



Project: ADAMS COUNTY
 Site: Prairie Pad Sundry
 Well: Prairie 06N
 Wellbore: OWB
 Design: Plan #1
 Lat: 39.944640
 Long: -104.804876
 GL: 5048.0
 KB: KB 25' @ 5073.0usft

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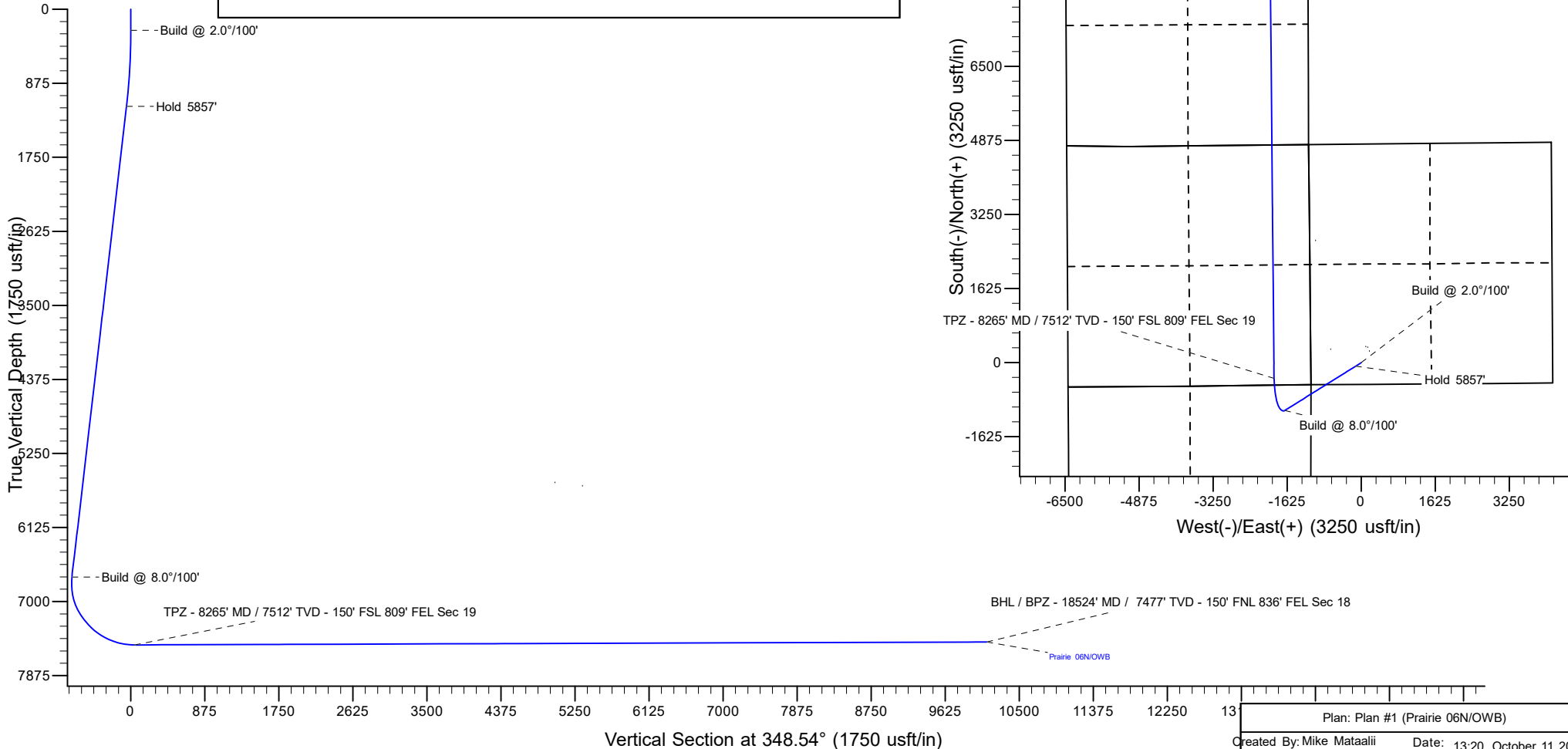
Azimuths to Grid North
 True North: -0.45°
 Magnetic North: 7.07°

