



Project: WELD COUNTY  
Site: Ottesen Pad  
Well: OTTESSEN FEDERAL 07C  
Wellbore: OWB  
Design: Plan #2  
Lat: 40° 0' 15.569 N  
Long: 104° 46' 40.800 W  
GL: 5076.0  
KB: KB 20' @ 5096.0usft



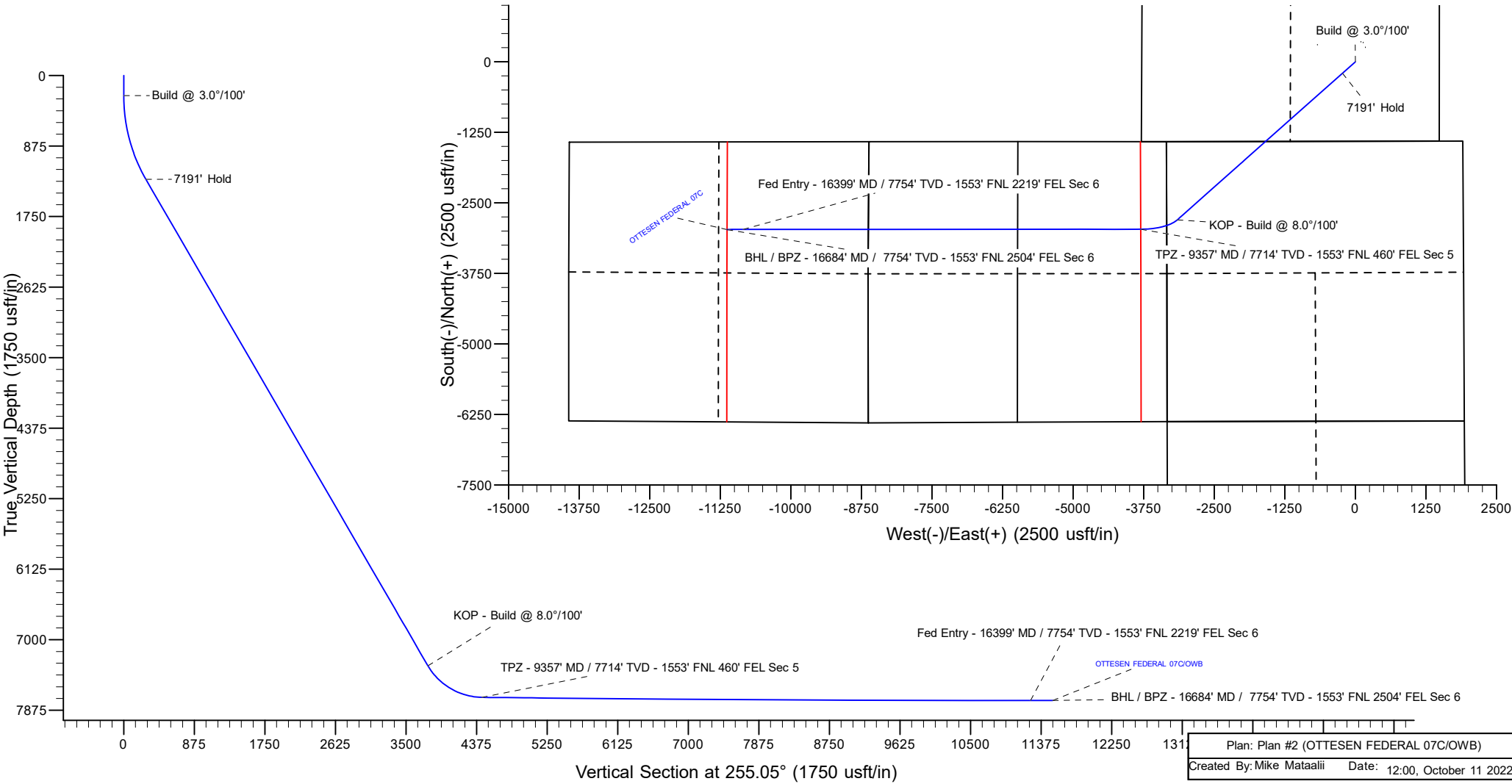
Azimuths to True North  
Magnetic North: 7.73°  
  
Magnetic Field  
Strength: 51656.6nT  
Dip Angle: 66.30°  
Date: 4/12/2022  
Model: IGRF2000

WELL DETAILS: OTTESSEN FEDERAL 07C

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1245245.65	3202255.83	40° 0' 15.569 N	104° 46' 40.800 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.0	Build @ 3.0°/100'
1348.6	32.96	228.39	1289.0	-204.1	-229.8	3.00	228.39	274.7	7191' Hold
8539.9	32.96	228.39	7323.1	-2801.9	-3154.8	0.00	0.00	3771.0	KOP - Build @ 8.0°/100'
9357.2	89.35	269.97	7714.0	-2968.2	-3801.5	8.00	46.88	4438.7	TPZ - 9357' MD / 7714' TVD - 1553' FNL 460' FEL Sec 5
16399.7	90.00	269.97	7754.0	-2972.4	-10843.8	0.01	-0.02	11243.6	Fed Entry - 16399' MD / 7754' TVD - 1553' FNL 2219' FEL Sec 6
16684.8	90.00	269.97	7754.0	-2972.5	-11128.9	0.00	0.00	11519.1	BHL / BPZ - 16684' MD / 7754' TVD - 1553' FNL 2504' FEL Sec 6



