.68	6.997	
8,100.0	7,118.9	8,185.6	7,210.0	20.5	20.6	-109.68	-259.5	258.7	270.6	231.4	39.14	6.913	
8,169.3	7,118.7	8,254.9	7,209.2	21.2	21.2	-109.56	-328.8	258.7	270.4	230.0	40.40	6.692	
8,200.0	7,118.6	8,285.6	7,208.9	21.5	21.5	-109.51	-359.5	258.7	270.3	229.3	40.97	6.598	
8,267.7	7,118.5	8,353.3	7,208.1	22.2	22.2	-109.39	-427.2	258.7	270.1	227.7	42.36	6.376	
8,300.0	7,118.4	8,385.6	7,207.8	22.5	22.6	-109.33	-459.5	258.7	270.0	227.0	43.03	6.275	
8,366.1	7,118.2	8,451.7	7,207.0	23.3	23.4	-109.22	-525.6	258.7	269.8	225.3	44.52	6.060	
8,400.0	7,118.1	8,485.6	7,206.6	23.7	23.8	-109.16	-559.5	258.7	269.7	224.4	45.30	5.954	
8,464.5	7,118.0	8,550.2	7,205.9	24.5	24.6	-109.04	-624.0	258.7	269.5	222.6	46.88	5.750	
8,500.0	7,117.9	8,585.6	7,205.5	25.0	25.0	-108.98	-659.5	258.7	269.4	221.7	47.75	5.642	
8,563.0	7,117.7	8,648.6	7,204.8	25.8	25.9	-108.87	-722.4	258.7	269.2	219.9	49.38	5.452	
8,600.0	7,117.6	8,685.6	7,204.4	26.3	26.4	-108.81	-759.5	258.7	269.1	218.8	50.35	5.345	
8,661.4	7,117.5	8,747.0	7,203.7	27.2	27.2	-108.70	-820.9	258.7	269.0	216.9	52.03	5.169	
8,700.0	7,117.4	8,785.6	7,203.3	27.7	27.8	-108.63	-859.5	258.7	268.9	215.8	53.09	5.064	
8,759.8	7,117.2	8,845.4	7,202.6	28.6	28.6	-108.52	-919.3	258.7	268.7	213.9	54.79	4.904	
8,800.0	7,117.1	8,885.6	7,202.2	29.2	29.2	-108.45	-959.4	258.7	268.6	212.6	55.94	4.801	
8,858.2	7,117.0	8,943.8	7,201.5	30.1	30.1	-108.35	-1,017.7	258.7	268.4	210.8	57.66	4.655	
8,900.0	7,116.9	8,985.6	7,201.0	30.7	30.8	-108.28	-1,059.4	258.7	268.3	209.4	58.89	4.556	
8,956.7	7,116.8	9,042.3	7,200.4	31.6	31.6	-108.18	-1,116.1	258.7	268.1	207.5	60.61	4.424	
9,000.0	7,116.7	9,085.6	7,199.9	32.3	32.3	-108.10	-1,159.4	258.7	268.0	206.1	61.93	4.328	
9,055.1	7,116.5	9,140.7	7,199.3	33.2	33.2	-108.00	-1,214.5	258.7	267.9	204.2	63.64	4.209	
9,100.0	7,116.4	9,185.6	7,198.8	33.9	33.9	-107.92	-1,259.4	258.7	267.8	202.7	65.05	4.116	
9,153.5	7,116.3	9,239.1	7,198.2	34.8	34.8	-107.83	-1,312.9	258.7	267.6	200.9	66.74	4.010	
9,200.0	7,116.2	9,285.6	7,197.7	35.5	35.5	-107.74	-1,359.4	258.7	267.5	199.3	68.22	3.921	
9,251.9	7,116.0	9,337.5	7,197.1	36.4	36.4	-107.65	-1,411.4	258.7	267.4	197.4	69.90	3.825	
9,300.0	7,115.9	9,385.6	7,196.6	37.2	37.2	-107.57	-1,459.4	258.7	267.2	195.8	71.46	3.739	
9,350.4	7,115.8	9,435.9	7,196.0	38.0	38.0	-107.48	-1,509.8	258.7	267.1	194.0	73.11	3.653	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
9,400.0	7,115.7	9,485.6	7,195.4	38.9	38.9	-107.39	-1,559.4	258.7	267.0	192.2	74.75	3.571	
9,448.8	7,115.5	9,534.4	7,194.9	39.7	39.7	-107.30	-1,608.2	258.7	266.8	190.5	76.37	3.494	
9,500.0	7,115.4	9,585.6	7,194.3	40.6	40.6	-107.21	-1,659.4	258.7	266.7	188.6	78.08	3.416	
9,547.2	7,115.3	9,632.8	7,193.8	41.4	41.4	-107.12	-1,706.6	258.7	266.6	186.9	79.67	3.346	
9,600.0	7,115.2	9,685.6	7,193.2	42.3	42.3	-107.03	-1,759.4	258.7	266.4	185.0	81.45	3.271	
9,645.6	7,115.1	9,731.2	7,192.7	43.1	43.1	-106.95	-1,805.0	258.7	266.3	183.3	83.01	3.208	
9,700.0	7,114.9	9,785.6	7,192.1	44.0	44.0	-106.85	-1,859.4	258.7	266.2	181.3	84.86	3.137	
9,744.1	7,114.8	9,829.6	7,191.6	44.8	44.8	-106.77	-1,903.4	258.7	266.1	179.7	86.38	3.080	
9,800.0	7,114.7	9,885.6	7,190.9	45.8	45.8	-106.67	-1,959.3	258.7	265.9	177.6	88.31	3.011	
9,842.5	7,114.6	9,928.1	7,190.5	46.5	46.5	-106.59	-2,001.8	258.7	265.8	176.0	89.78	2.961	
9,900.0	7,114.4	9,985.6	7,189.8	47.6	47.5	-106.49	-2,059.3	258.7	265.7	173.9	91.78	2.895	
9,940.9	7,114.3	10,026.5	7,189.4	48.3	48.3	-106.42	-2,100.3	258.7	265.6	172.4	93.21	2.849	
10,000.0	7,114.2	10,085.6	7,188.7	49.3	49.3	-106.31	-2,159.3	258.7	265.4	170.2	95.28	2.786	
10,039.3	7,114.1	10,124.9	7,188.3	50.0	50.0	-106.24	-2,198.7	258.7	265.3	168.7	96.67	2.745	
10,100.0	7,113.9	10,185.5	7,187.6	51.1	51.1	-106.13	-2,259.3	258.7	265.2	166.4	98.80	2.684	
10,137.8	7,113.8	10,223.3	7,187.2	51.8	51.8	-106.06	-2,297.1	258.7	265.1	165.0	100.14	2.647	
10,200.0	7,113.7	10,285.5	7,186.5	52.9	52.9	-105.95	-2,359.3	258.7	265.0	162.6	102.35	2.589	
10,236.2	7,113.6	10,321.7	7,186.0	53.6	53.5	-105.88	-2,395.5	258.7	264.9	161.2	103.64	2.556	
10,300.0	7,113.4	10,385.5	7,185.3	54.7	54.7	-105.76	-2,459.3	258.7	264.7	158.8	105.92	2.499	
10,334.6	7,113.3	10,420.2	7,184.9	55.4	55.3	-105.70	-2,493.9	258.7	264.6	157.5	107.16	2.470	
10,400.0	7,113.2	10,485.5	7,184.2	56.5	56.5	-105.58	-2,559.3	258.7	264.5	155.0	109.51	2.415	
10,433.0	7,113.1	10,518.6	7,183.8	57.1	57.1	-105.52	-2,592.3	258.7	264.4	153.7	110.70	2.389	
10,500.0	7,112.9	10,585.5	7,183.1	58.4	58.3	-105.40	-2,659.3	258.7	264.2	151.1	113.11	2.336	
10,531.5	7,112.8	10,617.0	7,182.7	58.9	58.9	-105.34	-2,690.8	258.7	264.2	149.9	114.25	2.312	
10,600.0	7,112.7	10,685.5	7,182.0	60.2	60.1	-105.22	-2,759.3	258.7	264.0	147.3	116.73	2.262	
10,629.9	7,112.6	10,715.4	7,181.6	60.7	60.7	-105.16	-2,789.2	258.7	263.9	146.1	117.82	2.240	
10,700.0	7,112.4	10,785.5	7,180.8	62.0	62.0	-105.03	-2,859.3	258.7	263.8	143.4	120.37	2.191	
10,728.3	7,112.3	10,813.9	7,180.5	62.5	62.5	-104.98	-2,887.6	258.7	263.7	142.3	121.40	2.172	
10,800.0	7,112.2	10,885.5	7,179.7	63.9	63.8	-104.85	-2,959.2	258.7	263.6	139.5	124.02	2.125	
10,826.7	7,112.1	10,912.3	7,179.4	64.4	64.3	-104.80	-2,986.0	258.7	263.5	138.5	125.00	2.108	
10,900.0	7,111.9	10,985.5	7,178.6	65.7	65.6	-104.67	-3,059.2	258.7	263.3	135.6	127.69	2.062	
10,925.2	7,111.8	11,010.7	7,178.3	66.2	66.1	-104.62	-3,084.4	258.7	263.3	134.7	128.61	2.047	
11,000.0	7,111.7	11,085.5	7,177.5	67.6	67.5	-104.48	-3,159.2	258.7	263.1	131.7	131.36	2.003	
11,023.6	7,111.6	11,109.1	7,177.2	68.0	67.9	-104.44	-3,182.8	258.7	263.1	130.8	132.23	1.989	
11,100.0	7,111.4	11,185.5	7,176.3	69.4	69.3	-104.30	-3,259.2	258.7	262.9	127.8	135.05	1.947	
11,122.0	7,111.3	11,207.5	7,176.1	69.8	69.7	-104.26	-3,281.2	258.7	262.8	127.0	135.87	1.935	
11,200.0	7,111.2	11,285.5	7,175.2	71.3	71.2	-104.11	-3,359.2	258.7	262.7	123.9	138.76	1.893	
11,220.4	7,111.1	11,306.0	7,175.0	71.6	71.6	-104.08	-3,379.7	258.7	262.6	123.1	139.51	1.883	
11,300.0	7,110.9	11,385.5	7,174.1	73.1	73.0	-103.93	-3,459.2	258.7	262.5	120.0	142.47	1.842	
11,318.9	7,110.9	11,404.4	7,173.9	73.5	73.4	-103.89	-3,478.1	258.7	262.4	119.3	143.17	1.833	
11,400.0	7,110.6	11,485.5	7,172.9	75.0	74.9	-103.74	-3,559.2	258.7	262.3	116.1	146.19	1.794	
11,417.3	7,110.6	11,502.8	7,172.8	75.3	75.2	-103.71	-3,576.5	258.7	262.2	115.4	146.83	1.786	
11,500.0	7,110.4	11,585.5	7,171.8	76.8	76.8	-103.56	-3,659.2	258.7	262.1	112.1	149.92	1.748	
11,515.7	7,110.4	11,601.2	7,171.6	77.1	77.1	-103.53	-3,674.9	258.7	262.0	111.5	150.51	1.741	
11,600.0	7,110.1	11,685.5	7,170.7	78.7	78.6	-103.37	-3,759.2	258.7	261.8	108.2	153.66	1.704	
11,614.1	7,110.1	11,699.6	7,170.5	79.0	78.9	-103.35	-3,773.3	258.7	261.8	107.6	154.19	1.698	
11,655.0	7,110.0	11,740.5	7,170.1	79.7	79.7	-103.27	-3,814.2	258.7	261.7	106.0	155.72	1.681	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	-88.59	0.4	-14.8	14.8				
98.4	98.4	98.4	98.4	0.1	0.1	-88.59	0.4	-14.8	14.8	14.6	0.17	87.034	
100.0	100.0	100.0	100.0	0.1	0.1	-88.59	0.4	-14.8	14.8	14.6	0.17	85.459	
196.8	196.8	196.8	196.8	0.3	0.3	-88.59	0.4	-14.8	14.8	14.2	0.61	24.309	
200.0	200.0	200.0	200.0	0.3	0.3	-88.59	0.4	-14.8	14.8	14.2	0.62	23.756	
295.3	295.3	295.3	295.3	0.5	0.5	-88.59	0.4	-14.8	14.8	13.7	1.05	14.074	
300.0	300.0	300.0	300.0	0.5	0.5	-88.59	0.4	-14.8	14.8	13.7	1.07	13.795	
393.7	393.7	393.7	393.7	0.7	0.7	-88.59	0.4	-14.8	14.8	13.3	1.49	9.904	
400.0	400.0	400.0	400.0	0.8	0.8	-88.59	0.4	-14.8	14.8	13.3	1.52	9.720	
492.1	492.1	492.1	492.1	1.0	1.0	-88.59	0.4	-14.8	14.8	12.9	1.94	7.640	
500.0	500.0	500.0	500.0	1.0	1.0	-88.59	0.4	-14.8	14.8	12.8	1.97	7.503	
590.5	590.5	590.5	590.5	1.2	1.2	-88.59	0.4	-14.8	14.8	12.4	2.38	6.219	
600.0	600.0	600.0	600.0	1.2	1.2	-88.59	0.4	-14.8	14.8	12.4	2.42	6.110	
689.0	689.0	689.0	689.0	1.4	1.4	-88.59	0.4	-14.8	14.8	12.0	2.82	5.243	
700.0	700.0	700.0	700.0	1.4	1.4	-88.59	0.4	-14.8	14.8	11.9	2.87	5.153	
787.4	787.4	787.4	787.4	1.6	1.6	-88.59	0.4	-14.8	14.8	11.5	3.26	4.533	
800.0	800.0	800.0	800.0	1.7	1.7	-88.59	0.4	-14.8	14.8	11.5	3.32	4.455	
885.8	885.8	885.8	885.8	1.9	1.9	-88.59	0.4	-14.8	14.8	11.1	3.71	3.991	
900.0	900.0	900.0	900.0	1.9	1.9	-88.59	0.4	-14.8	14.8	11.0	3.77	3.924	
984.2	984.2	984.2	984.2	2.1	2.1	-88.59	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	-88.59	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	-88.59	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	-88.59	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	-88.59	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	-88.59	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	-88.59	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	-88.59	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	-88.59	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	-88.59	0.4	-14.8	14.8	8.8	6.02	2.458	
1,437.8	1,437.8	1,437.8	1,437.8	3.1	3.1	-88.59	0.4	-14.8	14.8	8.6	6.19	2.391 CC	
1,476.4	1,476.4	1,476.3	1,476.3	3.2	3.2	-88.14	0.5	-14.8	14.8	8.5	6.36	2.331	
1,500.0	1,500.0	1,499.9	1,499.9	3.2	3.2	-86.98	0.8	-14.9	14.9	8.4	6.47	2.307 ES, SF	
1,574.8	1,574.8	1,574.5	1,574.5	3.4	3.4	-79.06	3.0	-15.5	15.7	8.9	6.80	2.315	
1,600.0	1,600.0	1,599.7	1,599.6	3.5	3.5	-75.23	4.2	-15.8	16.3	9.4	6.91	2.357	
1,673.2	1,673.2	1,672.5	1,672.2	3.6	3.6	-62.70	8.7	-16.9	19.1	11.8	7.24	2.633	
1,700.0	1,700.0	1,699.0	1,698.7	3.7	3.7	-58.15	10.8	-17.5	20.6	13.2	7.36	2.797	
1,771.6	1,771.6	1,769.9	1,769.2	3.8	3.8	-47.39	17.7	-19.2	26.2	18.5	7.68	3.408	
1,800.0	1,800.0	1,797.8	1,796.9	3.9	3.9	-43.87	20.8	-20.0	29.0	21.2	7.81	3.713	
1,870.1	1,870.1	1,866.5	1,865.1	4.1	4.1	-36.88	29.7	-22.2	37.4	29.3	8.13	4.602	
1,900.0	1,900.0	1,895.7	1,893.9	4.1	4.2	-34.54	33.9	-23.3	41.6	33.3	8.26	5.033	
1,968.5	1,968.5	1,962.2	1,959.5	4.3	4.3	-30.29	44.6	-26.1	52.5	43.9	8.57	6.117	
2,000.0	2,000.0	1,992.6	1,989.4	4.4	4.4	-28.75	50.0	-27.4	58.0	49.3	8.72	6.657	
2,066.9	2,066.9	2,057.0	2,052.5	4.5	4.6	-26.11	62.4	-30.6	71.0	62.0	9.02	7.874	
2,100.0	2,100.0	2,089.3	2,084.1	4.6	4.7	-25.07	69.0	-32.3	77.8	68.6	9.17	8.481	
2,150.0	2,150.0	2,138.3	2,132.0	4.7	4.9	-23.81	78.8	-34.8	88.0	78.6	9.40	9.366	
2,165.3	2,165.3	2,153.3	2,146.6	4.7	4.9	-23.71	81.8	-35.5	91.1	81.7	9.47	9.626	
2,200.0	2,200.0	2,187.2	2,179.9	4.8	5.0	-23.07	88.7	-37.3	97.9	88.3	9.62	10.174	
2,263.8	2,263.7	2,250.0	2,241.2	5.0	5.2	-22.32	101.3	-40.5	109.4	99.4	9.91	11.037	
2,300.0	2,299.9	2,285.7	2,276.2	5.0	5.4	-22.08	108.5	-42.3	115.3	105.2	10.07	11.450	
2,362.2	2,362.0	2,347.2	2,336.3	5.2	5.6	-21.90	120.9	-45.5	124.5	114.2	10.35	12.033	
2,400.0	2,399.7	2,384.7	2,373.0	5.3	5.7	-21.92	128.4	-47.4	129.5	119.0	10.52	12.316	
2,460.6	2,460.0	2,444.9	2,431.9	5.4	5.9	-22.10	140.6	-50.5	136.6	125.8	10.79	12.661	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	2,499.1	2,484.1	2,470.2	5.5	6.1	-22.32	148.4	-52.5	140.6	129.6	10.96	12.820	
2,559.0	2,557.7	2,542.9	2,527.7	5.6	6.3	-22.78	160.3	-55.5	145.6	134.3	11.23	12.965	
2,600.0	2,598.2	2,583.7	2,567.7	5.7	6.4	-23.20	168.5	-57.6	148.4	137.0	11.41	13.005	
2,657.5	2,654.8	2,641.1	2,623.8	5.9	6.7	-23.91	180.1	-60.6	151.5	139.8	11.67	12.980	
2,700.0	2,696.6	2,683.5	2,665.3	6.0	6.8	-24.54	188.6	-62.7	153.1	141.2	11.86	12.907	
2,755.9	2,751.4	2,739.4	2,719.9	6.1	7.0	-25.50	199.9	-65.6	154.4	142.3	12.12	12.739	
2,800.0	2,794.4	2,783.4	2,763.0	6.2	7.2	-26.38	208.7	-67.9	154.7	142.4	12.32	12.557	
2,854.3	2,847.3	2,837.6	2,816.0	6.4	7.4	-27.62	219.6	-70.7	154.4	141.8	12.58	12.269	
2,888.8	2,880.6	2,872.0	2,849.7	6.5	7.6	-28.51	226.6	-72.4	153.8	141.0	12.75	12.057	
2,900.0	2,891.5	2,883.2	2,860.6	6.6	7.6	-28.81	228.8	-73.0	153.5	140.7	12.82	11.978	
2,952.7	2,942.5	2,935.8	2,912.0	6.7	7.8	-30.24	239.4	-75.7	152.3	139.2	13.12	11.615	
3,000.0	2,988.2	2,982.9	2,958.1	6.9	8.0	-31.54	248.9	-78.1	151.4	138.0	13.39	11.302	
3,051.2	3,037.6	3,033.9	3,008.0	7.1	8.2	-32.96	259.2	-80.7	150.4	136.7	13.70	10.976	
3,100.0	3,084.9	3,082.6	3,055.7	7.3	8.4	-34.34	269.0	-83.2	149.6	135.6	14.01	10.678	
3,149.6	3,132.8	3,132.0	3,104.0	7.5	8.6	-35.75	278.9	-85.8	148.8	134.5	14.33	10.387	
3,200.0	3,181.5	3,182.3	3,153.2	7.6	8.8	-37.19	289.1	-88.3	148.2	133.5	14.66	10.104	
3,248.0	3,228.0	3,230.2	3,200.0	7.8	9.0	-38.58	298.7	-90.8	147.6	132.6	15.00	9.845	
3,300.0	3,278.2	3,282.0	3,250.7	8.0	9.2	-40.10	309.1	-93.5	147.1	131.8	15.36	9.576	
3,346.4	3,323.2	3,328.3	3,296.0	8.2	9.4	-41.46	318.5	-95.8	146.8	131.1	15.71	9.346	
3,400.0	3,374.9	3,381.7	3,348.3	8.5	9.7	-43.04	329.2	-98.6	146.5	130.4	16.11	9.092	
3,444.9	3,418.3	3,426.5	3,392.0	8.6	9.8	-44.36	338.2	-100.9	146.3	129.9	16.46	8.888	
3,500.0	3,471.6	3,481.4	3,445.8	8.9	10.1	-45.99	349.3	-103.7	146.2	129.3	16.90	8.650	
3,516.7	3,487.8	3,498.1	3,462.1	8.9	10.2	-46.49	352.7	-104.5	146.2	129.2	17.04	8.580	
3,543.3	3,513.5	3,524.6	3,488.0	9.1	10.3	-47.27	358.0	-105.9	146.2	129.0	17.26	8.471	
3,600.0	3,568.3	3,581.2	3,543.3	9.3	10.5	-48.95	369.4	-108.8	146.4	128.6	17.74	8.249	
3,641.7	3,608.7	3,622.8	3,584.0	9.5	10.7	-50.18	377.8	-110.9	146.5	128.4	18.11	8.093	
3,700.0	3,665.0	3,680.9	3,640.9	9.7	10.9	-51.90	389.5	-113.9	146.9	128.3	18.62	7.886	
3,740.1	3,703.8	3,720.9	3,680.0	9.9	11.1	-53.07	397.5	-116.0	147.2	128.2	18.99	7.751	
3,800.0	3,761.7	3,780.6	3,738.4	10.2	11.3	-54.81	409.6	-119.0	147.8	128.2	19.55	7.561	
3,838.6	3,799.0	3,819.0	3,776.0	10.4	11.5	-55.93	417.3	-121.0	148.2	128.3	19.91	7.445	
3,900.0	3,858.4	3,880.3	3,836.0	10.7	11.8	-57.69	429.6	-124.2	149.1	128.6	20.50	7.271	
3,937.0	3,894.2	3,917.2	3,872.0	10.8	11.9	-58.74	437.1	-126.0	149.6	128.8	20.86	7.173	
4,000.0	3,955.1	3,980.0	3,933.5	11.1	12.2	-60.51	449.7	-129.3	150.7	129.2	21.49	7.015	
4,035.4	3,989.3	4,015.3	3,968.0	11.3	12.4	-61.49	456.8	-131.1	151.4	129.6	21.84	6.932	
4,100.0	4,051.8	4,079.7	4,031.0	11.6	12.6	-63.26	469.8	-134.4	152.7	130.3	22.50	6.790	
4,133.8	4,084.5	4,113.5	4,064.0	11.7	12.8	-64.17	476.6	-136.1	153.5	130.7	22.84	6.720	
4,200.0	4,148.5	4,179.4	4,128.6	12.1	13.1	-65.93	489.9	-139.5	155.1	131.6	23.52	6.594	
4,232.3	4,179.7	4,211.6	4,160.0	12.2	13.2	-66.78	496.4	-141.2	155.9	132.1	23.86	6.536	
4,300.0	4,245.2	4,279.1	4,226.1	12.5	13.5	-68.52	510.0	-144.6	157.8	133.2	24.57	6.424	
4,330.7	4,274.9	4,309.8	4,256.0	12.7	13.6	-69.30	516.1	-146.2	158.7	133.8	24.89	6.376	
4,400.0	4,341.9	4,378.9	4,323.6	13.0	13.9	-71.02	530.0	-149.7	160.8	135.2	25.62	6.278	
4,429.1	4,370.0	4,407.9	4,352.0	13.1	14.1	-71.73	535.9	-151.2	161.7	135.8	25.92	6.239	
4,500.0	4,438.6	4,478.6	4,421.2	13.5	14.4	-73.42	550.1	-154.8	164.1	137.4	26.67	6.153	
4,527.5	4,465.2	4,506.0	4,448.0	13.6	14.5	-74.06	555.7	-156.3	165.1	138.1	26.96	6.123	
4,600.0	4,535.3	4,578.3	4,518.7	14.0	14.8	-75.72	570.2	-160.0	167.7	140.0	27.72	6.049	
4,626.0	4,560.4	4,604.2	4,544.0	14.1	14.9	-76.30	575.4	-161.3	168.6	140.7	27.99	6.024	
4,700.0	4,631.9	4,678.0	4,616.2	14.5	15.2	-77.93	590.3	-165.1	171.5	142.7	28.77	5.961	
4,724.4	4,655.5	4,702.3	4,640.0	14.6	15.3	-78.45	595.2	-166.3	172.5	143.5	29.03	5.942	
4,800.0	4,728.6	4,777.7	4,713.8	15.0	15.7	-80.03	610.4	-170.2	175.6	145.8	29.82	5.889	
4,822.8	4,750.7	4,800.5	4,736.0	15.1	15.8	-80.50	615.0	-171.4	176.6	146.5	30.06	5.874	
4,900.0	4,825.3	4,877.4	4,811.3	15.4	16.1	-82.04	630.5	-175.3	179.9	149.0	30.86	5.830	
4,921.2	4,845.9	4,898.6	4,832.0	15.6	16.2	-82.45	634.7	-176.4	180.8	149.8	31.08	5.819	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,000.0	4,922.0	4,977.1	4,908.8	15.9	16.5	-83.95	650.5	-180.4	184.4	152.5	31.89	5.783	
5,019.7	4,941.0	4,996.7	4,928.0	16.0	16.6	-84.32	654.5	-181.4	185.3	153.2	32.09	5.776	
5,100.0	5,018.7	5,076.8	5,006.4	16.4	17.0	-85.77	670.6	-185.5	189.1	156.2	32.91	5.747	
5,118.1	5,036.2	5,094.9	5,024.0	16.5	17.0	-86.09	674.3	-186.5	190.0	156.9	33.09	5.742	
5,200.0	5,115.4	5,176.6	5,103.9	16.9	17.4	-87.50	690.7	-190.7	194.0	160.1	33.92	5.720	
5,216.5	5,131.4	5,193.0	5,120.0	17.0	17.5	-87.78	694.0	-191.5	194.8	160.8	34.09	5.716	
5,300.0	5,212.1	5,276.3	5,201.4	17.4	17.8	-89.14	710.8	-195.8	199.1	164.2	34.92	5.701	
5,314.9	5,226.6	5,291.2	5,216.0	17.5	17.9	-89.38	713.8	-196.5	199.9	164.8	35.07	5.699	
5,400.0	5,308.8	5,376.0	5,299.0	17.9	18.3	-90.70	730.9	-200.9	204.3	168.4	35.91	5.689	
5,413.4	5,321.7	5,389.3	5,312.0	18.0	18.3	-90.91	733.5	-201.6	205.0	169.0	36.04	5.688	
5,500.0	5,405.5	5,475.7	5,396.5	18.4	18.7	-92.19	750.9	-206.0	209.7	172.8	36.89	5.683	
5,511.8	5,416.9	5,487.5	5,408.0	18.5	18.8	-92.36	753.3	-206.6	210.3	173.3	37.01	5.682	
5,600.0	5,502.2	5,575.4	5,494.1	18.9	19.2	-93.59	771.0	-211.1	215.2	177.3	37.87	5.682	
5,610.2	5,512.1	5,585.6	5,504.0	19.0	19.2	-93.73	773.1	-211.7	215.7	177.8	37.96	5.682	
5,700.0	5,598.9	5,675.1	5,591.6	19.4	19.6	-94.93	791.1	-216.2	220.8	181.9	38.83	5.686	
5,708.6	5,607.2	5,683.7	5,600.0	19.5	19.6	-95.04	792.8	-216.7	221.3	182.4	38.91	5.686	
5,745.8	5,643.2	5,720.8	5,636.3	19.7	19.8	-95.52	800.3	-218.6	223.4	184.1	39.27	5.689	
5,800.0	5,695.7	5,774.9	5,689.1	19.9	20.0	-96.13	811.2	-221.4	226.5	186.7	39.75	5.697	
5,807.1	5,702.6	5,781.9	5,696.1	19.9	20.1	-96.19	812.6	-221.7	226.8	187.0	39.81	5.699	
5,900.0	5,793.2	5,874.7	5,786.8	20.3	20.5	-96.56	831.3	-226.5	231.8	191.3	40.55	5.717	
5,905.5	5,798.6	5,880.2	5,792.2	20.3	20.5	-96.56	832.4	-226.8	232.1	191.5	40.60	5.718	
6,000.0	5,891.5	5,974.5	5,884.5	20.6	20.9	-96.12	851.4	-231.6	236.8	195.5	41.31	5.733	
6,003.9	5,895.4	5,978.5	5,888.3	20.6	20.9	-96.09	852.2	-231.8	237.0	195.7	41.34	5.733	
6,100.0	5,990.4	6,074.6	5,982.3	20.9	21.3	-94.90	871.5	-236.7	241.5	199.5	42.01	5.749	
6,102.3	5,992.7	6,076.9	5,984.7	20.9	21.4	-94.86	871.9	-236.8	241.7	199.6	42.03	5.750	
6,200.0	6,089.7	6,175.8	6,081.9	21.1	21.7	-93.44	889.4	-241.3	245.7	203.1	42.56	5.773	
6,200.8	6,090.4	6,176.6	6,082.6	21.1	21.7	-93.43	889.6	-241.3	245.7	203.2	42.56	5.773	
6,299.2	6,188.5	6,276.5	6,181.5	21.4	22.0	-92.01	903.9	-245.0	249.1	206.1	43.00	5.792	
6,300.0	6,189.3	6,277.3	6,182.3	21.4	22.0	-92.00	904.0	-245.0	249.1	206.1	43.01	5.793	
6,397.6	6,286.8	6,376.7	6,281.0	21.5	22.2	-90.61	915.0	-247.8	251.8	208.4	43.35	5.807	
6,400.0	6,289.2	6,379.1	6,283.4	21.5	22.2	-90.58	915.2	-247.9	251.8	208.5	43.36	5.808	
6,484.6	6,373.8	6,465.5	6,369.5	21.6	22.4	-89.14	921.9	-249.6	253.5	210.0	43.59	5.817	
6,496.0	6,385.3	6,477.2	6,381.1	21.7	22.4	-88.97	922.6	-249.8	253.7	210.1	43.62	5.817	
6,500.0	6,389.2	6,481.2	6,385.2	21.7	22.4	-88.92	922.9	-249.8	253.8	210.2	43.63	5.818	
6,514.6	6,403.8	6,496.1	6,400.1	21.7	22.4	-88.74	923.7	-250.0	254.0	210.4	43.66	5.818	
6,550.0	6,439.2	6,532.3	6,436.2	21.7	22.5	91.81	925.4	-250.5	254.5	210.8	43.72	5.821	
6,594.5	6,483.5	6,577.7	6,481.5	21.7	22.6	92.91	926.9	-250.8	255.1	211.4	43.73	5.834	
6,600.0	6,489.0	6,583.3	6,487.1	21.7	22.6	93.08	927.0	-250.9	255.2	211.4	43.72	5.836	
6,650.0	6,538.4	6,634.0	6,537.8	21.7	22.7	94.92	927.8	-251.1	256.0	212.3	43.62	5.868	
6,692.9	6,580.3	6,676.4	6,580.3	21.6	22.7	96.90	927.9	-251.1	257.0	213.5	43.43	5.917	
6,700.0	6,587.1	6,683.3	6,587.1	21.6	22.7	97.27	927.9	-251.1	257.2	213.8	43.39	5.928	
6,750.0	6,635.0	6,732.9	6,636.8	21.5	22.8	100.14	927.4	-251.1	259.4	216.4	43.01	6.031	
6,791.3	6,673.7	6,775.7	6,679.5	21.4	22.8	102.60	924.5	-251.1	261.8	219.2	42.58	6.149	
6,800.0	6,681.7	6,784.8	6,688.5	21.4	22.8	103.11	923.5	-251.1	262.4	219.9	42.49	6.176	
6,850.0	6,727.1	6,837.9	6,741.0	21.2	22.8	105.97	915.7	-251.1	266.1	224.3	41.83	6.361	
6,889.7	6,762.0	6,881.0	6,783.1	21.1	22.7	108.18	906.6	-251.1	269.4	228.2	41.22	6.536	
6,900.0	6,770.9	6,892.2	6,794.0	21.0	22.7	108.73	903.8	-251.1	270.4	229.3	41.06	6.585	
6,950.0	6,812.9	6,947.9	6,847.2	20.8	22.6	111.36	887.4	-251.1	275.2	235.0	40.18	6.848	
6,988.2	6,843.6	6,991.3	6,887.6	20.6	22.5	113.26	871.8	-251.1	279.1	239.7	39.45	7.075	
7,000.0	6,852.9	7,004.9	6,900.1	20.6	22.4	113.83	866.4	-251.1	280.4	241.1	39.22	7.149	
7,050.0	6,890.7	7,063.3	6,952.5	20.3	22.2	116.15	840.5	-251.1	285.8	247.6	38.19	7.485	
7,086.6	6,916.9	7,107.0	6,990.2	20.1	22.1	117.74	818.5	-251.1	289.9	252.5	37.41	7.751	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
7,100.0	6,926.2	7,123.2	7,003.8	20.1	22.0	118.30	809.7	-251.1	291.4	254.3	37.12	7.852	
7,150.0	6,959.1	7,184.4	7,053.5	19.8	21.7	120.26	773.9	-251.1	297.1	261.0	36.04	8.244	
7,185.0	6,980.5	7,228.2	7,087.0	19.6	21.5	121.52	745.7	-251.1	300.9	265.6	35.29	8.528	
7,200.0	6,989.3	7,247.1	7,100.9	19.5	21.4	122.04	732.9	-251.1	302.5	267.6	34.97	8.652	
7,250.0	7,016.6	7,311.2	7,145.6	19.3	21.1	123.62	687.0	-251.1	307.8	273.8	33.95	9.064	
7,283.4	7,033.3	7,354.9	7,173.5	19.1	20.9	124.57	653.5	-251.1	311.1	277.7	33.32	9.335	
7,300.0	7,041.0	7,376.6	7,186.7	19.1	20.8	125.00	636.1	-251.1	312.6	279.6	33.02	9.467	
7,350.0	7,062.2	7,443.3	7,223.6	18.8	20.4	126.19	580.7	-251.1	317.0	284.8	32.21	9.840	
7,381.9	7,074.1	7,486.3	7,244.7	18.7	20.2	126.83	543.1	-251.1	319.4	287.7	31.77	10.053	
7,400.0	7,080.3	7,511.0	7,255.7	18.7	20.1	127.16	521.1	-251.1	320.7	289.2	31.55	10.164	
7,450.0	7,095.0	7,579.6	7,282.4	18.5	19.9	127.93	457.9	-251.1	323.7	292.7	31.07	10.419	
7,480.3	7,102.4	7,621.6	7,295.6	18.4	19.7	128.29	418.1	-251.1	325.2	294.3	30.88	10.531	
7,500.0	7,106.4	7,649.0	7,303.0	18.4	19.6	128.49	391.7	-251.1	326.0	295.2	30.79	10.588	
7,550.0	7,114.4	7,718.9	7,317.2	18.3	19.4	128.83	323.3	-251.1	327.4	296.7	30.72	10.657	
7,578.7	7,117.4	7,759.2	7,322.4	18.3	19.4	128.93	283.3	-251.1	327.8	297.0	30.78	10.650	
7,600.0	7,118.9	7,789.1	7,324.8	18.3	19.3	128.96	253.5	-251.1	327.9	297.1	30.86	10.625	
7,640.6	7,120.0	7,842.0	7,326.0	18.3	19.3	128.93	200.7	-251.1	327.8	296.7	31.12	10.532	
7,641.3	7,120.0	7,842.8	7,326.0	18.3	19.3	128.93	199.9	-251.1	327.8	296.7	31.13	10.530	
7,677.1	7,119.9	7,878.6	7,325.9	18.3	19.3	128.94	164.1	-251.1	327.8	296.6	31.25	10.489	
7,700.0	7,119.9	7,901.4	7,325.9	18.4	19.3	128.94	141.2	-251.1	327.8	296.5	31.33	10.463	
7,775.6	7,119.7	7,977.0	7,325.8	18.6	19.5	128.95	65.6	-251.1	327.9	296.1	31.78	10.317	
7,800.0	7,119.6	8,001.4	7,325.8	18.6	19.5	128.96	41.2	-251.1	327.9	296.0	31.93	10.270	
7,874.0	7,119.4	8,075.4	7,325.7	19.0	19.8	128.97	-32.8	-251.1	327.9	295.4	32.58	10.066	
7,900.0	7,119.4	8,101.4	7,325.6	19.1	19.9	128.97	-58.8	-251.1	328.0	295.2	32.81	9.995	
7,972.4	7,119.2	8,173.8	7,325.5	19.6	20.4	128.98	-131.2	-251.1	328.0	294.4	33.64	9.750	
8,000.0	7,119.1	8,201.4	7,325.5	19.7	20.6	128.98	-158.8	-251.1	328.0	294.1	33.96	9.659	
8,070.8	7,118.9	8,272.3	7,325.4	20.3	21.1	128.99	-229.6	-251.1	328.1	293.1	34.94	9.389	
8,100.0	7,118.9	8,301.4	7,325.3	20.5	21.3	129.00	-258.8	-251.1	328.1	292.7	35.35	9.281	
8,169.3	7,118.7	8,370.7	7,325.2	21.2	22.0	129.01	-328.1	-251.1	328.1	291.7	36.46	9.000	
8,200.0	7,118.6	8,401.4	7,325.2	21.5	22.3	129.01	-358.8	-251.1	328.2	291.2	36.95	8.881	
8,267.7	7,118.5	8,469.1	7,325.1	22.2	23.0	129.02	-426.5	-251.1	328.2	290.0	38.16	8.601	
8,300.0	7,118.4	8,501.4	7,325.1	22.5	23.3	129.03	-458.8	-251.1	328.2	289.5	38.74	8.473	
8,366.1	7,118.2	8,567.5	7,325.0	23.3	24.1	129.03	-524.9	-251.1	328.3	288.2	40.03	8.202	
8,400.0	7,118.1	8,601.4	7,324.9	23.7	24.5	129.04	-558.8	-251.1	328.3	287.6	40.69	8.069	
8,464.5	7,118.0	8,666.0	7,324.8	24.5	25.3	129.05	-623.3	-251.1	328.3	286.3	42.03	7.811	
8,500.0	7,117.9	8,701.4	7,324.8	25.0	25.7	129.05	-658.8	-251.1	328.4	285.6	42.77	7.677	
8,563.0	7,117.7	8,764.4	7,324.7	25.8	26.6	129.06	-721.8	-251.1	328.4	284.2	44.16	7.436	
8,600.0	7,117.6	8,801.4	7,324.6	26.3	27.1	129.07	-758.8	-251.1	328.4	283.4	44.98	7.302	
8,661.4	7,117.5	8,862.8	7,324.5	27.2	27.9	129.08	-820.2	-251.1	328.5	282.1	46.40	7.080	
8,700.0	7,117.4	8,901.4	7,324.5	27.7	28.5	129.08	-858.8	-251.1	328.5	281.2	47.29	6.947	
8,759.8	7,117.2	8,961.2	7,324.4	28.6	29.3	129.09	-918.6	-251.1	328.5	279.8	48.72	6.743	
8,800.0	7,117.1	9,001.4	7,324.3	29.2	29.9	129.09	-958.8	-251.1	328.5	278.9	49.68	6.613	
8,858.2	7,117.0	9,059.7	7,324.2	30.1	30.8	129.10	-1,017.0	-251.1	328.6	277.5	51.12	6.427	
8,900.0	7,116.9	9,101.4	7,324.2	30.7	31.4	129.11	-1,058.8	-251.1	328.6	276.5	52.16	6.301	
8,956.7	7,116.8	9,158.1	7,324.1	31.6	32.3	129.12	-1,115.5	-251.1	328.6	275.1	53.59	6.132	
9,000.0	7,116.7	9,201.4	7,324.0	32.3	33.0	129.12	-1,158.8	-251.1	328.7	274.0	54.69	6.010	
9,055.1	7,116.5	9,256.5	7,324.0	33.2	33.9	129.13	-1,213.9	-251.1	328.7	272.6	56.12	5.857	
