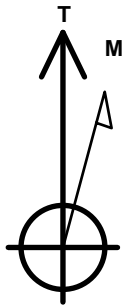


PDC Energy Inc. DJ Basin

Well Name: **J Clark 4N (Nio B)**
 Surface Location: Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W
 North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
 Ground Elevation: 4617.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1391636.24 3242560.86 40.405173 -104.628997
 Original Well Elev WELL @ 4640.0ft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 550'FNL & 2204'FEL, Sec.14	1.0	0.0	0.0	Point
BHL 500'FNL & 1050'FWL, Sec.11	6750.0	5376.6	-2040.9	Point
LPL 50'FSL & 1120'FWL, Sec.11	6790.0	584.4	-1934.8	Point



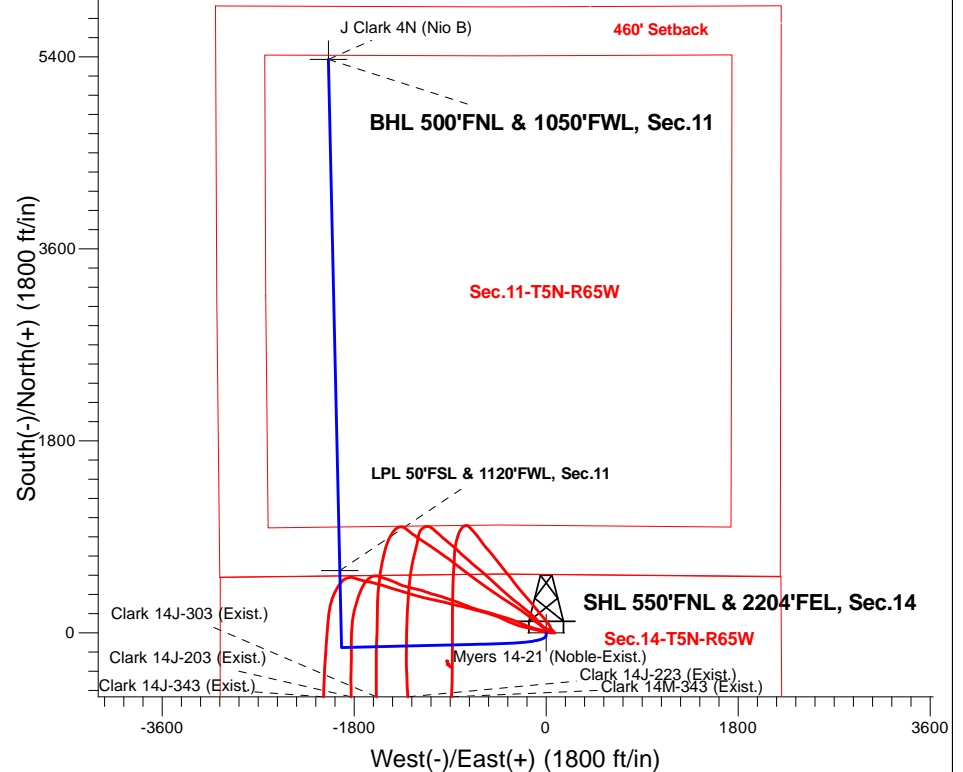
Azimuths to True North
 Magnetic North: 7.91°

Magnetic Field
 Strength: 52463.6snT
 Dip Angle: 66.85°
 Date: 12/19/2017
 Model: IGRF2010

Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W
 J Clark 4N (Nio B)
 Plan #1 (1-10-18)
 10:12, January 12 2018

