




Project: WELD COUNTY
Site: Ottesen Pad
Well: OTTESEN FEDERAL 06NA
Wellbore: OWB
Design: Plan #2
Lat: 40° 0' 15.569 N
Long: 104° 46' 41.002 W
GL: 5076.0
KB: KB 20' @ 5096.0usft

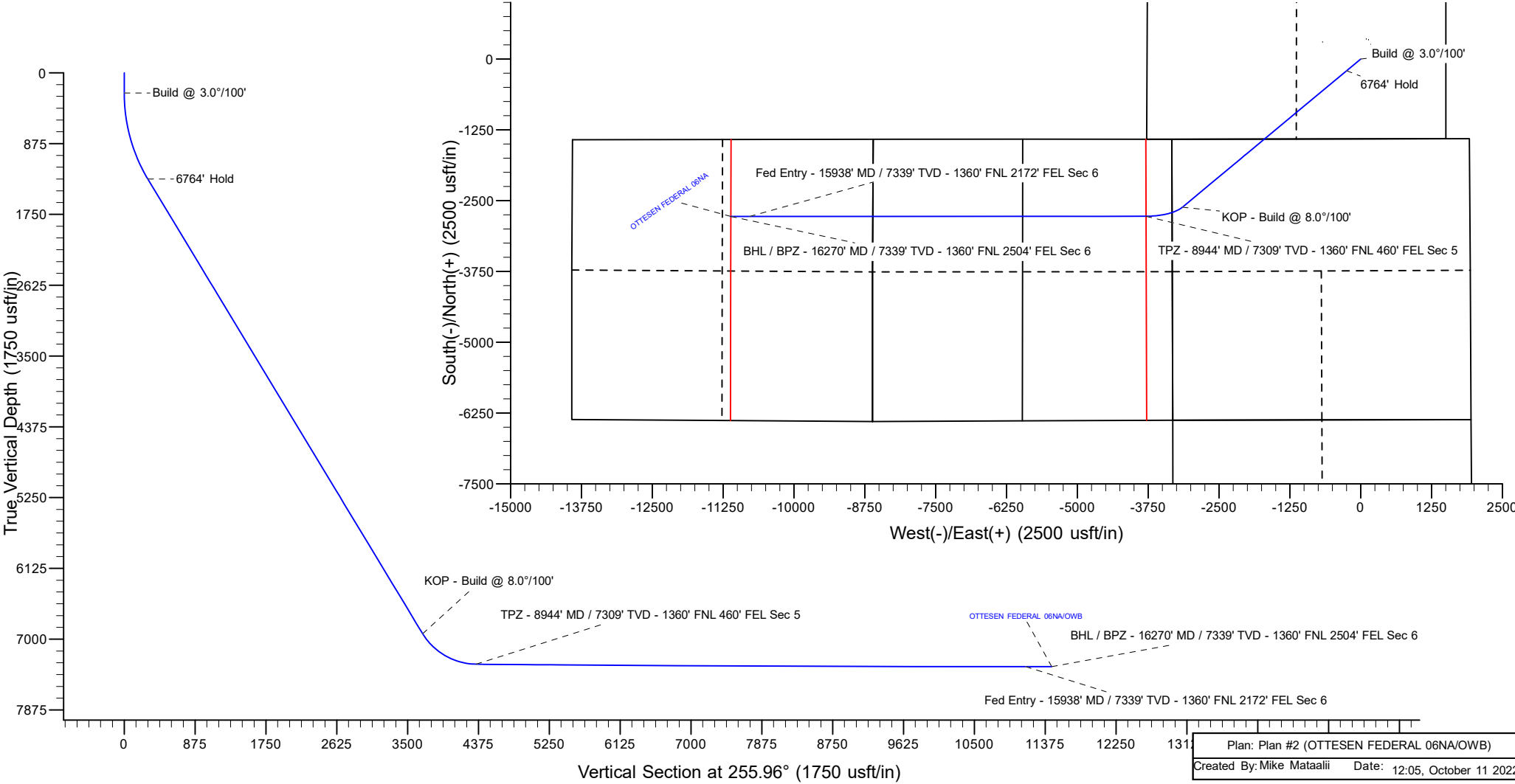


Azimuths to True North
Magnetic North: 7.73°

Magnetic Field
Strength: 51656.6nT
Dip Angle: 66.30°
Date: 4/12/2022
Model: IGRF2000