Magnetic Field
 Strength: 51432.0nT
 Dip Angle: 66.32°
 Date: 10/10/2023
 Model: IGRF2015

WELL DETAILS: Prairie 06N						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	1223444.41	3194897.46	39.944640	-104.804876	

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 @ 2.0°/100'
1163.7	18.27	238.00	1148.3	-76.6	-122.5	2.00	238.00	-50.7	Hold 5857'
7020.8	18.27	238.00	6710.0	-1049.9	-1679.9	0.00	0.00	-695.4	Build @ 8.0°/100'
8265.9	90.20	359.46	7512.0	-343.2	-1913.2	8.00	120.11	43.6	TPZ - 8265' MD / 7512' TVD - 150' FSL 809' FEL Sec 19
18524.2	90.20	359.46	7477.0	9914.6	-2009.0	0.00	0.00	10116.1	BHL / BPZ - 18524' MD / 7477' TVD - 150' FNL 836' FEL Sec 18

DESIGN TARGET DETAILS		
Name	Latitude	Longitude
PRAIRIE 06N BHL	39.971899	-104.811767
PRAIRIE 06N TPZ	39.943738	-104.811709



Ensign

Anticollision Summary Report

Company:	PDC	Local Co-ordinate Reference:	Well Prairie 06N
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5073.0usft
Reference Site:	Prairie Pad Sundry	MD Reference:	KB 25' @ 5073.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Prairie 06N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	US_EDM
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of refere		
Interpolation Method:	MD Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 1,000.0 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	10/11/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	18,524.2	Plan #1 (OWB)	MWD	OWSG MWD - Standard

