

EXTRACTION OIL & GAS

**WELD COUNTY, COLORADO (NAD 83)
NW SE SEC. 32 T6N R65W 6th P.M.
WAKE NORTH 13**

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

30 June, 2016



Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WAKE NORTH 13
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4666.0usft (Original Well Elev)
Reference Site:	NW SE SEC. 32 T6N R65W 6th P.M.	MD Reference:	KB-EST @ 4666.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WAKE NORTH 13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Reference	PROPOSAL #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 us	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	30/06/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	17,529.3	PROPOSAL #1 (ORIGINAL WELLBORE)	MWD	MWD - Standard

Summary						
Site Name Offset Well - Wellbore - Design	Reference	Offset	Distance		Separation Factor	Warning
	Measured Depth (usft)	Measured Depth (usft)	Between Centres (usft)	Between Ellipses (usft)		
NW NE SEC. 5 T5N R65W 6th P.M.						
DT-HABITAT C1-5-6 - ORIGINAL WELLBORE - PROPO	2,973.8	2,884.1	2,781.1	2,763.7	159.620	CC
DT-HABITAT C1-5-6 - ORIGINAL WELLBORE - PROPO	17,400.0	14,563.6	3,222.1	2,713.2	6.332	ES
DT-HABITAT C1-5-6 - ORIGINAL WELLBORE - PROPO	17,529.3	14,563.6	3,228.2	2,715.8	6.300	SF
DT-LOPEZ 2-5-6 - ORIGINAL WELLBORE - PROPOSAL	2,974.6	2,884.9	2,766.6	2,749.1	158.699	CC
DT-LOPEZ 2-5-6 - ORIGINAL WELLBORE - PROPOSAL	17,400.0	14,419.8	3,058.4	2,548.6	5.999	ES
DT-LOPEZ 2-5-6 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	14,419.8	3,064.5	2,551.1	5.969	SF
EXIST HZ DT-HABITAT 1-5-6 - Wellbore #1 - Wellbore #	1,993.8	1,940.0	2,695.1	2,686.7	321.467	CC
EXIST HZ DT-HABITAT 1-5-6 - Wellbore #1 - Wellbore #	2,000.0	1,940.0	2,695.1	2,686.7	320.715	ES
EXIST HZ DT-HABITAT 1-5-6 - Wellbore #1 - Wellbore #	17,529.3	14,475.0	3,410.8	2,902.2	6.706	SF
NW SE SEC. 32 T6N R65W 6th P.M.						
ABDN VERT MONFORT #1-31 - Wellbore #1 - Design #	13,346.2	6,907.0	2,114.3	1,804.8	6.832	CC
ABDN VERT MONFORT #1-31 - Wellbore #1 - Design #	13,400.0	6,907.0	2,114.9	1,804.0	6.802	ES
ABDN VERT MONFORT #1-31 - Wellbore #1 - Design #	13,700.0	6,907.0	2,143.7	1,824.6	6.719	SF
EXIST DD MONFORT E #31-27 - Wellbore #1 - Wellbore	14,060.3	7,158.7	2,868.2	2,661.3	13.862	CC
EXIST DD MONFORT E #31-27 - Wellbore #1 - Wellbore	14,100.0	7,158.8	2,868.4	2,660.5	13.791	ES
EXIST DD MONFORT E #31-27 - Wellbore #1 - Wellbore	15,200.0	7,160.2	3,086.3	2,848.2	12.964	SF
EXIST DD THERMO #5-5-32 - Wellbore #1 - Wellbore #1	9,238.5	7,071.2	598.6	512.7	6.973	CC, ES
EXIST DD THERMO #5-5-32 - Wellbore #1 - Wellbore #1	9,300.0	7,070.6	601.7	514.7	6.914	SF
EXIST HZ ISALND GROVE #2-32 - Wellbore #1 - Wellbc	11,284.6	9,161.9	47.0	-10.8	0.813	Level 1, CC, ES, SF
EXIST VERT ADAMS #1 - Wellbore #1 - Design #1	6,984.8	6,478.2	2,013.9	1,835.5	11.286	CC
EXIST VERT ADAMS #1 - Wellbore #1 - Design #1	7,000.0	6,493.1	2,014.0	1,835.3	11.270	ES
EXIST VERT ADAMS #1 - Wellbore #1 - Design #1	7,200.0	6,677.6	2,024.4	1,843.0	11.160	SF
EXIST VERT BUCKLEN #12-31 - Wellbore #1 - Design #	16,894.6	6,897.0	591.1	184.5	1.454	Level 3, CC
EXIST VERT BUCKLEN #12-31 - Wellbore #1 - Design #	16,900.0	6,897.0	591.2	184.4	1.453	Level 3, ES, SF
EXIST VERT BUCKLIN #11-31 - Wellbore #1 - Design #1	15,802.5	6,895.0	1,141.5	765.0	3.032	CC, ES
EXIST VERT BUCKLIN #11-31 - Wellbore #1 - Design #1	15,900.0	6,895.0	1,145.6	766.5	3.022	SF
EXIST VERT HARVEST #1 - Wellbore #1 - Design #1	7,926.9	6,929.0	814.3	624.4	4.287	CC, ES, SF
EXIST VERT HUNGENBERG #13-33 - Wellbore #1 - De	6,833.9	6,304.0	944.3	770.7	5.439	CC
EXIST VERT HUNGENBERG #13-33 - Wellbore #1 - De	6,850.0	6,320.1	944.4	770.5	5.429	ES
EXIST VERT HUNGENBERG #13-33 - Wellbore #1 - De	6,900.0	6,370.0	946.0	771.2	5.412	SF
EXIST VERT HUNGENBERG #14-33 - Wellbore #1 - De	6,807.4	6,268.7	2,266.0	2,091.0	12.947	CC
EXIST VERT HUNGENBERG #14-33 - Wellbore #1 - De	6,850.0	6,311.1	2,266.5	2,090.6	12.885	ES
EXIST VERT HUNGENBERG #14-33 - Wellbore #1 - De	7,050.0	6,508.5	2,281.6	2,102.9	12.767	SF
EXIST VERT JOHNSON OLY #1 - Wellbore #1 - Design	9,429.4	6,942.0	2,019.4	1,807.6	9.534	CC
EXIST VERT JOHNSON OLY #1 - Wellbore #1 - Design	9,500.0	6,942.0	2,020.6	1,807.4	9.475	ES
EXIST VERT JOHNSON OLY #1 - Wellbore #1 - Design	9,900.0	6,942.0	2,073.5	1,851.6	9.342	SF

