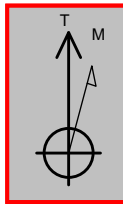
Plan #2

PDC ENERGY

Project: WELD COUNTY
Site: Ottesen Pad
Well: OTTESEN 19NA
Wellbore: OWB
Design: Plan #2
Lat: 40° 0' 16.557 N
Long: 104° 46' 42.927 W
GL: 5076.0
KB: KB 20' @ 5096.0usft



Azimuths to True North
Magnetic North: 7.73°

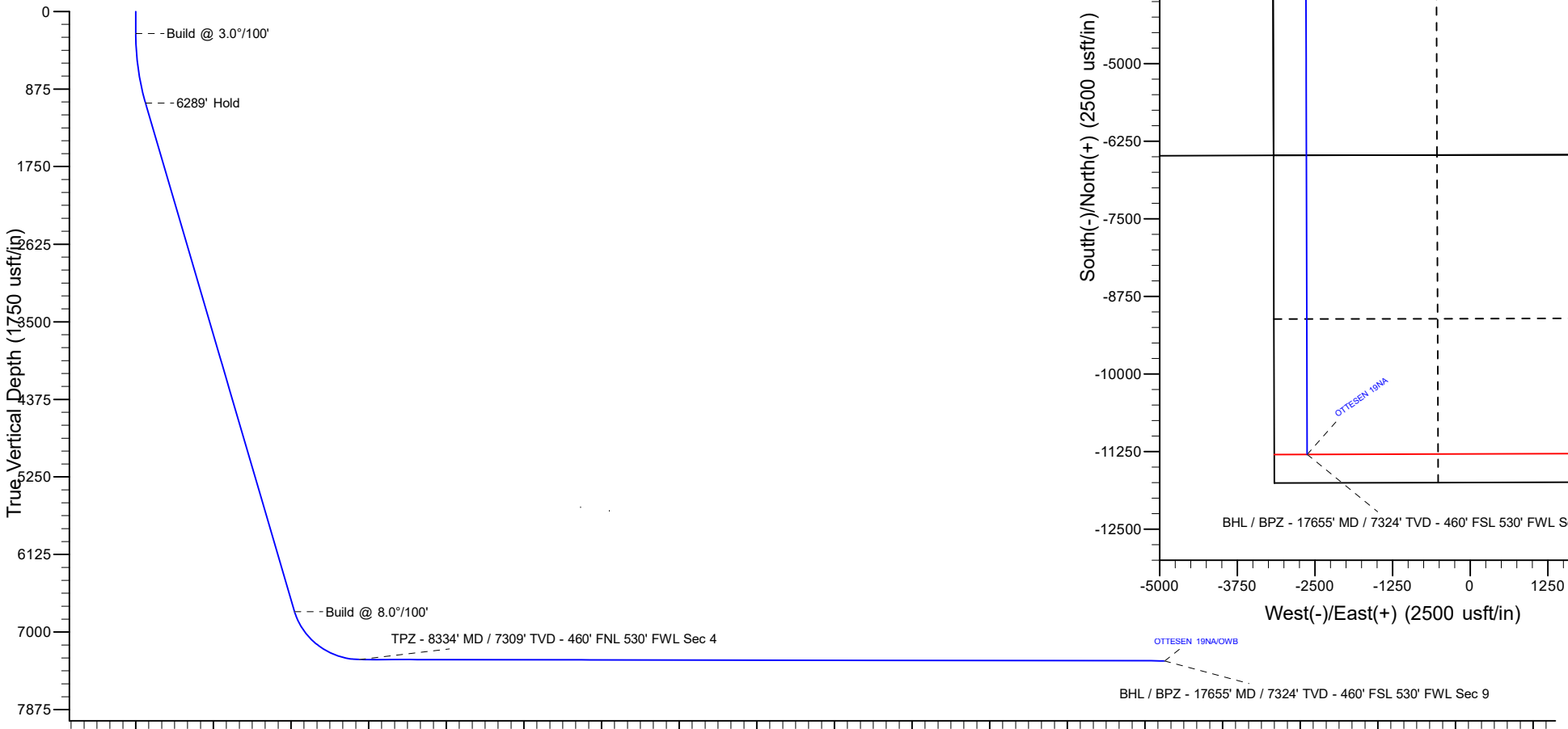
Magnetic Field
Strength: 51656.7nT
Dip Angle: 66.30°
Date: 4/12/2022
Model: IGRF2000

WELL DETAILS: OTTESEN 19NA

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1245344.25	3202089.51	40° 0' 16.557 N	104° 46' 42.927 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	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'
1057.2	24.22	242.45	1033.4	-77.7	-149.0	3.00	242.45	109.5	6289' Hold
7346.6	24.22	242.45	6769.3	-1271.1	-2436.2	0.00	0.00	1789.6	Build @ 8.0°/100'
8334.5	89.91	179.85	7309.0	-1973.9	-2649.5	8.00	-64.73	2522.4	TPZ - 8334' MD / 7309' TVD - 460' FNL 530' FWL Sec 4
17655.5	89.91	179.85	7324.0	-11294.8	-2625.2	0.00	0.00	11595.9	BHL / BPZ - 17655' MD / 7324' TVD - 460' FSL 530' FWL Sec 9



Plan: Plan #2 (OTTESEN 19NA/OWB)
Created By: Mike Mataalii Date: 14:20, October 03 2022

PDC Energy Inc.