9,100.0	7,116.4	9,301.4	7,323.9	33.9	34.6	129.14	-1,258.8	-251.1	328.7	271.5	57.29	5.739	
9,153.5	7,116.3	9,354.9	7,323.8	34.8	35.4	129.14	-1,312.3	-251.1	328.8	270.1	58.70	5.601	
9,200.0	7,116.2	9,401.4	7,323.7	35.5	36.2	129.15	-1,358.8	-251.1	328.8	268.9	59.93	5.487	
9,251.9	7,116.0	9,453.4	7,323.7	36.4	37.0	129.16	-1,410.7	-251.1	328.8	267.5	61.32	5.362	
9,300.0	7,115.9	9,501.4	7,323.6	37.2	37.8	129.16	-1,458.8	-251.1	328.9	266.3	62.62	5.252	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
9,350.4	7,115.8	9,551.8	7,323.5	38.0	38.7	129.17	-1,509.2	-251.1	328.9	264.9	63.99	5.140	
9,400.0	7,115.7	9,601.4	7,323.5	38.9	39.5	129.18	-1,558.8	-251.1	328.9	263.6	65.34	5.034	
9,448.8	7,115.5	9,650.2	7,323.4	39.7	40.3	129.18	-1,607.6	-251.1	329.0	262.3	66.68	4.933	
9,500.0	7,115.4	9,701.4	7,323.3	40.6	41.2	129.19	-1,658.8	-251.1	329.0	260.9	68.09	4.832	
9,547.2	7,115.3	9,748.6	7,323.2	41.4	42.0	129.20	-1,706.0	-251.1	329.0	259.6	69.41	4.740	
9,600.0	7,115.2	9,801.4	7,323.2	42.3	42.9	129.20	-1,758.8	-251.1	329.1	258.2	70.88	4.643	
9,645.6	7,115.1	9,847.1	7,323.1	43.1	43.7	129.21	-1,804.5	-251.1	329.1	256.9	72.16	4.561	
9,700.0	7,114.9	9,901.4	7,323.0	44.0	44.6	129.22	-1,858.8	-251.1	329.1	255.4	73.69	4.467	
9,744.1	7,114.8	9,945.5	7,322.9	44.8	45.4	129.22	-1,902.9	-251.1	329.2	254.2	74.94	4.392	
9,800.0	7,114.7	10,001.4	7,322.9	45.8	46.4	129.23	-1,958.8	-251.1	329.2	252.7	76.52	4.302	
9,842.5	7,114.6	10,043.9	7,322.8	46.5	47.1	129.23	-2,001.3	-251.1	329.2	251.5	77.73	4.235	
9,900.0	7,114.4	10,101.4	7,322.7	47.6	48.1	129.24	-2,058.8	-251.1	329.3	249.9	79.37	4.148	
9,940.9	7,114.3	10,142.4	7,322.6	48.3	48.8	129.25	-2,099.7	-251.1	329.3	248.7	80.55	4.088	
10,000.0	7,114.2	10,201.4	7,322.6	49.3	49.9	129.26	-2,158.8	-251.1	329.3	247.1	82.24	4.004	
10,039.3	7,114.1	10,240.8	7,322.5	50.0	50.6	129.26	-2,198.2	-251.1	329.3	246.0	83.38	3.950	
10,100.0	7,113.9	10,301.4	7,322.4	51.1	51.7	129.27	-2,258.8	-251.1	329.4	244.3	85.13	3.869	
10,137.8	7,113.8	10,339.2	7,322.3	51.8	52.3	129.27	-2,296.6	-251.1	329.4	243.2	86.22	3.820	
10,200.0	7,113.7	10,401.4	7,322.3	52.9	53.4	129.28	-2,358.8	-251.1	329.4	241.4	88.03	3.742	
10,236.2	7,113.6	10,437.6	7,322.2	53.6	54.1	129.29	-2,395.0	-251.1	329.5	240.4	89.08	3.698	
10,300.0	7,113.4	10,501.4	7,322.1	54.7	55.2	129.30	-2,458.8	-251.1	329.5	238.6	90.94	3.623	
10,334.6	7,113.3	10,536.1	7,322.0	55.4	55.9	129.30	-2,493.4	-251.1	329.5	237.6	91.95	3.584	
10,400.0	7,113.2	10,601.4	7,321.9	56.5	57.1	129.31	-2,558.8	-251.1	329.6	235.7	93.87	3.511	
10,433.0	7,113.1	10,634.5	7,321.9	57.1	57.6	129.31	-2,591.9	-251.1	329.6	234.8	94.84	3.475	
10,500.0	7,112.9	10,701.4	7,321.8	58.4	58.9	129.32	-2,658.8	-251.1	329.6	232.8	96.80	3.405	
10,531.5	7,112.8	10,732.9	7,321.7	58.9	59.4	129.33	-2,690.3	-251.1	329.7	231.9	97.73	3.373	
10,600.0	7,112.7	10,801.4	7,321.6	60.2	60.7	129.33	-2,758.8	-251.1	329.7	230.0	99.74	3.305	
10,629.9	7,112.6	10,831.3	7,321.6	60.7	61.2	129.34	-2,788.7	-251.1	329.7	229.1	100.63	3.277	
10,700.0	7,112.4	10,901.4	7,321.5	62.0	62.5	129.35	-2,858.8	-251.1	329.8	227.1	102.70	3.211	
10,728.3	7,112.3	10,929.8	7,321.4	62.5	63.0	129.35	-2,887.1	-251.1	329.8	226.2	103.54	3.185	
10,800.0	7,112.2	11,001.4	7,321.3	63.9	64.3	129.36	-2,958.8	-251.1	329.8	224.2	105.66	3.122	
10,826.7	7,112.1	11,028.2	7,321.3	64.4	64.8	129.36	-2,985.6	-251.1	329.8	223.4	106.45	3.098	
10,900.0	7,111.9	11,101.4	7,321.2	65.7	66.2	129.37	-3,058.8	-251.1	329.9	221.3	108.63	3.037	
10,925.2	7,111.8	11,126.6	7,321.1	66.2	66.6	129.38	-3,084.0	-251.1	329.9	220.5	109.37	3.016	
11,000.0	7,111.7	11,201.4	7,321.0	67.6	68.0	129.39	-3,158.8	-251.1	329.9	218.3	111.60	2.957	
11,023.6	7,111.6	11,225.0	7,321.0	68.0	68.4	129.39	-3,182.4	-251.1	330.0	217.7	112.30	2.938	
11,100.0	7,111.4	11,301.4	7,320.9	69.4	69.9	129.40	-3,258.8	-251.1	330.0	215.4	114.58	2.880	
11,122.0	7,111.3	11,323.5	7,320.8	69.8	70.3	129.40	-3,280.8	-251.1	330.0	214.8	115.24	2.864	
11,200.0	7,111.2	11,401.4	7,320.7	71.3	71.7	129.41	-3,358.8	-251.1	330.1	212.5	117.56	2.808	
11,220.4	7,111.1	11,421.9	7,320.7	71.6	72.1	129.41	-3,379.3	-251.1	330.1	211.9	118.18	2.793	
11,300.0	7,110.9	11,501.4	7,320.5	73.1	73.6	129.42	-3,458.8	-251.1	330.1	209.6	120.55	2.738	
11,318.9	7,110.9	11,520.3	7,320.5	73.5	73.9	129.43	-3,477.7	-251.1	330.1	209.0	121.12	2.726	
11,400.0	7,110.6	11,601.4	7,320.4	75.0	75.4	129.44	-3,558.8	-251.1	330.2	206.6	123.55	2.673	
11,417.3	7,110.6	11,618.7	7,320.4	75.3	75.7	129.44	-3,576.1	-251.1	330.2	206.1	124.07	2.661	
11,500.0	7,110.4	11,701.4	7,320.2	76.8	77.3	129.45	-3,658.8	-251.1	330.3	203.7	126.55	2.610	
11,515.7	7,110.4	11,717.2	7,320.2	77.1	77.6	129.45	-3,674.5	-251.1	330.3	203.2	127.02	2.600	
11,600.0	7,110.1	11,801.4	7,320.1	78.7	79.1	129.46	-3,758.8	-251.1	330.3	200.8	129.54	2.550	
11,614.1	7,110.1	11,815.6	7,320.1	79.0	79.3	129.46	-3,773.0	-251.1	330.3	200.4	129.92	2.543	
11,632.3	7,110.1	11,833.7	7,320.0	79.3	79.6	129.47	-3,791.1	-251.1	330.3	199.9	130.40	2.533	
11,655.0	7,110.0	11,849.6	7,320.0	79.7	79.8	129.47	-3,807.0	-251.1	330.4	199.5	130.92	2.524	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	97.4	97.4	0.1	0.1	91.74	-1.8	60.0	60.0	59.8	0.17	354.926	
100.0	100.0	99.0	99.0	0.1	0.1	91.74	-1.8	60.0	60.0	59.8	0.17	348.469	
196.8	196.8	195.8	195.8	0.3	0.3	91.74	-1.8	60.0	60.0	59.4	0.61	98.991	
200.0	200.0	199.0	199.0	0.3	0.3	91.74	-1.8	60.0	60.0	59.4	0.62	96.732	
295.3	295.3	294.3	294.3	0.5	0.5	91.74	-1.8	60.0	60.0	59.0	1.05	57.224	
300.0	300.0	299.0	299.0	0.5	0.5	91.74	-1.8	60.0	60.0	58.9	1.07	56.088	
393.7	393.7	392.7	392.7	0.7	0.7	91.74	-1.8	60.0	60.0	58.5	1.49	40.244	
400.0	400.0	399.0	399.0	0.8	0.8	91.74	-1.8	60.0	60.0	58.5	1.52	39.494	
492.1	492.1	491.1	491.1	1.0	1.0	91.74	-1.8	60.0	60.0	58.1	1.93	31.035	
500.0	500.0	499.0	499.0	1.0	1.0	91.74	-1.8	60.0	60.0	58.0	1.97	30.477	
590.5	590.5	589.5	589.5	1.2	1.2	91.74	-1.8	60.0	60.0	57.6	2.38	25.256	
600.0	600.0	599.0	599.0	1.2	1.2	91.74	-1.8	60.0	60.0	57.6	2.42	24.812	
689.0	689.0	688.0	688.0	1.4	1.4	91.74	-1.8	60.0	60.0	57.2	2.82	21.291	
700.0	700.0	699.0	699.0	1.4	1.4	91.74	-1.8	60.0	60.0	57.1	2.87	20.923	
787.4	787.4	786.4	786.4	1.6	1.6	91.74	-1.8	60.0	60.0	56.7	3.26	18.402	
800.0	800.0	799.0	799.0	1.7	1.7	91.74	-1.8	60.0	60.0	56.7	3.32	18.088	
885.8	885.8	884.8	884.8	1.9	1.9	91.74	-1.8	60.0	60.0	56.3	3.70	16.204	
900.0	900.0	899.0	899.0	1.9	1.9	91.74	-1.8	60.0	60.0	56.2	3.77	15.930	
984.2	984.2	983.2	983.2	2.1	2.1	91.74	-1.8	60.0	60.0	55.9	4.15	14.474	
1,000.0	1,000.0	999.0	999.0	2.1	2.1	91.74	-1.8	60.0	60.0	55.8	4.22	14.231	
1,082.7	1,082.7	1,081.7	1,081.7	2.3	2.3	91.74	-1.8	60.0	60.0	55.4	4.59	13.079	
1,100.0	1,100.0	1,099.0	1,099.0	2.3	2.3	91.74	-1.8	60.0	60.0	55.3	4.67	12.860	
1,181.1	1,181.1	1,180.1	1,180.1	2.5	2.5	91.74	-1.8	60.0	60.0	55.0	5.03	11.928	
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	91.74	-1.8	60.0	60.0	54.9	5.12	11.730	
1,279.5	1,279.5	1,278.5	1,278.5	2.7	2.7	91.74	-1.8	60.0	60.0	54.5	5.47	10.964	
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	91.74	-1.8	60.0	60.0	54.4	5.57	10.783	
1,377.9	1,377.9	1,376.9	1,376.9	3.0	3.0	91.74	-1.8	60.0	60.0	54.1	5.92	10.144	
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	91.74	-1.8	60.0	60.0	54.0	6.01	9.977	
1,476.4	1,476.4	1,475.4	1,475.4	3.2	3.2	91.74	-1.8	60.0	60.0	53.6	6.36	9.438	
1,500.0	1,500.0	1,499.0	1,499.0	3.2	3.2	91.74	-1.8	60.0	60.0	53.5	6.46	9.283	
1,574.8	1,574.8	1,573.8	1,573.8	3.4	3.4	91.74	-1.8	60.0	60.0	53.2	6.80	8.824	
1,600.0	1,600.0	1,599.0	1,599.0	3.5	3.5	91.74	-1.8	60.0	60.0	53.1	6.91	8.679	
1,673.2	1,673.2	1,672.2	1,672.2	3.6	3.6	91.74	-1.8	60.0	60.0	52.8	7.24	8.285	
1,700.0	1,700.0	1,699.0	1,699.0	3.7	3.7	91.74	-1.8	60.0	60.0	52.6	7.36	8.150	
1,738.1	1,738.1	1,737.1	1,737.1	3.8	3.8	91.74	-1.8	60.0	60.0	52.5	7.53	7.964 CC	
1,771.6	1,771.6	1,770.4	1,770.4	3.8	3.8	91.69	-1.8	60.0	60.1	52.4	7.68	7.816 ES	
1,800.0	1,800.0	1,798.3	1,798.3	3.9	3.9	91.44	-1.5	60.3	60.3	52.5	7.81	7.718	
1,870.1	1,870.1	1,867.4	1,867.4	4.1	4.1	90.03	0.0	61.6	61.6	53.5	8.12	7.591	
1,900.0	1,900.0	1,896.9	1,896.8	4.1	4.1	89.11	1.0	62.5	62.5	54.3	8.25	7.583	
1,968.5	1,968.5	1,964.2	1,964.0	4.3	4.3	86.39	4.1	65.3	65.6	57.0	8.55	7.669	
2,000.0	2,000.0	1,995.1	1,994.8	4.4	4.3	84.91	6.0	67.0	67.4	58.7	8.69	7.757	
2,066.9	2,066.9	2,060.5	2,059.9	4.5	4.5	81.48	10.7	71.2	72.3	63.3	8.98	8.046	
2,100.0	2,100.0	2,092.7	2,091.9	4.6	4.6	79.70	13.4	73.7	75.2	66.1	9.13	8.240	
2,150.0	2,150.0	2,141.2	2,140.0	4.7	4.7	76.98	18.0	77.8	80.4	71.0	9.35	8.596	
2,165.3	2,165.3	2,156.1	2,154.7	4.7	4.7	75.90	19.5	79.2	82.1	72.7	9.42	8.720	
2,200.0	2,200.0	2,189.6	2,187.8	4.8	4.8	74.21	23.2	82.5	86.3	76.7	9.57	9.016	
2,263.8	2,263.7	2,251.0	2,248.5	5.0	5.0	71.78	30.7	89.2	94.7	84.8	9.86	9.609	
2,300.0	2,299.9	2,285.8	2,282.7	5.0	5.0	70.74	35.3	93.4	99.9	89.8	10.02	9.970	
2,362.2	2,362.0	2,345.3	2,341.1	5.2	5.2	69.42	44.0	101.2	109.3	99.0	10.29	10.616	
2,400.0	2,399.7	2,381.4	2,376.3	5.3	5.3	68.87	49.7	106.3	115.3	104.9	10.46	11.025	
2,460.6	2,460.0	2,439.0	2,432.4	5.4	5.5	68.29	59.5	115.2	125.6	114.8	10.74	11.694	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	2,499.1	2,476.2	2,468.5	5.5	5.6	68.09	66.2	121.2	132.6	121.6	10.92	12.140	
2,559.0	2,557.7	2,531.9	2,522.2	5.6	5.8	67.99	77.0	130.9	143.5	132.3	11.20	12.812	
2,600.0	2,598.2	2,570.3	2,559.1	5.7	6.0	68.04	84.9	138.0	151.4	140.0	11.39	13.285	
2,657.5	2,654.8	2,624.0	2,610.5	5.9	6.2	68.24	96.5	148.5	162.9	151.2	11.68	13.946	
2,700.0	2,696.6	2,663.5	2,648.1	6.0	6.4	68.47	105.5	156.6	171.8	159.9	11.90	14.438	
2,755.9	2,751.4	2,715.2	2,697.1	6.1	6.6	68.84	117.9	167.8	183.9	171.7	12.20	15.074	
2,800.0	2,794.4	2,756.2	2,735.6	6.2	6.8	69.19	128.1	177.0	193.8	181.3	12.44	15.573	
2,854.3	2,847.3	2,809.0	2,785.3	6.4	7.1	69.79	141.6	189.1	205.9	193.2	12.78	16.120	
2,888.8	2,880.6	2,842.6	2,816.8	6.5	7.2	70.26	150.1	196.8	213.5	200.5	12.99	16.432	
2,900.0	2,891.5	2,853.5	2,827.1	6.6	7.3	70.47	152.9	199.3	215.9	202.8	13.07	16.526	
2,952.7	2,942.5	2,904.9	2,875.3	6.7	7.6	71.39	165.9	211.0	227.4	214.0	13.42	16.944	
3,000.0	2,988.2	2,950.9	2,918.6	6.9	7.8	72.14	177.6	221.6	237.8	224.0	13.75	17.292	
3,051.2	3,037.6	3,000.7	2,965.4	7.1	8.1	72.89	190.3	233.0	249.0	234.9	14.12	17.639	
3,100.0	3,084.9	3,048.2	3,010.1	7.3	8.4	73.53	202.4	243.8	259.8	245.3	14.48	17.944	
3,149.6	3,132.8	3,096.5	3,055.5	7.5	8.7	74.14	214.7	254.9	270.7	255.9	14.85	18.230	
3,200.0	3,181.5	3,145.6	3,101.6	7.6	8.9	74.71	227.1	266.1	281.9	266.7	15.24	18.498	
3,248.0	3,228.0	3,192.4	3,145.5	7.8	9.2	75.21	239.0	276.8	292.6	277.0	15.62	18.732	
3,300.0	3,278.2	3,243.0	3,193.1	8.0	9.5	75.71	251.9	288.4	304.1	288.1	16.04	18.967	
3,346.4	3,323.2	3,288.2	3,235.6	8.2	9.8	76.13	263.4	298.8	314.5	298.1	16.42	19.159	
3,400.0	3,374.9	3,340.4	3,284.6	8.5	10.1	76.58	276.6	310.7	326.5	309.6	16.86	19.364	
3,444.9	3,418.3	3,384.0	3,325.6	8.6	10.4	76.93	287.7	320.7	336.5	319.3	17.24	19.521	
3,500.0	3,471.6	3,437.7	3,376.1	8.9	10.7	77.33	301.4	333.0	348.8	331.1	17.71	19.701	
3,543.3	3,513.5	3,479.9	3,415.7	9.1	11.0	77.63	312.1	342.6	358.5	340.5	18.08	19.830	
3,600.0	3,568.3	3,535.1	3,467.6	9.3	11.3	78.00	326.1	355.3	371.3	352.7	18.57	19.988	
3,641.7	3,608.7	3,575.7	3,505.7	9.5	11.6	78.25	336.4	364.6	380.6	361.7	18.94	20.093	
3,700.0	3,665.0	3,632.5	3,559.1	9.7	11.9	78.58	350.9	377.5	393.7	374.3	19.46	20.232	
3,740.1	3,703.8	3,671.6	3,595.8	9.9	12.2	78.80	360.8	386.5	402.7	382.9	19.82	20.319	
3,800.0	3,761.7	3,729.8	3,650.6	10.2	12.6	79.11	375.6	399.8	416.2	395.9	20.36	20.441	
3,838.6	3,799.0	3,765.9	3,684.5	10.4	12.8	79.30	384.8	408.1	424.9	404.2	20.70	20.525	
3,900.0	3,858.4	3,820.7	3,736.0	10.7	13.1	79.65	398.1	421.3	439.3	418.1	21.23	20.696	
3,937.0	3,894.2	3,853.6	3,766.8	10.8	13.3	79.90	405.7	429.5	448.3	426.8	21.54	20.811	
4,000.0	3,955.1	3,911.4	3,821.2	11.1	13.7	80.41	418.5	444.5	464.2	442.1	22.10	21.003	
4,035.4	3,989.3	3,945.6	3,853.3	11.3	13.9	80.71	426.1	453.5	473.1	450.7	22.43	21.094	
4,100.0	4,051.8	4,007.9	3,911.9	11.6	14.3	81.22	439.8	469.8	489.6	466.5	23.03	21.254	
4,133.8	4,084.5	4,040.6	3,942.6	11.7	14.5	81.47	447.0	478.3	498.2	474.8	23.35	21.332	
4,200.0	4,148.5	4,104.4	4,002.6	12.1	14.9	81.94	461.0	495.0	515.0	491.1	23.98	21.480	
4,232.3	4,179.7	4,135.6	4,031.9	12.2	15.1	82.16	467.9	503.2	523.3	499.0	24.29	21.548	
4,300.0	4,245.2	4,200.9	4,093.3	12.5	15.6	82.60	482.2	520.3	540.6	515.7	24.93	21.685	
4,330.7	4,274.9	4,230.5	4,121.1	12.7	15.8	82.79	488.7	528.1	548.5	523.2	25.22	21.743	
4,400.0	4,341.9	4,297.4	4,183.9	13.0	16.2	83.20	503.5	545.6	566.2	540.3	25.89	21.870	
4,429.1	4,370.0	4,325.5	4,210.4	13.1	16.4	83.37	509.6	552.9	573.7	547.5	26.17	21.921	
4,500.0	4,438.6	4,393.9	4,274.6	13.5	16.8	83.75	524.7	570.8	591.9	565.0	26.86	22.039	
4,527.5	4,465.2	4,420.5	4,299.6	13.6	17.0	83.89	530.5	577.8	599.0	571.8	27.12	22.083	
4,600.0	4,535.3	4,490.4	4,365.3	14.0	17.5	84.25	545.9	596.1	617.6	589.8	27.83	22.194	
4,626.0	4,560.4	4,515.5	4,388.9	14.1	17.7	84.37	551.4	602.7	624.3	596.2	28.08	22.231	
4,700.0	4,631.9	4,586.9	4,456.0	14.5	18.1	84.71	567.1	621.4	643.4	614.5	28.80	22.335	
4,724.4	4,655.5	4,610.5	4,478.1	14.6	18.3	84.82	572.3	627.6	649.6	620.6	29.04	22.368	
4,800.0	4,728.6	4,683.4	4,546.7	15.0	18.8	85.14	588.4	646.7	669.1	639.4	29.79	22.465	
4,822.8	4,750.7	4,705.5	4,567.4	15.1	18.9	85.23	593.2	652.4	675.0	645.0	30.01	22.493	
4,900.0	4,825.3	4,779.9	4,637.4	15.4	19.4	85.53	609.6	671.9	695.0	664.2	30.77	22.584	
4,921.2	4,845.9	4,800.4	4,656.6	15.6	19.6	85.61	614.1	677.3	700.5	669.5	30.98	22.608	
5,000.0	4,922.0	4,876.4	4,728.0	15.9	20.1	85.90	630.8	697.2	720.8	689.1	31.76	22.694	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	4,941.0	4,895.4	4,745.9	16.0	20.2	85.97	635.0	702.2	725.9	694.0	31.96	22.715	
5,100.0	5,018.7	4,972.9	4,818.7	16.4	20.7	86.24	652.0	722.5	746.7	713.9	32.76	22.796	
5,118.1	5,036.2	4,990.4	4,835.1	16.5	20.9	86.30	655.9	727.0	751.4	718.4	32.94	22.813	
5,200.0	5,115.4	5,069.4	4,909.4	16.9	21.4	86.56	673.3	747.7	772.6	738.8	33.75	22.890	
5,216.5	5,131.4	5,085.4	4,924.4	17.0	21.5	86.61	676.8	751.9	776.9	743.0	33.92	22.905	
5,300.0	5,212.1	5,165.9	5,000.1	17.4	22.1	86.86	694.5	773.0	798.5	763.8	34.75	22.977	
5,314.9	5,226.6	5,180.4	5,013.7	17.5	22.2	86.90	697.7	776.8	802.4	767.5	34.90	22.990	
5,400.0	5,308.8	5,262.4	5,090.8	17.9	22.7	87.14	715.7	798.3	824.5	788.7	35.75	23.059	
5,413.4	5,321.7	5,275.3	5,102.9	18.0	22.8	87.17	718.6	801.7	827.9	792.0	35.89	23.069	
5,500.0	5,405.5	5,358.9	5,181.5	18.4	23.4	87.40	736.9	823.5	850.4	813.7	36.76	23.135	
5,511.8	5,416.9	5,370.3	5,192.2	18.5	23.5	87.43	739.4	826.5	853.5	816.6	36.88	23.143	
5,600.0	5,502.2	5,455.4	5,272.1	18.9	24.0	87.64	758.2	848.8	876.4	838.6	37.77	23.206	
5,610.2	5,512.1	5,465.3	5,281.4	19.0	24.1	87.67	760.3	851.4	879.0	841.2	37.87	23.213	
5,700.0	5,598.9	5,567.0	5,377.2	19.4	24.7	87.94	782.3	877.5	902.0	863.2	38.83	23.231	
5,708.6	5,607.2	5,578.0	5,387.7	19.5	24.8	87.98	784.6	880.2	904.1	865.2	38.92	23.227	
5,745.8	5,643.2	5,625.6	5,432.9	19.7	25.1	88.15	794.0	891.5	912.8	873.5	39.33	23.209	
5,800.0	5,695.7	5,695.3	5,499.6	19.9	25.4	88.66	807.0	907.0	924.7	884.8	39.92	23.168	
5,807.1	5,702.6	5,704.4	5,508.4	19.9	25.4	88.73	808.7	908.9	926.2	886.2	39.98	23.165	
5,900.0	5,793.2	5,825.3	5,625.2	20.3	26.0	89.50	828.5	932.5	944.3	903.4	40.87	23.107	
5,905.5	5,798.6	5,832.4	5,632.2	20.3	26.0	89.54	829.6	933.8	945.3	904.3	40.91	23.104	
6,000.0	5,891.5	5,956.7	5,753.6	20.6	26.4	90.20	846.5	953.9	960.5	918.8	41.72	23.023	
6,003.9	5,895.4	5,961.9	5,758.7	20.6	26.5	90.22	847.1	954.7	961.1	919.3	41.75	23.020	
6,100.0	5,990.4	6,089.3	5,884.4	20.9	26.9	90.78	860.7	970.9	973.3	930.8	42.47	22.917	
6,102.3	5,992.7	6,092.5	5,887.5	20.9	26.9	90.79	861.0	971.2	973.5	931.1	42.49	22.914	
6,200.0	6,089.7	6,222.9	6,016.9	21.1	27.2	91.25	871.1	983.3	982.6	939.5	43.11	22.794	
6,200.8	6,090.4	6,223.9	6,017.9	21.1	27.2	91.26	871.2	983.3	982.7	939.6	43.11	22.793	
6,299.2	6,188.5	6,355.9	6,149.6	21.4	27.5	91.62	877.5	990.9	988.4	944.7	43.63	22.654	
6,300.0	6,189.3	6,357.0	6,150.6	21.4	27.5	91.62	877.6	990.9	988.4	944.8	43.63	22.653	
6,397.6	6,286.8	6,488.2	6,281.8	21.5	27.6	91.88	880.0	993.8	990.6	946.6	44.03	22.496	
6,400.0	6,289.2	6,491.4	6,285.0	21.5	27.6	91.88	880.0	993.8	990.6	946.6	44.04	22.492	
6,484.6	6,373.8	6,579.2	6,372.8	21.6	27.7	92.21	880.0	993.8	990.7	946.4	44.28	22.372	
6,496.0	6,385.3	6,590.7	6,384.3	21.7	27.7	92.21	880.0	993.8	990.7	946.4	44.31	22.358	
6,500.0	6,389.2	6,594.6	6,388.2	21.7	27.7	92.21	880.0	993.8	990.7	946.3	44.32	22.353	
6,514.6	6,403.8	6,609.2	6,402.8	21.7	27.7	92.21	880.0	993.8	990.7	946.3	44.36	22.334	
6,550.0	6,439.2	6,643.3	6,436.9	21.7	27.8	-87.82	879.5	993.8	990.6	946.2	44.43	22.299	
6,594.5	6,483.5	6,685.5	6,479.0	21.7	27.8	-87.86	876.8	993.8	990.6	946.2	44.44	22.290	
6,600.0	6,489.0	6,690.8	6,484.3	21.7	27.8	-87.87	876.3	993.8	990.6	946.2	44.44	22.289	
6,650.0	6,538.4	6,738.4	6,531.4	21.7	27.8	-87.92	869.9	993.8	990.6	946.2	44.38	22.319	
6,692.9	6,580.3	6,779.2	6,571.5	21.6	27.7	-87.98	862.0	993.8	990.5	946.3	44.27	22.376	
6,700.0	6,587.1	6,786.0	6,578.1	21.6	27.7	-87.99	860.4	993.8	990.5	946.3	44.25	22.387	
6,750.0	6,635.0	6,833.7	6,624.1	21.5	27.7	-88.06	847.8	993.8	990.5	946.5	44.04	22.493	
6,791.3	6,673.7	6,873.2	6,661.4	21.4	27.6	-88.13	835.1	993.8	990.5	946.6	43.81	22.610	
6,800.0	6,681.7	6,881.5	6,669.2	21.4	27.6	-88.15	832.1	993.8	990.4	946.7	43.76	22.636	
6,850.0	6,727.1	6,929.4	6,713.3	21.2	27.5	-88.24	813.4	993.8	990.4	947.0	43.41	22.814	
6,889.7	6,762.0	6,967.5	6,747.4	21.1	27.3	-88.32	796.5	993.8	990.4	947.3	43.10	22.980	
6,900.0	6,770.9	6,977.4	6,756.1	21.0	27.3	-88.35	791.8	993.8	990.3	947.3	43.01	23.025	
6,950.0	6,812.9	7,025.5	6,797.5	20.8	27.1	-88.46	767.3	993.8	990.3	947.7	42.56	23.267	
6,988.2	6,843.6	7,062.3	6,828.0	20.6	27.0	-88.54	746.7	993.8	990.3	948.1	42.19	23.472	
7,000.0	6,852.9	7,073.7	6,837.2	20.6	27.0	-88.57	739.9	993.8	990.2	948.2	42.07	23.538	
7,050.0	6,890.7	7,122.1	6,875.1	20.3	26.8	-88.70	709.9	993.8	990.2	948.6	41.55	23.832	
7,086.6	6,916.9	7,157.6	6,901.6	20.1	26.6	-88.79	686.3	993.8	990.2	949.0	41.15	24.061	
7,100.0	6,926.2	7,170.6	6,911.0	20.1	26.5	-88.83	677.3	993.8	990.1	949.1	41.00	24.147	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - OLSON 30R-203 - ORIGINAL WELLBORE - PROPOSAL #2												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,150.0	6,959.1	7,219.2	6,944.7	19.8	26.3	-88.96	642.3	993.8	990.1	949.6	40.45	24.476	
7,185.0	6,980.5	7,253.4	6,966.9	19.6	26.1	-89.06	616.3	993.8	990.1	950.0	40.06	24.712	
7,200.0	6,989.3	7,268.0	6,976.1	19.5	26.1	-89.10	604.9	993.8	990.1	950.2	39.90	24.814	
7,250.0	7,016.6	7,317.0	7,004.9	19.3	25.8	-89.25	565.3	993.8	990.0	950.7	39.36	25.152	
7,283.4	7,033.3	7,350.0	7,022.7	19.1	25.7	-89.35	537.5	993.8	990.0	951.0	39.01	25.375	
7,300.0	7,041.0	7,366.1	7,031.0	19.1	25.6	-89.40	523.7	993.8	990.0	951.1	38.85	25.483	
7,350.0	7,062.2	7,415.4	7,054.3	18.8	25.3	-89.55	480.3	993.8	990.0	951.6	38.37	25.797	
7,381.9	7,074.1	7,446.9	7,067.6	18.7	25.2	-89.65	451.7	993.8	989.9	951.8	38.10	25.983	
7,400.0	7,080.3	7,464.9	7,074.6	18.7	25.1	-89.71	435.1	993.8	989.9	952.0	37.95	26.085	
7,450.0	7,095.0	7,514.6	7,091.8	18.5	24.8	-89.86	388.6	993.8	989.9	952.3	37.59	26.338	
7,480.3	7,102.4	7,544.8	7,100.7	18.4	24.7	-89.96	359.7	993.8	989.9	952.5	37.40	26.468	
7,492.3	7,104.9	7,556.8	7,103.9	18.4	24.6	-90.00	348.1	993.8	989.9	952.6	37.33	26.517	
7,500.0	7,106.4	7,564.4	7,105.8	18.4	24.6	-90.02	340.7	993.8	989.9	952.6	37.29	26.546	
7,550.0	7,114.4	7,614.5	7,116.5	18.3	24.3	-90.18	291.8	993.8	989.9	952.9	37.07	26.702	
7,578.7	7,117.4	7,643.3	7,121.0	18.3	24.2	-90.27	263.4	993.8	989.9	953.0	36.99	26.762	
7,600.0	7,118.9	7,664.7	7,123.7	18.3	24.1	-90.34	242.1	993.8	989.9	953.0	36.94	26.798	
7,641.3	7,120.0	7,706.4	7,127.1	18.3	24.0	-90.47	200.6	993.8	990.0	953.1	36.89	26.832	
7,677.1	7,119.9	7,742.6	7,128.0	18.3	23.8	-90.53	164.4	993.8	990.0	953.1	36.92	26.816	
7,700.0	7,119.9	7,765.5	7,127.9	18.4	23.7	-90.52	141.5	993.8	990.0	953.1	36.89	26.834	
7,775.6	7,119.7	7,841.1	7,127.6	18.6	23.5	-90.51	65.9	993.8	990.0	953.1	36.84	26.870	
7,800.0	7,119.6	7,865.5	7,127.4	18.6	23.4	-90.51	41.5	993.8	990.0	953.2	36.81	26.894	
7,874.0	7,119.4	7,939.5	7,127.1	19.0	23.3	-90.50	-32.5	993.8	990.0	953.0	36.93	26.809	
7,900.0	7,119.4	7,965.5	7,127.0	19.1	23.3	-90.50	-58.5	993.8	990.0	953.0	36.99	26.762	
7,972.4	7,119.2	8,038.0	7,126.7	19.6	23.3	-90.49	-131.0	993.8	990.0	952.6	37.38	26.484	
8,000.0	7,119.1	8,065.5	7,126.5	19.7	23.4	-90.49	-158.5	993.8	990.0	952.4	37.55	26.361	
8,070.8	7,118.9	8,136.4	7,126.2	20.3	23.5	-90.48	-229.4	993.8	990.0	951.8	38.19	25.921	
8,100.0	7,118.9	8,165.5	7,126.1	20.5	23.6	-90.48	-258.5	993.8	990.0	951.5	38.48	25.725	
8,169.3	7,118.7	8,234.8	7,125.8	21.2	23.9	-90.47	-327.8	993.8	990.0	950.6	39.34	25.162	
8,200.0	7,118.6	8,265.5	7,125.6	21.5	24.1	-90.46	-358.5	993.8	990.0	950.2	39.76	24.901	
8,267.7	7,118.5	8,333.2	7,125.3	22.2	24.4	-90.46	-426.2	993.8	990.0	949.2	40.81	24.258	
8,300.0	7,118.4	8,365.5	7,125.2	22.5	24.6	-90.45	-458.5	993.8	990.0	948.6	41.34	23.945	
8,366.1	7,118.2	8,431.7	7,124.9	23.3	25.1	-90.44	-524.7	993.8	990.0	947.4	42.56	23.259	
8,400.0	7,118.1	8,465.5	7,124.7	23.7	25.3	-90.44	-558.5	993.8	990.0	946.7	43.22	22.907	
8,464.5	7,118.0	8,530.1	7,124.4	24.5	25.8	-90.43	-623.1	993.8	990.0	945.4	44.57	22.213	
8,500.0	7,117.9	8,565.5	7,124.3	25.0	26.1	-90.43	-658.5	993.8	990.0	944.6	45.34	21.835	
8,563.0	7,117.7	8,628.5	7,124.0	25.8	26.6	-90.42	-721.5	993.8	990.0	943.2	46.80	21.155	
8,600.0	7,117.6	8,665.5	7,123.8	26.3	27.0	-90.42	-758.5	993.8	990.0	942.3	47.68	20.763	
8,661.4	7,117.5	8,726.9	7,123.6	27.2	27.5	-90.41	-819.9	993.8	990.0	940.7	49.22	20.114	
8,700.0	7,117.4	8,765.5	7,123.4	27.7	27.9	-90.40	-858.5	993.8	990.0	939.8	50.21	19.717	
8,759.8	7,117.2	8,825.3	7,123.1	28.6	28.6	-90.40	-918.3	993.8	990.0	938.2	51.80	19.110	
8,800.0	7,117.1	8,865.5	7,122.9	29.2	29.0	-90.39	-958.5	993.8	990.0	937.1	52.90	18.714	
8,858.2	7,117.0	8,923.8	7,122.7	30.1	29.6	-90.39	-1,016.8	993.8	990.0	935.4	54.53	18.153	
8,900.0	7,116.9	8,965.5	7,122.5	30.7	30.1	-90.38	-1,058.5	993.8	990.0	934.2	55.73	17.764	
8,956.7	7,116.8	9,022.2	7,122.2	31.6	30.8	-90.37	-1,115.2	993.8	990.0	932.6	57.39	17.251	
9,000.0	7,116.7	9,065.5	7,122.0	32.3	31.3	-90.37	-1,158.5	993.8	990.0	931.3	58.67	16.872	
9,055.1	7,116.5	9,120.6	7,121.8	33.2	32.0	-90.36	-1,213.6	993.8	990.0	929.6	60.34	16.405	
9,100.0	7,116.4	9,165.5	7,121.6	33.9	32.6	-90.36	-1,258.5	993.8	990.0	928.2	61.72	16.039	
9,153.5	7,116.3	9,219.0	7,121.3	34.8	33.3	-90.35	-1,312.0	993.8	990.0	926.6	63.39	15.617	
9,200.0	7,116.2	9,265.5	7,121.1	35.5	33.9	-90.35	-1,358.5	993.8	990.0	925.1	64.85	15.264	
9,251.9	7,116.0	9,317.5	7,120.9	36.4	34.6	-90.34	-1,410.5	993.8	990.0	923.4	66.51	14.884	
9,300.0	7,115.9	9,365.5	7,120.7	37.2	35.2	-90.33	-1,458.5	993.8	990.0	921.9	68.06	14.545	
9,350.4	7,115.8	9,415.9	7,120.4	38.0	36.0	-90.33	-1,508.9	993.8	990.0	920.3	69.70	14.202	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NW NE SEC 30 T4N R67W 6th P.M. - OLSON 30R-203 - 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	
9,400.0	7,115.7	9,465.5	7,120.2	38.9	36.7	-90.32	-1,558.5	993.8	990.0	918.6	71.33	13.878	
9,448.8	7,115.5	9,514.3	7,120.0	39.7	37.4	-90.32	-1,607.3	993.8	990.0	917.0	72.95	13.570	
9,500.0	7,115.4	9,565.5	7,119.8	40.6	38.1	-90.31	-1,658.5	993.8	990.0	915.3	74.66	13.259	
9,547.2	7,115.3	9,612.7	7,119.6	41.4	38.8	-90.30	-1,705.7	993.8	990.0	913.7	76.25	12.983	
9,600.0	7,115.2	9,665.5	7,119.3	42.3	39.6	-90.30	-1,758.5	993.8	990.0	911.9	78.04	12.686	
9,645.6	7,115.1	9,711.2	7,119.1	43.1	40.3	-90.29	-1,804.2	993.8	990.0	910.4	79.59	12.438	
9,700.0	7,114.9	9,765.5	7,118.9	44.0	41.1	-90.29	-1,858.5	993.8	990.0	908.5	81.45	12.154	
9,744.1	7,114.8	9,809.6	7,118.7	44.8	41.8	-90.28	-1,902.6	993.8	990.0	907.0	82.97	11.931	
9,797.0	7,114.7	9,862.5	7,118.4	45.7	42.6	-90.28	-1,955.5	993.8	990.0	905.2	84.80	11.674	
9,800.0	7,114.7	9,865.5	7,118.4	45.8	42.7	-90.28	-1,958.5	993.8	990.0	905.0	84.91	11.659	
9,842.5	7,114.6	9,908.0	7,118.2	46.5	43.4	-90.27	-2,001.0	993.8	990.0	903.6	86.39	11.460	
