

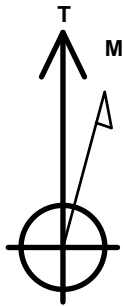
PDC Energy Inc. DJ Basin

Well Name: **J Clark 6N (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: 4615.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1391636.25 3242665.94 40.405170 -104.628620
 Original Well Elev WELL @ 4638.0ft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 550'FNL & 2099'FEL, Sec.14	1.0	0.0	0.0	Point
BHL 500'FNL & 1550'FWL, Sec.11	6768.0	5375.9	-1645.5	Point
LPL 50'FSL & 1607'FWL, Sec.11	6798.0	592.0	-1552.6	Point



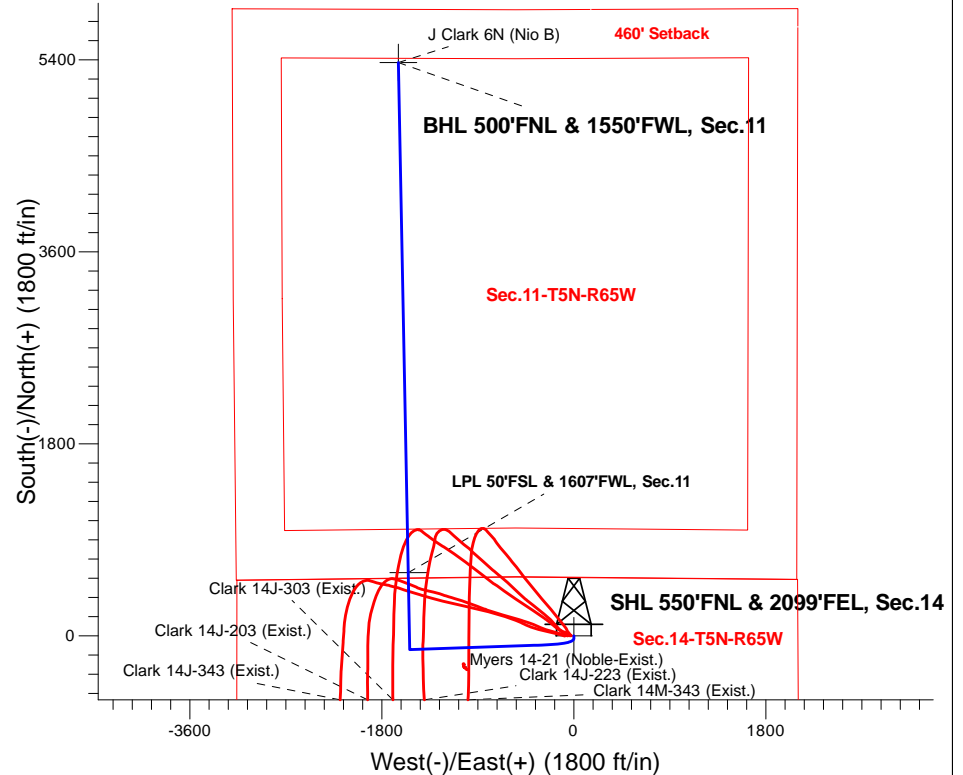
Azimuths to True North
 Magnetic North: 7.91°

Magnetic Field
 Strength: 52463.7snT
 Dip Angle: 66.85°
 Date: 12/19/2017
 Model: IGRF2010

Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W
 J Clark 6N (Nio B)
 Plan #1 (1-10-18)
 11:53, January 12 2018

