

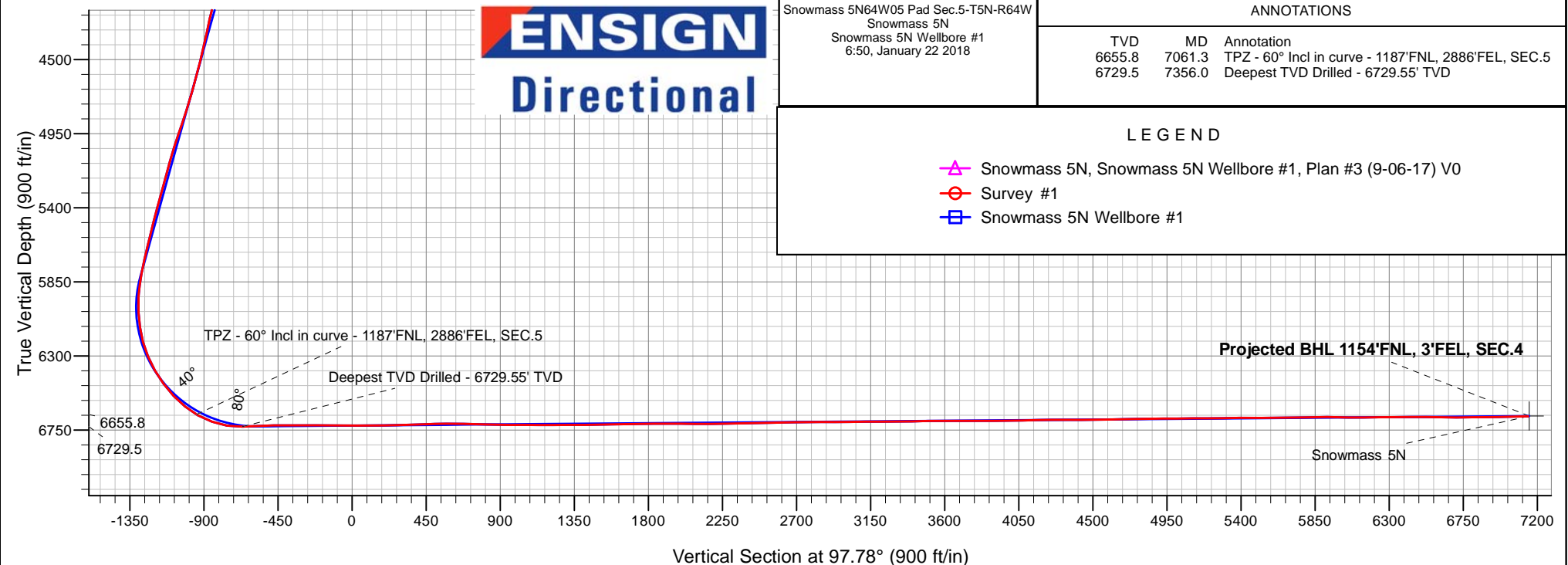
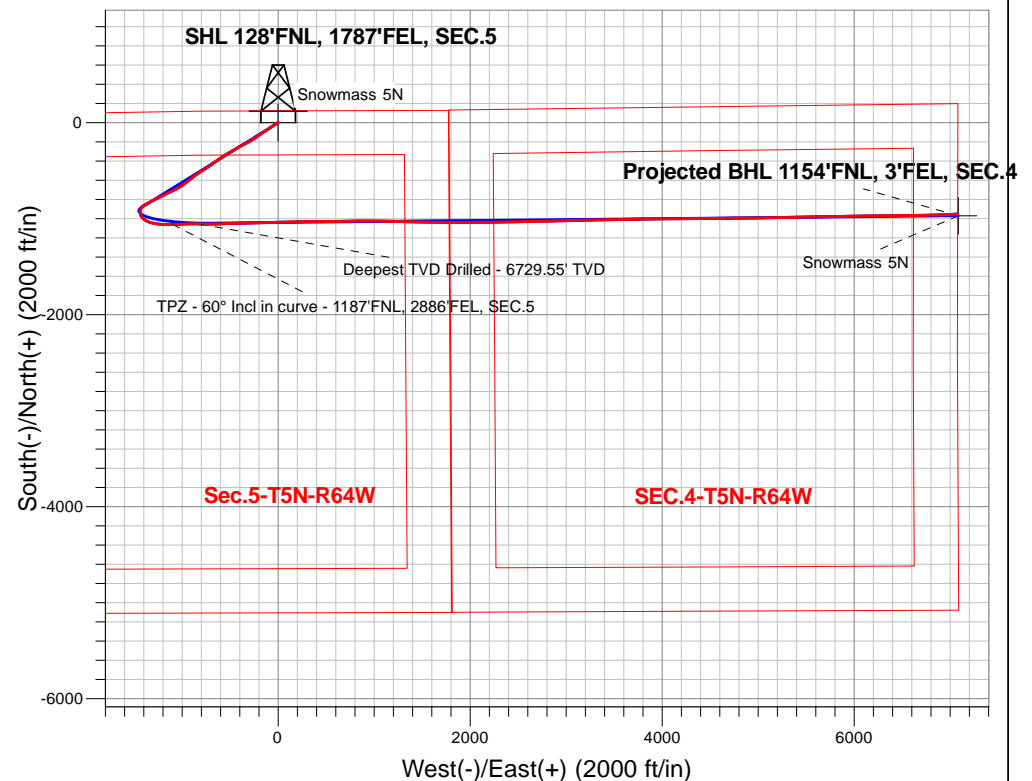
PDC Energy Inc. DJ Basin

