

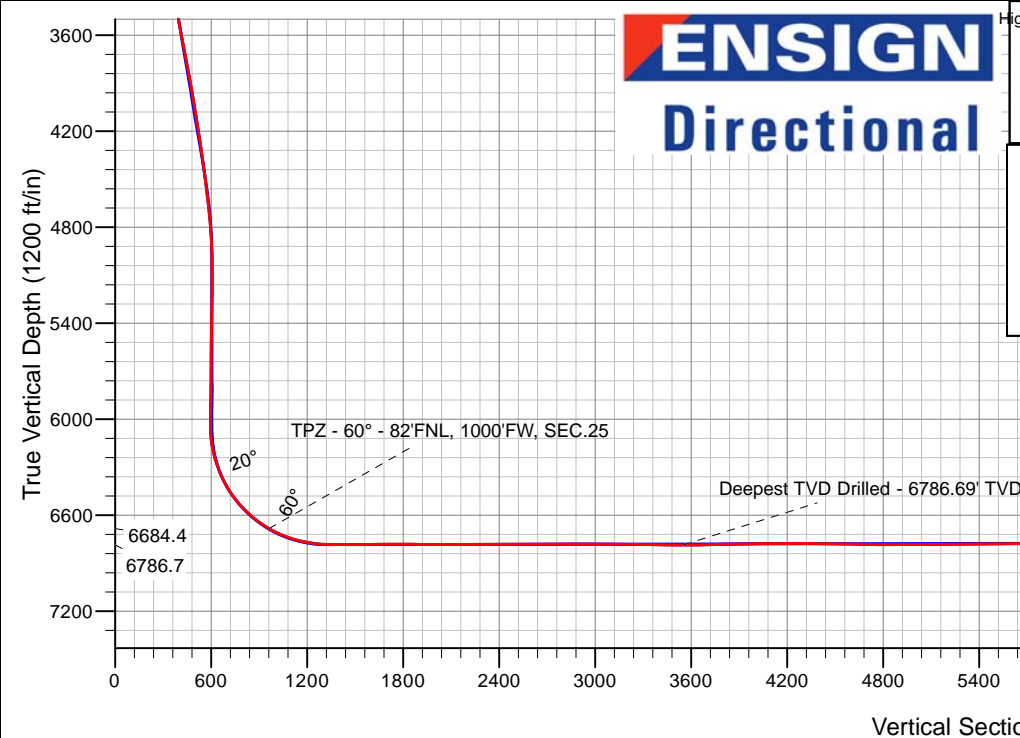
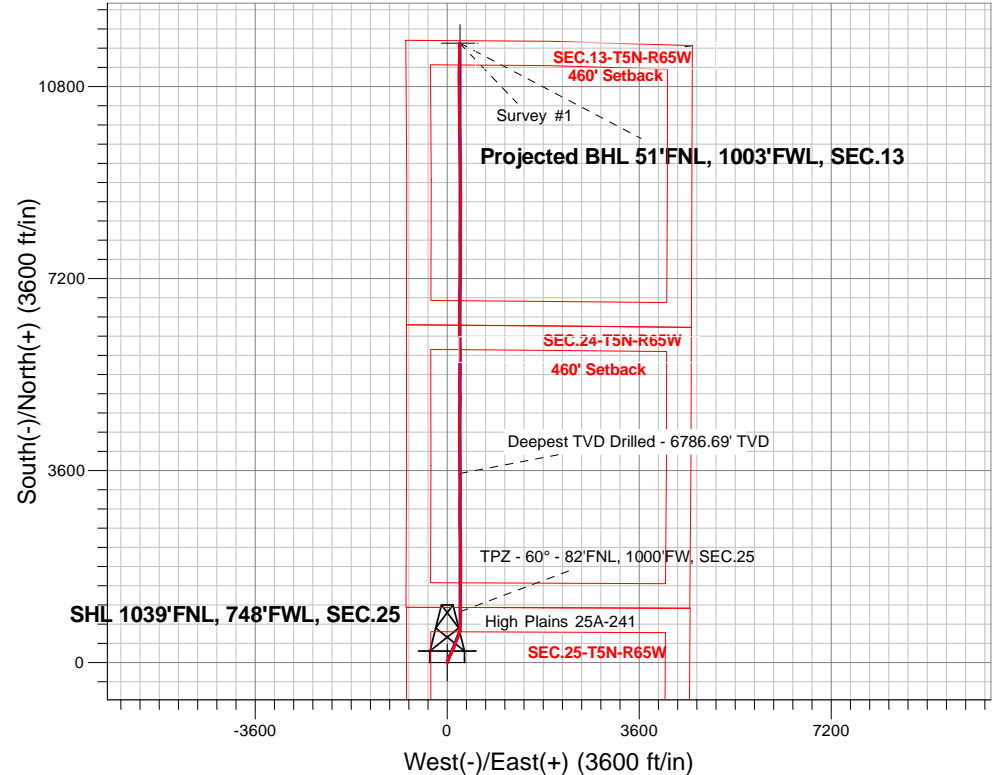
PDC Energy Inc. DJ Basin

