

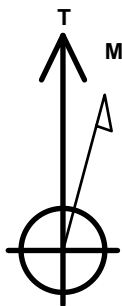
PDC Energy Inc. DJ Basin

Well Name: **High Plains 25N-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 1380449.41 3245642.97 40.374383 -104.618330
 Original Well Elev WELL @ 4662.0ft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 1114'FNL, 747'FWL, SEC.25	1.0	0.0	0.0	Point
BHL 0'FNL, 2614'FWL, SEC.24	6842.0	6387.9	1855.2	Point
LPL 99'FNL, 2602FWL, SEC.25	6862.0	1014.9	1855.2	Point



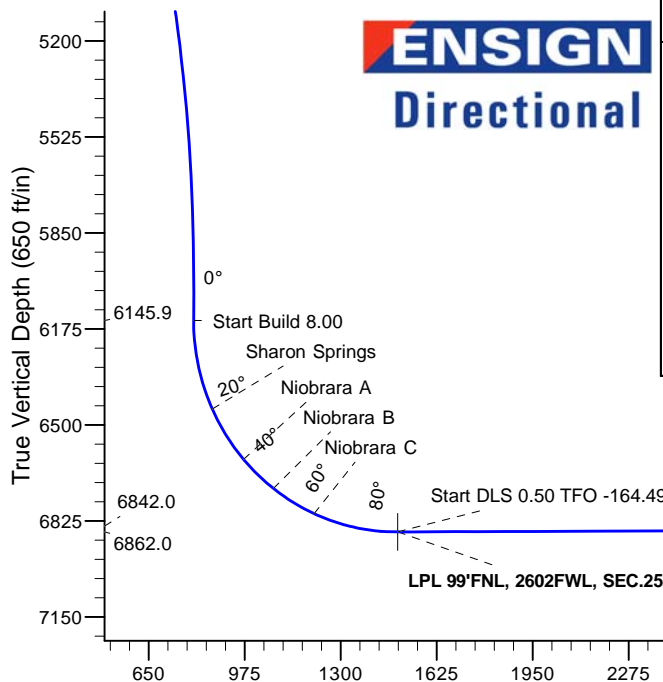
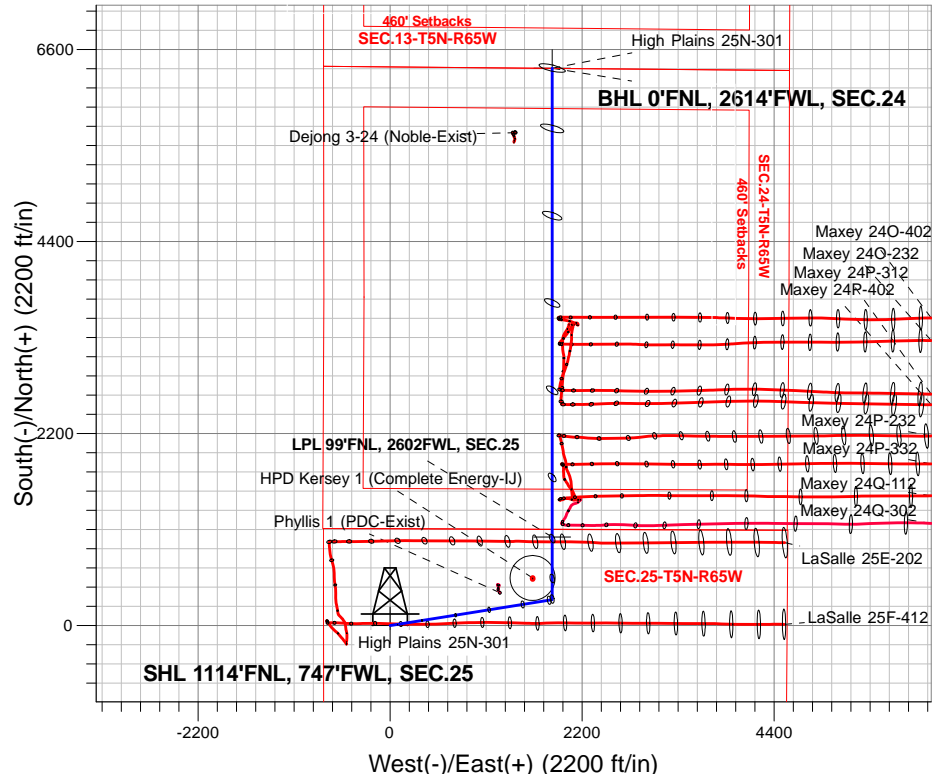
Azimuths to True North
 Magnetic North: 8.02°