9,900.0	7,114.4	9,965.5	7,118.0	47.6	44.3	-90.26	-2,058.5	993.8	990.0	901.6	88.39	11.199	
9,940.9	7,114.3	10,006.4	7,117.8	48.3	44.9	-90.26	-2,099.4	993.8	990.0	900.1	89.83	11.020	
10,000.0	7,114.2	10,065.5	7,117.5	49.3	45.9	-90.25	-2,158.5	993.8	990.0	898.0	91.91	10.771	
10,039.3	7,114.1	10,104.9	7,117.3	50.0	46.5	-90.25	-2,197.8	993.8	990.0	896.7	93.30	10.611	
10,100.0	7,113.9	10,165.5	7,117.1	51.1	47.5	-90.24	-2,258.5	993.8	990.0	894.5	95.45	10.371	
10,137.8	7,113.8	10,203.3	7,116.9	51.8	48.1	-90.24	-2,296.3	993.9	990.0	893.2	96.79	10.228	
10,200.0	7,113.7	10,265.5	7,116.6	52.9	49.2	-90.23	-2,358.5	993.9	990.0	890.9	99.01	9.998	
10,236.2	7,113.6	10,301.7	7,116.5	53.6	49.8	-90.22	-2,394.7	993.9	990.0	889.6	100.31	9.869	
10,300.0	7,113.4	10,365.5	7,116.2	54.7	50.8	-90.22	-2,458.5	993.9	990.0	887.4	102.60	9.649	
10,334.6	7,113.3	10,400.1	7,116.0	55.4	51.4	-90.21	-2,493.1	993.9	990.0	886.1	103.84	9.533	
10,400.0	7,113.2	10,465.5	7,115.7	56.5	52.5	-90.21	-2,558.5	993.9	990.0	883.8	106.20	9.322	
10,433.0	7,113.1	10,498.6	7,115.6	57.1	53.1	-90.20	-2,591.5	993.9	990.0	882.6	107.39	9.218	
10,500.0	7,112.9	10,565.5	7,115.3	58.4	54.2	-90.19	-2,658.5	993.9	990.0	880.1	109.82	9.015	
10,531.5	7,112.8	10,597.0	7,115.1	58.9	54.8	-90.19	-2,690.0	993.9	990.0	879.0	110.96	8.922	
10,600.0	7,112.7	10,665.5	7,114.8	60.2	55.9	-90.18	-2,758.5	993.9	990.0	876.5	113.45	8.726	
10,629.9	7,112.6	10,695.4	7,114.7	60.7	56.5	-90.18	-2,788.4	993.9	990.0	875.4	114.54	8.643	
10,700.0	7,112.4	10,765.5	7,114.4	62.0	57.7	-90.17	-2,858.5	993.9	990.0	872.9	117.10	8.454	
10,728.3	7,112.3	10,793.8	7,114.3	62.5	58.2	-90.17	-2,886.8	993.9	990.0	871.8	118.13	8.380	
10,800.0	7,112.2	10,865.5	7,113.9	63.9	59.4	-90.16	-2,958.5	993.9	990.0	869.2	120.76	8.198	
10,826.7	7,112.1	10,892.3	7,113.8	64.4	59.9	-90.16	-2,985.2	993.9	990.0	868.2	121.74	8.132	
10,900.0	7,111.9	10,965.5	7,113.5	65.7	61.2	-90.15	-3,058.5	993.9	990.0	865.5	124.43	7.956	
10,925.2	7,111.8	10,990.7	7,113.4	66.2	61.6	-90.15	-3,083.7	993.9	990.0	864.6	125.35	7.897	
11,000.0	7,111.7	11,065.5	7,113.0	67.6	62.9	-90.14	-3,158.5	993.9	990.0	861.9	128.11	7.728	
11,023.6	7,111.6	11,089.1	7,112.9	68.0	63.3	-90.14	-3,182.1	993.9	990.0	861.0	128.98	7.675	
11,100.0	7,111.4	11,165.5	7,112.6	69.4	64.7	-90.13	-3,258.5	993.9	990.0	858.2	131.80	7.511	
11,122.0	7,111.3	11,187.5	7,112.5	69.8	65.1	-90.12	-3,280.5	993.9	990.0	857.4	132.61	7.465	
11,200.0	7,111.2	11,265.5	7,112.2	71.3	66.5	-90.12	-3,358.5	993.9	990.0	854.5	135.49	7.306	
11,220.4	7,111.1	11,286.0	7,112.1	71.6	66.8	-90.11	-3,378.9	993.9	990.0	853.7	136.25	7.266	
11,300.0	7,110.9	11,365.5	7,111.7	73.1	68.3	-90.10	-3,458.5	993.9	990.0	850.8	139.20	7.112	
11,318.9	7,110.9	11,384.4	7,111.6	73.5	68.6	-90.10	-3,477.4	993.9	990.0	850.1	139.90	7.076	
11,400.0	7,110.6	11,465.5	7,111.3	75.0	70.0	-90.09	-3,558.5	993.9	990.0	847.1	142.91	6.927	
11,417.3	7,110.6	11,482.8	7,111.2	75.3	70.4	-90.09	-3,575.8	993.9	990.0	846.4	143.56	6.896	
11,500.0	7,110.4	11,565.5	7,110.8	76.8	71.8	-90.08	-3,658.5	993.9	990.0	843.3	146.63	6.751	
11,515.7	7,110.4	11,581.2	7,110.7	77.1	72.1	-90.08	-3,674.2	993.9	990.0	842.7	147.22	6.724	
11,600.0	7,110.1	11,665.5	7,110.4	78.7	73.7	-90.07	-3,758.5	993.9	990.0	839.6	150.36	6.584	
11,614.1	7,110.1	11,679.7	7,110.3	79.0	73.9	-90.07	-3,772.6	993.9	990.0	839.1	150.89	6.561	
11,655.0	7,110.0	11,720.5	7,110.1	79.7	74.7	-90.06	-3,813.5	993.9	990.0	837.6	152.41	6.495 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	91.62	-2.5	90.1	90.2				
98.4	98.4	97.4	97.4	0.1	0.1	91.62	-2.5	90.1	90.1	90.0	0.17	533.182	
100.0	100.0	99.0	99.0	0.1	0.1	91.62	-2.5	90.1	90.1	90.0	0.17	523.482	
196.8	196.8	195.8	195.8	0.3	0.3	91.62	-2.5	90.1	90.1	89.5	0.61	148.708	
200.0	200.0	199.0	199.0	0.3	0.3	91.62	-2.5	90.1	90.1	89.5	0.62	145.314	
295.3	295.3	294.3	294.3	0.5	0.5	91.62	-2.5	90.1	90.1	89.1	1.05	85.964	
300.0	300.0	299.0	299.0	0.5	0.5	91.62	-2.5	90.1	90.1	89.1	1.07	84.258	
393.7	393.7	392.7	392.7	0.7	0.7	91.62	-2.5	90.1	90.1	88.7	1.49	60.456	
400.0	400.0	399.0	399.0	0.8	0.8	91.62	-2.5	90.1	90.1	88.6	1.52	59.329	
492.1	492.1	491.1	491.1	1.0	1.0	91.62	-2.5	90.1	90.1	88.2	1.93	46.622	
500.0	500.0	499.0	499.0	1.0	1.0	91.62	-2.5	90.1	90.1	88.2	1.97	45.784	
590.5	590.5	589.5	589.5	1.2	1.2	91.62	-2.5	90.1	90.1	87.8	2.38	37.940	
600.0	600.0	599.0	599.0	1.2	1.2	91.62	-2.5	90.1	90.1	87.7	2.42	37.274	
689.0	689.0	688.0	688.0	1.4	1.4	91.62	-2.5	90.1	90.1	87.3	2.82	31.984	
700.0	700.0	699.0	699.0	1.4	1.4	91.62	-2.5	90.1	90.1	87.3	2.87	31.432	
787.4	787.4	786.4	786.4	1.6	1.6	91.62	-2.5	90.1	90.1	86.9	3.26	27.644	
800.0	800.0	799.0	799.0	1.7	1.7	91.62	-2.5	90.1	90.1	86.8	3.32	27.173	
885.8	885.8	884.8	884.8	1.9	1.9	91.62	-2.5	90.1	90.1	86.4	3.70	24.342	
900.0	900.0	899.0	899.0	1.9	1.9	91.62	-2.5	90.1	90.1	86.4	3.77	23.930	
984.2	984.2	983.2	983.2	2.1	2.1	91.62	-2.5	90.1	90.1	86.0	4.15	21.744	
1,000.0	1,000.0	999.0	999.0	2.1	2.1	91.62	-2.5	90.1	90.1	85.9	4.22	21.379	
1,082.7	1,082.7	1,081.7	1,081.7	2.3	2.3	91.62	-2.5	90.1	90.1	85.6	4.59	19.647	
1,100.0	1,100.0	1,099.0	1,099.0	2.3	2.3	91.62	-2.5	90.1	90.1	85.5	4.67	19.319	
1,181.1	1,181.1	1,180.1	1,180.1	2.5	2.5	91.62	-2.5	90.1	90.1	85.1	5.03	17.919	
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	91.62	-2.5	90.1	90.1	85.0	5.12	17.622	
1,279.5	1,279.5	1,278.5	1,278.5	2.7	2.7	91.62	-2.5	90.1	90.1	84.7	5.47	16.471	
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	91.62	-2.5	90.1	90.1	84.6	5.57	16.198	
1,377.9	1,377.9	1,376.9	1,376.9	3.0	3.0	91.62	-2.5	90.1	90.1	84.2	5.92	15.239	
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	91.62	-2.5	90.1	90.1	84.1	6.01	14.988	
1,476.4	1,476.4	1,475.4	1,475.4	3.2	3.2	91.62	-2.5	90.1	90.1	83.8	6.36	14.178	
1,500.0	1,500.0	1,499.0	1,499.0	3.2	3.2	91.62	-2.5	90.1	90.1	83.7	6.46	13.945	
1,538.2	1,538.2	1,537.2	1,537.2	3.3	3.3	91.62	-2.5	90.1	90.1	83.5	6.64	13.584 CC	
1,574.8	1,574.8	1,573.2	1,573.2	3.4	3.4	91.59	-2.5	90.2	90.2	83.4	6.80	13.273 ES	
1,600.0	1,600.0	1,597.7	1,597.7	3.5	3.4	91.48	-2.3	90.4	90.5	83.6	6.91	13.100	
1,673.2	1,673.2	1,669.0	1,669.0	3.6	3.6	90.78	-1.2	92.2	92.3	85.1	7.22	12.774	
1,700.0	1,700.0	1,695.1	1,695.0	3.7	3.7	90.38	-0.6	93.2	93.3	86.0	7.34	12.716	
1,771.6	1,771.6	1,764.6	1,764.4	3.8	3.8	89.01	1.7	96.9	97.2	89.5	7.65	12.701	
1,800.0	1,800.0	1,792.0	1,791.8	3.9	3.9	88.36	2.8	98.8	99.1	91.3	7.77	12.751	
1,870.1	1,870.1	1,859.7	1,859.1	4.1	4.0	86.57	6.3	104.3	105.0	96.9	8.08	12.998	
1,900.0	1,900.0	1,888.5	1,887.7	4.1	4.1	85.74	8.0	107.1	108.0	99.8	8.21	13.156	
1,968.5	1,968.5	1,954.1	1,952.8	4.3	4.3	83.79	12.4	114.3	115.9	107.4	8.51	13.625	
2,000.0	2,000.0	1,984.2	1,982.5	4.4	4.3	82.88	14.7	118.0	120.1	111.4	8.64	13.891	
2,066.9	2,066.9	2,047.7	2,045.2	4.5	4.5	80.96	20.2	126.8	130.0	121.1	8.94	14.546	
2,100.0	2,100.0	2,078.9	2,075.9	4.6	4.6	80.04	23.1	131.5	135.5	126.4	9.08	14.915	
2,150.0	2,150.0	2,125.8	2,121.9	4.7	4.7	78.69	27.8	139.1	144.4	135.1	9.30	15.525	
2,165.3	2,165.3	2,140.1	2,136.0	4.7	4.8	78.00	29.4	141.6	147.4	138.0	9.37	15.723	
2,200.0	2,200.0	2,172.5	2,167.6	4.8	4.9	77.12	32.9	147.4	154.1	144.6	9.52	16.184	
2,263.8	2,263.7	2,231.6	2,225.2	5.0	5.1	75.90	40.0	158.7	167.4	157.6	9.81	17.071	
2,300.0	2,299.9	2,265.0	2,257.6	5.0	5.2	75.40	44.2	165.6	175.3	165.4	9.97	17.592	
2,362.2	2,362.0	2,322.1	2,312.8	5.2	5.4	74.81	51.9	178.0	189.6	179.4	10.24	18.512	
2,400.0	2,399.7	2,356.6	2,346.0	5.3	5.5	74.60	56.9	186.0	198.7	188.3	10.41	19.082	
2,460.6	2,460.0	2,411.5	2,398.6	5.4	5.7	74.44	65.2	199.4	213.8	203.1	10.68	20.012	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	2,499.1	2,446.9	2,432.3	5.5	5.9	74.44	70.8	208.5	224.1	213.2	10.87	20.620	
2,559.0	2,557.7	2,500.0	2,482.7	5.6	6.2	74.56	79.7	222.8	240.0	228.9	11.14	21.538	
2,600.0	2,598.2	2,536.0	2,516.7	5.7	6.3	74.70	85.9	232.9	251.5	240.1	11.34	22.175	
2,657.5	2,654.8	2,586.6	2,564.1	5.9	6.6	74.98	95.2	247.8	268.1	256.5	11.62	23.065	
2,700.0	2,696.6	2,623.7	2,598.8	6.0	6.8	75.23	102.2	259.2	280.9	269.0	11.84	23.722	
2,755.9	2,751.4	2,672.1	2,643.7	6.1	7.1	75.60	111.7	274.6	298.2	286.0	12.14	24.564	
2,800.0	2,794.4	2,710.0	2,678.6	6.2	7.3	75.92	119.5	287.0	312.3	299.9	12.38	25.232	
2,854.3	2,847.3	2,756.3	2,720.9	6.4	7.6	76.33	129.2	302.8	330.2	317.5	12.69	26.015	
2,888.8	2,880.6	2,786.3	2,748.3	6.5	7.9	76.61	135.8	313.4	341.9	329.0	12.90	26.506	
2,900.0	2,891.5	2,796.8	2,757.9	6.6	7.9	76.79	138.1	317.1	345.7	332.7	12.97	26.648	
2,952.7	2,942.5	2,846.2	2,802.8	6.7	8.3	77.61	148.9	334.5	363.7	350.3	13.33	27.286	
3,000.0	2,988.2	2,890.4	2,843.0	6.9	8.6	78.28	158.5	350.1	379.8	366.2	13.65	27.831	
3,051.2	3,037.6	2,938.3	2,886.6	7.1	8.9	78.95	169.0	367.0	397.3	383.3	14.01	28.358	
3,100.0	3,084.9	2,984.0	2,928.1	7.3	9.3	79.53	179.0	383.1	414.1	399.8	14.36	28.832	
3,149.6	3,132.8	3,030.4	2,970.4	7.5	9.6	80.07	189.2	399.5	431.2	416.5	14.73	29.264	
3,200.0	3,181.5	3,077.6	3,013.3	7.6	10.0	80.58	199.5	416.2	448.6	433.5	15.12	29.675	
3,248.0	3,228.0	3,122.5	3,054.1	7.8	10.3	81.03	209.3	432.0	465.2	449.7	15.49	30.027	
3,300.0	3,278.2	3,171.1	3,098.4	8.0	10.7	81.49	219.9	449.2	483.1	467.2	15.90	30.383	
3,346.4	3,323.2	3,214.6	3,137.9	8.2	11.1	81.86	229.4	464.5	499.2	483.0	16.28	30.671	
3,400.0	3,374.9	3,264.7	3,183.5	8.5	11.4	82.27	240.4	482.2	517.8	501.1	16.71	30.979	
3,444.9	3,418.3	3,306.7	3,221.7	8.6	11.8	82.59	249.6	497.1	533.4	516.3	17.09	31.213	
3,500.0	3,471.6	3,358.3	3,268.7	8.9	12.2	82.96	260.9	515.3	552.5	535.0	17.55	31.479	
3,543.3	3,513.5	3,398.8	3,305.5	9.1	12.5	83.23	269.7	529.6	567.6	549.7	17.92	31.670	
3,600.0	3,568.3	3,451.9	3,353.8	9.3	12.9	83.56	281.3	548.3	587.3	568.9	18.41	31.900	
3,641.7	3,608.7	3,490.9	3,389.3	9.5	13.3	83.79	289.9	562.1	601.9	583.1	18.78	32.055	
3,700.0	3,665.0	3,545.5	3,438.9	9.7	13.7	84.10	301.8	581.3	622.2	602.9	19.29	32.256	
3,740.1	3,703.8	3,583.0	3,473.1	9.9	14.0	84.30	310.0	594.6	636.2	616.5	19.65	32.381	
3,800.0	3,761.7	3,639.0	3,524.0	10.2	14.5	84.58	322.3	614.4	657.1	636.9	20.18	32.556	
3,838.6	3,799.0	3,675.1	3,556.9	10.4	14.8	84.75	330.2	627.1	670.6	650.0	20.53	32.658	
3,900.0	3,858.4	3,732.6	3,609.2	10.7	15.2	85.01	342.7	647.4	692.0	670.9	21.09	32.811	
3,937.0	3,894.2	3,767.2	3,640.7	10.8	15.5	85.16	350.3	659.6	704.9	683.5	21.43	32.894	
4,000.0	3,955.1	3,826.2	3,694.3	11.1	16.0	85.40	363.2	680.4	727.0	705.0	22.01	33.027	
4,035.4	3,989.3	3,859.4	3,724.5	11.3	16.3	85.53	370.4	692.1	739.4	717.0	22.34	33.095	
4,100.0	4,051.8	3,919.8	3,779.4	11.6	16.8	85.76	383.7	713.4	762.0	739.0	22.94	33.211	
4,133.8	4,084.5	3,951.5	3,808.3	11.7	17.0	85.87	390.6	724.6	773.8	750.6	23.26	33.266	
4,200.0	4,148.5	4,013.4	3,864.6	12.1	17.6	86.08	404.1	746.5	797.0	773.1	23.88	33.368	
4,232.3	4,179.7	4,043.6	3,892.0	12.2	17.8	86.18	410.7	757.1	808.3	784.1	24.19	33.413	
4,300.0	4,245.2	4,106.9	3,949.7	12.5	18.3	86.38	424.6	779.5	832.0	807.2	24.83	33.503	
4,330.7	4,274.9	4,135.7	3,975.8	12.7	18.6	86.46	430.9	789.6	842.8	817.6	25.13	33.539	
4,400.0	4,341.9	4,200.5	4,034.8	13.0	19.1	86.65	445.1	812.5	867.1	841.3	25.79	33.618	
4,429.1	4,370.0	4,227.8	4,059.6	13.1	19.3	86.73	451.0	822.2	877.3	851.2	26.07	33.648	
4,500.0	4,438.6	4,294.1	4,120.0	13.5	19.9	86.90	465.5	845.6	902.1	875.4	26.76	33.717	
4,527.5	4,465.2	4,319.9	4,143.4	13.6	20.1	86.97	471.2	854.7	911.8	884.8	27.02	33.741	
4,600.0	4,535.3	4,387.7	4,205.1	14.0	20.7	87.13	486.0	878.6	937.2	909.5	27.73	33.802	
4,626.0	4,560.4	4,412.0	4,227.2	14.1	20.9	87.19	491.3	887.2	946.3	918.3	27.98	33.821	
4,700.0	4,631.9	4,481.3	4,290.2	14.5	21.5	87.35	506.4	911.6	972.3	943.6	28.70	33.875	
4,724.4	4,655.5	4,504.1	4,311.0	14.6	21.7	87.40	511.4	919.7	980.9	951.9	28.94	33.891	
4,800.0	4,728.6	4,574.8	4,375.4	15.0	22.3	87.55	526.9	944.7	1,007.4	977.7	29.68	33.937	
4,822.8	4,750.7	4,596.2	4,394.8	15.1	22.4	87.60	531.6	952.2	1,015.4	985.5	29.91	33.951	
4,900.0	4,825.3	4,668.4	4,460.5	15.4	23.1	87.74	547.4	977.7	1,042.5	1,011.9	30.67	33.992	
4,921.2	4,845.9	4,688.3	4,478.6	15.6	23.2	87.78	551.7	984.7	1,050.0	1,019.1	30.88	34.002	
5,000.0	4,922.0	4,762.0	4,545.6	15.9	23.8	87.91	567.8	1,010.7	1,077.6	1,046.0	31.66	34.038	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	4,941.0	4,780.4	4,562.4	16.0	24.0	87.95	571.9	1,017.2	1,084.6	1,052.7	31.86	34.047	
5,100.0	5,018.7	4,855.6	4,630.7	16.4	24.6	88.08	588.3	1,043.8	1,112.8	1,080.1	32.65	34.078	
5,118.1	5,036.2	4,872.5	4,646.2	16.5	24.8	88.11	592.0	1,049.7	1,119.1	1,086.3	32.83	34.085	
5,200.0	5,115.4	4,949.2	4,715.9	16.9	25.4	88.23	608.8	1,076.8	1,147.9	1,114.3	33.65	34.113	
5,216.5	5,131.4	4,964.6	4,729.9	17.0	25.6	88.26	612.2	1,082.2	1,153.7	1,119.9	33.82	34.118	
5,300.0	5,212.1	5,042.7	4,801.0	17.4	26.2	88.38	629.2	1,109.8	1,183.1	1,148.4	34.65	34.142	
5,314.9	5,226.6	5,056.7	4,813.7	17.5	26.4	88.40	632.3	1,114.8	1,188.3	1,153.5	34.80	34.146	
5,400.0	5,308.8	5,136.3	4,886.1	17.9	27.0	88.51	649.7	1,142.8	1,218.2	1,182.6	35.65	34.168	
5,413.4	5,321.7	5,148.8	4,897.5	18.0	27.1	88.53	652.4	1,147.3	1,222.9	1,187.1	35.79	34.171	
5,500.0	5,405.5	5,229.9	4,971.3	18.4	27.8	88.64	670.2	1,175.9	1,253.4	1,216.7	36.66	34.190	
5,511.8	5,416.9	5,240.9	4,981.3	18.5	27.9	88.66	672.6	1,179.8	1,257.5	1,220.8	36.78	34.192	
5,600.0	5,502.2	5,323.5	5,056.4	18.9	28.6	88.76	690.6	1,208.9	1,288.5	1,250.9	37.67	34.208	
5,610.2	5,512.1	5,333.0	5,065.1	19.0	28.7	88.78	692.7	1,212.3	1,292.1	1,254.4	37.77	34.210	
5,700.0	5,598.9	5,417.0	5,141.5	19.4	29.4	88.88	711.1	1,241.9	1,323.7	1,285.0	38.68	34.224	
5,708.6	5,607.2	5,425.1	5,148.9	19.5	29.5	88.89	712.9	1,244.8	1,326.8	1,288.0	38.77	34.225	
5,745.8	5,643.2	5,459.9	5,180.5	19.7	29.8	88.93	720.5	1,257.1	1,339.8	1,300.7	39.14	34.230	
5,800.0	5,695.7	5,530.9	5,245.3	19.9	30.3	89.39	735.8	1,281.8	1,358.7	1,318.8	39.82	34.116	
5,807.1	5,702.6	5,541.9	5,255.4	19.9	30.4	89.45	738.1	1,285.5	1,361.0	1,321.1	39.91	34.101	
5,900.0	5,793.2	5,688.4	5,391.4	20.3	31.3	90.14	766.7	1,331.8	1,390.3	1,349.3	41.03	33.883	
5,905.5	5,798.6	5,697.2	5,399.6	20.3	31.3	90.18	768.4	1,334.3	1,391.9	1,350.8	41.10	33.870	
6,000.0	5,891.5	5,850.5	5,544.8	20.6	32.2	90.75	794.2	1,376.0	1,417.6	1,375.4	42.13	33.645	
6,003.9	5,895.4	5,856.9	5,551.0	20.6	32.2	90.77	795.2	1,377.6	1,418.5	1,376.4	42.17	33.636	
6,100.0	5,990.4	6,016.5	5,704.9	20.9	32.9	91.23	817.5	1,413.6	1,440.2	1,397.1	43.11	33.406	
6,102.3	5,992.7	6,020.5	5,708.7	20.9	32.9	91.24	817.9	1,414.4	1,440.6	1,397.5	43.13	33.401	
6,200.0	6,089.7	6,185.9	5,870.5	21.1	33.6	91.58	836.2	1,443.8	1,457.9	1,414.0	43.95	33.172	
6,200.8	6,090.4	6,187.3	5,871.8	21.1	33.6	91.58	836.3	1,444.0	1,458.1	1,414.1	43.96	33.170	
6,299.2	6,188.5	6,356.6	6,039.2	21.4	34.0	91.82	849.7	1,465.7	1,470.7	1,426.0	44.63	32.950	
6,300.0	6,189.3	6,358.0	6,040.6	21.4	34.0	91.82	849.8	1,465.9	1,470.7	1,426.1	44.64	32.948	
6,397.6	6,286.8	6,527.8	6,209.6	21.5	34.4	91.95	858.0	1,479.1	1,478.3	1,433.2	45.16	32.736	
6,400.0	6,289.2	6,531.9	6,213.8	21.5	34.4	91.95	858.2	1,479.3	1,478.5	1,433.3	45.17	32.731	
6,484.6	6,373.8	6,679.8	6,361.5	21.6	34.6	92.21	860.9	1,483.7	1,481.0	1,435.5	45.50	32.551	
6,496.0	6,385.3	6,699.9	6,381.6	21.7	34.6	92.21	861.0	1,483.8	1,481.0	1,435.5	45.53	32.525	
6,500.0	6,389.2	6,706.5	6,388.2	21.7	34.6	92.21	861.0	1,483.8	1,481.0	1,435.5	45.55	32.516	
6,514.6	6,403.8	6,721.1	6,402.8	21.7	34.6	92.21	861.0	1,483.8	1,481.0	1,435.4	45.58	32.490	
6,550.0	6,439.2	6,755.0	6,436.7	21.7	34.6	-87.81	860.7	1,483.8	1,481.0	1,435.3	45.65	32.442	
6,594.5	6,483.5	6,796.2	6,477.9	21.7	34.6	-87.86	858.4	1,483.8	1,480.9	1,435.3	45.67	32.428	
6,600.0	6,489.0	6,800.0	6,481.6	21.7	34.6	-87.86	858.1	1,483.8	1,480.9	1,435.3	45.67	32.427	
6,650.0	6,538.4	6,847.8	6,529.0	21.7	34.6	-87.92	852.3	1,483.8	1,480.9	1,435.3	45.61	32.469	
6,692.9	6,580.3	6,887.7	6,568.3	21.6	34.6	-87.98	845.0	1,483.8	1,480.8	1,435.3	45.49	32.552	
6,700.0	6,587.1	6,894.3	6,574.8	21.6	34.6	-87.99	843.5	1,483.8	1,480.8	1,435.3	45.47	32.567	
6,750.0	6,635.0	6,941.0	6,619.9	21.5	34.6	-88.07	831.9	1,483.8	1,480.7	1,435.5	45.26	32.717	
6,791.3	6,673.7	6,979.6	6,656.6	21.4	34.5	-88.14	820.0	1,483.8	1,480.7	1,435.7	45.03	32.883	
6,800.0	6,681.7	6,987.7	6,664.3	21.4	34.5	-88.16	817.2	1,483.8	1,480.7	1,435.7	44.98	32.919	
6,850.0	6,727.1	7,034.6	6,707.8	21.2	34.4	-88.25	799.6	1,483.8	1,480.6	1,436.0	44.64	33.171	
6,889.7	6,762.0	7,072.0	6,741.5	21.1	34.3	-88.33	783.6	1,483.8	1,480.5	1,436.2	44.32	33.406	
6,900.0	6,770.9	7,081.7	6,750.1	21.0	34.3	-88.36	779.2	1,483.8	1,480.5	1,436.3	44.24	33.469	
6,950.0	6,812.9	7,128.9	6,791.2	20.8	34.2	-88.47	755.9	1,483.8	1,480.4	1,436.7	43.79	33.811	
6,988.2	6,843.6	7,165.0	6,821.6	20.6	34.1	-88.56	736.3	1,483.8	1,480.4	1,437.0	43.41	34.100	
7,000.0	6,852.9	7,176.3	6,830.8	20.6	34.0	-88.59	729.9	1,483.8	1,480.4	1,437.1	43.29	34.193	
7,050.0	6,890.7	7,223.8	6,868.7	20.3	33.9	-88.71	701.2	1,483.8	1,480.3	1,437.5	42.77	34.610	
7,086.6	6,916.9	7,258.8	6,895.3	20.1	33.7	-88.81	678.5	1,483.8	1,480.2	1,437.9	42.37	34.933	
7,100.0	6,926.2	7,271.6	6,904.8	20.1	33.7	-88.84	669.9	1,483.8	1,480.2	1,438.0	42.23	35.055	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
7,150.0	6,959.1	7,319.6	6,938.8	19.8	33.5	-88.98	636.1	1,483.8	1,480.1	1,438.5	41.67	35.522	
7,185.0	6,980.5	7,353.3	6,961.4	19.6	33.4	-89.08	611.0	1,483.8	1,480.1	1,438.8	41.28	35.856	
7,200.0	6,989.3	7,367.8	6,970.7	19.5	33.3	-89.12	600.0	1,483.8	1,480.1	1,439.0	41.11	36.001	
7,250.0	7,016.6	7,416.2	7,000.2	19.3	33.1	-89.27	561.6	1,483.8	1,480.0	1,439.5	40.57	36.484	
7,283.4	7,033.3	7,448.8	7,018.6	19.1	33.0	-89.37	534.7	1,483.8	1,480.0	1,439.8	40.22	36.801	
7,300.0	7,041.0	7,464.9	7,027.2	19.1	32.9	-89.42	521.0	1,483.8	1,480.0	1,439.9	40.05	36.958	
7,350.0	7,062.2	7,513.9	7,051.5	18.8	32.7	-89.57	478.5	1,483.8	1,479.9	1,440.4	39.56	37.411	
7,381.9	7,074.1	7,545.2	7,065.5	18.7	32.6	-89.67	450.5	1,483.8	1,479.9	1,440.7	39.27	37.681	
7,400.0	7,080.3	7,563.1	7,072.9	18.7	32.5	-89.73	434.2	1,483.8	1,479.9	1,440.8	39.12	37.831	
7,450.0	7,095.0	7,612.6	7,091.3	18.5	32.3	-89.89	388.3	1,483.8	1,479.9	1,441.2	38.74	38.204	
7,480.3	7,102.4	7,642.7	7,101.0	18.4	32.2	-89.98	359.8	1,483.8	1,479.9	1,441.4	38.54	38.399	
7,484.5	7,103.3	7,646.9	7,102.2	18.4	32.2	-90.00	355.7	1,483.8	1,479.9	1,441.4	38.51	38.426	
7,500.0	7,106.4	7,662.4	7,106.6	18.4	32.1	-90.05	341.0	1,483.8	1,479.9	1,441.5	38.42	38.518	
7,550.0	7,114.4	7,712.4	7,118.6	18.3	31.9	-90.21	292.4	1,483.8	1,479.9	1,441.7	38.18	38.761	
7,578.7	7,117.4	7,741.3	7,124.0	18.3	31.8	-90.30	264.0	1,483.8	1,479.9	1,441.8	38.08	38.861	
7,600.0	7,118.9	7,762.8	7,127.3	18.3	31.7	-90.36	242.8	1,483.8	1,479.9	1,441.9	38.02	38.925	
7,641.3	7,120.0	7,804.6	7,131.8	18.3	31.6	-90.49	201.2	1,483.8	1,480.0	1,442.0	37.95	38.998	
7,677.1	7,119.9	7,841.1	7,133.7	18.3	31.5	-90.57	164.8	1,483.8	1,480.0	1,442.0	37.95	38.998	
7,700.0	7,119.9	7,864.4	7,134.0	18.4	31.4	-90.59	141.4	1,483.8	1,480.0	1,442.0	37.96	38.986	
7,775.6	7,119.7	7,940.0	7,133.4	18.6	31.3	-90.57	65.8	1,483.8	1,480.0	1,441.8	38.23	38.716	
7,800.0	7,119.6	7,964.5	7,133.2	18.6	31.2	-90.57	41.4	1,483.8	1,480.0	1,441.7	38.33	38.614	
7,874.0	7,119.4	8,038.5	7,132.7	19.0	31.1	-90.55	-32.6	1,483.8	1,480.0	1,441.1	38.84	38.102	
7,900.0	7,119.4	8,064.5	7,132.5	19.1	31.1	-90.55	-58.6	1,483.8	1,480.0	1,440.9	39.05	37.903	
7,972.4	7,119.2	8,136.9	7,131.9	19.6	31.1	-90.53	-131.0	1,483.8	1,480.0	1,440.2	39.81	37.177	
8,000.0	7,119.1	8,164.5	7,131.7	19.7	31.1	-90.53	-158.6	1,483.8	1,480.0	1,439.9	40.12	36.887	
8,070.8	7,118.9	8,235.3	7,131.2	20.3	31.1	-90.51	-229.4	1,483.8	1,480.0	1,438.9	41.10	36.010	
8,100.0	7,118.9	8,264.5	7,131.0	20.5	31.2	-90.51	-258.6	1,483.8	1,480.0	1,438.4	41.52	35.641	
8,169.3	7,118.7	8,333.7	7,130.5	21.2	31.3	-90.49	-327.9	1,483.8	1,480.0	1,437.3	42.69	34.672	
8,200.0	7,118.6	8,364.4	7,130.2	21.5	31.4	-90.49	-358.6	1,483.8	1,480.0	1,436.7	43.22	34.240	
8,267.7	7,118.5	8,432.1	7,129.7	22.2	31.6	-90.48	-426.3	1,483.8	1,480.0	1,435.4	44.54	33.231	
8,300.0	7,118.4	8,464.4	7,129.5	22.5	31.7	-90.47	-458.6	1,483.8	1,480.0	1,434.8	45.18	32.754	
8,366.1	7,118.2	8,530.6	7,129.0	23.3	32.0	-90.46	-524.7	1,483.8	1,480.0	1,433.3	46.62	31.745	
8,400.0	7,118.1	8,564.4	7,128.7	23.7	32.2	-90.45	-558.6	1,483.8	1,480.0	1,432.6	47.38	31.238	
8,464.5	7,118.0	8,629.0	7,128.3	24.5	32.6	-90.44	-623.1	1,483.8	1,480.0	1,431.0	48.91	30.260	
8,500.0	7,117.9	8,664.4	7,128.0	25.0	32.8	-90.43	-658.6	1,483.8	1,480.0	1,430.2	49.77	29.737	
8,563.0	7,117.7	8,727.4	7,127.5	25.8	33.3	-90.42	-721.5	1,483.8	1,480.0	1,428.6	51.37	28.809	
8,600.0	7,117.6	8,764.4	7,127.2	26.3	33.6	-90.41	-758.6	1,483.8	1,480.0	1,427.6	52.33	28.280	
8,661.4	7,117.5	8,825.8	7,126.8	27.2	34.1	-90.40	-820.0	1,483.8	1,479.9	1,426.0	53.99	27.412	
8,700.0	7,117.4	8,864.4	7,126.5	27.7	34.5	-90.39	-858.6	1,483.8	1,479.9	1,424.9	55.05	26.886	
8,759.8	7,117.2	8,924.3	7,126.0	28.6	35.1	-90.38	-918.4	1,483.8	1,479.9	1,423.2	56.74	26.085	
8,800.0	7,117.1	8,964.4	7,125.7	29.2	35.5	-90.37	-958.6	1,483.8	1,479.9	1,422.1	57.89	25.566	
8,858.2	7,117.0	9,022.7	7,125.3	30.1	36.1	-90.36	-1,016.8	1,483.8	1,479.9	1,420.3	59.60	24.832	
8,900.0	7,116.9	9,064.4	7,125.0	30.7	36.6	-90.35	-1,058.6	1,483.8	1,479.9	1,419.1	60.84	24.326	
8,956.7	7,116.8	9,121.1	7,124.6	31.6	37.2	-90.34	-1,115.2	1,483.8	1,479.9	1,417.4	62.56	23.657	
9,000.0	7,116.7	9,164.4	7,124.2	32.3	37.7	-90.33	-1,158.6	1,483.8	1,479.9	1,416.1	63.88	23.166	
9,055.1	7,116.5	9,219.5	7,123.8	33.2	38.4	-90.32	-1,213.7	1,483.8	1,479.9	1,414.3	65.60	22.559	
9,100.0	7,116.4	9,264.4	7,123.5	33.9	39.0	-90.31	-1,258.5	1,483.8	1,479.9	1,412.9	67.01	22.084	
9,153.5	7,116.3	9,318.0	7,123.1	34.8	39.7	-90.30	-1,312.1	1,483.8	1,479.9	1,411.2	68.72	21.536	
9,200.0	7,116.2	9,364.4	7,122.7	35.5	40.3	-90.29	-1,358.5	1,483.8	1,479.9	1,409.7	70.21	21.078	
9,251.9	7,116.0	9,416.4	7,122.3	36.4	41.0	-90.28	-1,410.5	1,483.8	1,479.9	1,408.0	71.90	20.583	
9,300.0	7,115.9	9,464.4	7,122.0	37.2	41.7	-90.27	-1,458.5	1,483.8	1,479.9	1,406.5	73.47	20.142	
9,350.4	7,115.8	9,514.8	7,121.6	38.0	42.4	-90.26	-1,508.9	1,483.8	1,479.9	1,404.8	75.14	19.696	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
9,400.0	7,115.7	9,564.4	7,121.2	38.9	43.1	-90.25	-1,558.5	1,483.8	1,479.9	1,403.1	76.79	19.273	
9,448.8	7,115.5	9,613.2	7,120.9	39.7	43.8	-90.24	-1,607.3	1,483.8	1,479.9	1,401.5	78.42	18.871	
9,500.0	7,115.4	9,664.4	7,120.5	40.6	44.6	-90.24	-1,658.5	1,483.8	1,479.9	1,399.8	80.15	18.465	
9,547.2	7,115.3	9,711.7	7,120.1	41.4	45.3	-90.23	-1,705.8	1,483.8	1,479.9	1,398.2	81.75	18.102	
9,600.0	7,115.2	9,764.4	7,119.7	42.3	46.1	-90.22	-1,758.5	1,483.8	1,479.9	1,396.4	83.55	17.712	
9,645.6	7,115.1	9,810.1	7,119.4	43.1	46.8	-90.21	-1,804.2	1,483.8	1,479.9	1,394.8	85.12	17.386	
9,700.0	7,114.9	9,864.4	7,119.0	44.0	47.6	-90.20	-1,858.5	1,483.8	1,479.9	1,392.9	86.99	17.012	
9,744.1	7,114.8	9,908.5	7,118.7	44.8	48.3	-90.19	-1,902.6	1,483.8	1,479.9	1,391.4	88.52	16.718	
9,800.0	7,114.7	9,964.4	7,118.2	45.8	49.2	-90.18	-1,958.5	1,483.8	1,479.9	1,389.5	90.47	16.359	
9,842.5	7,114.6	10,006.9	7,117.9	46.5	49.9	-90.17	-2,001.0	1,483.8	1,479.9	1,388.0	91.95	16.095	
9,900.0	7,114.4	10,064.4	7,117.5	47.6	50.8	-90.16	-2,058.5	1,483.8	1,479.9	1,386.0	93.97	15.749	
9,940.9	7,114.3	10,105.4	7,117.2	48.3	51.5	-90.15	-2,099.4	1,483.8	1,479.9	1,384.5	95.41	15.512	
10,000.0	7,114.2	10,164.4	7,116.7	49.3	52.4	-90.14	-2,158.5	1,483.8	1,479.9	1,382.4	97.49	15.180	
10,039.3	7,114.1	10,203.8	7,116.4	50.0	53.1	-90.13	-2,197.9	1,483.8	1,479.9	1,381.0	98.89	14.966	
10,100.0	7,113.9	10,264.4	7,116.0	51.1	54.0	-90.12	-2,258.5	1,483.8	1,479.9	1,378.9	101.04	14.646	
10,137.8	7,113.8	10,302.2	7,115.7	51.8	54.7	-90.11	-2,296.3	1,483.8	1,479.9	1,377.5	102.39	14.454	
10,200.0	7,113.7	10,364.4	7,115.2	52.9	55.7	-90.10	-2,358.5	1,483.8	1,479.9	1,375.3	104.61	14.146	
10,236.2	7,113.6	10,400.6	7,115.0	53.6	56.3	-90.09	-2,394.7	1,483.8	1,479.9	1,374.0	105.91	13.973	
10,300.0	7,113.4	10,464.4	7,114.5	54.7	57.4	-90.08	-2,458.5	1,483.8	1,479.9	1,371.7	108.20	13.677	
10,334.6	7,113.3	10,499.0	7,114.2	55.4	57.9	-90.07	-2,493.1	1,483.8	1,479.9	1,370.5	109.45	13.521	
10,400.0	7,113.2	10,564.4	7,113.7	56.5	59.0	-90.06	-2,558.5	1,483.8	1,479.9	1,368.1	111.81	13.236	
