



Project: WELD COUNTY
 Site: Edmundson Pad
 Well: EDMUNDSON 05N
 Wellbore: OWB
 Design: PLAN #1
 Lat: 39.930014
 Long: -104.810150
 GL: 5052.0
 KB: KB 25 @ 5077.0usft



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 05N

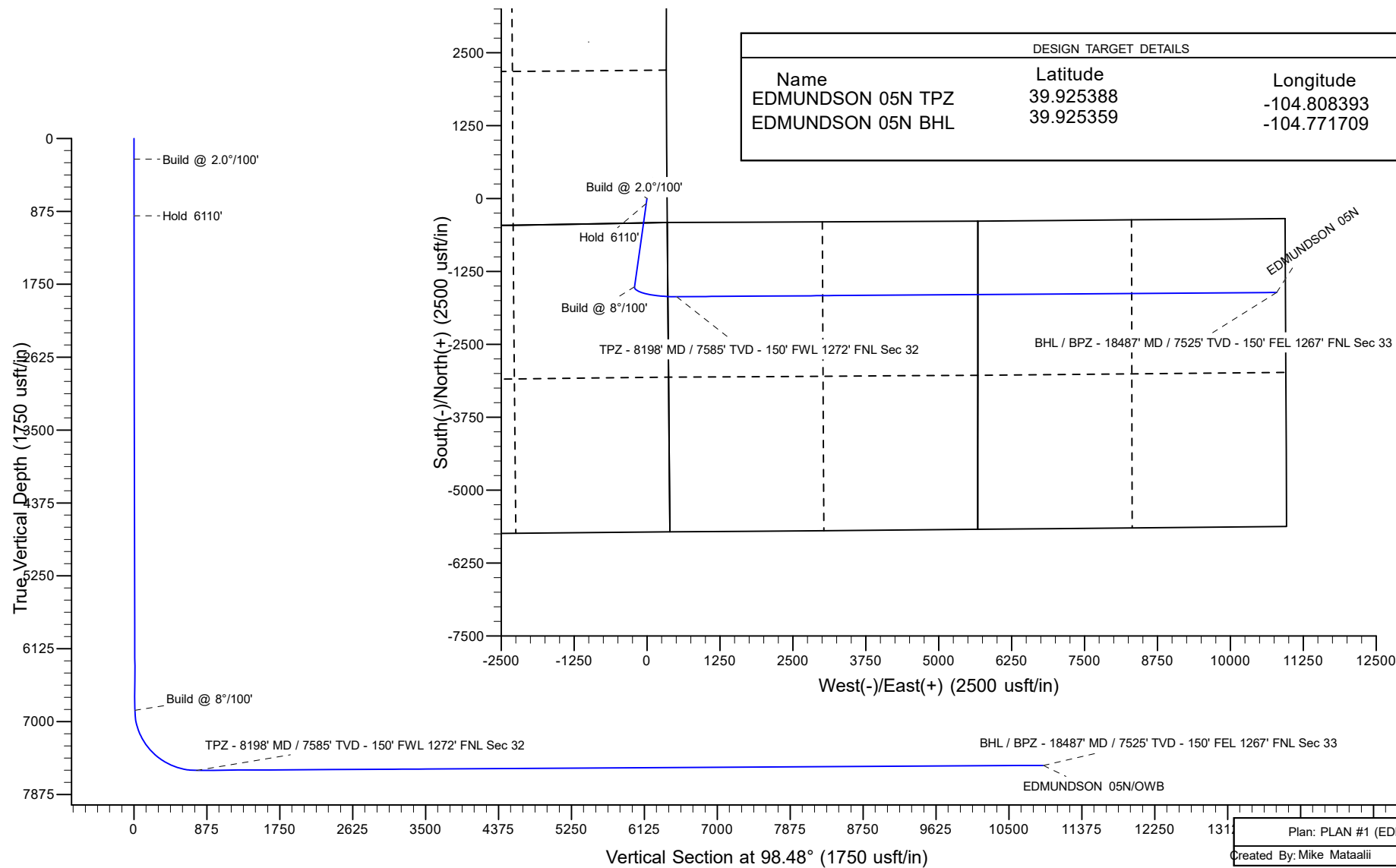
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1218105.19	3193460.24	39.930014	-104.810150