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

Anticollision Report



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Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4666.0usft (Original Well Elev)
Reference Site:	NW SE SEC. 32 T6N R65W 6th P.M.	MD Reference:	KB-EST @ 4666.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WAKE NORTH 13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
NW SE SEC. 32 T6N R65W 6th P.M.						
EXIST VERT JOZ A #5-7-32 - Wellbore #1 - Design #1	2,677.9	2,622.1	1,684.2	1,623.5	27.730	CC
EXIST VERT JOZ A #5-7-32 - Wellbore #1 - Design #1	2,900.0	2,817.7	1,687.5	1,620.8	25.312	ES
EXIST VERT JOZ A #5-7-32 - Wellbore #1 - Design #1	9,400.0	6,890.0	1,888.4	1,677.7	8.964	SF
EXIST VERT STRONG #6-31 - Wellbore #1 - Design #1	15,974.0	6,901.0	744.0	362.7	1.952	CC
EXIST VERT STRONG #6-31 - Wellbore #1 - Design #1	16,000.0	6,901.0	744.4	362.5	1.949	ES, SF
WAKE NORTH 1 - ORIGINAL WELLBORE - PROPOSAL	100.0	100.0	189.5	189.3	1,003.431	CC, ES
WAKE NORTH 1 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,701.1	2,638.9	2,077.2	4.698	SF
WAKE NORTH 10 - ORIGINAL WELLBORE - PROPOSAL	1,000.0	1,000.0	47.4	43.1	11.184	CC, ES
WAKE NORTH 10 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,487.7	658.0	89.0	1.157	Level 2, SF
WAKE NORTH 11 - ORIGINAL WELLBORE - PROPOSAL	1,100.0	1,100.0	29.1	24.5	6.222	CC
WAKE NORTH 11 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,495.1	330.9	-239.3	0.580	Level 1, ES, SF
WAKE NORTH 12 - ORIGINAL WELLBORE - PROPOSAL	1,200.0	1,200.0	14.6	9.4	2.839	CC
WAKE NORTH 12 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,665.2	241.8	-161.1	0.600	Level 1, ES, SF
WAKE NORTH 14 - ORIGINAL WELLBORE - PROPOSAL	1,100.0	1,100.0	18.2	13.5	3.889	CC
WAKE NORTH 14 - ORIGINAL WELLBORE - PROPOSAL	17,500.0	17,495.7	330.7	-239.4	0.580	Level 1, SF
WAKE NORTH 14 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,500.7	331.6	-239.4	0.581	Level 1, ES
WAKE NORTH 15 - ORIGINAL WELLBORE - PROPOSAL	1,000.0	1,000.0	32.9	28.7	7.771	CC
WAKE NORTH 15 - ORIGINAL WELLBORE - PROPOSAL	17,500.0	17,658.8	525.4	-13.8	0.974	Level 1, ES, SF
WAKE NORTH 16 - ORIGINAL WELLBORE - PROPOSAL	900.0	900.0	51.1	47.3	13.495	CC
WAKE NORTH 16 - ORIGINAL WELLBORE - PROPOSAL	1,000.0	999.7	51.4	47.1	12.177	ES
WAKE NORTH 16 - ORIGINAL WELLBORE - PROPOSAL	17,500.0	17,501.1	661.8	92.0	1.161	Level 2, SF
WAKE NORTH 17 - ORIGINAL WELLBORE - PROPOSAL	800.0	800.0	65.6	62.3	19.678	CC, ES
WAKE NORTH 17 - ORIGINAL WELLBORE - PROPOSAL	17,500.0	17,522.3	989.5	420.0	1.737	SF
WAKE NORTH 18 - ORIGINAL WELLBORE - PROPOSAL	700.0	700.0	80.2	77.3	27.788	CC, ES
