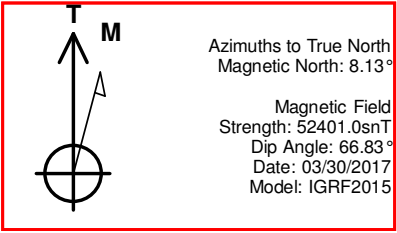


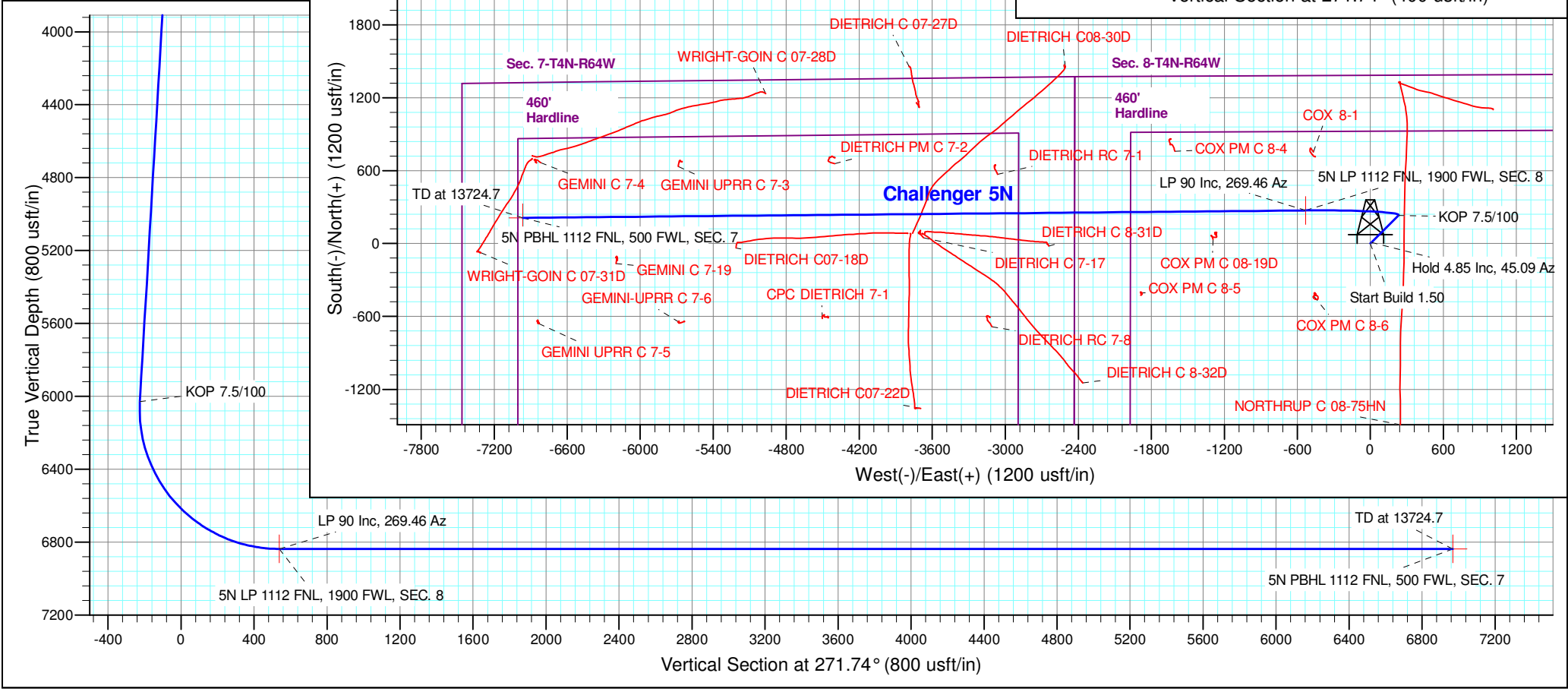
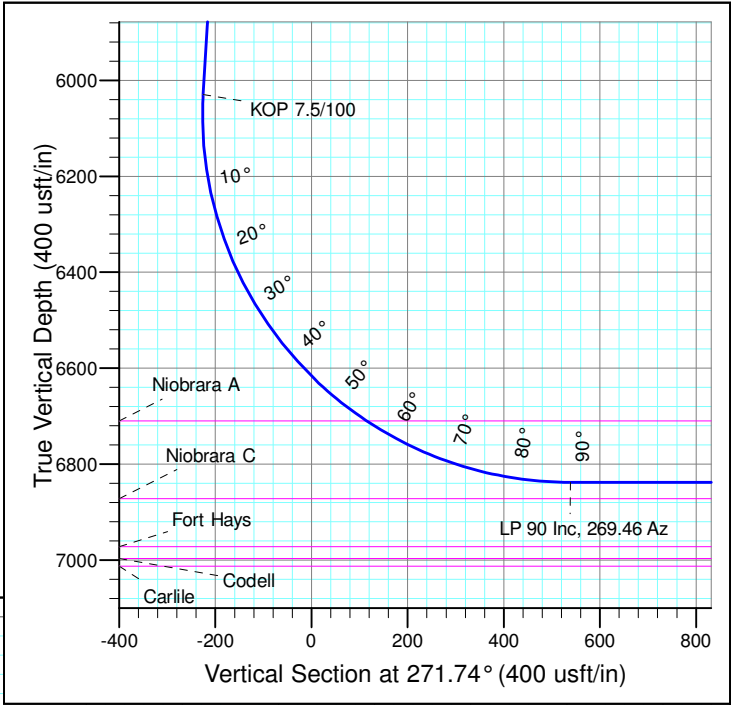


