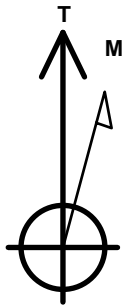


PDC Energy Inc. DJ Basin

Well Name: **J Clark 15N (Nio C)**
 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 1391636.23 3242800.93 40.405167 -104.628135
 Original Well Elev WELL @ 4638.0ft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 550'FNL & 1964'FEL, Sec.14	1.0	0.0	0.0	Point
BHL 500'FNL & 1400'FEL, Sec.11	6843.0	5378.5	570.0	Point
LPL 50'FSL & 1493'FEL, Sec.11	6863.0	595.1	468.3	Point



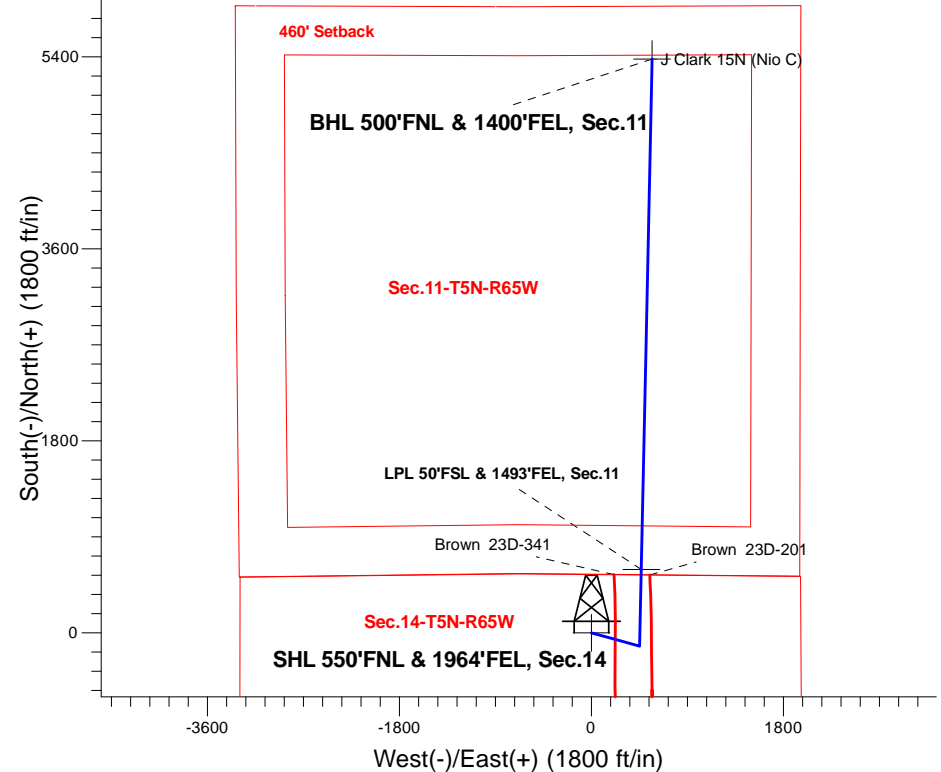
Azimuths to True North
 Magnetic North: 7.91°

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 15N (Nio C)
 Plan #1 (1-10-18)
 14:35, January 12 2018

