



Project: WELD COUNTY
 Site: Edmundson Pad
 Well: EDMUNDSON 10N
 Wellbore: OWB
 Design: PLAN #1
 Lat: 39.930015
 Long: -104.810373
 GL: 5052.0
 KB: KB 25 @ 5077.0usft

T G M

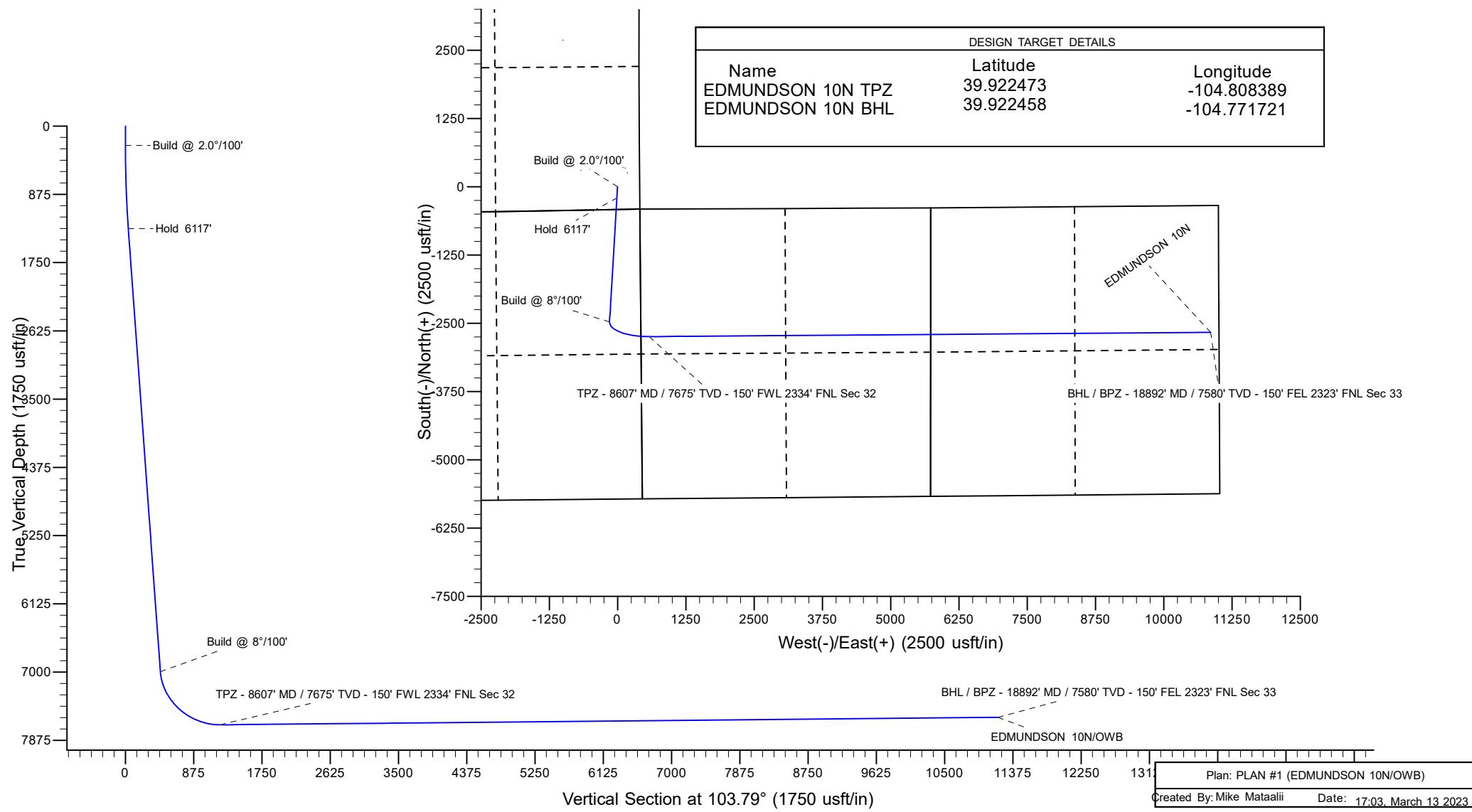
Azimuths to Grid North
 True North: -0.45°
 Magnetic North: 9.48°