10,433.0	7,113.1	10,597.5	7,113.5	57.1	59.6	-90.05	-2,591.5	1,483.8	1,479.9	1,366.9	113.01	13.096	
10,500.0	7,112.9	10,664.4	7,113.0	58.4	60.7	-90.04	-2,658.5	1,483.8	1,479.9	1,364.5	115.43	12.821	
10,531.5	7,112.8	10,695.9	7,112.7	58.9	61.3	-90.04	-2,690.0	1,483.8	1,479.9	1,363.3	116.57	12.695	
10,600.0	7,112.7	10,764.4	7,112.2	60.2	62.5	-90.02	-2,758.5	1,483.8	1,479.9	1,360.8	119.07	12.429	
10,629.9	7,112.6	10,794.3	7,112.0	60.7	63.0	-90.02	-2,788.4	1,483.8	1,479.9	1,359.8	120.16	12.317	
10,634.2	7,112.6	10,798.6	7,112.0	60.8	63.0	-90.02	-2,792.7	1,483.8	1,479.9	1,359.6	120.31	12.301	
10,700.0	7,112.4	10,864.4	7,111.5	62.0	64.2	-90.00	-2,858.5	1,483.8	1,479.9	1,357.2	122.71	12.060	
10,728.3	7,112.3	10,892.7	7,111.3	62.5	64.7	-90.00	-2,886.8	1,483.8	1,479.9	1,356.2	123.75	11.959	
10,800.0	7,112.2	10,964.4	7,110.7	63.9	65.9	-89.98	-2,958.5	1,483.8	1,479.9	1,353.5	126.37	11.711	
10,826.7	7,112.1	10,991.2	7,110.5	64.4	66.4	-89.98	-2,985.2	1,483.8	1,479.9	1,352.6	127.35	11.620	
10,900.0	7,111.9	11,064.4	7,110.0	65.7	67.7	-89.96	-3,058.5	1,483.8	1,479.9	1,349.9	130.04	11.380	
10,925.2	7,111.8	11,089.6	7,109.8	66.2	68.1	-89.96	-3,083.6	1,483.8	1,479.9	1,348.9	130.97	11.300	
11,000.0	7,111.7	11,164.4	7,109.2	67.6	69.4	-89.94	-3,158.5	1,483.8	1,479.9	1,346.2	133.72	11.067	
11,023.6	7,111.6	11,188.0	7,109.0	68.0	69.8	-89.94	-3,182.1	1,483.8	1,479.9	1,345.3	134.59	10.995	
11,100.0	7,111.4	11,264.4	7,108.5	69.4	71.2	-89.93	-3,258.5	1,483.8	1,479.9	1,342.5	137.41	10.770	
11,122.0	7,111.3	11,286.4	7,108.3	69.8	71.6	-89.92	-3,280.5	1,483.8	1,479.9	1,341.7	138.23	10.707	
11,200.0	7,111.2	11,364.4	7,107.7	71.3	72.9	-89.91	-3,358.5	1,483.8	1,479.9	1,338.8	141.11	10.488	
11,220.4	7,111.1	11,384.9	7,107.6	71.6	73.3	-89.90	-3,378.9	1,483.8	1,479.9	1,338.1	141.87	10.432	
11,300.0	7,110.9	11,464.4	7,107.0	73.1	74.7	-89.89	-3,458.5	1,483.8	1,479.9	1,335.1	144.81	10.220	
11,318.9	7,110.9	11,483.3	7,106.8	73.5	75.1	-89.88	-3,477.3	1,483.8	1,479.9	1,334.4	145.51	10.170	
11,400.0	7,110.6	11,564.4	7,106.2	75.0	76.5	-89.87	-3,558.5	1,483.8	1,479.9	1,331.4	148.52	9.964	
11,417.3	7,110.6	11,581.7	7,106.1	75.3	76.8	-89.86	-3,575.8	1,483.8	1,479.9	1,330.8	149.17	9.921	
11,500.0	7,110.4	11,664.4	7,105.5	76.8	78.3	-89.85	-3,658.5	1,483.8	1,479.9	1,327.7	152.24	9.721	
11,515.7	7,110.4	11,680.1	7,105.4	77.1	78.6	-89.85	-3,674.2	1,483.8	1,479.9	1,327.1	152.83	9.684	
11,600.0	7,110.1	11,764.4	7,104.7	78.7	80.1	-89.83	-3,758.4	1,483.8	1,479.9	1,324.0	155.97	9.489	
11,614.1	7,110.1	11,778.6	7,104.6	79.0	80.3	-89.83	-3,772.6	1,483.8	1,479.9	1,323.4	156.49	9.457	
11,655.0	7,110.0	11,819.1	7,104.3	79.7	81.1	-89.82	-3,813.2	1,483.8	1,479.9	1,321.9	158.01	9.366 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	92.09	-1.1	30.1	30.1				
98.4	98.4	98.4	98.4	0.1	0.1	92.09	-1.1	30.1	30.1	30.0	0.17	177.416	
100.0	100.0	100.0	100.0	0.1	0.1	92.09	-1.1	30.1	30.1	30.0	0.17	174.205	
196.8	196.8	196.8	196.8	0.3	0.3	92.09	-1.1	30.1	30.1	29.5	0.61	49.552	
200.0	200.0	200.0	200.0	0.3	0.3	92.09	-1.1	30.1	30.1	29.5	0.62	48.425	
295.3	295.3	295.3	295.3	0.5	0.5	92.09	-1.1	30.1	30.1	29.1	1.05	28.689	
300.0	300.0	300.0	300.0	0.5	0.5	92.09	-1.1	30.1	30.1	29.1	1.07	28.121	
393.7	393.7	393.7	393.7	0.7	0.7	92.09	-1.1	30.1	30.1	28.7	1.49	20.189	
400.0	400.0	400.0	400.0	0.8	0.8	92.09	-1.1	30.1	30.1	28.6	1.52	19.814	
492.1	492.1	492.1	492.1	1.0	1.0	92.09	-1.1	30.1	30.1	28.2	1.94	15.575	
500.0	500.0	500.0	500.0	1.0	1.0	92.09	-1.1	30.1	30.1	28.2	1.97	15.295	
590.5	590.5	590.5	590.5	1.2	1.2	92.09	-1.1	30.1	30.1	27.8	2.38	12.677	
600.0	600.0	600.0	600.0	1.2	1.2	92.09	-1.1	30.1	30.1	27.7	2.42	12.455	
689.0	689.0	689.0	689.0	1.4	1.4	92.09	-1.1	30.1	30.1	27.3	2.82	10.689	
700.0	700.0	700.0	700.0	1.4	1.4	92.09	-1.1	30.1	30.1	27.3	2.87	10.504	
787.4	787.4	787.4	787.4	1.6	1.6	92.09	-1.1	30.1	30.1	26.9	3.26	9.239	
800.0	800.0	800.0	800.0	1.7	1.7	92.09	-1.1	30.1	30.1	26.8	3.32	9.082	
885.8	885.8	885.8	885.8	1.9	1.9	92.09	-1.1	30.1	30.1	26.4	3.71	8.136	
900.0	900.0	900.0	900.0	1.9	1.9	92.09	-1.1	30.1	30.1	26.4	3.77	7.999	
984.2	984.2	984.2	984.2	2.1	2.1	92.09	-1.1	30.1	30.1	26.0	4.15	7.268	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	92.09	-1.1	30.1	30.1	25.9	4.22	7.146	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	92.09	-1.1	30.1	30.1	25.6	4.59	6.568	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	92.09	-1.1	30.1	30.1	25.5	4.67	6.458	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	92.09	-1.1	30.1	30.1	25.1	5.03	5.990	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	92.09	-1.1	30.1	30.1	25.0	5.12	5.891	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	92.09	-1.1	30.1	30.1	24.7	5.48	5.506	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	92.09	-1.1	30.1	30.1	24.6	5.57	5.415	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	92.09	-1.1	30.1	30.1	24.2	5.92	5.095	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	92.09	-1.1	30.1	30.1	24.1	6.02	5.011	
1,476.4	1,476.4	1,476.4	1,476.4	3.2	3.2	92.09	-1.1	30.1	30.1	23.8	6.36	4.740	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	92.09	-1.1	30.1	30.1	23.7	6.47	4.662	
1,574.8	1,574.8	1,574.8	1,574.8	3.4	3.4	92.09	-1.1	30.1	30.1	23.3	6.80	4.432	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	92.09	-1.1	30.1	30.1	23.2	6.92	4.359	
1,673.2	1,673.2	1,673.2	1,673.2	3.6	3.6	92.09	-1.1	30.1	30.1	22.9	7.25	4.161	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	92.09	-1.1	30.1	30.1	22.8	7.37	4.093	
1,771.6	1,771.6	1,771.6	1,771.6	3.8	3.8	92.09	-1.1	30.1	30.1	22.5	7.69	3.922	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	92.09	-1.1	30.1	30.1	22.3	7.82	3.858	
1,870.1	1,870.1	1,870.1	1,870.1	4.1	4.1	92.09	-1.1	30.1	30.1	22.0	8.13	3.708	
1,900.0	1,900.0	1,900.0	1,900.0	4.1	4.1	92.09	-1.1	30.1	30.1	21.9	8.26	3.648	
1,937.2	1,937.2	1,937.2	1,937.2	4.2	4.2	92.09	-1.1	30.1	30.1	21.7	8.43	3.576 CC	
1,968.5	1,968.5	1,968.4	1,968.4	4.3	4.3	91.98	-1.0	30.2	30.2	21.6	8.57	3.520 ES	
2,000.0	2,000.0	1,999.8	1,999.8	4.4	4.4	91.35	-0.7	30.3	30.3	21.6	8.71	3.482	
2,066.9	2,066.9	2,066.3	2,066.3	4.5	4.5	88.18	1.0	31.2	31.3	22.2	9.01	3.469	
2,100.0	2,100.0	2,099.2	2,099.1	4.6	4.6	85.81	2.3	31.9	32.0	22.9	9.16	3.499	
2,150.0	2,150.0	2,148.8	2,148.6	4.7	4.7	81.47	5.0	33.3	33.7	24.4	9.38	3.598	
2,165.3	2,165.3	2,164.0	2,163.8	4.7	4.7	79.81	6.0	33.9	34.4	25.0	9.45	3.642	
2,200.0	2,200.0	2,198.3	2,198.0	4.8	4.8	76.91	8.4	35.1	36.1	26.5	9.60	3.759	
2,263.8	2,263.7	2,261.3	2,260.7	5.0	4.9	72.63	13.9	38.0	39.8	30.0	9.88	4.031	
2,300.0	2,299.9	2,297.1	2,296.2	5.0	5.0	70.76	17.5	39.9	42.3	32.3	10.04	4.212	
2,362.2	2,362.0	2,358.3	2,357.0	5.2	5.2	68.38	24.6	43.7	47.0	36.7	10.32	4.555	
2,400.0	2,399.7	2,395.5	2,393.7	5.3	5.3	67.35	29.5	46.2	50.1	39.7	10.49	4.782	
2,460.6	2,460.0	2,455.0	2,452.4	5.4	5.4	66.26	38.2	50.8	55.6	44.8	10.76	5.164	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,500.0	2,499.1	2,493.6	2,490.4	5.5	5.5	65.84	44.4	54.1	59.4	48.4	10.94	5.426	
2,559.0	2,557.7	2,551.4	2,547.0	5.6	5.7	65.55	54.6	59.4	65.4	54.2	11.22	5.829	
2,600.0	2,598.2	2,591.4	2,586.0	5.7	5.8	65.55	62.2	63.4	69.8	58.4	11.41	6.120	
2,657.5	2,654.8	2,647.3	2,640.5	5.9	6.0	65.74	73.6	69.5	76.4	64.7	11.70	6.531	
2,700.0	2,696.6	2,688.7	2,680.5	6.0	6.1	66.00	82.7	74.3	81.5	69.6	11.91	6.844	
2,755.9	2,751.4	2,743.2	2,733.1	6.1	6.3	66.48	95.4	80.9	88.6	76.3	12.21	7.252	
2,800.0	2,794.4	2,786.9	2,775.2	6.2	6.4	67.13	105.8	86.4	94.0	81.6	12.46	7.548	
2,854.3	2,847.3	2,840.8	2,827.1	6.4	6.6	68.32	118.7	93.2	100.4	87.6	12.78	7.854	
2,888.8	2,880.6	2,875.0	2,860.0	6.5	6.8	69.28	126.8	97.5	104.3	91.3	13.00	8.024	
2,900.0	2,891.5	2,886.1	2,870.8	6.6	6.8	69.63	129.5	98.9	105.5	92.5	13.07	8.074	
2,952.7	2,942.5	2,938.5	2,921.2	6.7	7.0	71.17	141.9	105.4	111.5	98.0	13.43	8.300	
3,000.0	2,988.2	2,985.3	2,966.3	6.9	7.2	72.43	153.1	111.3	116.9	103.1	13.76	8.493	
3,051.2	3,037.6	3,036.1	3,015.2	7.1	7.4	73.66	165.2	117.7	122.7	108.6	14.13	8.686	
3,100.0	3,084.9	3,084.5	3,061.9	7.3	7.6	74.73	176.7	123.8	128.4	113.9	14.49	8.862	
3,149.6	3,132.8	3,133.8	3,109.2	7.5	7.9	75.72	188.5	129.9	134.2	119.3	14.86	9.026	
3,200.0	3,181.5	3,183.8	3,157.4	7.6	8.1	76.65	200.4	136.2	140.1	124.8	15.25	9.185	
3,248.0	3,228.0	3,231.4	3,203.3	7.8	8.3	77.46	211.7	142.2	145.8	130.1	15.63	9.323	
3,300.0	3,278.2	3,283.0	3,253.0	8.0	8.5	78.27	224.0	148.7	151.9	135.9	16.05	9.466	
3,346.4	3,323.2	3,329.1	3,297.3	8.2	8.7	78.94	235.0	154.4	157.5	141.0	16.43	9.583	
3,400.0	3,374.9	3,382.2	3,348.5	8.5	9.0	79.66	247.7	161.1	163.9	147.0	16.87	9.711	
3,444.9	3,418.3	3,426.7	3,391.4	8.6	9.2	80.22	258.3	166.7	169.2	152.0	17.25	9.810	
3,500.0	3,471.6	3,481.4	3,444.1	8.9	9.4	80.86	271.3	173.5	175.9	158.2	17.72	9.925	
3,543.3	3,513.5	3,524.4	3,485.4	9.1	9.7	81.33	281.5	178.9	181.1	163.0	18.10	10.008	
3,600.0	3,568.3	3,580.6	3,539.6	9.3	9.9	81.91	294.9	186.0	188.0	169.4	18.59	10.111	
3,641.7	3,608.7	3,622.0	3,579.5	9.5	10.1	82.30	304.8	191.2	193.0	174.1	18.96	10.182	
3,700.0	3,665.0	3,679.8	3,635.1	9.7	10.4	82.83	318.6	198.4	200.1	180.6	19.48	10.275	
3,740.1	3,703.8	3,719.7	3,673.5	9.9	10.6	83.17	328.0	203.4	205.0	185.2	19.84	10.334	
3,800.0	3,761.7	3,779.0	3,730.7	10.2	10.9	83.64	342.2	210.9	212.3	191.9	20.38	10.419	
3,838.6	3,799.0	3,817.3	3,767.6	10.4	11.1	83.93	351.3	215.7	217.0	196.3	20.73	10.469	
3,900.0	3,858.4	3,878.2	3,826.2	10.7	11.4	84.37	365.8	223.3	224.5	203.2	21.29	10.546	
3,937.0	3,894.2	3,915.0	3,861.6	10.8	11.6	84.62	374.6	227.9	229.1	207.4	21.63	10.589	
4,000.0	3,955.1	3,977.5	3,921.8	11.1	11.9	85.02	389.5	235.8	236.8	214.6	22.22	10.658	
4,035.4	3,989.3	4,012.6	3,955.6	11.3	12.1	85.23	397.8	240.2	241.1	218.6	22.55	10.695	
4,100.0	4,051.8	4,076.7	4,017.3	11.6	12.4	85.60	413.1	248.2	249.1	225.9	23.15	10.758	
4,133.8	4,084.5	4,110.3	4,049.7	11.7	12.6	85.79	421.1	252.4	253.2	229.8	23.47	10.789	
4,200.0	4,148.5	4,175.9	4,112.9	12.1	12.9	86.14	436.7	260.6	261.4	237.3	24.10	10.847	
4,232.3	4,179.7	4,207.9	4,143.7	12.2	13.1	86.30	444.4	264.7	265.3	240.9	24.40	10.874	
4,300.0	4,245.2	4,275.1	4,208.4	12.5	13.4	86.62	460.4	273.1	273.7	248.6	25.05	10.927	
4,330.7	4,274.9	4,305.6	4,237.8	12.7	13.6	86.76	467.6	276.9	277.5	252.1	25.34	10.950	
4,400.0	4,341.9	4,374.3	4,304.0	13.0	13.9	87.06	484.0	285.5	286.0	260.0	26.01	10.999	
4,429.1	4,370.0	4,403.2	4,331.8	13.1	14.1	87.18	490.9	289.2	289.6	263.4	26.29	11.018	
4,500.0	4,438.6	4,473.5	4,399.5	13.5	14.4	87.47	507.6	298.0	298.4	271.4	26.97	11.064	
4,527.5	4,465.2	4,500.9	4,425.9	13.6	14.6	87.57	514.1	301.4	301.8	274.6	27.24	11.080	
4,600.0	4,535.3	4,572.7	4,495.1	14.0	14.9	87.84	531.3	310.4	310.8	282.8	27.94	11.122	
4,626.0	4,560.4	4,598.5	4,519.9	14.1	15.1	87.93	537.4	313.7	314.0	285.8	28.19	11.136	
4,700.0	4,631.9	4,671.9	4,590.6	14.5	15.5	88.18	554.9	322.9	323.2	294.2	28.92	11.175	
4,724.4	4,655.5	4,696.1	4,613.9	14.6	15.6	88.26	560.7	325.9	326.2	297.0	29.16	11.188	
4,800.0	4,728.6	4,771.2	4,686.2	15.0	16.0	88.50	578.5	335.3	335.6	305.7	29.90	11.224	
4,822.8	4,750.7	4,793.8	4,708.0	15.1	16.1	88.57	583.9	338.2	338.4	308.3	30.12	11.234	
4,900.0	4,825.3	4,870.4	4,781.7	15.4	16.5	88.80	602.2	347.8	348.0	317.1	30.88	11.268	
4,921.2	4,845.9	4,891.4	4,802.0	15.6	16.6	88.86	607.2	350.4	350.6	319.5	31.09	11.277	
5,000.0	4,922.0	4,969.6	4,877.3	15.9	17.0	89.07	625.8	360.2	360.4	328.5	31.87	11.308	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	4,941.0	4,989.1	4,896.1	16.0	17.1	89.13	630.5	362.6	362.8	330.8	32.06	11.316	
5,100.0	5,018.7	5,068.8	4,972.8	16.4	17.6	89.33	649.4	372.6	372.8	339.9	32.86	11.345	
5,118.1	5,036.2	5,086.7	4,990.1	16.5	17.7	89.38	653.7	374.9	375.0	342.0	33.04	11.352	
5,200.0	5,115.4	5,168.0	5,068.4	16.9	18.1	89.57	673.1	385.1	385.2	351.4	33.85	11.379	
5,216.5	5,131.4	5,184.4	5,084.2	17.0	18.2	89.61	677.0	387.1	387.3	353.3	34.02	11.385	
5,300.0	5,212.1	5,267.2	5,163.9	17.4	18.6	89.80	696.7	397.5	397.7	362.8	34.85	11.411	
5,314.9	5,226.6	5,282.0	5,178.2	17.5	18.7	89.83	700.2	399.4	399.5	364.5	35.00	11.415	
5,400.0	5,308.8	5,366.4	5,259.5	17.9	19.1	90.01	720.4	410.0	410.1	374.2	35.85	11.440	
5,413.4	5,321.7	5,379.7	5,272.3	18.0	19.2	90.04	723.5	411.6	411.8	375.8	35.98	11.444	
5,500.0	5,405.5	5,465.6	5,355.0	18.4	19.7	90.21	744.0	422.4	422.5	385.7	36.85	11.467	
5,511.8	5,416.9	5,477.3	5,366.3	18.5	19.7	90.23	746.8	423.9	424.0	387.0	36.97	11.470	
5,600.0	5,502.2	5,564.8	5,450.6	18.9	20.2	90.40	767.6	434.9	435.0	397.1	37.85	11.492	
5,610.2	5,512.1	5,575.0	5,460.3	19.0	20.3	90.42	770.0	436.1	436.3	398.3	37.96	11.494	
5,700.0	5,598.9	5,664.1	5,546.1	19.4	20.7	90.58	791.3	447.3	447.4	408.6	38.86	11.515	
5,708.6	5,607.2	5,672.6	5,554.4	19.5	20.8	90.59	793.3	448.4	448.5	409.6	38.94	11.517	
5,745.8	5,643.2	5,709.5	5,589.9	19.7	21.0	90.66	802.1	453.0	453.2	413.8	39.32	11.525	
5,800.0	5,695.7	5,766.3	5,644.7	19.9	21.2	90.85	815.3	460.0	459.8	419.9	39.83	11.544	
5,807.1	5,702.6	5,773.9	5,652.0	19.9	21.3	90.88	817.0	460.9	460.6	420.7	39.89	11.547	
5,900.0	5,793.2	5,873.3	5,748.6	20.3	21.7	91.17	837.7	471.8	470.7	430.1	40.62	11.588	
5,905.5	5,798.6	5,879.2	5,754.4	20.3	21.7	91.18	838.8	472.4	471.3	430.6	40.66	11.590	
6,000.0	5,891.5	5,980.6	5,853.8	20.6	22.0	91.42	856.7	481.8	480.0	438.6	41.32	11.616	
6,003.9	5,895.4	5,984.8	5,857.9	20.6	22.1	91.43	857.4	482.1	480.3	438.9	41.35	11.616	
6,100.0	5,990.4	6,088.2	5,959.9	20.9	22.4	91.63	872.2	489.9	487.5	445.6	41.94	11.624	
6,102.3	5,992.7	6,090.7	5,962.4	20.9	22.4	91.63	872.5	490.1	487.7	445.7	41.95	11.624	
6,200.0	6,089.7	6,196.0	6,066.8	21.1	22.7	91.78	884.2	496.2	493.3	450.9	42.48	11.614	
6,200.8	6,090.4	6,196.8	6,067.7	21.1	22.7	91.78	884.3	496.3	493.4	450.9	42.48	11.614	
6,299.2	6,188.5	6,303.1	6,173.5	21.4	22.9	91.89	892.6	500.7	497.4	454.5	42.93	11.588	
6,300.0	6,189.3	6,304.0	6,174.4	21.4	22.9	91.89	892.7	500.7	497.4	454.5	42.93	11.587	
6,397.6	6,286.8	6,409.5	6,279.8	21.5	23.1	91.95	897.4	503.2	499.7	456.5	43.28	11.546	
6,400.0	6,289.2	6,412.0	6,282.3	21.5	23.1	91.95	897.5	503.2	499.8	456.5	43.29	11.545	
6,484.6	6,373.8	6,503.5	6,373.8	21.6	23.2	92.21	898.8	503.9	500.4	456.9	43.53	11.495	
6,496.0	6,385.3	6,515.0	6,385.3	21.7	23.2	92.21	898.8	503.9	500.4	456.8	43.56	11.488	
6,500.0	6,389.2	6,518.9	6,389.2	21.7	23.2	92.21	898.8	503.9	500.4	456.8	43.57	11.485	
6,514.6	6,403.8	6,533.5	6,403.8	21.7	23.2	92.21	898.8	503.9	500.4	456.8	43.61	11.475	
6,550.0	6,439.2	6,568.0	6,438.3	21.7	23.3	-87.79	898.0	503.9	500.4	456.7	43.67	11.458	
6,594.5	6,483.5	6,611.3	6,481.4	21.7	23.3	-87.80	894.6	503.9	500.4	456.7	43.69	11.452	
6,600.0	6,489.0	6,616.7	6,486.8	21.7	23.3	-87.81	894.0	503.9	500.4	456.7	43.69	11.452	
6,650.0	6,538.4	6,665.4	6,534.9	21.7	23.2	-87.83	886.7	503.9	500.4	456.8	43.64	11.468	
6,692.9	6,580.3	6,707.2	6,575.8	21.6	23.2	-87.86	877.9	503.9	500.4	456.9	43.52	11.497	
6,700.0	6,587.1	6,714.1	6,582.5	21.6	23.2	-87.86	876.2	503.9	500.4	456.9	43.50	11.503	
6,750.0	6,635.0	6,762.9	6,629.2	21.5	23.1	-87.91	862.4	503.9	500.4	457.1	43.29	11.558	
6,791.3	6,673.7	6,803.2	6,667.1	21.4	23.0	-87.95	848.6	503.9	500.3	457.3	43.07	11.618	
6,800.0	6,681.7	6,811.6	6,675.0	21.4	23.0	-87.96	845.5	503.9	500.3	457.3	43.02	11.632	
6,850.0	6,727.1	6,860.4	6,719.5	21.2	22.8	-88.02	825.5	503.9	500.3	457.6	42.68	11.723	
6,889.7	6,762.0	6,899.3	6,753.8	21.1	22.7	-88.08	807.4	503.9	500.3	457.9	42.37	11.809	
6,900.0	6,770.9	6,909.3	6,762.5	21.0	22.7	-88.09	802.5	503.9	500.3	458.0	42.28	11.832	
6,950.0	6,812.9	6,958.2	6,804.0	20.8	22.5	-88.18	776.6	503.9	500.3	458.4	41.84	11.957	
6,988.2	6,843.6	6,995.5	6,834.4	20.6	22.3	-88.24	754.9	503.9	500.3	458.8	41.47	12.062	
7,000.0	6,852.9	7,007.1	6,843.6	20.6	22.2	-88.27	747.9	503.9	500.3	458.9	41.36	12.095	
7,050.0	6,890.7	7,056.1	6,881.2	20.3	22.0	-88.37	716.5	503.9	500.2	459.4	40.85	12.246	
7,086.6	6,916.9	7,092.0	6,907.3	20.1	21.8	-88.44	691.9	503.9	500.2	459.8	40.46	12.363	
7,100.0	6,926.2	7,105.1	6,916.6	20.1	21.7	-88.47	682.6	503.9	500.2	459.9	40.32	12.406	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
7,150.0	6,959.1	7,154.2	6,949.7	19.8	21.5	-88.59	646.3	503.9	500.2	460.4	39.78	12.573	
7,185.0	6,980.5	7,188.7	6,971.3	19.6	21.3	-88.67	619.5	503.9	500.2	460.8	39.41	12.691	
7,200.0	6,989.3	7,203.4	6,980.2	19.5	21.2	-88.71	607.7	503.9	500.2	460.9	39.25	12.743	
7,250.0	7,016.6	7,252.7	7,008.0	19.3	21.0	-88.83	567.1	503.9	500.1	461.4	38.74	12.912	
7,283.4	7,033.3	7,285.6	7,025.1	19.1	20.8	-88.92	538.9	503.9	500.1	461.7	38.41	13.021	
7,300.0	7,041.0	7,302.0	7,033.1	19.1	20.7	-88.97	524.6	503.9	500.1	461.9	38.25	13.075	
7,350.0	7,062.2	7,351.4	7,055.1	18.8	20.4	-89.11	480.4	503.9	500.1	462.3	37.80	13.229	
7,381.9	7,074.1	7,382.9	7,067.6	18.7	20.3	-89.20	451.5	503.9	500.1	462.5	37.55	13.317	
7,400.0	7,080.3	7,400.9	7,074.1	18.7	20.2	-89.25	434.7	503.9	500.1	462.7	37.41	13.367	
7,450.0	7,095.0	7,450.4	7,090.0	18.5	19.9	-89.39	387.8	503.9	500.1	463.0	37.08	13.485	
7,480.3	7,102.4	7,480.5	7,098.0	18.4	19.8	-89.48	358.8	503.9	500.0	463.1	36.93	13.542	
7,500.0	7,106.4	7,500.0	7,102.5	18.4	19.7	-89.54	339.9	503.9	500.0	463.2	36.83	13.579	
7,504.9	7,107.4	7,505.0	7,103.6	18.4	19.7	-89.56	335.0	503.9	500.0	463.2	36.81	13.585	
7,550.0	7,114.4	7,549.9	7,111.8	18.3	19.5	-89.69	290.9	503.9	500.0	463.4	36.65	13.644	
7,578.7	7,117.4	7,578.5	7,115.5	18.3	19.4	-89.78	262.5	503.9	500.0	463.4	36.60	13.664	
7,600.0	7,118.9	7,599.7	7,117.6	18.3	19.3	-89.85	241.4	503.9	500.0	463.5	36.56	13.678	
7,641.3	7,120.0	7,641.0	7,119.8	18.3	19.1	-89.98	200.1	503.9	500.0	463.5	36.55	13.680	
7,649.5	7,120.0	7,649.2	7,119.9	18.3	19.1	-90.00	192.0	503.9	500.0	463.5	36.56	13.678	
7,677.1	7,119.9	7,676.8	7,120.0	18.3	19.0	-90.01	164.4	503.9	500.0	463.4	36.61	13.660	
7,700.0	7,119.9	7,699.6	7,119.9	18.4	19.0	-90.01	141.5	503.9	500.0	463.4	36.65	13.643	
7,775.6	7,119.7	7,775.2	7,119.7	18.6	18.8	-90.01	65.9	503.9	500.0	463.0	37.02	13.506	
7,800.0	7,119.6	7,799.6	7,119.7	18.6	18.8	-90.01	41.5	503.9	500.0	462.9	37.14	13.462	
7,874.0	7,119.4	7,873.6	7,119.5	19.0	18.9	-90.01	-32.5	503.9	500.0	462.2	37.79	13.231	
7,900.0	7,119.4	7,899.6	7,119.4	19.1	19.0	-90.01	-58.5	503.9	500.0	462.0	38.02	13.152	
7,972.4	7,119.2	7,972.1	7,119.2	19.6	19.4	-90.01	-130.9	503.9	500.0	461.1	38.91	12.850	
8,000.0	7,119.1	7,999.6	7,119.2	19.7	19.5	-90.01	-158.5	503.9	500.0	460.8	39.25	12.739	
8,070.8	7,118.9	8,070.5	7,119.0	20.3	20.1	-90.01	-229.3	503.9	500.0	459.7	40.36	12.390	
8,100.0	7,118.9	8,099.6	7,118.9	20.5	20.4	-90.01	-258.5	503.9	500.0	459.2	40.81	12.252	
8,169.3	7,118.7	8,168.9	7,118.7	21.2	21.1	-90.01	-327.8	503.9	500.0	457.9	42.09	11.879	
8,200.0	7,118.6	8,199.6	7,118.7	21.5	21.4	-90.01	-358.5	503.9	500.0	457.4	42.66	11.721	
8,267.7	7,118.5	8,267.3	7,118.5	22.2	22.1	-90.01	-426.2	503.9	500.0	455.9	44.08	11.343	
8,300.0	7,118.4	8,299.6	7,118.4	22.5	22.5	-90.01	-458.5	503.9	500.0	455.3	44.76	11.170	
8,366.1	7,118.2	8,365.8	7,118.3	23.3	23.3	-90.01	-524.6	503.9	500.0	453.7	46.30	10.800	
8,400.0	7,118.1	8,399.6	7,118.2	23.7	23.7	-90.01	-558.5	503.9	500.0	452.9	47.09	10.619	
8,464.5	7,118.0	8,464.2	7,118.0	24.5	24.5	-90.01	-623.0	503.9	500.0	451.3	48.71	10.266	
8,500.0	7,117.9	8,499.6	7,117.9	25.0	25.0	-90.01	-658.5	503.9	500.0	450.4	49.60	10.081	
8,563.0	7,117.7	8,562.6	7,117.8	25.8	25.8	-90.01	-721.5	503.9	500.0	448.7	51.28	9.750	
8,600.0	7,117.6	8,599.6	7,117.7	26.3	26.3	-90.01	-758.5	503.9	500.0	447.8	52.27	9.566	
8,661.4	7,117.5	8,661.0	7,117.5	27.2	27.2	-90.01	-819.9	503.9	500.0	446.0	54.00	9.260	
8,700.0	7,117.4	8,699.6	7,117.4	27.7	27.7	-90.01	-858.5	503.9	500.0	444.9	55.08	9.077	
8,759.8	7,117.2	8,759.5	7,117.3	28.6	28.6	-90.01	-918.3	503.9	500.0	443.2	56.84	8.798	
8,800.0	7,117.1	8,799.6	7,117.2	29.2	29.2	-90.01	-958.5	503.9	500.0	442.0	58.01	8.619	
8,858.2	7,117.0	8,857.9	7,117.1	30.1	30.1	-90.01	-1,016.7	503.9	500.0	440.2	59.78	8.364	
8,900.0	7,116.9	8,899.6	7,116.9	30.7	30.7	-90.01	-1,058.5	503.9	500.0	439.0	61.05	8.191	
8,956.7	7,116.8	8,956.3	7,116.8	31.6	31.6	-90.01	-1,115.2	503.9	500.0	437.2	62.81	7.961	
9,000.0	7,116.7	8,999.6	7,116.7	32.3	32.3	-90.01	-1,158.5	503.9	500.0	435.9	64.16	7.793	
9,055.1	7,116.5	9,054.7	7,116.6	33.2	33.2	-90.01	-1,213.6	503.9	500.0	434.1	65.92	7.585	
9,100.0	7,116.4	9,099.6	7,116.5	33.9	33.9	-90.01	-1,258.5	503.9	500.0	432.7	67.36	7.424	
9,153.5	7,116.3	9,153.2	7,116.3	34.8	34.7	-90.01	-1,312.0	503.9	500.0	430.9	69.10	7.236	
9,200.0	7,116.2	9,199.6	7,116.2	35.5	35.5	-90.01	-1,358.5	503.9	500.0	429.4	70.61	7.081	
9,251.9	7,116.0	9,251.6	7,116.1	36.4	36.4	-90.01	-1,410.4	503.9	500.0	427.7	72.34	6.913	
9,300.0	7,115.9	9,299.6	7,116.0	37.2	37.1	-90.01	-1,458.5	503.9	500.0	426.1	73.93	6.764	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
9,350.4	7,115.8	9,350.0	7,115.8	38.0	38.0	-90.01	-1,508.9	503.9	500.0	424.4	75.62	6.612	
9,400.0	7,115.7	9,399.6	7,115.7	38.9	38.8	-90.01	-1,558.5	503.9	500.0	422.7	77.29	6.469	
9,448.8	7,115.5	9,448.4	7,115.6	39.7	39.6	-90.01	-1,607.3	503.9	500.0	421.1	78.95	6.333	
9,500.0	7,115.4	9,499.6	7,115.5	40.6	40.5	-90.01	-1,658.5	503.9	500.0	419.3	80.70	6.196	
9,547.2	7,115.3	9,546.9	7,115.3	41.4	41.3	-90.01	-1,705.7	503.9	500.0	417.7	82.32	6.074	
9,600.0	7,115.2	9,599.6	7,115.2	42.3	42.2	-90.01	-1,758.5	503.9	500.0	415.9	84.14	5.943	
9,645.6	7,115.1	9,645.3	7,115.1	43.1	43.0	-90.01	-1,804.1	503.9	500.0	414.3	85.72	5.833	
9,700.0	7,114.9	9,699.6	7,115.0	44.0	44.0	-90.01	-1,858.5	503.9	500.0	412.4	87.61	5.707	
9,744.1	7,114.8	9,743.7	7,114.8	44.8	44.7	-90.01	-1,902.6	503.9	500.0	410.9	89.16	5.608	
9,800.0	7,114.7	9,799.6	7,114.7	45.8	45.7	-90.01	-1,958.5	503.9	500.0	408.9	91.12	5.488	
9,842.5	7,114.6	9,842.1	7,114.6	46.5	46.4	-90.01	-2,001.0	503.9	500.0	407.4	92.62	5.399	
9,900.0	7,114.4	9,899.6	7,114.5	47.6	47.5	-90.01	-2,058.5	503.9	500.0	405.4	94.65	5.283	
9,940.9	7,114.3	9,940.6	7,114.4	48.3	48.2	-90.01	-2,099.4	503.9	500.0	403.9	96.10	5.203	
10,000.0	7,114.2	9,999.6	7,114.2	49.3	49.2	-90.00	-2,158.5	503.9	500.0	401.8	98.20	5.092	
10,039.3	7,114.1	10,039.0	7,114.1	50.0	49.9	-90.00	-2,197.8	503.9	500.0	400.4	99.61	5.020	
10,100.0	7,113.9	10,099.6	7,114.0	51.1	51.0	-90.00	-2,258.5	503.9	500.0	398.2	101.78	4.913	
10,137.8	7,113.8	10,137.4	7,113.9	51.8	51.7	-90.00	-2,296.3	503.9	500.0	396.9	103.14	4.848	
10,200.0	7,113.7	10,199.6	7,113.7	52.9	52.8	-90.00	-2,358.5	503.9	500.0	394.6	105.37	4.745	
10,236.2	7,113.6	10,235.8	7,113.6	53.6	53.4	-90.00	-2,394.7	503.9	500.0	393.3	106.68	4.687	
10,300.0	7,113.4	10,299.6	7,113.5	54.7	54.6	-90.00	-2,458.5	503.9	500.0	391.0	108.98	4.588	
10,334.6	7,113.3	10,334.3	7,113.4	55.4	55.2	-90.00	-2,493.1	503.9	500.0	389.8	110.24	4.536	
10,400.0	7,113.2	10,399.6	7,113.2	56.5	56.4	-90.00	-2,558.5	503.9	500.0	387.4	112.61	4.440	
10,433.0	7,113.1	10,432.7	7,113.1	57.1	57.0	-90.00	-2,591.5	503.9	500.0	386.2	113.81	4.393	
10,500.0	7,112.9	10,499.6	7,113.0	58.4	58.2	-90.00	-2,658.5	503.9	500.0	383.8	116.25	4.301	
10,531.5	7,112.8	10,531.1	7,112.9	58.9	58.8	-90.00	-2,690.0	503.9	500.0	382.6	117.40	4.259	
10,600.0	7,112.7	10,599.6	7,112.7	60.2	60.0	-90.00	-2,758.5	503.9	500.0	380.1	119.90	4.170	
10,629.9	7,112.6	10,629.5	7,112.6	60.7	60.6	-90.00	-2,788.4	503.9	500.0	379.0	121.00	4.132	
10,700.0	7,112.4	10,699.6	7,112.5	62.0	61.9	-90.00	-2,858.5	503.9	500.0	376.4	123.57	4.047	
10,728.3	7,112.3	10,728.0	7,112.4	62.5	62.4	-90.00	-2,886.8	503.9	500.0	375.4	124.61	4.013	
10,800.0	7,112.2	10,799.6	7,112.2	63.9	63.7	-90.00	-2,958.5	503.9	500.0	372.8	127.24	3.930	
10,826.7	7,112.1	10,826.4	7,112.1	64.4	64.2	-90.00	-2,985.2	503.9	500.0	371.8	128.23	3.899	
10,900.0	7,111.9	10,899.6	7,111.9	65.7	65.5	-90.00	-3,058.5	503.9	500.0	369.1	130.93	3.819	
10,925.2	7,111.8	10,924.8	7,111.9	66.2	66.0	-90.00	-3,083.7	503.9	500.0	368.2	131.85	3.792	
11,000.0	7,111.7	10,999.6	7,111.7	67.6	67.4	-90.00	-3,158.5	503.9	500.0	365.4	134.62	3.714	
11,023.6	7,111.6	11,023.2	7,111.6	68.0	67.8	-90.00	-3,182.1	503.9	500.0	364.5	135.49	3.690	
11,100.0	7,111.4	11,099.6	7,111.4	69.4	69.2	-90.00	-3,258.5	503.9	500.0	361.7	138.32	3.615	
11,122.0	7,111.3	11,121.7	7,111.4	69.8	69.6	-90.00	-3,280.5	503.9	500.0	360.9	139.14	3.594	
11,200.0	7,111.2	11,199.6	7,111.2	71.3	71.0	-90.00	-3,358.5	503.9	500.0	358.0	142.03	3.521	