WAKE NORTH 18 - ORIGINAL WELLBORE - PROPOSAL	17,500.0	17,705.3	1,235.6	672.2	2.193	SF
WAKE NORTH 19 - ORIGINAL WELLBORE - PROPOSAL	600.0	600.0	98.4	96.0	40.388	CC, ES
WAKE NORTH 19 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,559.1	1,388.4	818.6	2.437	SF
WAKE NORTH 2 - ORIGINAL WELLBORE - PROPOSAL	200.0	200.0	174.9	174.2	273.948	CC, ES
WAKE NORTH 2 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,629.2	2,308.0	1,745.3	4.101	SF
WAKE NORTH 20 - ORIGINAL WELLBORE - PROPOSAL	500.0	500.0	113.0	111.0	56.857	CC, ES
WAKE NORTH 20 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,577.1	1,556.1	986.6	2.732	SF
WAKE NORTH 21 - ORIGINAL WELLBORE - PROPOSAL	400.0	400.0	131.2	129.6	85.328	CC, ES
WAKE NORTH 21 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,797.5	1,892.4	1,325.9	3.341	SF
WAKE NORTH 22 - ORIGINAL WELLBORE - PROPOSAL	300.0	300.0	145.8	144.7	133.980	CC, ES
WAKE NORTH 22 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,663.1	2,051.7	1,482.7	3.606	SF
WAKE NORTH 23 - ORIGINAL WELLBORE - PROPOSAL	200.0	199.0	160.3	159.7	252.044	CC, ES
WAKE NORTH 23 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,715.3	2,292.2	1,723.4	4.030	SF
WAKE NORTH 24 - ORIGINAL WELLBORE - PROPOSAL	100.0	99.0	178.5	178.3	950.367	CC, ES
WAKE NORTH 24 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,904.2	2,466.3	1,899.7	4.353	SF
WAKE NORTH 3 - ORIGINAL WELLBORE - PROPOSAL	300.0	300.0	156.7	155.6	144.002	CC, ES
WAKE NORTH 3 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,763.8	2,151.9	1,591.2	3.838	SF
WAKE NORTH 4 - ORIGINAL WELLBORE - PROPOSAL	400.0	400.0	142.1	140.5	92.417	CC, ES
WAKE NORTH 4 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,584.2	1,977.3	1,413.4	3.507	SF
WAKE NORTH 5 - ORIGINAL WELLBORE - PROPOSAL	500.0	500.0	127.5	125.5	64.174	CC, ES
WAKE NORTH 5 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,533.6	1,650.2	1,085.2	2.921	SF
WAKE NORTH 6 - ORIGINAL WELLBORE - PROPOSAL	600.0	600.0	109.3	106.9	44.858	CC, ES
WAKE NORTH 6 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,677.1	1,493.7	932.8	2.663	SF
WAKE NORTH 7 - ORIGINAL WELLBORE - PROPOSAL	700.0	700.0	94.7	91.8	32.821	CC, ES
WAKE NORTH 7 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,508.7	1,319.4	753.2	2.330	SF
WAKE NORTH 8 - ORIGINAL WELLBORE - PROPOSAL	800.0	800.0	76.5	73.2	22.937	CC, ES
WAKE NORTH 8 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,486.7	988.7	421.2	1.742	SF
WAKE NORTH 9 - ORIGINAL WELLBORE - PROPOSAL	900.0	900.0	61.9	58.1	16.363	CC, ES
WAKE NORTH 9 - ORIGINAL WELLBORE - PROPOSAL	17,529.3	17,641.5	844.1	288.9	1.520	SF