Magnetic Field
 Strength: 53709.0nT
 Dip Angle: 66.97°
 Date: 12/31/2004
 Model: IGRF2000

WELL DETAILS: EDMUNDSON 10N						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	1218105.19	3193397.74	39.930015	-104.810373	

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 @ 2.0°/100'
1340.6	21.81	183.39	1314.4	-204.7	-12.1	2.00	183.39	37.0	Hold 6117'
7458.5	21.81	183.39	6994.4	-2473.9	-146.3	0.00	0.00	447.5	Build @ 8°/100'
8607.4	90.53	89.57	7675.0	-2743.0	577.8	8.00	-93.35	1215.0	TPZ - 8607' MD / 7675' TVD - 150' FWL 2334' FNL Sec 32
18892.3	90.53	89.57	7580.0	-2665.9	10862.1	0.00	0.00	11184.4	BHL / BPZ - 18892' MD / 7580' TVD - 150' FEL 2323' FNL Sec 33

DESIGN TARGET DETAILS		
Name	Latitude	Longitude
EDMUNDSON 10N TPZ	39.922473	-104.808389
EDMUNDSON 10N BHL	39.922458	-104.771721



PDC Energy Inc.
Anticollision Summary Report

Company:	PDC - PLANNING DB	Local Co-ordinate Reference:	Well EDMUNDSON 10N
Project:	WELD COUNTY	TVD Reference:	KB 25 @ 5077.0usft
Reference Site:	Edmundson Pad	MD Reference:	KB 25 @ 5077.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	EDMUNDSON 10N	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 #1	Offset TVD Reference:	Offset Datum

Reference	PLAN #1		
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 2,500.0 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	3/13/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	18,892.3	PLAN #1 (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						
Edmundson Offsets						
CUTLER 1-A - OWB - OWB	11,771.4	7,658.8	346.2	104.2	1.431	Collision Avoidance Req., CC
CUTLER 1D - OWB - OWB	12,568.9	7,654.4	1,405.1	1,143.3	5.367	CC, ES
CUTLER 1D - OWB - OWB	12,600.0	7,654.1	1,405.5	1,143.5	5.364	SF
EDMUNDSON LE 33-082HC - OWB - OWB	759.2	759.1	68.0	61.8	10.985	CC, ES
EDMUNDSON LE 33-082HC - OWB - OWB	18,800.0	18,443.0	1,131.0	563.5	1.993	Collision Risk Procedures Re
ERGER 1 - OWB - OWB	11,677.1	7,674.6	2,185.5	1,945.6	9.109	CC
ERGER 1 - OWB - OWB	11,800.0	7,673.5	2,189.0	1,944.8	8.964	ES
ERGER 1 - OWB - OWB	12,200.0	7,669.8	2,247.2	1,991.3	8.780	SF
ERNEST H KALLSEN 2 - OWB - OWB						Out of range
ERNEST H KALLSEN 1 - OWB - OWB						Out of range
EVERETTE DAHLINGER A1 - OWB - OWB						Out of range
FARNER 1 - OWB - OWB	12,924.8	7,653.1	1,004.7	855.3	6.724	CC
FARNER 1 - OWB - OWB	13,000.0	7,652.4	1,007.5	854.6	6.587	ES
FARNER 1 - OWB - OWB	13,100.0	7,651.5	1,019.9	863.4	6.517	SF
FREEMAN 1 - OWB - OWB	8,089.4	7,533.9	1,128.4	954.3	6.480	CC
FREEMAN 1 - OWB - OWB	8,100.0	7,540.3	1,128.5	954.1	6.473	ES
FREEMAN 1 - OWB - OWB	8,200.0	7,594.9	1,136.1	959.6	6.438	SF
FREEMAN 1-A - OWB - OWB	8,089.4	7,527.9	1,128.4	954.4	6.484	CC
FREEMAN 1-A - OWB - OWB	8,100.0	7,534.3	1,128.5	954.2	6.477	ES
FREEMAN 1-A - OWB - OWB	8,200.0	7,588.9	1,136.1	959.8	6.442	SF
GREEN 1 - OWB - OWB						Out of range
IKE 1 - OWB - OWB	18,892.3	7,638.0	2,430.6	2,218.9	11.484	CC, ES, SF
KIMMEL 12-33 - OWB - OWB	14,459.7	7,647.9	508.1	197.9	1.638	Collision Risk Procedures Re
OHD 1 - OWB - OWB						Out of range
PC 1S-66-2928 - OWB - OWB	287.5	323.1	2,214.3	2,211.0	677.733	CC
PC 1S-66-2928 - OWB - OWB	300.0	333.6	2,214.3	2,211.0	668.926	ES
PC 1S-66-2928 - OWB - OWB	1,800.0	1,797.6	2,483.8	2,470.6	188.280	SF
PC 1S-66-2928 14CDH - OWB - OWB	0.0	17.0	2,182.0			
PC 1S-66-2928 14CDH - OWB - OWB	200.0	198.8	2,183.0	2,180.4	844.779	ES
PC 1S-66-2928 14CDH - OWB - OWB	3,000.0	3,317.9	2,482.0	2,453.7	87.618	SF
PC 1S-66-2928 17NH - OWB - OWB	0.0	17.0	2,162.0			
PC 1S-66-2928 17NH - OWB - OWB	1,800.0	2,431.3	2,175.1	2,155.6	111.983	ES
PC 1S-66-2928 17NH - OWB - OWB	5,600.0	5,996.9	2,485.7	2,426.5	41.987	SF
PC 1S-66-2928 17NH - ST01 - ST01	0.0	17.0	2,162.0			
PC 1S-66-2928 17NH - ST01 - ST01	1,800.0	2,431.3	2,175.1	2,155.6	111.983	ES
PC 1S-66-2928 17NH - ST01 - ST01	5,600.0	5,996.9	2,485.7	2,426.5	41.987	SF
PC 1S-66-2928 19NH - OWB - OWB	2,692.0	3,308.2	1,958.2	1,926.6	61.920	CC