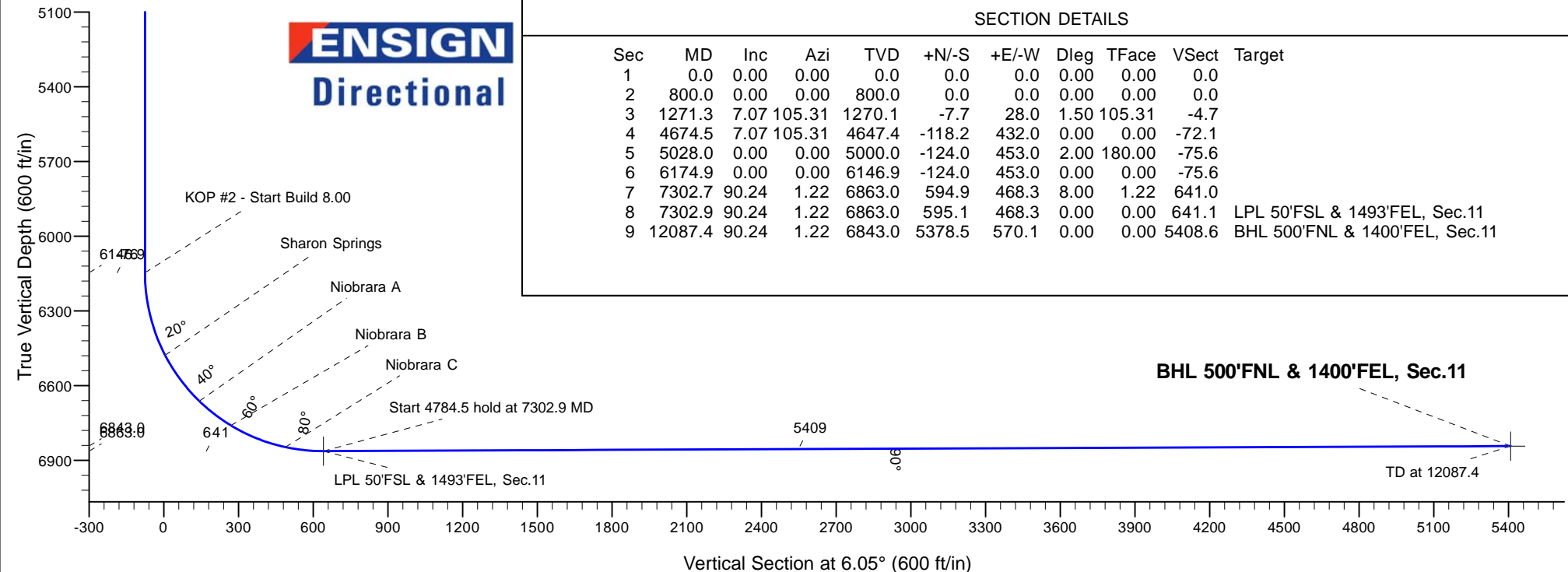
ANNOTATIONS

TVD	MD	Annotation
800.0	800.0	KOP - Start Build 1.50
4647.4	4674.5	Start Drop -2.00
6146.9	6174.9	KOP #2 - Start Build 8.00
6863.0	7302.9	Start 4784.5 hold at 7302.9 MD
6843.0	12087.4	TD at 12087.4



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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1271.3	7.07	105.31	1270.1	-7.7	28.0	1.50	105.31	-4.7	
4	4674.5	7.07	105.31	4647.4	-118.2	432.0	0.00	0.00	-72.1	
5	5028.0	0.00	0.00	5000.0	-124.0	453.0	2.00	180.00	-75.6	
6	6174.9	0.00	0.00	6146.9	-124.0	453.0	0.00	0.00	-75.6	
7	7302.7	90.24	1.22	6863.0	594.9	468.3	8.00	1.22	641.0	
8	7302.9	90.24	1.22	6863.0	595.1	468.3	0.00	0.00	641.1	LPL 50'FSL & 1493'FEL, Sec.11
9	12087.4	90.24	1.22	6843.0	5378.5	570.1	0.00	0.00	5408.6	BHL 500'FNL & 1400'FEL, Sec.11





PDC Energy Inc. DJ Basin

SEC.14-T5N-R65W

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

J Clark 15N (Nio C)

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 15N (Nio C)
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 15N (Nio C)	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	12,087.4	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
Brown 5N65W23 Pad Sec.23-T5N-R65W						
Brown 23D-201 - Wellbore #1 - Wellbore #1	6,924.0	14,936.3	99.4	-123.2	0.447	Level 1, CC, ES, SF
Brown 23D-341 - Wellbore #1 - Wellbore #1	7,038.0	14,997.0	242.9	18.0	1.080	Level 2, CC
Brown 23D-341 - Wellbore #1 - Wellbore #1	7,100.0	15,053.3	244.3	16.5	1.073	Level 2, ES, SF
Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W						
J Clark 10N (Nio B) - Wellbore #1 - Plan #1 (12-18-17)	800.0	800.0	75.0	70.9	18.160	CC, ES
J Clark 10N (Nio B) - Wellbore #1 - Plan #1 (12-18-17)	1,100.0	1,099.7	86.4	80.7	15.166	SF
J Clark 11N (Nio C) - Wellbore #1 - Plan #1 (12-18-17)	800.0	800.0	60.0	55.9	14.526	CC, ES
J Clark 11N (Nio C) - Wellbore #1 - Plan #1 (12-18-17)	1,050.0	1,049.8	67.9	62.5	12.490	SF
J Clark 12N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	800.0	800.0	45.0	40.9	10.891	CC, ES
J Clark 12N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	12,087.4	11,986.5	752.9	498.5	2.959	SF
J Clark 13N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	800.0	800.0	30.0	25.9	7.263	CC, ES
J Clark 13N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	12,087.4	12,058.2	500.1	244.3	1.955	SF
J Clark 14N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	800.0	800.0	15.0	10.9	3.628	CC
J Clark 14N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	12,087.4	12,002.2	258.4	10.4	1.042	Level 2, ES, SF
J Clark 16N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	200.0	200.0	15.0	14.2	18.174	CC
J Clark 16N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	12,087.4	12,057.9	261.0	12.4	1.050	Level 2, ES, SF
J Clark 5N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	306.8	306.8	150.0	148.6	108.330	CC
J Clark 5N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	500.0	499.6	150.3	147.9	62.154	ES
J Clark 5N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	1,050.0	1,027.7	191.6	186.2	35.322	SF
J Clark 6N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	501.5	501.5	135.0	132.5	55.013	CC
J Clark 6N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	700.0	699.6	135.4	131.9	38.905	ES
J Clark 6N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	1,100.0	1,090.1	156.8	151.2	27.909	SF
J Clark 7N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	695.8	695.8	120.0	116.5	34.040	CC
J Clark 7N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	800.0	799.9	120.0	116.0	29.676	ES
J Clark 7N (Nio C) - Wellbore #1 - Plan #1 (1-10-18)	1,200.0	1,197.4	142.6	136.5	23.368	SF
J Clark 8N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	800.0	800.0	105.0	100.9	25.423	CC, ES
J Clark 8N (Nio B) - Wellbore #1 - Plan #1 (1-10-18)	1,200.0	1,199.0	125.7	119.7	20.703	SF
J Clark 9C (Codell) - Wellbore #1 - Plan #1 (1-10-18)	800.0	800.0	90.0	85.9	21.788	CC, ES
J Clark 9C (Codell) - Wellbore #1 - Plan #1 (1-10-18)	1,150.0	1,149.6	105.5	99.6	17.878	SF