Magnetic Field
 Strength: 52539.0snT
 Dip Angle: 66.86°
 Date: 2/8/2017
 Model: IGRF2010

High Plains 5N65W25AF Pad Sec.25-T5N-R65W
 High Plains 25N-301
 Plan #1 (2-03-17)
 13:45, February 08 2017

ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	KOP - Start Build 1.50
4884.6	5198.9	Start Drop -2.00
6145.9	6490.4	Start Build 8.00
6862.0	7618.1	Start DLS 0.50 TFO -164.49
6862.0	7619.5	Start 5369.7 hold at 7619.5 MD
6842.0	12989.2	TD at 12989.2



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	1727.2	22.91	80.93	1686.9	47.5	297.5	1.50	80.93	128.6	
4	5199.1	22.91	80.93	4884.9	260.4	1632.1	0.00	0.00	705.2	
5	6344.5	0.00	0.00	6000.0	296.0	1855.2	2.00	180.00	801.7	
6	6490.3	0.00	0.00	6145.9	296.0	1855.2	0.00	0.00	801.7	
7	7617.9	90.21	0.00	6862.0	1014.8	1855.2	8.00	0.00	1491.9	
8	7618.0	90.21	0.00	6862.0	1014.9	1855.2	0.00	0.00	1492.0	LPL 99'FNL, 2602FWL, SEC.25
9	7618.7	90.21	360.00	6862.0	1015.7	1855.2	0.50	-29.42	1492.8	
10	12991.0	90.21	360.00	6842.0	6387.9	1855.2	0.00	0.00	6651.8	BHL 0'FNL, 2614'FWL, SEC.24

Vertical Section at 16.19° (650 ft/in)



