

PDC Energy Inc. DJ Basin

Well Name: **Erwin 3N (Nio C)**

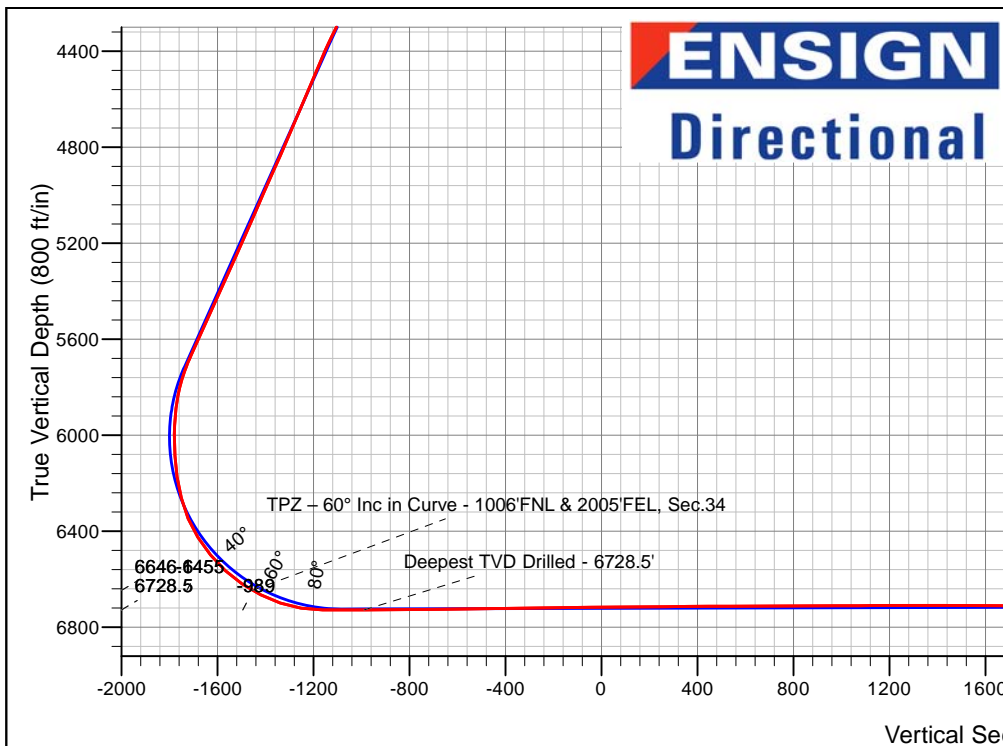
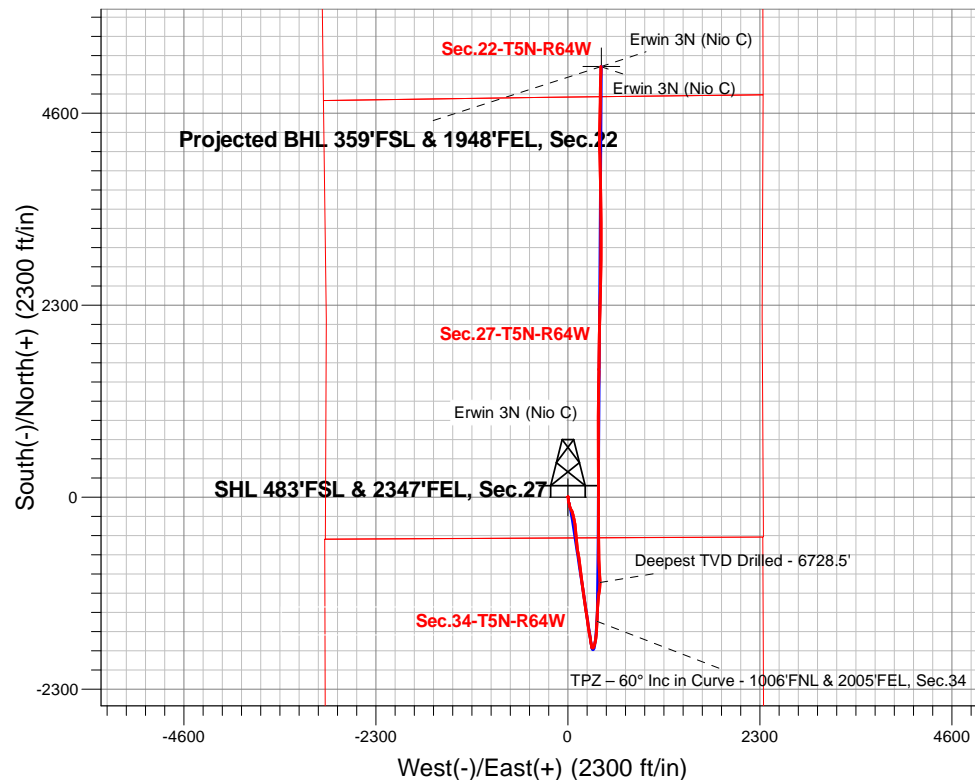
Surface Location: Erwin 5N64W27 1-6 Pad Sec.27-T5N-R64W
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
Ground Elevation: 4639.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1377056.88	3268959.60	40.364404	-104.534780	

