



Plan: Plan #1 (Prairie 10C/OWB)  
 Created By: Mike Mataalii Date: 13:38, October 11, 2023

Project: ADAMS COUNTY  
 Site: Prairie Pad Sundry  
 Well: Prairie 10C  
 Wellbore: OWB  
 Design: Plan #1  
 Lat: 39.944639  
 Long: -104.804662  
 GL: 5048.0  
 KB: KB 25' @ 5073.0usft

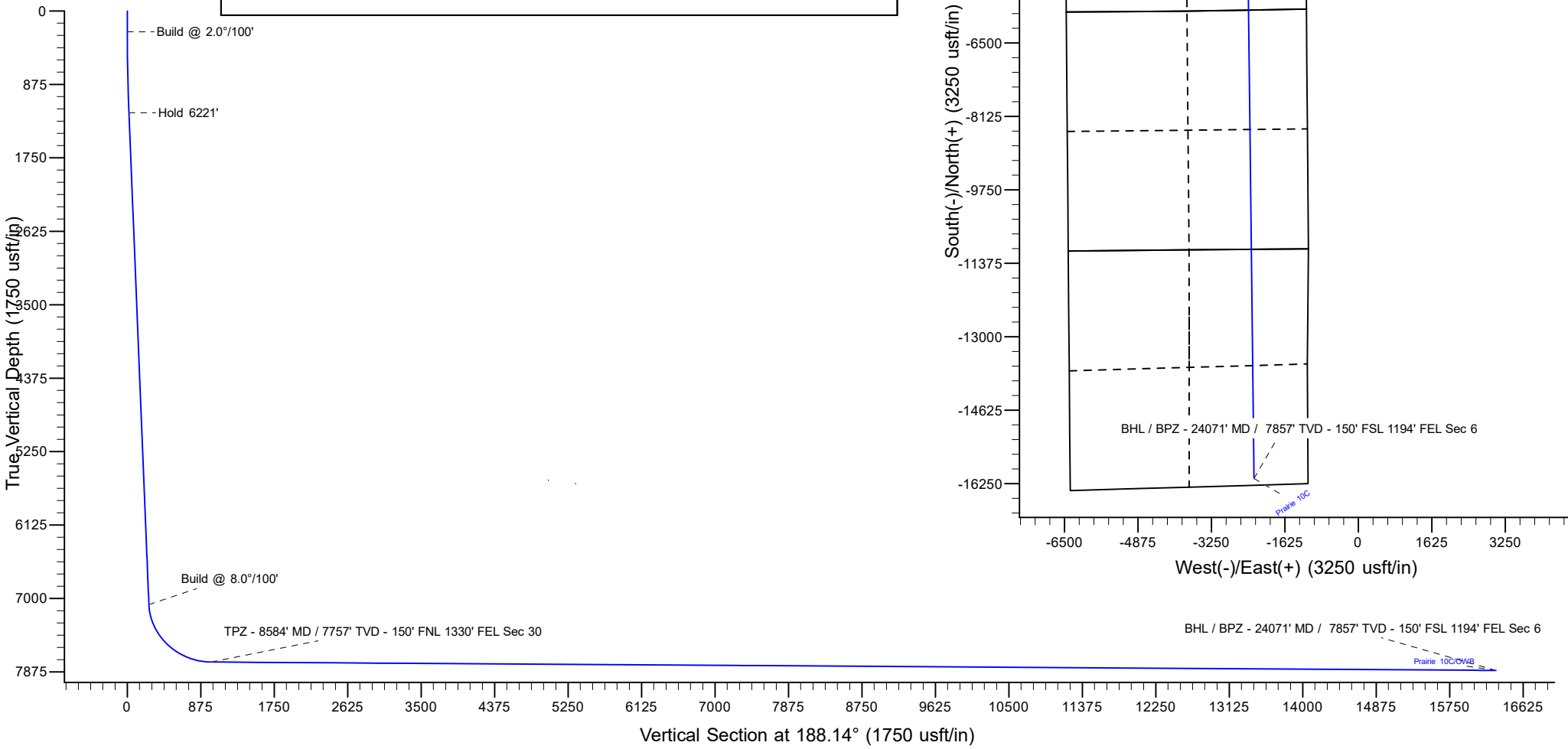
Azimuths to Grid North  
 True North: -0.45°  
 Magnetic North: 7.07°