Well Name: **Snowmass 5N**

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 0.0 1402639.713258541.57 40.434931 -104.571203
Ensign Rig #152 - RKB - 23'WELL @ 4657.0ft (Ensign Rig #152 - RKB - 23')

FINAL SURVEY

Projected Bottom Hole Location
15,255'MD 6668'TVD 952'S & 7081'E of SHL
90.8 degree Incl @ 87.9 degree AZM





PDC Energy Inc. DJ Basin

SEC.5-T5N-R64W

Snowmass 5N64W05 Pad Sec.5-T5N-R64W

Snowmass 5N

Snowmass 5N Wellbore #1

Survey: Survey #1

Standard Survey Report

22 January, 2018

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Snowmass 5N
Project:	SEC.5-T5N-R64W	TVD Reference:	WELL @ 4657.0ft (Ensign Rig #152 - RKB - 23')
Site:	Snowmass 5N64W05 Pad Sec.5-T5N-R64W	MD Reference:	WELL @ 4657.0ft (Ensign Rig #152 - RKB - 23')
Well:	Snowmass 5N	North Reference:	True
Wellbore:	Snowmass 5N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Snowmass 5N Wellbore #1	Database:	US_EDM

Project	SEC.5-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		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 5N					
Well Position	+N/-S	0.0 ft	Northing:	1,402,639.71 usft	Latitude:	40.434931
	+E/-W	0.0 ft	Easting:	3,258,541.57 usft	Longitude:	-104.571203
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,634.0 ft

Wellbore	Snowmass 5N Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/6/2017	7.92	66.89	52,515

Design	Snowmass 5N 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	97.78	

Survey Program	Date	1/22/2018			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
158.0	15,255.0	Survey #1 (Snowmass 5N 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	
1.0	0.01	356.70	1.0	0.0	0.0	0.0	0.51	0.51	0.00	
SHL 128'FNL, 1787'FEL, SEC.5										
158.0	0.80	356.70	158.0	1.1	-0.1	-0.2	0.51	0.51	0.00	
253.0	1.40	279.70	253.0	2.0	-1.2	-1.5	1.52	0.63	-81.05	
349.0	2.70	246.80	348.9	1.3	-4.5	-4.6	1.77	1.35	-34.27	
444.0	4.50	243.30	443.7	-1.3	-9.9	-9.6	1.91	1.89	-3.68	
540.0	6.20	238.70	539.3	-5.7	-17.7	-16.7	1.82	1.77	-4.79	
634.0	9.00	237.70	632.5	-12.2	-28.2	-26.3	2.98	2.98	-1.06	
729.0	11.20	235.00	726.0	-21.5	-42.1	-38.8	2.37	2.32	-2.84	
825.0	12.30	234.70	820.0	-32.8	-58.0	-53.1	1.15	1.15	-0.31	

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Project:	SEC.5-T5N-R64W	TVD Reference:	WELL @ 4657.0ft (Ensign Rig #152 - RKB - 23')
Site:	Snowmass 5N64W05 Pad Sec.5-T5N-R64W	MD Reference:	WELL @ 4657.0ft (Ensign Rig #152 - RKB - 23')
Well:	Snowmass 5N	North Reference:	True
Wellbore:	Snowmass 5N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Snowmass 5N 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)
920.0	13.30	234.50	912.6	-45.0	-75.2	-68.4	1.05	1.05	-0.21
1,015.0	14.20	237.00	1,004.9	-57.6	-93.9	-85.2	1.14	0.95	2.63
1,111.0	14.30	236.10	1,097.9	-70.7	-113.6	-103.0	0.25	0.10	-0.94
1,206.0	14.50	235.40	1,190.0	-84.0	-133.1	-120.5	0.28	0.21	-0.74
1,301.0	14.70	235.40	1,281.9	-97.6	-152.8	-138.2	0.21	0.21	0.00
1,397.0	14.90	235.70	1,374.7	-111.4	-173.0	-156.4	0.22	0.21	0.31
1,492.0	13.80	234.00	1,466.7	-125.0	-192.3	-173.6	1.24	-1.16	-1.79
1,610.0	11.80	233.40	1,581.8	-140.5	-213.4	-192.4	1.70	-1.69	-0.51
1,685.0	11.00	232.40	1,655.3	-149.4	-225.2	-202.9	1.10	-1.07	-1.33
1,781.0	12.80	237.50	1,749.3	-160.7	-241.4	-217.4	2.17	1.88	5.31
1,876.0	14.00	239.20	1,841.7	-172.2	-260.2	-234.4	1.33	1.26	1.79
1,972.0	15.10	237.10	1,934.6	-185.0	-280.6	-253.0	1.27	1.15	-2.19
2,067.0	15.70	243.60	2,026.2	-197.4	-302.5	-273.0	1.92	0.63	6.84
2,163.0	17.70	243.60	2,118.1	-209.7	-327.3	-295.8	2.08	2.08	0.00
2,259.0	18.40	242.90	2,209.4	-223.1	-353.8	-320.3	0.76	0.73	-0.73
2,354.0	19.00	241.40	2,299.4	-237.3	-380.7	-345.1	0.81	0.63	-1.58
2,450.0	20.00	241.00	2,389.9	-252.7	-408.8	-370.8	1.05	1.04	-0.42
2,545.0	19.30	237.80	2,479.4	-269.0	-436.3	-395.9	1.35	-0.74	-3.37
2,641.0	21.20	241.50	2,569.4	-285.7	-465.0	-422.0	2.39	1.98	3.85
2,737.0	20.30	240.70	2,659.2	-302.2	-494.8	-449.3	0.98	-0.94	-0.83
2,832.0	20.10	239.40	2,748.4	-318.5	-523.2	-475.2	0.52	-0.21	-1.37
2,928.0	21.40	237.00	2,838.1	-336.5	-552.1	-501.4	1.62	1.35	-2.50
3,024.0	21.40	238.00	2,927.5	-355.3	-581.6	-528.1	0.38	0.00	1.04
3,119.0	20.80	237.10	3,016.1	-373.6	-610.5	-554.3	0.72	-0.63	-0.95
3,215.0	18.60	233.10	3,106.5	-392.1	-637.0	-578.1	2.69	-2.29	-4.17
3,311.0	16.50	229.90	3,198.0	-410.1	-659.7	-598.1	2.41	-2.19	-3.33
3,406.0	18.00	233.60	3,288.8	-427.5	-681.9	-617.7	1.96	1.58	3.89
3,502.0	17.90	236.30	3,380.1	-444.4	-706.1	-639.4	0.87	-0.10	2.81
3,598.0	17.90	236.30	3,471.5	-460.8	-730.6	-661.5	0.00	0.00	0.00
3,693.0	17.90	235.20	3,561.9	-477.3	-754.8	-683.2	0.36	0.00	-1.16
3,789.0	21.50	239.20	3,652.2	-494.7	-782.0	-707.8	4.00	3.75	4.17
3,885.0	21.60	237.10	3,741.5	-513.3	-811.9	-734.9	0.81	0.10	-2.19
3,981.0	22.00	236.40	3,830.7	-532.8	-841.8	-761.8	0.50	0.42	-0.73
4,076.0	21.00	234.20	3,919.0	-552.6	-870.4	-787.5	1.35	-1.05	-2.32
4,172.0	19.00	231.30	4,009.2	-572.5	-896.5	-810.7	2.32	-2.08	-3.02
4,268.0	17.10	227.60	4,100.5	-591.8	-919.2	-830.5	2.31	-1.98	-3.85
4,363.0	19.30	234.20	4,190.8	-610.4	-942.2	-850.9	3.17	2.32	6.95
4,458.0	17.20	231.20	4,281.0	-628.4	-965.9	-871.9	2.42	-2.21	-3.16
4,554.0	16.80	233.50	4,372.8	-645.5	-988.1	-891.6	0.81	-0.42	2.40
4,651.0	17.10	238.70	4,465.6	-661.3	-1,011.6	-912.7	1.59	0.31	5.36
4,746.0	18.50	241.00	4,556.0	-675.8	-1,036.7	-935.6	1.65	1.47	2.42
4,842.0	17.50	240.80	4,647.3	-690.3	-1,062.6	-959.3	1.04	-1.04	-0.21
4,967.0	21.50	244.50	4,765.2	-709.3	-1,099.7	-993.5	3.35	3.20	2.96