11,220.4	7,111.1	11,220.1	7,111.1	71.6	71.4	-90.00	-3,378.9	503.9	500.0	357.2	142.79	3.502	
11,300.0	7,110.9	11,299.6	7,110.9	73.1	72.9	-90.00	-3,458.5	503.9	500.0	354.3	145.74	3.431	
11,318.9	7,110.9	11,318.5	7,110.9	73.5	73.3	-90.00	-3,477.4	503.9	500.0	353.6	146.44	3.414	
11,400.0	7,110.6	11,399.6	7,110.7	75.0	74.8	-90.00	-3,558.5	503.9	500.0	350.5	149.46	3.345	
11,417.3	7,110.6	11,416.9	7,110.6	75.3	75.1	-90.00	-3,575.8	503.9	500.0	349.9	150.11	3.331	
11,500.0	7,110.4	11,499.6	7,110.4	76.8	76.6	-90.00	-3,658.5	503.9	500.0	346.8	153.19	3.264	
11,515.7	7,110.4	11,515.4	7,110.4	77.1	76.9	-90.00	-3,674.2	503.9	500.0	346.2	153.78	3.251	
11,600.0	7,110.1	11,599.6	7,110.2	78.7	78.5	-90.00	-3,758.5	503.9	500.0	343.1	156.92	3.186	
11,614.1	7,110.1	11,613.8	7,110.1	79.0	78.7	-90.00	-3,772.6	503.9	500.0	342.6	157.45	3.176	
11,655.0	7,110.0	11,654.7	7,110.0	79.7	79.5	-90.00	-3,813.5	503.9	500.0	341.0	158.98	3.145 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	75.0	75.1				
98.4	98.4	97.4	97.4	0.1	0.1	91.67	-2.2	75.0	75.1	74.9	0.17	444.054	
100.0	100.0	99.0	99.0	0.1	0.1	91.67	-2.2	75.0	75.1	74.9	0.17	435.975	
196.8	196.8	195.8	195.8	0.3	0.3	91.67	-2.2	75.0	75.1	74.5	0.61	123.850	
200.0	200.0	199.0	199.0	0.3	0.3	91.67	-2.2	75.0	75.1	74.5	0.62	121.023	
295.3	295.3	294.3	294.3	0.5	0.5	91.67	-2.2	75.0	75.1	74.0	1.05	71.594	
300.0	300.0	299.0	299.0	0.5	0.5	91.67	-2.2	75.0	75.1	74.0	1.07	70.173	
393.7	393.7	392.7	392.7	0.7	0.7	91.67	-2.2	75.0	75.1	73.6	1.49	50.350	
400.0	400.0	399.0	399.0	0.8	0.8	91.67	-2.2	75.0	75.1	73.6	1.52	49.412	
492.1	492.1	491.1	491.1	1.0	1.0	91.67	-2.2	75.0	75.1	73.1	1.93	38.829	
500.0	500.0	499.0	499.0	1.0	1.0	91.67	-2.2	75.0	75.1	73.1	1.97	38.130	
590.5	590.5	589.5	589.5	1.2	1.2	91.67	-2.2	75.0	75.1	72.7	2.38	31.598	
600.0	600.0	599.0	599.0	1.2	1.2	91.67	-2.2	75.0	75.1	72.7	2.42	31.043	
689.0	689.0	688.0	688.0	1.4	1.4	91.67	-2.2	75.0	75.1	72.3	2.82	26.638	
700.0	700.0	699.0	699.0	1.4	1.4	91.67	-2.2	75.0	75.1	72.2	2.87	26.177	
787.4	787.4	786.4	786.4	1.6	1.6	91.67	-2.2	75.0	75.1	71.8	3.26	23.023	
800.0	800.0	799.0	799.0	1.7	1.7	91.67	-2.2	75.0	75.1	71.8	3.32	22.630	
885.8	885.8	884.8	884.8	1.9	1.9	91.67	-2.2	75.0	75.1	71.4	3.70	20.273	
900.0	900.0	899.0	899.0	1.9	1.9	91.67	-2.2	75.0	75.1	71.3	3.77	19.930	
984.2	984.2	983.2	983.2	2.1	2.1	91.67	-2.2	75.0	75.1	70.9	4.15	18.109	
1,000.0	1,000.0	999.0	999.0	2.1	2.1	91.67	-2.2	75.0	75.1	70.9	4.22	17.805	
1,082.7	1,082.7	1,081.7	1,081.7	2.3	2.3	91.67	-2.2	75.0	75.1	70.5	4.59	16.363	
1,100.0	1,100.0	1,099.0	1,099.0	2.3	2.3	91.67	-2.2	75.0	75.1	70.4	4.67	16.090	
1,181.1	1,181.1	1,180.1	1,180.1	2.5	2.5	91.67	-2.2	75.0	75.1	70.0	5.03	14.924	
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	91.67	-2.2	75.0	75.1	70.0	5.12	14.676	
1,279.5	1,279.5	1,278.5	1,278.5	2.7	2.7	91.67	-2.2	75.0	75.1	69.6	5.47	13.717	
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	91.67	-2.2	75.0	75.1	69.5	5.57	13.490	
1,377.9	1,377.9	1,376.9	1,376.9	3.0	3.0	91.67	-2.2	75.0	75.1	69.2	5.92	12.691	
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	91.67	-2.2	75.0	75.1	69.1	6.01	12.482	
1,476.4	1,476.4	1,475.4	1,475.4	3.2	3.2	91.67	-2.2	75.0	75.1	68.7	6.36	11.808	
1,500.0	1,500.0	1,499.0	1,499.0	3.2	3.2	91.67	-2.2	75.0	75.1	68.6	6.46	11.614	
1,574.8	1,574.8	1,573.8	1,573.8	3.4	3.4	91.67	-2.2	75.0	75.1	68.3	6.80	11.040	
1,600.0	1,600.0	1,599.0	1,599.0	3.5	3.5	91.67	-2.2	75.0	75.1	68.2	6.91	10.859	
1,638.2	1,638.2	1,637.2	1,637.2	3.5	3.5	91.67	-2.2	75.0	75.1	68.0	7.09	10.596 CC	
1,673.2	1,673.2	1,671.8	1,671.8	3.6	3.6	91.63	-2.1	75.1	75.1	67.9	7.24	10.378 ES	
1,700.0	1,700.0	1,698.0	1,698.0	3.7	3.7	91.48	-1.9	75.4	75.4	68.0	7.36	10.247	
1,771.6	1,771.6	1,768.2	1,768.1	3.8	3.8	90.54	-0.7	77.0	77.0	69.4	7.67	10.045	
1,800.0	1,800.0	1,795.9	1,795.8	3.9	3.9	89.97	0.0	78.0	78.1	70.3	7.79	10.020	
1,870.1	1,870.1	1,864.3	1,864.1	4.1	4.0	88.16	2.6	81.5	81.6	73.6	8.10	10.083	
1,900.0	1,900.0	1,893.4	1,893.1	4.1	4.1	87.24	4.0	83.3	83.6	75.4	8.23	10.163	
1,968.5	1,968.5	1,959.9	1,959.3	4.3	4.3	84.92	7.9	88.4	89.2	80.6	8.53	10.457	
2,000.0	2,000.0	1,990.4	1,989.6	4.4	4.3	83.79	9.9	91.2	92.2	83.6	8.67	10.643	
2,066.9	2,066.9	2,054.9	2,053.5	4.5	4.5	81.32	14.9	97.9	99.8	90.8	8.96	11.140	
2,100.0	2,100.0	2,086.6	2,084.9	4.6	4.6	80.10	17.7	101.6	104.1	95.0	9.10	11.435	
2,150.0	2,150.0	2,134.3	2,132.0	4.7	4.7	78.30	22.3	107.7	111.3	102.0	9.33	11.937	
2,165.3	2,165.3	2,148.9	2,146.4	4.7	4.7	77.49	23.8	109.7	113.7	104.3	9.39	12.103	
2,200.0	2,200.0	2,181.8	2,178.8	4.8	4.8	76.36	27.3	114.4	119.3	109.7	9.54	12.496	
2,263.8	2,263.7	2,242.1	2,237.9	5.0	5.0	74.79	34.4	123.8	130.3	120.5	9.83	13.261	
2,300.0	2,299.9	2,276.2	2,271.3	5.0	5.1	74.15	38.7	129.6	137.0	127.0	9.99	13.718	
2,362.2	2,362.0	2,334.5	2,328.0	5.2	5.3	73.40	46.6	140.2	149.1	138.8	10.26	14.528	
2,400.0	2,399.7	2,369.8	2,362.2	5.3	5.4	73.13	51.8	147.0	156.8	146.4	10.43	15.035	
2,460.6	2,460.0	2,426.0	2,416.5	5.4	5.6	72.92	60.5	158.6	169.8	159.1	10.71	15.864	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	2,499.1	2,462.3	2,451.4	5.5	5.7	72.91	66.4	166.6	178.7	167.8	10.89	16.412	
2,559.0	2,557.7	2,516.4	2,503.3	5.6	6.0	73.03	75.8	179.1	192.5	181.3	11.16	17.242	
2,600.0	2,598.2	2,553.7	2,538.8	5.7	6.1	73.20	82.6	188.1	202.5	191.1	11.36	17.822	
2,657.5	2,654.8	2,605.7	2,588.1	5.9	6.4	73.53	92.6	201.4	217.0	205.4	11.65	18.634	
2,700.0	2,696.6	2,644.0	2,624.1	6.0	6.6	73.83	100.2	211.6	228.2	216.3	11.86	19.233	
2,755.9	2,751.4	2,693.9	2,670.9	6.1	6.8	74.27	110.6	225.5	243.4	231.2	12.16	20.013	
2,800.0	2,794.4	2,735.0	2,709.3	6.2	7.1	74.69	119.5	237.4	255.7	243.3	12.41	20.608	
2,854.3	2,847.3	2,787.1	2,757.8	6.4	7.4	75.34	130.8	252.4	270.8	258.1	12.74	21.255	
2,888.8	2,880.6	2,820.1	2,788.6	6.5	7.5	75.81	137.9	261.9	280.3	267.3	12.96	21.633	
2,900.0	2,891.5	2,830.8	2,798.6	6.6	7.6	76.03	140.3	265.0	283.3	270.3	13.03	21.746	
2,952.7	2,942.5	2,881.3	2,845.7	6.7	7.9	77.00	151.2	279.6	297.8	284.4	13.38	22.251	
3,000.0	2,988.2	2,926.5	2,887.9	6.9	8.2	77.79	161.0	292.7	310.9	297.2	13.71	22.676	
3,051.2	3,037.6	2,975.5	2,933.6	7.1	8.5	78.58	171.6	306.8	325.1	311.0	14.08	23.092	
3,100.0	3,084.9	3,022.3	2,977.2	7.3	8.8	79.27	181.7	320.3	338.6	324.2	14.43	23.465	
3,149.6	3,132.8	3,069.7	3,021.5	7.5	9.1	79.92	192.0	334.0	352.5	337.7	14.81	23.806	
3,200.0	3,181.5	3,118.0	3,066.5	7.6	9.4	80.53	202.4	348.0	366.6	351.4	15.19	24.132	
3,248.0	3,228.0	3,164.0	3,109.3	7.8	9.7	81.06	212.4	361.2	380.1	364.5	15.57	24.411	
3,300.0	3,278.2	3,213.7	3,155.7	8.0	10.0	81.60	223.2	375.6	394.7	378.7	15.98	24.696	
3,346.4	3,323.2	3,258.2	3,197.2	8.2	10.3	82.05	232.8	388.4	407.7	391.4	16.36	24.923	
3,400.0	3,374.9	3,309.4	3,245.0	8.5	10.7	82.54	243.9	403.2	422.9	406.1	16.80	25.171	
3,444.9	3,418.3	3,352.4	3,285.1	8.6	10.9	82.92	253.2	415.6	435.5	418.4	17.18	25.357	
3,500.0	3,471.6	3,405.2	3,334.3	8.9	11.3	83.35	264.6	430.9	451.1	433.5	17.64	25.573	
3,543.3	3,513.5	3,446.6	3,373.0	9.1	11.6	83.68	273.6	442.9	463.4	445.4	18.01	25.724	
3,600.0	3,568.3	3,500.9	3,423.6	9.3	11.9	84.07	285.3	458.5	479.5	461.0	18.50	25.913	
3,641.7	3,608.7	3,540.8	3,460.8	9.5	12.2	84.35	294.0	470.1	491.4	472.5	18.87	26.036	
3,700.0	3,665.0	3,596.6	3,512.9	9.7	12.6	84.72	306.1	486.2	507.9	488.5	19.39	26.201	
3,740.1	3,703.8	3,635.1	3,548.7	9.9	12.9	84.95	314.4	497.3	519.3	499.6	19.75	26.302	
3,800.0	3,761.7	3,692.4	3,602.1	10.2	13.3	85.29	326.8	513.8	536.4	516.1	20.28	26.446	
3,838.6	3,799.0	3,729.3	3,636.6	10.4	13.5	85.49	334.8	524.5	547.4	526.8	20.63	26.530	
3,900.0	3,858.4	3,788.1	3,691.4	10.7	13.9	85.80	347.5	541.4	564.9	543.7	21.19	26.656	
3,937.0	3,894.2	3,823.5	3,724.4	10.8	14.2	85.98	355.2	551.7	575.5	553.9	21.53	26.724	
4,000.0	3,955.1	3,883.8	3,780.7	11.1	14.6	86.27	368.2	569.1	593.5	571.4	22.12	26.835	
4,035.4	3,989.3	3,917.7	3,812.3	11.3	14.9	86.42	375.6	578.9	603.6	581.1	22.45	26.891	
4,100.0	4,051.8	3,979.5	3,870.0	11.6	15.3	86.69	389.0	596.7	622.1	599.0	23.05	26.989	
4,133.8	4,084.5	4,012.0	3,900.2	11.7	15.5	86.83	396.0	606.1	631.7	608.4	23.37	27.035	
4,200.0	4,148.5	4,075.3	3,959.2	12.1	16.0	87.08	409.7	624.4	650.7	626.7	23.99	27.121	
4,232.3	4,179.7	4,106.2	3,988.1	12.2	16.2	87.20	416.4	633.3	659.9	635.6	24.30	27.160	
4,300.0	4,245.2	4,171.0	4,048.5	12.5	16.6	87.43	430.4	652.0	679.3	654.4	24.94	27.236	
4,330.7	4,274.9	4,200.4	4,075.9	12.7	16.9	87.54	436.8	660.5	688.1	662.9	25.24	27.268	
4,400.0	4,341.9	4,266.7	4,137.8	13.0	17.3	87.76	451.1	679.7	708.0	682.1	25.90	27.335	
4,429.1	4,370.0	4,294.6	4,163.8	13.1	17.5	87.85	457.2	687.7	716.3	690.2	26.18	27.361	
4,500.0	4,438.6	4,362.5	4,227.1	13.5	18.0	88.06	471.9	707.3	736.7	709.8	26.87	27.421	
4,527.5	4,465.2	4,388.8	4,251.7	13.6	18.2	88.14	477.6	714.9	744.6	717.4	27.13	27.442	
4,600.0	4,535.3	4,458.2	4,316.4	14.0	18.7	88.34	492.6	734.9	765.4	737.5	27.84	27.496	
4,626.0	4,560.4	4,483.1	4,339.6	14.1	18.9	88.40	498.0	742.1	772.8	744.7	28.09	27.513	
4,700.0	4,631.9	4,553.9	4,405.6	14.5	19.4	88.59	513.3	762.6	794.1	765.3	28.81	27.561	
4,724.4	4,655.5	4,577.3	4,427.4	14.6	19.6	88.65	518.4	769.3	801.1	772.0	29.05	27.575	
4,800.0	4,728.6	4,649.7	4,494.9	15.0	20.1	88.83	534.0	790.2	822.8	793.0	29.79	27.618	
4,822.8	4,750.7	4,671.5	4,515.3	15.1	20.2	88.88	538.8	796.5	829.4	799.4	30.02	27.630	
4,900.0	4,825.3	4,745.4	4,584.2	15.4	20.8	89.05	554.8	817.9	851.6	820.8	30.78	27.668	
4,921.2	4,845.9	4,765.7	4,603.2	15.6	20.9	89.10	559.2	823.7	857.7	826.7	30.99	27.677	
5,000.0	4,922.0	4,841.1	4,673.5	15.9	21.5	89.26	575.5	845.5	880.3	848.5	31.77	27.711	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	4,941.0	4,859.9	4,691.0	16.0	21.6	89.30	579.6	850.9	886.0	854.0	31.96	27.719	
5,100.0	5,018.7	4,936.8	4,762.8	16.4	22.2	89.46	596.2	873.1	909.1	876.3	32.76	27.750	
5,118.1	5,036.2	4,954.2	4,778.9	16.5	22.3	89.49	600.0	878.1	914.3	881.3	32.94	27.756	
5,200.0	5,115.4	5,032.6	4,852.0	16.9	22.9	89.64	616.9	900.8	937.8	904.1	33.76	27.783	
5,216.5	5,131.4	5,048.4	4,866.8	17.0	23.0	89.67	620.4	905.3	942.6	908.7	33.92	27.788	
5,300.0	5,212.1	5,128.3	4,941.3	17.4	23.6	89.82	637.7	928.4	966.6	931.9	34.75	27.813	
5,314.9	5,226.6	5,142.6	4,954.7	17.5	23.7	89.84	640.8	932.6	970.9	936.0	34.90	27.817	
5,400.0	5,308.8	5,224.0	5,030.6	17.9	24.3	89.98	658.4	956.1	995.4	959.7	35.76	27.839	
5,413.4	5,321.7	5,236.8	5,042.5	18.0	24.3	90.00	661.2	959.8	999.3	963.4	35.89	27.842	
5,500.0	5,405.5	5,319.8	5,119.9	18.4	24.9	90.13	679.1	983.7	1,024.2	987.4	36.76	27.861	
5,511.8	5,416.9	5,331.1	5,130.4	18.5	25.0	90.15	681.6	987.0	1,027.6	990.7	36.88	27.864	
5,600.0	5,502.2	5,415.5	5,209.1	18.9	25.6	90.28	699.8	1,011.3	1,053.0	1,015.2	37.77	27.881	
5,610.2	5,512.1	5,425.3	5,218.3	19.0	25.7	90.29	702.0	1,014.2	1,056.0	1,018.1	37.87	27.883	
5,700.0	5,598.9	5,511.2	5,298.4	19.4	26.3	90.41	720.6	1,039.0	1,081.8	1,043.0	38.78	27.899	
5,708.6	5,607.2	5,519.5	5,306.1	19.5	26.4	90.43	722.4	1,041.4	1,084.3	1,045.4	38.86	27.900	
5,745.8	5,643.2	5,555.1	5,339.3	19.7	26.7	90.47	730.1	1,051.7	1,095.0	1,055.8	39.24	27.906	
5,800.0	5,695.7	5,607.0	5,387.7	19.9	27.0	90.84	741.3	1,066.6	1,110.6	1,070.8	39.81	27.895	
5,807.1	5,702.6	5,613.7	5,394.0	19.9	27.1	90.89	742.8	1,068.6	1,112.7	1,072.8	39.88	27.898	
5,900.0	5,793.2	5,717.8	5,491.2	20.3	27.8	91.37	765.0	1,098.3	1,139.2	1,098.3	40.82	27.910	
5,905.5	5,798.6	5,725.4	5,498.3	20.3	27.8	91.39	766.6	1,100.4	1,140.7	1,099.8	40.87	27.910	
6,000.0	5,891.5	5,857.5	5,623.5	20.6	28.5	91.74	792.0	1,134.3	1,164.8	1,123.0	41.78	27.882	
6,003.9	5,895.4	5,863.1	5,628.8	20.6	28.6	91.75	793.0	1,135.6	1,165.7	1,123.9	41.81	27.881	
6,100.0	5,990.4	6,000.0	5,760.5	20.9	29.2	92.00	815.5	1,165.6	1,186.6	1,144.0	42.64	27.831	
6,102.3	5,992.7	6,003.4	5,763.8	20.9	29.2	92.01	816.0	1,166.3	1,187.1	1,144.4	42.66	27.830	
6,200.0	6,089.7	6,144.9	5,901.6	21.1	29.7	92.16	835.2	1,191.8	1,204.6	1,161.2	43.38	27.769	
6,200.8	6,090.4	6,146.0	5,902.7	21.1	29.7	92.16	835.3	1,192.0	1,204.7	1,161.3	43.38	27.768	
6,299.2	6,188.5	6,290.6	6,045.0	21.4	30.2	92.23	850.6	1,212.4	1,218.5	1,174.5	44.00	27.691	
6,300.0	6,189.3	6,291.8	6,046.2	21.4	30.2	92.23	850.7	1,212.5	1,218.6	1,174.5	44.01	27.690	
6,397.6	6,286.8	6,436.8	6,190.0	21.5	30.6	92.20	861.7	1,227.2	1,228.2	1,183.8	44.49	27.606	
6,400.0	6,289.2	6,440.3	6,193.5	21.5	30.6	92.20	861.9	1,227.4	1,228.4	1,183.9	44.50	27.604	
6,484.6	6,373.8	6,566.8	6,319.6	21.6	30.8	92.34	867.8	1,235.3	1,233.6	1,188.8	44.82	27.522	
6,496.0	6,385.3	6,584.0	6,336.8	21.7	30.9	92.31	868.3	1,236.0	1,234.0	1,189.2	44.86	27.510	
6,500.0	6,389.2	6,589.9	6,342.7	21.7	30.9	92.31	868.5	1,236.2	1,234.2	1,189.3	44.87	27.505	
6,514.6	6,403.8	6,611.8	6,364.6	21.7	30.9	92.28	869.0	1,237.0	1,234.7	1,189.8	44.92	27.488	
6,550.0	6,439.2	6,664.9	6,417.7	21.7	31.0	-87.77	870.0	1,238.3	1,235.5	1,190.5	45.02	27.445	
6,594.5	6,483.5	6,729.8	6,482.5	21.7	31.0	-88.01	870.4	1,238.8	1,235.7	1,190.6	45.05	27.429	
6,600.0	6,489.0	6,735.3	6,488.0	21.7	31.0	-88.04	870.4	1,238.8	1,235.7	1,190.6	45.05	27.428	
6,650.0	6,538.4	6,783.3	6,536.1	21.7	31.1	-88.37	869.9	1,238.8	1,235.5	1,190.5	44.99	27.462	
6,692.9	6,580.3	6,823.9	6,576.5	21.6	31.1	-88.67	867.2	1,238.8	1,235.3	1,190.4	44.87	27.529	
6,700.0	6,587.1	6,830.6	6,583.2	21.6	31.1	-88.72	866.5	1,238.8	1,235.3	1,190.4	44.85	27.542	
6,750.0	6,635.0	6,878.4	6,630.6	21.5	31.1	-89.08	860.0	1,238.8	1,235.1	1,190.5	44.64	27.669	
6,791.3	6,673.7	6,918.3	6,669.7	21.4	31.0	-89.38	852.1	1,238.8	1,235.0	1,190.6	44.41	27.810	
6,800.0	6,681.7	6,926.7	6,677.8	21.4	31.0	-89.44	850.2	1,238.8	1,235.0	1,190.6	44.36	27.842	
6,850.0	6,727.1	6,975.5	6,724.8	21.2	31.0	-89.81	837.1	1,238.8	1,234.9	1,190.9	44.01	28.058	
6,875.3	6,749.4	7,000.4	6,748.4	21.1	30.9	-90.00	829.2	1,238.8	1,234.9	1,191.1	43.82	28.183	
6,889.7	6,762.0	7,014.7	6,761.9	21.1	30.9	-90.11	824.3	1,238.8	1,234.9	1,191.2	43.70	28.261	
6,900.0	6,770.9	7,024.9	6,771.3	21.0	30.9	-90.18	820.6	1,238.8	1,234.9	1,191.3	43.61	28.317	
6,950.0	6,812.9	7,074.8	6,817.1	20.8	30.8	-90.55	800.7	1,238.8	1,235.0	1,191.8	43.16	28.615	
6,988.2	6,843.6	7,113.2	6,851.4	20.6	30.7	-90.84	783.2	1,238.8	1,235.1	1,192.3	42.78	28.868	
7,000.0	6,852.9	7,125.2	6,861.8	20.6	30.6	-90.93	777.4	1,238.8	1,235.1	1,192.4	42.66	28.950	
7,050.0	6,890.7	7,176.3	6,905.4	20.3	30.5	-91.29	750.7	1,238.8	1,235.3	1,193.1	42.13	29.319	
7,086.6	6,916.9	7,214.1	6,936.3	20.1	30.3	-91.56	728.9	1,238.8	1,235.4	1,193.7	41.73	29.607	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
7,100.0	6,926.2	7,228.0	6,947.3	20.1	30.3	-91.66	720.5	1,238.8	1,235.5	1,193.9	41.58	29.715	
7,150.0	6,959.1	7,280.3	6,987.5	19.8	30.1	-92.02	687.0	1,238.8	1,235.7	1,194.7	41.01	30.134	
7,185.0	6,980.5	7,317.3	7,014.4	19.6	29.9	-92.27	661.6	1,238.8	1,235.9	1,195.3	40.61	30.437	
7,200.0	6,989.3	7,333.3	7,025.6	19.5	29.9	-92.37	650.2	1,238.8	1,236.0	1,195.6	40.43	30.568	
7,250.0	7,016.6	7,386.9	7,061.2	19.3	29.6	-92.71	610.2	1,238.8	1,236.4	1,196.5	39.87	31.008	
7,283.4	7,033.3	7,423.1	7,083.5	19.1	29.5	-92.93	581.7	1,238.8	1,236.6	1,197.1	39.51	31.299	
7,300.0	7,041.0	7,441.1	7,094.1	19.1	29.4	-93.04	567.1	1,238.8	1,236.7	1,197.4	39.33	31.445	
7,350.0	7,062.2	7,496.0	7,124.0	18.8	29.1	-93.36	521.1	1,238.8	1,237.1	1,198.3	38.82	31.865	
7,381.9	7,074.1	7,531.3	7,141.3	18.7	29.0	-93.55	490.4	1,238.8	1,237.4	1,198.8	38.53	32.115	
7,400.0	7,080.3	7,551.5	7,150.5	18.7	28.9	-93.66	472.4	1,238.8	1,237.5	1,199.1	38.36	32.257	
7,450.0	7,095.0	7,607.6	7,173.5	18.5	28.6	-93.94	421.2	1,238.8	1,237.9	1,199.9	37.97	32.606	
7,480.3	7,102.4	7,641.9	7,185.5	18.4	28.5	-94.10	389.1	1,238.8	1,238.2	1,200.4	37.76	32.788	
7,500.0	7,106.4	7,664.3	7,192.5	18.4	28.4	-94.20	367.8	1,238.8	1,238.3	1,200.7	37.64	32.899	
7,550.0	7,114.4	7,721.5	7,207.4	18.3	28.1	-94.44	312.6	1,238.8	1,238.7	1,201.3	37.39	33.126	
7,578.7	7,117.4	7,754.6	7,213.9	18.3	28.0	-94.57	280.1	1,238.8	1,238.9	1,201.6	37.29	33.220	
7,600.0	7,118.9	7,779.2	7,217.9	18.3	27.9	-94.66	255.8	1,238.8	1,239.1	1,201.8	37.24	33.275	
7,641.3	7,120.0	7,827.3	7,223.1	18.3	27.7	-94.82	208.0	1,238.8	1,239.3	1,202.2	37.18	33.335	
7,677.1	7,119.9	7,869.3	7,225.0	18.3	27.6	-94.91	166.1	1,238.8	1,239.5	1,202.3	37.17	33.348	
7,700.0	7,119.9	7,895.3	7,225.0	18.4	27.5	-94.91	140.0	1,238.8	1,239.5	1,202.3	37.18	33.335	
7,775.6	7,119.7	7,970.9	7,223.9	18.6	27.3	-94.87	64.5	1,238.8	1,239.4	1,202.0	37.46	33.084	
7,800.0	7,119.6	7,995.3	7,223.6	18.6	27.3	-94.86	40.1	1,238.8	1,239.4	1,201.8	37.56	33.002	
7,874.0	7,119.4	8,069.3	7,222.6	19.0	27.2	-94.82	-33.9	1,238.8	1,239.3	1,201.2	38.11	32.522	
7,900.0	7,119.4	8,095.3	7,222.2	19.1	27.2	-94.81	-59.9	1,238.8	1,239.3	1,201.0	38.30	32.354	
7,972.4	7,119.2	8,167.7	7,221.2	19.6	27.1	-94.77	-132.3	1,238.8	1,239.2	1,200.1	39.10	31.690	
8,000.0	7,119.1	8,195.3	7,220.8	19.7	27.1	-94.75	-159.9	1,238.8	1,239.2	1,199.8	39.41	31.442	
8,070.8	7,118.9	8,266.2	7,219.9	20.3	27.2	-94.72	-230.7	1,238.8	1,239.1	1,198.7	40.43	30.650	
8,100.0	7,118.9	8,295.3	7,219.5	20.5	27.3	-94.70	-259.9	1,238.8	1,239.1	1,198.3	40.85	30.333	
8,169.3	7,118.7	8,364.6	7,218.5	21.2	27.5	-94.67	-329.2	1,238.8	1,239.1	1,197.0	42.05	29.466	
8,200.0	7,118.6	8,395.3	7,218.1	21.5	27.6	-94.65	-359.9	1,238.8	1,239.0	1,196.4	42.59	29.095	
8,267.7	7,118.5	8,463.0	7,217.1	22.2	27.9	-94.61	-427.6	1,238.8	1,239.0	1,195.0	43.94	28.199	
8,300.0	7,118.4	8,495.3	7,216.7	22.5	28.1	-94.60	-459.9	1,238.8	1,238.9	1,194.4	44.58	27.789	
8,366.1	7,118.2	8,561.4	7,215.8	23.3	28.5	-94.56	-526.0	1,238.8	1,238.9	1,192.8	46.05	26.900	
8,400.0	7,118.1	8,595.3	7,215.3	23.7	28.8	-94.55	-559.8	1,238.8	1,238.8	1,192.0	46.81	26.465	
8,464.5	7,118.0	8,659.8	7,214.4	24.5	29.3	-94.51	-624.4	1,238.8	1,238.8	1,190.4	48.38	25.608	
8,500.0	7,117.9	8,695.3	7,213.9	25.0	29.6	-94.49	-659.8	1,238.8	1,238.8	1,189.5	49.24	25.159	
8,563.0	7,117.7	8,758.3	7,213.1	25.8	30.2	-94.46	-722.8	1,238.8	1,238.7	1,187.8	50.87	24.350	
8,600.0	7,117.6	8,795.3	7,212.6	26.3	30.6	-94.44	-759.8	1,238.8	1,238.7	1,186.8	51.83	23.897	
8,661.4	7,117.5	8,856.7	7,211.7	27.2	31.2	-94.41	-821.2	1,238.8	1,238.6	1,185.1	53.52	23.145	
8,700.0	7,117.4	8,895.3	7,211.2	27.7	31.7	-94.39	-859.8	1,238.8	1,238.6	1,184.0	54.58	22.695	
8,759.8	7,117.2	8,955.1	7,210.4	28.6	32.4	-94.36	-919.6	1,238.8	1,238.5	1,182.2	56.29	22.002	
8,800.0	7,117.1	8,995.3	7,209.8	29.2	32.9	-94.34	-959.8	1,238.8	1,238.5	1,181.1	57.44	21.560	
8,858.2	7,117.0	9,053.5	7,209.0	30.1	33.6	-94.31	-1,018.0	1,238.8	1,238.4	1,179.3	59.18	20.928	
8,900.0	7,116.9	9,095.3	7,208.4	30.7	34.2	-94.28	-1,059.8	1,238.8	1,238.4	1,178.0	60.42	20.497	
8,956.7	7,116.8	9,151.9	7,207.6	31.6	34.9	-94.26	-1,116.4	1,238.8	1,238.4	1,176.2	62.16	19.923	
9,000.0	7,116.7	9,195.3	7,207.0	32.3	35.5	-94.23	-1,159.8	1,238.8	1,238.3	1,174.8	63.49	19.504	
9,055.1	7,116.5	9,250.4	7,206.3	33.2	36.3	-94.20	-1,214.8	1,238.8	1,238.3	1,173.1	65.22	18.985	
9,100.0	7,116.4	9,295.3	7,205.7	33.9	36.9	-94.18	-1,259.7	1,238.8	1,238.2	1,171.6	66.64	18.582	
9,153.5	7,116.3	9,348.8	7,204.9	34.8	37.7	-94.15	-1,313.3	1,238.8	1,238.2	1,169.8	68.36	18.113	
9,200.0	7,116.2	9,395.2	7,204.3	35.5	38.4	-94.13	-1,359.7	1,238.8	1,238.2	1,168.3	69.86	17.724	
9,251.9	7,116.0	9,447.2	7,203.6	36.4	39.1	-94.10	-1,411.7	1,238.8	1,238.1	1,166.6	71.56	17.302	
9,300.0	7,115.9	9,495.2	7,202.9	37.2	39.9	-94.08	-1,459.7	1,238.8	1,238.1	1,164.9	73.13	16.929	
9,350.4	7,115.8	9,545.6	7,202.2	38.0	40.6	-94.05	-1,510.1	1,238.8	1,238.0	1,163.2	74.81	16.549	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
9,400.0	7,115.7	9,595.2	7,201.5	38.9	41.4	-94.02	-1,559.7	1,238.8	1,238.0	1,161.5	76.47	16.190	
9,448.8	7,115.5	9,644.0	7,200.9	39.7	42.1	-94.00	-1,608.5	1,238.9	1,238.0	1,159.8	78.11	15.848	
9,500.0	7,115.4	9,695.2	7,200.2	40.6	42.9	-93.97	-1,659.7	1,238.9	1,237.9	1,158.1	79.84	15.505	
9,547.2	7,115.3	9,742.4	7,199.5	41.4	43.7	-93.95	-1,706.9	1,238.9	1,237.9	1,156.4	81.46	15.197	
9,600.0	7,115.2	9,795.2	7,198.8	42.3	44.5	-93.92	-1,759.7	1,238.9	1,237.8	1,154.6	83.26	14.867	
9,645.6	7,115.1	9,840.9	7,198.1	43.1	45.3	-93.90	-1,805.3	1,238.9	1,237.8	1,153.0	84.83	14.591	
9,700.0	7,114.9	9,895.2	7,197.4	44.0	46.2	-93.87	-1,859.6	1,238.9	1,237.8	1,151.1	86.71	14.274	
9,744.1	7,114.8	9,939.3	7,196.8	44.8	46.9	-93.84	-1,903.7	1,238.9	1,237.7	1,149.5	88.25	14.026	
9,800.0	7,114.7	9,995.2	7,196.0	45.8	47.8	-93.82	-1,959.6	1,238.9	1,237.7	1,147.5	90.20	13.722	
9,842.5	7,114.6	10,037.7	7,195.4	46.5	48.5	-93.79	-2,002.1	1,238.9	1,237.7	1,146.0	91.69	13.498	
9,900.0	7,114.4	10,095.2	7,194.6	47.6	49.4	-93.76	-2,059.6	1,238.9	1,237.6	1,143.9	93.71	13.207	
9,940.9	7,114.3	10,136.1	7,194.1	48.3	50.1	-93.74	-2,100.5	1,238.9	1,237.6	1,142.4	95.16	13.006	
10,000.0	7,114.2	10,195.2	7,193.3	49.3	51.1	-93.71	-2,159.6	1,238.9	1,237.5	1,140.3	97.25	12.726	
10,039.3	7,114.1	10,234.5	7,192.7	50.0	51.8	-93.69	-2,198.9	1,238.9	1,237.5	1,138.9	98.65	12.545	
10,100.0	7,113.9	10,295.2	7,191.9	51.1	52.8	-93.66	-2,259.6	1,238.9	1,237.5	1,136.7	100.81	12.276	
10,137.8	7,113.8	10,333.0	7,191.4	51.8	53.5	-93.64	-2,297.3	1,238.9	1,237.4	1,135.3	102.16	12.113	
10,200.0	7,113.7	10,395.2	7,190.5	52.9	54.5	-93.61	-2,359.6	1,238.9	1,237.4	1,133.0	104.39	11.854	
10,236.2	7,113.6	10,431.4	7,190.0	53.6	55.1	-93.59	-2,395.8	1,238.9	1,237.4	1,131.7	105.69	11.708	
10,300.0	7,113.4	10,495.2	7,189.1	54.7	56.2	-93.55	-2,459.5	1,238.9	1,237.3	1,129.3	107.99	11.458	
10,334.6	7,113.3	10,529.8	7,188.6	55.4	56.8	-93.54	-2,494.2	1,238.9	1,237.3	1,128.1	109.24	11.327	
10,400.0	7,113.2	10,595.2	7,187.7	56.5	58.0	-93.50	-2,559.5	1,238.9	1,237.3	1,125.7	111.60	11.087	
10,433.0	7,113.1	10,628.2	7,187.3	57.1	58.5	-93.49	-2,592.6	1,238.9	1,237.2	1,124.4	112.80	10.968	
10,500.0	7,112.9	10,695.2	7,186.4	58.4	59.7	-93.45	-2,659.5	1,238.9	1,237.2	1,122.0	115.23	10.737	
10,531.5	7,112.8	10,726.6	7,185.9	58.9	60.3	-93.43	-2,691.0	1,238.9	1,237.2	1,120.8	116.38	10.631	
10,600.0	7,112.7	10,795.2	7,185.0	60.2	61.5	-93.40	-2,759.5	1,238.9	1,237.1	1,118.3	118.87	10.407	
10,629.9	7,112.6	10,825.1	7,184.6	60.7	62.0	-93.38	-2,789.4	1,238.9	1,237.1	1,117.1	119.97	10.312	
10,700.0	7,112.4	10,895.1	7,183.6	62.0	63.2	-93.35	-2,859.5	1,238.9	1,237.1	1,114.5	122.53	10.096	
10,728.3	7,112.3	10,923.5	7,183.2	62.5	63.7	-93.33	-2,887.8	1,238.9	1,237.0	1,113.5	123.57	10.011	
10,800.0	7,112.2	10,995.1	7,182.2	63.9	65.0	-93.29	-2,959.5	1,238.9	1,237.0	1,110.8	126.20	9.802	
10,826.7	7,112.1	11,021.9	7,181.9	64.4	65.5	-93.28	-2,986.2	1,238.9	1,237.0	1,109.8	127.18	9.726	
10,900.0	7,111.9	11,095.1	7,180.9	65.7	66.8	-93.24	-3,059.4	1,238.9	1,236.9	1,107.1	129.87	9.524	
10,925.2	7,111.8	11,120.3	7,180.5	66.2	67.2	-93.23	-3,084.6	1,238.9	1,236.9	1,106.1	130.80	9.456	
11,000.0	7,111.7	11,195.1	7,179.5	67.6	68.5	-93.19	-3,159.4	1,238.9	1,236.9	1,103.3	133.56	9.261	
11,023.6	7,111.6	11,218.7	7,179.1	68.0	69.0	-93.18	-3,183.0	1,238.9	1,236.9	1,102.4	134.43	9.200	
11,100.0	7,111.4	11,295.1	7,178.1	69.4	70.3	-93.14	-3,259.4	1,238.9	1,236.8	1,099.5	137.26	9.011	
11,122.0	7,111.3	11,317.1	7,177.8	69.8	70.7	-93.13	-3,281.4	1,238.9	1,236.8	1,098.7	138.07	8.957	
11,200.0	7,111.2	11,395.1	7,176.7	71.3	72.1	-93.09	-3,359.4	1,238.9	1,236.7	1,095.8	140.96	8.774	
11,220.4	7,111.1	11,415.6	7,176.4	71.6	72.5	-93.07	-3,379.8	1,238.9	1,236.7	1,095.0	141.72	8.726	
11,300.0	7,110.9	11,495.1	7,175.3	73.1	73.9	-93.03	-3,459.4	1,238.9	1,236.7	1,092.0	144.67	8.548	
11,318.9	7,110.9	11,514.0	7,175.1	73.5	74.3	-93.02	-3,478.3	1,238.9	1,236.7	1,091.3	145.38	8.507	
11,400.0	7,110.6	11,595.1	7,174.0	75.0	75.8	-92.98	-3,559.4	1,238.9	1,236.6	1,088.2	148.39	8.333	
11,417.3	7,110.6	11,612.4	7,173.7	75.3	76.1	-92.97	-3,576.7	1,238.9	1,236.6	1,087.6	149.04	8.297	
11,500.0	7,110.4	11,695.1	7,172.6	76.8	77.6	-92.93	-3,659.4	1,238.9	1,236.6	1,084.4	152.12	8.129	
11,515.7	7,110.4	11,710.8	7,172.4	77.1	77.9	-92.92	-3,675.1	1,238.9	1,236.6	1,083.9	152.70	8.098	
11,600.0	7,110.1	11,795.1	7,171.2	78.7	79.4	-92.88	-3,759.3	1,238.9	1,236.5	1,080.7	155.85	7.934	
11,614.1	7,110.1	11,809.2	7,171.0	79.0	79.6	-92.87	-3,773.5	1,238.9	1,236.5	1,080.1	156.38	7.907	
11,655.0	7,110.0	11,850.1	7,170.5	79.7	80.4	-92.85	-3,814.4	1,238.9	1,236.5	1,078.6	157.91	7.831 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	91.85	-1.5	45.2	45.2				