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

WELL DETAILS: Prairie 10C						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	1223444.75	3194957.46	39.944639	-104.804662	

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'
1232.7	19.65	271.62	1213.5	4.7	-166.8	2.00	271.62	19.0	Hold 6221'
7454.5	19.65	271.62	7072.8	63.9	-2258.6	0.00	0.00	256.7	Build @ 8.0°/100'
8584.8	89.63	179.32	7757.0	-650.7	-2492.6	8.00	-92.29	997.2	TPZ - 8584' MD / 7757' TVD - 150' FNL 1330' FEL Sec 30
24071.6	89.63	179.32	7857.0	-16136.1	-2309.0	0.00	0.00	16300.4	BHL / BPZ - 24071' MD / 7857' TVD - 150' FSL 1194' FEL Sec 6

DESIGN TARGET DETAILS		
Name	Latitude	Longitude
PRAIRIE 10C TPZ	39.942906	-104.813570
PRAIRIE 10C BHL	39.900393	-104.813343



# Ensign

## Anticollision Summary Report

<b>Company:</b>	PDC	<b>Local Co-ordinate Reference:</b>	Well Prairie 10C
<b>Project:</b>	ADAMS COUNTY	<b>TVD Reference:</b>	KB 25' @ 5073.0usft
<b>Reference Site:</b>	Prairie Pad Sundry	<b>MD Reference:</b>	KB 25' @ 5073.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Prairie 10C	<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>	US_EDM
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1		
<b>Filter type:</b>	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of refere		
<b>Interpolation Method:</b>	MD Interval 100.0usft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum ellipse separation of 1,000.0 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>	Date	10/11/2023		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	24,071.6	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
<b>Praire Offsets</b>						
Edmundson LE 33-082HC - OWB - OWB	14,554.2	7,663.0	1,133.5	999.1	8.438	CC
Edmundson LE 33-082HC - OWB - OWB	14,600.0	7,683.9	1,134.1	998.9	8.388	ES, SF
FREEMAN 1 - OWB - OWB	17,000.0	7,836.3	595.0	291.2	1.958	Collision Risk Procedures
FREEMAN 1 - OWB - OWB	17,037.2	7,836.6	593.8	291.0	1.961	Collision Risk Procedures
FREEMAN 1-A - OWB - OWB	17,885.5	7,836.1	399.8	82.4	1.259	Collision Avoidance Req.,
FREEMAN 1-A - OWB - OWB	17,900.0	7,836.1	400.0	81.3	1.255	Collision Avoidance Req.,
PC 1S-66-2928 19NH - OWB - OWB	13,135.0	7,427.0	1,495.0	1,376.3	12.596	SF
PC 1S-66-2928 19NH - OWB - OWB	13,228.2	7,427.0	1,492.1	1,373.9	12.626	CC, ES
PC 1S-66-2928 20CDH - MWD - MWD	13,600.0	7,692.6	1,401.6	1,266.0	10.331	SF
PC 1S-66-2928 20CDH - MWD - MWD	13,663.0	7,692.0	1,400.2	1,265.0	10.355	CC, ES
PRAIRIE LE 17-012HNX - OWB - OWB	100.0	72.9	225.6	224.0	147.548	CC
PRAIRIE LE 17-012HNX - OWB - OWB	300.0	273.4	226.0	222.7	67.865	ES
PRAIRIE LE 17-012HNX - OWB - OWB	1,000.0	963.4	324.5	313.7	30.032	SF
PRAIRIE LE 17-013HC - OWB - OWB	227.2	201.1	232.0	229.1	78.962	CC
PRAIRIE LE 17-013HC - OWB - OWB	300.0	273.6	232.1	228.7	68.688	ES
PRAIRIE LE 17-013HC - OWB - OWB	1,000.0	959.3	330.0	319.6	31.726	SF
PRAIRIE LE 17-013HN - OWB - OWB	100.0	74.0	194.7	193.2	126.623	CC
PRAIRIE LE 17-013HN - OWB - OWB	300.0	274.4	195.2	191.8	58.170	ES
PRAIRIE LE 17-013HN - OWB - OWB	900.0	867.4	269.4	259.3	26.776	SF
PRAIRIE LE 17-015HN - OWB - OWB	100.0	72.8	204.8	203.3	133.699	CC
PRAIRIE LE 17-015HN - OWB - OWB	300.0	273.9	205.0	201.7	61.574	ES
PRAIRIE LE 17-015HN - OWB - OWB	1,000.0	965.0	292.3	281.9	28.220	SF
PRAIRIE LE 17-016HC - OWB - OWB	100.0	94.9	178.2	176.8	124.978	CC
PRAIRIE LE 17-016HC - OWB - OWB	300.0	294.5	178.8	175.5	53.957	ES
PRAIRIE LE 17-016HC - OWB - OWB	900.0	887.1	249.2	239.7	26.124	SF
PRAIRIE LE 17-016HN - OWB - OWB	100.0	72.7	192.6	191.1	125.687	CC
PRAIRIE LE 17-016HN - OWB - OWB	300.0	272.7	193.3	189.9	57.663	ES
PRAIRIE LE 17-016HN - OWB - OWB	1,000.0	967.6	278.4	268.0	26.611	SF
PRAIRIE LE 17-018HNX - OWB - OWB	221.3	195.9	166.4	163.5	57.615	CC
PRAIRIE LE 17-018HNX - OWB - OWB	300.0	274.5	166.5	163.1	49.311	ES
PRAIRIE LE 17-018HNX - OWB - OWB	900.0	867.6	241.4	231.4	24.200	SF
PRAIRIE LE 17-019HC - OWB - OWB	212.2	207.6	149.4	146.5	51.078	CC
PRAIRIE LE 17-019HC - OWB - OWB	300.0	295.2	149.7	146.2	43.234	ES
PRAIRIE LE 17-019HC - OWB - OWB	800.0	790.0	203.3	194.2	22.408	SF
PRAIRIE LE 17-021HN - OWB - OWB	223.1	218.6	121.3	118.3	40.360	CC
PRAIRIE LE 17-021HN - OWB - OWB	300.0	295.7	121.3	117.8	34.763	ES
PRAIRIE LE 17-021HN - OWB - OWB	7,600.0	8,395.8	1,241.7	1,170.2	17.371	SF