**PDC Energy Inc.**  
Anticollision Summary Report

<b>Company:</b>	GWP - PLANNING DB	<b>Local Co-ordinate Reference:</b>	Well OTTESEN FEDERAL 07C
<b>Project:</b>	WELD COUNTY	<b>TVD Reference:</b>	KB 20' @ 5096.0usft
<b>Reference Site:</b>	Ottesen Pad	<b>MD Reference:</b>	KB 20' @ 5096.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OTTESEN FEDERAL 07C	<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>	OWB	<b>Database:</b>	EDM 5000.15 Single User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #2		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<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 usft	<b>Error Surface:</b>	Pedal Curve
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	10/11/2022		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	16,684.8	Plan #2 (OWB)	MWD	OWSG 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						
Ottesen Offsets						
Bailey #1 - OWB - OWB	7,595.8	6,509.9	364.9	282.5	4.430	CC
Bailey #1 - OWB - OWB	7,600.0	6,513.4	364.9	282.5	4.428	ES, SF
Great Western Sugar 3X - OWB - OWB	16,684.8	7,630.0	696.8	631.3	10.632	CC, ES, SF
Grein #1 - OWB - OWB	10,500.0	7,648.9	301.9	181.8	2.513	ES, SF
Grein #1 - OWB - OWB	10,505.0	7,649.0	301.9	182.3	2.524	CC
OTTESEN LE 06-290HN - OWB - OWB	797.9	791.4	70.6	64.1	10.824	CC
OTTESEN LE 06-290HN - OWB - OWB	800.0	793.4	70.6	64.1	10.797	ES
OTTESEN LE 06-290HN - OWB - OWB	16,684.8	17,842.3	1,828.7	1,309.7	3.524	SF
OTTESEN LE 06-290HNX - OWB - OWB	841.3	832.7	80.5	73.8	11.952	CC
OTTESEN LE 06-290HNX - OWB - OWB	3,600.0	3,733.1	129.5	72.0	2.252	ES
OTTESEN LE 06-290HNX - OWB - OWB	3,700.0	3,827.9	134.6	73.8	2.213	SF
OTTESEN LE 06-311HC - OWB - OWB	855.3	844.7	88.2	81.3	12.852	CC, ES
OTTESEN LE 06-311HC - OWB - OWB	16,684.8	17,907.0	2,201.7	1,676.0	4.188	SF
OTTESEN LE 06-311HN - OWB - OWB	912.1	899.5	99.2	91.8	13.512	CC, ES
OTTESEN LE 06-311HN - OWB - OWB	16,684.8	17,847.2	2,306.5	1,783.5	4.410	SF
OTTESEN LE 06-351HN - OWB - OWB	975.8	961.0	107.0	99.1	13.598	CC
OTTESEN LE 06-351HN - OWB - OWB	1,000.0	984.2	107.3	99.1	13.084	ES
OTTESEN LE 06-351HN - OWB - OWB	16,600.0	17,635.0	2,567.2	2,043.0	4.897	SF
OTTESEN LE 06-351HNX - OWB - OWB	2,130.8	2,129.8	92.1	64.1	3.291	CC, ES
OTTESEN LE 06-351HNX - OWB - OWB	2,200.0	2,198.0	93.2	64.6	3.254	SF
OTTESEN LE 06-370HC - OWB - OWB	1,185.9	1,167.8	117.6	106.6	10.722	CC
OTTESEN LE 06-370HC - OWB - OWB	1,200.0	1,181.7	117.7	106.3	10.357	ES
OTTESEN LE 06-370HC - OWB - OWB	2,600.0	2,612.1	156.3	120.6	4.386	SF
OTTESEN LE 06-370HN - OWB - OWB	1,697.6	1,650.5	35.2	10.8	1.440	Collision Avoidance Req., CC
OTTESEN LE 06-370HN - OWB - OWB	1,700.0	1,652.8	35.2	10.7	1.435	Collision Avoidance Req., ES
OTTESEN LE 09-362HC - OWB - OWB	0.0	0.5	192.9			
OTTESEN LE 09-362HC - OWB - OWB	200.0	198.6	194.1	191.1	64.523	ES
OTTESEN LE 09-362HC - OWB - OWB	800.0	787.9	279.0	267.4	24.160	SF
OTTESEN LE 09-363HN - OWB - OWB	230.3	230.8	167.8	164.6	52.671	CC
OTTESEN LE 09-363HN - OWB - OWB	250.0	250.2	167.8	164.5	50.873	ES
OTTESEN LE 09-363HN - OWB - OWB	700.0	693.2	225.0	214.6	21.692	SF
OTTESEN LE 09-365HC - OWB - OWB	0.0	0.5	145.5			
OTTESEN LE 09-365HC - OWB - OWB	200.0	199.5	146.3	143.3	48.810	ES
OTTESEN LE 09-365HC - OWB - OWB	700.0	692.1	206.3	196.0	19.910	SF
OTTESEN LE 09-365HN - OWB - OWB	0.0	0.5	155.0			
OTTESEN LE 09-365HN - OWB - OWB	200.0	198.3	156.4	153.4	51.911	ES
OTTESEN LE 09-365HN - OWB - OWB	700.0	697.3	209.5	199.4	20.603	SF