98.4	98.4	98.4	98.4	0.1	0.1	91.85	-1.5	45.2	45.2	45.0	0.17	266.086	
100.0	100.0	100.0	100.0	0.1	0.1	91.85	-1.5	45.2	45.2	45.0	0.17	261.270	
196.8	196.8	196.8	196.8	0.3	0.3	91.85	-1.5	45.2	45.2	44.6	0.61	74.318	
200.0	200.0	200.0	200.0	0.3	0.3	91.85	-1.5	45.2	45.2	44.6	0.62	72.627	
295.3	295.3	295.3	295.3	0.5	0.5	91.85	-1.5	45.2	45.2	44.2	1.05	43.028	
300.0	300.0	300.0	300.0	0.5	0.5	91.85	-1.5	45.2	45.2	44.1	1.07	42.176	
393.7	393.7	393.7	393.7	0.7	0.7	91.85	-1.5	45.2	45.2	43.7	1.49	30.280	
400.0	400.0	400.0	400.0	0.8	0.8	91.85	-1.5	45.2	45.2	43.7	1.52	29.716	
492.1	492.1	492.1	492.1	1.0	1.0	91.85	-1.5	45.2	45.2	43.3	1.94	23.359	
500.0	500.0	500.0	500.0	1.0	1.0	91.85	-1.5	45.2	45.2	43.2	1.97	22.939	
590.5	590.5	590.5	590.5	1.2	1.2	91.85	-1.5	45.2	45.2	42.8	2.38	19.013	
600.0	600.0	600.0	600.0	1.2	1.2	91.85	-1.5	45.2	45.2	42.8	2.42	18.679	
689.0	689.0	689.0	689.0	1.4	1.4	91.85	-1.5	45.2	45.2	42.4	2.82	16.031	
700.0	700.0	700.0	700.0	1.4	1.4	91.85	-1.5	45.2	45.2	42.3	2.87	15.754	
787.4	787.4	787.4	787.4	1.6	1.6	91.85	-1.5	45.2	45.2	42.0	3.26	13.857	
800.0	800.0	800.0	800.0	1.7	1.7	91.85	-1.5	45.2	45.2	41.9	3.32	13.621	
885.8	885.8	885.8	885.8	1.9	1.9	91.85	-1.5	45.2	45.2	41.5	3.71	12.203	
900.0	900.0	900.0	900.0	1.9	1.9	91.85	-1.5	45.2	45.2	41.4	3.77	11.996	
984.2	984.2	984.2	984.2	2.1	2.1	91.85	-1.5	45.2	45.2	41.1	4.15	10.901	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	91.85	-1.5	45.2	45.2	41.0	4.22	10.718	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	91.85	-1.5	45.2	45.2	40.6	4.59	9.850	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	91.85	-1.5	45.2	45.2	40.5	4.67	9.686	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	91.85	-1.5	45.2	45.2	40.2	5.03	8.984	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	91.85	-1.5	45.2	45.2	40.1	5.12	8.835	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	91.85	-1.5	45.2	45.2	39.7	5.48	8.258	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	91.85	-1.5	45.2	45.2	39.7	5.57	8.122	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	91.85	-1.5	45.2	45.2	39.3	5.92	7.641	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	91.85	-1.5	45.2	45.2	39.2	6.02	7.515	
1,476.4	1,476.4	1,476.4	1,476.4	3.2	3.2	91.85	-1.5	45.2	45.2	38.9	6.36	7.109	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	91.85	-1.5	45.2	45.2	38.8	6.47	6.993	
1,574.8	1,574.8	1,574.8	1,574.8	3.4	3.4	91.85	-1.5	45.2	45.2	38.4	6.80	6.647	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	91.85	-1.5	45.2	45.2	38.3	6.92	6.538	
1,673.2	1,673.2	1,673.2	1,673.2	3.6	3.6	91.85	-1.5	45.2	45.2	38.0	7.25	6.241	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	91.85	-1.5	45.2	45.2	37.9	7.37	6.139	
1,771.6	1,771.6	1,771.6	1,771.6	3.8	3.8	91.85	-1.5	45.2	45.2	37.5	7.69	5.882	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	91.85	-1.5	45.2	45.2	37.4	7.82	5.786	
1,837.3	1,837.3	1,837.3	1,837.3	4.0	4.0	91.85	-1.5	45.2	45.2	37.2	7.98	5.664 CC	
1,870.1	1,870.1	1,869.9	1,869.9	4.1	4.1	91.78	-1.4	45.2	45.3	37.1	8.13	5.568 ES	
1,900.0	1,900.0	1,899.5	1,899.5	4.1	4.1	91.41	-1.1	45.5	45.5	37.2	8.26	5.504	
1,968.5	1,968.5	1,967.3	1,967.3	4.3	4.3	89.47	0.4	46.7	46.7	38.1	8.56	5.453	
2,000.0	2,000.0	1,998.5	1,998.4	4.4	4.3	88.12	1.6	47.6	47.6	38.9	8.70	5.473	
2,066.9	2,066.9	2,064.5	2,064.3	4.5	4.5	84.49	4.8	50.2	50.5	41.5	9.00	5.610	
2,100.0	2,100.0	2,097.1	2,096.8	4.6	4.6	82.41	6.9	51.8	52.4	43.2	9.14	5.726	
2,150.0	2,150.0	2,146.2	2,145.6	4.7	4.7	79.08	10.5	54.7	55.9	46.5	9.37	5.964	
2,165.3	2,165.3	2,161.2	2,160.6	4.7	4.7	77.81	11.8	55.7	57.1	47.7	9.43	6.052	
2,200.0	2,200.0	2,195.1	2,194.3	4.8	4.8	75.74	14.8	58.1	60.1	50.5	9.59	6.269	
2,263.8	2,263.7	2,257.4	2,256.0	5.0	4.9	72.78	21.2	63.1	66.4	56.5	9.87	6.724	
2,300.0	2,299.9	2,292.7	2,290.9	5.0	5.0	71.53	25.3	66.4	70.3	60.3	10.03	7.009	
2,362.2	2,362.0	2,353.1	2,350.5	5.2	5.2	69.99	33.1	72.5	77.6	67.3	10.31	7.531	
2,400.0	2,399.7	2,389.7	2,386.5	5.3	5.3	69.37	38.3	76.6	82.4	71.9	10.47	7.867	
2,460.6	2,460.0	2,448.3	2,443.9	5.4	5.4	68.76	47.4	83.8	90.6	79.8	10.75	8.425	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	2,499.1	2,486.2	2,481.0	5.5	5.6	68.59	53.7	88.8	96.2	85.2	10.93	8.801	
2,559.0	2,557.7	2,542.9	2,536.1	5.6	5.7	68.56	64.0	96.9	105.1	93.9	11.21	9.375	
2,600.0	2,598.2	2,582.0	2,574.1	5.7	5.9	68.69	71.5	102.9	111.5	100.1	11.40	9.785	
2,657.5	2,654.8	2,636.8	2,626.9	5.9	6.1	69.01	82.8	111.7	121.1	109.4	11.69	10.361	
2,700.0	2,696.6	2,677.2	2,665.7	6.0	6.2	69.33	91.6	118.7	128.5	116.6	11.90	10.796	
2,755.9	2,751.4	2,731.9	2,718.1	6.1	6.4	69.95	103.9	128.4	138.4	126.1	12.21	11.331	
2,800.0	2,794.4	2,775.3	2,759.7	6.2	6.6	70.65	113.7	136.2	145.9	133.5	12.46	11.712	
2,854.3	2,847.3	2,828.7	2,810.9	6.4	6.8	71.74	125.8	145.7	155.0	142.2	12.79	12.117	
2,888.8	2,880.6	2,862.6	2,843.4	6.5	7.0	72.54	133.4	151.7	160.6	147.6	13.00	12.349	
2,900.0	2,891.5	2,873.7	2,853.9	6.6	7.0	72.85	135.9	153.7	162.4	149.3	13.08	12.418	
2,952.7	2,942.5	2,925.6	2,903.6	6.7	7.3	74.20	147.6	163.0	171.0	157.6	13.44	12.727	
3,000.0	2,988.2	2,972.0	2,948.2	6.9	7.5	75.30	158.1	171.2	178.8	165.0	13.76	12.990	
3,051.2	3,037.6	3,022.4	2,996.4	7.1	7.7	76.39	169.5	180.2	187.3	173.2	14.13	13.252	
3,100.0	3,084.9	3,070.4	3,042.4	7.3	7.9	77.33	180.3	188.8	195.5	181.0	14.49	13.487	
3,149.6	3,132.8	3,119.2	3,089.1	7.5	8.2	78.22	191.3	197.5	203.8	188.9	14.87	13.707	
3,200.0	3,181.5	3,168.8	3,136.6	7.6	8.4	79.05	202.5	206.3	212.3	197.1	15.26	13.917	
3,248.0	3,228.0	3,216.1	3,181.9	7.8	8.6	79.78	213.1	214.7	220.5	204.8	15.64	14.101	
3,300.0	3,278.2	3,267.2	3,230.9	8.0	8.9	80.51	224.7	223.8	229.3	213.3	16.05	14.288	
3,346.4	3,323.2	3,312.9	3,274.6	8.2	9.1	81.12	235.0	232.0	237.3	220.9	16.43	14.441	
3,400.0	3,374.9	3,365.6	3,325.1	8.5	9.4	81.77	246.9	241.4	246.5	229.6	16.87	14.607	
3,444.9	3,418.3	3,409.7	3,367.4	8.6	9.6	82.29	256.8	249.2	254.2	237.0	17.25	14.736	
3,500.0	3,471.6	3,464.0	3,419.3	8.9	9.9	82.87	269.1	258.9	263.7	246.0	17.72	14.883	
3,543.3	3,513.5	3,506.6	3,460.1	9.1	10.1	83.30	278.7	266.5	271.2	253.1	18.09	14.991	
3,600.0	3,568.3	3,562.4	3,513.6	9.3	10.4	83.83	291.2	276.4	281.1	262.5	18.59	15.122	
3,641.7	3,608.7	3,603.4	3,552.9	9.5	10.6	84.20	300.5	283.7	288.3	269.4	18.95	15.212	
3,700.0	3,665.0	3,660.7	3,607.8	9.7	10.9	84.68	313.4	294.0	298.4	279.0	19.47	15.330	
3,740.1	3,703.8	3,700.2	3,645.6	9.9	11.1	85.00	322.4	301.0	305.4	285.6	19.83	15.405	
3,800.0	3,761.7	3,759.1	3,702.0	10.2	11.5	85.44	335.6	311.5	315.9	295.5	20.37	15.511	
3,838.6	3,799.0	3,797.1	3,738.4	10.4	11.7	85.71	344.2	318.2	322.6	301.9	20.72	15.574	
3,900.0	3,858.4	3,857.5	3,796.2	10.7	12.0	86.12	357.8	329.0	333.4	312.1	21.28	15.669	
3,937.0	3,894.2	3,893.9	3,831.1	10.8	12.2	86.35	366.0	335.5	339.9	318.3	21.62	15.722	
4,000.0	3,955.1	3,955.9	3,890.5	11.1	12.5	86.73	380.0	346.5	350.9	328.7	22.20	15.808	
4,035.4	3,989.3	3,990.7	3,923.9	11.3	12.7	86.93	387.9	352.8	357.2	334.6	22.53	15.853	
4,100.0	4,051.8	4,054.3	3,984.7	11.6	13.1	87.28	402.2	364.1	368.5	345.4	23.13	15.930	
4,133.8	4,084.5	4,087.6	4,016.6	11.7	13.2	87.46	409.7	370.0	374.5	351.0	23.45	15.968	
4,200.0	4,148.5	4,152.7	4,078.9	12.1	13.6	87.78	424.4	381.6	386.1	362.0	24.08	16.038	
4,232.3	4,179.7	4,184.4	4,109.4	12.2	13.8	87.93	431.6	387.3	391.8	367.4	24.38	16.070	
4,300.0	4,245.2	4,251.0	4,173.2	12.5	14.1	88.24	446.6	399.1	403.8	378.7	25.02	16.134	
4,330.7	4,274.9	4,281.2	4,202.1	12.7	14.3	88.37	453.4	404.5	409.2	383.9	25.32	16.161	
4,400.0	4,341.9	4,349.4	4,267.4	13.0	14.7	88.66	468.8	416.7	421.4	395.4	25.98	16.220	
4,429.1	4,370.0	4,378.1	4,294.9	13.1	14.9	88.77	475.2	421.8	426.6	400.3	26.26	16.243	
4,500.0	4,438.6	4,447.8	4,361.6	13.5	15.2	89.05	491.0	434.2	439.1	412.1	26.94	16.296	
4,527.5	4,465.2	4,474.9	4,387.6	13.6	15.4	89.15	497.1	439.0	444.0	416.7	27.21	16.316	
4,600.0	4,535.3	4,546.2	4,455.9	14.0	15.8	89.40	513.2	451.7	456.8	428.9	27.91	16.365	
4,626.0	4,560.4	4,571.7	4,480.3	14.1	15.9	89.49	518.9	456.3	461.4	433.2	28.16	16.382	
4,700.0	4,631.9	4,644.6	4,550.1	14.5	16.4	89.73	535.4	469.3	474.5	445.6	28.88	16.427	
4,724.4	4,655.5	4,668.6	4,573.1	14.6	16.5	89.81	540.8	473.5	478.8	449.7	29.12	16.441	
4,800.0	4,728.6	4,743.0	4,644.3	15.0	16.9	90.04	557.5	486.8	492.2	462.3	29.86	16.483	
4,822.8	4,750.7	4,765.4	4,665.8	15.1	17.0	90.10	562.6	490.8	496.3	466.2	30.09	16.495	
4,900.0	4,825.3	4,841.3	4,738.6	15.4	17.5	90.32	579.7	504.3	509.9	479.1	30.84	16.533	
4,921.2	4,845.9	4,862.3	4,758.6	15.6	17.6	90.38	584.4	508.0	513.7	482.7	31.05	16.543	
5,000.0	4,922.0	4,939.7	4,832.8	15.9	18.0	90.59	601.9	521.8	527.7	495.9	31.83	16.579	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	4,941.0	4,959.1	4,851.3	16.0	18.1	90.64	606.3	525.3	531.2	499.2	32.02	16.587	
5,100.0	5,018.7	5,038.1	4,927.0	16.4	18.6	90.83	624.1	539.4	545.4	512.6	32.82	16.621	
5,118.1	5,036.2	5,055.9	4,944.1	16.5	18.7	90.88	628.1	542.5	548.7	515.7	33.00	16.628	
5,200.0	5,115.4	5,136.5	5,021.3	16.9	19.1	91.07	646.3	556.9	563.2	529.4	33.81	16.659	
5,216.5	5,131.4	5,152.8	5,036.8	17.0	19.2	91.10	650.0	559.8	566.2	532.2	33.97	16.665	
5,300.0	5,212.1	5,234.9	5,115.5	17.4	19.7	91.29	668.5	574.4	581.0	546.2	34.80	16.694	
5,314.9	5,226.6	5,249.6	5,129.6	17.5	19.8	91.32	671.8	577.1	583.6	548.7	34.95	16.698	
5,400.0	5,308.8	5,333.3	5,209.7	17.9	20.3	91.49	690.7	592.0	598.8	563.0	35.80	16.725	
5,413.4	5,321.7	5,346.4	5,222.3	18.0	20.3	91.52	693.7	594.3	601.1	565.2	35.93	16.730	
5,500.0	5,405.5	5,431.7	5,304.0	18.4	20.8	91.68	712.9	609.5	616.6	579.8	36.80	16.755	
5,511.8	5,416.9	5,443.3	5,315.1	18.5	20.9	91.71	715.5	611.6	618.7	581.7	36.92	16.758	
5,600.0	5,502.2	5,530.0	5,398.2	18.9	21.4	91.87	735.1	627.0	634.4	596.6	37.80	16.782	
5,610.2	5,512.1	5,540.1	5,407.8	19.0	21.5	91.88	737.3	628.8	636.2	598.3	37.90	16.784	
5,700.0	5,598.9	5,628.4	5,492.4	19.4	22.0	92.04	757.3	644.6	652.2	613.4	38.80	16.807	
5,708.6	5,607.2	5,636.9	5,500.6	19.5	22.0	92.05	759.2	646.1	653.7	614.8	38.89	16.809	
5,745.8	5,643.2	5,673.5	5,535.6	19.7	22.2	92.12	767.4	652.6	660.3	621.1	39.26	16.818	
5,800.0	5,695.7	5,726.8	5,586.7	19.9	22.5	92.35	779.5	662.1	669.9	630.2	39.79	16.836	
5,807.1	5,702.6	5,733.8	5,593.3	19.9	22.6	92.38	781.0	663.3	671.2	631.3	39.86	16.840	
5,900.0	5,793.2	5,830.2	5,685.8	20.3	23.1	92.56	802.6	680.4	687.5	646.8	40.66	16.910	
5,905.5	5,798.6	5,836.5	5,691.8	20.3	23.1	92.57	804.0	681.4	688.4	647.7	40.70	16.915	
6,000.0	5,891.5	5,944.8	5,796.6	20.6	23.5	92.63	825.6	698.5	703.2	661.8	41.42	16.978	
6,003.9	5,895.4	5,949.3	5,800.9	20.6	23.6	92.64	826.4	699.2	703.7	662.3	41.44	16.980	
6,100.0	5,990.4	6,060.3	5,909.3	20.9	24.0	92.64	845.2	714.1	716.4	674.3	42.10	17.019	
6,102.3	5,992.7	6,063.0	5,911.9	20.9	24.0	92.64	845.7	714.4	716.7	674.6	42.11	17.020	
6,200.0	6,089.7	6,176.5	6,023.7	21.1	24.3	92.59	861.4	726.8	727.2	684.6	42.69	17.037	
6,200.8	6,090.4	6,177.4	6,024.6	21.1	24.4	92.59	861.5	726.9	727.3	684.6	42.69	17.037	
6,299.2	6,188.5	6,292.5	6,138.5	21.4	24.7	92.48	873.9	736.7	735.5	692.3	43.18	17.033	
6,300.0	6,189.3	6,293.4	6,139.4	21.4	24.7	92.48	874.0	736.7	735.6	692.4	43.18	17.033	
6,397.6	6,286.8	6,408.0	6,253.5	21.5	24.9	92.32	882.7	743.6	741.3	697.7	43.58	17.011	
6,400.0	6,289.2	6,410.8	6,256.3	21.5	24.9	92.31	882.9	743.8	741.4	697.8	43.59	17.010	
6,484.6	6,373.8	6,510.5	6,355.8	21.6	25.1	92.36	887.4	747.4	744.3	700.5	43.85	16.975	
6,496.0	6,385.3	6,524.0	6,369.3	21.7	25.1	92.33	887.8	747.7	744.6	700.7	43.88	16.969	
6,500.0	6,389.2	6,528.6	6,373.9	21.7	25.1	92.32	888.0	747.8	744.7	700.8	43.89	16.967	
6,514.6	6,403.8	6,545.9	6,391.1	21.7	25.2	92.28	888.4	748.2	745.0	701.0	43.93	16.958	
6,550.0	6,439.2	6,587.6	6,432.9	21.7	25.2	-87.82	889.1	748.7	745.4	701.4	44.01	16.936	
6,594.5	6,483.5	6,638.2	6,483.5	21.7	25.3	-88.14	889.3	748.9	745.4	701.3	44.04	16.925	
6,600.0	6,489.0	6,643.7	6,489.0	21.7	25.3	-88.19	889.3	748.9	745.4	701.3	44.04	16.924	
6,650.0	6,538.4	6,692.4	6,537.6	21.7	25.3	-88.72	888.6	748.9	745.2	701.2	43.99	16.941	
6,692.9	6,580.3	6,734.0	6,579.1	21.6	25.3	-89.19	885.4	748.9	745.1	701.2	43.87	16.982	
6,700.0	6,587.1	6,740.9	6,586.0	21.6	25.3	-89.26	884.6	748.9	745.1	701.2	43.85	16.990	
6,750.0	6,635.0	6,790.0	6,634.5	21.5	25.3	-89.81	877.3	748.9	745.0	701.4	43.65	17.069	
6,767.1	6,651.1	6,806.9	6,651.1	21.5	25.3	-90.00	874.1	748.9	745.0	701.4	43.55	17.105	
6,791.3	6,673.7	6,830.9	6,674.5	21.4	25.3	-90.27	868.7	748.9	745.0	701.6	43.42	17.160	
6,800.0	6,681.7	6,839.6	6,682.9	21.4	25.3	-90.36	866.6	748.9	745.0	701.6	43.37	17.180	
6,850.0	6,727.1	6,889.6	6,730.9	21.2	25.2	-90.92	852.4	748.9	745.1	702.1	43.02	17.319	
6,889.7	6,762.0	6,929.8	6,768.6	21.1	25.1	-91.36	838.6	748.9	745.2	702.5	42.70	17.452	
6,900.0	6,770.9	6,940.2	6,778.3	21.0	25.1	-91.47	834.7	748.9	745.2	702.6	42.62	17.487	
6,950.0	6,812.9	6,991.3	6,824.7	20.8	24.9	-92.02	813.5	748.9	745.5	703.3	42.16	17.682	
6,988.2	6,843.6	7,030.7	6,859.5	20.6	24.8	-92.43	794.9	748.9	745.7	703.9	41.78	17.849	
7,000.0	6,852.9	7,043.0	6,870.1	20.6	24.7	-92.56	788.7	748.9	745.7	704.1	41.66	17.902	
7,050.0	6,890.7	7,095.2	6,913.9	20.3	24.5	-93.09	760.4	748.9	746.1	705.0	41.12	18.145	
7,086.6	6,916.9	7,133.8	6,944.9	20.1	24.4	-93.47	737.4	748.9	746.4	705.7	40.71	18.335	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
7,100.0	6,926.2	7,148.0	6,956.0	20.1	24.3	-93.60	728.6	748.9	746.5	705.9	40.56	18.406	
7,150.0	6,959.1	7,201.3	6,996.1	19.8	24.1	-94.10	693.4	748.9	746.9	707.0	39.98	18.683	
7,185.0	6,980.5	7,239.0	7,022.8	19.6	23.9	-94.44	666.8	748.9	747.3	707.7	39.57	18.883	
7,200.0	6,989.3	7,255.2	7,033.8	19.5	23.8	-94.59	654.9	748.9	747.4	708.0	39.40	18.969	
7,250.0	7,016.6	7,309.6	7,068.9	19.3	23.5	-95.05	613.3	748.9	747.9	709.1	38.84	19.259	
7,283.4	7,033.3	7,346.4	7,090.7	19.1	23.3	-95.34	583.8	748.9	748.3	709.8	38.47	19.450	
7,300.0	7,041.0	7,364.6	7,101.0	19.1	23.2	-95.48	568.7	748.9	748.5	710.2	38.30	19.544	
7,350.0	7,062.2	7,420.1	7,129.8	18.8	22.9	-95.89	521.3	748.9	749.0	711.2	37.80	19.817	
7,381.9	7,074.1	7,455.8	7,146.3	18.7	22.7	-96.14	489.7	748.9	749.3	711.8	37.50	19.980	
7,400.0	7,080.3	7,476.1	7,155.1	18.7	22.6	-96.27	471.3	748.9	749.5	712.2	37.35	20.069	
7,450.0	7,095.0	7,532.6	7,176.5	18.5	22.3	-96.62	419.1	748.9	750.0	713.1	36.97	20.290	
7,480.3	7,102.4	7,567.0	7,187.6	18.4	22.1	-96.81	386.5	748.9	750.3	713.5	36.78	20.402	
7,500.0	7,106.4	7,589.5	7,193.9	18.4	22.0	-96.93	364.9	748.9	750.5	713.8	36.66	20.471	
7,550.0	7,114.4	7,646.8	7,207.1	18.3	21.7	-97.20	309.2	748.9	750.9	714.5	36.44	20.605	
7,578.7	7,117.4	7,679.8	7,212.6	18.3	21.6	-97.34	276.6	748.9	751.2	714.8	36.37	20.652	
7,600.0	7,118.9	7,704.4	7,215.7	18.3	21.5	-97.44	252.2	748.9	751.3	715.0	36.32	20.684	
7,641.3	7,120.0	7,752.3	7,219.4	18.3	21.3	-97.60	204.5	748.9	751.6	715.3	36.30	20.705	
7,677.1	7,119.9	7,793.7	7,220.0	18.3	21.1	-97.65	163.1	748.9	751.7	715.4	36.33	20.692	
7,700.0	7,119.9	7,816.5	7,219.7	18.4	21.0	-97.64	140.3	748.9	751.7	715.3	36.38	20.662	
7,775.6	7,119.7	7,892.1	7,218.8	18.6	20.7	-97.58	64.7	748.9	751.6	714.9	36.69	20.484	
7,800.0	7,119.6	7,916.5	7,218.5	18.6	20.7	-97.56	40.3	748.9	751.5	714.7	36.82	20.409	
7,874.0	7,119.4	7,990.5	7,217.6	19.0	20.5	-97.51	-33.7	748.9	751.4	714.0	37.41	20.085	
7,900.0	7,119.4	8,016.5	7,217.3	19.1	20.4	-97.49	-59.7	748.9	751.4	713.7	37.65	19.957	
7,972.4	7,119.2	8,088.9	7,216.4	19.6	20.4	-97.43	-132.1	748.9	751.3	712.8	38.49	19.520	
8,000.0	7,119.1	8,116.5	7,216.0	19.7	20.4	-97.41	-159.7	748.9	751.3	712.4	38.84	19.344	
8,070.8	7,118.9	8,187.4	7,215.1	20.3	20.9	-97.36	-230.5	748.9	751.2	711.3	39.89	18.830	
8,100.0	7,118.9	8,216.5	7,214.8	20.5	21.1	-97.34	-259.7	748.9	751.1	710.8	40.35	18.615	
8,169.3	7,118.7	8,285.8	7,213.9	21.2	21.8	-97.28	-329.0	748.9	751.1	709.5	41.59	18.060	
8,200.0	7,118.6	8,316.5	7,213.5	21.5	22.1	-97.26	-359.7	748.9	751.0	708.9	42.16	17.815	
8,267.7	7,118.5	8,384.2	7,212.7	22.2	22.8	-97.21	-427.4	748.9	750.9	707.4	43.54	17.247	
8,300.0	7,118.4	8,416.5	7,212.3	22.5	23.2	-97.19	-459.7	748.9	750.9	706.7	44.22	16.981	
8,366.1	7,118.2	8,482.6	7,211.5	23.3	24.0	-97.14	-525.8	748.9	750.8	705.1	45.72	16.421	
8,400.0	7,118.1	8,516.5	7,211.1	23.7	24.4	-97.11	-559.7	748.9	750.8	704.3	46.51	16.143	
8,464.5	7,118.0	8,581.0	7,210.3	24.5	25.2	-97.06	-624.2	748.9	750.7	702.6	48.10	15.607	
8,500.0	7,117.9	8,616.5	7,209.8	25.0	25.7	-97.03	-659.6	748.9	750.6	701.7	48.99	15.323	
8,563.0	7,117.7	8,679.5	7,209.0	25.8	26.5	-96.99	-722.6	748.9	750.6	699.9	50.64	14.821	
8,600.0	7,117.6	8,716.5	7,208.6	26.3	27.0	-96.96	-759.6	748.9	750.5	698.9	51.63	14.536	
8,661.4	7,117.5	8,777.9	7,207.8	27.2	27.9	-96.91	-821.0	748.9	750.4	697.1	53.33	14.071	
8,700.0	7,117.4	8,816.5	7,207.3	27.7	28.4	-96.88	-859.6	748.9	750.4	696.0	54.42	13.790	
8,759.8	7,117.2	8,876.3	7,206.6	28.6	29.3	-96.84	-919.4	748.9	750.3	694.2	56.15	13.363	
8,800.0	7,117.1	8,916.5	7,206.1	29.2	29.8	-96.81	-959.6	748.9	750.3	693.0	57.32	13.089	
8,858.2	7,117.0	8,974.7	7,205.3	30.1	30.7	-96.76	-1,017.8	748.9	750.2	691.1	59.07	12.701	
8,900.0	7,116.9	9,016.5	7,204.8	30.7	31.3	-96.73	-1,059.6	748.9	750.2	689.8	60.33	12.434	
8,956.7	7,116.8	9,073.1	7,204.1	31.6	32.2	-96.69	-1,116.3	748.9	750.1	688.0	62.08	12.082	
9,000.0	7,116.7	9,116.5	7,203.6	32.3	32.9	-96.66	-1,159.6	748.9	750.1	686.6	63.43	11.825	
9,055.1	7,116.5	9,171.6	7,202.9	33.2	33.7	-96.61	-1,214.7	748.9	750.0	684.8	65.17	11.508	
9,100.0	7,116.4	9,216.5	7,202.3	33.9	34.4	-96.58	-1,259.6	748.9	749.9	683.3	66.60	11.260	
9,153.5	7,116.3	9,270.0	7,201.7	34.8	35.3	-96.54	-1,313.1	748.9	749.9	681.5	68.33	10.974	
9,200.0	7,116.2	9,316.5	7,201.1	35.5	36.0	-96.50	-1,359.6	748.9	749.8	680.0	69.84	10.736	
9,251.9	7,116.0	9,368.4	7,200.4	36.4	36.9	-96.46	-1,411.5	748.9	749.8	678.2	71.55	10.478	
9,300.0	7,115.9	9,416.5	7,199.8	37.2	37.6	-96.43	-1,459.5	748.9	749.7	676.6	73.14	10.250	
9,350.4	7,115.8	9,466.8	7,199.2	38.0	38.5	-96.39	-1,509.9	748.9	749.7	674.8	74.83	10.019	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - OLSON 30R-343 - ORIGINAL WELLBORE - PROPOSAL #2												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	7,115.7	9,516.4	7,198.6	38.9	39.3	-96.35	-1,559.5	748.9	749.6	673.1	76.49	9.800	
9,448.8	7,115.5	9,565.2	7,198.0	39.7	40.1	-96.31	-1,608.3	748.9	749.5	671.4	78.14	9.592	
9,500.0	7,115.4	9,616.4	7,197.3	40.6	41.0	-96.28	-1,659.5	748.9	749.5	669.6	79.88	9.382	
9,547.2	7,115.3	9,663.7	7,196.7	41.4	41.7	-96.24	-1,706.7	748.9	749.4	667.9	81.50	9.195	
9,600.0	7,115.2	9,716.4	7,196.1	42.3	42.6	-96.20	-1,759.5	748.9	749.4	666.1	83.31	8.995	
9,645.6	7,115.1	9,762.1	7,195.5	43.1	43.4	-96.16	-1,805.1	748.9	749.3	664.4	84.89	8.827	
9,700.0	7,114.9	9,816.4	7,194.8	44.0	44.3	-96.12	-1,859.5	748.9	749.3	662.5	86.78	8.634	
9,744.1	7,114.8	9,860.5	7,194.3	44.8	45.1	-96.09	-1,903.6	748.9	749.2	660.9	88.32	8.483	
9,800.0	7,114.7	9,916.4	7,193.6	45.8	46.1	-96.05	-1,959.5	748.9	749.2	658.9	90.28	8.299	
9,842.5	7,114.6	9,958.9	7,193.1	46.5	46.8	-96.01	-2,002.0	748.9	749.1	657.3	91.77	8.163	
9,900.0	7,114.4	10,016.4	7,192.3	47.6	47.8	-95.97	-2,059.5	748.9	749.1	655.3	93.80	7.986	
9,940.9	7,114.3	10,057.3	7,191.8	48.3	48.5	-95.94	-2,100.4	748.9	749.0	653.8	95.25	7.864	
10,000.0	7,114.2	10,116.4	7,191.1	49.3	49.6	-95.89	-2,159.5	748.9	749.0	651.6	97.35	7.694	
10,039.3	7,114.1	10,155.8	7,190.6	50.0	50.2	-95.86	-2,198.8	748.9	748.9	650.2	98.75	7.584	
10,100.0	7,113.9	10,216.4	7,189.8	51.1	51.3	-95.82	-2,259.4	748.9	748.9	647.9	100.91	7.421	
10,137.8	7,113.8	10,254.2	7,189.4	51.8	52.0	-95.79	-2,297.2	748.9	748.8	646.5	102.27	7.322	
10,200.0	7,113.7	10,316.4	7,188.6	52.9	53.1	-95.74	-2,359.4	748.9	748.7	644.2	104.50	7.165	
10,236.2	7,113.6	10,352.6	7,188.1	53.6	53.7	-95.71	-2,395.6	748.9	748.7	642.9	105.81	7.076	
10,300.0	7,113.4	10,416.4	7,187.3	54.7	54.9	-95.67	-2,459.4	748.9	748.6	640.5	108.11	6.925	
10,334.6	7,113.3	10,451.0	7,186.9	55.4	55.5	-95.64	-2,494.0	748.9	748.6	639.3	109.36	6.845	
10,400.0	7,113.2	10,516.4	7,186.1	56.5	56.7	-95.59	-2,559.4	748.9	748.6	636.8	111.73	6.699	
10,433.0	7,113.1	10,549.5	7,185.6	57.1	57.2	-95.56	-2,592.5	748.9	748.5	635.6	112.93	6.628	
10,500.0	7,112.9	10,616.4	7,184.8	58.4	58.4	-95.51	-2,659.4	748.9	748.5	633.1	115.37	6.487	
10,531.5	7,112.8	10,647.9	7,184.4	58.9	59.0	-95.49	-2,690.9	748.9	748.4	631.9	116.52	6.423	
10,600.0	7,112.7	10,716.4	7,183.5	60.2	60.3	-95.44	-2,759.4	748.9	748.4	629.3	119.02	6.288	
10,629.9	7,112.6	10,746.3	7,183.2	60.7	60.8	-95.41	-2,789.3	748.9	748.3	628.2	120.11	6.230	
10,700.0	7,112.4	10,816.4	7,182.3	62.0	62.1	-95.36	-2,859.4	748.9	748.3	625.6	122.68	6.099	
10,728.3	7,112.3	10,844.7	7,181.9	62.5	62.6	-95.34	-2,887.7	748.9	748.2	624.5	123.72	6.048	
10,800.0	7,112.2	10,916.4	7,181.0	63.9	63.9	-95.28	-2,959.4	748.9	748.2	621.8	126.36	5.921	
10,826.7	7,112.1	10,943.1	7,180.7	64.4	64.4	-95.26	-2,986.1	748.9	748.1	620.8	127.34	5.875	
10,900.0	7,111.9	11,016.4	7,179.8	65.7	65.7	-95.21	-3,059.3	748.9	748.1	618.0	130.04	5.753	
10,925.2	7,111.8	11,041.6	7,179.5	66.2	66.2	-95.19	-3,084.5	748.9	748.1	617.1	130.97	5.712	
11,000.0	7,111.7	11,116.4	7,178.5	67.6	67.5	-95.13	-3,159.3	748.9	748.0	614.3	133.73	5.593	
11,023.6	7,111.6	11,140.0	7,178.2	68.0	68.0	-95.11	-3,182.9	748.9	748.0	613.4	134.61	5.557	
11,100.0	7,111.4	11,216.4	7,177.3	69.4	69.4	-95.05	-3,259.3	748.9	747.9	610.5	137.44	5.442	
11,122.0	7,111.3	11,238.4	7,177.0	69.8	69.8	-95.03	-3,281.3	748.9	747.9	609.6	138.25	5.409	
11,200.0	7,111.2	11,316.4	7,176.0	71.3	71.2	-94.97	-3,359.3	748.9	747.8	606.7	141.15	5.298	
11,220.4	7,111.1	11,336.8	7,175.7	71.6	71.6	-94.96	-3,379.8	748.9	747.8	605.9	141.91	5.270	
11,300.0	7,110.9	11,416.4	7,174.7	73.1	73.0	-94.90	-3,459.3	748.9	747.7	602.9	144.86	5.162	
11,318.9	7,110.9	11,435.2	7,174.5	73.5	73.4	-94.88	-3,478.2	748.9	747.7	602.1	145.57	5.136	
11,400.0	7,110.6	11,516.4	7,173.5	75.0	74.9	-94.82	-3,559.3	748.9	747.6	599.0	148.59	5.032	
11,417.3	7,110.6	11,533.7	7,173.3	75.3	75.2	-94.81	-3,576.6	748.9	747.6	598.4	149.23	5.010	
11,500.0	7,110.4	11,616.4	7,172.2	76.8	76.7	-94.74	-3,659.3	748.9	747.5	595.2	152.32	4.908	
11,515.7	7,110.4	11,632.1	7,172.0	77.1	77.0	-94.73	-3,675.0	748.9	747.5	594.6	152.91	4.889	
11,600.0	7,110.1	11,716.3	7,170.9	78.7	78.6	-94.67	-3,759.3	748.9	747.5	591.4	156.06	4.790	
11,614.1	7,110.1	11,730.5	7,170.8	79.0	78.8	-94.66	-3,773.4	748.9	747.5	590.9	156.59	4.773	
11,655.0	7,110.0	11,771.4	7,170.3	79.7	79.6	-94.62	-3,814.3	748.9	747.4	589.3	158.12	4.727 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	91.58	-2.9	105.2	105.2				
98.4	98.4	97.4	97.4	0.1	0.1	91.58	-2.9	105.2	105.2	105.0	0.17	622.309	
100.0	100.0	99.0	99.0	0.1	0.1	91.58	-2.9	105.2	105.2	105.0	0.17	610.988	
196.8	196.8	195.8	195.8	0.3	0.3	91.58	-2.9	105.2	105.2	104.6	0.61	173.566	
200.0	200.0	199.0	199.0	0.3	0.3	91.58	-2.9	105.2	105.2	104.6	0.62	169.605	
295.3	295.3	294.3	294.3	0.5	0.5	91.58	-2.9	105.2	105.2	104.2	1.05	100.334	
300.0	300.0	299.0	299.0	0.5	0.5	91.58	-2.9	105.2	105.2	104.1	1.07	98.342	
393.7	393.7	392.7	392.7	0.7	0.7	91.58	-2.9	105.2	105.2	103.7	1.49	70.562	
400.0	400.0	399.0	399.0	0.8	0.8	91.58	-2.9	105.2	105.2	103.7	1.52	69.247	
492.1	492.1	491.1	491.1	1.0	1.0	91.58	-2.9	105.2	105.2	103.3	1.93	54.415	
500.0	500.0	499.0	499.0	1.0	1.0	91.58	-2.9	105.2	105.2	103.2	1.97	53.437	
590.5	590.5	589.5	589.5	1.2	1.2	91.58	-2.9	105.2	105.2	102.8	2.38	44.282	
600.0	600.0	599.0	599.0	1.2	1.2	91.58	-2.9	105.2	105.2	102.8	2.42	43.505	
689.0	689.0	688.0	688.0	1.4	1.4	91.58	-2.9	105.2	105.2	102.4	2.82	37.331	
700.0	700.0	699.0	699.0	1.4	1.4	91.58	-2.9	105.2	105.2	102.3	2.87	36.686	
787.4	787.4	786.4	786.4	1.6	1.6	91.58	-2.9	105.2	105.2	102.0	3.26	32.266	
800.0	800.0	799.0	799.0	1.7	1.7	91.58	-2.9	105.2	105.2	101.9	3.32	31.715	
885.8	885.8	884.8	884.8	1.9	1.9	91.58	-2.9	105.2	105.2	101.5	3.70	28.411	
900.0	900.0	899.0	899.0	1.9	1.9	91.58	-2.9	105.2	105.2	101.4	3.77	27.930	
984.2	984.2	983.2	983.2	2.1	2.1	91.58	-2.9	105.2	105.2	101.1	4.15	25.379	
1,000.0	1,000.0	999.0	999.0	2.1	2.1	91.58	-2.9	105.2	105.2	101.0	4.22	24.952	
1,082.7	1,082.7	1,081.7	1,081.7	2.3	2.3	91.58	-2.9	105.2	105.2	100.6	4.59	22.931	
1,100.0	1,100.0	1,099.0	1,099.0	2.3	2.3	91.58	-2.9	105.2	105.2	100.5	4.67	22.549	
1,181.1	1,181.1	1,180.1	1,180.1	2.5	2.5	91.58	-2.9	105.2	105.2	100.2	5.03	20.915	
