



Plan: Plan #1 (Prairie 08N/OWB)
 Created By: Mike Mataalii Date: 13:29, October 11, 2023

Project: ADAMS COUNTY
 Site: Prairie Pad Sundry
 Well: Prairie 08N
 Wellbore: OWB
 Design: Plan #1
 Lat: 39.944639
 Long: -104.804769
 GL: 5048.0
 KB: KB 25' @ 5073.0usft

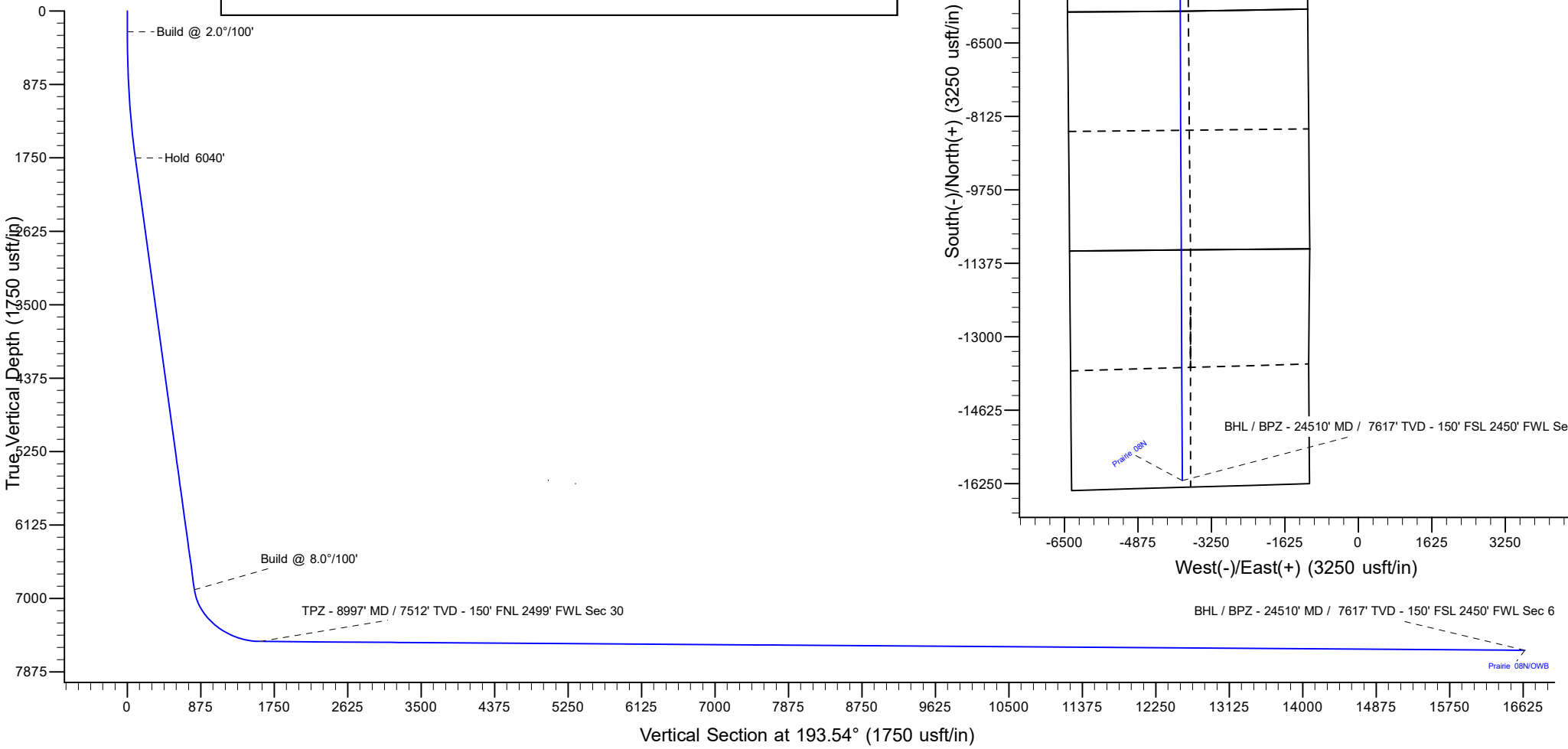
Azimuths to Grid North
 True North: -0.45°
 Magnetic North: 7.07°

