

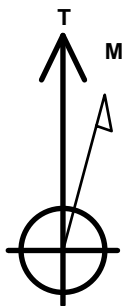
# PDC Energy Inc. DJ Basin

Well Name: **High Plains 25A-341**

Surface Location: High Plains 5N65W25AF Pad Sec.25-T5N-R65W  
 North American Datum 1983 , US State Plane 1983 Colorado Northern Zone  
 Ground Elevation: 4639.0  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1380539.39 3245642.91 40.374630 -104.618327  
 Original Well Elev WELL @ 4662.0ft (Original Well Elev)

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 1024'FNL, 748'FWL, SEC.25	1.0	0.0	0.0	Point
BHL 50'FNL, 664'FWL, SEC.13	6852.0	11602.6	-106.1	Point
LPL 2'FSL, 642'FWL, SEC.24	6882.0	1026.2	-106.1	Point



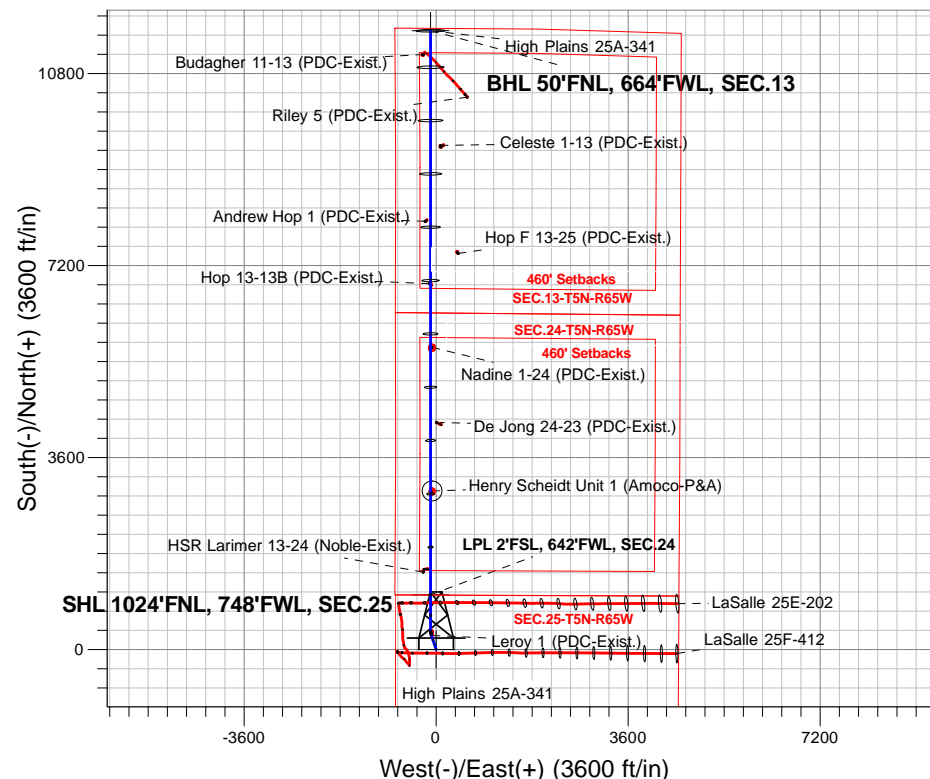
Azimuths to True North  
 Magnetic North: 8.02°

Magnetic Field  
 Strength: 52539.2snT  
 Dip Angle: 66.86°  
 Date: 2/8/2017  
 Model: IGRF2010

High Plains 5N65W25AF Pad Sec.25-T5N-R65W  
 High Plains 25A-341  
 Plan #1 (2-03-17)  
 9:25, February 08 2017