WELL DETAILS: OTTESEN FEDERAL 06NA						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	1245245.51	3202240.14	40° 0' 15.569 N	104° 46' 41.002 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'
1377.9	33.84	230.26	1313.5	-206.8	-248.7	3.00	230.26	291.5	6764' Hold
8142.3	33.84	230.26	6932.1	-2615.1	-3144.9	0.00	0.00	3685.5	KOP - Build @ 8.0°/100'
8944.6	89.51	269.97	7309.0	-2775.3	-3786.4	8.00	45.21	4346.6	TPZ - 8944' MD / 7309' TVD - 1360' FNL 460' FEL Sec 5
15938.8	90.00	269.97	7339.0	-2779.4	-10780.5	0.01	0.00	11132.7	Fed Entry - 15938' MD / 7339' TVD - 1360' FNL 2172' FEL Sec 6
16270.9	90.00	269.97	7339.0	-2779.6	-11112.6	0.00	0.00	11454.9	BHL / BPZ - 16270' MD / 7339' TVD - 1360' FNL 2504' FEL Sec 6



PDC Energy Inc.
Anticollision Summary Report

Company:	GWP - PLANNING DB	Local Co-ordinate Reference:	Well OTTESEN FEDERAL 06NA
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 FEDERAL 06NA	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	10/11/2022		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	16,270.9	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	7,405.6	6,299.2	495.3	413.1	6.020	CC, ES
Bailey #1 - OWB - OWB	7,500.0	6,377.6	498.1	415.0	5.991	SF
Great Western Sugar 3X - OWB - OWB	16,270.9	7,215.0	759.5	658.5	7.520	CC, ES, SF
Grein #1 - OWB - OWB	10,091.9	7,241.0	108.9	-10.0	0.916	No-Go Zone - Stop Drilling, (
OTTESEN LE 06-290HN - OWB - OWB	761.9	756.7	58.3	52.0	9.227	CC, ES
OTTESEN LE 06-290HN - OWB - OWB	16,270.9	17,864.8	2,026.9	1,513.2	3.946	SF
OTTESEN LE 06-290HNN - OWB - OWB	806.6	799.4	67.6	61.1	10.365	CC, ES
OTTESEN LE 06-290HNN - OWB - OWB	3,700.0	3,838.0	206.0	145.0	3.374	SF
OTTESEN LE 06-311HC - OWB - OWB	828.4	819.5	74.7	68.0	11.154	CC, ES
OTTESEN LE 06-311HC - OWB - OWB	16,270.9	17,871.7	2,429.6	1,912.8	4.701	SF
OTTESEN LE 06-311HN - OWB - OWB	885.8	874.8	85.4	78.3	11.958	CC
OTTESEN LE 06-311HN - OWB - OWB	900.0	888.2	85.6	78.3	11.760	ES
OTTESEN LE 06-311HN - OWB - OWB	16,270.9	17,849.6	2,493.8	1,972.9	4.788	SF
OTTESEN LE 06-351HN - OWB - OWB	947.0	934.0	93.1	85.5	12.191	CC, ES
OTTESEN LE 06-351HN - OWB - OWB	16,200.0	17,635.0	2,768.1	2,247.6	5.318	SF
OTTESEN LE 06-351HNN - OWB - OWB	1,271.8	1,256.9	81.0	65.3	5.167	CC
OTTESEN LE 06-351HNN - OWB - OWB	1,300.0	1,285.3	81.2	64.4	4.824	ES
OTTESEN LE 06-351HNN - OWB - OWB	1,400.0	1,386.0	86.0	65.5	4.192	SF
OTTESEN LE 06-370HC - OWB - OWB	1,144.6	1,128.1	103.7	93.1	9.777	CC
OTTESEN LE 06-370HC - OWB - OWB	1,200.0	1,182.8	104.7	92.4	8.460	ES
OTTESEN LE 06-370HC - OWB - OWB	2,600.0	2,614.2	207.8	171.9	5.784	SF
OTTESEN LE 06-370HN - OWB - OWB	1,621.1	1,578.4	16.4	-8.5	0.657	No-Go Zone - Stop Drilling, (
OTTESEN LE 09-362HC - OWB - OWB	0.0	0.5	206.4			
OTTESEN LE 09-362HC - OWB - OWB	200.0	198.5	207.6	204.6	69.032	ES
OTTESEN LE 09-362HC - OWB - OWB	800.0	788.0	292.0	280.5	25.333	SF
OTTESEN LE 09-363HN - OWB - OWB	227.2	227.7	180.6	177.4	57.033	CC
OTTESEN LE 09-363HN - OWB - OWB	250.0	250.2	180.6	177.3	54.756	ES
OTTESEN LE 09-363HN - OWB - OWB	700.0	693.4	237.3	226.9	22.864	SF
OTTESEN LE 09-365HC - OWB - OWB	0.0	0.5	157.0			
OTTESEN LE 09-365HC - OWB - OWB	200.0	199.3	157.9	154.9	52.680	ES
OTTESEN LE 09-365HC - OWB - OWB	700.0	692.2	217.5	207.2	20.991	SF
OTTESEN LE 09-365HN - OWB - OWB	0.0	0.5	167.3			
OTTESEN LE 09-365HN - OWB - OWB	200.0	198.2	168.6	165.6	56.003	ES
OTTESEN LE 09-365HN - OWB - OWB	700.0	697.3	221.7	211.5	21.807	SF
OTTESEN LE 09-366HN - OWB - OWB	0.0	0.5	136.5			
OTTESEN LE 09-366HN - OWB - OWB	250.0	249.9	137.3	134.0	41.615	ES
OTTESEN LE 09-366HN - OWB - OWB	700.0	692.8	195.6	185.1	18.615	SF