Ensign 142 RKB - 28' WELL @ 4667.0ft (Ensign 142 RKB - 28')

FINAL SURVEY

Projected Bottom Hole Location
13,796'MD 6697'TVD 5159'N & 395'E of SHL
90.41 degree Inc @ 0.58 degree Azm



Erwin 5N64W27 1-6 Pad Sec.27-T5N-R64W
Erwin 3N (Nio C)
Erwin 3N (Nio C) Wellbore #1
12:01, February 17 2021

ANNOTATIONS

TVD	MD	Annotation
6646.6	7132.8	TPZ - 60° Inc in Curve - 1006'FNL & 2005'FEL, Sec.34
6728.5	7613.9	Deepest TVD Drilled - 6728.5'

LEGEND

- Erwin 3N (Nio C), Erwin 3N (Nio C) Wellbore #1, Plan #3 (2-1-21) V0
- Erwin 3N (Nio C) Wellbore #1
- Survey #1

Projected BHL 359'FSL & 1948'FEL, Sec.22

Erwin 3N (Nio C)
Erwin 3N (Nio C)



PDC Energy Inc. DJ Basin

SEC.27-T5N-R64W

Erwin 5N64W27 1-6 Pad Sec.27-T5N-R64W

Erwin 3N (Nio C)

Erwin 3N (Nio C) Wellbore #1

Survey: Survey #1

Standard Survey Report

17 February, 2021

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Erwin 3N (Nio C)
Project:	SEC.27-T5N-R64W	TVD Reference:	WELL @ 4667.0ft (Ensign 142 RKB - 28')
Site:	Erwin 5N64W27 1-6 Pad Sec.27-T5N-R64W	MD Reference:	WELL @ 4667.0ft (Ensign 142 RKB - 28')
Well:	Erwin 3N (Nio C)	North Reference:	True
Wellbore:	Erwin 3N (Nio C) Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Erwin 3N (Nio C) Wellbore #1	Database:	US_EDM

Project	SEC.27-T5N-R64W, 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		Erwin 5N64W27 1-6 Pad Sec.27-T5N-R64W						
Site Position:		Northing:	1,377,056.42	usft	Latitude:	40.364404		
From:	Lat/Long	Easting:	3,268,929.60	usft	Longitude:	-104.534888		
Position Uncertainty:	0.0	ft	Slot Radius:	13-3/16	"	Grid Convergence:	0.62	°

Well	Erwin 3N (Nio C)					
Well Position	+N/-S	0.0 ft	Northing:	1,377,056.88 usft	Latitude:	40.364404
	+E/-W	0.0 ft	Easting:	3,268,959.61 usft	Longitude:	-104.534780
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,639.0 ft

Wellbore	Erwin 3N (Nio C) Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	02/01/2021	7.75	66.77	51,976

Design	Erwin 3N (Nio C) 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	4.43	