PDC Energy Inc. DJ Basin

SEC.25-T5N-R65W

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

High Plains 25N-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 25N-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 25N-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 2/8/2017			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	12,991.0	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.24-T5N-R65W (GRID)						
Dejong 3-24 (Noble-Exist) - Wellbore #1 - Wellbore #1	12,252.0	6,821.5	420.8	269.6	2.782	CC, ES
Dejong 3-24 (Noble-Exist) - Wellbore #1 - Wellbore #1	12,300.0	6,821.3	423.6	271.2	2.780	SF
Existing Wells Sec.25-T5N-R65W						
HPD Kersey 1 (Complete Energy-IJ) - Wellbore #1 - Wellbore #1	7,107.4	6,663.3	224.7	35.5	1.187	Level 2, CC, ES, SF
Phyllis 1 (PDC-Exist) - Wellbore #1 - Wellbore #1	4,287.8	4,024.1	228.4	185.6	5.331	CC
Phyllis 1 (PDC-Exist) - Wellbore #1 - Wellbore #1	4,300.0	4,035.3	228.5	185.5	5.318	ES, SF
High Plains 5N65W25AF Pad Sec.25-T5N-R65W						
High Plains 25A-221 - Wellbore #1 - Plan #1 (2-03-17)	436.8	436.6	44.2	42.1	20.874	CC
High Plains 25A-221 - Wellbore #1 - Plan #1 (2-03-17)	500.0	499.7	44.4	42.0	17.954	ES
High Plains 25A-221 - Wellbore #1 - Plan #1 (2-03-17)	700.0	698.6	51.0	47.3	13.893	SF
High Plains 25A-241 - Wellbore #1 - Plan #1 (2-03-17)	507.6	507.2	74.0	71.5	29.375	CC
High Plains 25A-241 - Wellbore #1 - Plan #1 (2-03-17)	600.0	599.3	74.5	71.4	24.312	ES
High Plains 25A-241 - Wellbore #1 - Plan #1 (2-03-17)	900.0	895.1	90.7	85.8	18.309	SF
High Plains 25A-321 - Wellbore #1 - Plan #1 (2-03-17)	395.1	395.0	29.5	27.6	15.641	CC
High Plains 25A-321 - Wellbore #1 - Plan #1 (2-03-17)	400.0	399.9	29.5	27.5	15.423	ES
High Plains 25A-321 - Wellbore #1 - Plan #1 (2-03-17)	12,991.0	12,794.0	674.1	374.0	2.246	SF
High Plains 25A-341 - Wellbore #1 - Plan #1 (2-03-17)	538.7	538.2	88.7	86.0	32.813	CC
High Plains 25A-341 - Wellbore #1 - Plan #1 (2-03-17)	600.0	599.3	88.9	85.9	29.008	ES
High Plains 25A-341 - Wellbore #1 - Plan #1 (2-03-17)	900.0	888.3	112.0	107.0	22.441	SF
High Plains 25A-401 - Wellbore #1 - Plan #1 (2-03-17)	476.8	476.5	59.3	56.9	25.291	CC
High Plains 25A-401 - Wellbore #1 - Plan #1 (2-03-17)	500.0	499.7	59.3	56.8	23.961	ES
High Plains 25A-401 - Wellbore #1 - Plan #1 (2-03-17)	800.0	797.5	69.9	65.6	16.252	SF
High Plains 25F-221 - Wellbore #1 - Plan #1 (2-03-17)	436.0	435.3	104.1	102.0	49.309	CC, ES
High Plains 25F-221 - Wellbore #1 - Plan #1 (2-03-17)	900.0	881.3	143.0	138.0	28.661	SF
High Plains 25F-301 - Wellbore #1 - Plan #1 (2-03-17)	200.0	200.0	119.9	119.0	145.110	CC
High Plains 25F-301 - Wellbore #1 - Plan #1 (2-03-17)	300.0	298.8	120.1	118.8	88.655	ES
High Plains 25F-301 - Wellbore #1 - Plan #1 (2-03-17)	900.0	876.7	176.4	171.3	34.755	SF
High Plains 25N-241 - Wellbore #1 - Plan #1 (2-03-17)	334.1	334.1	14.8	13.2	9.508	CC
High Plains 25N-241 - Wellbore #1 - Plan #1 (2-03-17)	400.0	399.9	15.0	13.1	7.868	ES
High Plains 25N-241 - Wellbore #1 - Plan #1 (2-03-17)	12,991.0	12,508.3	331.8	42.8	1.148	Level 2, SF

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well High Plains 25N-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 25N-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
Offset Well - Wellbore - Design						
LaSalle 25F-HZ Pad Sec.25-T5N-R65W						
LaSalle 25E-202 - Wellbore #1 - Wellbore #1	7,550.0	9,108.2	79.1	38.4	1.944 ES, SF	
LaSalle 25E-202 - Wellbore #1 - Wellbore #1	7,554.7	9,108.3	79.0	38.6	1.956 CC	
LaSalle 25F-412 - Wellbore #1 - Wellbore #1	0.0	0.0	544.5			
LaSalle 25F-412 - Wellbore #1 - Wellbore #1	6,850.0	9,202.6	573.3	454.6	4.829 SF	
LaSalle 25F-412 - Wellbore #1 - Wellbore #1	6,950.0	9,205.7	548.8	438.9	4.995 ES	
Maxey 24O-HZ Pad Sec.24-T5N-R65W						
Maxey 24O-232 - Wellbore #1 - Wellbore #1	9,827.3	6,599.0	451.6	373.9	5.810 CC, ES	
Maxey 24O-232 - Wellbore #1 - Wellbore #1	9,900.0	6,599.0	457.4	378.5	5.792 SF	
Maxey 24O-402 - Wellbore #1 - Wellbore #1	10,136.2	6,673.2	353.3	266.0	4.050 CC, ES, SF	
Maxey 24P-312 - Wellbore #1 - Wellbore #1	9,297.8	6,659.9	467.9	393.5	6.288 CC	
Maxey 24P-312 - Wellbore #1 - Wellbore #1	9,300.0	6,659.9	467.9	393.5	6.285 ES, SF	
Maxey 24P-402 - Wellbore #1 - Wellbore #1	9,137.7	6,722.1	394.6	318.4	5.178 CC, ES	
Maxey 24P-402 - Wellbore #1 - Wellbore #1	9,200.0	6,721.9	399.5	322.2	5.170 SF	
Maxey 24Q-HZ Pad Sec.24-T5N-R65W						
Maxey 24P-232 - Wellbore #1 - Wellbore #1	8,762.4	6,660.8	439.6	375.4	6.844 CC, ES	
Maxey 24P-232 - Wellbore #1 - Wellbore #1	8,800.0	6,659.7	441.2	376.5	6.814 SF	
Maxey 24P-332 - Wellbore #1 - Wellbore #1	8,451.3	6,641.2	411.6	354.3	7.177 CC, ES	
Maxey 24P-332 - Wellbore #1 - Wellbore #1	8,500.0	6,641.9	414.5	356.3	7.123 SF	
Maxey 24Q-112 - Wellbore #1 - Wellbore #1	8,079.7	6,541.1	518.7	471.4	10.948 CC, ES	
Maxey 24Q-112 - Wellbore #1 - Wellbore #1	8,200.0	6,542.9	532.5	483.3	10.817 SF	
Maxey 24Q-302 - Wellbore #1 - Wellbore #1	7,754.5	6,651.3	407.5	360.5	8.663 CC, ES	
Maxey 24Q-302 - Wellbore #1 - Wellbore #1	7,800.0	6,650.5	410.0	362.4	8.607 SF	