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	91.58	-2.9	105.2	105.2	100.1	5.12	20.567	
1,279.5	1,279.5	1,278.5	1,278.5	2.7	2.7	91.58	-2.9	105.2	105.2	99.7	5.47	19.224	
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	91.58	-2.9	105.2	105.2	99.6	5.57	18.906	
1,377.9	1,377.9	1,376.9	1,376.9	3.0	3.0	91.58	-2.9	105.2	105.2	99.3	5.92	17.786	
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	91.58	-2.9	105.2	105.2	99.2	6.01	17.493	
1,438.3	1,438.3	1,437.3	1,437.3	3.1	3.1	91.58	-2.9	105.2	105.2	99.0	6.19	17.007 CC	
1,476.4	1,476.4	1,474.6	1,474.6	3.2	3.2	91.56	-2.9	105.3	105.3	99.0	6.35	16.573 ES	
1,500.0	1,500.0	1,497.5	1,497.5	3.2	3.2	91.48	-2.7	105.5	105.6	99.1	6.46	16.350	
1,574.8	1,574.8	1,569.9	1,569.8	3.4	3.4	90.95	-1.8	107.4	107.5	100.7	6.78	15.861	
1,600.0	1,600.0	1,594.2	1,594.1	3.5	3.4	90.67	-1.3	108.4	108.5	101.6	6.89	15.763	
1,673.2	1,673.2	1,664.9	1,664.7	3.6	3.6	89.64	0.7	112.4	112.6	105.4	7.20	15.641	
1,700.0	1,700.0	1,690.6	1,690.3	3.7	3.6	89.18	1.6	114.2	114.5	107.2	7.32	15.655	
1,771.6	1,771.6	1,759.4	1,758.8	3.8	3.8	87.81	4.6	120.1	120.8	113.1	7.63	15.834	
1,800.0	1,800.0	1,786.5	1,785.7	3.9	3.9	87.22	6.0	122.8	123.7	115.9	7.75	15.959	
1,870.1	1,870.1	1,853.3	1,851.9	4.1	4.0	85.70	9.8	130.5	132.0	123.9	8.05	16.386	
1,900.0	1,900.0	1,881.6	1,880.0	4.1	4.1	85.03	11.7	134.2	136.0	127.8	8.18	16.618	
1,968.5	1,968.5	1,946.3	1,943.8	4.3	4.3	83.50	16.4	143.5	146.3	137.9	8.48	17.249	
2,000.0	2,000.0	1,975.8	1,972.9	4.4	4.3	82.80	18.7	148.2	151.6	143.0	8.62	17.585	
2,066.9	2,066.9	2,038.2	2,034.1	4.5	4.5	81.37	24.1	158.9	163.9	155.0	8.92	18.381	
2,100.0	2,100.0	2,068.9	2,064.1	4.6	4.6	80.69	27.0	164.7	170.5	161.4	9.06	18.815	
2,150.0	2,150.0	2,114.9	2,108.9	4.7	4.8	79.70	31.6	173.8	181.1	171.9	9.28	19.518	
2,165.3	2,165.3	2,129.0	2,122.6	4.7	4.8	79.10	33.1	176.7	184.6	175.2	9.35	19.742	
2,200.0	2,200.0	2,160.6	2,153.4	4.8	4.9	78.41	36.5	183.5	192.5	183.0	9.50	20.261	
2,263.8	2,263.7	2,218.6	2,209.4	5.0	5.2	77.44	43.1	196.7	207.9	198.1	9.78	21.253	
2,300.0	2,299.9	2,251.3	2,240.9	5.0	5.3	77.05	47.1	204.6	217.0	207.1	9.94	21.830	
2,362.2	2,362.0	2,307.0	2,294.3	5.2	5.5	76.59	54.2	218.9	233.4	223.2	10.22	22.846	
2,400.0	2,399.7	2,340.6	2,326.4	5.3	5.7	76.42	58.8	227.9	243.8	233.4	10.39	23.469	
2,460.6	2,460.0	2,394.2	2,377.2	5.4	5.9	76.31	66.4	242.9	261.0	250.4	10.66	24.484	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	2,499.1	2,428.7	2,409.8	5.5	6.1	76.31	71.5	253.1	272.6	261.8	10.84	25.145	
2,559.0	2,557.7	2,480.0	2,457.9	5.6	6.4	76.41	79.4	268.8	290.6	279.5	11.12	26.138	
2,600.0	2,598.2	2,515.3	2,490.9	5.7	6.6	76.54	85.0	280.1	303.5	292.2	11.31	26.831	
2,657.5	2,654.8	2,564.3	2,536.5	5.9	6.9	76.78	93.2	296.4	322.3	310.7	11.60	27.783	
2,700.0	2,696.6	2,600.0	2,569.4	6.0	7.1	76.98	99.4	308.6	336.5	324.7	11.81	28.499	
2,755.9	2,751.4	2,647.2	2,612.6	6.1	7.4	77.29	107.8	325.4	355.9	343.8	12.11	29.392	
2,800.0	2,794.4	2,683.8	2,646.0	6.2	7.7	77.55	114.6	338.9	371.6	359.2	12.34	30.106	
2,854.3	2,847.3	2,728.4	2,686.4	6.4	8.0	77.89	123.1	355.8	391.5	378.8	12.65	30.940	
2,888.8	2,880.6	2,756.4	2,711.6	6.5	8.2	78.11	128.6	366.7	404.4	391.6	12.85	31.469	
2,900.0	2,891.5	2,765.5	2,719.8	6.6	8.3	78.27	130.4	370.3	408.7	395.8	12.92	31.633	
2,952.7	2,942.5	2,808.0	2,757.7	6.7	8.6	78.96	139.0	387.4	429.3	416.0	13.25	32.397	
3,000.0	2,988.2	2,847.6	2,792.8	6.9	9.0	79.53	147.2	403.7	448.2	434.7	13.56	33.060	
3,051.2	3,037.6	2,894.1	2,834.1	7.1	9.4	80.13	156.9	423.0	469.0	455.1	13.92	33.699	
3,100.0	3,084.9	2,938.6	2,873.4	7.3	9.7	80.66	166.2	441.5	488.8	474.5	14.26	34.267	
3,149.6	3,132.8	2,983.7	2,913.4	7.5	10.1	81.16	175.6	460.2	508.9	494.3	14.63	34.792	
3,200.0	3,181.5	3,029.6	2,954.1	7.6	10.5	81.63	185.1	479.2	529.5	514.5	15.00	35.288	
3,248.0	3,228.0	3,073.3	2,992.8	7.8	10.9	82.04	194.2	497.3	549.0	533.7	15.37	35.713	
3,300.0	3,278.2	3,120.6	3,034.7	8.0	11.3	82.46	204.1	516.9	570.2	554.5	15.78	36.144	
3,346.4	3,323.2	3,162.9	3,072.1	8.2	11.7	82.80	212.9	534.4	589.2	573.1	16.15	36.489	
3,400.0	3,374.9	3,211.6	3,115.3	8.5	12.2	83.18	223.1	554.6	611.1	594.5	16.58	36.862	
3,444.9	3,418.3	3,252.5	3,151.5	8.6	12.5	83.47	231.6	571.6	629.5	612.5	16.95	37.141	
3,500.0	3,471.6	3,302.6	3,195.9	8.9	13.0	83.80	242.0	592.4	652.1	634.7	17.40	37.464	
3,543.3	3,513.5	3,342.0	3,230.8	9.1	13.4	84.05	250.2	608.7	669.8	652.0	17.77	37.689	
3,600.0	3,568.3	3,393.7	3,276.6	9.3	13.8	84.36	261.0	630.1	693.1	674.8	18.25	37.969	
3,641.7	3,608.7	3,431.6	3,310.2	9.5	14.2	84.57	268.9	645.8	710.2	691.6	18.61	38.151	
3,700.0	3,665.0	3,484.7	3,357.2	9.7	14.7	84.85	280.0	667.8	734.1	715.0	19.12	38.392	
3,740.1	3,703.8	3,521.2	3,389.5	9.9	15.0	85.03	287.6	683.0	750.6	731.1	19.48	38.541	
3,800.0	3,761.7	3,575.7	3,437.8	10.2	15.5	85.29	298.9	705.6	775.2	755.2	20.01	38.749	
3,838.6	3,799.0	3,610.8	3,468.9	10.4	15.9	85.45	306.3	720.1	791.1	770.7	20.35	38.871	
3,900.0	3,858.4	3,666.7	3,518.4	10.7	16.4	85.69	317.9	743.3	816.3	795.4	20.90	39.051	
3,937.0	3,894.2	3,700.4	3,548.3	10.8	16.7	85.83	324.9	757.3	831.5	810.3	21.24	39.150	
4,000.0	3,955.1	3,757.7	3,599.0	11.1	17.2	86.05	336.9	781.0	857.5	835.7	21.82	39.305	
4,035.4	3,989.3	3,790.0	3,627.6	11.3	17.5	86.17	343.6	794.4	872.1	849.9	22.14	39.386	
4,100.0	4,051.8	3,848.7	3,679.7	11.6	18.1	86.37	355.8	818.8	898.6	875.9	22.74	39.521	
4,133.8	4,084.5	3,879.5	3,707.0	11.7	18.4	86.48	362.3	831.5	912.6	889.5	23.05	39.586	
4,200.0	4,148.5	3,939.7	3,760.3	12.1	19.0	86.67	374.8	856.5	939.8	916.2	23.67	39.704	
4,232.3	4,179.7	3,969.1	3,786.3	12.2	19.3	86.76	380.9	868.7	953.1	929.2	23.97	39.757	
4,300.0	4,245.2	4,030.8	3,840.9	12.5	19.8	86.94	393.8	894.2	981.1	956.4	24.61	39.860	
4,330.7	4,274.9	4,058.7	3,865.7	12.7	20.1	87.02	399.6	905.8	993.7	968.8	24.90	39.902	
4,400.0	4,341.9	4,121.8	3,921.5	13.0	20.7	87.19	412.8	931.9	1,022.3	996.7	25.56	39.992	
4,429.1	4,370.0	4,148.3	3,945.0	13.1	21.0	87.26	418.3	942.9	1,034.3	1,008.5	25.84	40.026	
4,500.0	4,438.6	4,212.8	4,002.2	13.5	21.6	87.42	431.7	969.7	1,063.5	1,037.0	26.52	40.105	
4,527.5	4,465.2	4,237.9	4,024.4	13.6	21.8	87.48	436.9	980.1	1,074.9	1,048.1	26.78	40.132	
4,600.0	4,535.3	4,303.8	4,082.8	14.0	22.5	87.64	450.7	1,007.4	1,104.8	1,077.3	27.48	40.201	
4,626.0	4,560.4	4,327.4	4,103.7	14.1	22.7	87.69	455.6	1,017.2	1,115.5	1,087.8	27.73	40.223	
4,700.0	4,631.9	4,394.8	4,163.4	14.5	23.3	87.84	469.7	1,045.1	1,146.1	1,117.6	28.45	40.282	
4,724.4	4,655.5	4,417.0	4,183.1	14.6	23.6	87.88	474.3	1,054.3	1,156.2	1,127.5	28.69	40.300	
4,800.0	4,728.6	4,485.8	4,244.0	15.0	24.2	88.02	488.6	1,082.9	1,187.4	1,157.9	29.43	40.352	
4,822.8	4,750.7	4,506.6	4,262.4	15.1	24.4	88.06	493.0	1,091.5	1,196.8	1,167.2	29.65	40.366	
4,900.0	4,825.3	4,576.8	4,324.7	15.4	25.1	88.19	507.6	1,120.6	1,228.7	1,198.3	30.40	40.410	
4,921.2	4,845.9	4,596.2	4,341.8	15.6	25.3	88.23	511.6	1,128.6	1,237.4	1,206.8	30.61	40.422	
5,000.0	4,922.0	4,667.9	4,405.3	15.9	26.0	88.35	526.6	1,158.3	1,270.0	1,238.6	31.39	40.460	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	4,941.0	4,685.8	4,421.2	16.0	26.2	88.39	530.3	1,165.8	1,278.1	1,246.5	31.58	40.469	
5,100.0	5,018.7	4,758.9	4,485.9	16.4	26.9	88.51	545.5	1,196.1	1,311.3	1,278.9	32.38	40.503	
5,118.1	5,036.2	4,775.3	4,500.5	16.5	27.0	88.53	549.0	1,202.9	1,318.8	1,286.2	32.55	40.510	
5,200.0	5,115.4	4,849.9	4,566.5	16.9	27.7	88.65	564.5	1,233.8	1,352.6	1,319.2	33.37	40.538	
5,216.5	5,131.4	4,864.9	4,579.9	17.0	27.9	88.67	567.6	1,240.0	1,359.4	1,325.9	33.53	40.544	
5,300.0	5,212.1	4,940.9	4,647.2	17.4	28.6	88.78	583.5	1,271.5	1,393.9	1,359.6	34.36	40.568	
5,314.9	5,226.6	4,954.5	4,659.2	17.5	28.8	88.80	586.3	1,277.2	1,400.1	1,365.6	34.51	40.572	
5,400.0	5,308.8	5,031.9	4,727.8	17.9	29.5	88.91	602.4	1,309.2	1,435.3	1,399.9	35.36	40.594	
5,413.4	5,321.7	5,044.1	4,738.6	18.0	29.6	88.92	605.0	1,314.3	1,440.8	1,405.3	35.49	40.596	
5,500.0	5,405.5	5,122.9	4,808.4	18.4	30.4	89.02	621.4	1,347.0	1,476.6	1,440.2	36.36	40.614	
5,511.8	5,416.9	5,133.7	4,817.9	18.5	30.5	89.04	623.7	1,351.4	1,481.5	1,445.0	36.48	40.616	
5,600.0	5,502.2	5,213.9	4,889.0	18.9	31.3	89.14	640.4	1,384.7	1,517.9	1,480.6	37.36	40.631	
5,610.2	5,512.1	5,223.3	4,897.3	19.0	31.4	89.15	642.3	1,388.6	1,522.2	1,484.7	37.46	40.633	
5,700.0	5,598.9	5,305.0	4,969.7	19.4	32.2	89.24	659.3	1,422.4	1,559.3	1,520.9	38.36	40.645	
5,708.6	5,607.2	5,312.8	4,976.6	19.5	32.2	89.25	661.0	1,425.7	1,562.9	1,524.4	38.45	40.646	
5,745.8	5,643.2	5,346.7	5,006.6	19.7	32.6	89.29	668.0	1,439.7	1,578.2	1,539.4	38.82	40.650	
5,800.0	5,695.7	5,396.0	5,050.3	19.9	33.1	89.82	678.3	1,460.2	1,600.6	1,561.2	39.47	40.554	
5,807.1	5,702.6	5,402.4	5,056.0	19.9	33.1	89.88	679.7	1,462.8	1,603.6	1,564.0	39.55	40.547	
5,900.0	5,793.2	5,487.0	5,130.9	20.3	33.9	90.68	697.3	1,497.9	1,642.0	1,601.4	40.57	40.473	
5,905.5	5,798.6	5,492.0	5,135.4	20.3	34.0	90.73	698.3	1,500.0	1,644.3	1,603.7	40.63	40.471	
6,000.0	5,891.5	5,650.7	5,277.6	20.6	35.3	91.30	730.0	1,562.9	1,681.8	1,640.0	41.88	40.157	
6,003.9	5,895.4	5,658.2	5,284.3	20.6	35.4	91.32	731.4	1,565.7	1,683.3	1,641.4	41.93	40.144	
6,100.0	5,990.4	5,844.4	5,456.0	20.9	36.6	91.73	763.8	1,630.1	1,716.4	1,673.3	43.12	39.803	
6,102.3	5,992.7	5,849.0	5,460.3	20.9	36.6	91.74	764.5	1,631.6	1,717.1	1,674.0	43.15	39.796	
6,200.0	6,089.7	6,046.3	5,647.0	21.1	37.7	92.02	793.2	1,688.6	1,745.2	1,701.0	44.22	39.469	
6,200.8	6,090.4	6,047.9	5,648.5	21.1	37.7	92.02	793.4	1,689.0	1,745.4	1,701.2	44.22	39.467	
6,299.2	6,188.5	6,253.8	5,847.5	21.4	38.6	92.17	817.0	1,735.9	1,767.7	1,722.5	45.13	39.168	
6,300.0	6,189.3	6,255.5	5,849.2	21.4	38.6	92.17	817.1	1,736.3	1,767.8	1,722.7	45.14	39.165	
6,397.6	6,286.8	6,465.4	6,055.4	21.5	39.3	92.20	834.5	1,770.8	1,783.7	1,737.9	45.85	38.905	
6,400.0	6,289.2	6,470.5	6,060.5	21.5	39.3	92.20	834.8	1,771.4	1,784.0	1,738.2	45.86	38.899	
6,484.6	6,373.8	6,655.7	6,244.5	21.6	39.8	92.37	844.3	1,790.3	1,792.5	1,746.2	46.31	38.704	
6,496.0	6,385.3	6,681.0	6,269.6	21.7	39.8	92.34	845.2	1,792.0	1,793.3	1,746.9	46.36	38.683	
6,500.0	6,389.2	6,689.7	6,278.3	21.7	39.8	92.33	845.4	1,792.6	1,793.5	1,747.2	46.38	38.674	
6,514.6	6,403.8	6,721.9	6,310.5	21.7	39.9	92.29	846.4	1,794.4	1,794.4	1,747.9	46.43	38.645	
6,550.0	6,439.2	6,800.2	6,388.7	21.7	40.0	-87.71	848.0	1,797.6	1,795.7	1,749.1	46.58	38.550	
6,594.5	6,483.5	6,894.0	6,482.5	21.7	40.1	-87.94	848.6	1,798.9	1,796.1	1,749.5	46.62	38.527	
6,600.0	6,489.0	6,899.5	6,488.0	21.7	40.1	-87.96	848.6	1,798.9	1,796.1	1,749.5	46.62	38.527	
6,650.0	6,538.4	6,946.8	6,535.3	21.7	40.1	-88.19	848.1	1,798.9	1,795.9	1,749.3	46.55	38.578	
6,692.9	6,580.3	6,986.2	6,574.6	21.6	40.1	-88.40	845.6	1,798.9	1,795.7	1,749.3	46.43	38.679	
6,700.0	6,587.1	6,992.8	6,581.1	21.6	40.1	-88.44	844.9	1,798.9	1,795.7	1,749.3	46.40	38.696	
6,750.0	6,635.0	7,039.2	6,627.1	21.5	40.1	-88.69	838.8	1,798.9	1,795.5	1,749.3	46.19	38.874	
6,791.3	6,673.7	7,077.9	6,665.1	21.4	40.1	-88.91	831.4	1,798.9	1,795.3	1,749.4	45.95	39.069	
6,800.0	6,681.7	7,086.0	6,673.1	21.4	40.1	-88.95	829.5	1,798.9	1,795.3	1,749.4	45.90	39.111	
6,850.0	6,727.1	7,133.4	6,718.8	21.2	40.0	-89.22	817.2	1,798.9	1,795.1	1,749.6	45.55	39.406	
6,889.7	6,762.0	7,171.4	6,754.8	21.1	40.0	-89.43	805.1	1,798.9	1,795.1	1,749.8	45.24	39.682	
6,900.0	6,770.9	7,181.3	6,764.0	21.0	40.0	-89.49	801.6	1,798.9	1,795.0	1,749.9	45.15	39.756	
6,950.0	6,812.9	7,229.7	6,808.7	20.8	39.9	-89.76	782.8	1,798.9	1,795.0	1,750.3	44.70	40.157	
6,988.2	6,843.6	7,267.1	6,842.2	20.6	39.8	-89.97	766.3	1,798.9	1,795.0	1,750.6	44.32	40.497	
6,993.3	6,847.7	7,272.1	6,846.6	20.6	39.8	-90.00	764.0	1,798.9	1,795.0	1,750.7	44.27	40.544	
7,000.0	6,852.9	7,278.7	6,852.4	20.6	39.8	-90.04	760.8	1,798.9	1,795.0	1,750.8	44.20	40.606	
7,050.0	6,890.7	7,328.3	6,895.1	20.3	39.6	-90.31	735.6	1,798.9	1,795.0	1,751.3	43.68	41.097	
7,086.6	6,916.9	7,365.0	6,925.5	20.1	39.5	-90.52	715.0	1,798.9	1,795.0	1,751.8	43.28	41.479	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
7,100.0	6,926.2	7,378.5	6,936.4	20.1	39.5	-90.59	707.0	1,798.9	1,795.1	1,751.9	43.13	41.624	
7,150.0	6,959.1	7,429.4	6,976.1	19.8	39.4	-90.87	675.2	1,798.9	1,795.2	1,752.6	42.56	42.179	
7,185.0	6,980.5	7,465.4	7,002.8	19.6	39.2	-91.06	651.0	1,798.9	1,795.3	1,753.1	42.16	42.579	
7,200.0	6,989.3	7,480.9	7,013.9	19.5	39.2	-91.14	640.2	1,798.9	1,795.3	1,753.3	41.99	42.753	
7,250.0	7,016.6	7,533.2	7,049.6	19.3	39.0	-91.42	602.1	1,798.9	1,795.5	1,754.1	41.43	43.335	
7,283.4	7,033.3	7,568.5	7,072.1	19.1	38.9	-91.59	574.9	1,798.9	1,795.7	1,754.6	41.07	43.720	
7,300.0	7,041.0	7,586.1	7,082.8	19.1	38.8	-91.68	560.9	1,798.9	1,795.8	1,754.9	40.89	43.912	
7,350.0	7,062.2	7,639.7	7,113.2	18.8	38.6	-91.94	516.7	1,798.9	1,796.0	1,755.6	40.39	44.470	
7,381.9	7,074.1	7,674.3	7,131.1	18.7	38.5	-92.10	487.1	1,798.9	1,796.2	1,756.1	40.09	44.804	
7,400.0	7,080.3	7,694.1	7,140.6	18.7	38.4	-92.19	469.8	1,798.9	1,796.3	1,756.4	39.92	44.994	
7,450.0	7,095.0	7,749.1	7,164.7	18.5	38.2	-92.43	420.3	1,798.9	1,796.6	1,757.1	39.51	45.467	
7,480.3	7,102.4	7,782.8	7,177.5	18.4	38.1	-92.57	389.1	1,798.9	1,796.8	1,757.5	39.31	45.713	
7,500.0	7,106.4	7,804.9	7,185.1	18.4	38.0	-92.66	368.4	1,798.9	1,797.0	1,757.8	39.17	45.871	
7,550.0	7,114.4	7,861.3	7,201.6	18.3	37.8	-92.88	314.4	1,798.9	1,797.3	1,758.4	38.91	46.192	
7,578.7	7,117.4	7,894.1	7,209.2	18.3	37.7	-93.00	282.6	1,798.9	1,797.5	1,758.7	38.80	46.331	
7,600.0	7,118.9	7,918.5	7,213.9	18.3	37.7	-93.09	258.7	1,798.9	1,797.6	1,758.9	38.73	46.418	
7,641.3	7,120.0	7,966.2	7,220.7	18.3	37.5	-93.24	211.5	1,798.9	1,797.9	1,759.2	38.64	46.527	
7,677.1	7,119.9	8,007.9	7,224.1	18.3	37.4	-93.35	169.9	1,798.9	1,798.1	1,759.5	38.60	46.578	
7,700.0	7,119.9	8,034.7	7,225.0	18.4	37.4	-93.38	143.1	1,798.9	1,798.1	1,759.5	38.60	46.581	
7,775.6	7,119.7	8,113.3	7,224.2	18.6	37.2	-93.37	64.5	1,798.9	1,798.1	1,759.3	38.81	46.325	
7,800.0	7,119.6	8,137.8	7,223.9	18.6	37.1	-93.36	40.1	1,798.9	1,798.1	1,759.1	38.92	46.204	
7,874.0	7,119.4	8,211.8	7,222.9	19.0	37.1	-93.33	-33.9	1,798.9	1,798.0	1,758.6	39.38	45.654	
7,900.0	7,119.4	8,237.8	7,222.5	19.1	37.0	-93.32	-59.9	1,798.9	1,798.0	1,758.4	39.59	45.419	
7,972.4	7,119.2	8,310.2	7,221.5	19.6	37.0	-93.29	-132.3	1,798.9	1,797.9	1,757.6	40.30	44.617	
8,000.0	7,119.1	8,337.8	7,221.1	19.7	37.0	-93.28	-159.9	1,798.9	1,797.9	1,757.3	40.61	44.275	
8,070.8	7,118.9	8,408.6	7,220.2	20.3	37.0	-93.26	-230.8	1,798.9	1,797.9	1,756.3	41.53	43.286	
8,100.0	7,118.9	8,437.7	7,219.8	20.5	37.0	-93.25	-259.9	1,798.9	1,797.9	1,755.9	41.96	42.851	
8,169.3	7,118.7	8,507.0	7,218.8	21.2	37.1	-93.22	-329.2	1,798.9	1,797.8	1,754.8	43.07	41.745	
8,200.0	7,118.6	8,537.7	7,218.4	21.5	37.2	-93.21	-359.9	1,798.9	1,797.8	1,754.2	43.60	41.234	
8,267.7	7,118.5	8,605.4	7,217.4	22.2	37.3	-93.19	-427.6	1,798.9	1,797.8	1,752.9	44.86	40.071	
8,300.0	7,118.4	8,637.7	7,217.0	22.5	37.4	-93.18	-459.9	1,798.9	1,797.7	1,752.2	45.51	39.505	
8,366.1	7,118.2	8,703.9	7,216.1	23.3	37.6	-93.15	-526.0	1,798.9	1,797.7	1,750.8	46.90	38.333	
8,400.0	7,118.1	8,737.7	7,215.6	23.7	37.7	-93.14	-559.9	1,798.9	1,797.7	1,750.0	47.65	37.730	
8,464.5	7,118.0	8,802.3	7,214.7	24.5	38.0	-93.12	-624.4	1,798.9	1,797.6	1,748.5	49.14	36.585	
8,500.0	7,117.9	8,837.7	7,214.2	25.0	38.2	-93.10	-659.8	1,798.9	1,797.6	1,747.6	49.99	35.961	
8,563.0	7,117.7	8,900.7	7,213.4	25.8	38.5	-93.08	-722.8	1,798.9	1,797.6	1,746.0	51.55	34.868	
8,600.0	7,117.6	8,937.7	7,212.9	26.3	38.7	-93.07	-759.8	1,798.9	1,797.6	1,745.0	52.51	34.235	
8,661.4	7,117.5	8,999.1	7,212.0	27.2	39.1	-93.05	-821.2	1,798.9	1,797.5	1,743.4	54.13	33.208	
8,700.0	7,117.4	9,037.7	7,211.5	27.7	39.4	-93.03	-859.8	1,798.9	1,797.5	1,742.3	55.18	32.577	
8,759.8	7,117.2	9,097.5	7,210.7	28.6	39.8	-93.01	-919.6	1,798.9	1,797.5	1,740.6	56.84	31.624	
8,800.0	7,117.1	9,137.7	7,210.1	29.2	40.1	-93.00	-959.8	1,798.9	1,797.4	1,739.5	57.98	31.001	
8,858.2	7,117.0	9,196.0	7,209.3	30.1	40.6	-92.98	-1,018.0	1,798.9	1,797.4	1,737.7	59.66	30.125	
8,900.0	7,116.9	9,237.7	7,208.7	30.7	41.0	-92.96	-1,059.8	1,798.9	1,797.4	1,736.5	60.89	29.516	
8,956.7	7,116.8	9,294.4	7,207.9	31.6	41.5	-92.94	-1,116.4	1,798.9	1,797.3	1,734.7	62.59	28.716	
9,000.0	7,116.7	9,337.7	7,207.3	32.3	41.9	-92.92	-1,159.8	1,798.9	1,797.3	1,733.4	63.91	28.124	
9,055.1	7,116.5	9,392.8	7,206.6	33.2	42.5	-92.90	-1,214.9	1,798.9	1,797.3	1,731.7	65.61	27.395	
9,100.0	7,116.4	9,437.7	7,206.0	33.9	43.0	-92.89	-1,259.7	1,798.9	1,797.3	1,730.3	67.01	26.823	
9,153.5	7,116.3	9,491.2	7,205.2	34.8	43.6	-92.87	-1,313.3	1,798.9	1,797.2	1,728.5	68.69	26.162	
9,200.0	7,116.2	9,537.7	7,204.6	35.5	44.1	-92.85	-1,359.7	1,798.9	1,797.2	1,727.0	70.18	25.610	
9,251.9	7,116.0	9,589.6	7,203.9	36.4	44.7	-92.83	-1,411.7	1,798.9	1,797.2	1,725.3	71.85	25.013	
9,300.0	7,115.9	9,637.7	7,203.2	37.2	45.3	-92.82	-1,459.7	1,798.9	1,797.1	1,723.7	73.41	24.480	
9,350.4	7,115.8	9,688.1	7,202.5	38.0	45.9	-92.80	-1,510.1	1,798.9	1,797.1	1,722.1	75.06	23.941	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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	
9,400.0	7,115.7	9,737.7	7,201.8	38.9	46.5	-92.78	-1,559.7	1,798.9	1,797.1	1,720.4	76.70	23.429	
9,448.8	7,115.5	9,786.5	7,201.1	39.7	47.2	-92.76	-1,608.5	1,798.9	1,797.1	1,718.7	78.33	22.942	
9,500.0	7,115.4	9,837.7	7,200.4	40.6	47.8	-92.74	-1,659.7	1,798.9	1,797.0	1,717.0	80.04	22.450	
9,547.2	7,115.3	9,884.9	7,199.8	41.4	48.5	-92.73	-1,706.9	1,798.9	1,797.0	1,715.4	81.64	22.012	
9,600.0	7,115.2	9,937.7	7,199.1	42.3	49.2	-92.71	-1,759.7	1,798.9	1,797.0	1,713.6	83.43	21.539	
9,645.6	7,115.1	9,983.3	7,198.4	43.1	49.8	-92.69	-1,805.3	1,798.9	1,797.0	1,712.0	84.99	21.144	
9,700.0	7,114.9	10,037.7	7,197.7	44.0	50.6	-92.67	-1,859.7	1,798.9	1,796.9	1,710.1	86.85	20.690	
9,744.1	7,114.8	10,081.7	7,197.1	44.8	51.2	-92.66	-1,903.7	1,798.9	1,796.9	1,708.5	88.37	20.334	
9,800.0	7,114.7	10,137.7	7,196.3	45.8	52.0	-92.64	-1,959.6	1,798.9	1,796.9	1,706.6	90.31	19.897	
9,842.5	7,114.6	10,180.2	7,195.7	46.5	52.6	-92.62	-2,002.1	1,798.9	1,796.9	1,705.1	91.79	19.576	
9,900.0	7,114.4	10,237.6	7,194.9	47.6	53.5	-92.60	-2,059.6	1,798.9	1,796.8	1,703.0	93.79	19.157	
9,940.9	7,114.3	10,278.6	7,194.4	48.3	54.1	-92.59	-2,100.5	1,798.9	1,796.8	1,701.6	95.23	18.868	
10,000.0	7,114.2	10,337.6	7,193.5	49.3	55.0	-92.56	-2,159.6	1,798.9	1,796.8	1,699.5	97.31	18.465	
10,039.3	7,114.1	10,377.0	7,193.0	50.0	55.6	-92.55	-2,199.0	1,798.9	1,796.7	1,698.1	98.70	18.205	
10,100.0	7,113.9	10,437.6	7,192.2	51.1	56.5	-92.53	-2,259.6	1,798.9	1,796.7	1,695.9	100.84	17.817	
10,137.8	7,113.8	10,475.4	7,191.6	51.8	57.1	-92.51	-2,297.4	1,798.9	1,796.7	1,694.5	102.19	17.582	
10,200.0	7,113.7	10,537.6	7,190.8	52.9	58.1	-92.49	-2,359.6	1,798.9	1,796.7	1,692.3	104.40	17.209	
10,236.2	7,113.6	10,573.8	7,190.3	53.6	58.7	-92.48	-2,395.8	1,798.9	1,796.6	1,691.0	105.70	16.998	
10,300.0	7,113.4	10,637.6	7,189.4	54.7	59.7	-92.46	-2,459.6	1,798.9	1,796.6	1,688.6	107.98	16.638	
10,334.6	7,113.3	10,672.2	7,188.9	55.4	60.2	-92.44	-2,494.2	1,798.9	1,796.6	1,687.4	109.23	16.448	
10,400.0	7,113.2	10,737.6	7,188.0	56.5	61.3	-92.42	-2,559.6	1,798.9	1,796.6	1,685.0	111.58	16.101	
10,433.0	7,113.1	10,770.7	7,187.6	57.1	61.8	-92.41	-2,592.6	1,798.9	1,796.6	1,683.8	112.77	15.931	
10,500.0	7,112.9	10,837.6	7,186.6	58.4	62.9	-92.38	-2,659.5	1,798.9	1,796.5	1,681.3	115.19	15.596	
10,531.5	7,112.8	10,869.1	7,186.2	58.9	63.4	-92.37	-2,691.0	1,798.9	1,796.5	1,680.2	116.33	15.443	
10,600.0	7,112.7	10,937.6	7,185.3	60.2	64.5	-92.35	-2,759.5	1,798.9	1,796.5	1,677.7	118.82	15.119	
10,629.9	7,112.6	10,967.5	7,184.8	60.7	65.0	-92.34	-2,789.4	1,798.9	1,796.5	1,676.6	119.91	14.982	
10,700.0	7,112.4	11,037.6	7,183.9	62.0	66.2	-92.31	-2,859.5	1,798.9	1,796.4	1,674.0	122.46	14.670	
10,728.3	7,112.3	11,065.9	7,183.5	62.5	66.7	-92.30	-2,887.8	1,798.9	1,796.4	1,672.9	123.49	14.547	
10,800.0	7,112.2	11,137.6	7,182.5	63.9	67.9	-92.28	-2,959.5	1,798.9	1,796.4	1,670.3	126.11	14.244	
10,826.7	7,112.1	11,164.3	7,182.1	64.4	68.3	-92.27	-2,986.2	1,798.9	1,796.4	1,669.3	127.09	14.135	
10,900.0	7,111.9	11,237.6	7,181.1	65.7	69.5	-92.24	-3,059.5	1,798.9	1,796.3	1,666.6	129.77	13.842	
10,925.2	7,111.8	11,262.8	7,180.8	66.2	70.0	-92.23	-3,084.6	1,798.9	1,796.3	1,665.6	130.70	13.744	
11,000.0	7,111.7	11,337.6	7,179.7	67.6	71.2	-92.20	-3,159.5	1,798.9	1,796.3	1,662.8	133.45	13.460	
11,023.6	7,111.6	11,361.2	7,179.4	68.0	71.6	-92.20	-3,183.1	1,798.9	1,796.3	1,662.0	134.32	13.373	
11,100.0	7,111.4	11,437.6	7,178.3	69.4	72.9	-92.17	-3,259.4	1,798.9	1,796.2	1,659.1	137.13	13.099	
11,122.0	7,111.3	11,459.6	7,178.0	69.8	73.3	-92.16	-3,281.5	1,798.9	1,796.2	1,658.3	137.94	13.021	
11,200.0	7,111.2	11,537.6	7,177.0	71.3	74.7	-92.13	-3,359.4	1,798.9	1,796.2	1,655.4	140.82	12.755	
11,220.4	7,111.1	11,558.0	7,176.7	71.6	75.0	-92.12	-3,379.9	1,798.9	1,796.2	1,654.6	141.58	12.687	
11,300.0	7,110.9	11,637.6	7,175.6	73.1	76.4	-92.10	-3,459.4	1,798.9	1,796.2	1,651.6	144.52	12.428	
11,318.9	7,110.9	11,656.4	7,175.3	73.5	76.7	-92.09	-3,478.3	1,798.9	1,796.1	1,650.9	145.22	12.368	
11,400.0	7,110.6	11,737.6	7,174.2	75.0	78.1	-92.06	-3,559.4	1,798.9	1,796.1	1,647.9	148.23	12.117	
11,417.3	7,110.6	11,754.9	7,174.0	75.3	78.4	-92.05	-3,576.7	1,798.9	1,796.1	1,647.2	148.87	12.065	
11,500.0	7,110.4	11,837.6	7,172.8	76.8	79.9	-92.02	-3,659.4	1,798.9	1,796.1	1,644.1	151.95	11.820	
11,515.7	7,110.4	11,853.3	7,172.6	77.1	80.1	-92.02	-3,675.1	1,798.9	1,796.1	1,643.5	152.53	11.775	
11,600.0	7,110.1	11,937.6	7,171.4	78.7	81.6	-91.99	-3,759.4	1,798.9	1,796.0	1,640.4	155.67	11.538	
11,614.1	7,110.1	11,951.7	7,171.2	79.0	81.9	-91.98	-3,773.5	1,798.9	1,796.0	1,639.8	156.19	11.499	
11,655.0	7,110.0	11,992.6	7,170.7	79.7	82.6	-91.97	-3,814.4	1,798.9	1,796.0	1,638.3	157.72	11.388 SF	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - PROP HZ CHANDLER FARMS HD 20-389HN - Wellbore #1 - W												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 16-MWD												<b>Offset Well Error:</b>	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	-4.10	1,369.8	-98.2	1,373.9				
98.4	98.4	58.6	58.6	0.1	0.1	-4.10	1,369.8	-98.2	1,373.3	1,373.1	0.19	7,349.154	
100.0	100.0	60.2	60.2	0.1	0.1	-4.10	1,369.8	-98.2	1,373.3	1,373.1	0.19	7,146.085	
196.8	196.8	157.0	157.0	0.3	0.3	-4.10	1,369.8	-98.2	1,373.3	1,372.7	0.63	2,188.362	
200.0	200.0	160.2	160.2	0.3	0.3	-4.10	1,369.8	-98.2	1,373.3	1,372.7	0.64	2,140.073	
295.3	295.3	255.5	255.5	0.5	0.5	-4.10	1,369.8	-98.2	1,373.3	1,372.2	1.07	1,283.459	
300.0	300.0	260.2	260.2	0.5	0.6	-4.10	1,369.8	-98.2	1,373.3	1,372.2	1.09	1,258.478	
393.7	393.7	353.9	353.9	0.7	0.8	-4.10	1,369.8	-98.2	1,373.3	1,371.8	1.51	907.997	
400.0	400.0	360.2	360.2	0.8	0.8	-4.10	1,369.8	-98.2	1,373.3	1,371.8	1.54	891.307	
492.1	492.1	452.3	452.3	1.0	1.0	-4.10	1,369.8	-98.2	1,373.3	1,371.3	1.95	702.490	
500.0	500.0	460.2	460.2	1.0	1.0	-4.10	1,369.8	-98.2	1,373.3	1,371.3	1.99	689.995	
590.5	590.5	550.7	550.7	1.2	1.2	-4.10	1,369.8	-98.2	1,373.3	1,370.9	2.40	572.840	
600.0	600.0	560.2	560.2	1.2	1.2	-4.10	1,369.8	-98.2	1,373.3	1,370.9	2.44	562.866	
689.0	689.0	649.2	649.2	1.4	1.4	-4.10	1,369.8	-98.2	1,373.3	1,370.5	2.84	483.589	
700.0	700.0	660.2	660.2	1.4	1.5	-4.10	1,369.8	-98.2	1,373.3	1,370.4	2.89	475.294	
787.4	787.4	747.6	747.6	1.6	1.7	-4.10	1,369.8	-98.2	1,373.3	1,370.0	3.28	418.401	
800.0	800.0	760.2	760.2	1.7	1.7	-4.10	1,369.8	-98.2	1,373.3	1,370.0	3.34	411.303	
885.8	885.8	846.0	846.0	1.9	1.9	-4.10	1,369.8	-98.2	1,373.3	1,369.6	3.72	368.700	
900.0	900.0	860.2	860.2	1.9	1.9	-4.10	1,369.8	-98.2	1,373.3	1,369.5	3.79	362.498	
984.2	984.2	944.4	944.4	2.1	2.1	-4.10	1,369.8	-98.2	1,373.3	1,369.1	4.17	329.553	
1,000.0	1,000.0	960.2	960.2	2.1	2.1	-4.10	1,369.8	-98.2	1,373.3	1,369.1	4.24	324.047	
1,082.7	1,082.7	1,042.9	1,042.9	2.3	2.3	-4.10	1,369.8	-98.2	1,373.3	1,368.7	4.61	297.921	
1,100.0	1,100.0	1,060.2	1,060.2	2.3	2.4	-4.10	1,369.8	-98.2	1,373.3	1,368.6	4.69	292.971	
1,181.1	1,181.1	1,141.3	1,141.3	2.5	2.5	-4.10	1,369.8	-98.2	1,373.3	1,368.2	5.05	271.829	
1,200.0	1,200.0	1,160.2	1,160.2	2.6	2.6	-4.10	1,369.8	-98.2	1,373.3	1,368.2	5.14	267.334	
1,279.5	1,279.5	1,239.7	1,239.7	2.7	2.8	-4.10	1,369.8	-98.2	1,373.3	1,367.8	5.49	249.940	