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

# Ensign

## Anticollision Summary Report

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<b>Reference Well:</b>	Prairie 10C	<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>	US_EDM
<b>Reference Design:</b>	Plan #1	<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						
<b>Praire Offsets</b>						
PRAIRIE LE 17-022HN - OWB - OWB	100.0	74.9	135.9	134.3	87.635	CC
PRAIRIE LE 17-022HN - OWB - OWB	200.0	174.5	136.1	133.3	49.429	ES
PRAIRIE LE 17-022HN - OWB - OWB	800.0	772.8	189.7	180.6	20.854	SF
PRAIRIE LE 18-031HC - OWB - OWB	961.5	949.1	4.7	-2.9	0.620	No-Go Zone - Stop Drillin
PRAIRIE LE 18-039HC - OWB - OWB	100.0	74.8	91.0	89.5	58.360	CC
PRAIRIE LE 18-039HC - OWB - OWB	200.0	174.5	91.4	88.6	33.083	ES
PRAIRIE LE 18-039HC - OWB - OWB	7,900.0	8,529.2	892.0	817.9	12.031	SF
PRAIRIE LE 31-369HC - OWB - OWB	616.7	585.5	105.0	99.5	19.108	CC
PRAIRIE LE 31-369HC - OWB - OWB	6,604.5	6,963.5	160.1	78.2	1.955	Collision Risk Procedures
VESSELS O&G CO 1 - OWB - OWB	20,000.0	7,880.7	236.8	-119.0	0.666	No-Go Zone - Stop Drillin
VESSELS O&G CO 1 - OWB - OWB	20,008.3	7,880.8	236.7	-118.3	0.667	No-Go Zone - Stop Drillin
<b>Prairie Pad Sundry</b>						
Prairie 01C - OWB - Plan #1	1,187.4	1,141.0	143.9	127.5	8.793	CC
Prairie 01C - OWB - Plan #1	1,200.0	1,153.0	143.9	127.4	8.726	ES
Prairie 01C - OWB - Plan #1	1,400.0	1,342.4	149.9	132.0	8.394	SF
Prairie 02N - OWB - Plan #1	1,073.3	1,036.6	130.2	115.1	8.619	CC
Prairie 02N - OWB - Plan #1	1,200.0	1,157.2	130.7	114.3	7.985	ES
Prairie 02N - OWB - Plan #1	1,300.0	1,252.3	132.8	115.8	7.821	SF
Prairie 03N - OWB - Plan #1	943.9	916.6	115.9	102.3	8.543	CC
Prairie 03N - OWB - Plan #1	1,100.0	1,065.8	116.9	101.7	7.703	ES
Prairie 03N - OWB - Plan #1	1,200.0	1,161.2	119.0	103.0	7.434	SF
Prairie 04N - OWB - Plan #1	860.7	839.7	101.3	88.8	8.099	CC
Prairie 04N - OWB - Plan #1	1,000.0	973.6	102.3	88.3	7.293	ES
Prairie 04N - OWB - Plan #1	8,214.5	8,599.3	412.8	323.5	4.621	SF
Prairie 05C - OWB - Plan #1	732.4	720.6	72.4	61.6	6.694	CC
Prairie 05C - OWB - Plan #1	8,345.6	8,542.8	94.2	6.9	1.078	Collision Avoidance Req.,
Prairie 06N - OWB - Plan #1	667.6	659.6	57.5	47.6	5.844	CC
Prairie 06N - OWB - Plan #1	700.0	691.3	57.5	47.2	5.594	ES
Prairie 06N - OWB - Plan #1	7,800.0	8,598.9	412.3	330.1	5.014	SF
Prairie 07C - OWB - Plan #1	1,219.4	1,204.7	42.7	25.6	2.496	CC
Prairie 07C - OWB - Plan #1	1,300.0	1,284.1	43.1	25.3	2.422	ES, SF
Prairie 08N - OWB - Plan #1	1,211.9	1,202.1	28.5	11.5	1.674	Collision Risk Procedures
Prairie 08N - OWB - Plan #1	1,300.0	1,289.3	29.1	11.3	1.635	Collision Risk Procedures
Prairie 09N - OWB - Plan #1	1,206.2	1,201.3	14.3	-2.8	0.837	No-Go Zone - Stop Drillin
Prairie 09N - OWB - Plan #1	1,300.0	1,294.6	14.9	-2.9	0.836	No-Go Zone - Stop Drillin
Prairie 11N - OWB - Plan #1	1,100.0	1,104.3	14.5	-1.3	0.917	No-Go Zone - Stop Drillin
Prairie 11N - OWB - Plan #1	1,103.7	1,108.1	14.5	-1.3	0.916	No-Go Zone - Stop Drillin
Prairie 12N - OWB - Plan #1	886.0	892.6	29.4	16.3	2.241	CC
Prairie 12N - OWB - Plan #1	900.0	906.6	29.4	16.2	2.222	ES
Prairie 12N - OWB - Plan #1	24,058.3	23,811.0	785.1	210.3	1.366	Collision Avoidance Req.,

