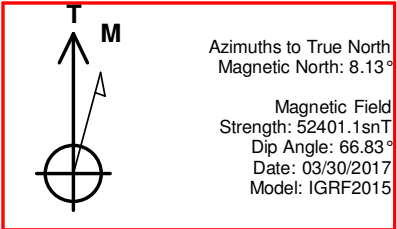




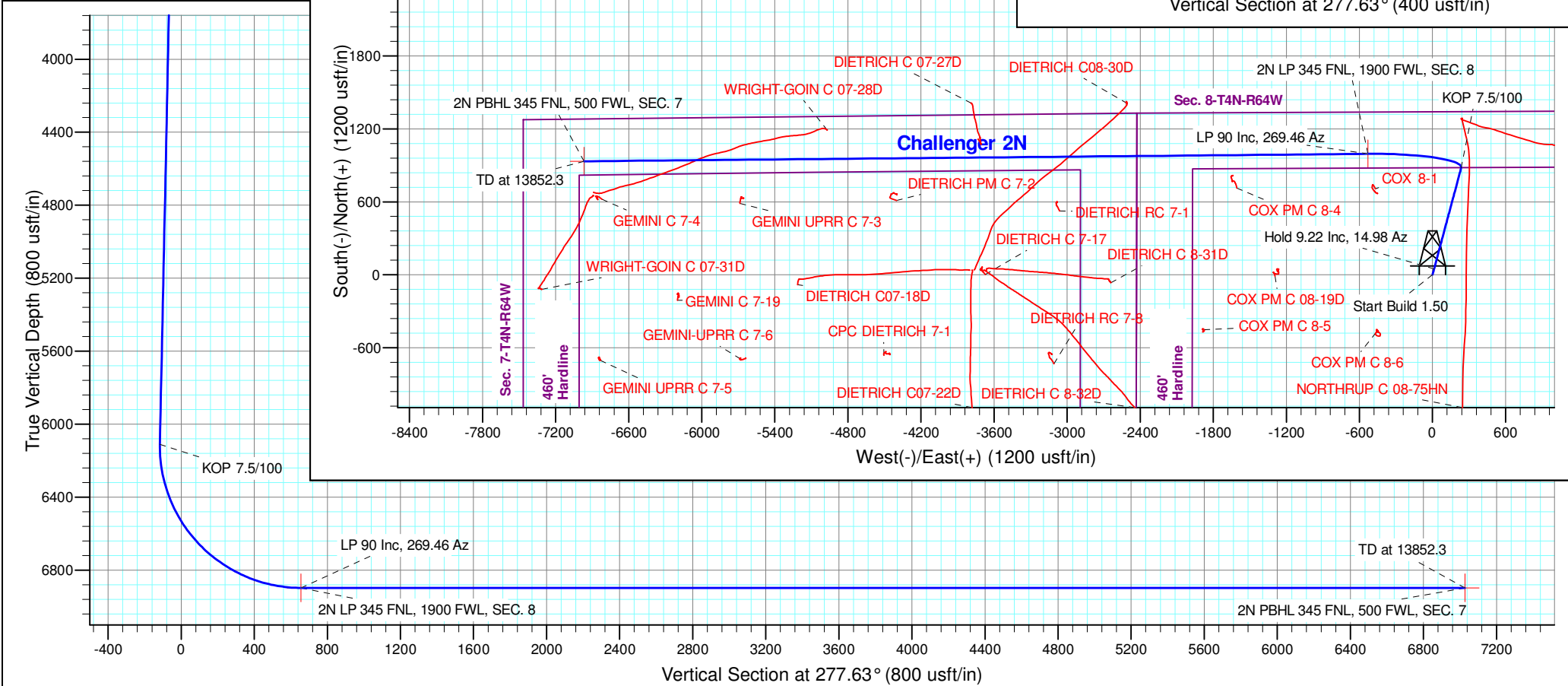
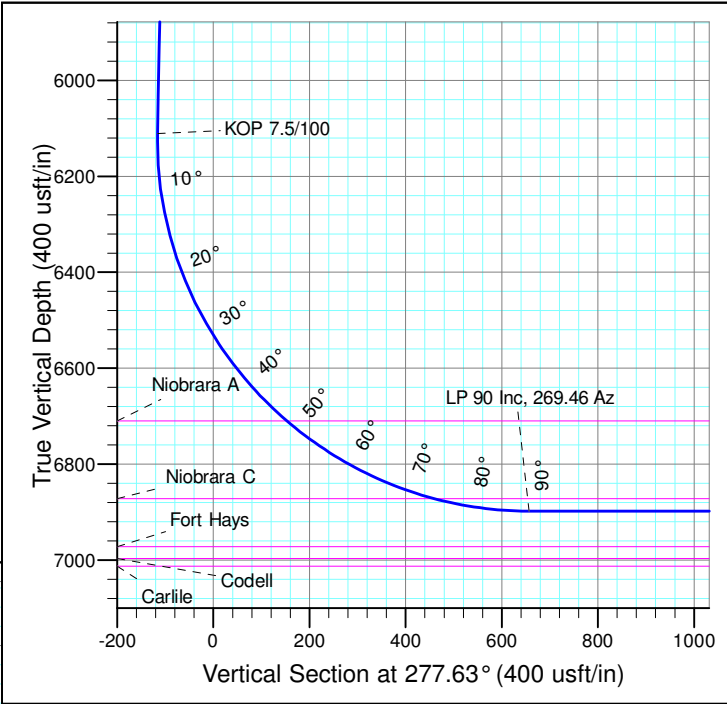
Well Name: Challenger 2N
Surface Location: CHALLENGER 4N64W08 1-9 PAD
North American Datum 1983
US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4775.0
WELL @ 4798.0usft (Original Well Elev)
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1364564.61 3257808.58 40° 19' 49.586 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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	814.5	9.22	14.98	811.9	47.7	12.7	1.50	14.98	-6.3	
4	6182.9	9.22	14.98	6110.9	878.4	235.0	0.00	0.00	-116.2	
5	7415.6	90.00	269.46	6898.0	994.3	-529.4	7.50	-105.33	656.8	2N LP 345 FNL, 1900 FWL, SEC. 8
6	13852.3	90.00	269.46	6898.0	933.5	-6965.8	0.00	0.00	7028.1	2N PBHL 345 FNL, 500 FWL, SEC. 7