Anticollision Summary Report

Company:	GWP - PLANNING DB	**Local Co-ordinate Reference:**	Well OTTESEN 19NA
Project:	WELD COUNTY	**TVD Reference:**	KB 20' @ 5096.0usft
Reference Site:	Ottesen Pad	**MD Reference:**	KB 20' @ 5096.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	OTTESEN 19NA	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 usft	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 10/5/2022

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	17,655.5	Plan #2 (OWB)	MWD	OWSG MWD - Standard

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
Ottesen Offsets						
Bailey #1 - OWB - OWB	9,100.0	7,289.2	299.7	220.6	3.789	SF
Bailey #1 - OWB - OWB	9,195.0	7,289.4	284.3	210.7	3.865	CC, ES
Great Western Sugar 3X - OWB - OWB	9,547.4	7,187.0	9,000.2	8,922.0	115.145	CC
Great Western Sugar 3X - OWB - OWB	9,700.0	7,187.2	9,001.5	8,920.7	111.467	ES
Great Western Sugar 3X - OWB - OWB	13,900.0	7,194.0	9,997.4	9,847.3	66.592	SF
Grein #1 - OWB - OWB	9,122.0	7,233.3	2,136.4	2,063.9	29.445	CC
Grein #1 - OWB - OWB	9,200.0	7,233.4	2,137.9	2,063.4	28.697	ES
Grein #1 - OWB - OWB	10,100.0	7,234.8	2,349.6	2,255.6	24.983	SF
OTTESEN LE 06-290HN - OWB - OWB	258.4	258.9	115.3	112.0	35.243	CC
OTTESEN LE 06-290HN - OWB - OWB	400.0	400.8	115.6	111.4	27.971	ES
OTTESEN LE 06-290HN - OWB - OWB	11,000.0	9,462.6	417.3	228.9	2.215	SF
OTTESEN LE 06-290HNX - OWB - OWB	390.7	391.0	108.6	104.4	26.190	CC
OTTESEN LE 06-290HNX - OWB - OWB	400.0	400.2	108.6	104.4	25.965	ES
OTTESEN LE 06-290HNX - OWB - OWB	11,300.0	9,473.4	1,244.1	1,043.4	6.200	SF
OTTESEN LE 06-311HC - OWB - OWB	445.6	444.8	102.4	97.9	22.902	CC
OTTESEN LE 06-311HC - OWB - OWB	500.0	498.7	102.6	97.8	21.481	ES
OTTESEN LE 06-311HC - OWB - OWB	11,200.0	9,503.9	340.3	151.6	1.803	Collision Risk Procedures Re
OTTESEN LE 06-311HN - OWB - OWB	595.3	593.4	95.5	90.1	17.736	CC
OTTESEN LE 06-311HN - OWB - OWB	600.0	598.0	95.5	90.1	17.663	ES
OTTESEN LE 06-311HN - OWB - OWB	11,500.0	9,617.0	448.1	247.6	2.234	SF
OTTESEN LE 06-351HN - OWB - OWB	662.3	659.1	87.7	82.1	15.530	CC, ES
OTTESEN LE 06-351HN - OWB - OWB	11,700.0	9,701.8	429.7	224.0	2.089	SF
OTTESEN LE 06-351HNX - OWB - OWB	645.0	638.4	83.9	77.2	12.602	CC, ES
OTTESEN LE 06-351HNX - OWB - OWB	12,000.0	9,760.0	566.3	355.8	2.690	SF
OTTESEN LE 06-370HC - OWB - OWB	772.3	765.4	75.3	68.8	11.641	CC, ES
OTTESEN LE 06-370HC - OWB - OWB	11,900.0	9,788.8	349.8	136.5	1.640	Collision Risk Procedures Re
OTTESEN LE 06-370HN - OWB - OWB	741.0	725.7	94.6	85.3	10.164	CC, ES
OTTESEN LE 06-370HN - OWB - OWB	12,200.0	9,872.0	468.4	243.8	2.086	SF
OTTESEN LE 09-362HC - OWB - OWB	0.0	0.5	329.7			
OTTESEN LE 09-362HC - OWB - OWB	250.0	249.5	330.9	327.6	99.810	ES
OTTESEN LE 09-362HC - OWB - OWB	17,656.3	17,900.4	4,243.2	3,839.5	10.512	SF
OTTESEN LE 09-363HN - OWB - OWB	0.0	0.5	299.4			
OTTESEN LE 09-363HN - OWB - OWB	250.0	249.7	299.5	296.2	90.808	ES
OTTESEN LE 09-363HN - OWB - OWB	17,655.5	17,453.0	3,888.9	3,489.2	9.729	SF
OTTESEN LE 09-365HC - OWB - OWB	0.0	0.5	269.0			
OTTESEN LE 09-365HC - OWB - OWB	200.0	198.1	270.3	267.3	90.120	ES
OTTESEN LE 09-365HC - OWB - OWB	17,656.3	17,568.5	3,552.7	3,155.4	8.942	SF