Well Name: Challenger 5N
Surface Location: CHALLENGER 4N64W08 1-9 PAD
North American Datum 1983
US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4775.0
WELL @ 4798.0usft (Original Well Elev)
Northing Easting Latitude Longitude Slot
0.0 0.0 1364519.62 3257809.00 40° 19' 49.142 N 104° 34' 30.945 W

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
3	2323.3	4.85	45.09	2322.9	9.7	9.7	1.50	45.09	-9.4	
4	6043.0	4.85	45.09	6029.3	231.6	232.4	0.00	0.00	-225.2	
5	7289.2	90.00	269.46	6838.0	272.4	-530.6	7.50	-135.53	538.6	5N LP 1112 FNL, 1900 FWL, SEC. 8
6	13724.7	90.00	269.46	6838.0	212.0	-6965.8	0.00	0.00	6969.0	5N PBHL 1112 FNL, 500 FWL, SEC. 7



Project: SEC. 8-T4N-R64W
Site: CHALLENGER 4N64W08 1-9 PAD
Well: Challenger 5N
Wellbore: Wellbore #1
Design: Design #1 30Mar17 kjs



PDC Energy Inc. DJ Basin

SEC. 8-T4N-R64W

CHALLENGER 4N64W08 1-9 PAD

Challenger 5N

Wellbore #1

Design #1 30Mar17 kjs

Anticollision Summary Report

02 June, 2017

Anticollision Summary Report

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Challenger 5N
Project:	SEC. 8-T4N-R64W	TVD Reference:	WELL @ 4798.0usft (Original Well Elev)
Reference Site:	CHALLENGER 4N64W08 1-9 PAD	MD Reference:	WELL @ 4798.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Challenger 5N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1 30Mar17 kjs	Offset TVD Reference:	Offset Datum

Reference	Design #1 30Mar17 kjs		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,682.5 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.45 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	06/02/17		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	13,724.4	Design #1 30Mar17 kjs (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
CHALLENGER 4N64W08 1-9 PAD						
Challenger 1N - Wellbore #1 - Design #1 30Mar17 kjs	200.0	200.0	59.9	59.2	78.572	CC, ES
Challenger 1N - Wellbore #1 - Design #1 30Mar17 kjs	13,724.7	13,806.4	1,010.2	526.0	2.086	SF
Challenger 2N - Wellbore #1 - Design #1 30Mar17 kjs	200.0	200.0	45.0	44.2	58.989	CC, ES
Challenger 2N - Wellbore #1 - Design #1 30Mar17 kjs	13,724.7	13,852.3	768.8	285.9	1.592	SF
Challenger 3N - Wellbore #1 - Design #1 30Mar17 kjs	200.0	200.0	30.0	29.2	39.310	CC, ES
Challenger 3N - Wellbore #1 - Design #1 30Mar17 kjs	13,724.7	13,750.1	515.3	30.9	1.064	Level 2, SF
Challenger 4N - Wellbore #1 - Design #1 30Mar17 kjs	200.0	200.0	15.0	14.2	19.631	CC
Challenger 4N - Wellbore #1 - Design #1 30Mar17 kjs	13,724.7	13,793.1	237.7	-230.4	0.508	Level 1, ES, SF
Challenger 6N - Wellbore #1 - Design #1 30Mar17 kjs	2,000.0	2,000.0	15.0	4.3	1.406	Level 3, CC
Challenger 6N - Wellbore #1 - Design #1 30Mar17 kjs	13,724.7	13,782.1	244.5	-225.6	0.520	Level 1, ES, SF
Challenger 7N - Wellbore #1 - Design #1 30Mar17 kjs	1,800.0	1,800.0	30.0	20.4	3.135	CC, ES
Challenger 7N - Wellbore #1 - Design #1 30Mar17 kjs	13,724.7	13,704.5	512.1	28.1	1.058	Level 2, SF
Challenger 8N - Wellbore #1 - Design #1 30Mar17 kjs	200.0	200.0	45.0	44.3	59.037	CC, ES
Challenger 8N - Wellbore #1 - Design #1 30Mar17 kjs	13,724.7	13,781.0	727.5	244.9	1.507	SF
Challenger 9N - Wellbore #1 - Design #1 30Mar17 kjs	200.0	200.0	60.0	59.2	78.668	CC, ES
Challenger 9N - Wellbore #1 - Design #1 30Mar17 kjs	13,724.7	13,728.0	1,015.0	531.5	2.099	SF