1,300.0	1,300.0	1,260.2	1,260.2	2.8	2.8	-4.10	1,369.8	-98.2	1,373.3	1,367.7	5.59	245.822	
1,377.9	1,377.9	1,338.1	1,338.1	3.0	3.0	-4.10	1,369.8	-98.2	1,373.3	1,367.4	5.94	231.313	
1,400.0	1,400.0	1,360.2	1,360.2	3.0	3.0	-4.10	1,369.8	-98.2	1,373.3	1,367.3	6.04	227.515	
1,476.4	1,476.4	1,436.6	1,436.6	3.2	3.2	-4.10	1,369.8	-98.2	1,373.3	1,366.9	6.38	215.270	
1,500.0	1,500.0	1,460.2	1,460.2	3.2	3.3	-4.10	1,369.8	-98.2	1,373.3	1,366.8	6.49	211.745	
1,574.8	1,574.8	1,535.0	1,535.0	3.4	3.4	-4.10	1,369.8	-98.2	1,373.3	1,366.5	6.82	201.308	
1,600.0	1,600.0	1,560.2	1,560.2	3.5	3.5	-4.10	1,369.8	-98.2	1,373.3	1,366.4	6.94	198.020	
1,673.2	1,673.2	1,633.4	1,633.4	3.6	3.6	-4.10	1,369.8	-98.2	1,373.3	1,366.0	7.26	189.047	
1,700.0	1,700.0	1,660.2	1,660.2	3.7	3.7	-4.10	1,369.8	-98.2	1,373.3	1,365.9	7.38	185.966	
1,771.6	1,771.6	1,731.8	1,731.8	3.8	3.9	-4.10	1,369.8	-98.2	1,373.3	1,365.6	7.71	178.194	
1,800.0	1,800.0	1,760.2	1,760.2	3.9	3.9	-4.10	1,369.8	-98.2	1,373.3	1,365.5	7.83	175.295	
1,870.1	1,870.1	1,830.3	1,830.3	4.1	4.1	-4.10	1,369.8	-98.2	1,373.3	1,365.2	8.15	168.519	
1,900.0	1,900.0	1,860.2	1,860.2	4.1	4.2	-4.10	1,369.8	-98.2	1,373.3	1,365.0	8.28	165.782	
1,968.5	1,968.5	1,928.7	1,928.7	4.3	4.3	-4.10	1,369.8	-98.2	1,373.3	1,364.7	8.59	159.841	
2,000.0	2,000.0	1,960.2	1,960.2	4.4	4.4	-4.10	1,369.8	-98.2	1,373.3	1,364.6	8.73	157.249	
2,066.9	2,066.9	2,027.1	2,027.1	4.5	4.5	-4.10	1,369.8	-98.2	1,373.3	1,364.3	9.03	152.012	
2,100.0	2,100.0	2,060.2	2,060.2	4.6	4.6	-4.10	1,369.8	-98.2	1,373.3	1,364.1	9.18	149.551	
2,150.0	2,150.0	2,110.2	2,110.2	4.7	4.7	-4.10	1,369.8	-98.2	1,373.3	1,363.9	9.41	145.978	
2,165.3	2,165.3	2,125.5	2,125.5	4.7	4.7	-4.34	1,369.8	-98.2	1,373.3	1,363.8	9.48	144.912	
2,200.0	2,200.0	2,160.2	2,160.2	4.8	4.8	-4.35	1,369.8	-98.2	1,372.9	1,363.2	9.63	142.543	
2,263.8	2,263.7	2,223.9	2,223.9	5.0	5.0	-4.35	1,369.8	-98.2	1,371.0	1,361.1	9.91	138.307	
2,300.0	2,299.9	2,260.1	2,260.1	5.0	5.1	-4.36	1,369.8	-98.2	1,369.4	1,359.3	10.07	135.973	
2,362.2	2,362.0	2,322.2	2,322.2	5.2	5.2	-4.38	1,369.8	-98.2	1,365.5	1,355.1	10.34	132.068	
2,400.0	2,399.7	2,359.9	2,359.9	5.3	5.3	-4.40	1,369.8	-98.2	1,362.4	1,351.9	10.50	129.762	
2,460.6	2,460.0	2,420.2	2,420.2	5.4	5.4	-4.42	1,369.8	-98.2	1,356.5	1,345.8	10.75	126.147	
2,500.0	2,499.1	2,459.3	2,459.3	5.5	5.5	-4.45	1,369.8	-98.2	1,352.0	1,341.1	10.92	123.860	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	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		
2,559.0	2,557.7	2,517.9	2,517.9	5.6	5.6	-4.48	1,369.8	-98.2	1,344.2	1,333.1	11.16	120.499		
2,600.0	2,598.2	2,558.4	2,558.4	5.7	5.7	-4.51	1,369.8	-98.2	1,338.1	1,326.8	11.32	118.222		
2,657.5	2,654.8	2,615.0	2,615.0	5.9	5.8	-4.56	1,369.8	-98.2	1,328.6	1,317.1	11.55	115.080		
2,700.0	2,696.6	2,656.8	2,656.8	6.0	5.9	-4.60	1,369.8	-98.2	1,320.8	1,309.1	11.71	112.806		
2,755.9	2,751.4	2,711.6	2,711.6	6.1	6.1	-4.66	1,369.8	-98.2	1,309.7	1,297.7	11.92	109.853		
2,800.0	2,794.4	2,754.6	2,754.6	6.2	6.2	-4.71	1,369.8	-98.2	1,300.1	1,288.0	12.09	107.574		
2,854.3	2,847.3	2,807.5	2,807.5	6.4	6.3	-4.78	1,369.8	-98.2	1,287.4	1,275.1	12.29	104.785		
2,888.8	2,880.6	2,840.8	2,840.8	6.5	6.4	-4.82	1,369.8	-98.2	1,278.9	1,266.5	12.41	103.056		
2,900.0	2,891.5	2,851.7	2,851.7	6.6	6.4	-4.83	1,369.8	-98.2	1,276.0	1,263.5	12.46	102.412		
2,952.7	2,942.5	2,902.7	2,902.7	6.7	6.5	-4.89	1,369.8	-98.2	1,262.6	1,249.9	12.69	99.459		
3,000.0	2,988.2	2,948.4	2,948.4	6.9	6.6	-4.93	1,369.8	-98.2	1,250.6	1,237.7	12.91	96.869		
3,051.2	3,037.6	2,997.8	2,997.8	7.1	6.7	-4.99	1,369.8	-98.2	1,237.6	1,224.4	13.14	94.169		
3,100.0	3,084.9	3,045.1	3,045.1	7.3	6.8	-5.04	1,369.8	-98.2	1,225.2	1,211.8	13.36	91.672		
3,149.6	3,132.8	3,093.0	3,093.0	7.5	6.9	-5.09	1,369.8	-98.2	1,212.6	1,199.0	13.59	89.213		
3,200.0	3,181.5	3,141.7	3,141.7	7.6	7.0	-5.14	1,369.8	-98.2	1,199.8	1,185.9	13.82	86.793		
3,248.0	3,228.0	3,188.2	3,188.2	7.8	7.1	-5.20	1,369.8	-98.2	1,187.6	1,173.5	14.04	84.555		
3,300.0	3,278.2	3,238.4	3,238.4	8.0	7.2	-5.25	1,369.8	-98.2	1,174.4	1,160.1	14.29	82.208		
3,346.4	3,323.2	3,283.4	3,283.4	8.2	7.4	-5.31	1,369.8	-98.2	1,162.6	1,148.1	14.50	80.171		
3,400.0	3,374.9	3,335.1	3,335.1	8.5	7.5	-5.37	1,369.8	-98.2	1,149.0	1,134.2	14.75	77.894		
3,444.9	3,418.3	3,378.5	3,378.5	8.6	7.6	-5.42	1,369.8	-98.2	1,137.6	1,122.6	14.96	76.039		
3,500.0	3,471.6	3,431.8	3,431.8	8.9	7.7	-5.49	1,369.8	-98.2	1,123.6	1,108.3	15.22	73.830		
3,543.3	3,513.5	3,473.7	3,473.7	9.1	7.8	-5.55	1,369.8	-98.2	1,112.6	1,097.1	15.42	72.142		
3,600.0	3,568.3	3,528.5	3,528.5	9.3	7.9	-5.62	1,369.8	-98.2	1,098.2	1,082.5	15.69	69.996		
3,641.7	3,608.7	3,568.9	3,568.9	9.5	8.0	-5.67	1,369.8	-98.2	1,087.6	1,071.7	15.89	68.460		
3,700.0	3,665.0	3,625.2	3,625.2	9.7	8.1	-5.75	1,369.8	-98.2	1,072.8	1,056.6	16.16	66.376		
3,740.1	3,703.8	3,664.0	3,664.0	9.9	8.2	-5.81	1,369.8	-98.2	1,062.6	1,046.2	16.35	64.979		
3,800.0	3,761.7	3,721.9	3,721.9	10.2	8.3	-5.89	1,369.8	-98.2	1,047.4	1,030.8	16.64	62.954		
3,838.6	3,799.0	3,759.2	3,759.2	10.4	8.4	-5.95	1,369.8	-98.2	1,037.6	1,020.8	16.82	61.683		
3,900.0	3,858.4	3,818.6	3,818.6	10.7	8.6	-6.04	1,369.8	-98.2	1,022.0	1,004.9	17.12	59.715		
3,937.0	3,894.2	3,854.4	3,854.4	10.8	8.6	-6.10	1,369.8	-98.2	1,012.6	995.4	17.29	58.559		
4,000.0	3,955.1	3,915.3	3,915.3	11.1	8.8	-6.19	1,369.8	-98.2	996.7	979.1	17.59	56.645		
4,035.4	3,989.3	3,949.5	3,949.5	11.3	8.8	-6.25	1,369.8	-98.2	987.7	969.9	17.77	55.595		
4,100.0	4,051.8	4,012.0	4,012.0	11.6	9.0	-6.36	1,369.8	-98.2	971.3	953.2	18.08	53.733		
4,133.8	4,084.5	4,044.7	4,044.7	11.7	9.1	-6.41	1,369.8	-98.2	962.7	944.5	18.24	52.780		
4,200.0	4,148.5	4,108.7	4,108.7	12.1	9.2	-6.53	1,369.8	-98.2	946.0	927.4	18.56	50.967		
4,232.3	4,179.7	4,139.9	4,139.9	12.2	9.3	-6.58	1,369.8	-98.2	937.8	919.1	18.72	50.103		
4,300.0	4,245.2	4,205.4	4,205.4	12.5	9.4	-6.71	1,369.8	-98.2	920.6	901.6	19.05	48.337		
4,330.7	4,274.9	4,235.1	4,235.1	12.7	9.5	-6.76	1,369.8	-98.2	912.8	893.6	19.20	47.555		
4,400.0	4,341.9	4,302.1	4,302.1	13.0	9.6	-6.90	1,369.8	-98.2	895.3	875.7	19.53	45.834		
4,429.1	4,370.0	4,330.2	4,330.2	13.1	9.7	-6.96	1,369.8	-98.2	887.9	868.2	19.68	45.127		
4,500.0	4,438.6	4,398.8	4,398.8	13.5	9.9	-7.10	1,369.8	-98.2	869.9	849.9	20.02	43.449		
4,527.5	4,465.2	4,425.4	4,425.4	13.6	9.9	-7.16	1,369.8	-98.2	863.0	842.8	20.16	42.812		
4,600.0	4,535.3	4,495.5	4,495.5	14.0	10.1	-7.31	1,369.8	-98.2	844.6	824.1	20.51	41.175		
4,626.0	4,560.4	4,520.6	4,520.6	14.1	10.1	-7.37	1,369.8	-98.2	838.1	817.4	20.64	40.602		
4,700.0	4,631.9	4,592.1	4,592.1	14.5	10.3	-7.54	1,369.8	-98.2	819.3	798.3	21.01	39.005		
4,724.4	4,655.5	4,615.7	4,615.7	14.6	10.3	-7.60	1,369.8	-98.2	813.2	792.0	21.13	38.490		
4,800.0	4,728.6	4,688.8	4,688.8	15.0	10.5	-7.78	1,369.8	-98.2	794.0	772.5	21.50	36.931		
4,822.8	4,750.7	4,710.9	4,710.9	15.1	10.6	-7.84	1,369.8	-98.2	788.3	766.7	21.61	36.471		
4,900.0	4,825.3	4,785.5	4,785.5	15.4	10.7	-8.04	1,369.8	-98.2	768.8	746.8	22.00	34.948		
4,921.2	4,845.9	4,806.1	4,806.1	15.6	10.8	-8.10	1,369.8	-98.2	763.4	741.3	22.10	34.538		
5,000.0	4,922.0	4,882.2	4,882.2	15.9	10.9	-8.31	1,369.8	-98.2	743.5	721.0	22.50	33.050		
5,019.7	4,941.0	4,901.2	4,901.2	16.0	11.0	-8.37	1,369.8	-98.2	738.5	715.9	22.59	32.686		

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - PROP HZ CHANDLER FARMS HD 20-389HN - Wellbore #1 - W												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 16-MWD												<b>Offset Well Error:</b>	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	5,018.7	4,978.9	4,978.9	16.4	11.2	-8.61	1,369.8	-98.2	718.3	695.3	23.00	31.232	
5,118.1	5,036.2	4,996.4	4,996.4	16.5	11.2	-8.66	1,369.8	-98.2	713.7	690.6	23.09	30.911	
5,200.0	5,115.4	5,075.6	5,075.6	16.9	11.4	-8.92	1,369.8	-98.2	693.0	669.5	23.50	29.489	
5,216.5	5,131.4	5,091.6	5,091.6	17.0	11.4	-8.98	1,369.8	-98.2	688.9	665.3	23.58	29.208	
5,300.0	5,212.1	5,172.3	5,172.3	17.4	11.6	-9.26	1,369.8	-98.2	667.8	643.8	24.01	27.817	
5,314.9	5,226.6	5,186.8	5,186.8	17.5	11.6	-9.31	1,369.8	-98.2	664.1	640.0	24.08	27.573	
5,400.0	5,308.8	5,269.0	5,269.0	17.9	11.8	-9.63	1,369.8	-98.2	642.6	618.1	24.52	26.212	
5,413.4	5,321.7	5,281.9	5,281.9	18.0	11.8	-9.68	1,369.8	-98.2	639.3	614.7	24.59	26.002	
5,500.0	5,405.5	5,365.7	5,365.7	18.4	12.0	-10.02	1,369.8	-98.2	617.5	592.5	25.03	24.670	
5,511.8	5,416.9	5,377.1	5,377.1	18.5	12.1	-10.07	1,369.8	-98.2	614.5	589.4	25.09	24.492	
5,600.0	5,502.2	5,462.4	5,462.4	18.9	12.2	-10.45	1,369.8	-98.2	592.4	566.8	25.55	23.188	
5,610.2	5,512.1	5,472.3	5,472.3	19.0	12.3	-10.50	1,369.8	-98.2	589.8	564.2	25.60	23.039	
5,700.0	5,598.9	5,559.1	5,559.1	19.4	12.5	-10.92	1,369.8	-98.2	567.3	541.2	26.07	21.761	
5,708.6	5,607.2	5,567.4	5,567.4	19.5	12.5	-10.96	1,369.8	-98.2	565.1	539.0	26.11	21.641	
5,745.8	5,643.2	5,603.4	5,603.4	19.7	12.6	-11.15	1,369.8	-98.2	555.8	529.5	26.31	21.126	
5,800.0	5,695.7	5,655.9	5,655.9	19.9	12.7	-11.36	1,369.8	-98.2	542.7	516.1	26.64	20.372	
5,807.1	5,702.6	5,662.8	5,662.8	19.9	12.7	-11.39	1,369.8	-98.2	541.1	514.4	26.68	20.280	
5,900.0	5,793.2	5,761.7	5,761.7	20.3	12.9	-11.96	1,369.0	-99.6	520.7	493.5	27.22	19.132	
5,905.5	5,798.6	5,767.9	5,767.8	20.3	12.9	-12.02	1,368.8	-99.9	519.6	492.3	27.25	19.066	
6,000.0	5,891.5	5,883.5	5,882.3	20.6	13.1	-14.13	1,361.5	-113.0	499.1	471.2	27.87	17.908	
6,003.9	5,895.4	5,888.3	5,887.0	20.6	13.2	-14.27	1,361.0	-113.9	498.2	470.3	27.90	17.859	
6,100.0	5,990.4	5,998.0	5,990.8	20.9	13.4	-18.77	1,344.0	-144.3	477.0	448.3	28.69	16.626	
6,102.3	5,992.7	6,000.4	5,993.1	20.9	13.4	-18.90	1,343.5	-145.2	476.5	447.8	28.71	16.597	
6,200.0	6,089.7	6,092.0	6,074.6	21.1	13.7	-24.32	1,323.2	-181.4	459.0	429.4	29.65	15.482	
6,200.8	6,090.4	6,092.7	6,075.2	21.1	13.7	-24.37	1,323.0	-181.7	458.9	429.2	29.66	15.474	
6,299.2	6,188.5	6,175.6	6,146.8	21.4	14.0	-29.94	1,302.5	-218.4	449.3	418.6	30.68	14.641	
6,300.0	6,189.3	6,176.3	6,147.3	21.4	14.0	-29.99	1,302.3	-218.7	449.2	418.5	30.69	14.636	
6,355.0	6,244.3	6,222.9	6,187.5	21.5	14.1	-33.14	1,290.8	-239.3	447.8	416.5	31.30	14.309	
6,397.6	6,286.8	6,259.2	6,218.8	21.5	14.3	-35.58	1,281.8	-255.4	448.6	416.9	31.78	14.118	
6,400.0	6,289.2	6,261.2	6,220.5	21.5	14.3	-35.71	1,281.3	-256.3	448.7	416.9	31.81	14.109	
6,484.6	6,373.8	6,333.8	6,283.1	21.6	14.7	-40.25	1,263.3	-288.4	455.2	422.5	32.76	13.898	
6,496.0	6,385.3	6,343.7	6,291.6	21.7	14.7	-40.87	1,260.9	-292.8	456.5	423.7	32.89	13.882	
6,500.0	6,389.2	6,347.1	6,294.6	21.7	14.7	-41.09	1,260.1	-294.3	457.0	424.1	32.93	13.877	
6,514.6	6,403.8	6,359.7	6,305.4	21.7	14.8	-41.87	1,256.9	-299.8	458.8	425.7	33.10	13.861	
6,550.0	6,439.2	6,390.4	6,331.9	21.7	14.9	135.98	1,249.3	-313.4	464.3	430.8	33.46	13.875	
6,594.5	6,483.5	6,457.1	6,390.2	21.7	15.3	132.03	1,232.5	-341.1	472.8	438.7	34.09	13.868	
6,600.0	6,489.0	6,466.9	6,398.9	21.7	15.3	131.53	1,230.0	-344.7	473.8	439.7	34.18	13.865	
6,650.0	6,538.4	6,589.6	6,511.8	21.7	15.8	127.04	1,196.9	-378.9	481.3	446.4	34.95	13.772	
6,692.9	6,580.3	6,718.5	6,634.7	21.6	16.2	125.43	1,160.0	-388.3	482.1	446.7	35.35	13.639	
6,700.0	6,587.1	6,740.0	6,655.2	21.6	16.2	125.45	1,153.7	-387.2	481.6	446.2	35.37	13.615	
6,750.0	6,635.0	6,885.5	6,791.4	21.5	16.5	127.89	1,111.7	-359.5	473.6	438.4	35.18	13.463	
6,791.3	6,673.7	6,991.4	6,884.2	21.4	16.6	132.53	1,082.3	-318.0	461.9	427.5	34.46	13.403	
6,800.0	6,681.7	7,011.5	6,900.9	21.4	16.6	133.73	1,077.0	-308.3	459.1	424.8	34.25	13.402 SF	
6,850.0	6,727.1	7,112.4	6,979.4	21.2	16.7	141.47	1,051.4	-250.6	440.9	408.2	32.70	13.484	
6,889.7	6,762.0	7,176.3	7,023.9	21.1	16.7	147.91	1,036.7	-207.2	426.2	394.9	31.25	13.639	
6,900.0	6,770.9	7,190.7	7,033.3	21.0	16.7	149.52	1,033.5	-196.7	422.5	391.6	30.87	13.688	
6,950.0	6,812.9	7,251.1	7,069.9	20.8	16.9	156.77	1,021.0	-150.3	406.7	377.6	29.06	13.992	
6,988.2	6,843.6	7,288.0	7,090.0	20.6	17.2	161.49	1,014.0	-120.2	397.8	369.9	27.86	14.280	
7,000.0	6,852.9	7,298.1	7,095.2	20.6	17.2	162.80	1,012.2	-111.7	395.8	368.3	27.49	14.399	
7,050.0	6,890.7	7,335.2	7,112.9	20.3	17.6	167.65	1,005.9	-79.9	391.6	365.5	26.10	15.002 ES	
7,052.1	6,892.3	7,336.6	7,113.6	20.3	17.6	167.83	1,005.6	-78.6	391.6	365.6	26.05	15.035 CC	
7,086.6	6,916.9	7,357.4	7,122.7	20.1	17.8	170.57	1,002.3	-60.2	393.5	368.4	25.15	15.646	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - PROP HZ CHANDLER FARMS HD 20-389HN - Wellbore #1 - W												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 16-MWD												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,100.0	6,926.2	7,364.7	7,125.8	20.1	17.9	171.53	1,001.2	-53.6	395.3	370.5	24.81	15.932	
7,150.0	6,959.1	7,388.7	7,135.2	19.8	18.2	174.68	997.7	-31.9	407.2	383.7	23.60	17.260	
7,185.0	6,980.5	7,402.9	7,140.4	19.6	18.3	176.57	995.7	-18.8	420.3	397.5	22.79	18.443	
7,200.0	6,989.3	7,408.4	7,142.4	19.5	18.4	177.32	995.0	-13.7	427.0	404.5	22.46	19.008	
7,250.0	7,016.6	7,424.7	7,147.8	19.3	18.6	179.62	992.8	1.5	453.7	432.3	21.43	21.173	
7,283.4	7,033.3	7,434.1	7,150.8	19.1	18.7	-178.95	991.7	10.3	475.0	454.2	20.80	22.841	
7,300.0	7,041.0	7,438.4	7,152.1	19.1	18.8	-178.27	991.2	14.3	486.4	465.9	20.50	23.723	
7,350.0	7,062.2	7,449.8	7,155.5	18.8	19.0	-176.20	989.8	25.2	523.8	504.0	19.73	26.546	
7,381.9	7,074.1	7,456.2	7,157.3	18.7	19.0	-174.84	989.1	31.3	549.6	530.3	19.35	28.408	
7,400.0	7,080.3	7,459.6	7,158.2	18.7	19.1	-174.02	988.7	34.5	564.9	545.7	19.17	29.464	
7,450.0	7,095.0	7,467.8	7,160.3	18.5	19.2	-171.52	987.8	42.4	608.9	590.0	18.91	32.208	
7,480.3	7,102.4	7,472.2	7,161.5	18.4	19.3	-169.70	987.4	46.6	636.6	617.7	18.93	33.629	
7,500.0	7,106.4	7,474.8	7,162.1	18.4	19.3	-168.33	987.1	49.1	655.0	636.0	19.04	34.399	
7,550.0	7,114.4	7,480.7	7,163.5	18.3	19.4	-163.78	986.5	54.8	702.7	682.9	19.80	35.485	
7,578.7	7,117.4	7,483.6	7,164.2	18.3	19.4	-160.00	986.2	57.7	730.6	709.9	20.71	35.282	
7,600.0	7,118.9	7,485.6	7,164.7	18.3	19.4	-156.25	986.0	59.6	751.5	729.7	21.73	34.582	
7,641.3	7,120.0	7,489.1	7,165.5	18.3	19.5	-144.69	985.6	63.0	792.3	767.1	25.21	31.434	
7,677.1	7,119.9	7,500.0	7,167.8	18.3	19.6	-140.90	984.6	73.6	827.9	801.4	26.43	31.318	
7,700.0	7,119.9	7,500.0	7,167.8	18.4	19.6	-140.90	984.6	73.6	850.5	824.0	26.49	32.105	
7,775.6	7,119.7	7,500.0	7,167.8	18.6	19.6	-140.90	984.6	73.6	925.5	898.8	26.75	34.594	
7,800.0	7,119.6	7,500.0	7,167.8	18.6	19.6	-140.90	984.6	73.6	949.8	922.9	26.84	35.388	
7,874.0	7,119.4	7,500.0	7,167.8	19.0	19.6	-140.90	984.6	73.6	1,023.3	996.1	27.18	37.650	
7,900.0	7,119.4	7,500.0	7,167.8	19.1	19.6	-140.90	984.6	73.6	1,049.2	1,021.9	27.30	38.431	
7,972.4	7,119.2	7,500.0	7,167.8	19.6	19.6	-140.90	984.6	73.6	1,121.2	1,093.5	27.71	40.464	
8,000.0	7,119.1	7,500.0	7,167.8	19.7	19.6	-140.90	984.6	73.6	1,148.6	1,120.8	27.86	41.222	
8,070.8	7,118.9	7,517.8	7,171.3	20.3	19.9	-135.69	983.0	90.9	1,219.0	1,189.1	29.86	40.825	
8,100.0	7,118.9	7,519.4	7,171.6	20.5	20.0	-135.26	982.9	92.5	1,248.0	1,217.8	30.18	41.346	
8,169.3	7,118.7	7,523.3	7,172.2	21.2	20.0	-134.28	982.6	96.3	1,316.9	1,285.9	31.01	42.473	
8,200.0	7,118.6	7,524.9	7,172.5	21.5	20.0	-133.87	982.5	97.9	1,347.5	1,316.1	31.37	42.961	
8,267.7	7,118.5	7,528.4	7,173.1	22.2	20.1	-133.02	982.2	101.4	1,414.9	1,382.7	32.20	43.934	
8,300.0	7,118.4	7,530.1	7,173.4	22.5	20.1	-132.63	982.0	103.0	1,447.1	1,414.5	32.60	44.387	
8,366.1	7,118.2	7,533.3	7,173.9	23.3	20.2	-131.89	981.8	106.2	1,512.9	1,479.4	33.45	45.223	
8,400.0	7,118.1	7,534.9	7,174.1	23.7	20.2	-131.52	981.7	107.8	1,546.6	1,512.7	33.89	45.639	
8,464.5	7,118.0	7,537.9	7,174.6	24.5	20.3	-130.87	981.4	110.7	1,610.9	1,576.2	34.75	46.354	
8,500.0	7,117.9	7,539.5	7,174.8	25.0	20.3	-130.52	981.3	112.3	1,646.2	1,611.0	35.23	46.735	
8,563.0	7,117.7	7,542.3	7,175.2	25.8	20.3	-129.94	981.1	115.0	1,709.0	1,672.9	36.10	47.345	
8,600.0	7,117.6	7,543.9	7,175.4	26.3	20.4	-129.62	981.0	116.6	1,745.9	1,709.3	36.61	47.692	
8,661.4	7,117.5	7,546.4	7,175.8	27.2	20.4	-129.10	980.8	119.1	1,807.1	1,769.6	37.48	48.211	
8,700.0	7,117.4	7,548.0	7,176.0	27.7	20.4	-128.79	980.7	120.6	1,845.5	1,807.5	38.03	48.526	
8,759.8	7,117.2	7,550.3	7,176.3	28.6	20.5	-128.33	980.6	123.0	1,905.2	1,866.3	38.91	48.968	
8,800.0	7,117.1	7,551.8	7,176.5	29.2	20.5	-128.03	980.5	124.5	1,945.2	1,905.7	39.49	49.255	
8,858.2	7,117.0	7,554.0	7,176.7	30.1	20.5	-127.62	980.3	126.6	2,003.3	1,962.9	40.36	49.631	
8,900.0	7,116.9	7,555.5	7,176.9	30.7	20.5	-127.34	980.2	128.1	2,044.9	2,003.9	40.99	49.891	
8,956.7	7,116.8	7,557.5	7,177.2	31.6	20.6	-126.97	980.1	130.1	2,101.4	2,059.6	41.85	50.211	
9,000.0	7,116.7	7,559.0	7,177.3	32.3	20.6	-126.70	980.0	131.6	2,144.6	2,102.1	42.51	50.448	
9,055.1	7,116.5	7,560.9	7,177.5	33.2	20.6	-126.37	979.9	133.4	2,199.6	2,156.2	43.37	50.721	
9,100.0	7,116.4	7,562.4	7,177.7	33.9	20.7	-126.10	979.8	134.9	2,244.4	2,200.3	44.06	50.935	
9,153.5	7,116.3	7,564.1	7,177.9	34.8	20.7	-125.81	979.7	136.6	2,297.8	2,252.9	44.91	51.169	
9,200.0	7,116.2	7,565.5	7,178.0	35.5	20.7	-125.55	979.6	138.1	2,344.1	2,298.5	45.64	51.364	
9,251.9	7,116.0	7,567.1	7,178.2	36.4	20.7	-125.28	979.5	139.6	2,395.9	2,349.5	46.47	51.563	
9,300.0	7,115.9	7,568.6	7,178.3	37.2	20.8	-125.04	979.4	141.1	2,443.9	2,396.6	47.23	51.741	
9,350.4	7,115.8	7,570.0	7,178.5	38.0	20.8	-124.80	979.3	142.5	2,494.1	2,446.1	48.05	51.912	

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NW NE SEC 30 T4N R67W 6th P.M. - PROP HZ CHANDLER FARMS HD 20-389HN - Wellbore #1 - W												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 16-MWD												<b>Offset Well Error:</b>	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,400.0	7,115.7	7,571.4	7,178.6	38.9	20.8	-124.56	979.2	143.9	2,543.6	2,494.8	48.85	52.074	
9,448.8	7,115.5	7,572.8	7,178.7	39.7	20.8	-124.34	979.1	145.3	2,592.3	2,542.7	49.64	52.221	
9,500.0	7,115.4	7,600.0	7,180.7	40.6	21.3	-120.31	977.7	172.4	2,643.7	2,591.8	51.92	50.918	
9,547.2	7,115.3	7,600.0	7,180.7	41.4	21.3	-120.31	977.7	172.4	2,690.8	2,638.2	52.64	51.117	
9,600.0	7,115.2	7,600.0	7,180.7	42.3	21.3	-120.31	977.7	172.4	2,743.4	2,690.0	53.44	51.332	
9,645.6	7,115.1	7,600.0	7,180.7	43.1	21.3	-120.31	977.7	172.4	2,789.0	2,734.8	54.15	51.507	
9,700.0	7,114.9	7,600.0	7,180.7	44.0	21.3	-120.31	977.7	172.4	2,843.2	2,788.2	54.98	51.710	
9,744.1	7,114.8	7,600.0	7,180.7	44.8	21.3	-120.31	977.7	172.4	2,887.2	2,831.5	55.67	51.865	
9,800.0	7,114.7	7,600.0	7,180.7	45.8	21.3	-120.31	977.7	172.4	2,943.0	2,886.4	56.53	52.056	
9,842.5	7,114.6	7,600.0	7,180.7	46.5	21.3	-120.31	977.7	172.4	2,985.4	2,928.2	57.20	52.193	
9,900.0	7,114.4	7,600.0	7,180.7	47.6	21.3	-120.31	977.7	172.4	3,042.7	2,984.6	58.10	52.373	
9,940.9	7,114.3	7,600.0	7,180.7	48.3	21.3	-120.31	977.7	172.4	3,083.6	3,024.8	58.74	52.495	
10,000.0	7,114.2	7,600.0	7,180.7	49.3	21.3	-120.30	977.7	172.4	3,142.5	3,082.9	59.67	52.665	
10,039.3	7,114.1	7,600.0	7,180.7	50.0	21.3	-120.30	977.7	172.4	3,181.8	3,121.5	60.29	52.773	
10,100.0	7,113.9	7,600.0	7,180.7	51.1	21.3	-120.30	977.7	172.4	3,242.4	3,181.1	61.25	52.935	
10,137.8	7,113.8	7,600.0	7,180.7	51.8	21.3	-120.30	977.7	172.4	3,280.1	3,218.2	61.85	53.031	
10,200.0	7,113.7	7,600.0	7,180.7	52.9	21.3	-120.30	977.7	172.4	3,342.2	3,279.3	62.84	53.184	
10,236.2	7,113.6	7,600.0	7,180.7	53.6	21.3	-120.30	977.7	172.4	3,378.3	3,314.9	63.42	53.269	
10,300.0	7,113.4	7,600.0	7,180.7	54.7	21.3	-120.30	977.7	172.4	3,442.0	3,377.6	64.44	53.415	
10,334.6	7,113.3	7,600.0	7,180.7	55.4	21.3	-120.30	977.7	172.4	3,476.6	3,411.6	64.99	53.490	
10,400.0	7,113.2	7,600.0	7,180.7	56.5	21.3	-120.30	977.7	172.4	3,541.9	3,475.8	66.04	53.629	
10,433.0	7,113.1	7,600.0	7,180.7	57.1	21.3	-120.30	977.7	172.4	3,574.9	3,508.3	66.58	53.696	
10,500.0	7,112.9	7,600.0	7,180.7	58.4	21.3	-120.29	977.7	172.4	3,641.7	3,574.1	67.65	53.829	
10,531.5	7,112.8	7,600.0	7,180.7	58.9	21.3	-120.29	977.7	172.4	3,673.1	3,605.0	68.16	53.888	
10,600.0	7,112.7	7,600.0	7,180.7	60.2	21.3	-120.29	977.7	172.4	3,741.6	3,672.3	69.27	54.015	
10,629.9	7,112.6	7,600.0	7,180.7	60.7	21.3	-120.29	977.7	172.4	3,771.4	3,701.7	69.75	54.068	
10,700.0	7,112.4	7,600.0	7,180.7	62.0	21.3	-120.29	977.7	172.4	3,841.4	3,770.5	70.89	54.188	
10,728.3	7,112.3	7,600.0	7,180.7	62.5	21.3	-120.29	977.7	172.4	3,869.7	3,798.4	71.35	54.235	
10,800.0	7,112.2	7,600.0	7,180.7	63.9	21.3	-120.29	977.7	172.4	3,941.3	3,868.8	72.52	54.351	
10,826.7	7,112.1	7,600.0	7,180.7	64.4	21.3	-120.29	977.7	172.4	3,968.0	3,895.1	72.95	54.392	
10,900.0	7,111.9	7,600.0	7,180.7	65.7	21.3	-120.28	977.7	172.4	4,041.2	3,967.0	74.15	54.503	
10,925.2	7,111.8	7,600.0	7,180.7	66.2	21.3	-120.28	977.7	172.4	4,066.3	3,991.8	74.56	54.540	
11,000.0	7,111.7	7,600.0	7,180.7	67.6	21.3	-120.28	977.7	172.4	4,141.1	4,065.3	75.78	54.646	
11,023.6	7,111.6	7,600.0	7,180.7	68.0	21.3	-120.28	977.7	172.4	4,164.7	4,088.5	76.17	54.679	
11,100.0	7,111.4	7,600.0	7,180.7	69.4	21.3	-120.28	977.7	172.4	4,241.0	4,163.6	77.42	54.781	
11,122.0	7,111.3	7,600.0	7,180.7	69.8	21.3	-120.28	977.7	172.4	4,263.0	4,185.2	77.78	54.809	
11,200.0	7,111.2	7,600.0	7,180.7	71.3	21.3	-120.28	977.7	172.4	4,340.9	4,261.8	79.06	54.907	
11,220.4	7,111.1	7,600.0	7,180.7	71.6	21.3	-120.28	977.7	172.4	4,361.3	4,281.9	79.39	54.932	
11,300.0	7,110.9	7,600.0	7,180.7	73.1	21.3	-120.27	977.7	172.4	4,440.8	4,360.1	80.70	55.027	
11,318.9	7,110.9	7,600.0	7,180.7	73.5	21.3	-120.27	977.7	172.4	4,459.6	4,378.6	81.01	55.049	
11,400.0	7,110.6	7,600.0	7,180.7	75.0	21.3	-120.27	977.7	172.4	4,540.7	4,458.3	82.35	55.139	
11,417.3	7,110.6	7,619.3	7,181.5	75.3	21.6	-117.85	976.9	191.6	4,557.9	4,473.8	84.08	54.208	
11,500.0	7,110.4	7,621.4	7,181.6	76.8	21.7	-117.60	976.8	193.8	4,640.5	4,554.9	85.62	54.202	
11,515.7	7,110.4	7,621.8	7,181.6	77.1	21.7	-117.55	976.8	194.2	4,656.2	4,570.3	85.91	54.200	
11,600.0	7,110.1	7,624.0	7,181.7	78.7	21.7	-117.31	976.7	196.3	4,740.4	4,652.9	87.47	54.193	
11,614.1	7,110.1	7,624.3	7,181.7	79.0	21.7	-117.27	976.7	196.6	4,754.5	4,666.8	87.74	54.191	
11,655.0	7,110.0	7,625.3	7,181.7	79.7	21.7	-117.16	976.6	197.7	4,795.4	4,706.9	88.50	54.187	

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB-EST @ 4990.0usft (Original Well ECoordinates are relative to: OLSON 30M-223

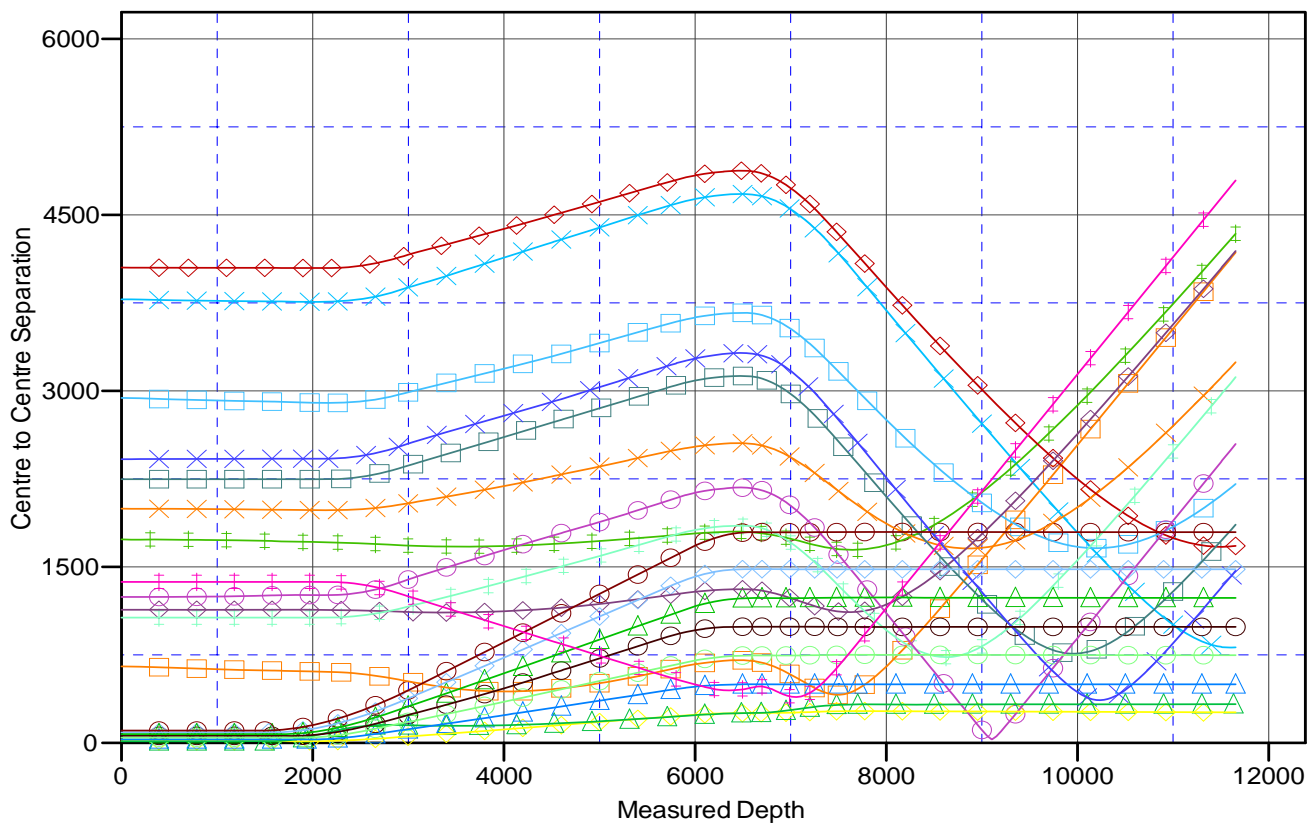
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.500000

Grid Convergence at Surface is: 0.37°

## Ladder Plot



## LEGEND

Wellbore #1, Wellbore #1 V0	EXIST VERT SHULTZ 22-30, Wellbore #1, Design #1 V0	OLSON 30R-223, ORIGINAL V
Wellbore #1, Wellbore #1 V0	EXIST VERT SHULTZ 23-30, Wellbore #1, Design #1 V0	OLSON 30R-243, ORIGINAL V
Wellbore #1, Wellbore #1 V0	EXIST VERT SHULTZ FARM 30-32, Wellbore #1, Wellbore #1 V0	OLSON 30R-303, ORIGINAL V
Wellbore #1, Wellbore #1 V0	EXIST VERT SHULTZ FARM 30-33, Wellbore #1, Wellbore #1 V0	OLSON 30R-343, ORIGINAL V
Wellbore #1, Wellbore #1 V0	OLSON 30M-323, ORIGINAL WELLBORE, PROPOSAL #2 V0	OLSON 30U-343, ORIGINAL V
Wellbore #1, Wellbore #1 V0	OLSON 30M-403, ORIGINAL WELLBORE, PROPOSAL #2 V0	PROP HZ CHANDLER FARM
Wellbore #1, Design #1 V0	OLSON 30R-203, ORIGINAL WELLBORE, PROPOSAL #2 V0	



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well OLSON 30M-223
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Reference Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4990.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OLSON 30M-223	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB-EST @ 4990.0usft (Original Well ECoordinates are relative to: OLSON 30M-223

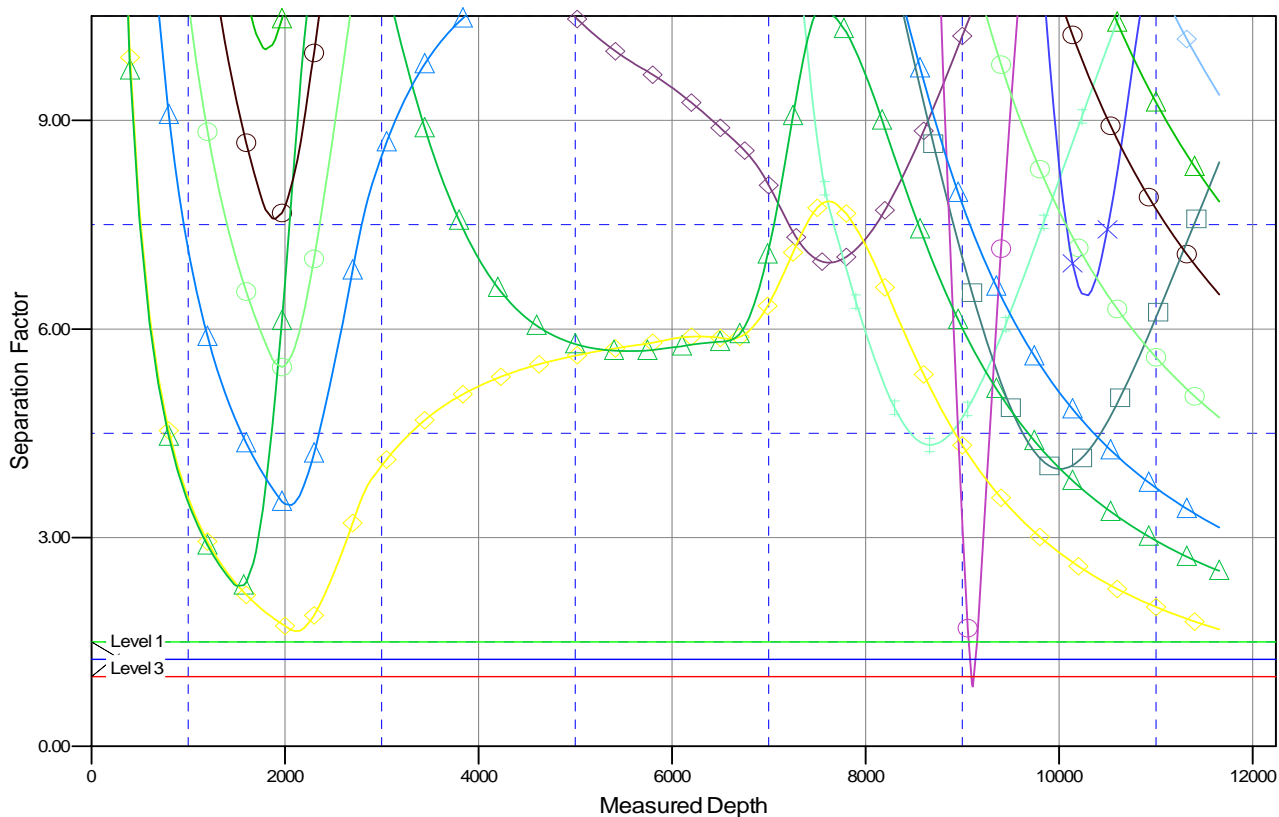
Offset Depths are relative to Offset Datum

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 V0	EXIST VERT SHULTZ 22-30, Wellbore #1, Design #1 V0	OLSON 30R-223, ORIGINAL V
Wellbore #1 V0	EXIST VERT SHULTZ 23-30, Wellbore #1, Design #1 V0	OLSON 30R-243, ORIGINAL V
Wellbore #1 V0	EXIST VERT SHULTZ FARM 30-32, Wellbore #1, Wellbore #1 V0	OLSON 30R-303, ORIGINAL V
Wellbore #1, Wellbore #1 V0	EXIST VERT SHULTZ FARM 30-33, Wellbore #1, Wellbore #1 V0	OLSON 30R-343, ORIGINAL V
Wellbore #1, Wellbore #1 V0	OLSON 30M-323, ORIGINAL WELLBORE, PROPOSAL #2 V0	OLSON 30U-343, ORIGINAL V
Wellbore #1, Wellbore #1 V0	OLSON 30M-403, ORIGINAL WELLBORE, PROPOSAL #2 V0	PROP HZ CHANDLER FARM
Wellbore #1, Design #1 V0	OLSON 30R-203, ORIGINAL WELLBORE, PROPOSAL #2 V0	