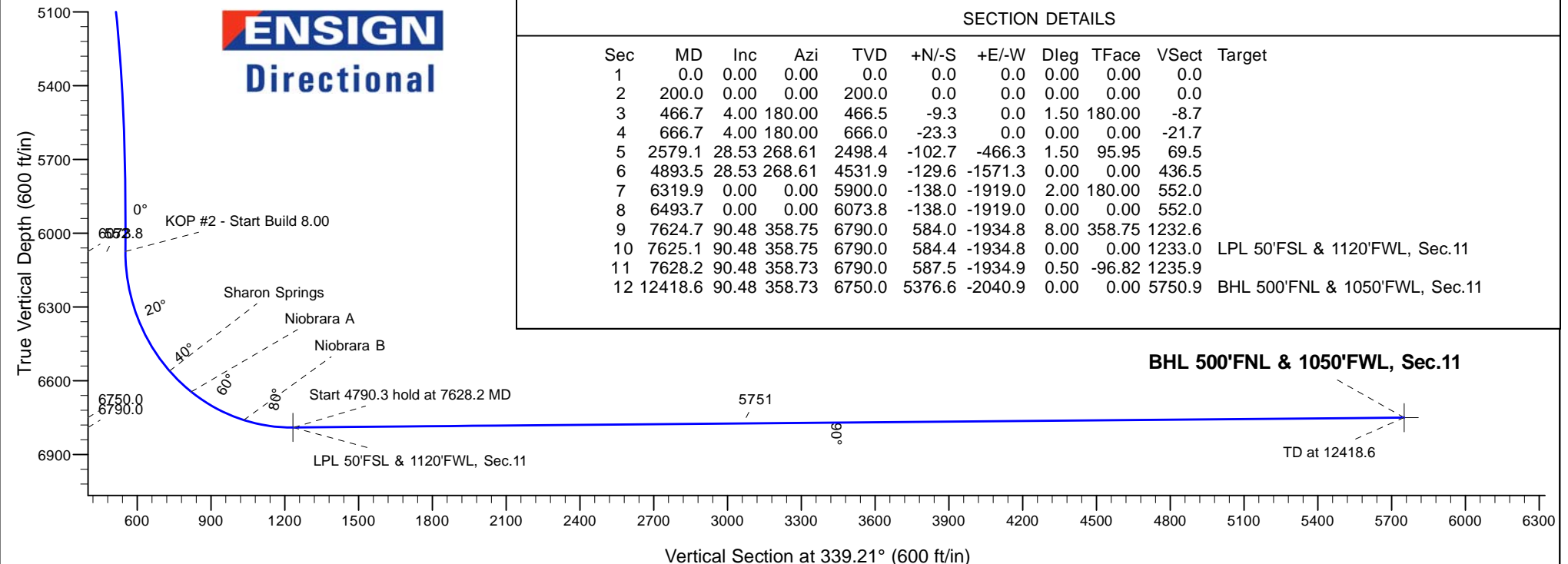
ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	KOP - Start Build 1.50
466.5	466.7	Start 200.0 hold at 466.7 MD
666.0	666.7	Start DLS 1.50 TFO 95.95
4531.9	4893.5	Start Drop -2.00
6073.8	6493.7	KOP #2 - Start Build 8.00
6790.0	7628.2	Start 4790.3 hold at 7628.2 MD
6750.0	12418.6	TD at 12418.6



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	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	466.7	4.00	180.00	466.5	-9.3	0.0	1.50	180.00	-8.7	
4	666.7	4.00	180.00	666.0	-23.3	0.0	0.00	0.00	-21.7	
5	2579.1	28.53	268.61	2498.4	-102.7	-466.3	1.50	95.95	69.5	
6	4893.5	28.53	268.61	4531.9	-129.6	-1571.3	0.00	0.00	436.5	
7	6319.9	0.00	0.00	5900.0	-138.0	-1919.0	2.00	180.00	552.0	
8	6493.7	0.00	0.00	6073.8	-138.0	-1919.0	0.00	0.00	552.0	
9	7624.7	90.48	358.75	6790.0	584.0	-1934.8	8.00	358.75	1232.6	
10	7625.1	90.48	358.75	6790.0	584.4	-1934.8	0.00	0.00	1233.0	LPL 50'FSL & 1120'FWL, Sec.11
11	7628.2	90.48	358.73	6790.0	587.5	-1934.9	0.50	-96.82	1235.9	
12	12418.6	90.48	358.73	6750.0	5376.6	-2040.9	0.00	0.00	5750.9	BHL 500'FNL & 1050'FWL, Sec.11