CC - Min centre to center distance or convergent 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 FEDERAL 06NA
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 FEDERAL 06NA	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	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 09-366HNX - OWB - OWB	0.0	0.5	146.7			
OTTESEN LE 09-366HNX - OWB - OWB	251.3	252.0	147.4	144.1	44.750	ES
OTTESEN LE 09-366HNX - OWB - OWB	700.0	696.7	199.9	189.8	19.722	SF
OTTESEN LE 09-368HC - OWB - OWB	0.0	0.5	117.7			
OTTESEN LE 09-368HC - OWB - OWB	200.0	199.3	118.6	115.5	39.384	ES
OTTESEN LE 09-368HC - OWB - OWB	700.0	694.3	178.1	167.8	17.324	SF
OTTESEN LE 09-368HN - OWB - OWB	0.0	0.5	125.9			
OTTESEN LE 09-368HN - OWB - OWB	250.0	249.7	126.5	123.1	38.156	ES
OTTESEN LE 09-368HN - OWB - OWB	700.0	699.2	178.0	167.8	17.533	SF

PDC Energy Inc.
Anticollision Summary Report

Company:	GWP - PLANNING DB	Local Co-ordinate Reference:	Well OTTESEN FEDERAL 06NA
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 FEDERAL 06NA	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	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	119.9	117.1	42.921	CC
OTTESEN 14NA - OWB - Plan #2	500.0	510.3	121.7	114.1	15.995	ES
OTTESEN 14NA - OWB - Plan #2	16,270.9	16,939.3	1,399.6	863.8	2.612	SF
OTTESEN 15C - OWB - OWB	0.0	0.0	135.3			
OTTESEN 15C - OWB - OWB	251.9	252.1	136.2	133.2	46.402	ES
OTTESEN 15C - OWB - OWB	800.0	791.9	202.2	191.7	19.246	SF
OTTESEN 15C - OWB - Plan #2	0.0	0.0	135.3			
OTTESEN 15C - OWB - Plan #2	251.9	252.1	136.2	133.2	46.402	ES
OTTESEN 15C - OWB - Plan #2	16,270.9	17,560.2	1,629.6	1,114.6	3.164	SF
OTTESEN 16N - OWB - OWB	255.6	255.9	149.4	146.4	49.620	CC, ES
OTTESEN 16N - OWB - OWB	800.0	792.2	216.1	205.5	20.344	SF
OTTESEN 16N - OWB - Plan #2	255.6	255.9	149.4	146.4	49.620	CC, ES
OTTESEN 16N - OWB - Plan #2	16,270.9	17,562.1	1,759.3	1,227.4	3.308	SF
OTTESEN 17N - OWB - OWB	777.5	770.3	192.2	186.1	31.653	CC
OTTESEN 17N - OWB - OWB	800.0	791.8	192.3	186.1	30.949	ES
OTTESEN 17N - OWB - OWB	1,200.0	1,162.5	249.8	237.8	20.855	SF
OTTESEN 17N - OWB - Plan #2	777.5	770.3	192.2	186.1	31.653	CC
OTTESEN 17N - OWB - Plan #2	800.0	791.8	192.3	186.1	30.949	ES