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Challenger 5N
Project:	SEC. 8-T4N-R64W	TVD Reference:	WELL @ 4798.0usft (Original Well Elev)
Reference Site:	CHALLENGER 4N64W08 1-9 PAD	MD Reference:	WELL @ 4798.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Challenger 5N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1 30Mar17 kjs	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						
Existing Wells Sec. 7-T4N-R64W						
CPC DIETRICH 7-1 - Wellbore #1 - Wellbore #1	11,271.8	6,829.4	838.5	664.5	4.818	CC
CPC DIETRICH 7-1 - Wellbore #1 - Wellbore #1	11,300.0	6,829.9	839.0	664.0	4.794	ES
CPC DIETRICH 7-1 - Wellbore #1 - Wellbore #1	11,400.0	6,831.5	848.3	669.8	4.754	SF
DIETRICH C 07-27D - Wellbore #1 - Wellbore #1	10,535.3	6,860.2	1,215.3	1,066.0	8.143	CC
DIETRICH C 07-27D - Wellbore #1 - Wellbore #1	10,600.0	6,860.7	1,217.0	1,065.5	8.036	ES
DIETRICH C 07-27D - Wellbore #1 - Wellbore #1	10,900.0	6,863.1	1,268.8	1,107.1	7.848	SF
DIETRICH C 7-17 - Wellbore #1 - Wellbore #1	10,446.7	6,847.3	178.8	33.9	1.234	Level 2, CC, ES, SF
DIETRICH C 8-31D - Wellbore #1 - Wellbore #1	9,409.2	6,979.4	260.8	143.9	2.232	CC, ES, SF
DIETRICH C 8-32D - Wellbore #1 - Wellbore #1	9,138.2	7,120.9	1,398.3	1,286.9	12.559	CC
DIETRICH C 8-32D - Wellbore #1 - Wellbore #1	9,200.0	7,120.1	1,399.6	1,286.2	12.342	ES
DIETRICH C 8-32D - Wellbore #1 - Wellbore #1	9,700.0	7,112.6	1,506.9	1,376.7	11.571	SF
DIETRICH C07-18D - Wellbore #1 - Wellbore #1	11,970.3	7,073.0	237.2	18.3	1.084	Level 2, CC, ES, SF
DIETRICH C07-22D - Wellbore #1 - Wellbore #1	10,487.2	7,069.2	1,597.8	1,445.5	10.489	CC
DIETRICH C07-22D - Wellbore #1 - Wellbore #1	10,500.0	7,068.6	1,597.9	1,445.1	10.459	ES
DIETRICH C07-22D - Wellbore #1 - Wellbore #1	11,000.0	7,047.7	1,678.0	1,508.2	9.882	SF
DIETRICH C08-30D - Wellbore #1 - Wellbore #1	9,259.6	7,235.9	1,215.7	1,100.5	10.545	CC
DIETRICH C08-30D - Wellbore #1 - Wellbore #1	9,300.0	7,235.8	1,216.4	1,099.8	10.428	ES
DIETRICH C08-30D - Wellbore #1 - Wellbore #1	9,700.0	7,234.2	1,293.1	1,162.9	9.936	SF
DIETRICH PM C 7-2 - Wellbore #1 - Wellbore #1	11,190.7	6,885.0	432.2	259.9	2.508	CC
DIETRICH PM C 7-2 - Wellbore #1 - Wellbore #1	11,200.0	6,884.1	432.3	259.6	2.504	ES, SF
DIETRICH RC 7-1 - Wellbore #1 - Wellbore #1	9,825.2	6,850.0	335.8	209.2	2.653	CC, ES, SF
DIETRICH RC 7-8 - Wellbore #1 - Wellbore #1	9,886.3	6,816.0	916.7	789.5	7.208	CC