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

PDC Energy Inc.

Anticollision Summary Report

Company:	GWP - PLANNING DB	**Local Co-ordinate Reference:**	Well OTTESEN 19NA
Project:	WELD COUNTY	**TVD Reference:**	KB 20' @ 5096.0usft
Reference Site:	Ottesen Pad	**MD Reference:**	KB 20' @ 5096.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	OTTESEN 19NA	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #2	**Offset TVD Reference:**	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
Ottesen Offsets						
OTTESEN LE 09-365HN - OWB - OWB	0.0	0.5	283.8			
OTTESEN LE 09-365HN - OWB - OWB	200.0	198.4	284.6	281.6	94.850 ES	
OTTESEN LE 09-365HN - OWB - OWB	17,656.3	17,626.0	3,618.5	3,214.3	8.953 SF	
OTTESEN LE 09-366HN - OWB - OWB	0.0	0.5	240.2			
OTTESEN LE 09-366HN - OWB - OWB	254.5	255.5	240.5	237.2	72.658 ES	
OTTESEN LE 09-366HN - OWB - OWB	17,656.3	17,533.2	3,127.6	2,726.5	7.798 SF	
OTTESEN LE 09-366HNX - OWB - OWB	0.0	0.5	255.0			
OTTESEN LE 09-366HNX - OWB - OWB	250.0	250.2	255.9	252.6	77.635 ES	
OTTESEN LE 09-366HNX - OWB - OWB	17,655.5	17,146.2	3,254.6	2,858.9	8.226 SF	
OTTESEN LE 09-368HC - OWB - OWB	0.0	0.5	209.9			
OTTESEN LE 09-368HC - OWB - OWB	200.0	199.1	210.6	207.6	70.079 ES	
OTTESEN LE 09-368HC - OWB - OWB	17,656.3	17,645.5	2,795.2	2,397.1	7.021 SF	
OTTESEN LE 09-368HN - OWB - OWB	0.0	0.5	224.7			
OTTESEN LE 09-368HN - OWB - OWB	250.0	249.6	224.9	221.6	68.140 ES	
OTTESEN LE 09-368HN - OWB - OWB	17,656.3	17,457.8	2,857.1	2,457.2	7.143 SF	