Project: SEC. 8-T4N-R64W
Site: CHALLENGER 4N64W08 1-9 PAD
Well: Challenger 2N
Wellbore: Wellbore #1
Design: Design #1 30Mar17 kjs



PDC Energy Inc. DJ Basin

SEC. 8-T4N-R64W

CHALLENGER 4N64W08 1-9 PAD

Challenger 2N

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 2N
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 2N	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	13,852.3	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	14.9	14.2	19.583	CC
Challenger 1N - Wellbore #1 - Design #1 30Mar17 kjs	13,852.3	13,816.6	256.4	-207.9	0.552	Level 1, ES, SF
Challenger 3N - Wellbore #1 - Design #1 30Mar17 kjs	200.0	200.0	15.0	14.2	19.679	CC
Challenger 3N - Wellbore #1 - Design #1 30Mar17 kjs	12,900.0	12,785.6	203.6	-190.2	0.517	Level 1, SF
Challenger 3N - Wellbore #1 - Design #1 30Mar17 kjs	13,852.3	13,732.5	260.3	-205.7	0.559	Level 1, ES
Challenger 4N - Wellbore #1 - Design #1 30Mar17 kjs	200.0	200.0	30.0	29.3	39.358	CC
Challenger 4N - Wellbore #1 - Design #1 30Mar17 kjs	400.0	401.4	30.5	28.6	16.249	ES
Challenger 4N - Wellbore #1 - Design #1 30Mar17 kjs	13,852.3	13,788.1	536.5	53.2	1.110	Level 2, SF
Challenger 5N - Wellbore #1 - Design #1 30Mar17 kjs	200.0	200.0	45.0	44.2	58.989	CC, ES
Challenger 5N - Wellbore #1 - Design #1 30Mar17 kjs	13,852.3	13,717.4	768.8	286.1	1.593	SF
Challenger 6N - Wellbore #1 - Design #1 30Mar17 kjs	200.0	200.0	60.0	59.2	78.668	CC, ES
Challenger 6N - Wellbore #1 - Design #1 30Mar17 kjs	13,852.3	13,782.1	1,003.5	520.0	2.075	SF
Challenger 7N - Wellbore #1 - Design #1 30Mar17 kjs	200.0	200.0	75.0	74.2	98.347	CC, ES
Challenger 7N - Wellbore #1 - Design #1 30Mar17 kjs	13,852.3	13,697.2	1,280.4	797.2	2.650	SF
Challenger 8N - Wellbore #1 - Design #1 30Mar17 kjs	200.0	200.0	90.0	89.3	118.025	CC, ES
Challenger 8N - Wellbore #1 - Design #1 30Mar17 kjs	13,852.3	13,775.6	1,491.5	1,007.4	3.081	SF
Challenger 9N - Wellbore #1 - Design #1 30Mar17 kjs	200.0	200.0	105.0	104.2	137.657	CC, ES
Challenger 9N - Wellbore #1 - Design #1 30Mar17 kjs	6,200.0	5,997.8	1,578.5	1,541.9	43.111	SF

