



# **PDC ENERGY**

**WELD COUNTY, COLORADO  
SE SE SEC. 4 T5N R64W 6th P.M.  
MCGLOTHLIN FARMS 4W-334**

**ORIGINAL WELLBORE  
PROPOSAL #1**

## **Anticollision Report**

**29 July, 2016**



# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well MCGLOTHLIN FARMS 4W-334
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4639.0usft (Original Well Elev)
<b>Reference Site:</b>	SE SE SEC. 4 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4639.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	MCGLOTHLIN FARMS 4W-334	<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 #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PROPOSAL #1		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD + Stations Interval 100.0usft	<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>	29/07/2016		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	14,530.5	PROPOSAL #1 (ORIGINAL WELLBORE)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
NW NW SEC. 5 T5N R64W 6th P.M.						
ABDN VERT LITTLE WILL #12 - Wellbore #1 - Design #	14,065.6	6,728.7	144.0	-191.1	0.430	Level 1, CC, ES, SF
ABDN VERT NOFFSINGER #1 - Wellbore #1 - Wellbore	14,530.5	6,400.0	1,416.0	1,204.8	6.704	CC, ES, SF
EHRlich 5M-243 - ORIGINAL WELLBORE - PROPOSAL	14,530.5	9,775.9	307.3	222.0	3.603	CC, ES, SF
EHRlich 5M-343 - ORIGINAL WELLBORE - PROPOSAL	14,530.5	9,736.9	560.6	476.9	6.699	CC, ES, SF
EXIST VERT NOFFSINGER #21-5 - Wellbore #1 - Wellbore	14,530.5	6,761.6	2,516.1	2,299.0	11.592	CC, ES, SF
EXIST VERT NOFFSINGER #32-5 - Wellbore #1 - Wellbore	13,846.4	6,735.7	1,038.7	840.6	5.242	CC
EXIST VERT NOFFSINGER #32-5 - Wellbore #1 - Wellbore	13,900.0	6,736.3	1,040.1	840.4	5.209	ES
EXIST VERT NOFFSINGER #32-5 - Wellbore #1 - Wellbore	14,000.0	6,737.6	1,050.0	847.5	5.186	SF
EXIST VERT PLUMB #B5-11 - Wellbore #1 - Wellbore #1	14,530.5	6,732.8	831.5	614.5	3.831	CC, ES, SF
EXIST VERT PLUMB B5-14 - Wellbore #1 - Wellbore #1	14,530.5	6,687.6	1,487.9	1,271.0	6.859	CC, ES, SF
SE SE SEC. 4 T5N R64W 6th P.M.						
ABDN VERT ACHZIGER B5-9 - Wellbore #1 - Design #1	12,423.8	6,740.0	147.0	-142.3	0.508	Level 1, CC, ES, SF
