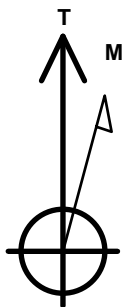


# PDC Energy Inc. DJ Basin

Well Name: **Barr 11L-301**  
 Surface Location: Barr 5N65W11TY Pad Sec.11-T5N-R65W  
 North American Datum 1983 , US State Plane 1983, Colorado Northern Zone  
 Ground Elevation: 4611.0  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1392431.37 3244361.39 40.407307 -104.622504  
 Original Well Elev WELL @ 4634.0ft (Original Well Elev)

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 244'FSL, 394'FEL, SEC.11	1.0	0.0	0.0	Point
BHL 500'FNL, 1465'FWL, SEC.12	6824.0	4553.2	1868.0	Point
LPL 50'FSL, 1465'FWL, SEC.12	6854.0	-207.0	1858.9	Point



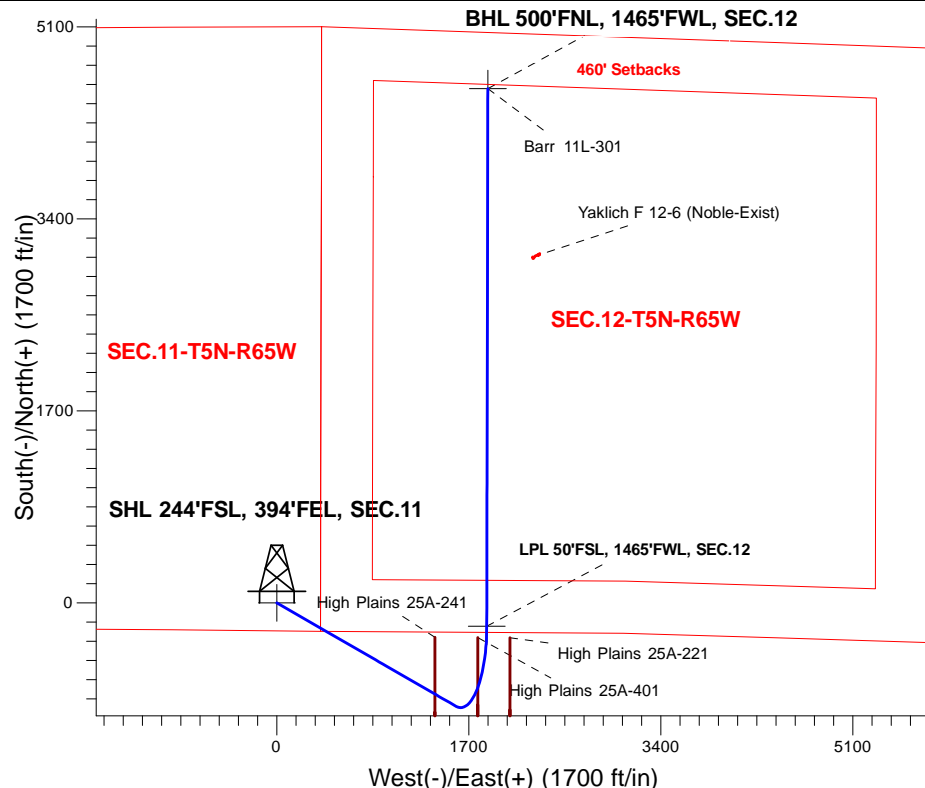
Azimuths to True North  
 Magnetic North: 8.03°

Magnetic Field  
 Strength: 52557.7snT  
 Dip Angle: 66.88°  
 Date: 2/2/2017  
 Model: IGRF2010

Barr 5N65W11TY Pad Sec.11-T5N-R65W  
 Barr 11L-301  
 Plan #2 (6-19-17)  
 14:58, June 19 2017