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Reference Site:	Ottesen Pad	**MD Reference:**	KB 20' @ 5096.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	OTTESEN 19NA	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #2	**Offset TVD Reference:**	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
Ottesen Pad						
OTTESEN 14NA - OWB - Plan #2	250.0	250.0	287.6	284.8	102.965	CC
OTTESEN 14NA - OWB - Plan #2	300.0	302.6	287.8	284.8	94.332	ES
OTTESEN 14NA - OWB - Plan #2	10,600.0	8,920.9	489.9	318.7	2.863	SF
OTTESEN 15C - OWB - OWB	0.0	0.0	302.0			
OTTESEN 15C - OWB - OWB	252.1	252.3	302.7	299.8	103.332	ES
OTTESEN 15C - OWB - OWB	1,700.0	1,734.0	558.5	537.8	26.924	SF
OTTESEN 15C - OWB - Plan #2	10,395.6	9,133.5	256.2	100.9	1.649	Collision Risk Procedures Re
OTTESEN 15C - OWB - Plan #2	10,500.0	9,191.6	270.4	94.2	1.535	Collision Risk Procedures Re
OTTESEN 16N - OWB - OWB	252.3	252.6	315.4	312.4	105.948	CC, ES
OTTESEN 16N - OWB - OWB	1,700.0	1,735.0	634.7	613.8	30.398	SF
OTTESEN 16N - OWB - Plan #2	252.3	252.6	315.4	312.4	105.948	CC
OTTESEN 16N - OWB - Plan #2	10,800.0	9,430.7	386.8	204.6	2.123	ES, SF
OTTESEN 17N - OWB - OWB	575.0	573.6	14.1	9.2	2.878	CC
OTTESEN 17N - OWB - OWB	600.0	598.2	14.8	9.1	2.587	ES, SF
OTTESEN 17N - OWB - Plan #2	6,719.2	6,967.8	6.5	-92.2	0.066	No-Go Zone - Stop Drilling, (
OTTESEN 18C - OWB - Plan #2	1,067.0	1,061.5	12.9	-6.3	0.672	No-Go Zone - Stop Drilling, (
OTTESEN 18C - OWB - Plan #2	7,650.0	7,635.8	29.8	-71.2	0.295	No-Go Zone - Stop Drilling, E
OTTESEN 20N - OWB - Plan #2	250.0	250.0	15.0	12.2	5.356	CC
OTTESEN 20N - OWB - Plan #2	17,656.3	17,785.7	302.2	-8.9	0.971	No-Go Zone - Stop Drilling, E
OTTESEN 21N - OWB - OWB	211.8	211.8	30.4	27.9	11.976	CC
OTTESEN 21N - OWB - OWB	250.9	250.9	30.4	27.6	10.986	ES
OTTESEN 21N - OWB - OWB	500.0	499.3	45.6	38.8	6.626	SF
OTTESEN 21N - OWB - Plan #2	211.8	211.8	30.4	27.9	11.976	CC
OTTESEN 21N - OWB - Plan #2	250.9	250.9	30.4	27.6	10.986	ES
OTTESEN 21N - OWB - Plan #2	17,655.5	17,855.4	414.2	31.2	1.082	Collision Avoidance Req., SF
OTTESEN 22C - OWB - Plan #2	250.0	250.0	45.0	42.2	16.092	CC
OTTESEN 22C - OWB - Plan #2	800.0	810.8	47.9	34.4	3.541	ES
OTTESEN 22C - OWB - Plan #2	17,655.5	17,851.1	696.2	336.3	1.934	Collision Risk Procedures Re
OTTESEN 23NA - OWB - Plan #2	250.0	250.0	60.0	57.2	21.473	CC
OTTESEN 23NA - OWB - Plan #2	700.0	711.6	63.0	50.9	5.197	ES
OTTESEN 23NA - OWB - Plan #2	17,655.5	17,445.5	759.8	361.0	1.905	Collision Risk Procedures Re
OTTESEN 24N - OWB - OWB	255.5	255.7	73.2	70.3	25.386	CC, ES
OTTESEN 24N - OWB - OWB	600.0	595.7	105.4	96.9	12.316	SF
OTTESEN 24N - OWB - Plan #2	255.5	255.7	73.2	70.3	25.386	CC, ES
OTTESEN 24N - OWB - Plan #2	17,655.5	17,737.5	977.2	582.2	2.474	SF
OTTESEN 25N - OWB - Plan #2	250.0	250.0	90.2	87.4	32.274	CC
OTTESEN 25N - OWB - Plan #2	600.0	612.7	93.7	83.4	9.098	ES
OTTESEN 25N - OWB - Plan #2	17,655.5	17,469.6	1,152.3	753.0	2.885	SF
OTTESEN 26C - OWB - Plan #2	250.0	250.0	104.7	101.9	37.489	CC
OTTESEN 26C - OWB - Plan #2	500.0	510.2	107.1	98.8	12.913	ES
OTTESEN 26C - OWB - Plan #2	17,656.3	17,680.9	1,385.6	992.0	3.520	SF
OTTESEN 27NA - OWB - OWB	0.0	0.0	120.1			
OTTESEN 27NA - OWB - OWB	250.0	250.0	120.8	118.0	42.776	ES
OTTESEN 27NA - OWB - OWB	700.0	694.8	169.1	159.5	17.606	SF
OTTESEN 27NA - OWB - Plan #2	0.0	0.0	120.1			
OTTESEN 27NA - OWB - Plan #2	250.0	250.0	120.8	118.0	42.776	ES
OTTESEN 27NA - OWB - Plan #2	17,655.5	17,364.8	1,519.6	1,121.4	3.816	SF
OTTESEN 28N - OWB - Plan #2	250.0	250.0	135.3	132.5	48.419	CC
OTTESEN 28N - OWB - Plan #2	400.0	406.8	136.7	131.2	24.738	ES
OTTESEN 28N - OWB - Plan #2	17,655.5	17,449.6	1,724.9	1,325.7	4.320	SF
OTTESEN 29C - OWB - Plan #2	250.0	250.0	149.8	147.0	53.634	CC
OTTESEN 29C - OWB - Plan #2	400.0	406.7	151.7	146.3	28.074	ES
OTTESEN 29C - OWB - Plan #2	17,655.5	17,591.9	1,938.1	1,540.8	4.879	SF

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

PDC Energy Inc.