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

WELL DETAILS: Prairie 08N						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	1223444.58	3194927.46	39.944639	-104.804769	

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'	
1830.6	31.61	270.70	1751.6	5.2	-425.1	2.00	270.70	94.5	Hold 6040'	
7870.7	31.61	270.70	6895.5	43.8	-3590.8	0.00	0.00	798.3	Build @ 8.0°/100'	
8997.7	89.61	179.75	7512.0	-669.9	-3964.2	8.00	-91.01	1579.5	TPZ - 8997' MD / 7512' TVD - 150' FNL 2499' FWL Sec 30	
24510.8	89.61	179.75	7617.0	-16182.4	-3897.5	0.00	0.00	16645.2	BHL / BPZ - 24510' MD / 7617' TVD - 150' FSL 2450' FWL Sec 6	

DESIGN TARGET DETAILS		
Name	Latitude	Longitude
PRAIRIE 08N TPZ	39.942885	-104.818926
PRAIRIE 08N BHL	39.900300	-104.819113



Ensign

Anticollision Summary Report

Company:	PDC	Local Co-ordinate Reference:	Well Prairie 08N
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 08N	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	24,510.8	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
Praire Offsets						
BRIGHTON FARMS LTD 1 - OWB - OWB	18,427.0	7,579.8	1,576.2	1,260.2	4.988	CC
BRIGHTON FARMS LTD 1 - OWB - OWB	18,500.0	7,580.3	1,577.9	1,258.6	4.942	ES
BRIGHTON FARMS LTD 1 - OWB - OWB	18,700.0	7,581.7	1,599.7	1,273.1	4.899	SF
FREEMAN 1-A - OWB - OWB	18,200.0	7,593.3	1,175.5	860.0	3.726	SF
FREEMAN 1-A - OWB - OWB	18,288.4	7,593.9	1,172.2	858.3	3.735	CC, ES
GUTSHALL 1 - OWB - OWB	15,113.2	7,561.4	835.6	695.8	5.980	CC
GUTSHALL 1 - OWB - OWB	15,200.0	7,562.0	840.1	694.5	5.773	ES
GUTSHALL 1 - OWB - OWB	15,300.0	7,562.7	856.2	705.4	5.680	SF
PRAIRIE LE 17-013HN - OWB - OWB	100.0	74.0	224.7	223.2	146.137	CC
PRAIRIE LE 17-013HN - OWB - OWB	300.0	274.5	225.1	221.8	67.110	ES
PRAIRIE LE 17-013HN - OWB - OWB	900.0	867.3	299.4	289.3	29.761	SF
PRAIRIE LE 17-015HN - OWB - OWB	100.0	72.8	231.7	230.2	151.268	CC
PRAIRIE LE 17-015HN - OWB - OWB	300.0	274.0	231.9	228.6	69.625	ES
PRAIRIE LE 17-015HN - OWB - OWB	1,000.0	965.1	321.4	311.0	30.830	SF
PRAIRIE LE 17-016HC - OWB - OWB	100.0	94.9	204.1	202.6	143.092	CC
PRAIRIE LE 17-016HC - OWB - OWB	300.0	294.5	204.7	201.4	61.666	ES
PRAIRIE LE 17-016HC - OWB - OWB	1,000.0	982.3	300.1	289.6	28.627	SF
PRAIRIE LE 17-016HN - OWB - OWB	100.0	72.6	219.1	217.5	142.993	CC
PRAIRIE LE 17-016HN - OWB - OWB	300.0	272.7	219.8	216.4	65.493	ES
PRAIRIE LE 17-016HN - OWB - OWB	1,000.0	967.7	307.6	297.1	29.207	SF
PRAIRIE LE 17-018HNX - OWB - OWB	221.3	196.0	196.4	193.5	67.991	CC
PRAIRIE LE 17-018HNX - OWB - OWB	300.0	274.6	196.5	193.1	58.189	ES
PRAIRIE LE 17-018HNX - OWB - OWB	900.0	867.6	271.2	261.3	27.197	SF
PRAIRIE LE 17-019HC - OWB - OWB	212.3	207.6	179.4	176.5	61.327	CC
PRAIRIE LE 17-019HC - OWB - OWB	300.0	295.3	179.7	176.2	51.896	ES
PRAIRIE LE 17-019HC - OWB - OWB	900.0	891.5	254.2	244.3	25.610	SF
PRAIRIE LE 17-021HN - OWB - OWB	223.2	218.8	151.3	148.3	50.330	CC
PRAIRIE LE 17-021HN - OWB - OWB	300.0	295.8	151.3	147.8	43.352	ES
PRAIRIE LE 17-021HN - OWB - OWB	800.0	790.5	204.2	195.1	22.381	SF
PRAIRIE LE 17-022HN - OWB - OWB	100.0	74.8	165.9	164.3	107.004	CC
PRAIRIE LE 17-022HN - OWB - OWB	200.0	174.4	166.1	163.3	60.338	ES
PRAIRIE LE 17-022HN - OWB - OWB	900.0	871.5	239.7	229.8	24.142	SF
PRAIRIE LE 18-031HC - OWB - OWB	829.8	820.9	2.6	-4.1	0.383	No-Go Zone - Stop Drillin
PRAIRIE LE 18-039HC - OWB - OWB	100.0	74.8	121.0	119.5	77.616	CC
PRAIRIE LE 18-039HC - OWB - OWB	200.0	174.3	121.4	118.6	43.957	ES
PRAIRIE LE 18-039HC - OWB - OWB	700.0	674.0	155.9	147.5	18.634	SF
PRAIRIE LE 31-369HC - OWB - OWB	388.5	360.7	100.0	96.1	25.498	CC

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

Ensign

Anticollision Summary Report

Company:	PDC	Local Co-ordinate Reference:	Well Prairie 08N
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 08N	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

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						
Prairie Offsets						
PRAIRIE LE 31-369HC - OWB - OWB	500.0	470.9	100.6	96.0	21.775	ES
PRAIRIE LE 31-369HC - OWB - OWB	19,000.0	19,250.0	592.6	214.8	1.569	Collision Risk Procedures
RICHEY 1-19 - OWB - OWB	8,318.0	7,223.4	939.1	752.8	5.041	CC, ES
RICHEY 1-19 - OWB - OWB	8,500.0	7,337.4	966.1	770.9	4.947	SF
SABLE FARMS 22-31 - OWB - OWB	15,761.6	7,564.8	836.2	565.7	3.091	CC
SABLE FARMS 22-31 - OWB - OWB	15,800.0	7,565.0	837.1	563.9	3.064	ES
SABLE FARMS 22-31 - OWB - OWB	15,900.0	7,565.7	847.6	568.5	3.037	SF
VESSELS O&G CO 1 - OWB - OWB	20,400.0	7,639.2	1,824.7	1,473.5	5.196	ES, SF
VESSELS O&G CO 1 - OWB - OWB	20,406.3	7,639.2	1,824.7	1,473.5	5.196	CC
Prairie Pad Sundry						
Prairie 01C - OWB - Plan #1	1,082.4	1,049.2	115.7	100.5	7.585	CC
Prairie 01C - OWB - Plan #1	1,200.0	1,161.9	116.1	99.7	7.064	ES
Prairie 01C - OWB - Plan #1	9,600.0	8,571.7	454.8	318.3	3.331	SF
Prairie 02N - OWB - Plan #1	968.0	942.9	101.7	87.8	7.302	CC
Prairie 02N - OWB - Plan #1	9,113.4	8,711.2	186.1	77.3	1.710	Collision Risk Procedures
Prairie 03N - OWB - Plan #1	844.6	826.8	87.2	74.8	7.044	CC
Prairie 03N - OWB - Plan #1	1,000.0	977.1	88.2	74.1	6.263	ES
Prairie 03N - OWB - Plan #1	1,200.0	1,170.0	93.7	78.1	6.023	SF
Prairie 04N - OWB - Plan #1	761.4	748.7	72.6	61.3	6.444	CC
Prairie 04N - OWB - Plan #1	900.0	883.5	73.5	60.6	5.711	ES
Prairie 04N - OWB - Plan #1	1,000.0	980.4	75.7	62.0	5.520	SF
Prairie 05C - OWB - Plan #1	620.8	615.3	43.5	34.3	4.710	CC
Prairie 05C - OWB - Plan #1	700.0	693.2	43.9	33.5	4.245	ES
Prairie 05C - OWB - Plan #1	800.0	791.3	45.6	34.3	4.028	SF
Prairie 06N - OWB - Plan #1	544.0	541.2	28.8	20.9	3.625	CC
Prairie 06N - OWB - Plan #1	600.0	596.5	29.0	20.2	3.287	ES
Prairie 06N - OWB - Plan #1	700.0	695.2	30.9	21.1	3.142	SF
Prairie 07C - OWB - Plan #1	1,810.6	1,802.9	12.9	-10.9	0.542	No-Go Zone - Stop Drillin
Prairie 07C - OWB - Plan #1	1,818.1	1,810.4	12.9	-11.0	0.541	No-Go Zone - Stop Drillin
Prairie 07C - OWB - Plan #1	1,900.0	1,891.9	13.5	-11.1	0.549	No-Go Zone - Stop Drillin
Prairie 09N - OWB - Plan #1	1,440.8	1,446.8	14.0	-5.6	0.714	No-Go Zone - Stop Drillin
Prairie 10C - OWB - Plan #1	1,230.8	1,240.8	28.5	11.2	1.646	Collision Risk Procedures
Prairie 10C - OWB - Plan #1	1,300.0	1,310.1	29.3	11.4	1.633	Collision Risk Procedures
Prairie 11N - OWB - Plan #1	1,100.0	1,113.0	43.3	27.5	2.739	CC
Prairie 11N - OWB - Plan #1	1,103.2	1,116.3	43.3	27.5	2.735	ES
Prairie 11N - OWB - Plan #1	1,200.0	1,213.0	45.3	28.6	2.708	SF
Prairie 12N - OWB - Plan #1	900.0	913.2	58.7	45.5	4.426	CC
Prairie 12N - OWB - Plan #1	900.2	913.4	58.7	45.5	4.426	ES
Prairie 12N - OWB - Plan #1	24,453.6	23,811.0	2,414.1	1,837.0	4.183	SF