PDC Energy Inc. DJ Basin

SEC.14-T5N-R65W

Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W

J Clark 4N (Nio B)

Wellbore #1

Plan #1 (1-10-18)

Anticollision Summary Report

12 January, 2018



Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well J Clark 4N (Nio B)
Project:	SEC.14-T5N-R65W	TVD Reference:	WELL @ 4640.0ft (Original Well Elev)
Reference Site:	Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W	MD Reference:	WELL @ 4640.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	J Clark 4N (Nio B)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (1-10-18)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (1-10-18)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 50.0ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 800.0 ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.45 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	1/12/2018		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	12,418.6	Plan #1 (1-10-18) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W						
J Clark 10N (Nio B) - Wellbore #1 - Plan #1 (12-18-17)	310.9	308.9	165.1	163.7	118.019	CC
J Clark 10N (Nio B) - Wellbore #1 - Plan #1 (12-18-17)	550.0	547.6	165.6	162.9	61.187	ES
J Clark 10N (Nio B) - Wellbore #1 - Plan #1 (12-18-17)	1,300.0	1,294.7	225.1	218.2	32.767	SF
J Clark 11N (Nio C) - Wellbore #1 - Plan #1 (12-18-17)	315.8	313.8	180.1	178.7	126.432	CC
J Clark 11N (Nio C) - Wellbore #1 - Plan #1 (12-18-17)	550.0	547.6	180.6	177.9	66.712	ES
J Clark 11N (Nio C) - Wellbore #1 - Plan #1 (12-18-17)	1,350.0	1,342.4	248.7	241.5	34.676	SF
J Clark 12N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	320.5	318.5	195.1	193.6	134.643	CC
J Clark 12N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	600.0	597.5	195.8	192.8	65.409	ES
J Clark 12N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	1,400.0	1,391.5	272.7	265.3	36.628	SF
J Clark 1C (Codell) - Wellbore #1 - Plan #1 (1-10-18)	200.0	200.0	45.0	44.2	54.522	CC, ES
J Clark 1C (Codell) - Wellbore #1 - Plan #1 (1-10-18)	12,418.6	12,858.5	771.0	520.8	3.081	SF
J Clark 2N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	200.0	200.0	30.0	29.2	36.348	CC
J Clark 2N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	350.0	350.0	30.2	28.6	18.770	ES
J Clark 2N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	12,400.0	12,605.5	501.5	243.3	1.942	SF
J Clark 3N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	200.0	200.0	15.0	14.2	18.174	CC
J Clark 3N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	12,418.6	12,633.8	259.4	11.5	1.046	Level 2, ES, SF
J Clark 5N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	2,286.2	2,312.4	44.1	30.8	3.329	CC
J Clark 5N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	12,418.6	12,420.1	269.7	19.7	1.079	Level 2, ES, SF
J Clark 6N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	288.6	286.6	105.1	103.8	81.947	CC
J Clark 6N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	700.0	698.4	106.0	102.6	30.490	ES
J Clark 6N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	12,418.6	12,264.7	500.9	240.8	1.926	SF
J Clark 7N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	294.7	292.7	120.1	118.8	91.404	CC
J Clark 7N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	500.0	497.7	120.5	118.1	49.813	ES
J Clark 7N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	12,418.6	12,271.6	757.1	497.9	2.921	SF
J Clark 8N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	300.4	298.4	135.1	133.7	100.534	CC
J Clark 8N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	500.0	497.7	135.5	133.0	55.979	ES
J Clark 8N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	4,700.0	4,752.1	798.5	766.8	25.209	SF
J Clark 9C (Codell) - Wellbore #1 - Plan #1 (1-10-18)	306.2	304.2	150.1	148.7	109.224	CC
J Clark 9C (Codell) - Wellbore #1 - Plan #1 (1-10-18)	550.0	547.6	150.7	148.0	55.677	ES
J Clark 9C (Codell) - Wellbore #1 - Plan #1 (1-10-18)	1,300.0	1,297.0	208.1	201.3	30.705	SF

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well J Clark 4N (Nio B)
Project:	SEC.14-T5N-R65W	TVD Reference:	WELL @ 4640.0ft (Original Well Elev)
Reference Site:	Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W	MD Reference:	WELL @ 4640.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	J Clark 4N (Nio B)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (1-10-18)	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Clark 5N65W14EJ Pad Sec.14-T5N-R65W						
Clark 14J-203 (Exist.) - Wellbore #1 - Wellbore #1	442.8	442.2	28.5	26.6	15.092	CC
Clark 14J-203 (Exist.) - Wellbore #1 - Wellbore #1	500.0	499.5	28.7	26.5	12.973	ES
Clark 14J-203 (Exist.) - Wellbore #1 - Wellbore #1	7,188.7	7,129.3	119.7	71.5	2.485	SF
Clark 14J-223 (Exist.) - Wellbore #1 - Wellbore #1	0.0	0.0	60.0			
Clark 14J-223 (Exist.) - Wellbore #1 - Wellbore #1	350.0	348.8	60.8	59.3	40.499	ES
Clark 14J-223 (Exist.) - Wellbore #1 - Wellbore #1	7,500.0	7,322.2	646.6	596.7	12.944	SF
Clark 14J-303 (Exist.) - Wellbore #1 - Wellbore #1	198.9	197.9	45.1	44.3	61.708	CC
Clark 14J-303 (Exist.) - Wellbore #1 - Wellbore #1	300.0	298.8	45.2	44.0	36.758	ES
Clark 14J-303 (Exist.) - Wellbore #1 - Wellbore #1	7,550.0	7,370.0	373.3	319.5	6.940	SF
Clark 14J-343 (Exist.) - Wellbore #1 - Wellbore #1	418.5	418.0	11.8	10.0	6.374	CC, ES
Clark 14J-343 (Exist.) - Wellbore #1 - Wellbore #1	7,271.3	7,125.6	99.0	48.9	1.974	SF
Clark 14M-343 (Exist.) - Wellbore #1 - Wellbore #1	50.0	48.0	75.0	74.9	555.675	CC
Clark 14M-343 (Exist.) - Wellbore #1 - Wellbore #1	350.0	347.7	75.9	74.4	51.148	ES
Clark 14M-343 (Exist.) - Wellbore #1 - Wellbore #1	1,050.0	1,047.0	109.4	104.1	20.852	SF
Existing Wells Sec.14-T5N-R65W						
Myers 14-21 (Noble-Exist.) - Wellbore #1 - Wellbore #1	3,541.7	3,319.9	168.3	135.6	5.140	CC
Myers 14-21 (Noble-Exist.) - Wellbore #1 - Wellbore #1	3,550.0	3,327.2	168.4	135.5	5.116	ES
Myers 14-21 (Noble-Exist.) - Wellbore #1 - Wellbore #1	3,600.0	3,371.4	170.5	136.9	5.063	SF

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well J Clark 4N (Nio B)
Project:	SEC.14-T5N-R65W	TVD Reference:	WELL @ 4640.0ft (Original Well Elev)
Reference Site:	Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W	MD Reference:	WELL @ 4640.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	J Clark 4N (Nio B)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (1-10-18)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4640.0ft (Original Well Elev)