OTTESEN 17N - OWB - Plan #2	8,600.0	9,634.3	355.5	234.2	2.932	SF
OTTESEN 18C - OWB - Plan #2	250.0	250.0	192.8	190.0	69.011	CC
OTTESEN 18C - OWB - Plan #2	400.0	392.7	193.7	189.4	44.751	ES
OTTESEN 18C - OWB - Plan #2	8,650.0	9,519.1	685.7	563.2	5.598	SF
OTTESEN 19NA - OWB - Plan #2	250.0	250.0	180.1	177.3	64.477	CC
OTTESEN 19NA - OWB - Plan #2	400.0	393.5	181.1	176.9	42.564	ES
OTTESEN 19NA - OWB - Plan #2	8,300.0	9,126.9	500.2	376.1	4.030	SF
OTTESEN 20N - OWB - Plan #2	250.0	250.0	167.9	165.1	60.105	CC
OTTESEN 20N - OWB - Plan #2	400.0	394.8	168.8	164.7	40.885	ES
OTTESEN 20N - OWB - Plan #2	8,400.0	9,284.9	794.5	669.7	6.363	SF
OTTESEN 21N - OWB - OWB	556.8	555.0	153.5	148.8	32.336	CC, ES
OTTESEN 21N - OWB - OWB	1,100.0	1,073.8	220.3	208.5	18.734	SF
OTTESEN 21N - OWB - Plan #2	556.8	555.0	153.5	148.8	32.336	CC, ES
OTTESEN 21N - OWB - Plan #2	8,300.0	9,326.2	902.3	781.5	7.468	SF
OTTESEN 22C - OWB - Plan #2	250.0	250.0	145.0	142.2	51.899	CC
OTTESEN 22C - OWB - Plan #2	400.0	397.4	145.6	141.8	37.549	ES
OTTESEN 22C - OWB - Plan #2	8,400.0	9,351.5	1,215.5	1,091.7	9.819	SF
OTTESEN 23NA - OWB - Plan #2	250.0	250.0	134.5	131.7	48.155	CC
OTTESEN 23NA - OWB - Plan #2	400.0	398.8	135.0	131.2	35.638	ES
OTTESEN 23NA - OWB - Plan #2	8,150.0	8,867.9	1,175.8	1,054.3	9.675	SF
OTTESEN 24N - OWB - OWB	0.0	0.0	125.7			
OTTESEN 24N - OWB - OWB	400.0	399.2	127.7	123.9	33.124	ES
OTTESEN 24N - OWB - OWB	900.0	878.3	191.2	180.8	18.277	SF
OTTESEN 24N - OWB - Plan #2	0.0	0.0	125.7			
OTTESEN 24N - OWB - Plan #2	400.0	399.2	127.7	123.9	33.124	ES
OTTESEN 24N - OWB - Plan #2	8,250.0	9,192.4	1,441.5	1,322.9	12.150	SF
OTTESEN 25N - OWB - Plan #2	884.6	890.6	114.7	106.8	14.513	CC
OTTESEN 25N - OWB - Plan #2	1,000.0	1,005.7	115.5	106.1	12.279	ES
OTTESEN 25N - OWB - Plan #2	1,377.9	1,375.9	148.2	130.1	8.182	SF
OTTESEN 26C - OWB - Plan #2	878.9	888.7	103.4	94.5	11.557	CC
OTTESEN 26C - OWB - Plan #2	1,000.0	1,009.2	105.2	94.2	9.542	ES
OTTESEN 26C - OWB - Plan #2	1,300.0	1,302.7	137.3	119.0	7.525	SF
OTTESEN 27NA - OWB - OWB	253.0	253.0	104.1	101.2	36.432	CC
OTTESEN 27NA - OWB - OWB	300.0	300.1	104.3	101.2	33.363	ES
OTTESEN 27NA - OWB - OWB	800.0	793.4	156.1	146.5	16.271	SF