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

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WAKE NORTH 13
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4666.0usft (Original Well Elev)
Reference Site:	NW SE SEC. 32 T6N R65W 6th P.M.	MD Reference:	KB-EST @ 4666.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WAKE NORTH 13	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SEC. 36 T6N R66W 6th P.M.						
HINER 36C-17W - ORIGINAL WELLBORE - ORIGINAL	17,529.3	6,845.0	2,673.5	2,364.9	8.662	CC, ES, SF
HINER 36C-20W - ORIGINAL WELLBORE - ORIGINAL	17,529.3	6,837.1	1,563.7	1,256.9	5.098	CC, ES, SF
HINER 36C-22W - ORIGINAL WELLBORE - ORIGINAL	17,529.3	6,926.3	938.6	634.1	3.082	CC, ES, SF
HINER 36C-24W - ORIGINAL WELLBORE - ORIGINAL	17,500.0	6,917.0	517.7	376.9	3.676	SF
HINER 36C-24W - ORIGINAL WELLBORE - ORIGINAL	17,529.3	6,945.3	489.5	358.5	3.735	CC, ES
HINER 36NB-19W - ORIGINAL WELLBORE - ORIGINAL	17,529.3	6,926.1	1,895.3	1,587.2	6.153	CC, ES, SF
HINER 36NB-21W - ORIGINAL WELLBORE - ORIGINAL	17,529.3	6,843.6	1,285.4	982.0	4.237	CC, ES, SF
HINER 36NB-23W - ORIGINAL WELLBORE - ORIGINAL	17,529.3	6,874.9	827.9	539.6	2.872	CC, ES, SF
HINER 36NC-18W - ORIGINAL WELLBORE - ORIGINAL	17,529.3	6,828.6	2,196.7	1,888.9	7.137	CC, ES, SF