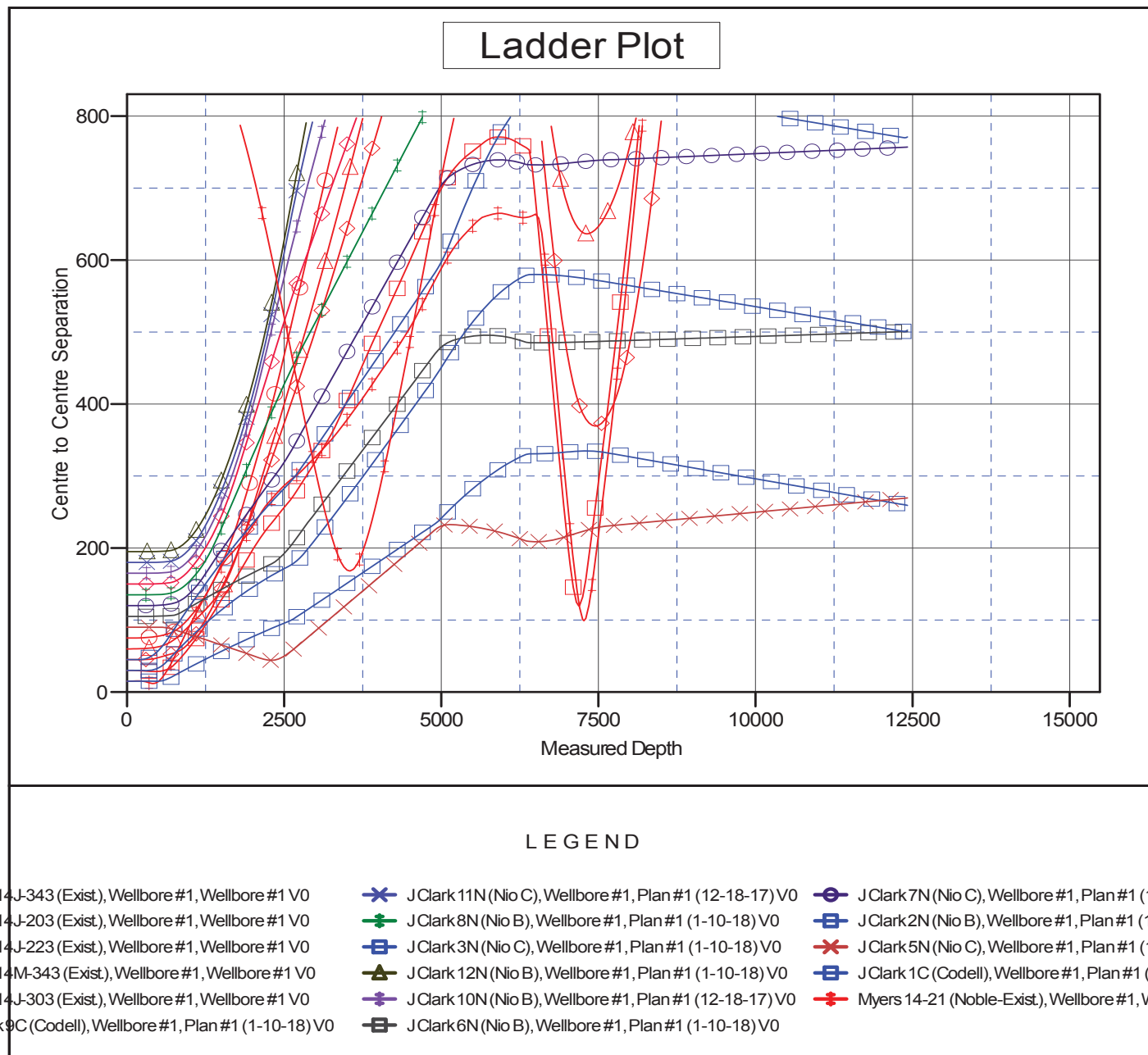
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000

Coordinates are relative to: J Clark 4N (Nio B)

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.56°



Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well J Clark 4N (Nio B)
Project:	SEC.14-T5N-R65W	TVD Reference:	WELL @ 4640.0ft (Original Well Elev)
Reference Site:	Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W	MD Reference:	WELL @ 4640.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	J Clark 4N (Nio B)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (1-10-18)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4640.0ft (Original Well Elev)

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000

Coordinates are relative to: J Clark 4N (Nio B)

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.56°

