

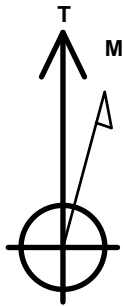
PDC Energy Inc. DJ Basin

Well Name: **High Plains 25F-301**

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 1380569.26 3245642.89 40.374712 -104.618326
 Original Well Elev WELL @ 4662.0ft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 994'FNL, 749'FWL, SEC.25	1.0	0.0	0.0	Point
BHL 50'FNL, 85'FWL, SEC.13	6852.0	11576.4	-685.4	Point
LPL 2'FSL, 64'FWL, SEC.24	6882.0	996.2	-685.4	Point



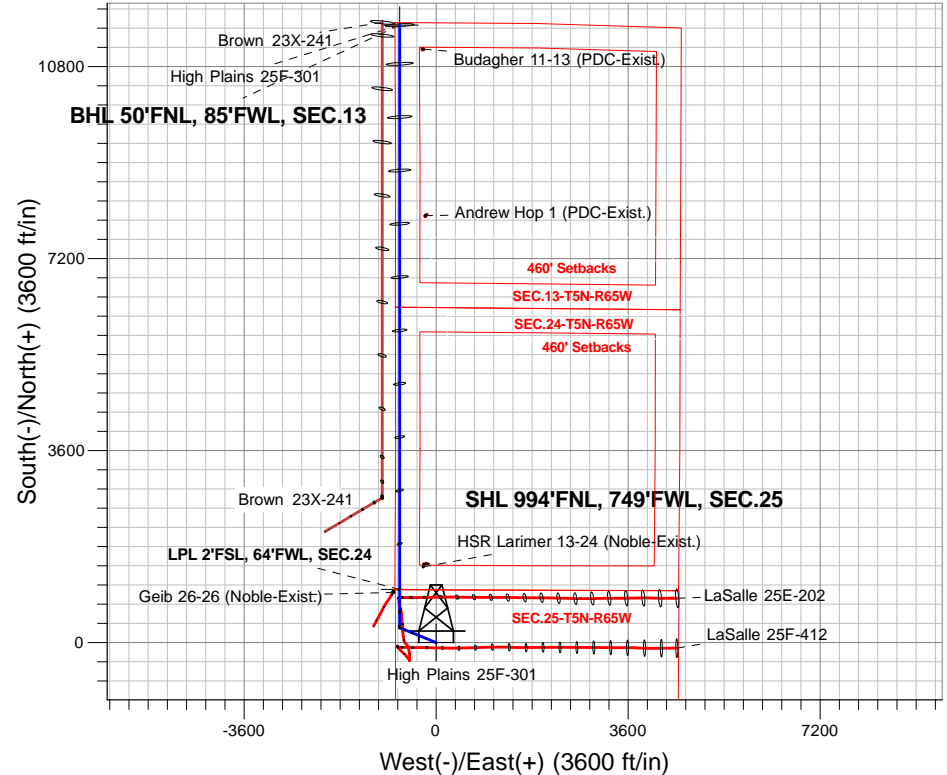
Azimuths to True North
 Magnetic North: 8.02°

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 25F-301
 Plan #1 (2-03-17)
 7:56, February 08 2017