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

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Reference Wellbore	OWB	Database:	EDM 5000.15 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Offset Datum

Summary						
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Edmundson Offsets						
PC 1S-66-2928 19NH - OWB - OWB	2,900.0	3,516.0	1,958.4	1,924.2	57.268	ES
PC 1S-66-2928 19NH - OWB - OWB	6,300.0	6,558.2	2,228.4	2,159.2	32.233	SF
PC 1S-66-2928 20CDH - OWB - OWB	4,814.0	5,436.0	1,808.9	1,750.7	31.123	CC
PC 1S-66-2928 20CDH - OWB - OWB	18,500.0	17,826.6	2,258.0	1,716.6	4.171	ES
PC 1S-66-2928 20CDH - OWB - OWB	18,600.0	17,875.0	2,261.5	1,717.6	4.158	SF
PC 1S-66-2928 9NH - OWB - OWB	0.0	15.0	1,994.6			
PC 1S-66-2928 9NH - OWB - OWB	200.0	201.9	1,995.6	1,993.0	769.601	ES
PC 1S-66-2928 9NH - OWB - OWB	2,400.0	2,162.4	2,485.9	2,465.8	123.792	SF
POLLARD 1 - OWB - OWB						Out of range
PRAIRIE LE 31-369HC - OWB - OWB	7,699.0	16,414.3	1,873.6	1,695.5	10.519	CC
PRAIRIE LE 31-369HC - OWB - OWB	7,700.0	16,414.6	1,873.6	1,695.4	10.516	ES
PRAIRIE LE 31-369HC - OWB - OWB	7,900.0	16,471.0	1,910.7	1,725.1	10.294	SF
REASONER 1 - OWB - OWB	9,755.3	7,706.4	1,993.2	1,796.6	10.137	CC
REASONER 1 - OWB - OWB	9,800.0	7,706.0	1,993.7	1,795.8	10.072	ES
REASONER 1 - OWB - OWB	10,300.0	7,701.4	2,066.3	1,854.1	9.738	SF
REASONER 1-A - OWB - OWB	10,422.5	7,707.2	1,005.8	795.0	4.771	CC
REASONER 1-A - OWB - OWB	10,500.0	7,706.5	1,008.8	794.6	4.711	ES
REASONER 1-A - OWB - OWB	10,600.0	7,705.6	1,021.3	803.4	4.686	SF
REASONER 1A-X - OWB - OWB	9,755.3	7,714.4	1,993.2	1,796.5	10.130	CC
REASONER 1A-X - OWB - OWB	9,800.0	7,714.0	1,993.7	1,795.6	10.065	ES
REASONER 1A-X - OWB - OWB	10,300.0	7,709.4	2,066.3	1,854.0	9.732	SF
SUPERS 1 - OWB - OWB	9,100.0	7,680.4	345.2	160.6	1.870	Collision Risk Procedures R
SUPERS 1 - OWB - OWB	9,100.9	7,680.4	345.2	160.6	1.870	Collision Risk Procedures R

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Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	EDMUNDSON 10N	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 #1	Offset TVD Reference:	Offset Datum

Summary						
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Edmundson Pad						
Edmundson Pad						
EDMUNDSON 01N - OWB - PLAN #1	850.4	854.0	99.4	91.8	13.155	CC
EDMUNDSON 01N - OWB - PLAN #1	900.0	903.1	99.7	91.6	12.219	ES
EDMUNDSON 01N - OWB - PLAN #1	18,892.3	18,381.1	2,113.2	1,529.6	3.621	SF
EDMUNDSON 02N - OWB - PLAN #1	911.5	914.6	87.3	79.1	10.730	CC
EDMUNDSON 02N - OWB - PLAN #1	1,000.0	1,002.3	88.4	79.0	9.408	ES
EDMUNDSON 02N - OWB - PLAN #1	18,892.3	18,313.6	1,902.8	1,319.6	3.263	SF
EDMUNDSON 03N - OWB - PLAN #1	963.3	965.9	75.6	67.4	9.171	CC
EDMUNDSON 03N - OWB - PLAN #1	1,000.0	1,002.3	75.8	67.0	8.655	ES
EDMUNDSON 03N - OWB - PLAN #1	18,892.3	18,437.9	1,690.5	1,106.3	2.894	SF
EDMUNDSON 04NA - OWB - PLAN #1	1,036.4	1,038.6	63.6	54.8	7.237	CC
EDMUNDSON 04NA - OWB - PLAN #1	1,100.0	1,101.8	64.1	54.3	6.531	ES
EDMUNDSON 04NA - OWB - PLAN #1	18,892.3	18,256.0	1,492.6	915.6	2.587	SF
EDMUNDSON 05N - OWB - PLAN #1	1,156.9	1,158.7	52.9	43.3	5.486	CC
EDMUNDSON 05N - OWB - PLAN #1	1,200.0	1,201.6	53.1	42.8	5.125	ES
EDMUNDSON 05N - OWB - PLAN #1	18,892.3	18,484.9	1,058.0	474.9	1.814	Collision Risk Procedures Re
EDMUNDSON 06N - OWB - PLAN #1	1,200.5	1,201.9	42.0	32.0	4.164	CC
EDMUNDSON 06N - OWB - PLAN #1	1,300.0	1,301.0	43.3	31.2	3.566	ES
EDMUNDSON 06N - OWB - PLAN #1	18,892.3	18,621.8	845.3	260.1	1.445	Collision Avoidance Req., SF
EDMUNDSON 07NA - OWB - PLAN #1	1,277.3	1,278.3	31.0	20.3	2.902	CC
EDMUNDSON 07NA - OWB - PLAN #1	1,400.0	1,400.7	32.7	19.3	2.446	ES
EDMUNDSON 07NA - OWB - PLAN #1	18,892.3	18,465.8	664.7	110.3	1.199	Collision Avoidance Req., SF
EDMUNDSON 08C - OWB - PLAN #1	1,272.4	1,273.0	21.0	10.5	1.998	Collision Risk Procedures Re
EDMUNDSON 08C - OWB - PLAN #1	18,892.3	18,890.9	448.5	-115.6	0.795	No-Go Zone - Stop Drilling, E
EDMUNDSON 09N - OWB - PLAN #1	1,341.4	1,341.6	10.5	-0.6	0.944	No-Go Zone - Stop Drilling, C
EDMUNDSON 09N - OWB - PLAN #1	18,892.3	18,729.6	218.4	-344.7	0.388	No-Go Zone - Stop Drilling, E
EDMUNDSON 11NA - OWB - PLAN #1	1,412.6	1,412.3	10.3	-1.6	0.864	No-Go Zone - Stop Drilling, C
EDMUNDSON 11NA - OWB - PLAN #1	18,892.3	18,778.6	287.5	-181.0	0.614	No-Go Zone - Stop Drilling, E
EDMUNDSON 12C - OWB - PLAN #1	1,458.1	1,457.6	20.7	8.2	1.654	Collision Risk Procedures Re
EDMUNDSON 12C - OWB - PLAN #1	18,892.3	19,199.0	453.7	-88.6	0.837	No-Go Zone - Stop Drilling, E
EDMUNDSON 13N - OWB - PLAN #1	1,430.4	1,414.4	117.0	104.1	9.045	CC
EDMUNDSON 13N - OWB - PLAN #1	18,892.3	19,048.8	635.9	50.0	1.085	Collision Avoidance Req., ES
EDMUNDSON 14N - OWB - PLAN #1	1,398.4	1,382.1	107.5	94.7	8.391	CC
EDMUNDSON 14N - OWB - PLAN #1	1,500.0	1,482.2	108.2	94.1	7.676	ES
EDMUNDSON 14N - OWB - PLAN #1	18,892.3	19,231.9	845.3	259.7	1.443	Collision Avoidance Req., SF
EDMUNDSON 15NA - OWB - PLAN #1	1,373.6	1,357.0	98.1	85.2	7.611	CC
EDMUNDSON 15NA - OWB - PLAN #1	1,500.0	1,481.5	99.3	84.8	6.880	ES
EDMUNDSON 15NA - OWB - PLAN #1	18,892.3	19,153.7	1,073.5	491.1	1.843	Collision Risk Procedures Re
EDMUNDSON 16C - OWB - PLAN #1	1,355.8	1,338.9	88.7	75.6	6.752	CC
EDMUNDSON 16C - OWB - PLAN #1	1,400.0	1,382.5	88.8	75.3	6.542	ES
EDMUNDSON 16C - OWB - PLAN #1	18,892.3	19,565.6	1,279.2	701.2	2.213	SF
EDMUNDSON 17N - OWB - PLAN #1	1,343.4	1,325.9	70.3	55.9	4.899	CC
EDMUNDSON 17N - OWB - PLAN #1	1,400.0	1,381.7	70.6	55.7	4.748	ES
EDMUNDSON 17N - OWB - PLAN #1	18,892.3	19,468.9	1,479.9	893.0	2.521	SF
EDMUNDSON 18N - OWB - PLAN #1	1,341.2	1,323.5	62.2	47.0	4.079	CC
EDMUNDSON 18N - OWB - PLAN #1	1,400.0	1,381.4	62.7	46.9	3.972	ES
EDMUNDSON 18N - OWB - PLAN #1	18,892.3	19,661.6	1,690.6	1,104.3	2.883	SF
EDMUNDSON 19NA - OWB - PLAN #1	1,342.2	1,324.2	55.4	39.0	3.386	CC
EDMUNDSON 19NA - OWB - PLAN #1	1,400.0	1,381.1	55.8	39.0	3.317	ES
EDMUNDSON 19NA - OWB - PLAN #1	18,892.3	19,614.2	1,910.8	1,323.8	3.255	SF
EDMUNDSON 20C - OWB - PLAN #1	1,346.1	1,327.9	50.2	32.7	2.869	CC, ES
EDMUNDSON 20C - OWB - PLAN #1	1,400.0	1,380.9	50.6	32.7	2.826	SF
EDMUNDSON 21N - OWB - PLAN #1	1,352.7	1,334.2	47.2	28.8	2.572	CC, ES
EDMUNDSON 21N - OWB - PLAN #1	1,400.0	1,380.7	47.6	28.8	2.541	SF