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

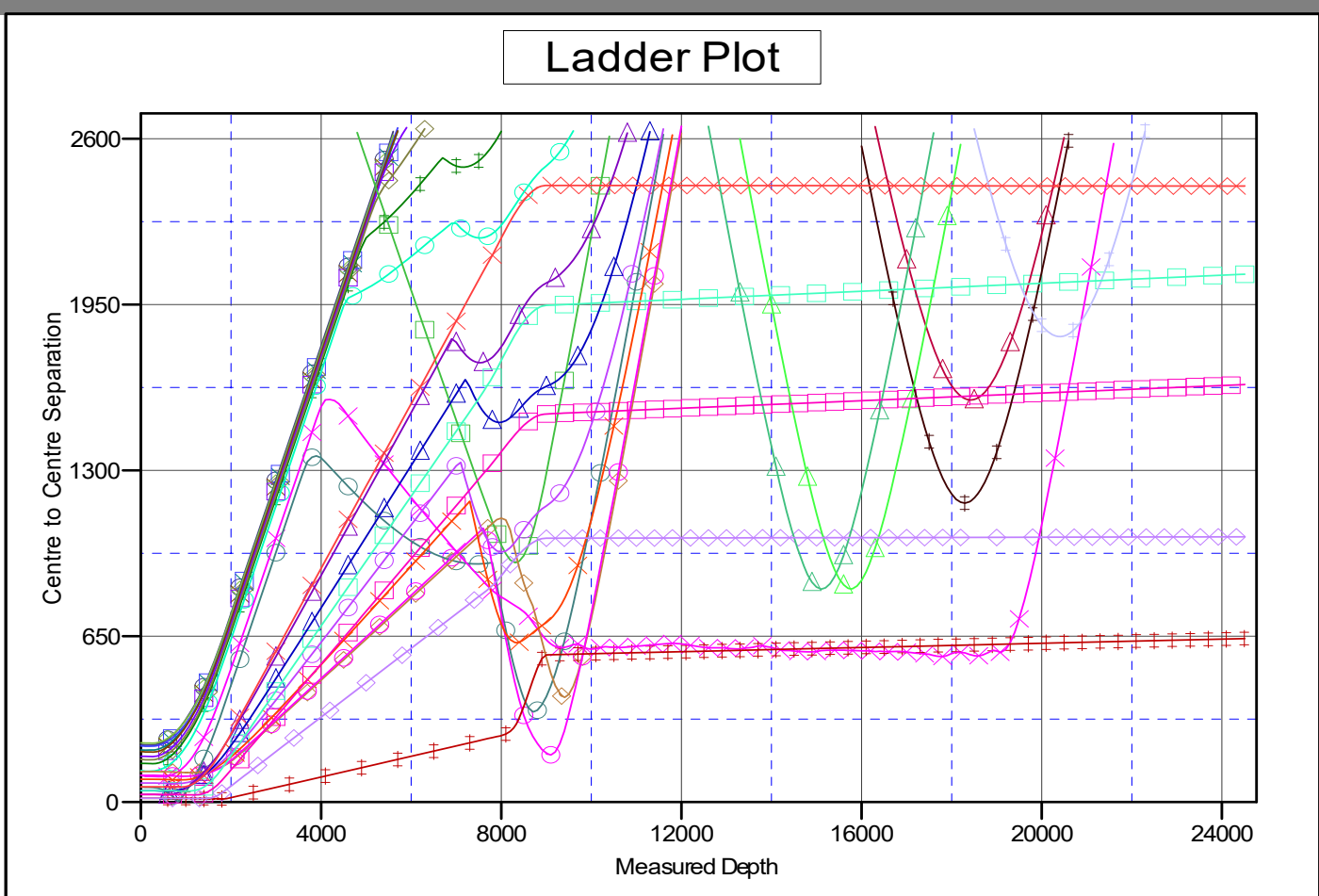
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Reference Well: Prairie 08N	Survey Calculation Method: Minimum Curvature
Well Error: 0.0 usft	Output errors are at: 2.00 sigma
Reference Wellbore: OWB	Database: US_EDM
Reference Design: Plan #1	Offset TVD Reference: Offset Datum

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 08N
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.45°



LEGEND

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|-------------------------------------|------------------------------------|--------------------------------|
| ▲ BRIGHTON FARMS LTD 1, OWB, OWB V0 | ◆ PRAIRIE LE 17-022HN, OWB, OWB V0 | ○ Prairie 04N, OWB, Plan #1 V0 |