Anticollision Summary Report

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Reference Wellbore	OWB	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #2	**Offset TVD Reference:**	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
Ottesen Pad						
OTTESEN 30N - OWB - OWB	256.4	256.9	164.2	161.1	52.869	CC
OTTESEN 30N - OWB - OWB	300.0	301.3	164.5	160.9	45.960	ES
OTTESEN 30N - OWB - OWB	800.0	789.7	241.1	229.8	21.359	SF
OTTESEN 30N - OWB - Plan #2	256.4	256.9	164.2	161.1	52.869	CC
OTTESEN 30N - OWB - Plan #2	300.0	301.3	164.5	160.9	45.960	ES
OTTESEN 30N - OWB - Plan #2	17,655.5	17,395.0	2,096.3	1,697.1	5.251	SF
OTTESEN 31N - OWB - Plan #2	250.0	250.0	180.4	177.6	64.565	CC, ES
OTTESEN 31N - OWB - Plan #2	17,655.5	17,390.0	2,290.4	1,891.0	5.735	SF
OTTESEN 32NA - OWB - OWB	204.8	204.8	193.0	190.4	73.293	CC
OTTESEN 32NA - OWB - OWB	250.0	249.6	193.2	190.3	66.769	ES
OTTESEN 32NA - OWB - OWB	800.0	792.1	267.0	256.3	24.932	SF
OTTESEN 32NA - OWB - Plan #2	204.8	204.8	193.0	190.4	73.293	CC
OTTESEN 32NA - OWB - Plan #2	250.0	249.6	193.2	190.3	66.769	ES
OTTESEN 32NA - OWB - Plan #2	17,655.5	17,211.7	2,469.4	2,070.8	6.195	SF
OTTESEN FEDERAL 01N - OWB - Plan #2	250.0	250.0	125.2	122.4	44.828	CC
OTTESEN FEDERAL 01N - OWB - Plan #2	600.0	602.7	126.6	121.2	23.238	ES
OTTESEN FEDERAL 01N - OWB - Plan #2	8,400.0	8,060.8	424.9	304.8	3.539	SF
OTTESEN FEDERAL 02NA - OWB - Plan #2	250.0	250.0	134.7	131.9	48.208	CC
OTTESEN FEDERAL 02NA - OWB - Plan #2	500.0	503.0	136.0	131.1	27.859	ES
OTTESEN FEDERAL 02NA - OWB - Plan #2	8,600.0	8,034.1	529.0	409.8	4.438	SF
OTTESEN FEDERAL 03C - OWB - Plan #2	250.0	250.0	144.8	142.0	51.839	CC
OTTESEN FEDERAL 03C - OWB - Plan #2	400.0	402.4	145.5	141.4	36.031	ES
OTTESEN FEDERAL 03C - OWB - Plan #2	8,600.0	8,149.8	318.5	198.6	2.658	SF
OTTESEN FEDERAL 04N - OWB - Plan #2	250.0	250.0	156.5	153.7	56.031	CC
OTTESEN FEDERAL 04N - OWB - Plan #2	400.0	403.0	157.3	153.2	37.954	ES
OTTESEN FEDERAL 04N - OWB - Plan #2	8,900.0	8,200.0	449.1	319.0	3.452	SF
OTTESEN FEDERAL 05N - OWB - Plan #2	250.0	250.0	168.2	165.4	60.212	CC
OTTESEN FEDERAL 05N - OWB - Plan #2	400.0	403.6	169.2	164.9	39.927	ES
OTTESEN FEDERAL 05N - OWB - Plan #2	9,000.0	8,274.4	396.8	265.8	3.029	SF
OTTESEN FEDERAL 06NA - OWB - Plan #2	250.0	250.0	180.1	177.3	64.477	CC
OTTESEN FEDERAL 06NA - OWB - Plan #2	400.0	404.1	181.2	176.9	41.974	ES
OTTESEN FEDERAL 06NA - OWB - Plan #2	9,300.0	8,284.6	528.9	391.0	3.834	SF
OTTESEN FEDERAL 07C - OWB - Plan #2	250.0	250.0	193.4	190.6	69.215	CC
OTTESEN FEDERAL 07C - OWB - Plan #2	9,300.0	8,403.7	316.6	174.8	2.233	ES, SF
OTTESEN FEDERAL 08N - OWB - Plan #2	250.0	250.0	206.2	203.4	73.813	CC
OTTESEN FEDERAL 08N - OWB - Plan #2	400.0	405.2	207.5	203.1	46.548	ES
OTTESEN FEDERAL 08N - OWB - Plan #2	9,600.0	8,475.2	451.2	300.2	2.989	SF
OTTESEN FEDERAL 09N - OWB - Plan #2	250.0	250.0	219.3	216.5	78.502	CC
OTTESEN FEDERAL 09N - OWB - Plan #2	400.0	405.7	220.8	216.2	48.918	ES
OTTESEN FEDERAL 09N - OWB - Plan #2	9,700.0	8,550.0	397.7	244.7	2.599	SF
OTTESEN FEDERAL 10NA - OWB - Plan #2	250.0	250.0	232.3	229.6	83.175	CC
OTTESEN FEDERAL 10NA - OWB - Plan #2	400.0	406.1	233.9	229.4	51.312	ES
OTTESEN FEDERAL 10NA - OWB - Plan #2	9,900.0	8,569.4	495.1	345.4	3.306	SF
OTTESEN FEDERAL 11C - OWB - OWB	243.6	243.6	245.4	242.5	84.489	CC
OTTESEN FEDERAL 11C - OWB - OWB	250.0	249.9	245.4	242.4	83.328	ES
OTTESEN FEDERAL 11C - OWB - OWB	1,700.0	1,736.0	475.8	455.5	23.342	SF
OTTESEN FEDERAL 11C - OWB - Plan #2	243.6	243.6	245.4	242.5	84.489	CC
OTTESEN FEDERAL 11C - OWB - Plan #2	9,800.0	8,757.7	278.0	135.0	1.944	Collision Risk Procedures Re
OTTESEN FEDERAL 11C - OWB - Plan #2	9,900.0	8,804.6	295.9	136.0	1.850	Collision Risk Procedures Re
OTTESEN FEDERAL 12N - OWB - OWB	0.0	0.0	259.8			
OTTESEN FEDERAL 12N - OWB - OWB	250.0	249.7	260.8	258.0	95.173	ES
OTTESEN FEDERAL 12N - OWB - OWB	1,700.0	1,742.0	599.6	579.7	30.129	SF
OTTESEN FEDERAL 12N - OWB - Plan #2	0.0	0.0	259.8			

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

PDC Energy Inc.

Anticollision Summary Report

Company:	GWP - PLANNING DB	**Local Co-ordinate Reference:**	Well OTTESEN 19NA
Project:	WELD COUNTY	**TVD Reference:**	KB 20' @ 5096.0usft
Reference Site:	Ottesen Pad	**MD Reference:**	KB 20' @ 5096.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	OTTESEN 19NA	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #2	**Offset TVD Reference:**	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
Ottesen Pad						
OTTESEN FEDERAL 12N - OWB - Plan #2	10,100.0	9,017.8	397.3	240.8	2.538	ES
OTTESEN FEDERAL 12N - OWB - Plan #2	10,200.0	9,063.9	420.9	252.1	2.494	SF
OTTESEN FEDERAL 13HN - OWB - Plan #2	250.0	250.0	273.8	271.0	98.000	CC
OTTESEN FEDERAL 13HN - OWB - Plan #2	10,300.0	8,860.4	375.6	210.6	2.276	ES, SF

PDC Energy Inc.

Anticollision Summary Report

Company:	GWP - PLANNING DB	**Local Co-ordinate Reference:**	Well OTTESEN 19NA
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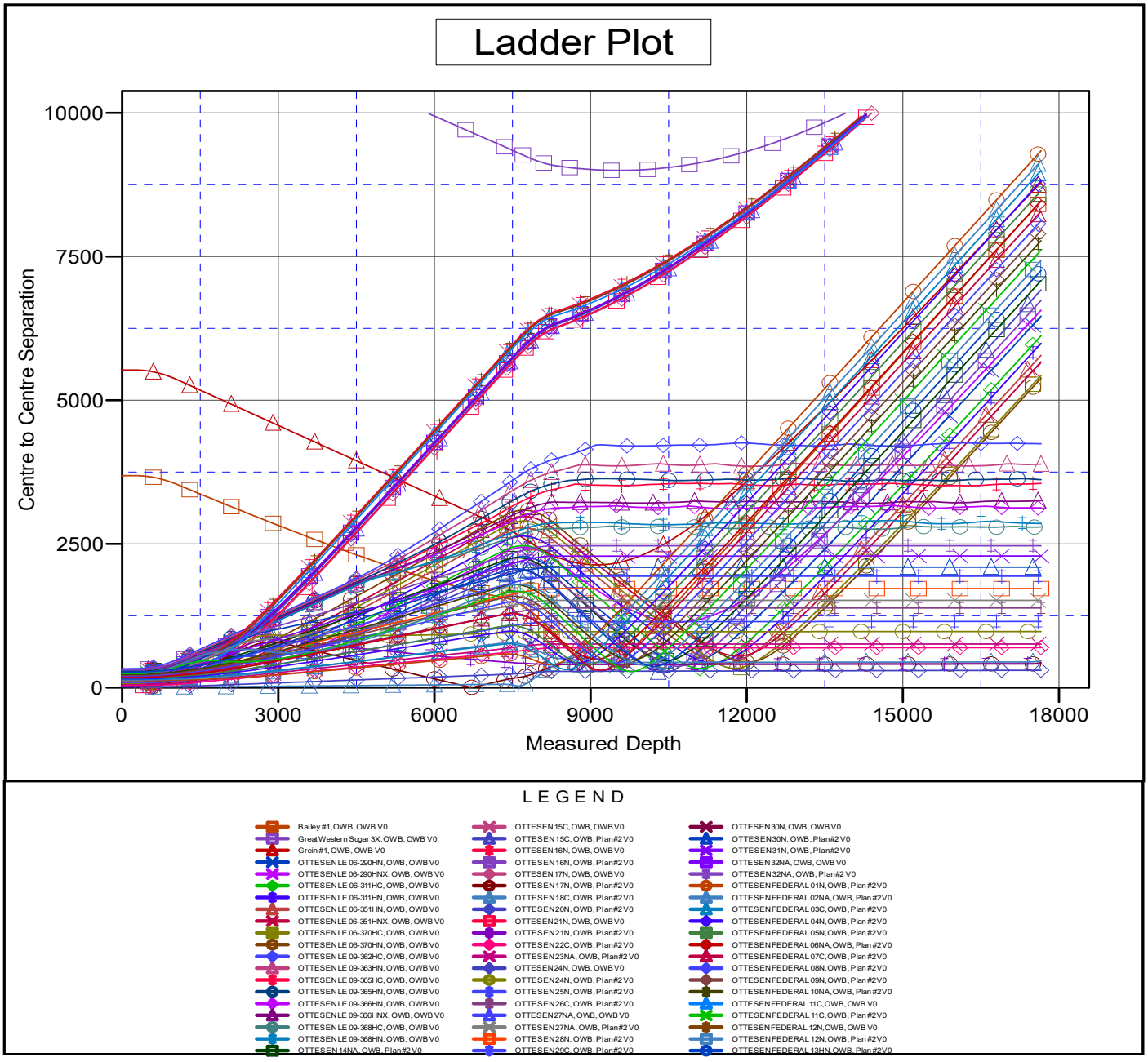
Reference Site:	Ottesen Pad	**MD Reference:**	KB 20' @ 5096.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	OTTESEN 19NA	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #2	**Offset TVD Reference:**	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 19NA
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.47°



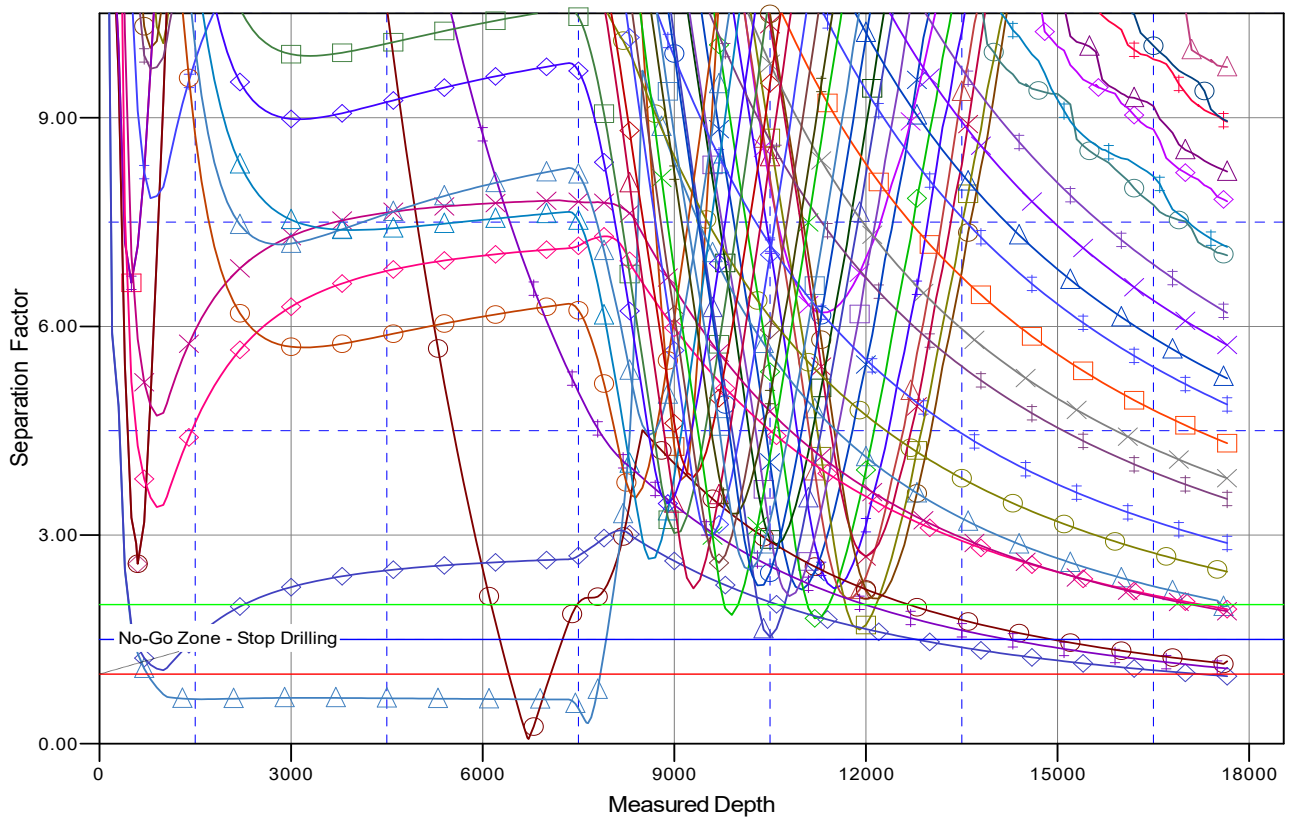
PDC Energy Inc.