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well J Clark 15N (Nio C)
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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 15N (Nio C)	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)

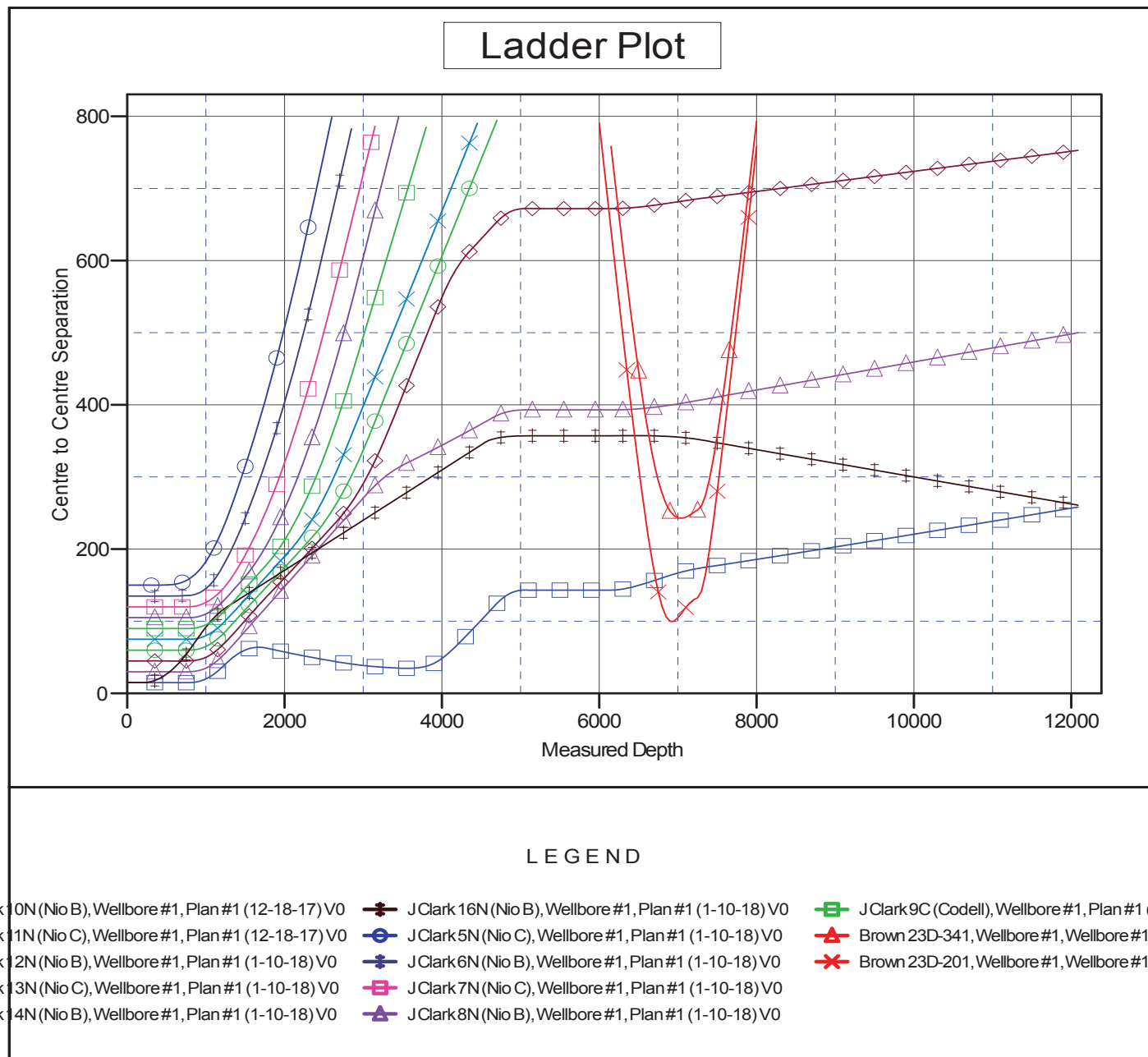
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000

Coordinates are relative to: J Clark 15N (Nio C)

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 15N (Nio C)
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 15N (Nio C)	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 15N (Nio C)

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.56°