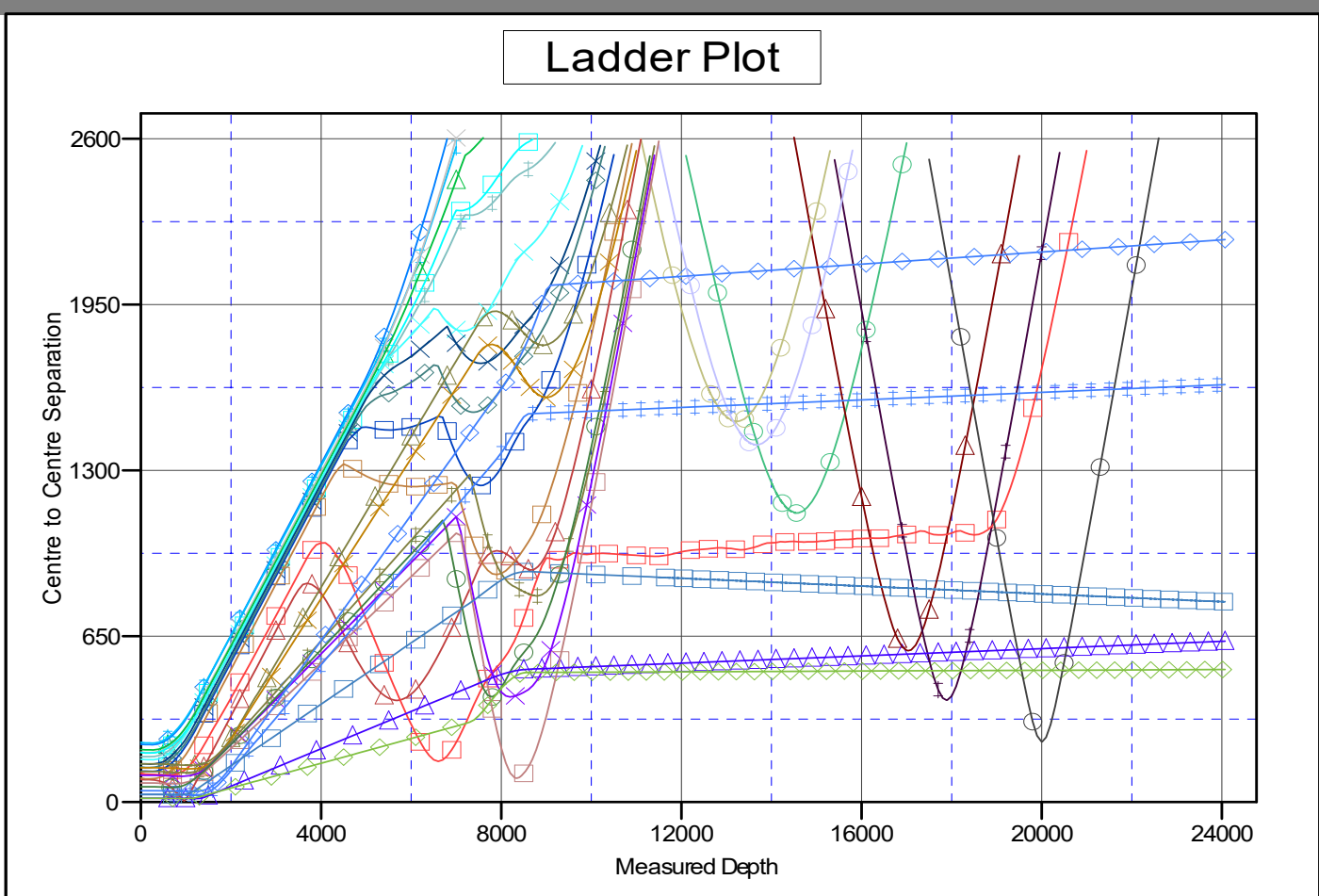
CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

# Ensign

## Anticollision Summary Report

<b>Company:</b>	PDC	<b>Local Co-ordinate Reference:</b>	Well Prairie 10C
<b>Project:</b>	ADAMS COUNTY	<b>TVD Reference:</b>	KB 25' @ 5073.0usft
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<b>Reference Well:</b>	Prairie 10C	<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>	US_EDM
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB 25' @ 5073.0usft	Coordinates are relative to: Prairie 10C
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: 0.45°