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
Brant Federal Pad						
Brant Federal 15NA - Brant Federal 15NA - Brant Federa	18,524.2	17,297.6	1,995.9	1,672.9	6.179	CC, ES, SF
Brant Federal 16C - Brant Federal 16C - Brant Federal 16	18,524.2	17,628.6	1,735.2	1,406.2	5.274	CC, ES, SF
Brant Federal 17N - Brant Federal 17N - Brant Federal 17	18,524.2	17,477.8	1,439.6	1,116.8	4.460	CC, ES, SF
Brant Federal 18C - Brant Federal 18C - Brant Federal 18	18,524.2	17,736.2	1,183.3	853.0	3.583	CC, ES, SF
Brant Federal 19N - Brant Federal 19N - Brant Federal 19	18,524.2	17,679.0	869.8	541.9	2.653	CC, ES, SF
Brant Federal 20NA - Brant Federal 20NA - Brant Federa	18,524.2	17,656.4	598.6	275.8	1.854	Collision Risk Procedures
Brant Federal 21C - Brant Federal 21C - Brant Federal 21	18,524.2	18,036.0	386.7	82.9	1.273	Collision Avoidance Req.,
Existing Wells Sec.29-T1N-R66W						
PC 1S-66-2928-2CDH (Exist.) - PC 1S-66-2928-2CDH W	6,038.5	6,745.0	415.7	338.5	5.386	CC
PC 1S-66-2928-2CDH (Exist.) - PC 1S-66-2928-2CDH W	6,100.0	6,793.5	417.0	337.3	5.235	ES
PC 1S-66-2928-2CDH (Exist.) - PC 1S-66-2928-2CDH W	6,300.0	6,961.3	437.2	350.9	5.068	SF
Praire Offsets						
Brant Federal 15NA - Brant Federal 15NA - Brant Federa	18,524.2	17,297.6	1,995.9	1,672.9	6.179	CC, ES, SF
Brant Federal 16C - Brant Federal 16C - Brant Federal 16	18,524.2	17,628.6	1,735.2	1,406.2	5.274	CC, ES, SF
Brant Federal 17N - Brant Federal 17N - Brant Federal 17	18,524.2	17,477.8	1,439.6	1,116.8	4.460	CC, ES, SF
Brant Federal 17N - Brant Federal 17N - Brant Federal 17	18,524.2	17,486.7	1,431.1	1,106.9	4.415	CC, ES, SF
Brant Federal 18C - Brant Federal 18C - Brant Federal 18	18,524.2	17,736.2	1,183.3	853.0	3.583	CC, ES, SF
Brant Federal 18C - Brant Federal 18C - Brant Federal 18	18,524.2	17,723.1	1,173.5	842.9	3.550	CC, ES, SF
Brant Federal 19N - Brant Federal 19N - Brant Federal 19	18,524.2	17,679.0	869.8	541.9	2.652	CC, ES, SF
Brant Federal 19N - Brant Federal 19N - Brant Federal 19	18,524.2	17,695.5	875.2	547.2	2.668	CC, ES, SF
Brant Federal 20NA - Brant Federal 20NA - Brant Federa	18,524.2	17,656.4	598.6	275.8	1.854	Collision Risk Procedures
Brant Federal 20NA - Brant Federal 20NA - Brant Federa	18,524.2	17,645.7	591.0	268.4	1.832	Collision Risk Procedures
Brant Federal 21C - Brant Federal 21C - Brant Federal 21	18,524.2	18,036.0	386.7	82.9	1.273	Collision Avoidance Req.,
Brant Federal 21C - Brant Federal 21C - Brant Federal 21	18,524.2	18,046.4	378.7	65.1	1.207	Collision Avoidance Req.,
PC 1S-66-2928 2CDH - OWB - OWB	5,980.5	6,693.2	424.1	342.5	5.197	CC
PC 1S-66-2928 2CDH - OWB - OWB	6,000.0	6,708.8	424.2	342.2	5.169	ES
PC 1S-66-2928 2CDH - OWB - OWB	6,100.0	6,788.1	428.9	344.6	5.088	SF
PC 1S-66-2928 3NH - OWB - OWB	6,269.6	6,876.1	539.7	461.6	6.912	CC
PC 1S-66-2928 3NH - OWB - OWB	6,300.0	6,898.7	539.9	461.4	6.876	ES
PC 1S-66-2928 3NH - OWB - OWB	6,500.0	7,061.0	553.0	471.5	6.789	SF
PRAIRIE LE 17-018HNX - OWB - OWB	225.5	200.3	226.4	223.5	77.727	CC
PRAIRIE LE 17-018HNX - OWB - OWB	300.0	274.7	226.5	223.1	67.248	ES
PRAIRIE LE 17-018HNX - OWB - OWB	18,400.0	17,780.0	1,666.5	1,304.9	4.608	SF
PRAIRIE LE 17-019HC - OWB - OWB	214.2	209.6	209.4	206.4	71.319	CC
PRAIRIE LE 17-019HC - OWB - OWB	300.0	295.3	209.6	206.2	60.716	ES