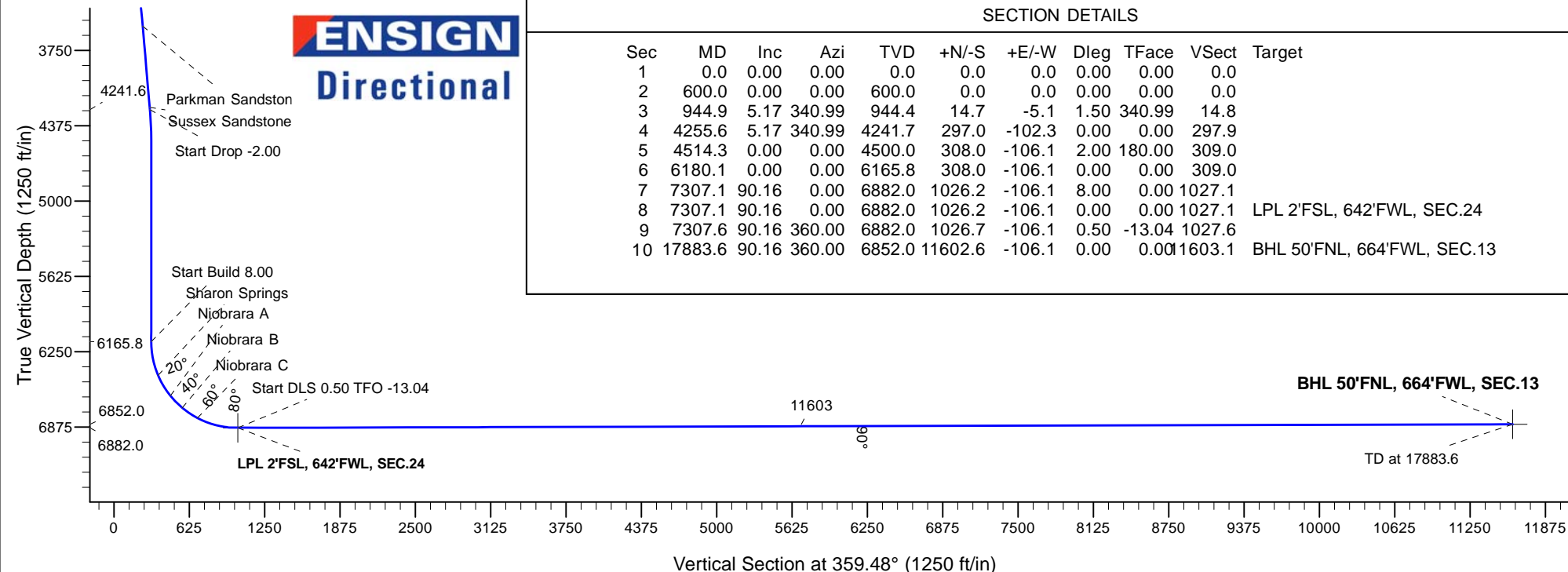
## ANNOTATIONS

TVD	MD	Annotation
600.0	600.0	KOP - Start Build 1.50
4241.6	4255.6	Start Drop -2.00
6165.8	6180.1	Start Build 8.00
6882.0	7307.1	Start DLS 0.50 TFO -13.04
6882.0	7307.6	Start 10575.9 hold at 7307.6 MD
6852.0	17883.6	TD at 17883.6



## 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	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	944.9	5.17	340.99	944.4	14.7	-5.1	1.50	340.99	14.8	
4	4255.6	5.17	340.99	4241.7	297.0	-102.3	0.00	0.00	297.9	
5	4514.3	0.00	0.00	4500.0	308.0	-106.1	2.00	180.00	309.0	
6	6180.1	0.00	0.00	6165.8	308.0	-106.1	0.00	0.00	309.0	
7	7307.1	90.16	0.00	6882.0	1026.2	-106.1	8.00	0.00	1027.1	
8	7307.1	90.16	0.00	6882.0	1026.2	-106.1	0.00	0.00	1027.1	LPL 2'FSL, 642'FWL, SEC.24
9	7307.6	90.16	360.00	6882.0	1026.7	-106.1	0.50	-13.04	1027.6	
10	17883.6	90.16	360.00	6852.0	11602.6	-106.1	0.00	0.00	11603.1	BHL 50'FNL, 664'FWL, SEC.13





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

**SEC.25-T5N-R65W**

**High Plains 5N65W25AF Pad Sec.25-T5N-R65W**

**High Plains 25A-341**

**Wellbore #1**

**Plan #1 (2-03-17)**

## **Anticollision Report**

**08 February, 2017**



<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well High Plains 25A-341
<b>Project:</b>	SEC.25-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev)
<b>Reference Site:</b>	High Plains 5N65W25AF Pad Sec.25-T5N-R65W	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	High Plains 25A-341	<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 #1 (2-03-17)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1 (2-03-17)		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<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 800.0 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> 2/7/2017			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	17,883.6	Plan #1 (2-03-17) (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
Offset Well - Wellbore - Design						
Existing Wells Sec.13-T5N-R65W						
Andrew Hop 1 (PDC-Exist.) - Wellbore #1 - Wellbore #1	14,305.6	6,834.8	99.0	-106.4	0.482	Level 1, CC, ES, SF
Budagher 11-13 (PDC-Exist.) - Wellbore #1 - Wellbore #1	17,439.2	6,804.9	135.9	-140.6	0.492	Level 1, CC, ES, SF
Celeste 1-13 (PDC-Exist.) - Wellbore #1 - Wellbore #1	15,730.4	6,807.2	179.8	-58.2	0.756	Level 1, CC, ES, SF
Hop 13-13B (PDC-Exist.) - Wellbore #1 - Wellbore #1	13,143.0	6,841.5	27.9	-150.3	0.157	Level 1, CC, ES, SF
Hop F 13-25 (PDC-Exist.) - Wellbore #1 - Wellbore #1	13,706.6	6,832.4	519.7	329.0	2.726	CC, ES, SF
Riley 5 (PDC-Exist.) - Wellbore #1 - Wellbore #1	16,651.1	6,926.3	679.0	414.1	2.563	CC, ES
Riley 5 (PDC-Exist.) - Wellbore #1 - Wellbore #1	16,700.0	6,923.7	680.8	414.7	2.558	SF
Existing Wells Sec.24-T5N-R65W						
De Jong 24-23 (PDC-Exist.) - Wellbore #1 - Wellbore #1	10,539.2	6,850.4	113.9	-2.7	0.977	Level 1, CC, ES, SF
Henry Scheidt Unit 1 (Amoco-P&A) - Wellbore #1 - Wellb	9,255.5	6,850.5	28.1	-211.2	0.117	Level 1, CC, ES, SF
Nadine 1-24 (PDC-Exist.) - Wellbore #1 - Wellbore #1	11,945.5	6,842.8	29.3	-118.8	0.198	Level 1, CC, ES, SF
Existing Wells Sec.24-T5N-R65W (GRID)						
HSR Larimer 13-24 (Noble-Exist.) - Wellbore #1 - Wellbo	7,743.4	6,860.0	133.5	76.4	2.338	CC, ES, SF
Existing Wells Sec.25-T5N-R65W						
Leroy 1 (PDC-Exist.) - Wellbore #1 - Wellbore #1	4,865.6	4,829.0	23.6	-3.5	0.871	Level 1, CC
Leroy 1 (PDC-Exist.) - Wellbore #1 - Wellbore #1	5,100.0	5,063.3	24.2	-4.1	0.856	Level 1, ES, SF

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well High Plains 25A-341
<b>Project:</b>	SEC.25-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev)
<b>Reference Site:</b>	High Plains 5N65W25AF Pad Sec.25-T5N-R65W	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	High Plains 25A-341	<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 #1 (2-03-17)	<b>Offset TVD Reference:</b>	Offset Datum

#### Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
High Plains 5N65W25AF Pad Sec.25-T5N-R65W						
High Plains 25A-221 - Wellbore #1 - Plan #1 (2-03-17)	600.0	600.0	45.2	42.1	14.917	CC, ES
High Plains 25A-221 - Wellbore #1 - Plan #1 (2-03-17)	900.0	899.6	56.5	51.8	12.070	SF
High Plains 25A-241 - Wellbore #1 - Plan #1 (2-03-17)	600.0	600.0	14.9	11.9	4.933	CC
High Plains 25A-241 - Wellbore #1 - Plan #1 (2-03-17)	17,883.6	17,563.7	350.2	-185.3	0.654	Level 1, ES, SF
High Plains 25A-321 - Wellbore #1 - Plan #1 (2-03-17)	600.0	600.0	60.1	57.1	19.848	CC, ES
High Plains 25A-321 - Wellbore #1 - Plan #1 (2-03-17)	944.9	944.6	74.0	69.1	15.044	SF
High Plains 25A-401 - Wellbore #1 - Plan #1 (2-03-17)	600.0	600.0	29.9	26.8	9.862	CC, ES
High Plains 25A-401 - Wellbore #1 - Plan #1 (2-03-17)	17,883.6	17,995.4	726.9	185.7	1.343	Level 3, SF
High Plains 25F-221 - Wellbore #1 - Plan #1 (2-03-17)	400.0	400.0	14.9	13.0	7.750	CC
High Plains 25F-221 - Wellbore #1 - Plan #1 (2-03-17)	17,883.6	17,817.2	303.7	-224.6	0.575	Level 1, ES, SF
High Plains 25F-301 - Wellbore #1 - Plan #1 (2-03-17)	200.0	200.0	29.9	29.0	36.167	CC
High Plains 25F-301 - Wellbore #1 - Plan #1 (2-03-17)	300.0	299.7	30.4	29.0	22.204	ES
High Plains 25F-301 - Wellbore #1 - Plan #1 (2-03-17)	17,883.6	17,920.9	579.0	34.8	1.064	Level 2, SF
High Plains 25N-241 - Wellbore #1 - Plan #1 (2-03-17)	674.2	675.8	72.5	69.1	21.147	CC
High Plains 25N-241 - Wellbore #1 - Plan #1 (2-03-17)	700.0	701.7	72.6	69.0	20.316	ES
High Plains 25N-241 - Wellbore #1 - Plan #1 (2-03-17)	944.9	945.0	85.3	80.2	16.874	SF
High Plains 25N-301 - Wellbore #1 - Plan #1 (2-03-17)	539.3	539.7	88.7	86.0	32.731	CC
High Plains 25N-301 - Wellbore #1 - Plan #1 (2-03-17)	600.0	600.1	88.9	85.8	28.966	ES
High Plains 25N-301 - Wellbore #1 - Plan #1 (2-03-17)	900.0	894.3	112.4	107.4	22.535	SF
LaSalle 25F-HZ Pad Sec.25-T5N-R65W						
LaSalle 25E-202 - Wellbore #1 - Wellbore #1	7,136.2	7,173.9	103.7	77.6	3.969	CC, ES, SF
LaSalle 25F-412 - Wellbore #1 - Wellbore #1	0.0	0.0	586.1			
LaSalle 25F-412 - Wellbore #1 - Wellbore #1	6,550.0	7,058.0	609.7	574.4	17.290	SF
LaSalle 25F-412 - Wellbore #1 - Wellbore #1	6,597.3	7,082.6	606.7	572.0	17.490	ES

<b>Offset Design</b>												Offset Site Error:	0.0 ft
Existing Wells Sec.13-T5N-R65W - Andrew Hop 1 (PDC-Exist.) - Wellbore #1 - Wellbore #1												Offset Well Error:	0.0 ft
Survey Program: 100-NS-GYRO-MS													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
13,600.0	6,864.2	6,829.6	6,829.1	172.2	16.7	-86.53	8,024.6	-205.1	712.5	523.9	188.61	3.778	
13,700.0	6,863.9	6,830.3	6,829.9	174.5	16.8	-86.95	8,024.7	-205.1	613.7	422.7	191.01	3.213	
13,800.0	6,863.6	6,831.0	6,830.6	176.8	16.8	-87.38	8,024.7	-205.1	515.2	321.8	193.41	2.664	
13,900.0	6,863.3	6,831.8	6,831.4	179.2	16.8	-87.81	8,024.7	-205.1	417.5	221.7	195.80	2.133	
14,000.0	6,863.0	6,832.5	6,832.1	181.5	16.8	-88.24	8,024.7	-205.1	321.3	123.1	198.18	1.621	
14,100.0	6,862.7	6,833.3	6,832.8	183.8	16.8	-88.67	8,024.7	-205.1	228.2	27.7	200.55	1.138	Level 2
14,200.0	6,862.4	6,834.0	6,833.6	186.2	16.8	-89.10	8,024.7	-205.1	144.8	-58.1	202.91	0.714	Level 1
14,300.0	6,862.2	6,834.8	6,834.3	188.5	16.8	-89.53	8,024.7	-205.1	99.2	-106.1	205.27	0.483	Level 1
14,305.6	6,862.1	6,834.8	6,834.4	188.7	16.8	-89.55	8,024.7	-205.1	99.0	-106.4	205.40	0.482	Level 1, CC, ES, SF
14,400.0	6,861.9	6,835.5	6,835.1	190.9	16.8	-89.95	8,024.7	-205.1	136.8	-70.8	207.61	0.659	Level 1
14,500.0	6,861.6	6,836.2	6,835.8	193.2	16.8	-90.38	8,024.7	-205.1	218.1	8.2	209.95	1.039	Level 2
14,600.0	6,861.3	6,837.0	6,836.6	195.5	16.8	-90.81	8,024.7	-205.1	310.6	98.3	212.27	1.463	Level 3
14,700.0	6,861.0	6,837.7	6,837.3	197.9	16.8	-91.24	8,024.7	-205.1	406.6	192.0	214.58	1.895	
14,800.0	6,860.7	6,838.5	6,838.0	200.2	16.8	-91.67	8,024.7	-205.1	504.2	287.3	216.89	2.325	
14,900.0	6,860.5	6,839.2	6,838.8	202.6	16.8	-92.10	8,024.7	-205.1	602.5	383.3	219.18	2.749	
15,000.0	6,860.2	6,839.9	6,839.5	204.9	16.8	-92.53	8,024.8	-205.2	701.4	479.9	221.46	3.167	