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'
934.2	13.68	188.09	927.7	-80.5	-11.4	2.00	188.09	0.5	Hold 6110'
7044.6	13.68	188.09	6864.6	-1511.6	-215.0	0.00	0.00	10.3	Build @ 8°/100'
8198.6	90.33	89.60	7585.0	-1681.1	506.1	8.00	-98.18	748.4	TPZ - 8198' MD / 7585' TVD - 150' FWL 1272' FNL Sec 32
18487.2	90.33	89.60	7525.0	-1609.3	10794.2	0.00	0.00	10913.5	BHL / BPZ - 18487' MD / 7525' TVD - 150' FEL 1267' FNL Sec 33

DESIGN TARGET DETAILS

Name	Latitude	Longitude
EDMUNDSON 05N TPZ	39.925388	-104.808393
EDMUNDSON 05N BHL	39.925359	-104.771709



PDC Energy Inc.
Anticollision Summary Report

Company:	PDC - PLANNING DB	Local Co-ordinate Reference:	Well EDMUNDSON 05N
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 05N	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	18,487.2	PLAN #1 (OWB)	MWD	OWSG MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance		Separation Factor	Warning
			Between Centres (usft)	Between Ellipses (usft)		
Edmundson Offsets						
CUTLER 1-A - OWB - OWB	11,364.3	7,579.5	714.1	475.9	2.998	CC
CUTLER 1-A - OWB - OWB	11,400.0	7,579.3	714.9	475.3	2.983	ES, SF
CUTLER 1D - OWB - OWB	12,161.2	7,577.9	345.3	86.9	1.336	Collision Avoidance Req., CC
EDMUNDSON LE 33-082HC - OWB - OWB	766.3	765.7	9.3	3.1	1.500	Collision Avoidance Req., CC
EDMUNDSON LE 33-082HC - OWB - OWB	18,330.5	18,443.0	196.0	-72.1	0.731	No-Go Zone - Stop Drilling, ES
ERGER 1 - OWB - OWB						Out of range
ERNEST H KALLSEN 2 - OWB - OWB						Out of range
ERNST H KALLSEN 1 - OWB - OWB						Out of range
EVERETTE DAHLINGER A1 - OWB - OWB						Out of range
FARNER 1 - OWB - OWB	12,518.4	7,577.8	2,064.4	1,917.0	14.009	CC
FARNER 1 - OWB - OWB	12,600.0	7,577.3	2,066.0	1,916.0	13.776	ES
FARNER 1 - OWB - OWB	13,000.0	7,575.0	2,119.8	1,960.2	13.279	SF
FREEMAN 1 - OWB - OWB	7,725.3	7,462.0	2,138.6	1,971.8	12.826	CC
FREEMAN 1 - OWB - OWB	7,750.0	7,476.2	2,138.8	1,971.7	12.801	ES
FREEMAN 1 - OWB - OWB	7,950.0	7,565.9	2,157.8	1,988.0	12.703	SF
FREEMAN 1-A - OWB - OWB	7,725.3	7,456.0	2,138.6	1,971.9	12.834	CC
FREEMAN 1-A - OWB - OWB	7,750.0	7,470.2	2,138.8	1,971.8	12.809	ES
FREEMAN 1-A - OWB - OWB	7,950.0	7,559.9	2,157.8	1,988.1	12.711	SF
GREEN 1 - OWB - OWB						Out of range
IKE 1 - OWB - OWB						Out of range
KIMMEL 12-33 - OWB - OWB	14,052.4	7,577.9	550.7	243.4	1.792	Collision Risk Procedures Re
KIMMEL 12-33 - OWB - OWB	14,100.0	7,577.6	552.8	243.4	1.787	Collision Risk Procedures Re
OHD 1 - OWB - OWB						Out of range
PC 1S-66-2928 - OWB - OWB	285.0	320.8	2,166.1	2,162.8	664.379	CC
PC 1S-66-2928 - OWB - OWB	300.0	333.4	2,166.1	2,162.8	653.820	ES
PC 1S-66-2928 - OWB - OWB	3,100.0	3,354.2	2,493.7	2,469.0	100.930	SF
PC 1S-66-2928 14CDH - OWB - OWB	0.0	17.0	2,133.0			
PC 1S-66-2928 14CDH - OWB - OWB	200.0	199.2	2,134.0	2,131.4	825.712	ES
PC 1S-66-2928 14CDH - OWB - OWB	5,700.0	5,998.0	2,495.4	2,442.6	47.261	SF
PC 1S-66-2928 17NH - OWB - OWB	5,364.0	5,890.0	1,869.8	1,815.0	34.117	CC
PC 1S-66-2928 17NH - OWB - OWB	18,103.0	17,454.0	2,091.6	1,552.2	3.877	ES
PC 1S-66-2928 17NH - OWB - OWB	18,200.0	17,454.0	2,093.9	1,553.5	3.875	SF
PC 1S-66-2928 17NH - ST01 - ST01	5,364.0	5,890.0	1,869.8	1,815.0	34.117	CC
PC 1S-66-2928 17NH - ST01 - ST01	18,100.0	17,451.0	2,088.7	1,549.4	3.872	ES, SF
PC 1S-66-2928 19NH - OWB - OWB	5,683.5	6,158.7	1,507.1	1,445.7	24.537	CC
PC 1S-66-2928 19NH - OWB - OWB	18,100.0	17,580.0	1,650.6	1,107.9	3.041	ES, SF
PC 1S-66-2928 20CDH - OWB - OWB	17,416.9	17,216.4	1,198.2	694.0	2.376	CC