ABDN VERT MILLAGE 3-1 - Wellbore #1 - Design #1	1,637.9	1,610.8	1,301.6	1,267.3	37.884	CC
ABDN VERT MILLAGE 3-1 - Wellbore #1 - Design #1	2,300.0	2,258.0	1,309.0	1,258.8	26.068	ES
ABDN VERT MILLAGE 3-1 - Wellbore #1 - Design #1	6,500.0	6,376.0	1,600.5	1,454.0	10.924	SF
ABDN VERT MININGER-PFEIF 1 - Wellbore #1 - Design	12,649.6	6,750.7	1,148.9	853.1	3.884	CC
ABDN VERT MININGER-PFEIF 1 - Wellbore #1 - Design	12,700.0	6,750.6	1,150.0	852.8	3.870	ES
ABDN VERT MININGER-PFEIF 1 - Wellbore #1 - Design	12,800.0	6,750.5	1,158.7	858.7	3.863	SF
ABDN VERT OGRADY 3 - Wellbore #1 - Design #1	600.0	592.0	2,334.7	2,324.2	222.854	CC
ABDN VERT OGRADY 3 - Wellbore #1 - Design #1	700.0	692.0	2,336.4	2,323.7	183.742	ES
ABDN VERT OGRADY 3 - Wellbore #1 - Design #1	9,800.0	6,743.6	3,032.9	2,816.3	14.004	SF
EXIST DD MILLAGE 13-3D - Wellbore #1 - Wellbore #1	6,242.7	6,165.5	652.6	616.9	18.254	CC, ES
EXIST DD MILLAGE 13-3D - Wellbore #1 - Wellbore #1	6,350.0	6,273.1	653.8	617.8	18.137	SF
EXIST HZ WOLFPACK PC B3-63-1HN - Wellbore #1 - V	6,500.0	10,966.0	1,316.2	1,175.9	9.382	SF
EXIST HZ WOLFPACK PC B3-63-1HN - Wellbore #1 - V	6,548.5	10,966.0	1,314.2	1,174.3	9.394	CC, ES
EXIST VERT ACHZIGER #B5-16 - Wellbore #1 - Wellbore	12,418.9	6,730.4	1,451.4	1,293.2	9.178	CC, ES
EXIST VERT ACHZIGER #B5-16 - Wellbore #1 - Wellbore	12,800.0	6,730.3	1,500.6	1,331.8	8.891	SF
EXIST VERT ACHZIGER 14-4 - Wellbore #1 - Design #1	11,349.6	6,735.5	1,459.8	1,198.3	5.582	CC
EXIST VERT ACHZIGER 14-4 - Wellbore #1 - Design #1	11,400.0	6,735.4	1,460.7	1,197.8	5.555	ES
EXIST VERT ACHZIGER 14-4 - Wellbore #1 - Design #1	11,600.0	6,735.2	1,481.1	1,212.6	5.516	SF
EXIST VERT ACHZIGER 1 - Wellbore #1 - Design #1	11,456.6	6,747.4	115.9	-148.8	0.438	Level 1, CC, ES, SF
EXIST VERT BAUER 12-4 - Wellbore #1 - Design #1	11,182.5	6,749.7	1,034.6	777.5	4.025	CC
EXIST VERT BAUER 12-4 - Wellbore #1 - Design #1	11,200.0	6,749.7	1,034.7	777.2	4.018	ES
EXIST VERT BAUER 12-4 - Wellbore #1 - Design #1	11,300.0	6,749.6	1,041.2	780.9	4.000	SF
EXIST VERT BLOSKAS 1 - Wellbore #1 - Design #1	11,216.8	6,712.7	2,833.3	2,577.9	11.091	CC
EXIST VERT BLOSKAS 1 - Wellbore #1 - Design #1	11,300.0	6,712.6	2,834.5	2,576.8	10.997	ES

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 MCGLOTHLIN FARMS 4W-334
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4639.0usft (Original Well Elev)
<b>Reference Site:</b>	SE SE SEC. 4 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4639.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	MCGLOTHLIN FARMS 4W-334	<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 #1	<b>Offset TVD Reference:</b>	Offset Datum

## Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SE SE SEC. 4 T5N R64W 6th P.M.						
EXIST VERT BLOSKAS 1 - Wellbore #1 - Design #1	12,100.0	6,711.5	2,967.8	2,687.8	10.598	SF
EXIST VERT BOND 21-9 - Wellbore #1 - Design #1	9,902.2	6,722.5	2,805.5	2,586.3	12.800	CC
EXIST VERT BOND 21-9 - Wellbore #1 - Design #1	10,000.0	6,722.3	2,807.2	2,585.3	12.653	ES
EXIST VERT BOND 21-9 - Wellbore #1 - Design #1	10,900.0	6,721.1	2,977.6	2,730.9	12.068	SF
EXIST VERT FLACK 5-3 - Wellbore #1 - Design #1	6,320.8	6,198.7	1,370.7	1,222.5	9.247	CC, ES, SF
EXIST VERT FRENCH 1 - Wellbore #1 - Wellbore #1	7,305.8	6,733.3	1,102.6	1,079.6	47.866	CC, ES
EXIST VERT FRENCH 1 - Wellbore #1 - Wellbore #1	9,200.0	6,722.4	2,191.7	2,122.8	31.798	SF
EXIST VERT HECKENDORF 1 - Wellbore #1 - Design #	12,586.4	6,711.8	2,628.7	2,335.1	8.953	CC
EXIST VERT HECKENDORF 1 - Wellbore #1 - Design #	12,700.0	6,711.6	2,631.1	2,334.3	8.865	ES
EXIST VERT HECKENDORF 1 - Wellbore #1 - Design #	13,200.0	6,710.9	2,699.3	2,388.6	8.687	SF
EXIST VERT HEINRICH 41-9 - Wellbore #1 - Design #1	600.0	589.0	1,835.2	1,824.7	175.696	CC
EXIST VERT HEINRICH 41-9 - Wellbore #1 - Design #1	700.0	689.0	1,836.7	1,824.0	144.774	ES
EXIST VERT HEINRICH 41-9 - Wellbore #1 - Design #1	8,600.0	6,742.1	3,096.9	2,912.7	16.818	SF
EXIST VERT MILLAGE 11-10 - Wellbore #1 - Design #1	600.0	580.0	1,881.9	1,871.5	181.789	CC
EXIST VERT MILLAGE 11-10 - Wellbore #1 - Design #1	800.0	779.8	1,884.6	1,869.8	127.035	ES
EXIST VERT MILLAGE 11-10 - Wellbore #1 - Design #1	6,625.0	6,485.3	2,519.7	2,372.9	17.164	SF
EXIST VERT OGRADY 1 - Wellbore #1 - Design #1	8,717.5	6,750.0	180.0	-9.5	0.950	Level 1, CC, ES, SF
EXIST VERT OGRADY 2 - Wellbore #1 - Design #1	600.0	593.0	494.6	481.9	39.037	CC
EXIST VERT OGRADY 2 - Wellbore #1 - Design #1	700.0	693.0	496.2	481.3	33.292	ES
EXIST VERT OGRADY 2 - Wellbore #1 - Design #1	7,500.0	6,747.5	1,433.7	1,273.8	8.964	SF
EXIST VERT OGRADY 31-9 - Wellbore #1 - Design #1	600.0	581.0	2,047.0	2,036.6	197.541	CC
EXIST VERT OGRADY 31-9 - Wellbore #1 - Design #1	700.0	681.0	2,048.7	2,036.1	162.561	ES
EXIST VERT OGRADY 31-9 - Wellbore #1 - Design #1	9,400.0	6,733.1	2,763.2	2,557.7	13.444	SF
EXIST VERT OGRADY 34-4 - Wellbore #1 - Design #1	8,602.7	6,742.1	1,454.3	1,267.9	7.803	CC, ES
EXIST VERT OGRADY 34-4 - Wellbore #1 - Design #1	8,900.0	6,741.8	1,484.4	1,290.1	7.641	SF
EXIST VERT OGRADY 43-4 - Wellbore #1 - Design #1	7,329.7	6,738.7	301.0	144.1	1.918	CC, ES, SF
EXIST VERT SITZMAN 1 - Wellbore #1 - Design #1	9,959.4	6,745.4	1,246.1	1,022.9	5.584	CC
EXIST VERT SITZMAN 1 - Wellbore #1 - Design #1	10,000.0	6,745.3	1,246.7	1,022.5	5.559	ES
EXIST VERT SITZMAN 1 - Wellbore #1 - Design #1	10,200.0	6,745.1	1,269.1	1,039.3	5.523	SF
EXIST VERT SITZMAN 1A - Wellbore #1 - Design #1	9,952.8	6,747.4	1,655.3	1,432.3	7.423	CC
EXIST VERT SITZMAN 1A - Wellbore #1 - Design #1	10,000.0	6,747.3	1,656.0	1,431.7	7.383	ES