### LEGEND

<ul style="list-style-type: none"> <li><span style="color: green;">●</span> Edmundson LE 33-082HC, OWB, OWB V0</li> <li><span style="color: red;">▲</span> FREEMAN 1, OWB, OWB V0</li> <li><span style="color: purple;">◆</span> FREEMAN 1-A, OWB, OWB V0</li> <li><span style="color: yellow;">●</span> PC 1S-66-2928 19NH, OWB, OWB V0</li> <li><span style="color: blue;">◆</span> PC 1S-66-2928 20CDH, MWD, MWD V0</li> <li><span style="color: cyan;">◆</span> PRAIRIE LE 17-012HNX, OWB, OWB V0</li> <li><span style="color: magenta;">◆</span> PRAIRIE LE 17-013HC, OWB, OWB V0</li> <li><span style="color: grey;">✕</span> PRAIRIE LE 17-013HN, OWB, OWB V0</li> <li><span style="color: green;">▲</span> PRAIRIE LE 17-015HN, OWB, OWB V0</li> </ul>	<ul style="list-style-type: none"> <li><span style="color: cyan;">◆</span> PRAIRIE LE 17-016HN, OWB, OWB V0</li> <li><span style="color: cyan;">✕</span> PRAIRIE LE 17-018HNX, OWB, OWB V0</li> <li><span style="color: blue;">✕</span> PRAIRIE LE 17-019HC, OWB, OWB V0</li> <li><span style="color: blue;">◆</span> PRAIRIE LE 17-021HN, OWB, OWB V0</li> <li><span style="color: green;">◆</span> PRAIRIE LE 17-022HN, OWB, OWB V0</li> <li><span style="color: red;">▲</span> PRAIRIE LE 18-031HC, OWB, OWB V0</li> <li><span style="color: orange;">◆</span> PRAIRIE LE 18-039HC, OWB, OWB V0</li> <li><span style="color: red;">◆</span> PRAIRIE LE 31-369HC, OWB, OWB V0</li> <li><span style="color: black;">●</span> VESSELS O&amp;G CO 1, OWB, OWB V0</li> </ul>	<ul style="list-style-type: none"> <li><span style="color: orange;">✕</span> Prairie 02N, OWB, Plan #1 V0</li> <li><span style="color: green;">◆</span> Prairie 03N, OWB, Plan #1 V0</li> <li><span style="color: purple;">✕</span> Prairie 04N, OWB, Plan #1 V0</li> <li><span style="color: red;">◆</span> Prairie 05C, OWB, Plan #1 V0</li> <li><span style="color: green;">●</span> Prairie 06N, OWB, Plan #1 V0</li> <li><span style="color: blue;">◆</span> Prairie 07C, OWB, Plan #1 V0</li> <li><span style="color: blue;">◆</span> Prairie 08N, OWB, Plan #1 V0</li> <li><span style="color: purple;">▲</span> Prairie 09N, OWB, Plan #1 V0</li> <li><span style="color: green;">◆</span> Prairie 11N, OWB, Plan #1 V0</li> </ul>
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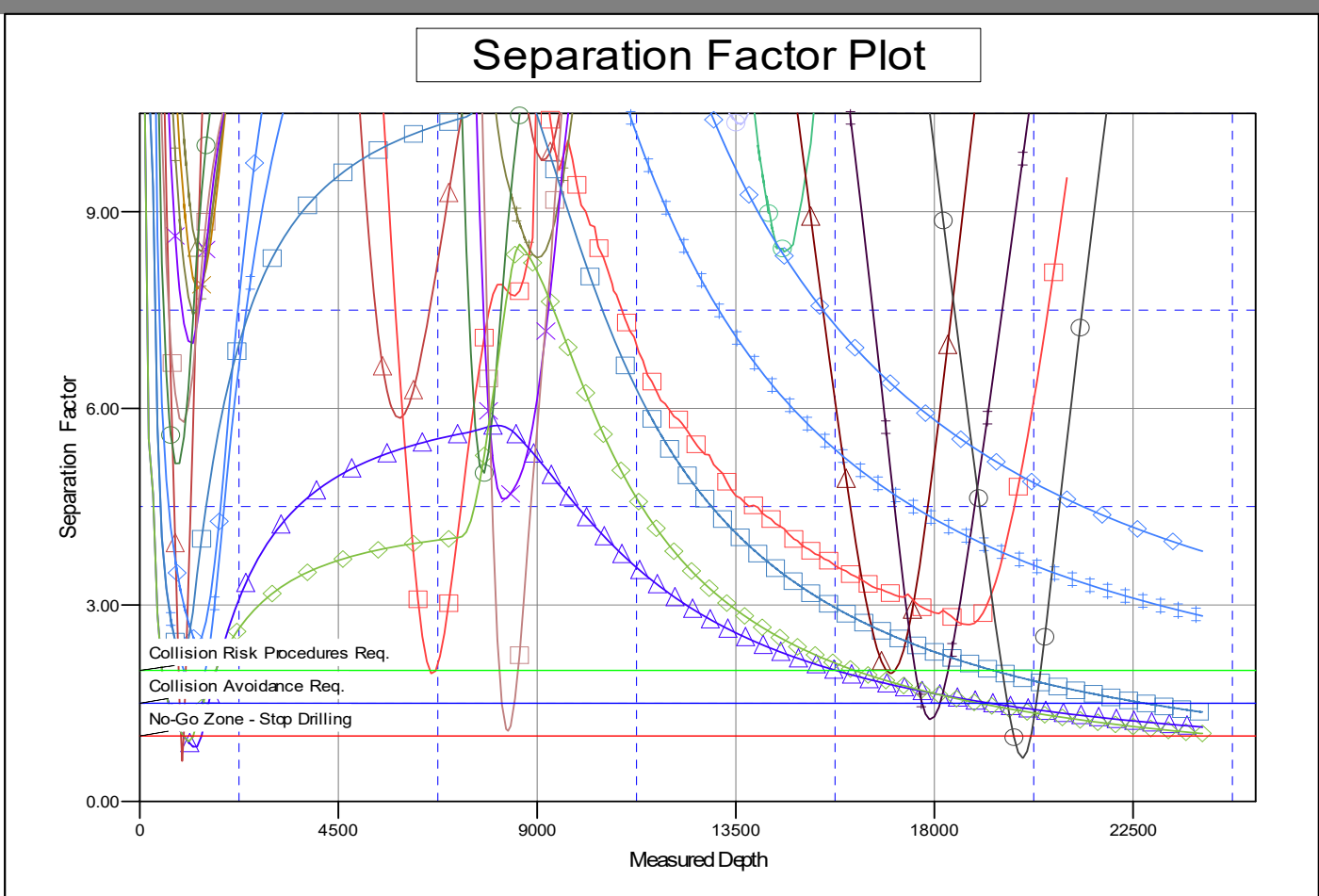
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 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.45°