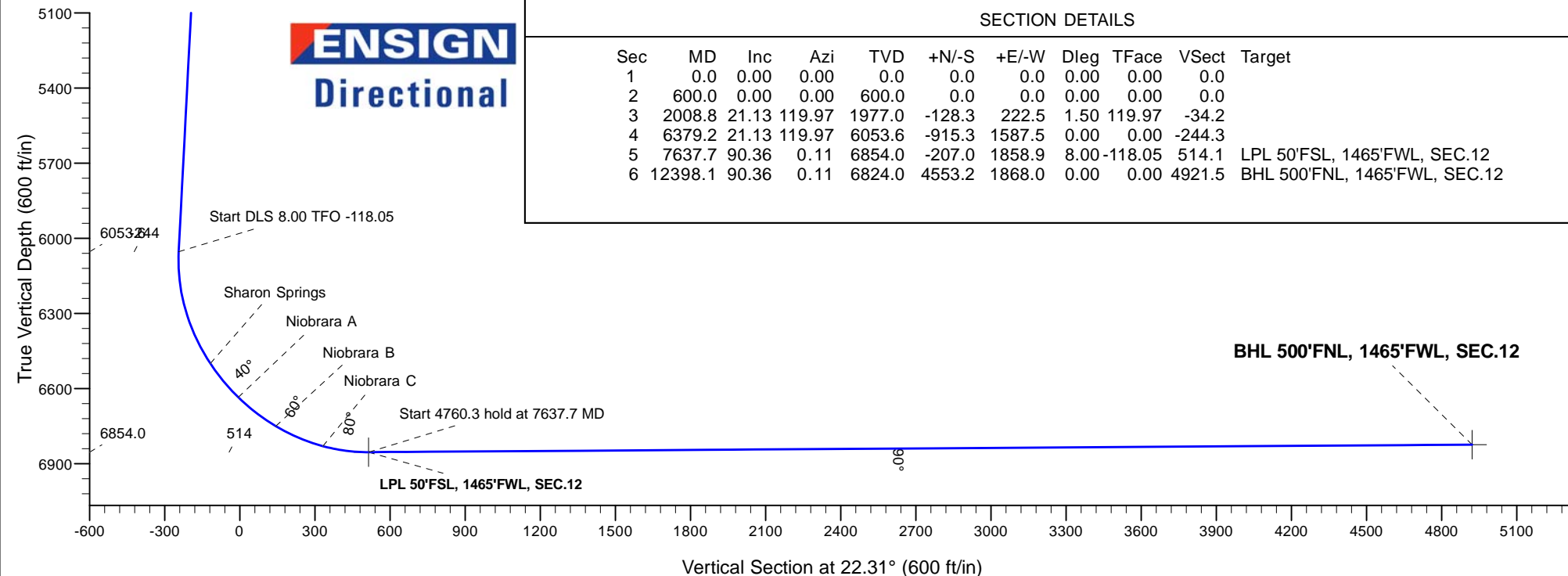
## ANNOTATIONS

TVD	MD	Annotation
600.0	600.0	KOP - Start Build 1.50
1977.0	2008.8	Start 4370.5 hold at 2008.8 MD
6053.6	6379.2	Start DLS 8.00 TFO -118.05
6854.0	7637.7	Start 4760.3 hold at 7637.7 MD
6824.0	12398.1	TD at 12398.1



## 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	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	2008.8	21.13	119.97	1977.0	-128.3	222.5	1.50	119.97	-34.2	
4	6379.2	21.13	119.97	6053.6	-915.3	1587.5	0.00	0.00	-244.3	
5	7637.7	90.36	0.11	6854.0	-207.0	1858.9	8.00	-118.05	514.1	LPL 50'FSL, 1465'FWL, SEC.12
6	12398.1	90.36	0.11	6824.0	4553.2	1868.0	0.00	0.00	4921.5	BHL 500'FNL, 1465'FWL, SEC.12