ANNOTATIONS

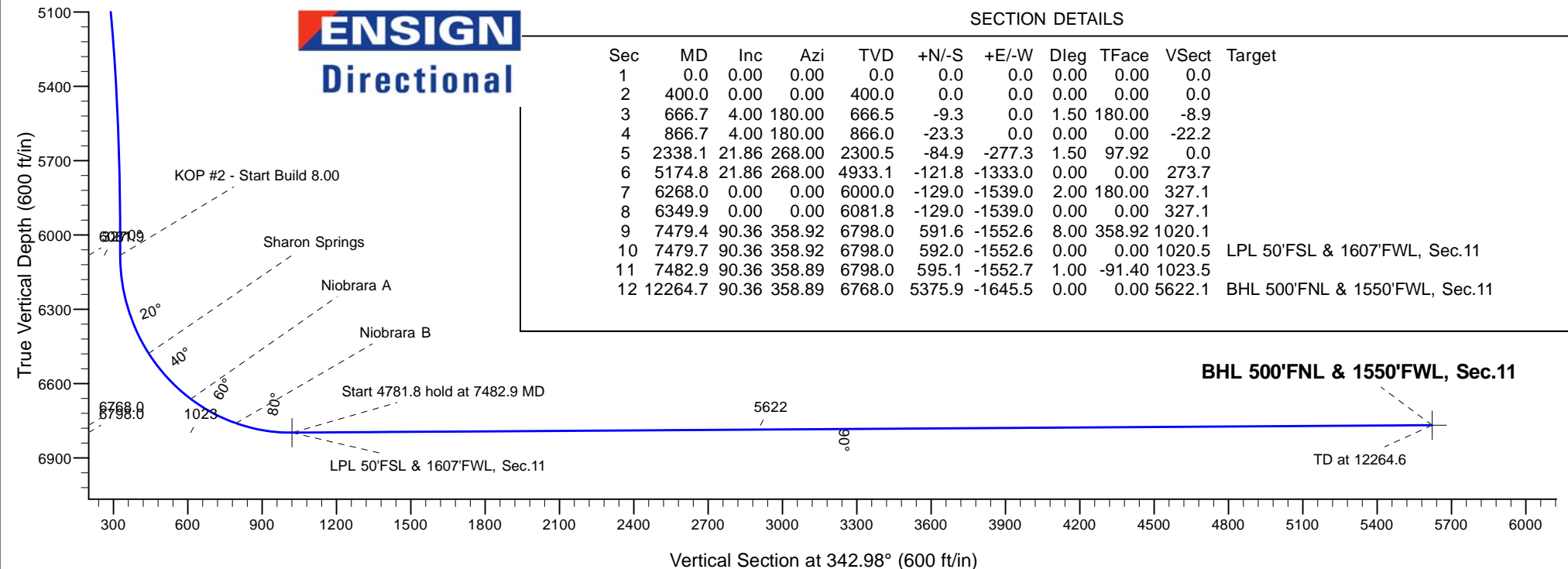
TVD	MD	Annotation
400.0	400.0	KOP - Start Build 1.50
666.5	666.7	Start 200.0 hold at 666.7 MD
866.0	866.7	Start DLS 1.50 TFO 97.92
4933.1	5174.8	Start Drop -2.00
6081.9	6349.9	KOP #2 - Start Build 8.00
6798.0	7482.9	Start 4781.8 hold at 7482.9 MD
6768.0	12264.6	TD at 12264.6



ENSIGN
 Directional

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	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	666.7	4.00	180.00	666.5	-9.3	0.0	1.50	180.00	-8.9	
4	866.7	4.00	180.00	866.0	-23.3	0.0	0.00	0.00	-22.2	
5	2338.1	21.86	268.00	2300.5	-84.9	-277.3	1.50	97.92	0.0	
6	5174.8	21.86	268.00	4933.1	-121.8	-1333.0	0.00	0.00	273.7	
7	6268.0	0.00	0.00	6000.0	-129.0	-1539.0	2.00	180.00	327.1	
8	6349.9	0.00	0.00	6081.8	-129.0	-1539.0	0.00	0.00	327.1	
9	7479.4	90.36	358.92	6798.0	591.6	-1552.6	8.00	358.92	1020.1	
10	7479.7	90.36	358.92	6798.0	592.0	-1552.6	0.00	0.00	1020.5	LPL 50'FSL & 1607'FWL, Sec.11
11	7482.9	90.36	358.89	6798.0	595.1	-1552.7	1.00	-91.40	1023.5	
12	12264.7	90.36	358.89	6768.0	5375.9	-1645.5	0.00	0.00	5622.1	BHL 500'FNL & 1550'FWL, Sec.11





PDC Energy Inc. DJ Basin

SEC.14-T5N-R65W

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

J Clark 6N (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 6N (Nio B)
Project:	SEC.14-T5N-R65W	TVD Reference:	WELL @ 4638.0ft (Original Well Elev)
Reference Site:	Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W	MD Reference:	WELL @ 4638.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	J Clark 6N (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	12,264.6	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)	466.7	466.7	60.0	57.7	26.396	CC
J Clark 10N (Nio B) - Wellbore #1 - Plan #1 (12-18-17)	600.0	599.9	60.2	57.2	20.396	ES
J Clark 10N (Nio B) - Wellbore #1 - Plan #1 (12-18-17)	1,050.0	1,048.8	73.2	67.8	13.515	SF
J Clark 11N (Nio C) - Wellbore #1 - Plan #1 (12-18-17)	474.6	474.6	75.0	72.7	32.420	CC
J Clark 11N (Nio C) - Wellbore #1 - Plan #1 (12-18-17)	650.0	649.8	75.4	72.2	23.451	ES
J Clark 11N (Nio C) - Wellbore #1 - Plan #1 (12-18-17)	1,150.0	1,148.4	94.7	88.7	15.863	SF
J Clark 12N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	481.7	481.7	90.0	87.7	38.299	CC
J Clark 12N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	650.0	649.8	90.3	87.1	28.099	ES
J Clark 12N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	1,200.0	1,198.2	113.1	106.9	18.116	SF
J Clark 1C (Codell) - Wellbore #1 - Plan #1 (1-10-18)	182.6	184.6	150.1	149.4	203.989	CC
J Clark 1C (Codell) - Wellbore #1 - Plan #1 (1-10-18)	200.0	201.9	150.1	149.3	180.637	ES
J Clark 1C (Codell) - Wellbore #1 - Plan #1 (1-10-18)	3,950.0	3,695.5	797.3	768.7	27.873	SF
J Clark 2N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	382.6	384.6	135.1	133.3	73.537	CC
J Clark 2N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	400.0	401.9	135.1	133.2	69.918	ES
J Clark 2N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	2,700.0	2,554.6	374.4	357.2	21.725	SF
J Clark 3N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	292.7	294.7	120.1	118.8	91.404	CC
J Clark 3N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	500.0	501.7	120.4	118.0	50.318	ES
J Clark 3N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	12,264.7	12,628.1	751.9	494.0	2.916	SF
J Clark 4N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	286.7	288.7	105.1	103.8	81.939	CC
J Clark 4N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	700.0	700.0	106.0	102.6	30.463	ES
J Clark 4N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	12,264.7	12,405.6	500.7	241.2	1.929	SF
J Clark 5N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	233.4	233.4	15.0	14.0	15.014	CC
J Clark 5N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	350.0	349.9	15.3	13.7	9.493	ES
J Clark 5N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	12,264.7	12,416.1	262.5	17.5	1.072	Level 2, SF
J Clark 7N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	433.4	433.4	15.0	12.9	7.148	CC
J Clark 7N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	12,264.7	12,271.6	262.5	10.7	1.042	Level 2, ES, SF
J Clark 8N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	447.2	447.2	30.0	27.8	13.813	CC
J Clark 8N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	550.0	550.0	30.1	27.4	11.163	ES
J Clark 8N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	12,264.7	12,156.4	500.1	241.7	1.935	SF
J Clark 9C (Codell) - Wellbore #1 - Plan #1 (1-10-18)	458.6	458.6	45.0	42.8	20.177	CC
J Clark 9C (Codell) - Wellbore #1 - Plan #1 (1-10-18)	600.0	599.9	45.3	42.3	15.341	ES
J Clark 9C (Codell) - Wellbore #1 - Plan #1 (1-10-18)	12,264.7	12,258.5	769.1	514.2	3.017	SF

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well J Clark 6N (Nio B)
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Reference Site:	Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W	MD Reference:	WELL @ 4638.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	J Clark 6N (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	0.0	1.0	74.9	74.9	10,000.000	CC
Clark 14J-203 (Exist.) - Wellbore #1 - Wellbore #1	150.0	150.7	75.2	74.7	155.741	ES
Clark 14J-203 (Exist.) - Wellbore #1 - Wellbore #1	7,100.0	6,999.7	355.3	308.5	7.595	SF
Clark 14J-223 (Exist.) - Wellbore #1 - Wellbore #1	503.8	504.9	44.1	41.7	18.913	CC
Clark 14J-223 (Exist.) - Wellbore #1 - Wellbore #1	550.0	551.1	44.2	41.6	17.262	ES
Clark 14J-223 (Exist.) - Wellbore #1 - Wellbore #1	7,256.4	7,361.8	154.9	107.1	3.240	SF
Clark 14J-303 (Exist.) - Wellbore #1 - Wellbore #1	560.2	561.3	58.4	55.8	22.555	CC
Clark 14J-303 (Exist.) - Wellbore #1 - Wellbore #1	7,521.6	7,205.3	100.3	44.9	1.812	ES, SF
Clark 14J-343 (Exist.) - Wellbore #1 - Wellbore #1	180.4	181.4	89.5	88.9	140.118	CC
Clark 14J-343 (Exist.) - Wellbore #1 - Wellbore #1	200.0	200.7	89.5	88.8	120.931	ES
Clark 14J-343 (Exist.) - Wellbore #1 - Wellbore #1	5,450.0	5,348.8	585.6	514.2	8.204	SF
Clark 14M-343 (Exist.) - Wellbore #1 - Wellbore #1	550.2	550.4	28.5	25.9	11.184	CC
Clark 14M-343 (Exist.) - Wellbore #1 - Wellbore #1	600.0	600.1	28.6	25.8	10.253	ES
Clark 14M-343 (Exist.) - Wellbore #1 - Wellbore #1	950.0	949.0	39.3	34.7	8.533	SF
Existing Wells Sec.14-T5N-R65W						
Myers 14-21 (Noble-Exist.) - Wellbore #1 - Wellbore #1	4,368.4	4,162.4	177.3	139.6	4.707	CC
Myers 14-21 (Noble-Exist.) - Wellbore #1 - Wellbore #1	4,400.0	4,191.6	177.7	139.6	4.661	ES
Myers 14-21 (Noble-Exist.) - Wellbore #1 - Wellbore #1	4,450.0	4,238.0	180.0	141.3	4.652	SF

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Reference Well:	J Clark 6N (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 @ 4638.0ft (Original Well Elev)

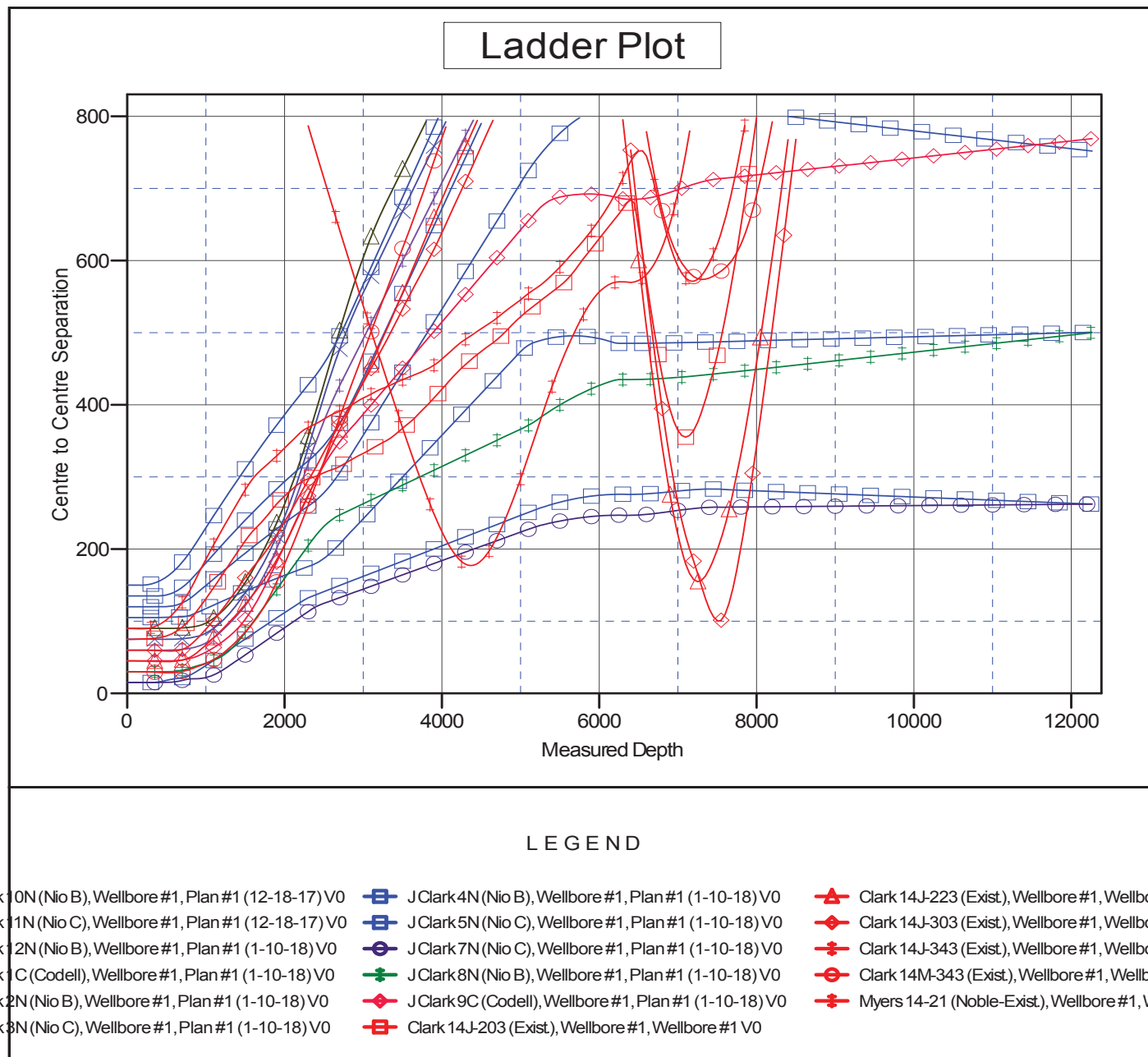
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000

Coordinates are relative to: J Clark 6N (Nio B)

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.56°



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