Anticollision Summary Report

Company:	GWP - PLANNING DB	**Local Co-ordinate Reference:**	Well OTTESEN 19NA
Project:	WELD COUNTY	**TVD Reference:**	KB 20' @ 5096.0usft
Reference Site:	Ottesen Pad	**MD Reference:**	KB 20' @ 5096.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	OTTESEN 19NA	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB 20' @ 5096.0usft	Coordinates are relative to: OTTESEN 19NA
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W	Grid Convergence at Surface is: 0.47°

Separation Factor Plot



LEGEND

Bailey #1, OWB, OWB V0
Great Western Sugar 3X, OWB, OWB V0
Grein #1, OWB, OWB V0
OTTESEN LE 06-290HN, OWB, OWB V0
OTTESEN LE 06-290HNX, OWB, OWB V0
OTTESEN LE 06-311HC, OWB, OWB V0
OTTESEN LE 06-311HN, OWB, OWB V0
OTTESEN LE 06-351HN, OWB, OWB V0
OTTESEN LE 06-351HNX, OWB, OWB V0
OTTESEN LE 06-370HC, OWB, OWB V0
OTTESEN LE 06-370HN, OWB, OWB V0
OTTESEN LE 09-362HC, OWB, OWB V0
OTTESEN LE 09-363HN, OWB, OWB V0
OTTESEN LE 09-365HC, OWB, OWB V0
OTTESEN LE 09-365HN, OWB, OWB V0
OTTESEN LE 09-366HN, OWB, OWB V0
OTTESEN LE 09-366HNX, OWB, OWB V0
OTTESEN LE 09-368HC, OWB, OWB V0
OTTESEN LE 09-368HN, OWB, OWB V0
OTTESEN 14NA, OWB, Plan#2 V0
OTTESEN 15C, OWB, OWB V0
OTTESEN 15C, OWB, Plan#2 V0
OTTESEN 16N, OWB, OWB V0
OTTESEN 16N, OWB, Plan#2 V0
OTTESEN 17N, OWB, OWB V0
OTTESEN 17N, OWB, Plan#2 V0
OTTESEN 18C, OWB, Plan#2 V0
OTTESEN 20N, OWB, Plan#2 V0
OTTESEN 21N, OWB, OWB V0
OTTESEN 21N, OWB, Plan#2 V0
OTTESEN 22C, OWB, Plan#2 V0
OTTESEN 23NA, OWB, Plan#2 V0
OTTESEN 24N, OWB, OWB V0
OTTESEN 24N, OWB, Plan#2 V0
OTTESEN 25N, OWB, Plan#2 V0
OTTESEN 26C, OWB, Plan#2 V0
OTTESEN 27NA, OWB, OWB V0
OTTESEN 27NA, OWB, Plan#2 V0
OTTESEN 28N, OWB, Plan#2 V0
OTTESEN 29C, OWB, Plan#2 V0
OTTESEN 30N, OWB, OWB V0
OTTESEN 30N, OWB, Plan#2 V0
OTTESEN 31N, OWB, Plan#2 V0
OTTESEN 32NA, OWB, OWB V0
OTTESEN 32NA, OWB, Plan#2 V0
OTTESEN FEDERAL 01N, OWB, Plan#2V0
OTTESEN FEDERAL 02NA, OWB, Plan#2V0
OTTESEN FEDERAL 03C, OWB, Plan#2V0
OTTESEN FEDERAL 04N, OWB, Plan#2V0
OTTESEN FEDERAL 05N, OWB, Plan#2V0
OTTESEN FEDERAL 06NA, OWB, Plan#2V0
OTTESEN FEDERAL 07C, OWB, Plan#2V0
OTTESEN FEDERAL 08N, OWB, Plan#2V0
OTTESEN FEDERAL 09N, OWB, Plan#2V0
OTTESEN FEDERAL 10NA, OWB, Plan#2V0
OTTESEN FEDERAL 11C, OWB, OWB V0
OTTESEN FEDERAL 11C, OWB, Plan#2V0
OTTESEN FEDERAL 12N, OWB, OWB V0
OTTESEN FEDERAL 12N, OWB, Plan#2V0
OTTESEN FEDERAL 13HN, OWB, Plan#2V0