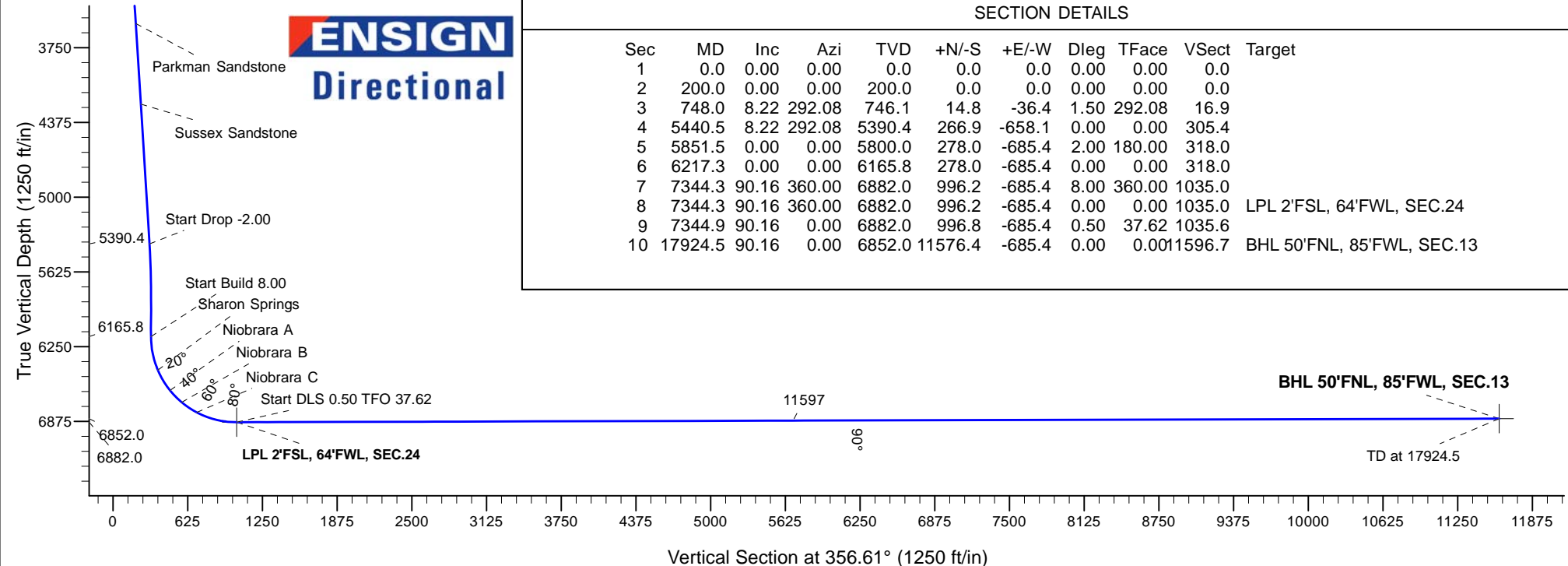
ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	KOP - Start Build 1.50
5390.4	5440.5	Start Drop -2.00
6165.8	6217.3	Start Build 8.00
6882.0	7344.3	Start DLS 0.50 TFO 37.62
6882.0	7344.9	Start 10579.6 hold at 7344.9 MD
6852.0	17924.5	TD at 17924.5



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	748.0	8.22	292.08	746.1	14.8	-36.4	1.50	292.08	16.9	
4	5440.5	8.22	292.08	5390.4	266.9	-658.1	0.00	0.00	305.4	
5	5851.5	0.00	0.00	5800.0	278.0	-685.4	2.00	180.00	318.0	
6	6217.3	0.00	0.00	6165.8	278.0	-685.4	0.00	0.00	318.0	
7	7344.3	90.16	360.00	6882.0	996.2	-685.4	8.00	360.00	1035.0	
8	7344.3	90.16	360.00	6882.0	996.2	-685.4	0.00	0.00	1035.0	LPL 2'FSL, 64'FWL, SEC.24
9	7344.9	90.16	0.00	6882.0	996.8	-685.4	0.50	37.62	1035.6	
10	17924.5	90.16	0.00	6852.0	11576.4	-685.4	0.00	0.00	11596.7	BHL 50'FNL, 85'FWL, SEC.13





PDC Energy Inc. DJ Basin

SEC.25-T5N-R65W

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

High Plains 25F-301

Wellbore #1

Plan #1 (2-03-17)