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

Ensign

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Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	US_EDM
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Summary						
Praire Offsets						
PRAIRIE LE 17-019HC - OWB - OWB	18,400.1	18,146.2	1,446.9	1,086.0	4.009	SF
PRAIRIE LE 17-021HN - OWB - OWB	300.0	296.0	181.2	177.7	52.071	CC, ES
PRAIRIE LE 17-021HN - OWB - OWB	18,403.3	18,074.1	977.8	616.4	2.706	SF
PRAIRIE LE 17-022HN - OWB - OWB	100.0	74.8	195.9	194.3	126.380	CC
PRAIRIE LE 17-022HN - OWB - OWB	200.0	174.3	196.1	193.3	71.252	ES
PRAIRIE LE 17-022HN - OWB - OWB	18,400.0	17,972.8	1,309.1	946.8	3.614	SF
PRAIRIE LE 18-031HC - OWB - OWB	612.5	606.4	15.1	9.8	2.814	CC, ES, SF
PRAIRIE LE 18-039HC - OWB - OWB	100.0	74.7	151.0	149.5	96.883	CC
PRAIRIE LE 18-039HC - OWB - OWB	200.0	174.1	151.4	148.6	54.838	ES
PRAIRIE LE 18-039HC - OWB - OWB	18,372.2	18,376.9	565.8	221.0	1.641	Collision Risk Procedures
PRAIRIE LE 31-369HC - OWB - OWB	300.0	273.5	100.3	97.0	29.925	CC, ES
PRAIRIE LE 31-369HC - OWB - OWB	7,900.0	7,828.2	953.0	873.3	11.961	SF
Prairie Pad Sundry						
Prairie 01C - OWB - Plan #1	284.0	283.0	89.7	86.6	28.886	CC
Prairie 01C - OWB - Plan #1	600.0	589.6	92.1	83.7	11.005	ES
Prairie 01C - OWB - Plan #1	1,100.0	1,073.7	106.8	93.8	8.238	SF
Prairie 02N - OWB - Plan #1	284.0	283.1	74.7	71.6	24.053	CC
Prairie 02N - OWB - Plan #1	600.0	591.3	77.0	68.7	9.235	ES
Prairie 02N - OWB - Plan #1	1,100.0	1,078.2	91.3	78.5	7.145	SF
Prairie 03N - OWB - Plan #1	284.0	283.3	59.7	56.6	19.224	CC
Prairie 03N - OWB - Plan #1	700.0	691.3	62.7	53.3	6.607	ES
Prairie 03N - OWB - Plan #1	18,524.2	19,057.5	1,340.3	973.0	3.650	SF
Prairie 04N - OWB - Plan #1	284.0	283.5	44.7	41.6	14.391	CC
Prairie 04N - OWB - Plan #1	700.0	693.6	47.1	37.7	4.996	ES
Prairie 04N - OWB - Plan #1	18,524.2	18,807.0	878.2	508.2	2.374	SF
Prairie 05C - OWB - Plan #1	284.1	284.0	14.7	11.6	4.723	CC
Prairie 05C - OWB - Plan #1	700.0	697.9	16.5	7.4	1.813	Collision Risk Procedures
Prairie 05C - OWB - Plan #1	18,524.2	18,867.9	518.4	197.6	1.616	Collision Risk Procedures
Prairie 07C - OWB - Plan #1	454.2	455.2	14.4	8.2	2.300	CC
Prairie 07C - OWB - Plan #1	500.0	501.2	14.6	7.4	2.027	ES
Prairie 07C - OWB - Plan #1	600.0	601.4	16.5	8.2	2.003	SF
Prairie 08N - OWB - Plan #1	541.2	544.0	28.8	20.9	3.625	CC
Prairie 08N - OWB - Plan #1	600.0	603.3	29.0	20.2	3.273	ES
Prairie 08N - OWB - Plan #1	700.0	703.9	31.1	21.2	3.144	SF
Prairie 09N - OWB - Plan #1	605.0	610.2	43.2	34.1	4.788	CC
Prairie 09N - OWB - Plan #1	700.0	706.2	43.8	33.6	4.263	ES
Prairie 09N - OWB - Plan #1	800.0	807.0	46.7	35.5	4.194	SF
Prairie 10C - OWB - Plan #1	659.6	667.6	57.5	47.6	5.845	CC
Prairie 10C - OWB - Plan #1	700.0	708.6	57.6	47.2	5.536	ES
Prairie 10C - OWB - Plan #1	8,700.0	7,747.0	420.8	336.3	4.977	SF
Prairie 11N - OWB - Plan #1	705.4	716.5	71.8	61.3	6.832	CC
Prairie 11N - OWB - Plan #1	8,161.9	8,018.7	74.4	-5.6	0.931	No-Go Zone - Stop Drillin
Prairie 12N - OWB - Plan #1	742.6	757.1	86.1	75.1	7.817	CC
Prairie 12N - OWB - Plan #1	800.0	815.8	86.4	74.6	7.360	ES
Prairie 12N - OWB - Plan #1	8,329.8	7,929.6	428.5	351.1	5.533	SF

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

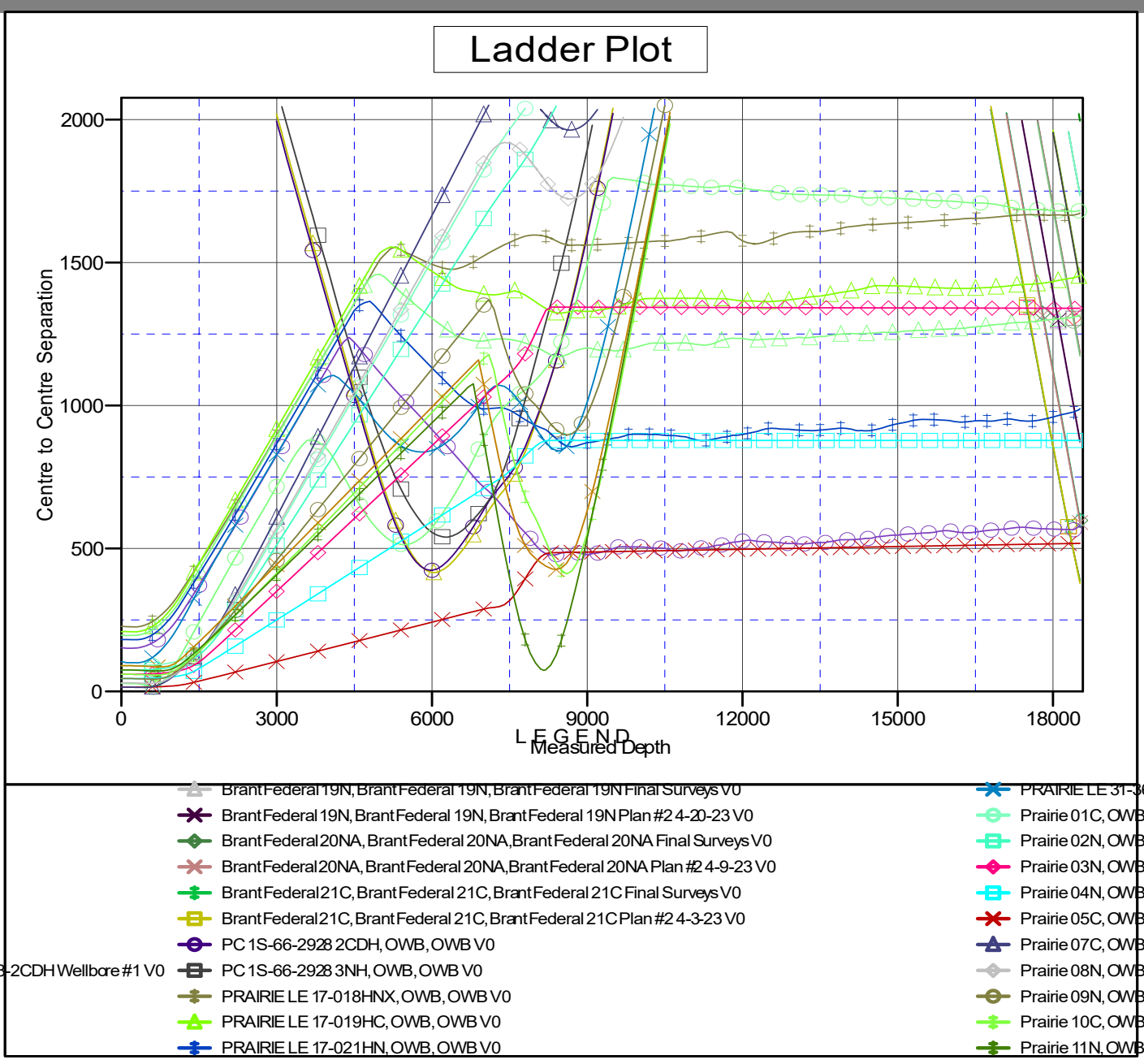
Ensign

Anticollision Summary Report

Company:	PDC	Local Co-ordinate Reference:	Well Prairie 06N
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Reference Site:	Prairie Pad Sundry	MD Reference:	KB 25' @ 5073.0usft
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Reference Well:	Prairie 06N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	US_EDM
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB 25' @ 5073.0usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Prairie 06N
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.45°



Ensign

Anticollision Summary Report

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