CC - Min centre to center distance or convergent 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 FEDERAL 06NA
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 FEDERAL 06NA	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	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 27NA - OWB - Plan #2	253.0	253.0	104.1	101.2	36.432	CC
OTTESEN 27NA - OWB - Plan #2	300.0	300.1	104.3	101.2	33.363	ES
OTTESEN 27NA - OWB - Plan #2	800.0	793.4	156.1	146.5	16.271	SF
OTTESEN 28N - OWB - Plan #2	824.5	840.9	88.2	75.9	7.181	CC
OTTESEN 28N - OWB - Plan #2	900.0	916.0	89.5	75.8	6.536	ES
OTTESEN 28N - OWB - Plan #2	1,000.0	1,015.1	95.6	79.8	6.073	SF
OTTESEN 29C - OWB - Plan #2	763.7	781.6	87.9	75.0	6.819	CC
OTTESEN 29C - OWB - Plan #2	800.0	817.8	88.2	74.7	6.533	ES
OTTESEN 29C - OWB - Plan #2	900.0	917.1	92.8	77.5	6.086	SF
OTTESEN 30N - OWB - OWB	176.5	176.5	101.7	99.4	45.669	CC
OTTESEN 30N - OWB - OWB	200.0	199.4	101.7	99.2	40.969	ES
OTTESEN 30N - OWB - OWB	700.0	692.4	145.9	135.8	14.518	SF
OTTESEN 30N - OWB - Plan #2	176.5	176.5	101.7	99.4	45.669	CC
OTTESEN 30N - OWB - Plan #2	200.0	199.4	101.7	99.2	40.969	ES
OTTESEN 30N - OWB - Plan #2	700.0	692.4	145.9	135.8	14.518	SF
OTTESEN 31N - OWB - Plan #2	668.6	689.0	97.8	84.8	7.553	CC
OTTESEN 31N - OWB - Plan #2	700.0	720.2	98.1	84.7	7.328	ES
OTTESEN 31N - OWB - Plan #2	800.0	819.4	103.1	88.5	7.043	SF
OTTESEN 32NA - OWB - OWB	0.0	0.0	110.5			
OTTESEN 32NA - OWB - OWB	250.0	249.6	110.8	108.0	39.605	ES
OTTESEN 32NA - OWB - OWB	700.0	696.0	159.4	149.5	16.100	SF
OTTESEN 32NA - OWB - Plan #2	0.0	0.0	110.5			
OTTESEN 32NA - OWB - Plan #2	250.0	249.6	110.8	108.0	39.605	ES
OTTESEN 32NA - OWB - Plan #2	700.0	696.0	159.4	149.5	16.100	SF
OTTESEN FEDERAL 01N - OWB - Plan #2	250.0	250.0	74.5	71.7	26.675	CC
OTTESEN FEDERAL 01N - OWB - Plan #2	600.0	588.6	76.8	66.7	7.631	ES
OTTESEN FEDERAL 01N - OWB - Plan #2	16,270.9	16,150.7	911.2	393.3	1.760	Collision Risk Procedures Req., SF
OTTESEN FEDERAL 02NA - OWB - Plan #2	250.0	250.0	59.7	56.9	21.360	CC
OTTESEN FEDERAL 02NA - OWB - Plan #2	700.0	688.4	62.8	51.4	5.504	ES
OTTESEN FEDERAL 02NA - OWB - Plan #2	16,270.9	16,016.3	699.8	166.3	1.312	Collision Avoidance Req., SF
OTTESEN FEDERAL 03C - OWB - Plan #2	250.0	250.0	45.1	42.3	16.145	CC
OTTESEN FEDERAL 03C - OWB - Plan #2	700.0	691.4	47.4	36.1	4.180	ES
OTTESEN FEDERAL 03C - OWB - Plan #2	16,270.9	16,420.5	669.1	227.8	1.516	Collision Risk Procedures Req., SF
OTTESEN FEDERAL 04N - OWB - Plan #2	250.0	250.0	29.4	26.6	10.530	CC
OTTESEN FEDERAL 04N - OWB - Plan #2	16,270.9	16,258.2	395.8	-90.4	0.814	No-Go Zone - Stop Drilling, ES
OTTESEN FEDERAL 05N - OWB - Plan #2	250.0	250.0	14.6	11.8	5.215	CC
OTTESEN FEDERAL 05N - OWB - Plan #2	16,268.5	16,388.1	309.2	-38.4	0.890	No-Go Zone - Stop Drilling, ES
OTTESEN FEDERAL 07C - OWB - Plan #2	250.0	250.0	15.7	12.9	5.616	CC
OTTESEN FEDERAL 07C - OWB - Plan #2	900.0	903.9	17.8	4.9	1.377	Collision Avoidance Req., ES
OTTESEN FEDERAL 07C - OWB - Plan #2	8,142.3	8,146.7	182.2	44.2	1.320	Collision Avoidance Req., SF
OTTESEN FEDERAL 08N - OWB - Plan #2	250.0	250.0	30.5	27.7	10.931	CC
OTTESEN FEDERAL 08N - OWB - Plan #2	16,270.9	16,535.1	395.8	-76.2	0.838	No-Go Zone - Stop Drilling, ES
OTTESEN FEDERAL 09N - OWB - Plan #2	250.0	250.0	45.4	42.6	16.246	CC
OTTESEN FEDERAL 09N - OWB - Plan #2	700.0	707.7	47.7	36.8	4.372	ES
OTTESEN FEDERAL 09N - OWB - Plan #2	16,270.9	16,676.8	585.7	107.8	1.226	Collision Avoidance Req., SF
OTTESEN FEDERAL 10NA - OWB - Plan #2	250.0	250.0	59.9	57.2	21.460	CC
OTTESEN FEDERAL 10NA - OWB - Plan #2	700.0	709.9	63.0	52.2	5.814	ES
OTTESEN FEDERAL 10NA - OWB - Plan #2	16,270.9	16,582.4	699.8	164.5	1.307	Collision Avoidance Req., SF
OTTESEN FEDERAL 11C - OWB - OWB	252.8	252.9	75.3	72.4	25.478	CC, ES
OTTESEN FEDERAL 11C - OWB - OWB	600.0	597.6	103.2	95.1	12.652	SF
OTTESEN FEDERAL 11C - OWB - Plan #2	252.8	252.9	75.3	72.4	25.478	CC, ES
OTTESEN FEDERAL 11C - OWB - Plan #2	16,270.9	17,126.1	970.4	488.9	2.015	SF
OTTESEN FEDERAL 12N - OWB - OWB	0.0	0.0	90.2			

CC - Min centre to center distance or convergent 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 FEDERAL 06NA
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 FEDERAL 06NA	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

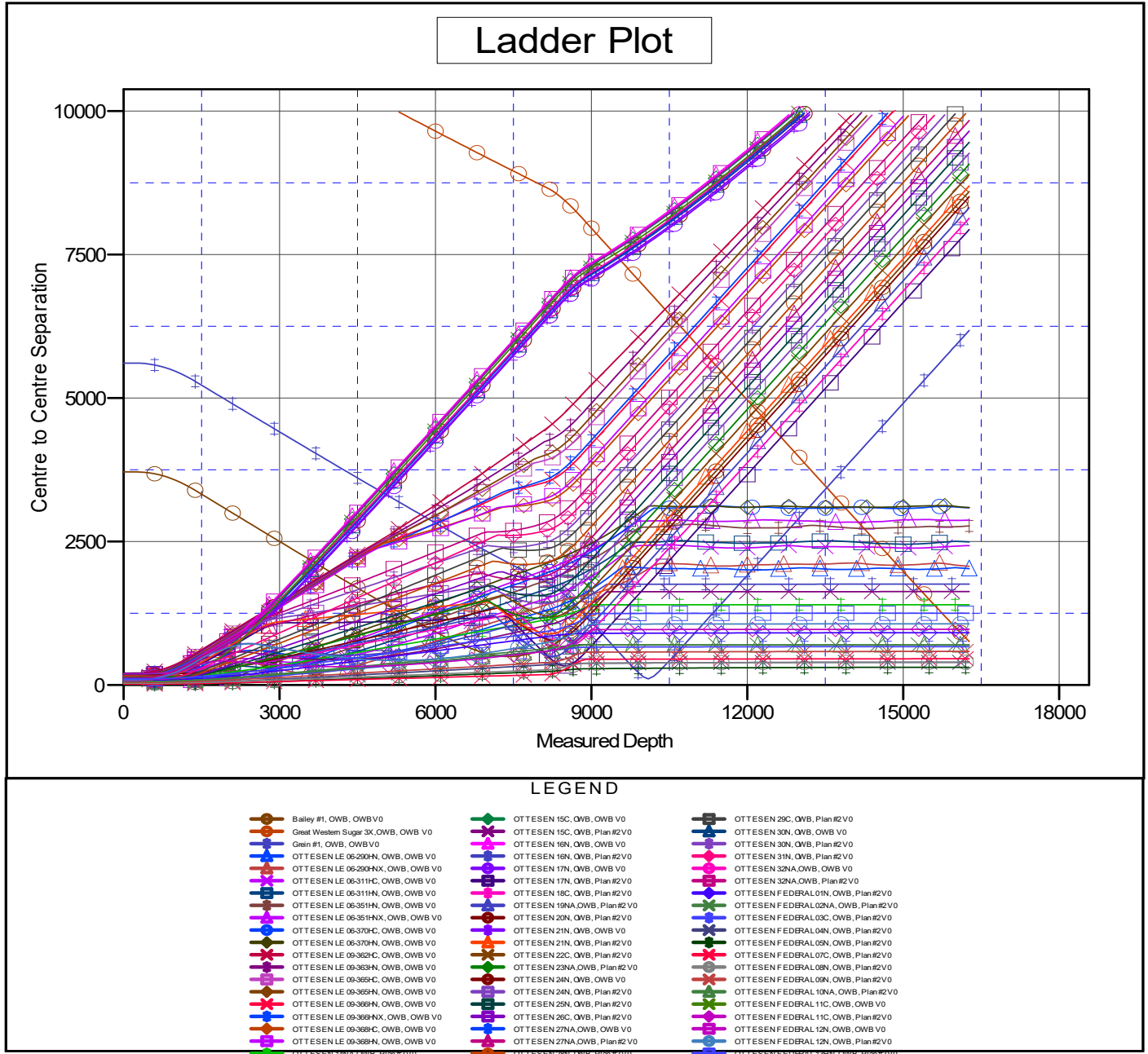
Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Ottesen Pad						
OTTESEN FEDERAL 12N - OWB - OWB	250.0	249.9	91.4	88.6	33.273	ES
OTTESEN FEDERAL 12N - OWB - OWB	700.0	696.0	135.3	126.0	14.472	SF
OTTESEN FEDERAL 12N - OWB - Plan #2	0.0	0.0	90.2			
OTTESEN FEDERAL 12N - OWB - Plan #2	250.0	249.9	91.4	88.6	33.273	ES
OTTESEN FEDERAL 12N - OWB - Plan #2	16,270.9	17,151.5	1,065.9	539.4	2.025	SF
OTTESEN FEDERAL 12N - OWB - Plan #2	250.0	250.0	105.1	102.3	37.606	CC
OTTESEN FEDERAL 13HN - OWB - Plan #2	600.0	612.8	108.2	98.8	11.599	ES
OTTESEN FEDERAL 13HN - OWB - Plan #2	16,270.9	17,009.3	1,252.0	731.0	2.403	SF

PDC Energy Inc.
Anticollision Summary Report

Company:	GWP - PLANNING DB	Local Co-ordinate Reference:	Well OTTESEN FEDERAL 06NA
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:	OTTESSEN FEDERAL 06NA	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: OTTESSEN FEDERAL 06NA
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.47°



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

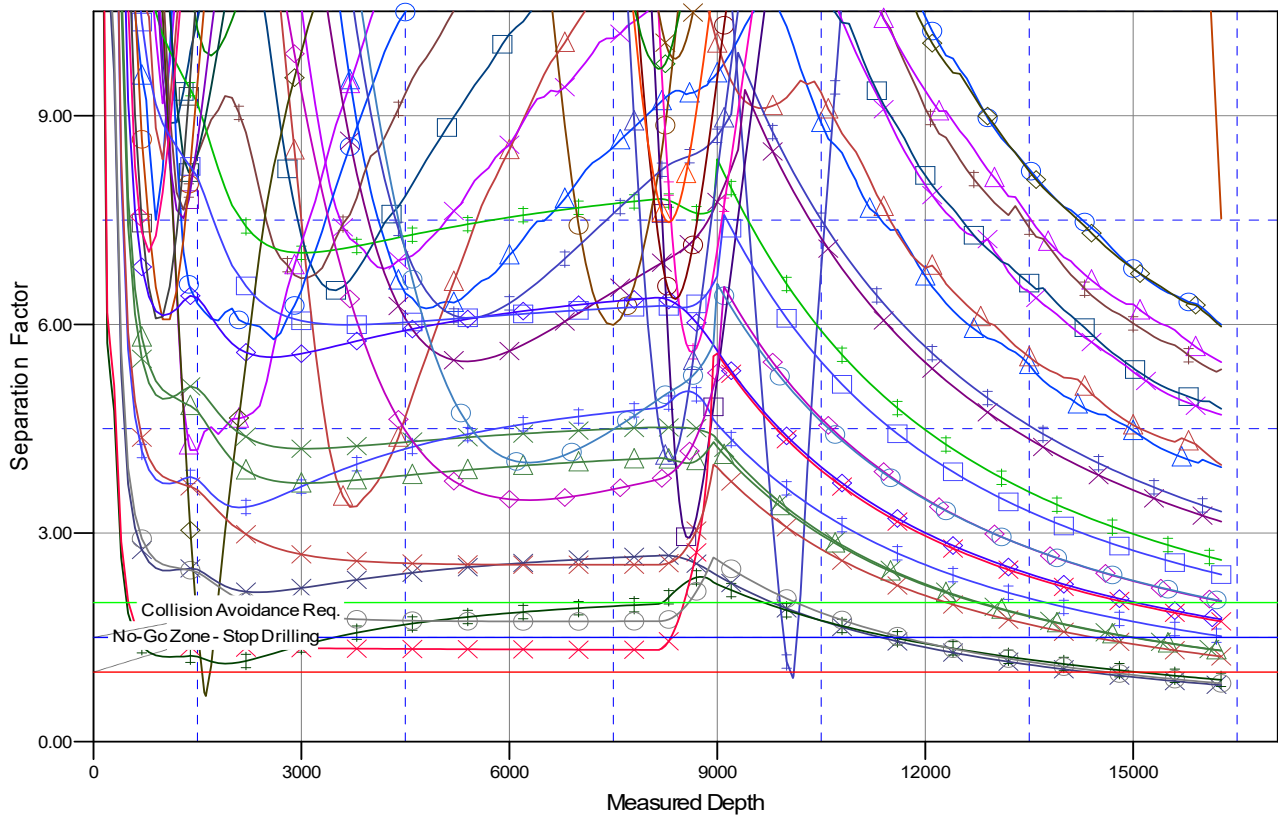
PDC Energy Inc.
Anticollision Summary Report

Company:	GWP - PLANNING DB	Local Co-ordinate Reference:	Well OTTESEN FEDERAL 06NA
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:	OTTESSEN FEDERAL 06NA	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: OTTESSEN FEDERAL 06NA
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	● OTTESSEN 15C, OWB, OWB V0	● OTTESSEN 29C, OWB, Plan#2 V0
● Great Western Sugar 3X, OWB, OWB V0	● OTTESSEN 15C, OWB, Plan#2 V0	● OTTESSEN 30N, OWB, OWB V0
● Grain #1, OWB, OWB V0	● OTTESSEN 16N, OWB, OWB V0	● OTTESSEN 30N, OWB, Plan#2 V0
● OTTESSEN LE 06-290HN, OWB, OWB V0	● OTTESSEN 16N, OWB, Plan#2 V0	● OTTESSEN 31N, OWB, Plan#2 V0
● OTTESSEN LE 06-290HN, OWB, OWB V0	● OTTESSEN 17N, OWB, OWB V0	● OTTESSEN 32NA, OWB, OWB V0
● OTTESSEN LE 06-311HC, OWB, OWB V0	● OTTESSEN 17N, OWB, Plan#2 V0	● OTTESSEN 32NA, OWB, Plan#2 V0
● OTTESSEN LE 06-311HN, OWB, OWB V0	● OTTESSEN 18C, OWB, Plan#2 V0	● OTTESSEN FEDERAL 01N, OWB, Plan#2 V0
● OTTESSEN LE 06-351HN, OWB, OWB V0	● OTTESSEN 19NA, OWB, Plan#2 V0	● OTTESSEN FEDERAL 02NA, OWB, Plan#2 V0
● OTTESSEN LE 06-351HN, OWB, OWB V0	● OTTESSEN 20N, OWB, Plan#2 V0	● OTTESSEN FEDERAL 03C, OWB, Plan#2 V0
● OTTESSEN LE 06-370HC, OWB, OWB V0	● OTTESSEN 21N, OWB, OWB V0	● OTTESSEN FEDERAL 04N, OWB, Plan#2 V0
● OTTESSEN LE 06-370HN, OWB, OWB V0	● OTTESSEN 21N, OWB, Plan#2 V0	● OTTESSEN FEDERAL 05N, OWB, Plan#2 V0
● OTTESSEN LE 06-362HC, OWB, OWB V0	● OTTESSEN 22C, OWB, Plan#2 V0	● OTTESSEN FEDERAL 07C, OWB, Plan#2 V0
● OTTESSEN LE 06-363HN, OWB, OWB V0	● OTTESSEN 23NA, OWB, Plan#2 V0	● OTTESSEN FEDERAL 08N, OWB, Plan#2 V0
● OTTESSEN LE 06-363HC, OWB, OWB V0	● OTTESSEN 24N, OWB, OWB V0	● OTTESSEN FEDERAL 09N, OWB, Plan#2 V0
● OTTESSEN LE 06-363HN, OWB, OWB V0	● OTTESSEN 24N, OWB, Plan#2 V0	● OTTESSEN FEDERAL 10NA, OWB, Plan#2 V0
● OTTESSEN LE 06-366HN, OWB, OWB V0	● OTTESSEN 25N, OWB, Plan#2 V0	● OTTESSEN FEDERAL 11C, OWB, OWB V0
● OTTESSEN LE 06-366HN, OWB, OWB V0	● OTTESSEN 26C, OWB, Plan#2 V0	● OTTESSEN FEDERAL 11C, OWB, Plan#2 V0
● OTTESSEN LE 06-368HC, OWB, OWB V0	● OTTESSEN 27NA, OWB, OWB V0	● OTTESSEN FEDERAL 12N, OWB, OWB V0
● OTTESSEN LE 06-368HN, OWB, OWB V0	● OTTESSEN 27NA, OWB, Plan#2 V0	● OTTESSEN FEDERAL 12N, OWB, Plan#2 V0
● OTTESSEN 19NA, OWB, Plan#2 V0	● OTTESSEN 28N, OWB, Plan#2 V0	● OTTESSEN FEDERAL 13HN, OWB, Plan#2 V0

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