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

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Reference Well:	EDMUNDSON 05N	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						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Edmundson Offsets						
PC 1S-66-2928 20CDH - OWB - OWB	18,100.0	17,865.0	1,211.2	672.3	2.247	ES, SF
PC 1S-66-2928 9NH - OWB - OWB	0.0	15.0	1,945.8			
PC 1S-66-2928 9NH - OWB - OWB	200.0	202.0	1,946.8	1,944.2	750.541	ES
PC 1S-66-2928 9NH - OWB - OWB	3,000.0	2,844.3	2,496.7	2,471.5	98.992	SF
POLLARD 1 - OWB - OWB	14,017.0	7,578.1	1,967.1	1,660.7	6.419	CC, ES
POLLARD 1 - OWB - OWB	14,200.0	7,577.0	1,975.6	1,666.6	6.394	SF
PRAIRIE LE 31-369HC - OWB - OWB	7,330.0	15,457.0	1,903.9	1,759.2	13.161	CC
PRAIRIE LE 31-369HC - OWB - OWB	7,350.0	15,468.7	1,904.3	1,759.0	13.109	ES
PRAIRIE LE 31-369HC - OWB - OWB	7,550.0	15,510.3	1,948.5	1,797.2	12.879	SF
REASONER 1 - OWB - OWB						Out of range
REASONER 1-A - OWB - OWB	10,016.1	7,623.4	2,066.7	1,860.6	10.027	CC
REASONER 1-A - OWB - OWB	10,100.0	7,622.9	2,068.4	1,859.9	9.916	ES
REASONER 1-A - OWB - OWB	10,500.0	7,620.6	2,122.6	1,903.7	9.696	SF
REASONER 1A-X - OWB - OWB						Out of range
SUPERS 1 - OWB - OWB	8,693.9	7,592.1	716.4	538.1	4.017	CC
SUPERS 1 - OWB - OWB	8,700.0	7,592.1	716.5	537.9	4.013	ES
SUPERS 1 - OWB - OWB	8,800.0	7,591.5	724.3	542.9	3.993	SF

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Reference Well:	EDMUNDSON 05N	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						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Edmundson Pad						
Edmundson Pad						
EDMUNDSON 01N - OWB - PLAN #1	723.8	725.5	42.5	35.6	6.193	CC
EDMUNDSON 01N - OWB - PLAN #1	800.0	801.4	43.4	35.4	5.387	ES
EDMUNDSON 01N - OWB - PLAN #1	18,487.2	18,383.0	1,057.3	474.5	1.814	Collision Risk Procedures Re
EDMUNDSON 02N - OWB - PLAN #1	772.6	773.9	31.1	23.7	4.223	CC
EDMUNDSON 02N - OWB - PLAN #1	800.0	801.2	31.2	23.4	3.984	ES
EDMUNDSON 02N - OWB - PLAN #1	18,487.2	18,315.4	845.3	262.5	1.450	Collision Avoidance Req., SF
EDMUNDSON 03N - OWB - PLAN #1	810.3	811.1	20.0	12.7	2.736	CC
EDMUNDSON 03N - OWB - PLAN #1	900.0	900.7	21.3	11.9	2.273	ES
EDMUNDSON 03N - OWB - PLAN #1	18,487.2	18,440.0	635.5	52.3	1.090	Collision Avoidance Req., SF
EDMUNDSON 04NA - OWB - PLAN #1	861.7	862.1	9.1	1.4	1.176	Collision Avoidance Req., CC
EDMUNDSON 04NA - OWB - PLAN #1	18,487.2	18,258.1	446.8	-102.5	0.813	No-Go Zone - Stop Drilling, E
EDMUNDSON 06N - OWB - PLAN #1	1,003.1	1,002.7	10.5	2.2	1.273	Collision Avoidance Req., CC
EDMUNDSON 06N - OWB - PLAN #1	18,487.2	18,623.5	217.1	-348.5	0.384	No-Go Zone - Stop Drilling, E
EDMUNDSON 07NA - OWB - PLAN #1	1,052.8	1,052.0	20.8	12.1	2.398	CC
EDMUNDSON 07NA - OWB - PLAN #1	18,487.2	18,468.4	446.8	-115.9	0.794	No-Go Zone - Stop Drilling, E
EDMUNDSON 08C - OWB - PLAN #1	1,092.7	1,091.6	31.4	22.4	3.472	CC
EDMUNDSON 08C - OWB - PLAN #1	1,200.0	1,198.4	32.7	21.6	2.941	ES
EDMUNDSON 08C - OWB - PLAN #1	18,487.2	18,890.9	666.3	113.2	1.205	Collision Avoidance Req., SF
EDMUNDSON 09N - OWB - PLAN #1	1,128.5	1,127.1	42.0	32.6	4.476	CC
EDMUNDSON 09N - OWB - PLAN #1	1,200.0	1,198.0	42.6	31.9	3.984	ES
EDMUNDSON 09N - OWB - PLAN #1	18,487.2	18,730.4	845.3	260.4	1.445	Collision Avoidance Req., SF
EDMUNDSON 10N - OWB - PLAN #1	1,158.6	1,156.9	52.9	43.3	5.486	CC
EDMUNDSON 10N - OWB - PLAN #1	1,200.0	1,197.9	53.1	42.8	5.145	ES
EDMUNDSON 10N - OWB - PLAN #1	18,487.2	18,892.3	1,058.0	474.7	1.814	Collision Risk Procedures Re
EDMUNDSON 11NA - OWB - PLAN #1	1,187.2	1,185.1	63.8	53.9	6.447	CC
EDMUNDSON 11NA - OWB - PLAN #1	1,300.0	1,296.5	65.5	53.6	5.499	ES
EDMUNDSON 11NA - OWB - PLAN #1	18,487.2	18,779.6	1,275.6	691.1	2.182	SF
EDMUNDSON 12C - OWB - PLAN #1	1,213.4	1,211.1	74.8	64.6	7.384	CC
EDMUNDSON 12C - OWB - PLAN #1	1,300.0	1,296.5	75.7	64.2	6.547	ES
EDMUNDSON 12C - OWB - PLAN #1	18,487.2	19,199.0	1,495.5	918.9	2.594	SF
EDMUNDSON 13N - OWB - PLAN #1	250.0	250.0	70.7	68.0	25.619	CC
EDMUNDSON 13N - OWB - PLAN #1	900.0	889.9	73.4	63.7	7.618	ES
EDMUNDSON 13N - OWB - PLAN #1	18,487.2	19,048.8	1,690.5	1,106.3	2.894	SF
EDMUNDSON 14N - OWB - PLAN #1	250.0	250.0	62.5	59.7	22.644	CC
EDMUNDSON 14N - OWB - PLAN #1	900.0	889.5	65.1	54.7	6.248	ES
EDMUNDSON 14N - OWB - PLAN #1	18,487.2	19,231.9	1,902.8	1,319.2	3.261	SF
EDMUNDSON 15NA - OWB - PLAN #1	250.0	250.0	55.9	53.1	20.254	CC
EDMUNDSON 15NA - OWB - PLAN #1	900.0	889.3	58.0	46.7	5.119	ES
EDMUNDSON 15NA - OWB - PLAN #1	18,487.2	19,153.7	2,117.4	1,532.3	3.619	SF
EDMUNDSON 16C - OWB - PLAN #1	250.0	250.0	51.5	48.8	18.673	CC
EDMUNDSON 16C - OWB - PLAN #1	934.2	922.7	52.9	40.4	4.228	ES
EDMUNDSON 16C - OWB - PLAN #1	18,487.2	19,565.6	2,335.3	1,755.1	4.025	SF
EDMUNDSON 17N - OWB - PLAN #1	946.2	934.2	49.5	35.8	3.622	CC, ES
EDMUNDSON 17N - OWB - PLAN #1	1,000.0	987.0	50.0	35.9	3.540	SF
EDMUNDSON 18N - OWB - PLAN #1	962.4	949.9	52.0	38.4	3.836	CC
EDMUNDSON 18N - OWB - PLAN #1	1,000.0	986.9	52.2	38.3	3.754	ES
EDMUNDSON 18N - OWB - PLAN #1	1,100.0	1,085.0	55.3	40.4	3.710	SF
EDMUNDSON 19NA - OWB - PLAN #1	979.8	966.9	56.9	43.8	4.346	CC
EDMUNDSON 19NA - OWB - PLAN #1	1,000.0	986.8	57.0	43.7	4.283	ES
EDMUNDSON 19NA - OWB - PLAN #1	1,100.0	1,084.9	59.3	44.9	4.116	SF
EDMUNDSON 20C - OWB - PLAN #1	998.3	985.0	63.6	51.1	5.087	CC
EDMUNDSON 20C - OWB - PLAN #1	1,000.0	986.7	63.6	51.1	5.079	ES
EDMUNDSON 20C - OWB - PLAN #1	1,200.0	1,182.5	70.0	55.1	4.685	SF

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

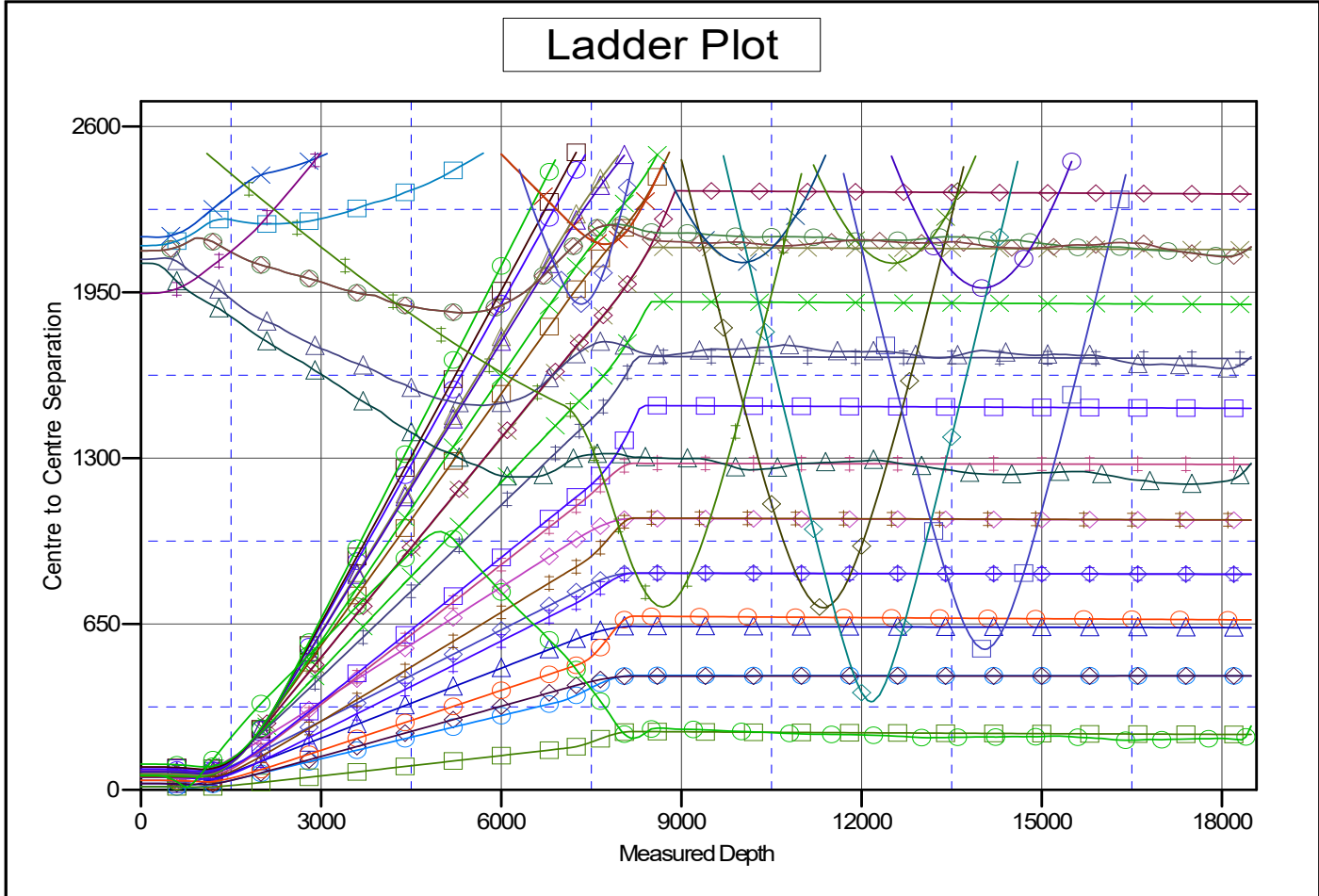
PDC Energy Inc.