## **PDC Energy Inc. DJ Basin**

**SEC.11-T5N-R65W**

**Barr 5N65W11TY Pad Sec.11-T5N-R65W**

**Barr 11L-301**

**Wellbore #1**

**Plan #2 (6-19-17)**

## **Anticollision Summary Report**

**19 June, 2017**

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Barr 11L-301
<b>Project:</b>	SEC.11-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4634.0ft (Original Well Elev)
<b>Reference Site:</b>	Barr 5N65W11TY Pad Sec.11-T5N-R65W	<b>MD Reference:</b>	WELL @ 4634.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Barr 11L-301	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.45 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #2 (6-19-17)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #2 (6-19-17)		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0ft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 1,000.0 ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.45 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	6/19/2017		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	12,397.9	Plan #2 (6-19-17) (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
Offet Well - Wellbore - Design						
Barr 5N65W11TY Pad Sec.11-T5N-R65W						
Barr 11L-221 - Wellbore #1 - Plan #2 (6-19-17)	600.0	600.0	60.2	57.1	19.863	CC, ES
Barr 11L-221 - Wellbore #1 - Plan #2 (6-19-17)	900.0	899.7	70.7	66.1	15.367	SF
Barr 11L-301 - Wellbore #1 - Plan #2 (6-19-17)	600.0	600.0	75.2	72.2	24.828	CC, ES
Barr 11L-301 - Wellbore #1 - Plan #2 (6-19-17)	1,000.0	999.3	94.0	88.9	18.307	SF
Barr 11L-201 - Wellbore #1 - Plan #2 (6-19-17)	600.0	600.0	30.1	27.1	9.931	CC, ES
Barr 11L-201 - Wellbore #1 - Plan #2 (6-19-17)	12,398.1	11,963.9	541.0	314.4	2.387	SF
Barr 11L-221 - Wellbore #1 - Plan #2 (6-19-17)	400.0	400.0	14.8	12.8	7.658	CC, ES
Barr 11L-221 - Wellbore #1 - Plan #2 (6-19-17)	12,398.1	11,988.7	258.7	32.1	1.141	Level 2, SF
Barr 11L-321 - Wellbore #1 - Plan #2 (6-19-17)	200.0	200.0	29.8	29.0	36.075	CC, ES
Barr 11L-321 - Wellbore #1 - Plan #2 (6-19-17)	12,398.1	12,085.8	523.2	294.6	2.289	SF
Barr 11L-341 - Wellbore #1 - Plan #3 (6-19-17)	600.0	600.0	45.1	42.1	14.898	CC, ES
Barr 11L-341 - Wellbore #1 - Plan #3 (6-19-17)	12,398.1	11,854.4	823.6	594.9	3.601	SF
Barr 11L-401 - Wellbore #1 - Plan #2 (6-19-17)	600.0	600.0	15.0	12.0	4.967	CC, ES
Barr 11L-401 - Wellbore #1 - Plan #2 (6-19-17)	12,398.1	12,421.9	274.0	49.1	1.219	Level 2, SF
Barr 11X-334 - Wellbore #1 - Plan #2 (6-19-17)	400.0	400.0	120.0	118.1	62.281	CC
Barr 11X-334 - Wellbore #1 - Plan #2 (6-19-17)	600.0	599.9	120.1	117.1	39.644	ES
Barr 11X-334 - Wellbore #1 - Plan #2 (6-19-17)	1,500.0	1,510.8	186.1	177.6	21.815	SF
Barr 11X-404 - Wellbore #1 - Plan #2 (6-19-17)	717.2	721.8	134.0	130.3	36.184	CC, ES
Barr 11X-404 - Wellbore #1 - Plan #2 (6-19-17)	1,300.0	1,302.8	181.6	174.0	23.849	SF
Barr 11Y-214 - Wellbore #1 - Plan #2 (6-19-17)	600.0	600.0	105.3	102.2	34.759	CC, ES
Barr 11Y-214 - Wellbore #1 - Plan #2 (6-19-17)	4,900.0	4,822.0	976.9	927.8	19.911	SF
Barr 11Y-314 - Wellbore #1 - Plan #2 (6-19-17)	600.0	600.0	90.2	87.2	29.794	CC, ES
Barr 11Y-314 - Wellbore #1 - Plan #2 (6-19-17)	1,100.0	1,098.6	119.8	114.1	21.108	SF
Existing Wells Sec.12-T5N-R65W (GRID)						
Yaklich F 12-6 (Noble-Exist) - Wellbore #1 - Wellbore #1	10,905.3	6,811.1	403.2	304.5	4.085	CC, ES, SF
High Plains 5N65W25AF Pad Sec.25-T5N-R65W						
High Plains 25A-221 - Wellbore #1 - Plan #1 (2-03-17)	7,400.0	17,506.1	227.7	-63.0	0.783	Level 1, ES, SF
High Plains 25A-221 - Wellbore #1 - Plan #1 (2-03-17)	7,439.0	17,543.3	227.4	-61.0	0.789	Level 1, CC
High Plains 25A-241 - Wellbore #1 - Plan #1 (2-03-17)	7,028.4	17,121.0	401.2	119.8	1.426	Level 3, CC
High Plains 25A-241 - Wellbore #1 - Plan #1 (2-03-17)	7,100.0	17,171.0	404.5	119.3	1.418	Level 3, ES, SF
High Plains 25A-401 - Wellbore #1 - Plan #1 (2-03-17)	7,537.9	17,995.4	102.2	-146.2	0.411	Level 1, CC, ES, SF