Well Name: **High Plains 25A-241**

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 1380524.453245642.78 40.374589 -104.618328
 Original Well Elev WELL @ 4662.0ft (Original Well Elev)

FINAL SURVEY

Projected Bottom Hole Location
17,547'MD 6760'TVD 11,614'N & 233'E of SHL
90.4 degree Incl @ 1.10 degree AZM



High Plains 5N65W25AF Pad Sec.25-T5N-R65W
 High Plains 25A-241
 High Plains 25A-241 Wellbore #1
 11:49, November 14 2017

ANNOTATIONS

TVD	MD	Annotation
6684.4	6870.4	TPZ - 60° - 82'FNL, 1000'FW, SEC.25
6786.7	9478.0	Deepest TVD Drilled - 6786.69' TVD

LEGEND

- High Plains 25A-241, High Plains 25A-241 Wellbore #1, Plan #2 (10-20-17)R V0
- High Plains 25A-241 Wellbore #1
- Survey #1



PDC Energy Inc. DJ Basin

SEC.25-T5N-R65W

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

High Plains 25A-241

High Plains 25A-241 Wellbore #1

Survey: Survey #1

Standard Survey Report

14 November, 2017

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well High Plains 25A-241
Project:	SEC.25-T5N-R65W	TVD Reference:	WELL @ 4662.0ft (Original Well Elev)
Site:	High Plains 5N65W25AF Pad Sec.25-T5N-R65W	MD Reference:	WELL @ 4662.0ft (Original Well Elev)
Well:	High Plains 25A-241	North Reference:	True
Wellbore:	High Plains 25A-241 Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	High Plains 25A-241 Wellbore #1	Database:	US_EDM

Project	SEC.25-T5N-R65W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	High Plains 5N65W25AF Pad Sec.25-T5N-R65W				
Site Position:		Northing:	1,380,509.53 usft	Latitude:	40.374548
From:	Lat/Long	Easting:	3,245,642.93 usft	Longitude:	-104.618328
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.57 °

Well	High Plains 25A-241					
Well Position	+N/-S	0.0 ft	Northing:	1,380,524.45 usft	Latitude:	40.374589
	+E/-W	0.0 ft	Easting:	3,245,642.78 usft	Longitude:	-104.618328
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,639.0 ft

Wellbore	High Plains 25A-241 Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/20/2017	7.93	66.83	52,466

Design	High Plains 25A-241 Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	1.17	

Survey Program	Date	11/14/2017			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
157.0	17,547.0	Survey #1 (High Plains 25A-241 Wellbore	MWD	MWD - Standard	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
1.0	0.00	92.70	1.0	0.0	0.0	0.0	0.19	0.19	0.00	
SHL 1039'FNL, 748'FWL, SEC.25										
157.0	0.30	92.70	157.0	0.0	0.4	0.0	0.19	0.19	0.00	
253.0	0.30	158.60	253.0	-0.3	0.8	-0.2	0.34	0.00	68.65	
349.0	0.60	158.20	349.0	-1.0	1.0	-0.9	0.31	0.31	-0.42	
445.0	0.90	168.90	445.0	-2.2	1.4	-2.1	0.34	0.31	11.15	
541.0	1.00	122.70	541.0	-3.4	2.2	-3.3	0.78	0.10	-48.13	
637.0	0.50	341.90	637.0	-3.4	2.8	-3.4	1.48	-0.52	-146.67	
733.0	0.80	332.60	733.0	-2.4	2.3	-2.4	0.33	0.31	-9.69	