Anticollision Report

08 February, 2017



Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well High Plains 25F-301
Project:	SEC.25-T5N-R65W	TVD Reference:	WELL @ 4662.0ft (Original Well Elev)
Reference Site:	High Plains 5N65W25AF Pad Sec.25-T5N-R65W	MD Reference:	WELL @ 4662.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Plains 25F-301	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 (2-03-17)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (2-03-17)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	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 2/7/2017			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	17,924.5	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						
Brown 5N65W23 Pad Sec.23-T5N-R65W						
Brown 23X-241 - Wellbore #1 - Plan #2 (12-28-16)	17,924.5	15,492.3	335.5	-147.5	0.695	Level 1, CC, ES, SF
Existing Wells Sec.13-T5N-R65W						
Andrew Hop 1 (PDC-Exist.) - Wellbore #1 - Wellbore #1	14,343.0	6,839.4	480.0	275.3	2.345	CC, ES, SF
Budagher 11-13 (PDC-Exist.) - Wellbore #1 - Wellbore #1	17,476.5	6,800.0	443.1	167.3	1.607	CC, ES
Budagher 11-13 (PDC-Exist.) - Wellbore #1 - Wellbore #1	17,500.0	6,799.9	443.7	167.4	1.606	SF
Existing Wells Sec.24-T5N-R65W (GRID)						
HSR Larimer 13-24 (Noble-Exist.) - Wellbore #1 - Wellbo	7,780.2	6,868.5	445.5	388.7	7.846	CC, ES
HSR Larimer 13-24 (Noble-Exist.) - Wellbore #1 - Wellbo	7,900.0	6,861.9	461.2	402.1	7.796	SF
Existing Wells Sec.26-T5N-R65W						
Geib 26-26 (Noble-Exist.) - Wellbore #1 - Wellbore #1	7,294.7	6,957.8	115.2	68.5	2.468	CC, ES
Geib 26-26 (Noble-Exist.) - Wellbore #1 - Wellbore #1	7,300.0	6,958.1	115.3	68.5	2.466	SF
High Plains 5N65W25AF Pad Sec.25-T5N-R65W						
High Plains 25A-221 - Wellbore #1 - Plan #1 (2-03-17)	200.0	200.0	75.1	74.2	90.861	CC
High Plains 25A-221 - Wellbore #1 - Plan #1 (2-03-17)	300.0	300.0	75.5	74.2	55.111	ES
High Plains 25A-221 - Wellbore #1 - Plan #1 (2-03-17)	900.0	895.6	113.1	108.2	23.224	SF
High Plains 25A-241 - Wellbore #1 - Plan #1 (2-03-17)	200.0	200.0	44.8	44.0	54.253	CC
High Plains 25A-241 - Wellbore #1 - Plan #1 (2-03-17)	300.0	300.0	45.3	43.9	33.052	ES
High Plains 25A-241 - Wellbore #1 - Plan #1 (2-03-17)	700.0	698.6	64.4	60.7	17.491	SF
High Plains 25A-321 - Wellbore #1 - Plan #1 (2-03-17)	200.0	200.0	90.0	89.2	108.943	CC
High Plains 25A-321 - Wellbore #1 - Plan #1 (2-03-17)	300.0	300.0	90.5	89.1	66.008	ES
High Plains 25A-321 - Wellbore #1 - Plan #1 (2-03-17)	900.0	893.7	129.0	124.2	26.616	SF
High Plains 25A-341 - Wellbore #1 - Plan #1 (2-03-17)	200.0	200.0	29.9	29.0	36.167	CC
High Plains 25A-341 - Wellbore #1 - Plan #1 (2-03-17)	300.0	300.0	30.4	29.0	22.160	ES
High Plains 25A-341 - Wellbore #1 - Plan #1 (2-03-17)	17,924.5	17,883.6	579.0	34.7	1.064	Level 2, SF
High Plains 25A-401 - Wellbore #1 - Plan #1 (2-03-17)	200.0	200.0	59.7	58.9	72.330	CC
High Plains 25A-401 - Wellbore #1 - Plan #1 (2-03-17)	300.0	300.0	60.2	58.9	43.945	ES
High Plains 25A-401 - Wellbore #1 - Plan #1 (2-03-17)	900.0	896.6	99.8	95.0	20.518	SF
High Plains 25F-221 - Wellbore #1 - Plan #1 (2-03-17)	200.0	200.0	14.9	14.1	18.086	CC
High Plains 25F-221 - Wellbore #1 - Plan #1 (2-03-17)	17,924.5	17,819.3	297.0	-228.6	0.565	Level 1, ES, SF
High Plains 25N-241 - Wellbore #1 - Plan #1 (2-03-17)	200.0	200.0	104.9	104.1	127.028	CC
High Plains 25N-241 - Wellbore #1 - Plan #1 (2-03-17)	300.0	300.0	105.4	104.0	76.906	ES
High Plains 25N-241 - Wellbore #1 - Plan #1 (2-03-17)	1,000.0	988.7	160.7	155.2	29.102	SF
High Plains 25N-301 - Wellbore #1 - Plan #1 (2-03-17)	200.0	200.0	119.9	119.0	145.110	CC