DIETRICH RC 7-8 - Wellbore #1 - Wellbore #1	9,900.0	6,815.6	916.8	789.2	7.183	ES
DIETRICH RC 7-8 - Wellbore #1 - Wellbore #1	10,100.0	6,809.4	941.3	806.9	7.006	SF
GEMINI C 7-19 - Wellbore #1 - Wellbore #1	12,956.3	6,878.0	351.1	119.7	1.518	CC, ES, SF
GEMINI C 7-4 - Wellbore #1 - Wellbore #1	13,595.6	6,884.2	470.8	217.9	1.861	CC
GEMINI C 7-4 - Wellbore #1 - Wellbore #1	13,600.0	6,883.9	470.8	217.7	1.860	ES, SF
GEMINI UPRR C 7-3 - Wellbore #1 - Wellbore #1	12,442.0	6,908.6	412.5	198.4	1.927	CC, ES, SF
GEMINI UPRR C 7-5 - Wellbore #1 - Wellbore #1	13,600.0	6,833.7	872.4	619.2	3.445	CC, ES
GEMINI UPRR C 7-5 - Wellbore #1 - Wellbore #1	13,700.0	6,835.6	878.1	621.4	3.421	SF
GEMINI-UPRR C 7-6 - Wellbore #1 - Wellbore #1	12,449.4	6,902.2	871.7	658.1	4.081	CC
GEMINI-UPRR C 7-6 - Wellbore #1 - Wellbore #1	12,500.0	6,900.0	873.2	657.9	4.055	ES
GEMINI-UPRR C 7-6 - Wellbore #1 - Wellbore #1	12,600.0	6,900.0	884.6	665.9	4.044	SF
NORTHROP C 08-75HN - Wellbore #1 - Wellbore #1	6,600.0	7,807.2	470.1	430.1	11.753	SF
NORTHROP C 08-75HN - Wellbore #1 - Wellbore #1	6,726.1	7,803.2	442.7	406.1	12.085	CC, ES
WRIGHT-GOIN C 07-28D - Wellbore #1 - Wellbore #1	11,738.9	7,229.7	1,015.4	812.4	5.001	CC
WRIGHT-GOIN C 07-28D - Wellbore #1 - Wellbore #1	11,800.0	7,225.4	1,017.3	812.1	4.959	ES
WRIGHT-GOIN C 07-28D - Wellbore #1 - Wellbore #1	11,900.0	7,218.3	1,028.1	819.5	4.929	SF
WRIGHT-GOIN C 07-31D - Wellbore #1 - Wellbore #1	13,724.7	6,978.7	450.3	188.8	1.722	CC, ES, SF
Existing Wells Sec. 8-T4N-R64W						
COX 8-1 - Wellbore #1 - Wellbore #1	7,234.9	6,831.9	497.2	454.6	11.688	CC, ES
COX 8-1 - Wellbore #1 - Wellbore #1	7,400.0	6,828.9	524.9	478.2	11.246	SF
COX PM C 08-19D - Wellbore #1 - Wellbore #1	8,060.8	6,818.4	208.1	142.9	3.192	CC, ES
COX PM C 08-19D - Wellbore #1 - Wellbore #1	8,100.0	6,818.0	211.8	145.3	3.187	SF
COX PM C 8-4 - Wellbore #1 - Wellbore #1	8,365.4	6,859.1	517.6	441.1	6.766	CC, ES
COX PM C 8-4 - Wellbore #1 - Wellbore #1	8,500.0	6,857.2	534.9	453.9	6.610	SF
COX PM C 8-5 - Wellbore #1 - Wellbore #1	8,642.8	6,838.8	663.6	578.5	7.794	CC, ES
COX PM C 8-5 - Wellbore #1 - Wellbore #1	8,800.0	6,837.9	682.0	591.6	7.549	SF
COX PM C 8-6 - Wellbore #1 - Wellbore #1	2,037.8	2,028.1	611.4	600.6	56.389	CC, ES
COX PM C 8-6 - Wellbore #1 - Wellbore #1	7,600.0	6,829.4	796.6	745.6	15.630	SF