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well High Plains 25A-241
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Site:	High Plains 5N65W25AF Pad Sec.25-T5N-R65W	MD Reference:	WELL @ 4662.0ft (Original Well Elev)
Well:	High Plains 25A-241	North Reference:	True
Wellbore:	High Plains 25A-241 Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	High Plains 25A-241 Wellbore #1	Database:	US_EDM

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
829.0	1.90	346.00	828.9	-0.3	1.7	-0.3	1.18	1.15	13.96	
925.0	3.40	4.80	924.8	4.1	1.5	4.1	1.79	1.56	19.58	
1,021.0	5.20	13.20	1,020.6	11.2	2.7	11.2	1.98	1.88	8.75	
1,117.0	7.10	14.60	1,116.0	21.1	5.2	21.2	1.99	1.98	1.46	
1,213.0	8.00	20.90	1,211.2	33.1	9.1	33.3	1.27	0.94	6.56	
1,309.0	9.10	22.90	1,306.1	46.4	14.4	46.6	1.19	1.15	2.08	
1,406.0	10.40	22.70	1,401.7	61.5	20.8	61.9	1.34	1.34	-0.21	
1,501.0	9.10	19.90	1,495.3	76.5	26.7	77.0	1.46	-1.37	-2.95	
1,597.0	9.70	18.70	1,590.0	91.3	31.9	91.9	0.66	0.63	-1.25	
1,615.0	9.80	18.50	1,607.8	94.2	32.8	94.8	0.59	0.56	-1.11	
1,694.0	9.10	18.50	1,685.7	106.5	36.9	107.2	0.89	-0.89	0.00	
1,789.0	9.10	19.50	1,779.5	120.7	41.8	121.5	0.17	0.00	1.05	
1,886.0	9.70	32.00	1,875.2	134.8	48.7	135.8	2.19	0.62	12.89	
1,982.0	9.40	29.40	1,969.9	148.5	56.9	149.7	0.55	-0.31	-2.71	
2,078.0	9.00	26.20	2,064.7	162.1	64.0	163.4	0.68	-0.42	-3.33	
2,173.0	8.70	26.40	2,158.5	175.2	70.5	176.6	0.32	-0.32	0.21	
2,269.0	9.90	27.60	2,253.3	189.0	77.6	190.6	1.27	1.25	1.25	
2,366.0	9.30	26.90	2,348.9	203.4	85.0	205.1	0.63	-0.62	-0.72	
2,462.0	9.10	22.70	2,443.7	217.3	91.4	219.1	0.73	-0.21	-4.38	
2,557.0	9.90	25.00	2,537.4	231.6	97.7	233.6	0.93	0.84	2.42	
2,653.0	11.30	25.50	2,631.7	247.6	105.3	249.7	1.46	1.46	0.52	
2,750.0	11.30	25.20	2,726.8	264.8	113.4	267.1	0.06	0.00	-0.31	
2,846.0	10.70	23.80	2,821.1	281.5	121.0	283.9	0.68	-0.63	-1.46	
2,942.0	10.40	25.00	2,915.5	297.5	128.3	300.0	0.39	-0.31	1.25	
3,038.0	9.80	22.90	3,010.0	312.8	135.1	315.5	0.73	-0.63	-2.19	
3,133.0	9.10	22.00	3,103.7	327.3	141.1	330.1	0.75	-0.74	-0.95	
3,229.0	10.20	18.10	3,198.3	342.4	146.6	345.3	1.33	1.15	-4.06	
3,325.0	9.10	17.10	3,293.0	357.7	151.4	360.7	1.16	-1.15	-1.04	
3,421.0	10.00	18.80	3,387.6	372.9	156.4	376.0	0.98	0.94	1.77	
3,517.0	11.40	22.20	3,482.0	389.5	162.6	392.8	1.60	1.46	3.54	
3,613.0	11.30	22.70	3,576.1	407.0	169.8	410.4	0.15	-0.10	0.52	
3,709.0	11.30	22.00	3,670.2	424.4	177.0	427.9	0.14	0.00	-0.73	
3,806.0	11.30	20.90	3,765.3	442.1	184.0	445.7	0.22	0.00	-1.13	
3,902.0	11.30	21.80	3,859.5	459.6	190.8	463.4	0.18	0.00	0.94	
3,998.0	10.60	21.60	3,953.7	476.5	197.5	480.5	0.73	-0.73	-0.21	
4,094.0	9.80	23.40	4,048.2	492.3	204.0	496.3	0.90	-0.83	1.88	
4,190.0	9.70	23.00	4,142.8	507.2	210.4	511.4	0.13	-0.10	-0.42	
4,286.0	9.20	20.10	4,237.5	521.8	216.2	526.2	0.72	-0.52	-3.02	
4,382.0	8.50	19.40	4,332.4	535.7	221.2	540.2	0.74	-0.73	-0.73	
4,478.0	8.20	16.90	4,427.4	549.0	225.6	553.5	0.49	-0.31	-2.60	
4,574.0	7.80	17.90	4,522.4	561.7	229.6	566.3	0.44	-0.42	1.04	
4,670.0	7.60	17.40	4,617.6	574.0	233.5	578.6	0.22	-0.21	-0.52	