Offset Design													Offset Site Error:	0.0 usft		
Survey Program: 0-MWD													Offset Well Error:	0.0 usft		
Reference													Distance		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	169.46	169.46	-2,768.8	515.0	2,816.3						
100.0	100.0	91.9	91.9	0.1	0.1	169.46	169.46	-2,768.8	515.0	2,816.3	2,816.1	0.18	N/A			
200.0	200.0	191.9	191.9	0.3	0.3	169.46	169.46	-2,768.8	515.0	2,816.3	2,815.7	0.62	4,541.840			
300.0	300.0	291.9	291.9	0.5	0.5	169.46	169.46	-2,768.8	515.0	2,816.3	2,815.2	1.07	2,633.003			
400.0	400.0	391.9	391.9	0.8	0.8	169.46	169.46	-2,768.8	515.0	2,816.3	2,814.8	1.52	1,853.864			
500.0	500.0	491.9	491.9	1.0	1.0	169.46	169.46	-2,768.8	515.0	2,816.3	2,814.3	1.97	1,430.547			
600.0	600.0	591.9	591.9	1.2	1.2	169.46	169.46	-2,768.8	515.0	2,816.3	2,813.9	2.42	1,164.615			
700.0	700.0	691.9	691.9	1.4	1.4	169.46	169.46	-2,768.8	515.0	2,816.3	2,813.4	2.87	982.056			
800.0	800.0	791.9	791.9	1.7	1.6	169.46	169.46	-2,768.8	515.0	2,816.3	2,813.0	3.32	848.975			
900.0	900.0	891.9	891.9	1.9	1.9	169.46	169.46	-2,768.8	515.0	2,816.3	2,812.5	3.77	747.657			
1,000.0	1,000.0	991.9	991.9	2.1	2.1	169.46	169.46	-2,768.8	515.0	2,816.3	2,812.1	4.22	667.945			
1,100.0	1,100.0	1,091.9	1,091.9	2.3	2.3	169.46	169.46	-2,768.8	515.0	2,816.3	2,811.6	4.67	603.591			
1,200.0	1,200.0	1,191.9	1,191.9	2.6	2.5	169.46	169.46	-2,768.8	515.0	2,816.3	2,811.2	5.12	550.549			
1,300.0	1,300.0	1,291.9	1,291.9	2.8	2.8	169.46	169.46	-2,768.8	515.0	2,816.3	2,810.7	5.56	506.076			
1,400.0	1,400.0	1,391.9	1,391.9	3.0	3.0	80.98	80.98	-2,768.8	515.0	2,816.0	2,810.0	6.00	469.205			
1,500.0	1,499.8	1,491.7	1,491.7	3.2	3.2	81.11	81.11	-2,768.8	515.0	2,815.2	2,808.8	6.43	437.777			
1,600.0	1,599.5	1,591.4	1,591.4	3.4	3.4	81.31	81.31	-2,768.8	515.0	2,813.8	2,807.0	6.87	409.554			
1,600.6	1,600.0	1,591.9	1,591.9	3.4	3.4	81.31	81.31	-2,768.8	515.0	2,813.8	2,807.0	6.87	409.408			
1,665.6	1,664.6	1,656.5	1,656.5	3.6	3.6	81.44	81.44	-2,768.8	515.0	2,812.8	2,805.6	7.17	392.512			
1,700.0	1,698.9	1,690.8	1,690.8	3.7	3.7	81.53	81.53	-2,768.8	515.0	2,812.2	2,804.9	7.32	383.992			
1,800.0	1,798.0	1,789.9	1,789.9	3.9	3.9	81.84	81.84	-2,768.8	515.0	2,810.3	2,802.5	7.80	360.491			
1,900.0	1,896.5	1,888.4	1,888.4	4.2	4.1	82.22	82.22	-2,768.8	515.0	2,807.9	2,799.6	8.30	338.461			
2,000.0	1,994.5	1,986.4	1,986.4	4.5	4.3	82.67	82.67	-2,768.8	515.0	2,805.2	2,796.4	8.83	317.552			
2,100.0	2,091.6	2,083.5	2,083.5	4.9	4.6	83.20	83.20	-2,768.8	515.0	2,802.2	2,792.8	9.42	297.540			
2,200.0	2,187.9	2,179.8	2,179.8	5.3	4.8	83.79	83.79	-2,768.8	515.0	2,799.0	2,789.0	10.06	278.313			
2,300.0	2,283.1	2,275.0	2,275.0	5.8	5.0	84.45	84.45	-2,768.8	515.0	2,795.8	2,785.0	10.76	259.847			
2,400.0	2,377.3	2,369.2	2,369.2	6.4	5.2	85.16	85.16	-2,768.8	515.0	2,792.5	2,781.0	11.53	242.179			
2,500.0	2,470.2	2,462.1	2,462.1	7.0	5.4	85.93	85.93	-2,768.8	515.0	2,789.4	2,777.0	12.38	225.370			
2,600.0	2,561.7	2,553.6	2,553.6	7.7	5.6	86.74	86.74	-2,768.8	515.0	2,786.6	2,773.3	13.30	209.491			
2,700.0	2,651.8	2,643.7	2,643.7	8.5	5.8	87.59	87.59	-2,768.8	515.0	2,784.2	2,769.9	14.31	194.596			
2,800.0	2,740.4	2,732.3	2,732.3	9.4	6.0	88.47	88.47	-2,768.8	515.0	2,782.4	2,767.0	15.40	180.720			
2,825.2	2,762.4	2,754.3	2,754.3	9.6	6.1	88.70	88.70	-2,768.8	515.0	2,782.1	2,766.4	15.68	177.391			
2,900.0	2,827.7	2,819.6	2,819.6	10.3	6.2	89.35	89.35	-2,768.8	515.0	2,781.4	2,764.8	16.55	168.037			

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