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

**PDC Energy Inc.**  
Anticollision Summary Report

<b>Company:</b>	GWP - PLANNING DB	<b>Local Co-ordinate Reference:</b>	Well OTTESEN FEDERAL 07C
<b>Project:</b>	WELD COUNTY	<b>TVD Reference:</b>	KB 20' @ 5096.0usft
<b>Reference Site:</b>	Ottesen Pad	<b>MD Reference:</b>	KB 20' @ 5096.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OTTESEN FEDERAL 07C	<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>	OWB	<b>Database:</b>	EDM 5000.15 Single User Db
<b>Reference Design:</b>	Plan #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						
Ottesen Offsets						
OTTESEN LE 09-366HN - OWB - OWB	0.0	0.5	126.6			
OTTESEN LE 09-366HN - OWB - OWB	250.0	249.8	127.5	124.2	38.629	ES
OTTESEN LE 09-366HN - OWB - OWB	700.0	692.6	185.9	175.4	17.712	SF
OTTESEN LE 09-366HNX - OWB - OWB	0.0	0.5	135.9			
OTTESEN LE 09-366HNX - OWB - OWB	251.7	252.4	136.6	133.3	41.450	ES
OTTESEN LE 09-366HNX - OWB - OWB	700.0	696.8	188.8	178.7	18.650	SF
OTTESEN LE 09-368HC - OWB - OWB	0.0	0.5	110.5			
OTTESEN LE 09-368HC - OWB - OWB	200.0	199.4	111.3	108.3	36.991	ES
OTTESEN LE 09-368HC - OWB - OWB	700.0	694.2	170.2	160.0	16.679	SF
OTTESEN LE 09-368HN - OWB - OWB	0.0	0.5	117.2			
OTTESEN LE 09-368HN - OWB - OWB	250.0	249.7	117.8	114.5	35.534	ES
OTTESEN LE 09-368HN - OWB - OWB	700.0	699.1	168.6	158.5	16.703	SF

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<b>Reference Site:</b>	Ottesen Pad	<b>MD Reference:</b>	KB 20' @ 5096.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OTTESEN FEDERAL 07C	<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>	OWB	<b>Database:</b>	EDM 5000.15 Single User Db
<b>Reference Design:</b>	Plan #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						
Ottesen Pad						
OTTESEN 14NA - OWB - Plan #2	250.0	250.0	104.2	101.4	37.305	CC
OTTESEN 14NA - OWB - Plan #2	600.0	612.4	107.1	98.0	11.686	ES
OTTESEN 14NA - OWB - Plan #2	16,684.8	16,940.9	1,276.0	759.5	2.470	SF
OTTESEN 15C - OWB - OWB	0.0	0.0	119.6			
OTTESEN 15C - OWB - OWB	252.0	252.1	120.5	117.6	41.053	ES
OTTESEN 15C - OWB - OWB	700.0	695.7	162.8	153.5	17.624	SF
OTTESEN 15C - OWB - Plan #2	0.0	0.0	119.6			
OTTESEN 15C - OWB - Plan #2	252.0	252.1	120.5	117.6	41.053	ES
OTTESEN 15C - OWB - Plan #2	16,684.8	17,563.2	1,381.6	846.5	2.582	SF
OTTESEN 16N - OWB - OWB	255.7	256.0	133.7	130.7	44.402	CC, ES
OTTESEN 16N - OWB - OWB	800.0	792.2	199.8	189.2	18.824	SF
OTTESEN 16N - OWB - Plan #2	255.7	256.0	133.7	130.7	44.402	CC, ES
OTTESEN 16N - OWB - Plan #2	16,684.8	17,565.9	1,573.5	1,039.7	2.948	SF
OTTESEN 17N - OWB - OWB	796.5	788.4	205.0	198.8	33.139	CC
OTTESEN 17N - OWB - OWB	800.0	791.8	205.0	198.8	33.027	ES
OTTESEN 17N - OWB - OWB	1,300.0	1,250.4	288.4	275.1	21.696	SF
OTTESEN 17N - OWB - Plan #2	8,674.8	9,741.1	36.0	-87.0	0.293	No-Go Zone - Stop Drilling, (
OTTESEN 18C - OWB - Plan #2	250.0	250.0	206.3	203.6	73.868	CC
OTTESEN 18C - OWB - Plan #2	400.0	391.7	207.4	203.0	47.400	ES
OTTESEN 18C - OWB - Plan #2	8,800.0	9,655.0	352.6	221.6	2.693	SF
OTTESEN 19NA - OWB - Plan #2	250.0	250.0	193.4	190.6	69.215	CC
OTTESEN 19NA - OWB - Plan #2	8,400.0	9,211.0	303.8	175.2	2.362	ES, SF
OTTESEN 20N - OWB - Plan #2	250.0	250.0	180.7	177.9	64.699	CC
OTTESEN 20N - OWB - Plan #2	400.0	393.8	181.8	177.6	43.300	ES
OTTESEN 20N - OWB - Plan #2	8,550.0	9,394.7	569.5	439.4	4.378	SF
OTTESEN 21N - OWB - OWB	577.8	575.1	164.9	160.1	33.893	CC
OTTESEN 21N - OWB - OWB	600.0	596.6	165.0	160.0	33.117	ES
OTTESEN 21N - OWB - OWB	1,100.0	1,073.8	223.7	212.2	19.529	SF
OTTESEN 21N - OWB - Plan #2	577.8	575.1	164.9	160.1	33.893	CC
OTTESEN 21N - OWB - Plan #2	600.0	596.6	165.0	160.0	33.117	ES
OTTESEN 21N - OWB - Plan #2	8,400.0	9,410.8	709.5	585.8	5.736	SF
OTTESEN 22C - OWB - Plan #2	250.0	250.0	156.7	153.9	56.091	CC
OTTESEN 22C - OWB - Plan #2	400.0	396.4	157.5	153.6	39.855	ES
OTTESEN 22C - OWB - Plan #2	8,600.0	9,478.5	996.3	867.1	7.710	SF
OTTESEN 23NA - OWB - Plan #2	250.0	250.0	145.5	142.7	52.069	CC
OTTESEN 23NA - OWB - Plan #2	400.0	397.8	146.1	142.2	38.038	ES
OTTESEN 23NA - OWB - Plan #2	8,200.0	8,929.6	1,005.2	882.5	8.194	SF
OTTESEN 24N - OWB - OWB	0.0	0.0	135.6			
OTTESEN 24N - OWB - OWB	400.0	399.2	137.4	133.5	35.735	ES
OTTESEN 24N - OWB - OWB	900.0	878.1	193.8	183.7	19.063	SF
OTTESEN 24N - OWB - Plan #2	0.0	0.0	135.6			
OTTESEN 24N - OWB - Plan #2	400.0	399.2	137.4	133.5	35.735	ES
OTTESEN 24N - OWB - Plan #2	8,400.0	9,292.9	1,274.9	1,153.3	10.487	SF
OTTESEN 25N - OWB - Plan #2	250.0	250.0	125.4	122.6	44.888	CC
OTTESEN 25N - OWB - Plan #2	900.0	902.5	126.9	119.2	16.531	ES
OTTESEN 25N - OWB - Plan #2	1,500.0	1,489.9	179.0	159.6	9.242	SF
OTTESEN 26C - OWB - Plan #2	866.5	873.3	113.6	105.6	14.305	CC
OTTESEN 26C - OWB - Plan #2	1,000.0	1,006.3	115.1	105.2	11.613	ES
OTTESEN 26C - OWB - Plan #2	1,300.0	1,299.8	142.8	125.8	8.395	SF
OTTESEN 27NA - OWB - OWB	253.8	253.9	109.5	106.6	38.218	CC
OTTESEN 27NA - OWB - OWB	300.0	300.1	109.7	106.5	35.076	ES
OTTESEN 27NA - OWB - OWB	900.0	890.3	178.1	167.4	16.639	SF
OTTESEN 27NA - OWB - Plan #2	253.8	253.9	109.5	106.6	38.218	CC

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

**PDC Energy Inc.**  
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<b>Reference Site:</b>	Ottesen Pad	<b>MD Reference:</b>	KB 20' @ 5096.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OTTESEN FEDERAL 07C	<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>	OWB	<b>Database:</b>	EDM 5000.15 Single User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
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Offset Well - Wellbore - Design						
Ottesen Pad						
OTTESEN 27NA - OWB - Plan #2	300.0	300.1	109.7	106.5	35.076	ES
OTTESEN 27NA - OWB - Plan #2	8,100.0	8,813.2	1,721.8	1,606.3	14.914	SF
OTTESEN 28N - OWB - Plan #2	844.5	858.7	92.2	81.1	8.293	CC
OTTESEN 28N - OWB - Plan #2	900.0	913.9	92.8	80.7	7.638	ES
OTTESEN 28N - OWB - Plan #2	1,100.0	1,111.3	107.3	90.8	6.476	SF
OTTESEN 29C - OWB - Plan #2	786.8	802.9	88.3	76.2	7.319	CC
OTTESEN 29C - OWB - Plan #2	800.0	816.0	88.3	76.0	7.183	ES
OTTESEN 29C - OWB - Plan #2	1,000.0	1,014.1	100.1	83.9	6.203	SF
OTTESEN 30N - OWB - OWB	0.0	0.0	100.6			
OTTESEN 30N - OWB - OWB	200.0	199.4	100.7	98.2	40.603	ES
OTTESEN 30N - OWB - OWB	800.0	792.2	165.3	153.7	14.208	SF
OTTESEN 30N - OWB - Plan #2	0.0	0.0	100.6			
OTTESEN 30N - OWB - Plan #2	200.0	199.4	100.7	98.2	40.603	ES
OTTESEN 30N - OWB - Plan #2	800.0	792.2	165.3	153.7	14.208	SF
OTTESEN 31N - OWB - Plan #2	692.5	711.7	91.7	78.7	7.040	CC
OTTESEN 31N - OWB - Plan #2	700.0	719.1	91.8	78.6	6.980	ES
OTTESEN 31N - OWB - Plan #2	800.0	818.4	95.3	80.7	6.536	SF
OTTESEN 32NA - OWB - OWB	0.0	0.0	105.1			
OTTESEN 32NA - OWB - OWB	250.0	249.6	105.7	102.9	37.666	ES
OTTESEN 32NA - OWB - OWB	700.0	696.1	152.2	142.4	15.494	SF
OTTESEN 32NA - OWB - Plan #2	0.0	0.0	105.1			
OTTESEN 32NA - OWB - Plan #2	250.0	249.6	105.7	102.9	37.666	ES
OTTESEN 32NA - OWB - Plan #2	700.0	696.1	152.2	142.4	15.494	SF
OTTESEN FEDERAL 01N - OWB - Plan #2	250.0	250.0	90.2	87.4	32.291	CC
OTTESEN FEDERAL 01N - OWB - Plan #2	600.0	586.2	93.0	83.1	9.354	ES
OTTESEN FEDERAL 01N - OWB - Plan #2	16,684.8	16,150.7	1,079.6	554.8	2.057	SF
OTTESEN FEDERAL 02NA - OWB - Plan #2	250.0	250.0	75.4	72.6	26.976	CC
OTTESEN FEDERAL 02NA - OWB - Plan #2	600.0	588.7	77.7	67.9	7.868	ES
OTTESEN FEDERAL 02NA - OWB - Plan #2	16,684.8	16,016.3	984.5	502.1	2.041	SF
OTTESEN FEDERAL 03C - OWB - Plan #2	250.0	250.0	60.8	58.0	21.761	CC
OTTESEN FEDERAL 03C - OWB - Plan #2	700.0	688.5	64.0	52.8	5.715	ES
OTTESEN FEDERAL 03C - OWB - Plan #2	16,684.8	16,420.5	717.8	185.4	1.348	Collision Avoidance Req., SF
OTTESEN FEDERAL 04N - OWB - Plan #2	250.0	250.0	45.1	42.3	16.145	CC
OTTESEN FEDERAL 04N - OWB - Plan #2	700.0	691.6	47.6	36.5	4.285	ES
OTTESEN FEDERAL 04N - OWB - Plan #2	16,684.8	16,258.2	589.6	100.3	1.205	Collision Avoidance Req., SF
OTTESEN FEDERAL 05N - OWB - Plan #2	250.0	250.0	30.3	27.5	10.830	CC
OTTESEN FEDERAL 05N - OWB - Plan #2	16,681.7	16,388.2	401.2	-86.3	0.823	No-Go Zone - Stop Drilling, ES
OTTESEN FEDERAL 06NA - OWB - Plan #2	250.0	250.0	15.7	12.9	5.616	CC
OTTESEN FEDERAL 06NA - OWB - Plan #2	900.0	896.0	17.8	4.9	1.380	Collision Avoidance Req., ES
OTTESEN FEDERAL 06NA - OWB - Plan #2	8,100.0	8,091.3	181.0	44.0	1.321	Collision Avoidance Req., SF
OTTESEN FEDERAL 08N - OWB - Plan #2	250.0	250.0	14.8	12.1	5.315	CC
OTTESEN FEDERAL 08N - OWB - Plan #2	16,684.8	16,535.9	278.5	-71.4	0.796	No-Go Zone - Stop Drilling, ES
OTTESEN FEDERAL 09N - OWB - Plan #2	250.0	250.0	29.7	26.9	10.630	CC
OTTESEN FEDERAL 09N - OWB - Plan #2	16,684.8	16,677.6	366.3	-131.8	0.735	No-Go Zone - Stop Drilling, ES
OTTESEN FEDERAL 10NA - OWB - Plan #2	250.0	250.0	44.3	41.5	15.845	CC
OTTESEN FEDERAL 10NA - OWB - Plan #2	700.0	707.3	46.4	35.6	4.320	ES
OTTESEN FEDERAL 10NA - OWB - Plan #2	16,684.8	16,583.1	655.1	213.7	1.484	Collision Avoidance Req., SF
OTTESEN FEDERAL 11C - OWB - OWB	252.9	253.0	59.7	56.7	20.172	CC, ES
OTTESEN FEDERAL 11C - OWB - OWB	600.0	597.7	87.5	79.3	10.680	SF
OTTESEN FEDERAL 11C - OWB - Plan #2	252.9	253.0	59.7	56.7	20.172	CC, ES
OTTESEN FEDERAL 11C - OWB - Plan #2	16,684.8	17,126.8	681.8	147.0	1.275	Collision Avoidance Req., SF
OTTESEN FEDERAL 12N - OWB - OWB	0.0	0.0	74.5			
OTTESEN FEDERAL 12N - OWB - OWB	250.0	249.9	75.7	73.0	27.561	ES

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

**PDC Energy Inc.**  
Anticollision Summary Report

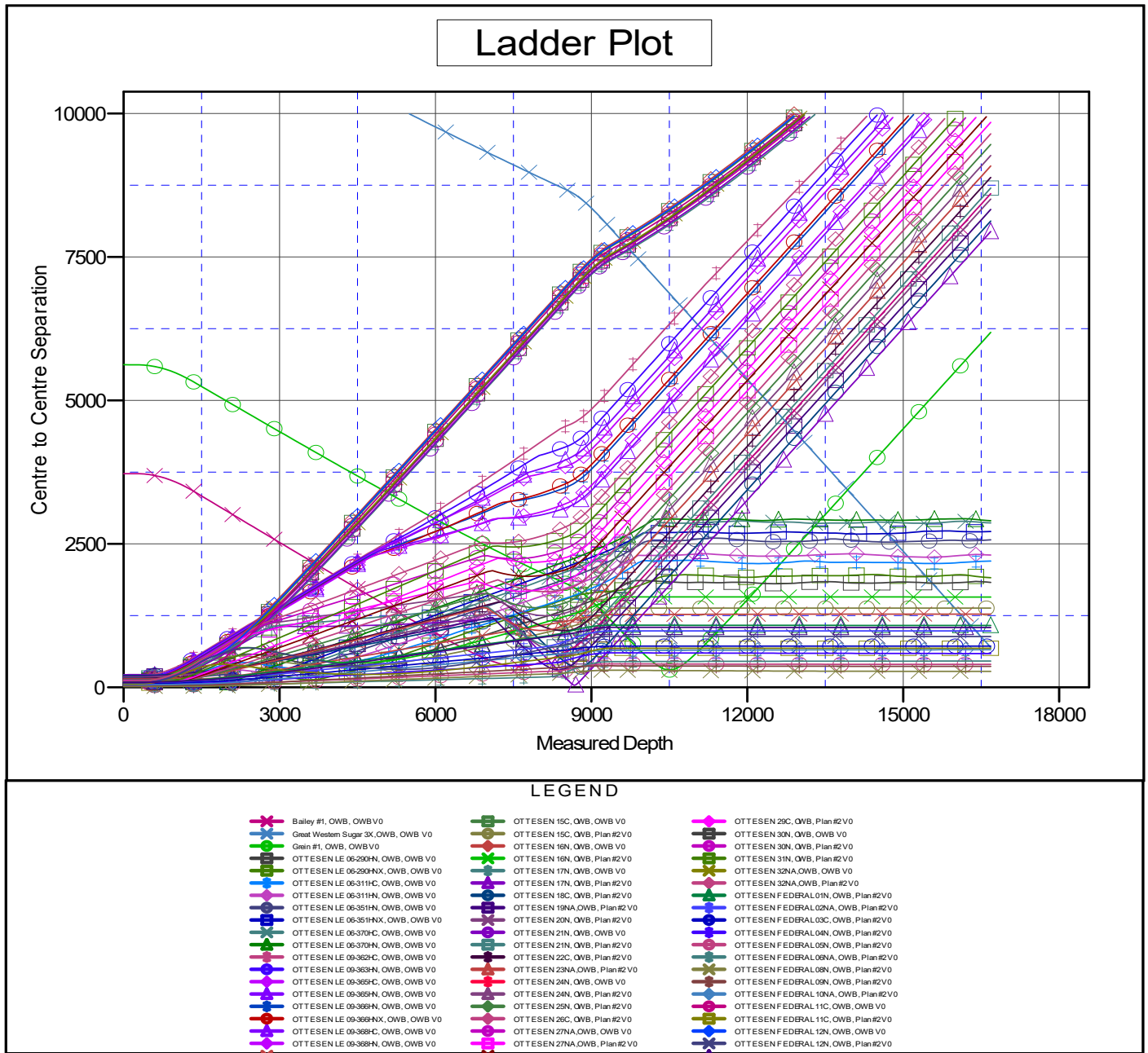
<b>Company:</b>	GWP - PLANNING DB	<b>Local Co-ordinate Reference:</b>	Well OTTESEN FEDERAL 07C
<b>Project:</b>	WELD COUNTY	<b>TVD Reference:</b>	KB 20' @ 5096.0usft
<b>Reference Site:</b>	Ottesen Pad	<b>MD Reference:</b>	KB 20' @ 5096.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OTTESEN FEDERAL 07C	<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>	OWB	<b>Database:</b>	EDM 5000.15 Single User Db
<b>Reference Design:</b>	Plan #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						
Ottesen Pad						
OTTESEN FEDERAL 12N - OWB - OWB	600.0	598.3	101.0	93.0	12.626	SF
OTTESEN FEDERAL 12N - OWB - Plan #2	0.0	0.0	74.5			
OTTESEN FEDERAL 12N - OWB - Plan #2	250.0	249.9	75.7	73.0	27.561	ES
OTTESEN FEDERAL 12N - OWB - Plan #2	16,684.8	17,152.2	887.1	362.2	1.690	Collision Risk Procedures R
OTTESEN FEDERAL 13HN - OWB - Plan #2	250.0	250.0	89.4	86.6	31.990	CC
OTTESEN FEDERAL 13HN - OWB - Plan #2	600.0	610.9	91.9	82.7	9.965	ES
OTTESEN FEDERAL 13HN - OWB - Plan #2	16,684.8	17,010.1	1,043.3	510.5	1.958	Collision Risk Procedures R

## Anticollision Summary Report

<b>Company:</b>	GWP - PLANNING DB	<b>Local Co-ordinate Reference:</b>	Well OTTESEN FEDERAL 07C
<b>Project:</b>	WELD COUNTY	<b>TVD Reference:</b>	KB 20' @ 5096.0usft
<b>Reference Site:</b>	Ottesen Pad	<b>MD Reference:</b>	KB 20' @ 5096.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OTTESEN FEDERAL 07C	<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>	OWB	<b>Database:</b>	EDM 5000.15 Single User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Coordinates are relative to: OTTESEN FEDERAL 07C  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.47°



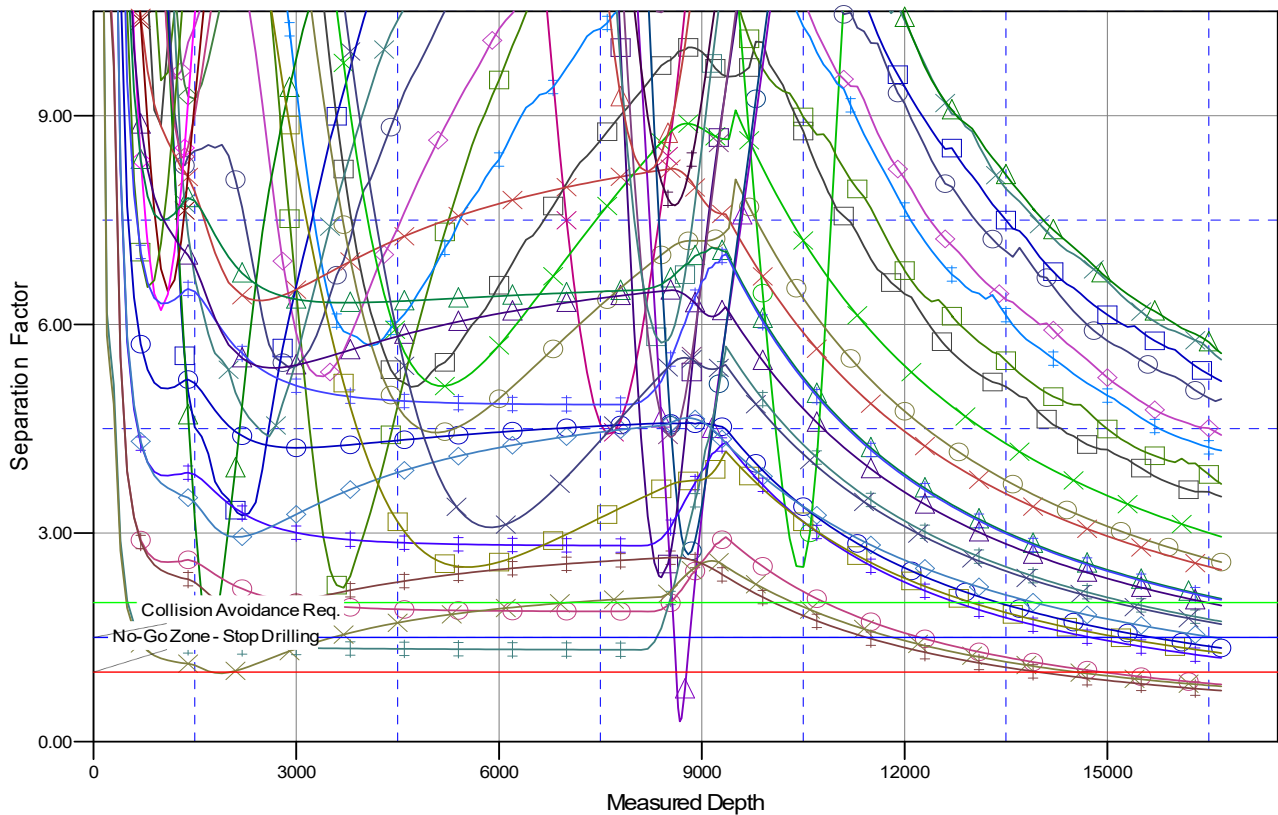
**PDC Energy Inc.**  
**Anticollision Summary Report**

<b>Company:</b>	GWP - PLANNING DB	<b>Local Co-ordinate Reference:</b>	Well OTTESEN FEDERAL 07C
<b>Project:</b>	WELD COUNTY	<b>TVD Reference:</b>	KB 20' @ 5096.0usft
<b>Reference Site:</b>	Ottesen Pad	<b>MD Reference:</b>	KB 20' @ 5096.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	OTTESEN FEDERAL 07C	<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>	OWB	<b>Database:</b>	EDM 5000.15 Single User Db
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB 20' @ 5096.0usft  
Offset Depths are relative to Offset Datum  
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: OTTESEN FEDERAL 07C  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.47°

## Separation Factor Plot



### LEGEND

✱ Bailey #1, OWB, OWB V0	■ OTTESEN 15C, OWB, OWB V0	✱ OTTESEN 29C, OWB, Plan#2 V0
✱ Great Western Sugar 3X, OWB, OWB V0	■ OTTESEN 15C, OWB, Plan#2 V0	✱ OTTESEN 30N, OWB, OWB V0
✱ Grain #1, OWB, OWB V0	✱ OTTESEN 16N, OWB, OWB V0	✱ OTTESEN 30N, OWB, Plan#2 V0
✱ OTTESEN LE 06-290HN, OWB, OWB V0	✱ OTTESEN 16N, OWB, Plan#2 V0	✱ OTTESEN 31N, OWB, Plan#2 V0
✱ OTTESEN LE 06-290HN, OWB, OWB V0	✱ OTTESEN 17N, OWB, OWB V0	✱ OTTESEN 32NA, OWB, OWB V0
✱ OTTESEN LE 06-311HC, OWB, OWB V0	✱ OTTESEN 17N, OWB, Plan#2 V0	✱ OTTESEN 32NA, OWB, Plan#2 V0
✱ OTTESEN LE 06-311HN, OWB, OWB V0	✱ OTTESEN 18C, OWB, Plan#2 V0	✱ OTTESEN FEDERAL 01N, OWB, Plan#2 V0
✱ OTTESEN LE 06-351HN, OWB, OWB V0	✱ OTTESEN 18NA, OWB, Plan#2 V0	✱ OTTESEN FEDERAL 02N, OWB, Plan#2 V0
✱ OTTESEN LE 06-351HN, OWB, OWB V0	✱ OTTESEN 20N, OWB, Plan#2 V0	✱ OTTESEN FEDERAL 03C, OWB, Plan#2 V0
✱ OTTESEN LE 06-370HC, OWB, OWB V0	✱ OTTESEN 21N, OWB, OWB V0	✱ OTTESEN FEDERAL 04N, OWB, Plan#2 V0
✱ OTTESEN LE 06-370HN, OWB, OWB V0	✱ OTTESEN 21N, OWB, Plan#2 V0	✱ OTTESEN FEDERAL 05N, OWB, Plan#2 V0
✱ OTTESEN LE 06-362HC, OWB, OWB V0	✱ OTTESEN 22C, OWB, Plan#2 V0	✱ OTTESEN FEDERAL 06NA, OWB, Plan#2 V0
✱ OTTESEN LE 06-363HN, OWB, OWB V0	✱ OTTESEN 23NA, OWB, Plan#2 V0	✱ OTTESEN FEDERAL 08N, OWB, Plan#2 V0
✱ OTTESEN LE 06-363HC, OWB, OWB V0	✱ OTTESEN 24N, OWB, OWB V0	✱ OTTESEN FEDERAL 09N, OWB, Plan#2 V0
✱ OTTESEN LE 06-363HN, OWB, OWB V0	✱ OTTESEN 24N, OWB, Plan#2 V0	✱ OTTESEN FEDERAL 10NA, OWB, Plan#2 V0
✱ OTTESEN LE 06-366HN, OWB, OWB V0	✱ OTTESEN 25N, OWB, Plan#2 V0	✱ OTTESEN FEDERAL 11C, OWB, OWB V0
✱ OTTESEN LE 06-366HN, OWB, OWB V0	✱ OTTESEN 26C, OWB, Plan#2 V0	✱ OTTESEN FEDERAL 11C, OWB, Plan#2 V0
✱ OTTESEN LE 06-368HC, OWB, OWB V0	✱ OTTESEN 27NA, OWB, OWB V0	✱ OTTESEN FEDERAL 12N, OWB, OWB V0
✱ OTTESEN LE 06-368HN, OWB, OWB V0	✱ OTTESEN 27NA, OWB, Plan#2 V0	✱ OTTESEN FEDERAL 12N, OWB, Plan#2 V0
✱ OTTESEN 18NA, OWB, Plan#2 V0	✱ OTTESEN 28N, OWB, Plan#2 V0	✱ OTTESEN FEDERAL 13HN, OWB, Plan#2 V0

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