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Challenger 2N
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 2N	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	11,407.1	6,856.1	1,607.1	1,432.6	9.210	CC
CPC DIETRICH 7-1 - Wellbore #1 - Wellbore #1	11,500.0	6,857.3	1,609.7	1,432.1	9.061	ES
CPC DIETRICH 7-1 - Wellbore #1 - Wellbore #1	11,900.0	6,862.1	1,680.9	1,489.6	8.785	SF
DIETRICH C 07-27D - Wellbore #1 - Wellbore #1	10,670.5	6,926.2	448.5	298.7	2.993	CC
DIETRICH C 07-27D - Wellbore #1 - Wellbore #1	10,700.0	6,926.3	449.5	298.6	2.980	ES, SF
DIETRICH C 7-17 - Wellbore #1 - Wellbore #1	10,580.7	6,866.8	947.5	802.2	6.518	CC
DIETRICH C 7-17 - Wellbore #1 - Wellbore #1	10,600.0	6,866.0	947.7	801.7	6.491	ES
DIETRICH C 7-17 - Wellbore #1 - Wellbore #1	10,800.0	6,857.3	972.5	819.8	6.370	SF
DIETRICH C 8-31D - Wellbore #1 - Wellbore #1	9,543.6	7,019.5	1,028.5	911.0	8.753	CC
DIETRICH C 8-31D - Wellbore #1 - Wellbore #1	9,600.0	7,018.9	1,030.0	910.6	8.627	ES
DIETRICH C 8-31D - Wellbore #1 - Wellbore #1	9,800.0	7,016.7	1,060.0	933.9	8.406	SF
DIETRICH C 8-32D - Wellbore #1 - Wellbore #1						Out of range
DIETRICH C07-18D - Wellbore #1 - Wellbore #1	12,105.4	7,095.0	1,005.6	786.4	4.588	CC, ES
DIETRICH C07-18D - Wellbore #1 - Wellbore #1	12,300.0	7,095.0	1,024.3	798.4	4.535	SF
DIETRICH C07-22D - Wellbore #1 - Wellbore #1						Out of range
DIETRICH C08-30D - Wellbore #1 - Wellbore #1	9,394.3	7,289.6	448.5	332.5	3.869	CC
DIETRICH C08-30D - Wellbore #1 - Wellbore #1	9,400.0	7,289.6	448.5	332.4	3.863	ES
DIETRICH C08-30D - Wellbore #1 - Wellbore #1	9,500.0	7,289.2	460.7	341.3	3.857	SF
DIETRICH PM C 7-2 - Wellbore #1 - Wellbore #1	11,322.2	6,918.6	336.0	163.3	1.945	CC, ES, SF
DIETRICH RC 7-1 - Wellbore #1 - Wellbore #1	9,959.4	6,879.2	432.7	305.6	3.404	CC, ES
DIETRICH RC 7-1 - Wellbore #1 - Wellbore #1	10,000.0	6,878.2	434.6	306.1	3.384	SF
DIETRICH RC 7-8 - Wellbore #1 - Wellbore #1						Out of range
GEMINI C 7-19 - Wellbore #1 - Wellbore #1	13,091.6	6,909.2	1,119.3	887.6	4.831	CC
GEMINI C 7-19 - Wellbore #1 - Wellbore #1	13,100.0	6,909.3	1,119.3	887.3	4.825	ES
GEMINI C 7-19 - Wellbore #1 - Wellbore #1	13,300.0	6,911.4	1,138.5	899.6	4.766	SF