Survey Program	Date	02/17/2021			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
162.0	13,796.0	Survey #1 (Erwin 3N (Nio C) Wellbore #1)	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	
162.0	0.50	71.60	162.0	0.2	0.7	0.3	0.31	0.31	0.00	
253.0	0.30	58.70	253.0	0.5	1.3	0.6	0.24	-0.22	-14.18	
343.0	0.40	58.00	343.0	0.8	1.7	0.9	0.11	0.11	-0.78	
463.0	0.20	352.10	463.0	1.2	2.0	1.3	0.31	-0.17	-54.92	
552.0	0.30	33.80	552.0	1.5	2.2	1.7	0.23	0.11	46.85	
642.0	0.30	324.30	642.0	1.9	2.1	2.1	0.38	0.00	-77.22	
731.0	0.20	312.20	731.0	2.2	1.9	2.4	0.13	-0.11	-13.60	
820.0	0.20	0.50	820.0	2.5	1.8	2.6	0.18	0.00	54.27	
909.0	1.60	173.90	909.0	1.4	1.9	1.5	2.02	1.57	194.83	

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Site:	Erwin 5N64W27 1-6 Pad Sec.27-T5N-R64W	MD Reference:	WELL @ 4667.0ft (Ensign 142 RKB - 28')
Well:	Erwin 3N (Nio C)	North Reference:	True
Wellbore:	Erwin 3N (Nio C) Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Erwin 3N (Nio C) 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)
998.0	4.10	177.40	997.9	-3.0	2.2	-2.8	2.81	2.81	3.93
1,088.0	4.70	163.30	1,087.6	-9.8	3.4	-9.5	1.37	0.67	-15.67
1,177.0	5.50	180.00	1,176.3	-17.5	4.4	-17.1	1.89	0.90	18.76
1,263.0	6.50	180.40	1,261.8	-26.5	4.4	-26.1	1.16	1.16	0.47
1,352.0	8.40	175.10	1,350.0	-38.0	4.9	-37.5	2.27	2.13	-5.96
1,442.0	9.10	168.90	1,439.0	-51.6	6.9	-50.9	1.30	0.78	-6.89
1,530.0	9.90	162.10	1,525.8	-65.6	10.5	-64.6	1.56	0.91	-7.73
1,647.0	10.50	169.10	1,640.9	-85.6	15.6	-84.2	1.18	0.51	5.98
1,791.0	9.88	163.22	1,782.7	-110.3	21.7	-108.3	0.84	-0.43	-4.08
1,880.0	8.87	160.38	1,870.5	-124.1	26.2	-121.7	1.25	-1.13	-3.19
1,970.0	10.13	157.32	1,959.2	-138.0	31.6	-135.1	1.51	1.40	-3.40
2,060.0	10.13	149.57	2,047.8	-152.1	38.6	-148.6	1.51	0.00	-8.61
2,150.0	12.32	150.17	2,136.1	-167.2	47.4	-163.1	2.44	2.43	0.67
2,240.0	14.61	168.04	2,223.7	-186.7	54.6	-181.9	5.25	2.54	19.86
2,329.0	17.74	167.45	2,309.1	-210.9	59.8	-205.7	3.52	3.52	-0.66
2,420.0	20.09	167.28	2,395.2	-239.7	66.3	-233.8	2.58	2.58	-0.19
2,509.0	21.99	167.16	2,478.3	-270.8	73.4	-264.4	2.14	2.13	-0.13
2,599.0	22.39	168.45	2,561.6	-304.1	80.5	-296.9	0.70	0.44	1.43
2,689.0	24.69	173.53	2,644.1	-339.5	86.1	-331.9	3.41	2.56	5.64
2,779.0	25.26	174.72	2,725.7	-377.3	90.0	-369.3	0.84	0.63	1.32
2,869.0	24.95	174.98	2,807.2	-415.4	93.4	-406.9	0.37	-0.34	0.29
2,958.0	25.18	175.22	2,887.8	-452.9	96.6	-444.1	0.28	0.26	0.27
3,048.0	24.84	174.93	2,969.4	-490.9	99.9	-481.7	0.40	-0.38	-0.32
3,137.0	24.72	174.91	3,050.2	-528.0	103.2	-518.5	0.14	-0.13	-0.02
3,227.0	24.35	173.52	3,132.1	-565.2	106.9	-555.2	0.76	-0.41	-1.54
3,316.0	24.10	172.23	3,213.2	-601.4	111.5	-591.0	0.66	-0.28	-1.45
3,406.0	24.00	171.60	3,295.4	-637.7	116.6	-626.8	0.31	-0.11	-0.70
3,496.0	22.92	170.74	3,378.0	-673.1	122.1	-661.7	1.26	-1.20	-0.96
3,585.0	23.71	170.70	3,459.7	-707.9	127.8	-695.9	0.89	0.89	-0.04
3,674.0	26.65	172.24	3,540.2	-745.4	133.4	-732.8	3.38	3.30	1.73
3,763.0	26.99	172.11	3,619.7	-785.1	138.9	-772.1	0.39	0.38	-0.15
3,853.0	26.99	172.45	3,699.9	-825.6	144.3	-812.0	0.17	0.00	0.38
3,943.0	26.87	172.17	3,780.1	-866.0	149.8	-851.8	0.19	-0.13	-0.31
4,033.0	26.04	173.11	3,860.7	-905.8	154.9	-891.1	1.03	-0.92	1.04
4,122.0	26.51	173.02	3,940.5	-944.9	159.7	-929.7	0.53	0.53	-0.10
4,212.0	26.70	172.97	4,021.0	-984.9	164.6	-969.2	0.21	0.21	-0.06
4,301.0	26.18	173.21	4,100.6	-1,024.2	169.4	-1,008.1	0.60	-0.58	0.27
4,391.0	26.45	172.91	4,181.3	-1,063.8	174.2	-1,047.2	0.33	0.30	-0.33
4,481.0	26.24	172.61	4,262.0	-1,103.4	179.2	-1,086.3	0.28	-0.23	-0.33
4,570.0	26.71	172.66	4,341.6	-1,142.8	184.3	-1,125.1	0.53	0.53	0.06
4,660.0	23.80	172.11	4,423.0	-1,180.9	189.4	-1,162.7	3.24	-3.23	-0.61
4,749.0	22.63	170.77	4,504.8	-1,215.5	194.6	-1,196.9	1.44	-1.31	-1.51
4,840.0	24.23	171.84	4,588.3	-1,251.3	200.1	-1,232.1	1.82	1.76	1.18
4,930.0	23.63	171.83	4,670.6	-1,287.4	205.3	-1,267.7	0.67	-0.67	-0.01

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Wellbore:	Erwin 3N (Nio C) Wellbore #1	Survey Calculation Method:	Minimum Curvature
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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)
5,020.0	22.95	171.67	4,753.2	-1,322.7	210.4	-1,302.5	0.76	-0.76	-0.18
5,109.0	24.94	171.49	4,834.6	-1,358.4	215.7	-1,337.7	2.24	2.24	-0.20
5,199.0	24.86	171.44	4,916.2	-1,395.9	221.3	-1,374.6	0.09	-0.09	-0.06
5,289.0	24.42	171.76	4,998.0	-1,433.0	226.8	-1,411.2	0.51	-0.49	0.36
5,378.0	23.69	171.96	5,079.3	-1,468.9	231.9	-1,446.6	0.83	-0.82	0.22
5,468.0	24.02	171.69	5,161.6	-1,504.9	237.1	-1,482.1	0.39	0.37	-0.30
5,558.0	24.54	171.39	5,243.6	-1,541.5	242.5	-1,518.2	0.59	0.58	-0.33
5,648.0	25.10	170.84	5,325.3	-1,578.9	248.4	-1,554.9	0.67	0.62	-0.61
5,737.0	25.28	170.96	5,405.9	-1,616.3	254.3	-1,591.8	0.21	0.20	0.13
5,827.0	24.76	170.22	5,487.4	-1,653.8	260.6	-1,628.7	0.67	-0.58	-0.82
5,916.0	25.21	170.88	5,568.1	-1,690.9	266.7	-1,665.2	0.59	0.51	0.74
6,006.0	24.97	170.46	5,649.6	-1,728.5	272.9	-1,702.3	0.33	-0.27	-0.47
6,096.0	20.55	169.78	5,732.6	-1,762.8	278.9	-1,736.0	4.92	-4.91	-0.76
6,186.0	13.08	165.21	5,818.7	-1,788.3	284.3	-1,761.0	8.42	-8.30	-5.08
6,275.0	6.42	151.55	5,906.3	-1,802.4	289.2	-1,774.7	7.87	-7.48	-15.35
6,365.0	4.88	100.32	5,996.0	-1,807.5	295.4	-1,779.3	5.64	-1.71	-56.92
6,455.0	4.54	49.77	6,085.7	-1,805.9	301.9	-1,777.2	4.48	-0.38	-56.17
6,544.0	8.31	22.46	6,174.1	-1,797.7	307.0	-1,768.6	5.34	4.24	-30.69
6,634.0	15.05	20.89	6,262.2	-1,780.7	313.7	-1,751.2	7.50	7.49	-1.74
6,724.0	23.13	15.21	6,347.2	-1,752.7	322.5	-1,722.5	9.20	8.98	-6.31
6,813.0	31.68	10.17	6,426.2	-1,712.8	331.2	-1,682.0	9.95	9.61	-5.66
6,903.0	39.96	5.52	6,499.1	-1,660.6	338.2	-1,629.5	9.68	9.20	-5.17
6,993.0	47.38	3.48	6,564.1	-1,598.7	343.0	-1,567.4	8.39	8.24	-2.27
7,082.0	55.55	2.58	6,619.5	-1,529.3	346.7	-1,497.9	9.21	9.18	-1.01
7,132.8	60.00	2.12	6,646.6	-1,486.3	348.4	-1,455.0	8.80	8.77	-0.90
TPZ - 60° Inc in Curve - 1006'FNL & 2005'FEL, Sec.34									
7,172.0	63.44	1.80	6,665.2	-1,451.8	349.6	-1,420.5	8.80	8.77	-0.83
7,261.0	71.19	2.10	6,699.5	-1,369.8	352.4	-1,338.5	8.71	8.71	0.34
7,351.0	81.24	4.97	6,720.9	-1,282.7	357.8	-1,251.2	11.59	11.17	3.19
7,441.0	89.70	9.26	6,728.0	-1,193.8	368.9	-1,161.7	10.53	9.40	4.77
7,530.0	89.91	6.54	6,728.3	-1,105.6	381.2	-1,072.9	3.07	0.24	-3.06
7,613.9	89.84	358.23	6,728.5	-1,021.9	384.7	-989.1	9.90	-0.09	-9.90
Deepest TVD Drilled - 6728.5'									
7,620.0	89.83	357.63	6,728.5	-1,015.8	384.4	-983.0	9.90	-0.09	-9.90
7,709.0	90.60	356.79	6,728.2	-926.9	380.1	-894.8	1.28	0.87	-0.94
7,799.0	90.60	356.98	6,727.2	-837.0	375.2	-805.5	0.21	0.00	0.21
7,888.0	90.67	357.07	6,726.3	-748.2	370.6	-717.3	0.13	0.08	0.10
7,978.0	90.75	0.24	6,725.1	-658.2	368.5	-627.8	3.52	0.09	3.52
8,068.0	90.81	359.52	6,723.9	-568.2	368.3	-538.1	0.80	0.07	-0.80
8,158.0	90.81	359.56	6,722.6	-478.2	367.6	-448.4	0.04	0.00	0.04
8,248.0	90.75	359.72	6,721.4	-388.2	367.0	-358.7	0.19	-0.07	0.18
8,337.0	90.73	359.83	6,720.3	-299.2	366.7	-270.0	0.13	-0.02	0.12
8,427.0	90.60	359.91	6,719.2	-209.2	366.5	-180.3	0.17	-0.14	0.09

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8,517.0	90.59	359.75	6,718.3	-119.3	366.2	-90.6	0.18	-0.01	-0.18
8,607.0	90.42	359.99	6,717.5	-29.3	366.0	-0.9	0.33	-0.19	0.27
8,697.0	90.79	0.05	6,716.5	60.7	366.0	88.8	0.42	0.41	0.07
8,787.0	90.80	0.50	6,715.3	150.7	366.5	178.6	0.50	0.01	0.50
8,877.0	90.22	359.45	6,714.5	240.7	366.4	268.3	1.33	-0.64	-1.17
8,966.0	90.38	359.70	6,714.0	329.7	365.8	357.0	0.33	0.18	0.28
9,055.0	90.29	359.93	6,713.5	418.7	365.5	445.7	0.28	-0.10	0.26
9,145.0	90.21	359.64	6,713.1	508.7	365.1	535.4	0.33	-0.09	-0.32
9,235.0	90.22	359.54	6,712.8	598.7	364.5	625.1	0.11	0.01	-0.11
9,325.0	90.29	359.01	6,712.4	688.7	363.3	714.7	0.59	0.08	-0.59
9,414.0	90.31	359.80	6,711.9	777.7	362.4	803.4	0.89	0.02	0.89
9,504.0	90.35	0.53	6,711.4	867.7	362.7	893.1	0.81	0.04	0.81
9,593.0	90.17	0.51	6,711.0	956.7	363.5	981.9	0.20	-0.20	-0.02
9,683.0	90.23	0.79	6,710.7	1,046.7	364.5	1,071.7	0.32	0.07	0.31
9,773.0	90.26	0.78	6,710.3	1,136.7	365.7	1,161.5	0.04	0.03	-0.01
9,862.0	89.95	1.12	6,710.1	1,225.7	367.2	1,250.4	0.52	-0.35	0.38
9,951.0	90.01	359.88	6,710.2	1,314.7	368.0	1,339.2	1.39	0.07	-1.39
10,041.0	89.72	2.44	6,710.4	1,404.6	369.8	1,429.0	2.86	-0.32	2.84
10,131.0	90.30	358.21	6,710.4	1,494.6	370.3	1,518.8	4.74	0.64	-4.70
10,220.0	89.62	2.79	6,710.4	1,583.6	371.1	1,607.5	5.20	-0.76	5.15
10,310.0	90.22	1.37	6,710.5	1,673.5	374.4	1,697.4	1.71	0.67	-1.58
10,400.0	90.26	0.92	6,710.2	1,763.5	376.2	1,787.3	0.50	0.04	-0.50
10,490.0	90.35	0.48	6,709.7	1,853.5	377.3	1,877.1	0.50	0.10	-0.49
10,580.0	90.21	0.46	6,709.2	1,943.5	378.0	1,966.9	0.16	-0.16	-0.02
10,670.0	90.24	0.85	6,708.9	2,033.5	379.0	2,056.7	0.43	0.03	0.43
10,759.0	90.40	0.74	6,708.4	2,122.5	380.3	2,145.5	0.22	0.18	-0.12
10,849.0	90.03	0.91	6,708.1	2,212.5	381.6	2,235.3	0.45	-0.41	0.19
10,939.0	90.08	1.20	6,708.0	2,302.4	383.2	2,325.2	0.33	0.06	0.32
11,029.0	89.93	3.26	6,708.0	2,392.4	386.7	2,415.1	2.29	-0.17	2.29
11,118.0	89.93	1.34	6,708.1	2,481.3	390.3	2,504.0	2.16	0.00	-2.16
11,208.0	90.11	1.72	6,708.0	2,571.3	392.7	2,593.9	0.47	0.20	0.42
11,297.0	90.44	1.46	6,707.6	2,660.2	395.2	2,682.8	0.47	0.37	-0.29
11,387.0	90.27	1.06	6,707.1	2,750.2	397.2	2,772.7	0.48	-0.19	-0.44
11,476.0	90.29	359.56	6,706.6	2,839.2	397.6	2,861.4	1.69	0.02	-1.69
11,566.0	90.40	359.94	6,706.1	2,929.2	397.2	2,951.1	0.44	0.12	0.42
11,656.0	90.05	359.51	6,705.7	3,019.2	396.8	3,040.8	0.62	-0.39	-0.48
11,745.0	90.34	359.26	6,705.4	3,108.2	395.9	3,129.5	0.43	0.33	-0.28
11,835.0	89.98	0.94	6,705.2	3,198.2	396.0	3,219.2	1.91	-0.40	1.87
11,925.0	90.36	359.23	6,704.9	3,288.2	396.1	3,309.0	1.95	0.42	-1.90
12,014.0	90.30	0.01	6,704.4	3,377.2	395.6	3,397.6	0.88	-0.07	0.88
12,104.0	90.17	358.88	6,704.0	3,467.2	394.7	3,487.3	1.26	-0.14	-1.26
12,194.0	90.28	358.87	6,703.7	3,557.2	392.9	3,576.9	0.12	0.12	-0.01
12,283.0	90.34	358.70	6,703.2	3,646.1	391.0	3,665.4	0.20	0.07	-0.19
12,373.0	90.35	359.69	6,702.6	3,736.1	389.8	3,755.1	1.10	0.01	1.10

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Erwin 3N (Nio C)
Project:	SEC.27-T5N-R64W	TVD Reference:	WELL @ 4667.0ft (Ensign 142 RKB - 28')
Site:	Erwin 5N64W27 1-6 Pad Sec.27-T5N-R64W	MD Reference:	WELL @ 4667.0ft (Ensign 142 RKB - 28')
Well:	Erwin 3N (Nio C)	North Reference:	True
Wellbore:	Erwin 3N (Nio C) Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Erwin 3N (Nio C) 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)	
12,464.0	90.26	359.25	6,702.2	3,827.1	388.9	3,845.7	0.49	-0.10	-0.48	
12,553.0	90.11	359.04	6,701.9	3,916.1	387.6	3,934.3	0.29	-0.17	-0.24	
12,643.0	90.23	357.89	6,701.6	4,006.1	385.2	4,023.9	1.28	0.13	-1.28	
12,733.0	90.35	358.85	6,701.2	4,096.0	382.6	4,113.3	1.07	0.13	1.07	
12,823.0	90.31	358.50	6,700.6	4,186.0	380.5	4,202.9	0.39	-0.04	-0.39	
12,913.0	90.10	359.55	6,700.3	4,276.0	379.0	4,292.5	1.19	-0.23	1.17	
13,003.0	90.20	1.53	6,700.1	4,366.0	379.9	4,382.3	2.20	0.11	2.20	
13,093.0	90.31	0.58	6,699.7	4,456.0	381.5	4,472.1	1.06	0.12	-1.06	
13,182.0	90.28	0.96	6,699.2	4,545.0	382.7	4,560.9	0.43	-0.03	0.43	
13,272.0	90.29	1.23	6,698.8	4,634.9	384.4	4,650.8	0.30	0.01	0.30	
13,362.0	90.38	1.22	6,698.2	4,724.9	386.4	4,740.6	0.10	0.10	-0.01	
13,452.0	90.15	1.17	6,697.8	4,814.9	388.2	4,830.5	0.26	-0.26	-0.06	
13,542.0	90.00	1.42	6,697.7	4,904.9	390.3	4,920.4	0.32	-0.17	0.28	
13,632.0	90.39	1.47	6,697.4	4,994.8	392.5	5,010.2	0.44	0.43	0.06	
13,722.0	90.15	0.65	6,697.0	5,084.8	394.2	5,100.1	0.95	-0.27	-0.91	
13,774.0	90.41	0.58	6,696.7	5,136.8	394.8	5,152.0	0.52	0.50	-0.13	
13,796.0	90.41	0.58	6,696.6	5,158.8	395.0	5,173.9	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL 483'FSL & 2347'FE - hit/miss target - Shape - survey hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,377,056.89	3,268,959.61	40.364404	-104.534780	
BHL 360'FSL & 1943'FE - survey misses target center by 12.7ft at 13796.0ft MD (6696.6 TVD, 5158.8 N, 395.0 E) - Point	0.00	0.00	6,708.2	5,159.6	399.9	1,382,220.30	3,269,303.30	40.378567	-104.533345	

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
7,132.8	6,646.6	-1,486.3	348.4	TPZ - 60° Inc in Curve - 1006'FNL & 2005'FEL, Sec.34	
7,613.9	6,728.5	-1,021.9	384.7	Deepest TVD Drilled - 6728.5'	

Checked By: _____	Approved By: _____	Date: _____
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