EXIST VERT SITZMAN 1A - Wellbore #1 - Design #1	10,300.0	6,746.9	1,691.3	1,458.8	7.273	SF
EXIST VERT SITZMAN 23-4 - Wellbore #1 - Design #1	9,795.3	6,739.6	93.9	-124.7	0.430	Level 1, CC, SF
EXIST VERT SITZMAN 23-4 - Wellbore #1 - Design #1	9,800.0	6,739.6	94.0	-124.7	0.430	Level 1, ES
EXIST VERT SITZMAN 32-4 - Wellbore #1 - Design #1	8,608.1	6,748.1	1,167.3	980.7	6.256	CC, ES
EXIST VERT SITZMAN 32-4 - Wellbore #1 - Design #1	8,800.0	6,747.9	1,182.9	991.3	6.172	SF
EXIST VERT ZEHNDER B5-23 - Wellbore #1 - Wellbore	12,903.8	6,736.6	633.7	462.3	3.696	CC, ES
EXIST VERT ZEHNDER B5-23 - Wellbore #1 - Wellbore	13,000.0	6,735.7	641.0	466.9	3.681	SF
MCGLOTHLIN FARMS 4W-234 - ORIGINAL WELLBORI	600.0	600.0	15.0	12.5	6.183	CC
MCGLOTHLIN FARMS 4W-234 - ORIGINAL WELLBORI	14,530.5	14,507.5	241.7	-175.6	0.579	Level 1, ES, SF
MCGLOTHLIN FARMS 4W-404 - ORIGINAL WELLBORI	600.0	600.0	30.2	27.8	12.476	CC
MCGLOTHLIN FARMS 4W-404 - ORIGINAL WELLBORI	700.0	700.0	30.6	27.7	10.669	ES
MCGLOTHLIN FARMS 4W-404 - ORIGINAL WELLBORI	14,530.5	14,720.3	525.1	99.5	1.234	Level 2, SF
MCGLOTHLIN FARMS 4X-204 - ORIGINAL WELLBORE	300.0	300.0	44.9	43.8	41.883	CC, ES
MCGLOTHLIN FARMS 4X-204 - ORIGINAL WELLBORE	14,530.5	14,400.0	823.7	393.4	1.914	SF
MCGLOTHLIN FARMS 4X-214 - ORIGINAL WELLBORE	500.0	500.0	15.0	13.0	7.594	CC
MCGLOTHLIN FARMS 4X-214 - ORIGINAL WELLBORE	14,530.5	14,427.4	340.3	-82.6	0.805	Level 1, ES, SF
MCGLOTHLIN FARMS 4X-234 - ORIGINAL WELLBORE	600.0	600.0	60.0	57.6	24.796	CC
MCGLOTHLIN FARMS 4X-234 - ORIGINAL WELLBORE	700.0	700.0	60.4	57.5	21.062	ES
MCGLOTHLIN FARMS 4X-234 - ORIGINAL WELLBORE	14,530.5	14,421.7	1,288.7	858.3	2.994	SF
MCGLOTHLIN FARMS 4X-314 - ORIGINAL WELLBORE	400.0	400.0	29.9	28.4	19.674	CC, ES
MCGLOTHLIN FARMS 4X-314 - ORIGINAL WELLBORE	14,530.5	14,485.9	567.2	135.8	1.315	Level 3, SF
MCGLOTHLIN FARMS 4X-334 - ORIGINAL WELLBORE	600.0	600.0	45.1	42.6	18.613	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 MCGLOTHLIN FARMS 4W-334
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4639.0usft (Original Well Elev)
<b>Reference Site:</b>	SE SE SEC. 4 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4639.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	MCGLOTHLIN FARMS 4W-334	<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 #1	<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						
SE SE SEC. 4 T5N R64W 6th P.M.						
MCGLOTHLIN FARMS 4X-334 - ORIGINAL WELLBORE	700.0	700.0	45.4	42.6	15.847	ES
MCGLOTHLIN FARMS 4X-334 - ORIGINAL WELLBORE	14,530.5	14,475.2	1,063.1	631.7	2.465	SF
MCGLOTHLIN FARMS 4Y-214 - ORIGINAL WELLBORE	600.0	600.0	90.0	87.5	37.163	CC
MCGLOTHLIN FARMS 4Y-214 - ORIGINAL WELLBORE	700.0	700.0	90.3	87.5	31.497	ES
MCGLOTHLIN FARMS 4Y-214 - ORIGINAL WELLBORE	14,530.5	14,483.2	1,763.4	1,332.9	4.097	SF
MCGLOTHLIN FARMS 4Y-304 - ORIGINAL WELLBORE	600.0	600.0	105.1	102.7	43.409	CC
MCGLOTHLIN FARMS 4Y-304 - ORIGINAL WELLBORE	700.0	700.0	105.5	102.6	36.770	ES
MCGLOTHLIN FARMS 4Y-304 - ORIGINAL WELLBORE	14,530.5	14,594.2	1,977.2	1,546.4	4.589	SF
MCGLOTHLIN FARMS 4Y-314 - ORIGINAL WELLBORE	600.0	600.0	75.0	72.6	30.979	CC
MCGLOTHLIN FARMS 4Y-314 - ORIGINAL WELLBORE	700.0	700.0	75.4	72.5	26.279	ES
MCGLOTHLIN FARMS 4Y-314 - ORIGINAL WELLBORE	14,530.5	14,506.7	1,540.3	1,109.5	3.575	SF