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Challenger 5N
Project:	SEC. 8-T4N-R64W	TVD Reference:	WELL @ 4798.0usft (Original Well Elev)
Reference Site:	CHALLENGER 4N64W08 1-9 PAD	MD Reference:	WELL @ 4798.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Challenger 5N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1 30Mar17 kjs	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4798.0usft (Original Well Ele

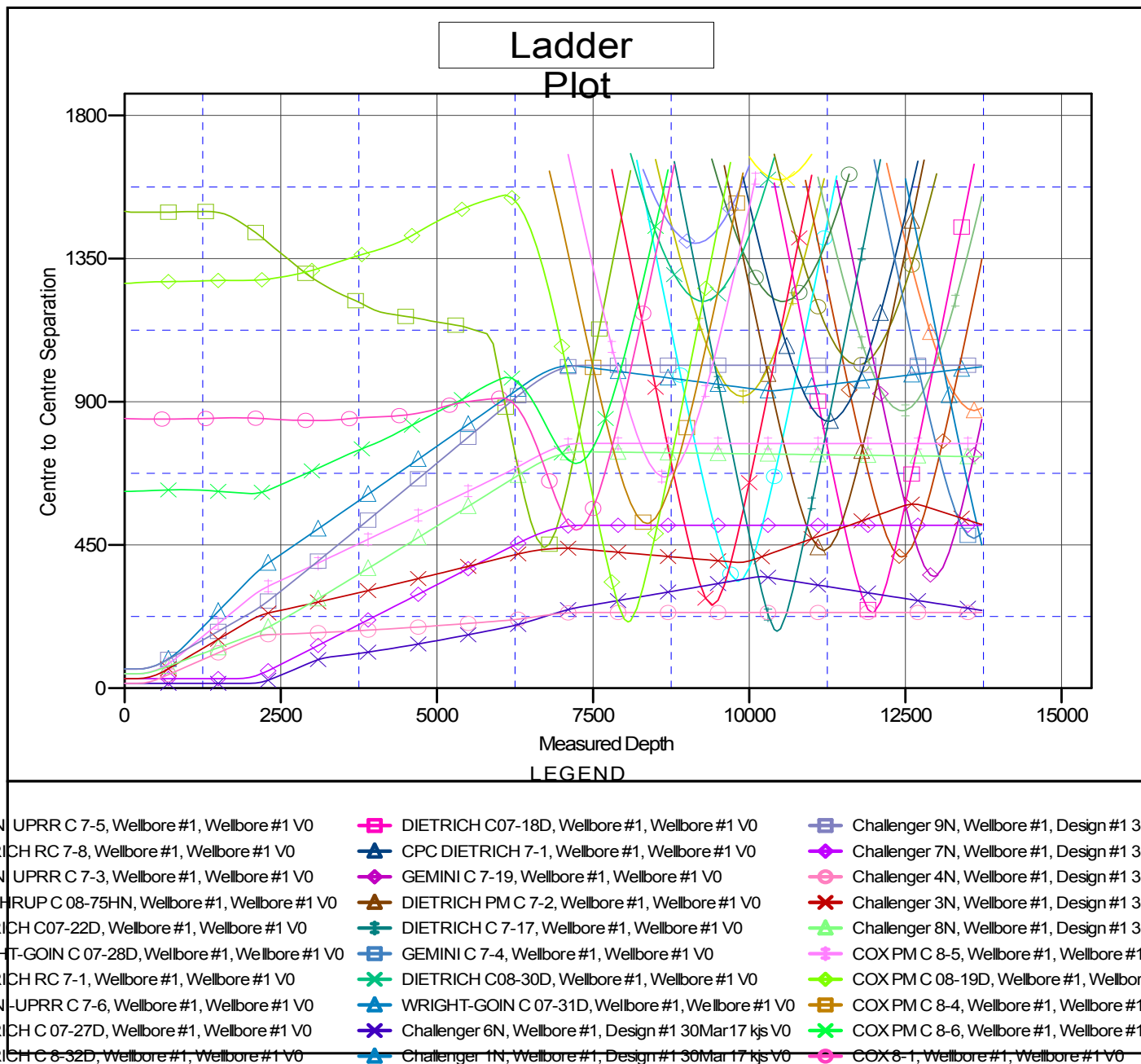
Offset Depths are relative to Offset Datum

Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Challenger 5N

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.60°



Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Challenger 5N
Project:	SEC. 8-T4N-R64W	TVD Reference:	WELL @ 4798.0usft (Original Well Elev)
Reference Site:	CHALLENGER 4N64W08 1-9 PAD	MD Reference:	WELL @ 4798.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Challenger 5N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1 30Mar17 kjs	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4798.0usft (Original Well Ele

Offset Depths are relative to Offset Datum

Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Challenger 5N

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.60°