| ● FREEMAN 1-A, OWB, OWB V0 | ● PRAIRIE LE 18-031HC, OWB, OWB V0 | ▲ Prairie 05C, OWB, Plan #1 V0 |
| ▲ GUTSHALL 1, OWB, OWB V0 | ● PRAIRIE LE 18-039HC, OWB, OWB V0 | ▲ Prairie 06N, OWB, Plan #1 V0 |
| ● PRAIRIE LE 17-013HN, OWB, OWB V0 | ✕ PRAIRIE LE 31-369HC, OWB, OWB V0 | ● Prairie 07C, OWB, Plan #1 V0 |
| ◆ PRAIRIE LE 17-015HN, OWB, OWB V0 | ■ RICHEY 1-19, OWB, OWB V0 | ◆ Prairie 09N, OWB, Plan #1 V0 |
| ✕ PRAIRIE LE 17-016HC, OWB, OWB V0 | ▲ SABLE FARMS 22-31, OWB, OWB V0 | ■ Prairie 10C, OWB, Plan #1 V0 |
| ■ PRAIRIE LE 17-016HN, OWB, OWB V0 | ● VESSELS O&G CO 1, OWB, OWB V0 | ■ Prairie 11N, OWB, Plan #1 V0 |
| ✕ PRAIRIE LE 17-018HNX, OWB, OWB V0 | ◆ Prairie 01C, OWB, Plan #1 V0 | ✕ Prairie 12N, OWB, Plan #1 V0 |
| ■ PRAIRIE LE 17-019HC, OWB, OWB V0 | ○ Prairie 02N, OWB, Plan #1 V0 | |