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

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Reference Well:	EDMUNDSON 10N	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 #1	Offset TVD Reference:	Offset Datum

Summary						
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Edmundson Pad						
Edmundson Pad						
EDMUNDSON 22N - OWB - PLAN #1	1,361.7	1,343.0	47.0	28.3	2.523	CC
EDMUNDSON 22N - OWB - PLAN #1	1,400.0	1,380.6	47.2	28.3	2.493	ES, SF
EDMUNDSON 23N - OWB - PLAN #1	1,372.6	1,353.6	49.5	31.3	2.721	CC
EDMUNDSON 23N - OWB - PLAN #1	1,400.0	1,380.5	49.6	31.2	2.688	ES
EDMUNDSON 23N - OWB - PLAN #1	1,500.0	1,478.8	52.2	32.8	2.681	SF

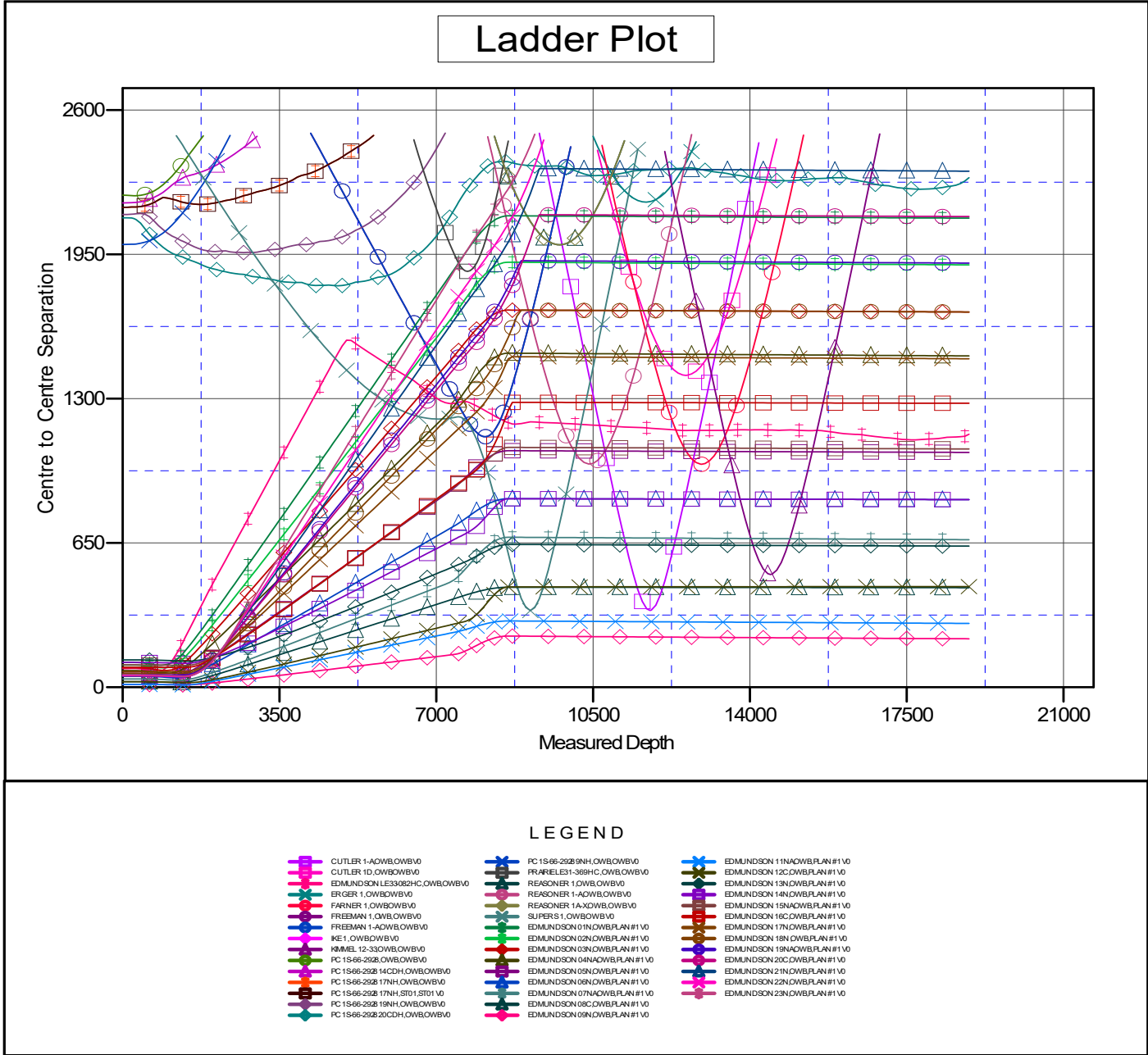
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Project: WELD COUNTY	TVD Reference: KB 25 @ 5077.0usft
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Site Error: 0.0 usft	North Reference: Grid
Reference Well: EDMUNDSON 10N	Survey Calculation Method: Minimum Curvature
Well Error: 0.0 usft	Output errors are at: 2.00 sigma
Reference Wellbore: OWB	Database: EDM 5000.15 Single User Db
Reference Design: PLAN #1	Offset TVD Reference: Offset Datum

Reference Depths are relative to KB 25 @ 5077.0usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000

Coordinates are relative to: EDMUNDSON 10N
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.45°



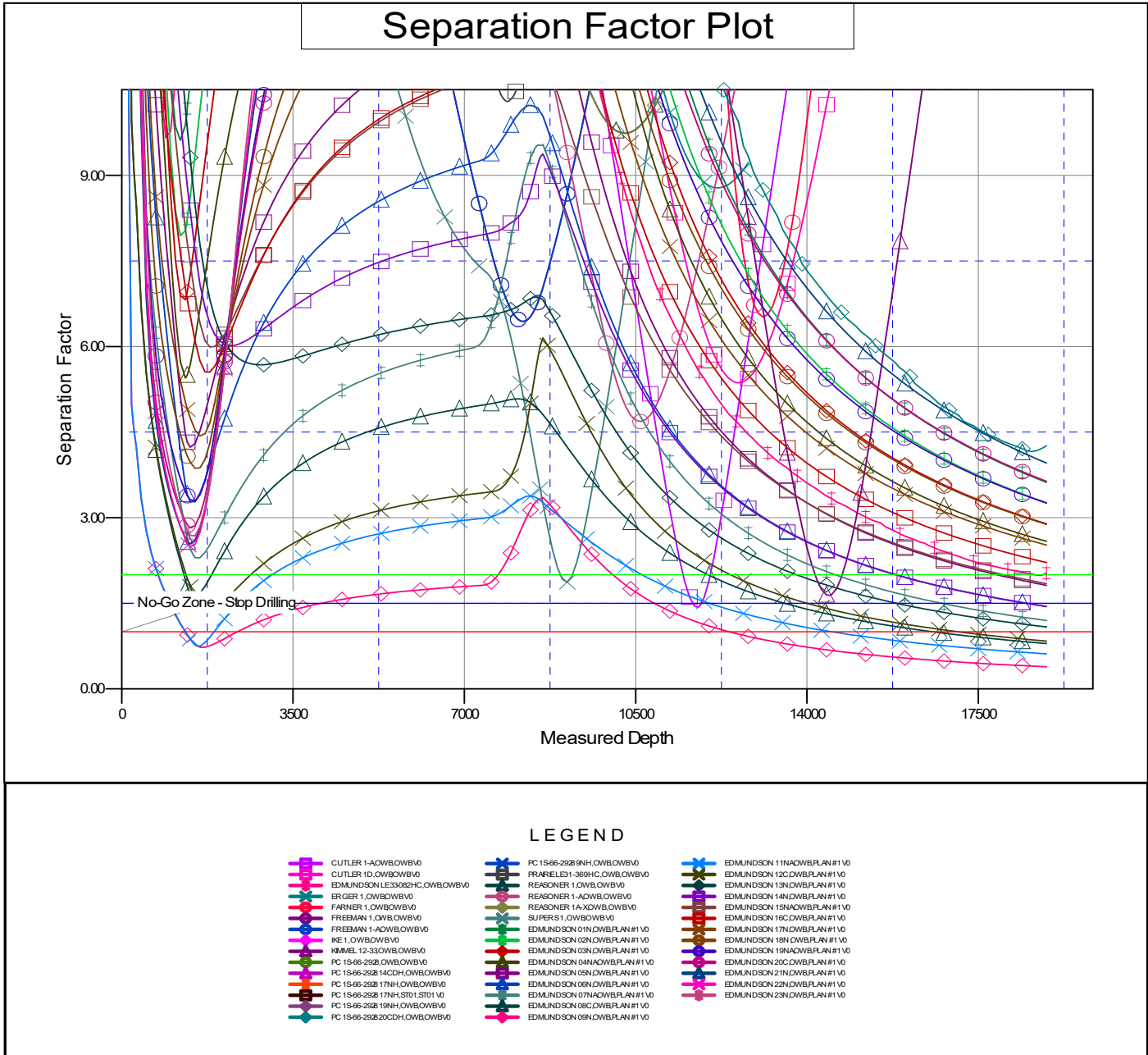
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