GEMINI C 7-4 - Wellbore #1 - Wellbore #1	13,729.0	6,910.5	297.6	44.4	1.175	Level 2, CC, ES, SF
GEMINI UPRR C 7-3 - Wellbore #1 - Wellbore #1	12,576.5	6,936.4	355.9	141.4	1.659	CC
GEMINI UPRR C 7-3 - Wellbore #1 - Wellbore #1	12,600.0	6,936.0	356.7	141.4	1.657	ES, SF
GEMINI UPRR C 7-5 - Wellbore #1 - Wellbore #1	13,735.3	6,850.0	1,640.6	1,387.1	6.473	CC
GEMINI UPRR C 7-5 - Wellbore #1 - Wellbore #1	13,800.0	6,850.0	1,641.9	1,386.2	6.421	ES
GEMINI UPRR C 7-5 - Wellbore #1 - Wellbore #1	13,852.3	6,850.0	1,644.8	1,387.3	6.388	SF
GEMINI-UPRR C 7-6 - Wellbore #1 - Wellbore #1	12,584.1	6,958.1	1,638.3	1,424.2	7.652	CC
GEMINI-UPRR C 7-6 - Wellbore #1 - Wellbore #1	12,600.0	6,958.0	1,638.4	1,423.7	7.633	ES
GEMINI-UPRR C 7-6 - Wellbore #1 - Wellbore #1	12,900.0	6,956.5	1,668.5	1,443.6	7.419	SF
NORTHROP C 08-75HN - Wellbore #1 - Wellbore #1	6,700.0	6,734.1	319.1	276.8	7.538	SF
NORTHROP C 08-75HN - Wellbore #1 - Wellbore #1	6,723.8	6,760.2	318.4	276.6	7.616	CC, ES
WRIGHT-GOIN C 07-28D - Wellbore #1 - Wellbore #1	11,871.0	7,274.3	247.6	44.2	1.217	Level 2, CC, ES, SF
WRIGHT-GOIN C 07-31D - Wellbore #1 - Wellbore #1	13,852.3	7,037.0	1,107.6	845.9	4.232	CC, ES, SF
Existing Wells Sec. 8-T4N-R64W						
COX 8-1 - Wellbore #1 - Wellbore #1	7,361.2	6,854.6	271.5	227.6	6.187	CC, ES
COX 8-1 - Wellbore #1 - Wellbore #1	7,400.0	6,855.2	274.0	229.4	6.137	SF
COX PM C 08-19D - Wellbore #1 - Wellbore #1	8,195.4	6,861.6	975.9	909.7	14.750	CC
COX PM C 08-19D - Wellbore #1 - Wellbore #1	8,200.0	6,861.5	975.9	909.6	14.718	ES
COX PM C 08-19D - Wellbore #1 - Wellbore #1	8,700.0	6,857.8	1,098.6	1,016.3	13.347	SF
COX PM C 8-4 - Wellbore #1 - Wellbore #1	8,500.1	6,870.9	251.3	174.1	3.254	CC, ES, SF
COX PM C 8-5 - Wellbore #1 - Wellbore #1	8,777.5	6,894.0	1,430.7	1,344.7	16.636	CC
COX PM C 8-5 - Wellbore #1 - Wellbore #1	8,800.0	6,893.9	1,430.9	1,344.1	16.497	ES
COX PM C 8-5 - Wellbore #1 - Wellbore #1	9,600.0	6,890.5	1,650.2	1,536.9	14.563	SF
COX PM C 8-6 - Wellbore #1 - Wellbore #1	0.0	0.0	650.3			
COX PM C 8-6 - Wellbore #1 - Wellbore #1	100.0	79.2	650.4	650.1	2,768.880	ES
COX PM C 8-6 - Wellbore #1 - Wellbore #1	8,100.0	6,895.3	1,645.1	1,581.9	26.035	SF

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

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Challenger 2N
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 2N	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

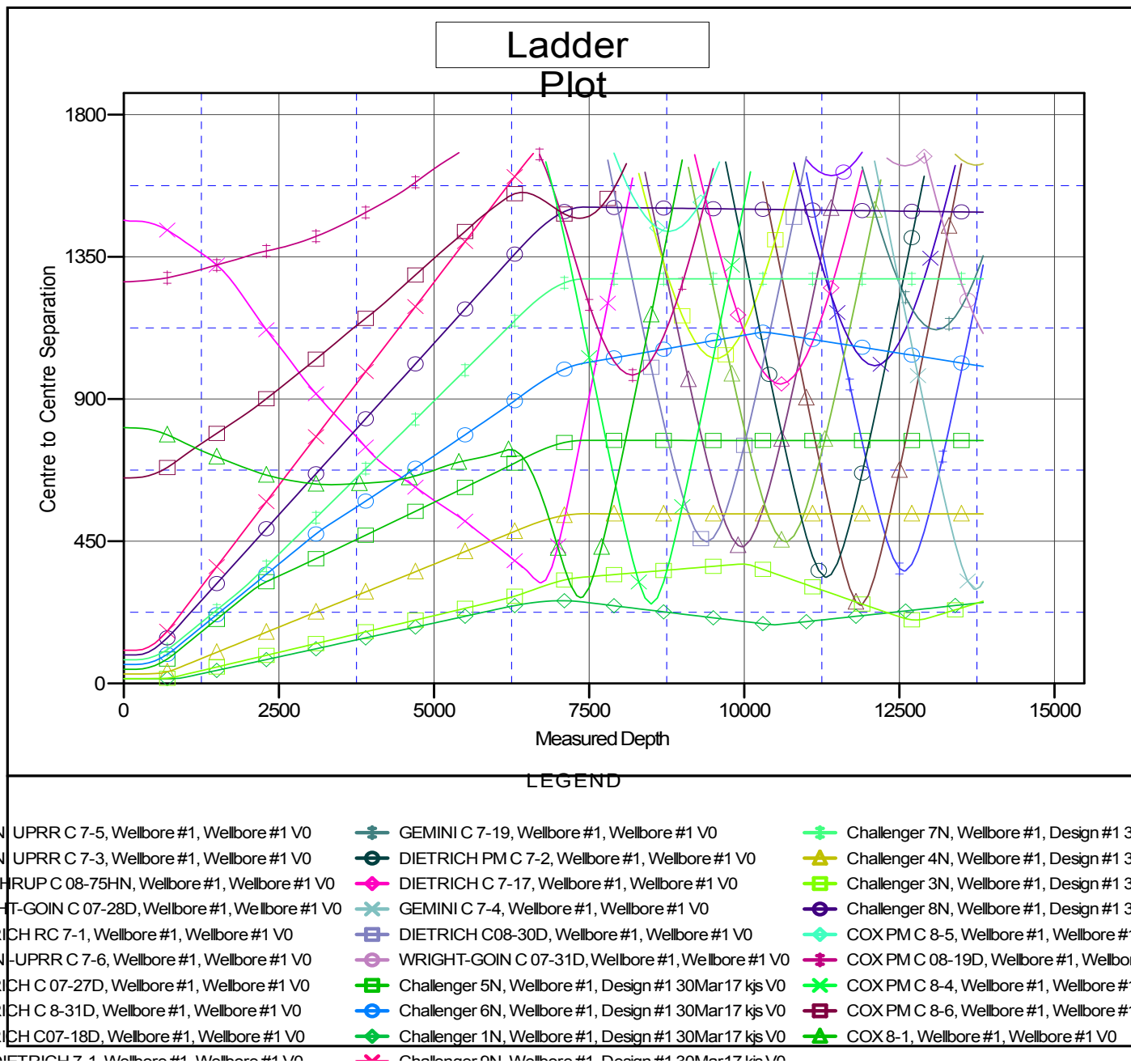
Offset Depths are relative to Offset Datum

Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Challenger 2N

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.60°



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

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Challenger 2N
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 2N	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 2N

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.60°