<b>Offset Design</b> NW NW SEC. 5 T5N R64W 6th P.M. - ABDN VERT LITTLE WILL #12 - 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 Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-83.50	784.2	-6,884.0	6,928.6					
100.0	100.0	83.0	83.0	0.1	0.0	-83.50	784.2	-6,884.0	6,928.6	6,928.5	0.09	N/A		
200.0	200.0	183.0	183.0	0.3	0.9	-83.50	784.2	-6,884.0	6,928.6	6,927.4	1.17	5,905.581		
300.0	300.0	283.0	283.0	0.5	3.0	-83.50	784.2	-6,884.0	6,928.6	6,925.1	3.51	1,976.491		
400.0	400.0	383.0	383.0	0.8	5.1	-83.50	784.2	-6,884.0	6,928.6	6,922.7	5.85	1,183.818		
500.0	500.0	483.0	483.0	1.0	7.1	-83.50	784.2	-6,884.0	6,928.6	6,920.4	8.13	852.575		
600.0	600.0	583.0	583.0	1.2	9.2	-83.50	784.2	-6,884.0	6,928.6	6,918.2	10.38	667.308		
700.0	700.0	683.0	683.0	1.4	11.2	-113.26	784.2	-6,884.0	6,929.2	6,916.6	12.63	548.739		
800.0	799.8	782.8	782.8	1.7	13.2	-113.26	784.2	-6,884.0	6,931.3	6,916.5	14.86	466.334		
900.0	899.5	882.5	882.5	1.9	15.2	-113.27	784.2	-6,884.0	6,934.8	6,917.7	17.10	405.606		
1,000.0	998.7	981.7	981.7	2.2	17.2	-113.27	784.2	-6,884.0	6,939.6	6,920.3	19.34	358.902		
1,100.0	1,097.5	1,080.5	1,080.5	2.4	19.2	-113.27	784.2	-6,884.0	6,945.9	6,924.3	21.59	321.790		
1,200.0	1,195.6	1,178.6	1,178.6	2.8	21.2	-113.27	784.2	-6,884.0	6,953.5	6,929.7	23.85	291.518		
1,206.8	1,202.3	1,185.3	1,185.3	2.8	21.3	-113.27	784.2	-6,884.0	6,954.1	6,930.1	24.01	289.672		
1,300.0	1,293.4	1,276.4	1,276.4	3.1	23.2	-113.42	784.2	-6,884.0	6,962.0	6,935.8	26.16	266.128		
1,400.0	1,391.2	1,374.2	1,374.2	3.5	25.1	-113.57	784.2	-6,884.0	6,970.5	6,942.1	28.49	244.691		
1,500.0	1,488.9	1,471.9	1,471.9	3.9	27.1	-113.73	784.2	-6,884.0	6,979.1	6,948.3	30.83	226.412		
1,600.0	1,586.7	1,569.7	1,569.7	4.4	29.1	-113.88	784.2	-6,884.0	6,987.8	6,954.6	33.17	210.661		
1,700.0	1,684.4	1,667.4	1,667.4	4.8	31.0	-114.04	784.2	-6,884.0	6,996.5	6,961.0	35.52	196.960		
1,800.0	1,782.2	1,765.2	1,765.2	5.2	33.0	-114.19	784.2	-6,884.0	7,005.2	6,967.4	37.88	184.942		
1,900.0	1,880.0	1,863.0	1,863.0	5.6	35.0	-114.35	784.2	-6,884.0	7,014.0	6,973.8	40.24	174.320		
2,000.0	1,977.7	1,960.7	1,960.7	6.1	36.9	-114.50	784.2	-6,884.0	7,022.9	6,980.3	42.60	164.866		
2,100.0	2,075.5	2,058.5	2,058.5	6.5	38.9	-114.65	784.2	-6,884.0	7,031.8	6,986.9	44.96	156.401		
2,200.0	2,173.3	2,156.3	2,156.3	6.9	40.9	-114.81	784.2	-6,884.0	7,040.8	6,993.5	47.32	148.779		
2,300.0	2,271.0	2,254.0	2,254.0	7.4	42.8	-114.96	784.2	-6,884.0	7,049.8	7,000.1	49.69	141.880		
2,400.0	2,368.8	2,351.8	2,351.8	7.8	44.8	-115.11	784.2	-6,884.0	7,058.8	7,006.8	52.05	135.608		
2,500.0	2,466.6	2,449.6	2,449.6	8.2	46.8	-115.26	784.2	-6,884.0	7,068.0	7,013.5	54.42	129.882		
2,600.0	2,564.3	2,547.3	2,547.3	8.7	48.7	-115.41	784.2	-6,884.0	7,077.1	7,020.3	56.78	124.633		
2,700.0	2,662.1	2,645.1	2,645.1	9.1	50.7	-115.56	784.2	-6,884.0	7,086.3	7,027.2	59.15	119.804		
2,800.0	2,759.9	2,742.9	2,742.9	9.6	52.7	-115.71	784.2	-6,884.0	7,095.6	7,034.1	61.51	115.348		
2,900.0	2,857.6	2,840.6	2,840.6	10.0	54.6	-115.86	784.2	-6,884.0	7,104.9	7,041.0	63.88	111.223		
3,000.0	2,955.4	2,938.4	2,938.4	10.5	56.6	-116.01	784.2	-6,884.0	7,114.3	7,048.0	66.24	107.394		

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