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Well:	High Plains 25A-241	North Reference:	True
Wellbore:	High Plains 25A-241 Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	High Plains 25A-241 Wellbore #1	Database:	US_EDM

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,765.0	6.20	23.90	4,711.9	584.7	237.4	589.4	1.69	-1.47	6.84
4,861.0	4.10	26.70	4,807.5	592.5	241.1	597.3	2.20	-2.19	2.92
4,956.0	2.80	13.60	4,902.3	597.8	243.1	602.6	1.59	-1.37	-13.79
5,051.0	0.80	282.70	4,997.3	600.2	243.0	605.0	3.08	-2.11	-95.68
5,147.0	1.00	249.60	5,093.3	600.0	241.6	604.8	0.57	0.21	-34.48
5,243.0	0.90	246.60	5,189.2	599.4	240.1	604.2	0.12	-0.10	-3.13
5,339.0	0.70	258.80	5,285.2	599.0	238.9	603.8	0.27	-0.21	12.71
5,434.0	0.90	258.80	5,380.2	598.8	237.6	603.5	0.21	0.21	0.00
5,529.0	0.90	232.10	5,475.2	598.2	236.2	602.9	0.44	0.00	-28.11
5,625.0	1.00	213.20	5,571.2	597.0	235.2	601.7	0.34	0.10	-19.69
5,720.0	0.60	222.90	5,666.2	595.9	234.4	600.6	0.44	-0.42	10.21
5,816.0	0.60	203.20	5,762.2	595.1	233.9	599.8	0.21	0.00	-20.52
5,911.0	0.70	205.90	5,857.2	594.1	233.4	598.8	0.11	0.11	2.84
6,007.0	1.30	229.40	5,953.2	592.9	232.3	597.5	0.74	0.63	24.48
6,103.0	1.10	247.90	6,049.1	591.8	230.6	596.4	0.45	-0.21	19.27
6,228.0	10.60	354.20	6,173.4	602.9	228.4	607.4	8.77	7.60	85.04
6,324.0	17.80	10.60	6,266.5	626.1	230.2	630.7	8.52	7.50	17.08
6,420.0	24.20	8.50	6,356.1	660.0	235.8	664.7	6.71	6.67	-2.19
6,515.0	31.70	5.30	6,439.9	704.2	241.0	709.0	8.05	7.89	-3.37
6,611.0	39.70	4.60	6,517.8	760.0	245.8	764.8	8.34	8.33	-0.73
6,706.0	47.00	4.10	6,586.9	825.0	250.7	829.9	7.69	7.68	-0.53
6,802.0	54.60	359.30	6,647.5	899.2	252.7	904.2	8.81	7.92	-5.00
6,870.4	60.00	358.93	6,684.4	956.8	251.8	961.7	7.91	7.89	-0.54
TPZ - 60° - 82°FNL, 1000'FW, SEC.25									
6,897.0	62.10	358.80	6,697.3	980.0	251.4	985.0	7.91	7.90	-0.50
6,993.0	69.80	359.10	6,736.4	1,067.6	249.8	1,072.5	8.03	8.02	0.31
7,088.0	77.70	357.90	6,763.0	1,158.7	247.4	1,163.5	8.40	8.32	-1.26
7,184.0	82.80	1.40	6,779.2	1,253.3	246.8	1,258.1	6.41	5.31	3.65
7,249.4	87.97	0.78	6,784.5	1,318.5	248.1	1,323.3	7.95	7.89	-0.95
LPL 280'FSL, 985'FWL, SEC.24									
7,279.0	90.30	0.50	6,784.9	1,348.0	248.4	1,352.8	7.95	7.90	-0.94
7,374.0	91.10	0.40	6,783.8	1,443.0	249.1	1,447.8	0.85	0.84	-0.11
7,470.0	90.20	1.30	6,782.7	1,539.0	250.6	1,543.8	1.33	-0.94	0.94
7,566.0	90.00	0.70	6,782.5	1,635.0	252.2	1,639.8	0.66	-0.21	-0.63
7,662.0	89.80	0.40	6,782.7	1,731.0	253.2	1,735.8	0.38	-0.21	-0.31
7,757.0	89.80	0.20	6,783.0	1,826.0	253.6	1,830.8	0.21	0.00	-0.21
7,853.0	89.90	359.50	6,783.3	1,922.0	253.4	1,926.7	0.74	0.10	-0.73
7,949.0	90.00	359.30	6,783.4	2,018.0	252.4	2,022.7	0.23	0.10	-0.21
8,044.0	90.10	359.00	6,783.3	2,113.0	251.0	2,117.6	0.33	0.11	-0.32
8,140.0	90.10	358.80	6,783.1	2,208.9	249.1	2,213.6	0.21	0.00	-0.21
8,236.0	89.80	358.40	6,783.2	2,304.9	246.8	2,309.5	0.52	-0.31	-0.42
8,331.0	89.80	357.90	6,783.5	2,399.9	243.7	2,404.3	0.53	0.00	-0.53
8,426.0	90.70	358.10	6,783.1	2,494.8	240.4	2,499.2	0.97	0.95	0.21

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Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,522.0	90.90	358.10	6,781.8	2,590.7	237.2	2,595.0	0.21	0.21	0.00
8,618.0	90.90	359.80	6,780.3	2,686.7	235.5	2,691.0	1.77	0.00	1.77
8,713.0	89.60	1.10	6,779.9	2,781.7	236.2	2,785.9	1.94	-1.37	1.37
8,809.0	89.60	1.10	6,780.5	2,877.7	238.1	2,881.9	0.00	0.00	0.00
8,904.0	89.30	1.30	6,781.4	2,972.7	240.1	2,976.9	0.38	-0.32	0.21
9,000.0	89.40	0.50	6,782.5	3,068.6	241.6	3,072.9	0.84	0.10	-0.83
9,095.0	89.50	0.20	6,783.4	3,163.6	242.1	3,167.9	0.33	0.11	-0.32
9,191.0	89.60	359.80	6,784.2	3,259.6	242.1	3,263.9	0.43	0.10	-0.42
9,287.0	89.70	359.70	6,784.8	3,355.6	241.7	3,359.9	0.15	0.10	-0.10
9,383.0	89.30	359.10	6,785.6	3,451.6	240.7	3,455.8	0.75	-0.42	-0.63
9,478.0	89.40	358.60	6,786.7	3,546.6	238.8	3,550.7	0.54	0.11	-0.53
Deepest TVD Drilled - 6786.69' TVD									
9,574.0	91.40	358.80	6,786.0	3,642.6	236.6	3,646.6	2.09	2.08	0.21
9,669.0	91.40	358.40	6,783.7	3,737.5	234.3	3,741.5	0.42	0.00	-0.42
9,774.0	90.80	0.50	6,781.7	3,842.5	233.3	3,846.4	2.08	-0.57	2.00
9,870.0	91.10	0.20	6,780.1	3,938.5	233.9	3,942.4	0.44	0.31	-0.31
9,966.0	91.20	359.80	6,778.2	4,034.4	233.9	4,038.4	0.43	0.10	-0.42
10,062.0	89.60	359.80	6,777.5	4,130.4	233.6	4,134.3	1.67	-1.67	0.00
10,158.0	90.10	359.00	6,777.7	4,226.4	232.5	4,230.3	0.98	0.52	-0.83
10,254.0	90.10	359.30	6,777.6	4,322.4	231.1	4,326.2	0.31	0.00	0.31
10,350.0	89.20	1.30	6,778.2	4,418.4	231.6	4,422.2	2.28	-0.94	2.08
10,446.0	89.00	0.70	6,779.7	4,514.4	233.3	4,518.2	0.66	-0.21	-0.63
10,542.0	88.80	0.70	6,781.5	4,610.3	234.5	4,614.2	0.21	-0.21	0.00
10,638.0	88.60	0.00	6,783.7	4,706.3	235.1	4,710.1	0.76	-0.21	-0.73
10,734.0	90.30	0.90	6,784.6	4,802.3	235.8	4,806.1	2.00	1.77	0.94
10,829.0	90.40	0.40	6,784.0	4,897.3	236.9	4,901.1	0.54	0.11	-0.53
10,924.0	90.40	359.50	6,783.4	4,992.3	236.8	4,996.1	0.95	0.00	-0.95
11,020.0	90.40	358.40	6,782.7	5,088.3	235.1	5,092.0	1.15	0.00	-1.15
11,116.0	90.10	0.40	6,782.3	5,184.3	234.0	5,188.0	2.11	-0.31	2.08
11,211.0	90.00	0.40	6,782.2	5,279.3	234.7	5,283.0	0.11	-0.11	0.00
11,307.0	90.80	0.90	6,781.5	5,375.3	235.8	5,379.0	0.98	0.83	0.52
11,402.0	90.70	0.50	6,780.3	5,470.2	237.0	5,473.9	0.43	-0.11	-0.42
11,497.0	90.70	0.50	6,779.1	5,565.2	237.8	5,568.9	0.00	0.00	0.00
11,593.0	90.90	0.20	6,777.8	5,661.2	238.4	5,664.9	0.38	0.21	-0.31
11,688.0	90.90	359.70	6,776.3	5,756.2	238.3	5,759.9	0.53	0.00	-0.53
11,784.0	90.70	358.90	6,775.0	5,852.2	237.1	5,855.8	0.86	-0.21	-0.83
11,880.0	90.90	358.30	6,773.6	5,948.2	234.8	5,951.7	0.66	0.21	-0.63
11,976.0	91.10	358.30	6,771.9	6,044.1	231.9	6,047.6	0.21	0.21	0.00
12,071.0	89.80	0.00	6,771.2	6,139.1	230.5	6,142.5	2.25	-1.37	1.79
12,167.0	89.50	1.60	6,771.8	6,235.1	231.9	6,238.5	1.70	-0.31	1.67
12,263.0	89.50	1.10	6,772.6	6,331.0	234.1	6,334.5	0.52	0.00	-0.52
12,359.0	89.80	0.40	6,773.2	6,427.0	235.4	6,430.5	0.79	0.31	-0.73
12,454.0	90.30	0.20	6,773.1	6,522.0	235.9	6,525.5	0.57	0.53	-0.21

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well High Plains 25A-241
Project:	SEC.25-T5N-R65W	TVD Reference:	WELL @ 4662.0ft (Original Well Elev)
Site:	High Plains 5N65W25AF Pad Sec.25-T5N-R65W	MD Reference:	WELL @ 4662.0ft (Original Well Elev)
Well:	High Plains 25A-241	North Reference:	True
Wellbore:	High Plains 25A-241 Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	High Plains 25A-241 Wellbore #1	Database:	US_EDM

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
12,550.0	90.20	359.50	6,772.7	6,618.0	235.6	6,621.4	0.74	-0.10	-0.73	
12,645.0	90.60	359.10	6,772.0	6,713.0	234.5	6,716.4	0.60	0.42	-0.42	
12,741.0	90.50	359.30	6,771.1	6,809.0	233.1	6,812.3	0.23	-0.10	0.21	
12,836.0	89.30	1.60	6,771.3	6,904.0	233.9	6,907.3	2.73	-1.26	2.42	
12,932.0	89.20	1.40	6,772.5	6,999.9	236.4	7,003.3	0.23	-0.10	-0.21	
13,028.0	89.30	1.40	6,773.8	7,095.9	238.7	7,099.3	0.10	0.10	0.00	
13,123.0	89.20	1.40	6,775.0	7,190.9	241.0	7,194.3	0.11	-0.11	0.00	
13,218.0	89.50	1.40	6,776.1	7,285.8	243.4	7,289.3	0.32	0.32	0.00	
13,314.0	90.50	1.30	6,776.1	7,381.8	245.6	7,385.3	1.05	1.04	-0.10	
13,410.0	91.50	0.50	6,774.4	7,477.8	247.1	7,481.3	1.33	1.04	-0.83	
13,505.0	91.00	359.30	6,772.4	7,572.8	247.0	7,576.2	1.37	-0.53	-1.26	
13,601.0	91.70	359.30	6,770.1	7,668.7	245.8	7,672.1	0.73	0.73	0.00	
13,696.0	90.30	358.40	6,768.5	7,763.7	243.9	7,767.0	1.75	-1.47	-0.95	
13,792.0	89.30	0.20	6,768.8	7,859.7	242.7	7,863.0	2.14	-1.04	1.88	
13,888.0	90.40	359.30	6,769.0	7,955.7	242.3	7,959.0	1.48	1.15	-0.94	
13,983.0	89.90	1.10	6,768.8	8,050.7	242.6	8,053.9	1.97	-0.53	1.89	
14,080.0	91.20	1.10	6,767.9	8,147.6	244.5	8,150.9	1.34	1.34	0.00	
14,175.0	89.70	1.40	6,767.1	8,242.6	246.6	8,245.9	1.61	-1.58	0.32	
14,270.0	90.30	0.70	6,767.1	8,337.6	248.3	8,340.9	0.97	0.63	-0.74	
14,366.0	91.00	0.70	6,766.0	8,433.6	249.5	8,436.9	0.73	0.73	0.00	
14,461.0	89.30	359.80	6,765.8	8,528.6	249.9	8,531.9	2.02	-1.79	-0.95	
14,557.0	90.30	359.70	6,766.1	8,624.6	249.5	8,627.9	1.05	1.04	-0.10	
14,652.0	90.00	359.70	6,765.9	8,719.6	249.0	8,722.8	0.32	-0.32	0.00	
14,748.0	90.90	359.70	6,765.1	8,815.6	248.5	8,818.8	0.94	0.94	0.00	
14,843.0	89.40	359.80	6,764.9	8,910.6	248.1	8,913.8	1.58	-1.58	0.11	
14,939.0	90.10	359.30	6,765.3	9,006.5	247.3	9,009.7	0.90	0.73	-0.52	
15,035.0	89.00	0.20	6,766.0	9,102.5	246.9	9,105.7	1.48	-1.15	0.94	
15,130.0	89.80	359.30	6,767.0	9,197.5	246.5	9,200.7	1.27	0.84	-0.95	
15,226.0	90.50	358.80	6,766.8	9,293.5	244.9	9,296.6	0.90	0.73	-0.52	
15,321.0	88.90	359.80	6,767.3	9,388.5	243.7	9,391.5	1.99	-1.68	1.05	
15,417.0	89.40	359.10	6,768.7	9,484.5	242.8	9,487.5	0.90	0.52	-0.73	
15,513.0	90.10	358.80	6,769.1	9,580.5	241.0	9,583.4	0.79	0.73	-0.31	
15,609.0	90.90	358.10	6,768.3	9,676.4	238.4	9,679.3	1.11	0.83	-0.73	
15,705.0	89.40	359.70	6,768.0	9,772.4	236.6	9,775.2	2.28	-1.56	1.67	
15,801.0	90.10	359.10	6,768.4	9,868.4	235.6	9,871.2	0.96	0.73	-0.63	
15,897.0	91.00	358.40	6,767.5	9,964.4	233.5	9,967.1	1.19	0.94	-0.73	
15,993.0	89.50	359.50	6,767.1	10,060.4	231.7	10,063.0	1.94	-1.56	1.15	
16,088.0	90.70	358.80	6,766.9	10,155.3	230.3	10,157.9	1.46	1.26	-0.74	
16,184.0	91.50	357.90	6,765.1	10,251.3	227.6	10,253.8	1.25	0.83	-0.94	
16,280.0	89.60	358.80	6,764.2	10,347.2	224.8	10,349.7	2.19	-1.98	0.94	
16,376.0	89.30	0.00	6,765.1	10,443.2	223.8	10,445.6	1.29	-0.31	1.25	
16,472.0	89.80	359.00	6,765.8	10,539.2	223.0	10,541.6	1.16	0.52	-1.04	

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well High Plains 25A-241
Project:	SEC.25-T5N-R65W	TVD Reference:	WELL @ 4662.0ft (Original Well Elev)
Site:	High Plains 5N65W25AF Pad Sec.25-T5N-R65W	MD Reference:	WELL @ 4662.0ft (Original Well Elev)
Well:	High Plains 25A-241	North Reference:	True
Wellbore:	High Plains 25A-241 Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	High Plains 25A-241 Wellbore #1	Database:	US_EDM

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,568.0	89.40	0.40	6,766.5	10,635.2	222.5	10,637.5	1.52	-0.42	1.46
16,664.0	90.90	359.30	6,766.3	10,731.2	222.2	10,733.5	1.94	1.56	-1.15
16,759.0	90.20	358.60	6,765.4	10,826.2	220.5	10,828.4	1.04	-0.74	-0.74
16,855.0	90.10	0.00	6,765.1	10,922.2	219.3	10,924.4	1.46	-0.10	1.46
16,951.0	89.90	1.40	6,765.1	11,018.2	220.5	11,020.4	1.47	-0.21	1.46
17,047.0	90.60	1.10	6,764.7	11,114.1	222.6	11,116.4	0.79	0.73	-0.31
17,142.0	89.90	1.30	6,764.3	11,209.1	224.5	11,211.4	0.77	-0.74	0.21
17,238.0	91.00	0.70	6,763.5	11,305.1	226.2	11,307.4	1.31	1.15	-0.63
17,334.0	90.20	2.00	6,762.5	11,401.1	228.5	11,403.3	1.59	-0.83	1.35
17,430.0	91.30	0.90	6,761.3	11,497.0	230.9	11,499.3	1.62	1.15	-1.15
17,492.0	90.40	1.10	6,760.3	11,559.0	232.0	11,561.3	1.49	-1.45	0.32
17,547.0	90.40	1.10	6,760.0	11,614.0	233.1	11,616.3	0.00	0.00	0.00
BHL 50°FNL, 1007°FWL, SEC.13									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
SHL 1039°FNL, 748°FWL	0.00	0.00	1.0	0.0	0.0	1,380,524.46	3,245,642.78	40.374589	-104.618328
- survey hits target center									
- Point									
BHL 50°FNL, 1007°FWL,	0.00	0.00	6,765.0	11,615.0	237.3	1,392,140.74	3,245,764.56	40.406471	-104.617476
- survey misses target center by 6.7ft at 17547.0ft MD (6760.0 TVD, 11614.0 N, 233.1 E)									
- Point									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
6,870.4	6,684.4	956.8	251.8	TPZ - 60° - 82°FNL, 1000°FWD, SEC.25
9,478.0	6,786.7	3,546.6	238.8	Deepest TVD Drilled - 6786.69' TVD

Checked By: _____	Approved By: _____	Date: _____
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