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 100-NS-GYRO-MS												Offset Well Error:	0.0 ft
Existing Wells Sec.24-T5N-R65W (GRID) - Dejong 3-24 (Noble-Exist) - Wellbore #1 - Wellbore #1													
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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
11,600.0	6,847.2	6,825.2	6,823.2	123.6	17.9	-90.60	5,648.8	1,434.4	776.0	639.7	136.27	5.695	
11,700.0	6,846.8	6,824.6	6,822.6	125.8	17.9	-90.53	5,648.8	1,434.4	694.1	555.5	138.56	5.009	
11,800.0	6,846.4	6,824.1	6,822.1	128.0	17.9	-90.45	5,648.8	1,434.4	617.6	476.7	140.86	4.384	
11,900.0	6,846.1	6,823.5	6,821.5	130.2	17.9	-90.38	5,648.9	1,434.4	548.6	405.5	143.16	3.832	
12,000.0	6,845.7	6,822.9	6,820.9	132.4	17.9	-90.30	5,648.9	1,434.4	490.5	345.0	145.46	3.372	
12,100.0	6,845.3	6,822.4	6,820.4	134.7	17.9	-90.22	5,648.9	1,434.3	447.4	299.7	147.76	3.028	
12,200.0	6,844.9	6,821.8	6,819.8	136.9	17.9	-90.15	5,648.9	1,434.3	424.0	274.0	150.06	2.826	
12,252.0	6,844.8	6,821.5	6,819.5	138.0	17.9	-90.11	5,648.9	1,434.3	420.8	269.6	151.26	2.782 CC, ES	
12,300.0	6,844.6	6,821.3	6,819.3	139.1	17.9	-90.07	5,648.9	1,434.3	423.6	271.2	152.37	2.780 SF	
12,400.0	6,844.2	6,820.7	6,818.7	141.4	17.9	-89.99	5,648.9	1,434.3	446.1	291.4	154.67	2.884	
12,500.0	6,843.8	6,820.1	6,818.2	143.6	17.9	-89.92	5,648.9	1,434.3	488.5	331.5	156.98	3.112	
12,600.0	6,843.5	6,819.6	6,817.6	145.8	17.9	-89.84	5,648.9	1,434.3	546.1	386.8	159.29	3.428	
12,700.0	6,843.1	6,819.0	6,817.0	148.1	17.9	-89.77	5,648.9	1,434.3	614.7	453.1	161.59	3.804	
12,800.0	6,842.7	6,818.5	6,816.5	150.3	17.9	-89.69	5,648.9	1,434.3	691.0	527.0	163.90	4.216	
12,900.0	6,842.3	6,817.9	6,815.9	152.6	17.9	-89.61	5,648.9	1,434.3	772.7	606.5	166.21	4.649	