Anticollision Summary Report

Company: PDC - PLANNING DB	Local Co-ordinate Reference: Well EDMUNDSON 05N
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 05N	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 05N
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.45°



LEGEND

- | | | |
|--|--|---|
| <ul style="list-style-type: none"> EDMUNDSON 01NOWBPLAN#1 V0 EDMUNDSON 02NOWBPLAN#1 V0 EDMUNDSON 03NOWBPLAN#1 V0 EDMUNDSON 04NAOWBPLAN#1 V0 EDMUNDSON 06NOWBPLAN#1 V0 EDMUNDSON 07NAOWBPLAN#1 V0 EDMUNDSON 08COWBPLAN#1 V0 EDMUNDSON 09NOWBPLAN#1 V0 EDMUNDSON 10NOWBPLAN#1 V0 EDMUNDSON 11NAOWBPLAN#1 V0 EDMUNDSON 12COWBPLAN#1 V0 EDMUNDSON 13NOWBPLAN#1 V0 EDMUNDSON 14NOWBPLAN#1 V0 EDMUNDSON 15NAOWBPLAN#1 V0 | <ul style="list-style-type: none"> EDMUNDSON 16COWBPLAN#1 V0 EDMUNDSON 17NOWBPLAN#1 V0 EDMUNDSON 18NOWBPLAN#1 V0 EDMUNDSON 19NAOWBPLAN#1 V0 EDMUNDSON 20COWBPLAN#1 V0 EDMUNDSON 21NOWBPLAN#1 V0 EDMUNDSON 22NOWBPLAN#1 V0 EDMUNDSON 23NOWBPLAN#1 V0 CUTLER 1-AOWBOWBVO CUTLER 1D.OWBOWBVO EDMUNDSON LESS082HCOWBOWBVO FARNER 1.OWBOWBVO FREEMAN 1.OWBOWBVO FREEMAN 1-AOWBOWBVO | <ul style="list-style-type: none"> KIMMEL 12-33COWBOWBVO PC 1S-66-2928.OWBOWBVO PC 1S-66-2928 14CDH.OWBOWBVO PC 1S-66-2928 17NH.OWBOWBVO PC 1S-66-2928 17NH.SD1.SD1 V0 PC 1S-66-2928 19NH.OWBOWBVO PC 1S-66-2928 20CDH.OWBOWBVO PC 1S-66-2928 9NH.OWBOWBVO POLLARD 1.OWBOWBVO PRARELE31-368HC.OWBOWBVO REASONER 1-AOWBOWBVO SUPERS 1.OWBOWBVO |
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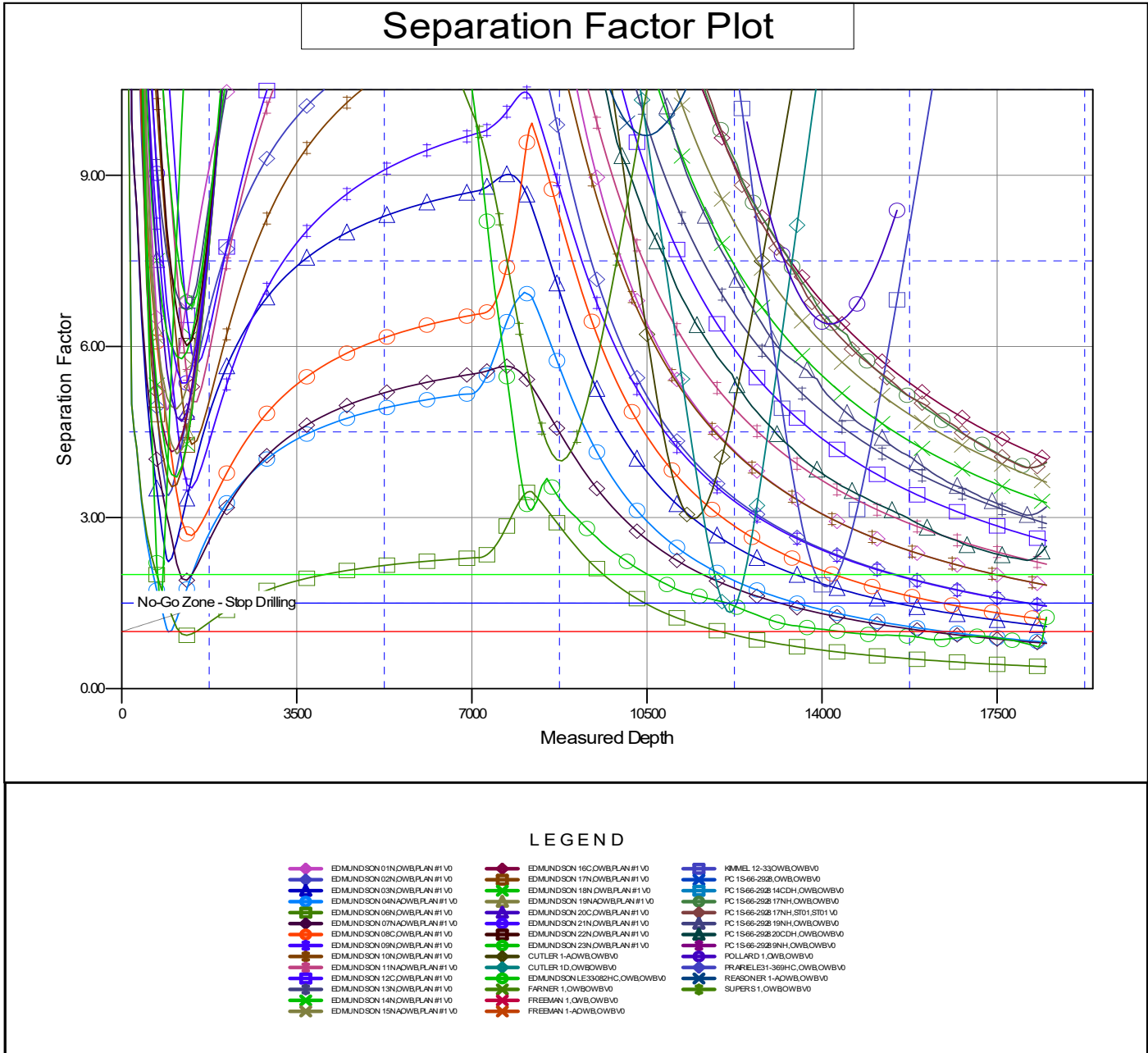
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Reference Design:	PLAN #1	Offset TVD Reference:	Offset Datum

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 05N
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.45°



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