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

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Project:	SEC.25-T5N-R65W	TVD Reference:	WELL @ 4662.0ft (Original Well Elev)
Reference Site:	High Plains 5N65W25AF Pad Sec.25-T5N-R65W	MD Reference:	WELL @ 4662.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Plains 25F-301	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 (2-03-17)	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
High Plains 5N65W25AF Pad Sec.25-T5N-R65W						
High Plains 25N-301 - Wellbore #1 - Plan #1 (2-03-17)	300.0	300.5	120.1	118.8	88.279	ES
High Plains 25N-301 - Wellbore #1 - Plan #1 (2-03-17)	900.0	883.4	177.1	172.0	34.861	SF
LaSalle 25F-HZ Pad Sec.25-T5N-R65W						
LaSalle 25E-202 - Wellbore #1 - Wellbore #1	3,344.7	3,339.3	296.1	272.9	12.756	CC, ES
LaSalle 25E-202 - Wellbore #1 - Wellbore #1	7,100.0	6,770.0	383.9	342.2	9.213	SF
LaSalle 25F-412 - Wellbore #1 - Wellbore #1	4,974.9	4,944.2	341.6	307.4	9.967	CC
LaSalle 25F-412 - Wellbore #1 - Wellbore #1	5,000.0	4,968.8	341.7	307.2	9.925	ES
LaSalle 25F-412 - Wellbore #1 - Wellbore #1	6,217.3	6,173.3	366.4	326.4	9.150	SF

