

# **PDC ENERGY**

**WELD COUNTY, COLORADO  
NW SW SEC. 17 T5N R64W 6th P.M.  
CECIL'S KERSEY FARM 17K-232**

**ORIGINAL WELLBORE  
PROPOSAL #2**

## **Anticollision Report**

**16 September, 2015**



# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well CECIL'S KERSEY FARM 17K-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4636.0usft (Original Well Elev)
<b>Reference Site:</b>	NW SW SEC. 17 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4636.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	CECIL'S KERSEY FARM 17K-232	<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>	16/09/2015		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,293.2	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
NW SW SEC. 17 T5N R64W 6th P.M.						
CECIL'S KERSEY FARM 17B-212 - ORIGINAL WELLBC	1,237.6	1,237.6	60.0	54.7	11.302	CC
CECIL'S KERSEY FARM 17B-212 - ORIGINAL WELLBC	1,300.0	1,299.8	60.1	54.5	10.762	ES
CECIL'S KERSEY FARM 17B-212 - ORIGINAL WELLBC	11,293.7	11,235.4	758.9	505.2	2.992	SF
CECIL'S KERSEY FARM 17B-214 - ORIGINAL WELLBC	1,350.0	1,350.0	45.0	39.2	7.740	CC
CECIL'S KERSEY FARM 17B-214 - ORIGINAL WELLBC	1,377.9	1,377.9	45.1	39.1	7.591	ES
CECIL'S KERSEY FARM 17B-214 - ORIGINAL WELLBC	1,500.0	1,499.9	47.3	40.8	7.299	SF
CECIL'S KERSEY FARM 17B-302 - ORIGINAL WELLBC	1,037.2	1,037.2	90.0	85.6	20.417	CC
CECIL'S KERSEY FARM 17B-302 - ORIGINAL WELLBC	1,082.7	1,082.3	90.1	85.5	19.555	ES
CECIL'S KERSEY FARM 17B-302 - ORIGINAL WELLBC	11,293.7	11,325.9	979.1	725.7	3.863	SF
CECIL'S KERSEY FARM 17B-304 - ORIGINAL WELLBC	1,137.4	1,137.4	75.0	70.1	15.436	CC
CECIL'S KERSEY FARM 17B-304 - ORIGINAL WELLBC	1,200.0	1,199.8	75.1	69.9	14.632	ES
CECIL'S KERSEY FARM 17B-304 - ORIGINAL WELLBC	1,476.4	1,473.3	82.0	75.7	13.006	SF
CECIL'S KERSEY FARM 17K-204 - ORIGINAL WELLBC	1,237.4	1,237.4	15.0	9.7	2.826	CC
CECIL'S KERSEY FARM 17K-204 - ORIGINAL WELLBC	1,279.5	1,279.4	15.1	9.6	2.752	ES
CECIL'S KERSEY FARM 17K-204 - ORIGINAL WELLBC	7,381.9	7,054.9	104.2	58.7	2.291	SF
CECIL'S KERSEY FARM 17K-332 - ORIGINAL WELLBC	1,350.0	1,350.0	30.0	24.2	5.160	CC
CECIL'S KERSEY FARM 17K-332 - ORIGINAL WELLBC	11,293.7	11,351.4	260.6	10.2	1.041	Level 2, ES, SF
CECIL'S KERSEY FARM 17K-334 - ORIGINAL WELLBC	1,350.0	1,350.0	15.0	9.2	2.580	CC
CECIL'S KERSEY FARM 17K-334 - ORIGINAL WELLBC	1,377.9	1,377.9	15.1	9.1	2.539	ES
CECIL'S KERSEY FARM 17K-334 - ORIGINAL WELLBC	1,400.0	1,400.0	15.2	9.2	2.525	SF
CECIL'S KERSEY FARM 17K-402 - ORIGINAL WELLBC	1,137.3	1,137.3	30.0	25.1	6.175	CC
CECIL'S KERSEY FARM 17K-402 - ORIGINAL WELLBC	1,181.1	1,180.9	30.1	25.1	5.958	ES
CECIL'S KERSEY FARM 17K-402 - ORIGINAL WELLBC	11,293.7	11,472.7	269.3	53.6	1.249	Level 2, SF
CECIL'S KERSEY FARM 17K-404 - ORIGINAL WELLBC	1,037.1	1,037.1	45.0	40.6	10.211	CC
CECIL'S KERSEY FARM 17K-404 - ORIGINAL WELLBC	1,082.7	1,082.2	45.2	40.6	9.797	ES
CECIL'S KERSEY FARM 17K-404 - ORIGINAL WELLBC	7,775.6	6,828.1	353.3	301.5	6.830	SF
EXIST VERT B&H #1 - Wellbore #1 - Design #1	6,117.1	5,986.8	4,684.1	4,544.4	33.519	CC, ES
EXIST VERT B&H #1 - Wellbore #1 - Design #1	6,200.0	6,069.5	4,688.9	4,548.3	33.352	SF
EXIST VERT BRIGHT #2 - Wellbore #1 - Design #1	6,117.1	5,986.8	4,552.9	4,410.6	31.996	CC, ES, SF
EXIST VERT DUNN #22-18 - Wellbore #1 - Design #1	6,117.1	5,983.8	3,459.8	3,316.8	24.199	CC, ES, SF
EXIST VERT DUNN/MILLER #1 - Wellbore #1 - Design #1	2,888.4	2,849.0	101.2	35.7	1.545	CC
EXIST VERT DUNN/MILLER #1 - Wellbore #1 - Design #1	2,900.0	2,860.2	101.3	35.5	1.539	ES
EXIST VERT DUNN/MILLER #1 - Wellbore #1 - Design #1	2,952.7	2,911.1	102.6	35.7	1.533	SF
EXIST VERT DUNN/MILLER #17B - Wellbore #1 - Desig	1,350.0	1,340.0	537.1	507.6	18.176	CC
EXIST VERT DUNN/MILLER #17B - Wellbore #1 - Desig	1,400.0	1,390.0	537.5	506.9	17.531	ES
EXIST VERT DUNN/MILLER #17B - Wellbore #1 - Desig	7,900.0	6,688.0	905.1	734.4	5.304	SF
EXIST VERT DUNN/MILLER #23-17 - Wellbore #1 - Des	8,469.8	6,682.5	242.2	57.6	1.312	Level 3, CC, ES, SF

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 CECIL'S KERSEY FARM 17K-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4636.0usft (Original Well Elev)
<b>Reference Site:</b>	NW SW SEC. 17 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4636.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	CECIL'S KERSEY FARM 17K-232	<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 Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
NW SW SEC. 17 T5N R64W 6th P.M.						
EXIST VERT GUNTHER #18-2 - Wellbore #1 - Design #	6,117.1	5,979.8	1,199.5	1,056.3	8.380	CC, ES, SF
EXIST VERT GUNTHER-PM B #18-7 - Wellbore #1 - We	6,117.1	6,010.8	2,287.6	2,262.3	90.669	ES
EXIST VERT GUNTHER-PM B #18-7 - Wellbore #1 - We	6,128.0	6,022.0	2,287.5	2,270.8	137.287	CC
EXIST VERT GUNTHER-PM B #18-7 - Wellbore #1 - We	11,293.2	6,696.4	6,868.5	6,739.7	53.314	SF
EXIST VERT H&S #1 - Wellbore #1 - Design #1	10,009.3	6,677.0	535.7	310.1	2.375	CC, ES
EXIST VERT H&S #1 - Wellbore #1 - Design #1	10,039.3	6,676.8	536.6	310.1	2.370	SF
EXIST VERT HETTINGER #1 - Wellbore #1 - Design #1	6,117.1	5,983.8	774.5	637.8	5.666	CC
EXIST VERT HETTINGER #1 - Wellbore #1 - Design #1	6,150.0	6,016.7	775.2	632.2	5.421	ES, SF
EXIST VERT HETTINGER #33-18 - Wellbore #1 - Desig	6,117.1	5,977.8	2,067.6	1,928.8	14.896	CC
EXIST VERT HETTINGER #33-18 - Wellbore #1 - Desig	6,150.0	6,010.7	2,068.3	1,927.2	14.657	ES, SF
EXIST VERT HETTINGER #34-18 - Wellbore #1 - Desig	6,117.1	5,982.8	2,620.4	2,485.2	19.384	CC
EXIST VERT HETTINGER #34-18 - Wellbore #1 - Desig	6,150.0	6,015.7	2,621.0	2,476.9	18.193	ES
EXIST VERT HETTINGER #34-18 - Wellbore #1 - Desig	6,200.8	6,066.3	2,624.2	2,479.5	18.143	SF
EXIST VERT HETTINGER #44-18 - Wellbore #1 - Desig	3,740.3	3,666.9	1,724.1	1,637.6	19.930	CC
EXIST VERT HETTINGER #44-18 - Wellbore #1 - Desig	4,330.7	4,236.5	1,731.1	1,630.0	17.117	ES
EXIST VERT HETTINGER #44-18 - Wellbore #1 - Desig	6,350.0	6,207.6	1,814.6	1,667.9	12.372	SF
EXIST VERT HOSHIKO #32-17 - Wellbore #1 - Design #	9,801.0	6,676.3	982.0	762.1	4.465	CC
EXIST VERT HOSHIKO #32-17 - Wellbore #1 - Design #	9,842.5	6,676.0	982.9	761.8	4.447	ES
EXIST VERT HOSHIKO #32-17 - Wellbore #1 - Design #	9,940.9	6,675.4	991.9	768.2	4.434	SF
EXIST VERT HOSHIKO #42-17 - Wellbore #1 - Design #	11,129.6	6,668.0	993.1	736.8	3.875	CC, ES
EXIST VERT HOSHIKO #42-17 - Wellbore #1 - Design #	11,220.4	6,667.5	997.2	738.4	3.853	SF
EXIST VERT HOSHIKO/SOLIS #1 - Wellbore #1 - Wellb	9,811.3	6,638.7	1,901.0	1,812.8	21.550	CC
EXIST VERT HOSHIKO/SOLIS #1 - Wellbore #1 - Wellb	9,842.5	6,638.9	1,901.2	1,812.2	21.347	ES
EXIST VERT HOSHIKO/SOLIS #1 - Wellbore #1 - Wellb	10,925.2	6,645.9	2,203.2	2,084.4	18.539	SF
EXIST VERT HOWARD #14-18 - Wellbore #1 - Design #	6,117.1	5,984.8	5,002.8	4,865.1	36.344	CC
EXIST VERT HOWARD #14-18 - Wellbore #1 - Design #	6,150.0	6,017.7	5,003.5	4,861.2	35.173	ES
EXIST VERT HOWARD #14-18 - Wellbore #1 - Design #	6,200.0	6,067.5	5,007.3	4,864.7	35.120	SF
EXIST VERT HOWARD #24-18 - Wellbore #1 - Design #	6,117.1	5,986.8	3,627.7	3,491.4	26.616	CC
EXIST VERT HOWARD #24-18 - Wellbore #1 - Design #	6,150.0	6,019.7	3,628.3	3,485.0	25.311	ES
EXIST VERT HOWARD #24-18 - Wellbore #1 - Design #	6,200.0	6,069.5	3,631.8	3,488.0	25.259	SF
EXIST VERT MASON #1 - Wellbore #1 - Design #1	6,117.1	5,983.8	3,368.7	3,229.4	24.171	CC
EXIST VERT MASON #1 - Wellbore #1 - Design #1	6,150.0	6,016.7	3,369.5	3,228.8	23.951	ES
EXIST VERT MASON #1 - Wellbore #1 - Design #1	6,200.0	6,066.5	3,373.4	3,232.5	23.941	SF
EXIST VERT MILLER #1 - Wellbore #1 - Wellbore #1	0.0	0.0	1,087.6			
EXIST VERT MILLER #1 - Wellbore #1 - Wellbore #1	1,350.0	1,347.9	1,091.0	1,087.3	293.617	ES
EXIST VERT MILLER #1 - Wellbore #1 - Wellbore #1	11,293.2	6,677.0	4,512.6	4,383.9	35.073	SF
EXIST VERT MILLER #2 - Wellbore #1 - Wellbore #1	1,361.4	1,361.5	1,536.9	1,533.2	413.751	CC, ES
EXIST VERT MILLER #2 - Wellbore #1 - Wellbore #1	10,100.0	6,659.8	2,364.5	2,268.7	24.657	SF
EXIST VERT SCHAUMBERG #12-17 - Wellbore #1 - De	7,308.3	6,693.6	941.8	782.8	5.924	CC, ES
EXIST VERT SCHAUMBERG #12-17 - Wellbore #1 - De	7,400.0	6,693.1	946.2	785.8	5.898	SF
EXIST VERT SOLIS #43-17 - Wellbore #1 - Design #1	11,124.2	6,680.1	504.2	248.0	1.968	CC, ES, SF
EXIST VERT SOLIS #44-17 - Wellbore #1 - Wellbore #1	11,293.7	6,640.8	1,470.7	1,342.0	11.431	CC, ES, SF
EXIST VERT STEINMETZ #1 - Wellbore #1 - Design #1	8,470.0	6,687.5	960.4	775.8	5.202	CC
EXIST VERT STEINMETZ #1 - Wellbore #1 - Design #1	8,500.0	6,687.3	960.9	775.5	5.183	ES
EXIST VERT STEINMETZ #1 - Wellbore #1 - Design #1	8,600.0	6,686.7	969.2	781.2	5.156	SF