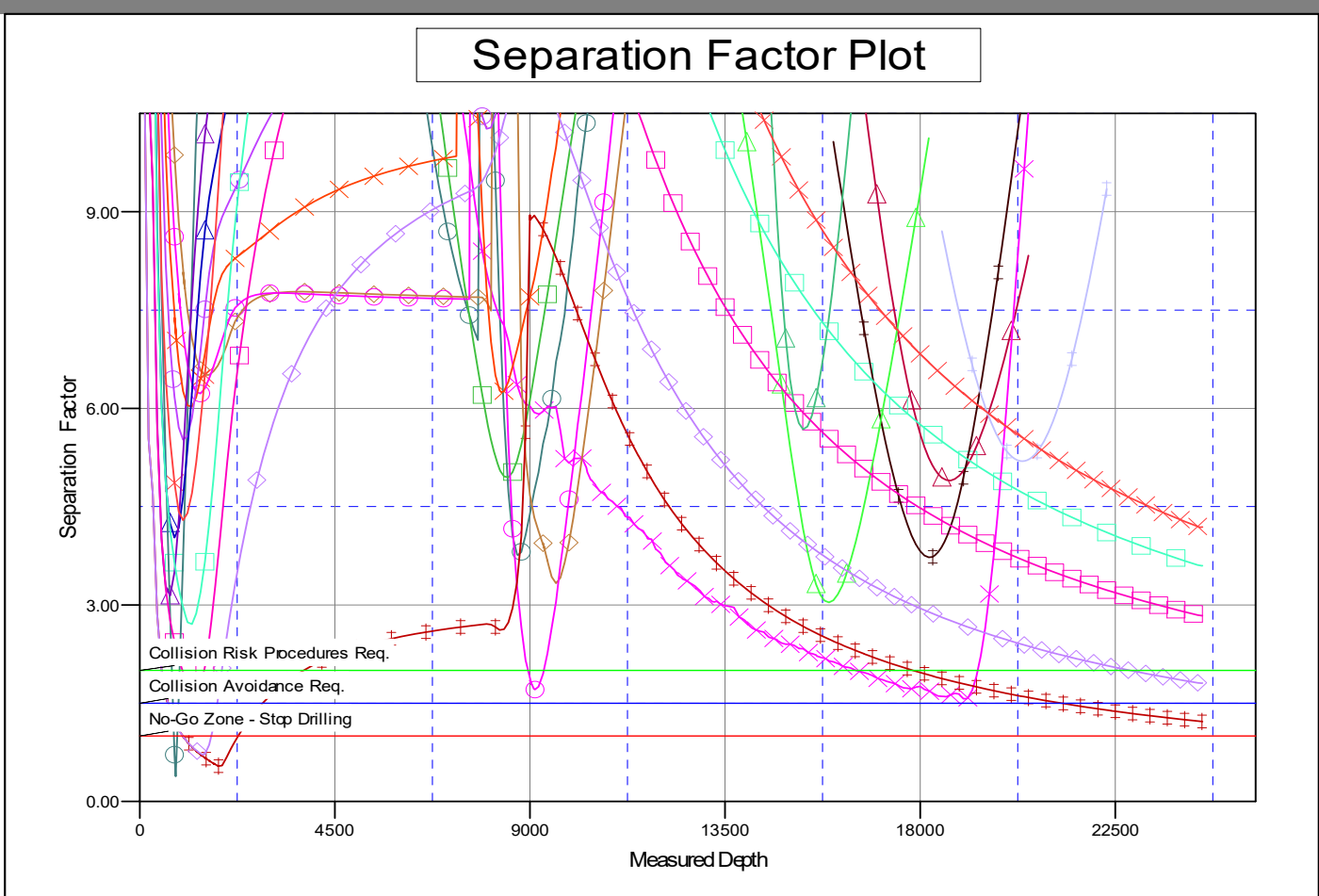
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- | | | |
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| ◆ FREEMAN 1-A, OWB, OWB V0 | ● PRAIRIE LE 18-031HC, OWB, OWB V0 | ▲ Prairie 05C, OWB, Plan #1 V0 |
| ▲ GUTSHALL 1, OWB, OWB V0 | ● PRAIRIE LE 18-039HC, OWB, OWB V0 | ▲ Prairie 06N, OWB, Plan #1 V0 |
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