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
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		
8,600.0	6,878.4	6,650.0	6,473.2	57.1	34.9	-38.82	2,846.0	-1,013.4	792.5	738.9	53.60	14.785		
8,700.0	6,878.2	6,682.9	6,500.0	59.3	35.1	-40.74	2,865.1	-1,013.4	719.1	661.8	57.24	12.563		
8,800.0	6,877.9	6,717.2	6,527.0	61.4	35.4	-42.85	2,886.2	-1,013.4	649.7	588.6	61.14	10.628		
8,900.0	6,877.6	6,750.0	6,552.0	63.6	35.6	-44.94	2,907.5	-1,013.4	585.4	520.3	65.09	8.994		
9,000.0	6,877.3	6,800.0	6,588.2	65.8	36.0	-48.29	2,942.0	-1,013.4	526.9	456.5	70.46	7.478		
9,100.0	6,877.0	6,850.0	6,622.0	68.0	36.5	-51.77	2,978.7	-1,013.4	475.5	399.5	76.00	6.256		
9,200.0	6,876.7	6,900.0	6,653.4	70.2	37.0	-55.33	3,017.6	-1,013.4	432.1	350.5	81.61	5.295		
9,300.0	6,876.5	6,965.2	6,690.5	72.4	37.7	-59.96	3,071.3	-1,013.4	397.4	309.2	88.23	4.504		
9,400.0	6,876.2	7,034.1	6,724.4	74.6	38.5	-64.63	3,131.2	-1,013.4	371.6	276.9	94.73	3.923		
9,500.0	6,875.9	7,110.0	6,755.5	76.8	39.4	-69.24	3,200.4	-1,013.4	354.1	253.1	101.03	3.505		
9,600.0	6,875.6	7,192.2	6,781.1	79.1	40.5	-73.30	3,278.5	-1,013.3	343.4	236.6	106.83	3.215		
9,700.0	6,875.3	7,279.6	6,799.1	81.3	41.8	-76.26	3,364.0	-1,013.3	337.8	225.8	112.00	3.016		
9,800.0	6,875.0	7,370.2	6,807.2	83.6	43.2	-77.65	3,454.1	-1,013.3	335.7	219.2	116.49	2.882		
9,846.8	6,874.9	7,414.5	6,807.5	84.6	43.9	-77.72	3,498.5	-1,013.3	335.6	217.2	118.41	2.834		
9,900.0	6,874.8	7,467.7	6,807.4	85.8	44.8	-77.72	3,551.7	-1,013.3	335.6	215.0	120.61	2.783		
10,000.0	6,874.5	7,567.7	6,807.1	88.1	46.5	-77.72	3,651.7	-1,013.3	335.6	210.8	124.79	2.689		
10,100.0	6,874.2	7,667.7	6,806.7	90.4	48.2	-77.71	3,751.7	-1,013.3	335.6	206.6	129.01	2.601		
10,200.0	6,873.9	7,767.7	6,806.4	92.6	50.0	-77.70	3,851.7	-1,013.3	335.6	202.3	133.26	2.518		
10,300.0	6,873.6	7,867.7	6,806.1	94.9	51.8	-77.70	3,951.7	-1,013.3	335.6	198.0	137.55	2.440		
10,400.0	6,873.3	7,967.7	6,805.8	97.2	53.7	-77.69	4,051.7	-1,013.3	335.6	193.7	141.86	2.366		
10,500.0	6,873.1	8,067.7	6,805.5	99.5	55.7	-77.69	4,151.7	-1,013.3	335.6	189.4	146.20	2.295		
10,600.0	6,872.8	8,167.7	6,805.2	101.7	57.6	-77.68	4,251.7	-1,013.3	335.6	185.0	150.56	2.229		
10,700.0	6,872.5	8,267.7	6,804.9	104.0	59.6	-77.68	4,351.7	-1,013.3	335.6	180.7	154.94	2.166		
10,800.0	6,872.2	8,367.7	6,804.5	106.3	61.6	-77.67	4,451.7	-1,013.2	335.6	176.3	159.33	2.106		
10,900.0	6,871.9	8,467.7	6,804.2	108.6	63.7	-77.67	4,551.7	-1,013.2	335.6	171.9	163.74	2.050		
11,000.0	6,871.6	8,567.7	6,803.9	110.9	65.7	-77.66	4,651.7	-1,013.2	335.6	167.4	168.16	1.996		
11,100.0	6,871.4	8,667.7	6,803.6	113.2	67.8	-77.66	4,751.7	-1,013.2	335.6	163.0	172.59	1.944		
11,200.0	6,871.1	8,767.7	6,803.3	115.5	69.9	-77.65	4,851.7	-1,013.2	335.6	158.5	177.04	1.896		
11,300.0	6,870.8	8,867.7	6,803.0	117.8	72.0	-77.64	4,951.7	-1,013.2	335.6	154.1	181.49	1.849		
11,400.0	6,870.5	8,967.7	6,802.7	120.1	74.1	-77.64	5,051.7	-1,013.2	335.6	149.6	185.96	1.805		
11,500.0	6,870.2	9,067.7	6,802.3	122.4	76.3	-77.63	5,151.7	-1,013.2	335.6	145.2	190.43	1.762		
11,600.0	6,869.9	9,167.7	6,802.0	124.7	78.4	-77.63	5,251.7	-1,013.2	335.6	140.7	194.91	1.722		
11,700.0	6,869.6	9,267.7	6,801.7	127.0	80.6	-77.62	5,351.7	-1,013.2	335.6	136.2	199.39	1.683		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation