

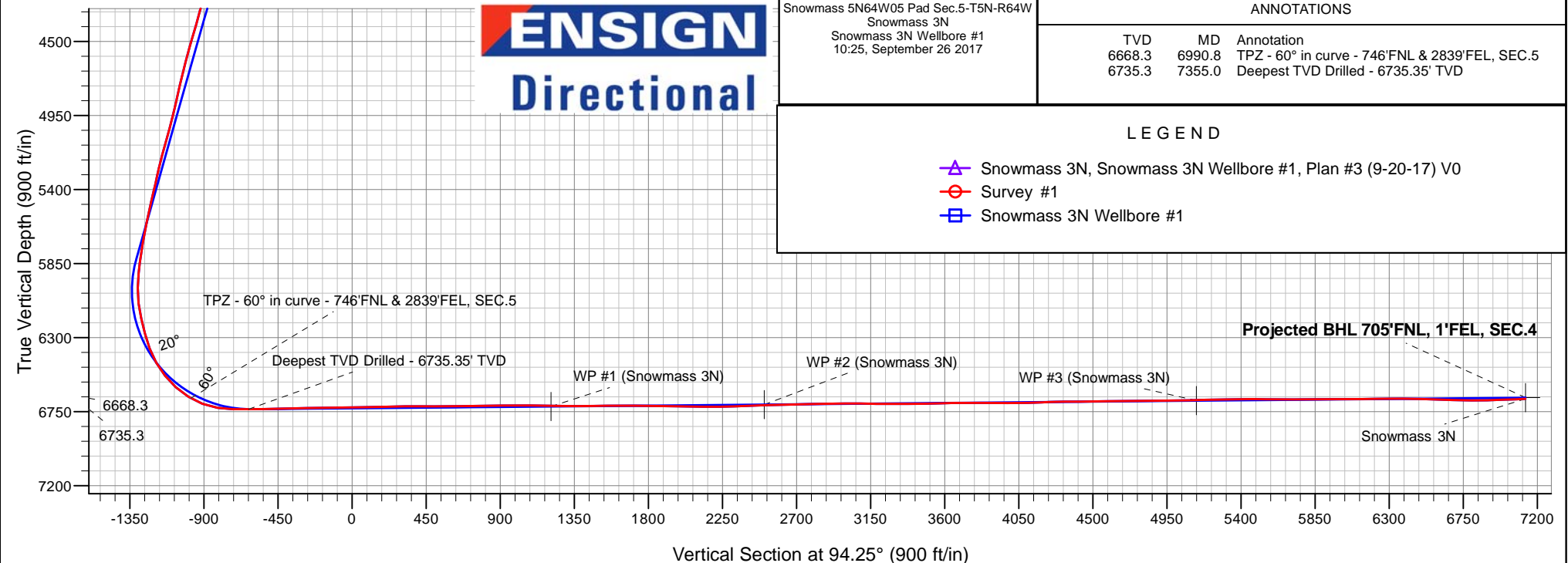
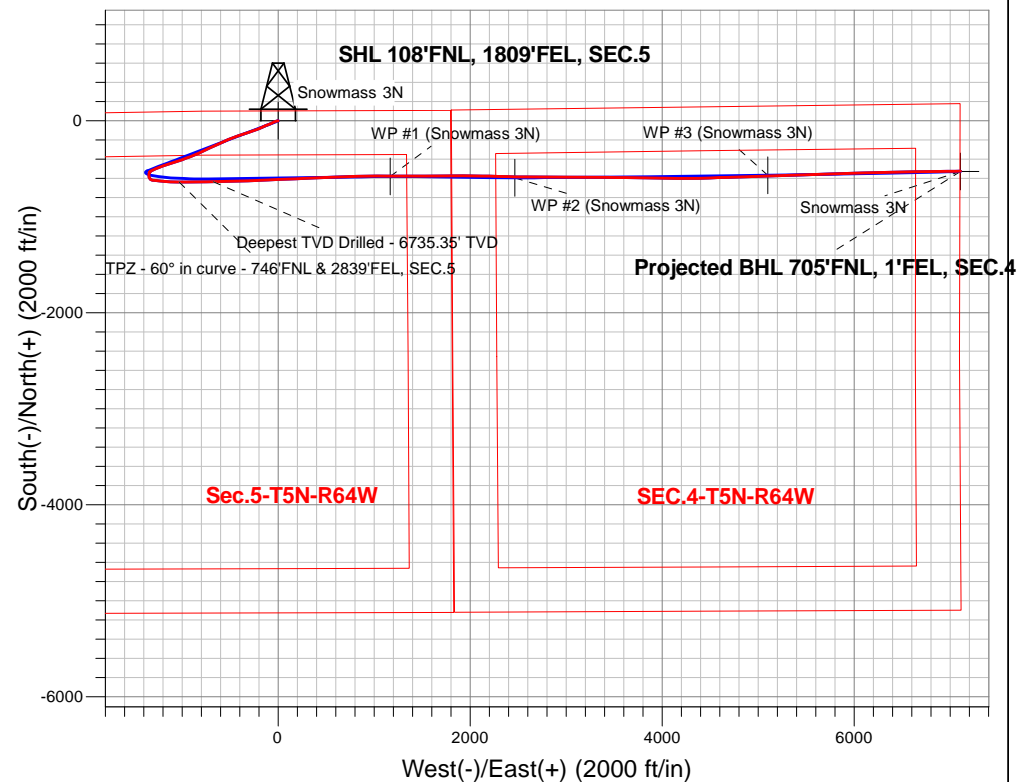
# PDC Energy Inc. DJ Basin

Well Name: **Snowmass 3N**

Surface Location: Snowmass 5N64W05 Pad Sec.5-T5N-R64W  
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone  
Ground Elevation: 4634.0  
+N/-S+E/-W Northing Easting Latitude Longitude Slot  
0.0 0.01402659.143258518.54 40.434985 -104.571285  
Original Well Elev WELL @ 4657.0ft (Original Well Elev)

## FINAL SURVEY

**Projected Bottom Hole Location**  
**15,144'MD 6672'TVD 523'S & 7107'E of SHL**  
**92.7 degree Incl @ 89.0 degree AZM**





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

**SEC.5-T5N-R64W**

**Snowmass 5N64W05 Pad Sec.5-T5N-R64W**

**Snowmass 3N**

**Snowmass 3N Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**26 September, 2017**

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Snowmass 3N
<b>Project:</b>	SEC.5-T5N-R64W	<b>TVD Reference:</b>	WELL @ 4657.0ft (Original Well Elev)
<b>Site:</b>	Snowmass 5N64W05 Pad Sec.5-T5N-R64W	<b>MD Reference:</b>	WELL @ 4657.0ft (Original Well Elev)
<b>Well:</b>	Snowmass 3N	<b>North Reference:</b>	True
<b>Wellbore:</b>	Snowmass 3N Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Snowmass 3N Wellbore #1	<b>Database:</b>	US_EDM

<b>Project</b>	SEC.5-T5N-R64W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site	Snowmass 5N64W05 Pad Sec.5-T5N-R64W				
Site Position:		Northing:	1,402,678.95 usft	Latitude:	40.435040
From:	Lat/Long	Easting:	3,258,495.78 usft	Longitude:	-104.571366
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.60 °

Well	Snowmass 3N					
Well Position	+N/-S	0.0 ft	Northing:	1,402,659.14 usft	Latitude:	40.434985
	+E/-W	0.0 ft	Easting:	3,258,518.54 usft	Longitude:	-104.571285
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,634.0 ft

<b>Wellbore</b>	Snowmass 3N Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	9/20/2017	7.92	66.89	52,511

<b>Design</b>	Snowmass 3N Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	94.25	

<b>Survey Program</b>	<b>Date</b>	9/26/2017			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
158.0	15,144.0	Survey #1 (Snowmass 3N Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
158.0	0.30	259.10	158.0	-0.1	-0.4	-0.4	0.19	0.19	0.00	
253.0	0.30	247.20	253.0	-0.2	-0.9	-0.9	0.07	0.00	-12.53	
349.0	0.20	242.30	349.0	-0.4	-1.3	-1.2	0.11	-0.10	-5.10	
444.0	0.20	249.60	444.0	-0.5	-1.6	-1.5	0.03	0.00	7.68	
539.0	0.10	295.90	539.0	-0.6	-1.8	-1.7	0.16	-0.11	48.74	
634.0	2.20	256.30	634.0	-0.9	-3.6	-3.6	2.24	2.21	-41.68	
729.0	4.60	261.40	728.8	-2.0	-9.2	-9.0	2.54	2.53	5.37	
825.0	5.20	263.40	824.4	-3.0	-17.3	-17.0	0.65	0.63	2.08	
920.0	6.20	250.00	919.0	-5.3	-26.4	-25.9	1.75	1.05	-14.11	

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Snowmass 3N
<b>Project:</b>	SEC.5-T5N-R64W	<b>TVD Reference:</b>	WELL @ 4657.0ft (Original Well Elev)
<b>Site:</b>	Snowmass 5N64W05 Pad Sec.5-T5N-R64W	<b>MD Reference:</b>	WELL @ 4657.0ft (Original Well Elev)
<b>Well:</b>	Snowmass 3N	<b>North Reference:</b>	True
<b>Wellbore:</b>	Snowmass 3N Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Snowmass 3N Wellbore #1	<b>Database:</b>	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)
1,015.0	7.70	248.40	1,013.3	-9.4	-37.1	-36.3	1.59	1.58	-1.68
1,111.0	9.50	242.40	1,108.2	-15.4	-50.1	-48.9	2.09	1.88	-6.25
1,206.0	11.40	245.40	1,201.6	-23.0	-65.6	-63.7	2.08	2.00	3.16
1,301.0	13.00	246.10	1,294.5	-31.2	-83.9	-81.4	1.69	1.68	0.74
1,397.0	15.20	248.90	1,387.6	-40.1	-105.6	-102.3	2.40	2.29	2.92
1,492.0	15.70	247.90	1,479.1	-49.4	-129.1	-125.1	0.60	0.53	-1.05
1,588.0	14.20	244.70	1,571.9	-59.3	-151.8	-146.9	1.78	-1.56	-3.33
1,684.0	12.60	241.90	1,665.3	-69.3	-171.6	-166.0	1.80	-1.67	-2.92
1,779.0	14.70	245.60	1,757.6	-79.2	-191.8	-185.4	2.39	2.21	3.89
1,875.0	17.10	251.90	1,849.9	-88.6	-216.3	-209.1	3.08	2.50	6.56
1,970.0	16.90	252.80	1,940.8	-97.0	-242.7	-234.9	0.35	-0.21	0.95
2,066.0	16.60	252.30	2,032.7	-105.3	-269.1	-260.6	0.35	-0.31	-0.52
2,162.0	18.90	252.40	2,124.1	-114.2	-297.0	-287.8	2.40	2.40	0.10
2,257.0	19.30	251.90	2,213.9	-123.7	-326.6	-316.6	0.45	0.42	-0.53
2,353.0	18.70	250.80	2,304.7	-133.7	-356.2	-345.3	0.73	-0.63	-1.15
2,544.0	18.10	250.00	2,485.9	-153.9	-413.0	-400.5	0.34	-0.31	-0.42
2,640.0	17.80	248.60	2,577.2	-164.4	-440.7	-427.3	0.55	-0.31	-1.46
2,735.0	17.60	248.40	2,667.7	-174.9	-467.6	-453.3	0.22	-0.21	-0.21
2,830.0	17.50	248.40	2,758.3	-185.5	-494.2	-479.1	0.11	-0.11	0.00
2,926.0	17.10	247.30	2,850.0	-196.3	-520.6	-504.7	0.54	-0.42	-1.15
3,022.0	16.80	247.00	2,941.8	-207.1	-546.4	-529.6	0.33	-0.31	-0.31
3,214.0	15.50	243.10	3,126.2	-229.6	-594.9	-576.2	0.88	-0.68	-2.03
3,310.0	17.10	248.60	3,218.4	-240.5	-619.4	-599.9	2.31	1.67	5.73
3,405.0	16.50	249.60	3,309.3	-250.3	-645.1	-624.8	0.70	-0.63	1.05
3,501.0	18.00	244.50	3,401.0	-261.5	-671.3	-650.1	2.22	1.56	-5.31
3,596.0	19.30	244.20	3,491.0	-274.6	-698.6	-676.4	1.37	1.37	-0.32
3,692.0	19.30	243.60	3,581.6	-288.6	-727.1	-703.8	0.21	0.00	-0.63
3,788.0	19.30	243.30	3,672.2	-302.8	-755.5	-731.0	0.10	0.00	-0.31
3,884.0	19.30	243.30	3,762.8	-317.0	-783.9	-758.2	0.00	0.00	0.00
3,979.0	19.30	243.30	3,852.5	-331.1	-811.9	-785.2	0.00	0.00	0.00
4,075.0	19.10	249.10	3,943.1	-343.9	-840.8	-813.0	2.00	-0.21	6.04
4,171.0	19.60	251.70	4,033.7	-354.5	-870.7	-842.1	1.04	0.52	2.71
4,266.0	18.90	250.10	4,123.4	-364.8	-900.3	-870.8	0.92	-0.74	-1.68
4,362.0	17.50	248.00	4,214.6	-375.5	-928.3	-898.0	1.61	-1.46	-2.19
4,457.0	16.60	245.60	4,305.4	-386.4	-953.9	-922.7	1.20	-0.95	-2.53
4,553.0	17.50	250.80	4,397.2	-396.8	-980.1	-948.0	1.84	0.94	5.42
4,649.0	17.70	250.80	4,488.7	-406.4	-1,007.5	-974.6	0.21	0.21	0.00
4,745.0	16.30	251.60	4,580.5	-415.4	-1,034.0	-1,000.4	1.48	-1.46	0.83
4,841.0	14.90	252.30	4,673.0	-423.4	-1,058.6	-1,024.3	1.47	-1.46	0.73
4,937.0	14.10	252.60	4,765.9	-430.7	-1,081.5	-1,046.6	0.84	-0.83	0.31
5,032.0	13.60	250.70	4,858.2	-437.8	-1,103.1	-1,067.6	0.71	-0.53	-2.00
5,127.0	15.10	250.30	4,950.2	-445.7	-1,125.3	-1,089.2	1.58	1.58	-0.42
5,223.0	16.70	254.00	5,042.5	-453.7	-1,150.3	-1,113.5	1.97	1.67	3.85
5,318.0	16.60	253.80	5,133.5	-461.3	-1,176.5	-1,139.1	0.12	-0.11	-0.21

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<b>Site:</b>	Snowmass 5N64W05 Pad Sec.5-T5N-R64W	<b>MD Reference:</b>	WELL @ 4657.0ft (Original Well Elev)
<b>Well:</b>	Snowmass 3N	<b>North Reference:</b>	True
<b>Wellbore:</b>	Snowmass 3N Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Snowmass 3N Wellbore #1	<b>Database:</b>	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)	
5,414.0	15.10	251.70	5,225.9	-469.0	-1,201.5	-1,163.5	1.67	-1.56	-2.19	
5,510.0	13.70	247.50	5,318.9	-477.3	-1,223.9	-1,185.2	1.82	-1.46	-4.38	
5,605.0	15.40	248.60	5,410.8	-486.2	-1,246.0	-1,206.6	1.81	1.79	1.16	
5,730.0	13.50	246.50	5,531.9	-498.1	-1,274.9	-1,234.5	1.58	-1.52	-1.68	
5,826.0	12.10	245.40	5,625.5	-506.7	-1,294.3	-1,253.2	1.48	-1.46	-1.15	
5,922.0	11.20	244.00	5,719.5	-515.0	-1,311.8	-1,270.1	0.98	-0.94	-1.46	
6,018.0	10.60	244.00	5,813.8	-523.0	-1,328.1	-1,285.7	0.63	-0.63	0.00	
6,114.0	15.00	203.00	5,907.5	-538.3	-1,340.9	-1,297.4	10.22	4.58	-42.71	
6,208.0	15.80	190.20	5,998.2	-562.1	-1,348.0	-1,302.6	3.71	0.85	-13.62	
6,304.0	16.00	157.30	6,090.7	-587.2	-1,345.2	-1,298.0	9.27	0.21	-34.27	
6,400.0	15.80	133.60	6,183.1	-608.5	-1,330.6	-1,281.9	6.72	-0.21	-24.69	
6,495.0	15.10	99.50	6,274.9	-619.4	-1,309.0	-1,259.5	9.46	-0.74	-35.89	
6,591.0	20.30	91.80	6,366.3	-622.0	-1,280.0	-1,230.4	5.93	5.42	-8.02	
6,687.0	29.50	96.00	6,453.3	-625.0	-1,239.7	-1,190.0	9.75	9.58	4.38	
6,782.0	38.80	95.60	6,531.8	-630.4	-1,186.7	-1,136.8	9.79	9.79	-0.42	
6,878.0	47.70	93.20	6,601.7	-635.3	-1,121.2	-1,071.1	9.43	9.27	-2.50	
6,974.0	58.00	90.50	6,659.6	-637.7	-1,044.8	-994.7	10.96	10.73	-2.81	