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<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well CECIL'S KERSEY FARM 17K-232
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4636.0usft (Original Well Elev)
<b>Reference Site:</b>	NW SW SEC. 17 T5N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4636.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	CECIL'S KERSEY FARM 17K-232	<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						
SE SE SEC. 18 T5N R64W 6th P.M.						
GILLHAM 18X-102 - ORIGINAL WELLBORE - PROPOS	6,838.4	7,670.8	1,194.7	1,139.4	21.611	CC
GILLHAM 18X-102 - ORIGINAL WELLBORE - PROPOS	11,293.7	12,104.1	1,201.0	919.5	4.266	ES, SF
GILLHAM 18X-104 - ORIGINAL WELLBORE - PROPOS	4,169.1	4,294.7	991.8	963.4	34.892	CC
GILLHAM 18X-104 - ORIGINAL WELLBORE - PROPOS	4,232.3	4,352.2	992.2	963.2	34.238	ES
GILLHAM 18X-104 - ORIGINAL WELLBORE - PROPOS	6,594.5	6,647.7	1,092.1	1,051.7	27.018	SF
GILLHAM 18X-232 - ORIGINAL WELLBORE - PROPOS	1,035.2	1,037.2	1,578.1	1,573.7	358.319	CC
GILLHAM 18X-232 - ORIGINAL WELLBORE - PROPOS	11,293.7	12,192.9	1,630.1	1,346.9	5.755	ES, SF
GILLHAM 18X-234 - ORIGINAL WELLBORE - PROPOS	3,289.4	3,372.1	1,204.2	1,183.1	56.976	CC
GILLHAM 18X-234 - ORIGINAL WELLBORE - PROPOS	3,346.4	3,423.4	1,204.4	1,182.8	55.626	ES
GILLHAM 18X-234 - ORIGINAL WELLBORE - PROPOS	9,350.4	6,250.0	2,884.0	2,795.2	32.496	SF
GILLHAM 18X-332 - ORIGINAL WELLBORE - PROPOS	11,293.7	12,282.4	1,413.6	1,130.3	4.989	CC, ES, SF
GILLHAM 18X-334 - ORIGINAL WELLBORE - PROPOS	3,756.7	3,855.1	1,112.8	1,088.1	44.967	CC
GILLHAM 18X-334 - ORIGINAL WELLBORE - PROPOS	3,800.0	3,894.5	1,113.0	1,087.9	44.289	ES
GILLHAM 18X-334 - ORIGINAL WELLBORE - PROPOS	8,200.0	6,400.0	1,853.2	1,791.8	30.198	SF
GILLHAM 18Y-202 - ORIGINAL WELLBORE - PROPOS	1,536.5	1,500.0	1,527.0	1,520.5	233.382	CC
GILLHAM 18Y-202 - ORIGINAL WELLBORE - PROPOS	1,574.8	1,534.0	1,527.1	1,520.4	228.366	ES
GILLHAM 18Y-202 - ORIGINAL WELLBORE - PROPOS	11,293.7	12,228.1	2,154.0	1,871.8	7.634	SF
GILLHAM 18Y-214 - ORIGINAL WELLBORE - PROPOS	2,800.4	2,824.6	1,413.9	1,397.8	87.793	CC
GILLHAM 18Y-214 - ORIGINAL WELLBORE - PROPOS	2,854.3	2,870.7	1,414.2	1,397.6	85.078	ES
GILLHAM 18Y-214 - ORIGINAL WELLBORE - PROPOS	11,293.2	6,250.0	4,817.9	4,674.5	33.598	SF
GILLHAM 18Y-312 - ORIGINAL WELLBORE - PROPOS	1,332.6	1,334.6	1,540.4	1,534.7	268.314	CC
GILLHAM 18Y-312 - ORIGINAL WELLBORE - PROPOS	1,377.9	1,369.5	1,540.5	1,534.6	260.423	ES
GILLHAM 18Y-312 - ORIGINAL WELLBORE - PROPOS	11,293.7	12,298.9	1,946.4	1,664.1	6.894	SF
GILLHAM 18Y-314 - ORIGINAL WELLBORE - PROPOS	2,994.0	3,038.6	1,357.5	1,339.6	75.506	CC
GILLHAM 18Y-314 - ORIGINAL WELLBORE - PROPOS	3,051.2	3,088.9	1,357.8	1,339.3	73.358	ES
GILLHAM 18Y-314 - ORIGINAL WELLBORE - PROPOS	10,433.0	6,300.0	3,956.3	3,835.9	32.852	SF

## Offset Design

Survey Program: 0-MWD

NW SW SEC. 17 T5N R64W 6th P.M. - CECIL'S KERSEY FARM 17B-212 - ORIGINAL WELLBORE - P

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-174.67	-59.7	-5.6	60.0				
98.4	98.4	98.4	98.4	0.1	0.1	-174.67	-59.7	-5.6	60.0	59.8	0.19	312.147	
100.0	100.0	100.0	100.0	0.1	0.1	-174.67	-59.7	-5.6	60.0	59.8	0.20	306.864	
196.8	196.8	196.8	196.8	0.3	0.3	-174.67	-59.7	-5.6	60.0	59.4	0.63	95.109	
200.0	200.0	200.0	200.0	0.3	0.3	-174.67	-59.7	-5.6	60.0	59.4	0.65	93.021	
295.3	295.3	295.3	295.3	0.5	0.5	-174.67	-59.7	-5.6	60.0	58.9	1.07	55.904	
300.0	300.0	300.0	300.0	0.5	0.5	-174.67	-59.7	-5.6	60.0	58.9	1.09	54.820	
393.7	393.7	393.7	393.7	0.8	0.8	-174.67	-59.7	-5.6	60.0	58.5	1.52	39.587	
400.0	400.0	400.0	400.0	0.8	0.8	-174.67	-59.7	-5.6	60.0	58.5	1.54	38.861	
492.1	492.1	492.1	492.1	1.0	1.0	-174.67	-59.7	-5.6	60.0	58.0	1.96	30.642	
500.0	500.0	500.0	500.0	1.0	1.0	-174.67	-59.7	-5.6	60.0	58.0	1.99	30.098	
590.5	590.5	590.5	590.5	1.2	1.2	-174.67	-59.7	-5.6	60.0	57.6	2.40	24.995	
600.0	600.0	600.0	600.0	1.2	1.2	-174.67	-59.7	-5.6	60.0	57.6	2.44	24.560	
689.0	689.0	689.0	689.0	1.4	1.4	-174.67	-59.7	-5.6	60.0	57.2	2.84	21.105	
700.0	700.0	700.0	700.0	1.4	1.4	-174.67	-59.7	-5.6	60.0	57.1	2.89	20.744	
787.4	787.4	787.4	787.4	1.6	1.6	-174.67	-59.7	-5.6	60.0	56.7	3.29	18.263	
800.0	800.0	800.0	800.0	1.7	1.7	-174.67	-59.7	-5.6	60.0	56.7	3.34	17.954	
885.8	885.8	885.8	885.8	1.9	1.9	-174.67	-59.7	-5.6	60.0	56.3	3.73	16.096	

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