### LEGEND

- |                                    |                                   |                              |
|------------------------------------|-----------------------------------|------------------------------|
| Edmundson LE 33-082HC, OWB, OWB V0 | PRAIRIE LE 17-016HN, OWB, OWB V0  | Prairie 02N, OWB, Plan #1 V0 |
| FREEMAN 1, OWB, OWB V0             | PRAIRIE LE 17-018HNX, OWB, OWB V0 | Prairie 03N, OWB, Plan #1 V0 |
| FREEMAN 1-A, OWB, OWB V0           | PRAIRIE LE 17-019HC, OWB, OWB V0  | Prairie 04N, OWB, Plan #1 V0 |
| PC 1S-66-2928 19NH, OWB, OWB V0    | PRAIRIE LE 17-021HN, OWB, OWB V0  | Prairie 05C, OWB, Plan #1 V0 |
| PC 1S-66-2928 20CDH, MWD, MWD V0   | PRAIRIE LE 17-022HN, OWB, OWB V0  | Prairie 06N, OWB, Plan #1 V0 |
| PRAIRIE LE 17-012HNX, OWB, OWB V0  | PRAIRIE LE 18-031HC, OWB, OWB V0  | Prairie 07C, OWB, Plan #1 V0 |
| PRAIRIE LE 17-013HC, OWB, OWB V0   | PRAIRIE LE 18-039HC, OWB, OWB V0  | Prairie 08N, OWB, Plan #1 V0 |
| PRAIRIE LE 17-013HN, OWB, OWB V0   | PRAIRIE LE 31-369HC, OWB, OWB V0  | Prairie 09N, OWB, Plan #1 V0 |
| PRAIRIE LE 17-015HN, OWB, OWB V0   | VESSELS O&G CO 1, OWB, OWB V0     | Prairie 11N, OWB, Plan #1 V0 |