6,990.8	60.00	90.31	6,668.3	-637.8	-1,030.4	-980.4	11.93	11.89	-1.14	
TPZ - 60° in curve - 746°FNL & 2839°FEL, SEC.5										
7,069.0	69.30	89.50	6,701.7	-637.6	-959.9	-910.0	11.93	11.90	-1.03	
7,165.0	80.40	89.10	6,726.7	-636.5	-867.3	-817.8	11.57	11.56	-0.42	
7,260.0	89.30	89.50	6,735.3	-635.3	-772.8	-723.6	9.38	9.37	0.42	
7,355.0	90.60	88.40	6,735.3	-633.6	-677.8	-629.1	1.79	1.37	-1.16	
Deepest TVD Drilled - 6735.35' TVD										
7,451.0	91.00	89.10	6,734.0	-631.5	-581.9	-533.5	0.84	0.42	0.73	
7,547.0	91.20	89.00	6,732.2	-629.9	-485.9	-437.9	0.23	0.21	-0.10	
7,642.0	91.90	88.30	6,729.6	-627.7	-391.0	-343.4	1.04	0.74	-0.74	
7,737.0	90.00	87.40	6,728.0	-624.1	-296.1	-249.0	2.21	-2.00	-0.95	
7,833.0	91.00	87.70	6,727.2	-620.0	-200.2	-153.7	1.09	1.04	0.31	
7,928.0	91.70	87.40	6,724.9	-616.0	-105.3	-59.3	0.80	0.74	-0.32	
8,024.0	90.50	87.50	6,723.1	-611.7	-9.4	36.0	1.25	-1.25	0.10	
8,119.0	90.90	87.50	6,721.9	-607.5	85.5	130.3	0.42	0.42	0.00	
8,215.0	91.70	87.50	6,719.8	-603.4	181.4	225.6	0.83	0.83	0.00	
8,311.0	90.40	87.20	6,718.0	-598.9	277.3	320.9	1.39	-1.35	-0.31	
8,407.0	89.50	87.50	6,718.1	-594.5	373.2	416.2	0.99	-0.94	0.31	
8,502.0	90.20	87.70	6,718.3	-590.5	468.1	510.6	0.77	0.74	0.21	
8,598.0	90.90	88.10	6,717.4	-587.0	564.0	606.0	0.84	0.73	0.42	
8,694.0	91.40	87.50	6,715.5	-583.3	659.9	701.3	0.81	0.52	-0.63	
8,790.0	90.20	88.40	6,714.1	-579.9	755.9	796.7	1.56	-1.25	0.94	
8,886.0	89.90	89.10	6,714.1	-577.8	851.8	892.3	0.79	-0.31	0.73	
8,981.0	91.10	88.80	6,713.2	-576.0	946.8	986.9	1.30	1.26	-0.32	
9,077.0	89.40	89.50	6,712.8	-574.6	1,042.8	1,082.5	1.92	-1.77	0.73	
9,173.0	88.90	90.00	6,714.2	-574.2	1,138.8	1,178.2	0.74	-0.52	0.52	

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<b>Well:</b>	Snowmass 3N	<b>North Reference:</b>	True
<b>Wellbore:</b>	Snowmass 3N Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Snowmass 3N Wellbore #1	<b>Database:</b>	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)
9,268.0	89.60	90.20	6,715.5	-574.4	1,233.8	1,272.9	0.77	0.74	0.21
9,364.0	90.10	90.40	6,715.7	-574.9	1,329.8	1,368.7	0.56	0.52	0.21
9,460.0	90.50	90.70	6,715.2	-575.8	1,425.8	1,464.5	0.52	0.42	0.31
9,556.0	90.20	89.50	6,714.6	-575.9	1,521.8	1,560.3	1.29	-0.31	-1.25
9,652.0	90.60	88.80	6,714.0	-574.5	1,617.8	1,655.9	0.84	0.42	-0.73
9,748.0	89.30	89.30	6,714.1	-572.9	1,713.7	1,751.5	1.45	-1.35	0.52
9,844.0	89.10	89.50	6,715.4	-571.9	1,809.7	1,847.1	0.29	-0.21	0.21
9,940.0	89.10	90.70	6,716.9	-572.1	1,905.7	1,942.9	1.25	0.00	1.25
10,036.0	89.10	90.90	6,718.4	-573.4	2,001.7	2,038.7	0.21	0.00	0.21
10,132.0	89.30	90.20	6,719.8	-574.4	2,097.7	2,134.5	0.76	0.21	-0.73
10,228.0	90.80	91.60	6,719.7	-575.9	2,193.7	2,230.3	2.14	1.56	1.46
10,323.0	91.80	91.60	6,717.5	-578.5	2,288.6	2,325.2	1.05	1.05	0.00
10,418.0	92.20	91.10	6,714.2	-580.7	2,383.5	2,420.0	0.67	0.42	-0.53
10,514.0	92.10	90.50	6,710.6	-582.1	2,479.4	2,515.7	0.63	-0.10	-0.63
10,610.0	91.20	90.70	6,707.8	-583.1	2,575.4	2,611.5	0.96	-0.94	0.21
10,705.0	92.00	90.50	6,705.2	-584.1	2,670.3	2,706.3	0.87	0.84	-0.21
10,800.0	90.00	90.40	6,703.5	-584.8	2,765.3	2,801.0	2.11	-2.11	-0.11
10,895.0	90.70	90.20	6,702.9	-585.3	2,860.3	2,895.8	0.77	0.74	-0.21
10,991.0	91.50	90.40	6,701.1	-585.8	2,956.3	2,991.6	0.86	0.83	0.21
11,087.0	89.00	90.50	6,700.7	-586.6	3,052.3	3,087.4	2.61	-2.60	0.10
11,183.0	89.20	90.40	6,702.2	-587.3	3,148.3	3,183.1	0.23	0.21	-0.10
11,278.0	89.90	90.00	6,702.9	-587.7	3,243.3	3,277.9	0.85	0.74	-0.42
11,374.0	90.60	90.90	6,702.5	-588.4	3,339.3	3,373.7	1.19	0.73	0.94
11,469.0	90.70	90.40	6,701.4	-589.5	3,434.3	3,468.5	0.54	0.11	-0.53
11,565.0	91.40	90.40	6,699.7	-590.2	3,530.2	3,564.2	0.73	0.73	0.00
11,660.0	91.70	90.20	6,697.1	-590.7	3,625.2	3,659.0	0.38	0.32	-0.21
11,756.0	89.60	91.10	6,696.0	-591.8	3,721.2	3,754.8	2.38	-2.19	0.94
11,851.0	89.40	90.70	6,696.9	-593.3	3,816.2	3,849.6	0.47	-0.21	-0.42
11,946.0	90.00	91.10	6,697.4	-594.7	3,911.1	3,944.5	0.76	0.63	0.42
12,042.0	90.70	91.10	6,696.8	-596.6	4,007.1	4,040.3	0.73	0.73	0.00
12,137.0	91.40	91.10	6,695.0	-598.4	4,102.1	4,135.2	0.74	0.74	0.00
12,233.0	92.30	90.90	6,691.9	-600.1	4,198.0	4,230.9	0.96	0.94	-0.21
12,329.0	90.70	88.80	6,689.4	-599.8	4,294.0	4,326.6	2.75	-1.67	-2.19
12,425.0	90.00	88.30	6,688.8	-597.4	4,390.0	4,422.1	0.90	-0.73	-0.52
12,521.0	90.70	88.40	6,688.2	-594.6	4,485.9	4,517.6	0.74	0.73	0.10
12,617.0	91.70	88.40	6,686.2	-592.0	4,581.9	4,613.1	1.04	1.04	0.00
12,712.0	90.60	87.90	6,684.3	-588.9	4,676.8	4,707.6	1.27	-1.16	-0.53
12,808.0	89.70	88.40	6,684.1	-585.8	4,772.7	4,803.0	1.07	-0.94	0.52
12,903.0	90.40	88.10	6,684.0	-582.9	4,867.7	4,897.5	0.80	0.74	-0.32
12,999.0	90.70	87.70	6,683.1	-579.4	4,963.6	4,992.9	0.52	0.31	-0.42
13,094.0	91.70	87.40	6,681.1	-575.3	5,058.5	5,087.2	1.10	1.05	-0.32
13,190.0	91.50	87.50	6,678.4	-571.0	5,154.4	5,182.5	0.23	-0.21	0.10
13,286.0	90.80	88.60	6,676.5	-567.8	5,250.3	5,277.9	1.36	-0.73	1.15
13,382.0	91.60	88.30	6,674.5	-565.2	5,346.2	5,373.4	0.89	0.83	-0.31

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Snowmass 3N
<b>Project:</b>	SEC.5-T5N-R64W	<b>TVD Reference:</b>	WELL @ 4657.0ft (Original Well Elev)
<b>Site:</b>	Snowmass 5N64W05 Pad Sec.5-T5N-R64W	<b>MD Reference:</b>	WELL @ 4657.0ft (Original Well Elev)
<b>Well:</b>	Snowmass 3N	<b>North Reference:</b>	True
<b>Wellbore:</b>	Snowmass 3N Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Snowmass 3N Wellbore #1	<b>Database:</b>	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)	
13,477.0	89.30	89.00	6,673.7	-562.9	5,441.2	5,468.0	2.53	-2.42	0.74	
13,573.0	89.20	89.00	6,675.0	-561.3	5,537.2	5,563.5	0.10	-0.10	0.00	
13,668.0	89.90	88.10	6,675.7	-558.9	5,632.1	5,658.1	1.20	0.74	-0.95	
13,764.0	90.30	87.70	6,675.5	-555.3	5,728.1	5,753.5	0.59	0.42	-0.42	
13,860.0	91.20	87.00	6,674.3	-550.9	5,824.0	5,848.8	1.19	0.94	-0.73	
13,956.0	89.30	88.60	6,673.9	-547.2	5,919.9	5,944.2	2.59	-1.98	1.67	
14,051.0	90.00	88.80	6,674.5	-545.1	6,014.9	6,038.7	0.77	0.74	0.21	
14,147.0	90.70	88.30	6,673.9	-542.6	6,110.8	6,134.2	0.90	0.73	-0.52	
14,243.0	91.40	87.90	6,672.1	-539.5	6,206.8	6,229.7	0.84	0.73	-0.42	
14,338.0	90.00	88.60	6,670.9	-536.6	6,301.7	6,324.1	1.65	-1.47	0.74	
14,433.0	88.80	88.40	6,671.9	-534.1	6,396.7	6,418.7	1.28	-1.26	-0.21	
14,529.0	88.90	88.10	6,673.9	-531.1	6,492.6	6,514.1	0.33	0.10	-0.31	
14,624.0	88.40	89.80	6,676.1	-529.4	6,587.6	6,608.7	1.86	-0.53	1.79	
14,719.0	87.50	89.30	6,679.5	-528.7	6,682.5	6,703.3	1.08	-0.95	-0.53	
14,815.0	89.70	89.80	6,681.8	-527.9	6,778.5	6,798.9	2.35	2.29	0.52	
14,911.0	91.70	89.30	6,680.7	-527.1	6,874.4	6,894.6	2.15	2.08	-0.52	
15,006.0	92.00	89.00	6,677.6	-525.7	6,969.4	6,989.2	0.45	0.32	-0.32	
15,087.0	92.70	89.00	6,674.3	-524.3	7,050.3	7,069.8	0.86	0.86	0.00	
15,144.0	92.70	89.00	6,671.6	-523.3	7,107.2	7,126.5	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 108°FNL, 1809°FEL - hit/miss target - Shape - survey hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,402,659.15	3,258,518.54	40.434985		-104.571285
BHL 710°FNL, 0°FEL, SE - survey misses target center by 8.1ft at 15144.0ft MD (6671.6 TVD, -523.3 N, 7107.2 E) - Point	0.00	0.00	6,665.0	-528.0	7,108.0	1,402,205.68	3,265,631.37	40.433533		-104.545752
WP #3 (Snowmass 3N) - survey misses target center by 6.5ft at 13136.1ft MD (6679.9 TVD, -573.4 N, 5100.5 E) - Point	0.00	0.00	6,683.1	-567.8	5,100.3	1,402,144.81	3,263,624.34	40.433425		-104.552964
WP #2 (Snowmass 3N) - survey misses target center by 12.7ft at 10500.6ft MD (6711.1 TVD, -582.0 N, 2466.0 E) - Point	0.00	0.00	6,706.8	-593.9	2,465.7	1,402,091.12	3,260,990.20	40.433355		-104.562428
WP #1 (Snowmass 3N) - survey misses target center by 5.7ft at 9201.8ft MD (6714.7 TVD, -574.2 N, 1167.6 E) - Point	0.00	0.00	6,718.5	-578.4	1,167.5	1,402,093.02	3,259,691.99	40.433397		-104.567091

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Snowmass 3N
<b>Project:</b>	SEC.5-T5N-R64W	<b>TVD Reference:</b>	WELL @ 4657.0ft (Original Well Elev)
<b>Site:</b>	Snowmass 5N64W05 Pad Sec.5-T5N-R64W	<b>MD Reference:</b>	WELL @ 4657.0ft (Original Well Elev)
<b>Well:</b>	Snowmass 3N	<b>North Reference:</b>	True
<b>Wellbore:</b>	Snowmass 3N Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Snowmass 3N Wellbore #1	<b>Database:</b>	US_EDM

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
6,990.8	6,668.3	-637.8	-1,030.4	TPZ - 60° in curve - 746'FNL & 2839'FEL, SEC.5
7,355.0	6,735.3	-633.6	-677.8	Deepest TVD Drilled - 6735.35' TVD

Checked By: _____	Approved By: _____	Date: _____
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