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Project:	SEC.5-T5N-R64W	TVD Reference:	WELL @ 4657.0ft (Ensign Rig #152 - RKB - 23')
Site:	Snowmass 5N64W05 Pad Sec.5-T5N-R64W	MD Reference:	WELL @ 4657.0ft (Ensign Rig #152 - RKB - 23')
Well:	Snowmass 5N	North Reference:	True
Wellbore:	Snowmass 5N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Snowmass 5N 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)
5,062.0	21.60	245.60	4,853.5	-724.0	-1,131.3	-1,022.8	0.44	0.11	1.16
5,158.0	21.30	245.00	4,942.9	-738.7	-1,163.2	-1,052.5	0.39	-0.31	-0.63
5,253.0	20.60	244.00	5,031.6	-753.3	-1,193.9	-1,080.9	0.83	-0.74	-1.05
5,349.0	19.50	241.70	5,121.8	-768.3	-1,223.2	-1,107.8	1.41	-1.15	-2.40
5,445.0	18.10	238.70	5,212.6	-783.6	-1,250.0	-1,132.4	1.77	-1.46	-3.13
5,540.0	18.90	247.50	5,302.8	-797.2	-1,276.9	-1,157.1	3.05	0.84	9.26
5,636.0	17.80	244.50	5,393.9	-809.5	-1,304.5	-1,182.8	1.51	-1.15	-3.13
5,731.0	16.90	241.50	5,484.5	-822.3	-1,329.7	-1,206.1	1.34	-0.95	-3.16
5,827.0	17.80	239.40	5,576.2	-836.4	-1,354.6	-1,228.8	1.14	0.94	-2.19
5,923.0	16.40	243.60	5,667.9	-849.9	-1,379.4	-1,251.5	1.94	-1.46	4.38
6,019.0	15.40	236.40	5,760.3	-863.0	-1,402.1	-1,272.3	2.30	-1.04	-7.50
6,115.0	15.10	218.90	5,852.9	-879.8	-1,420.6	-1,288.4	4.79	-0.31	-18.23
6,209.0	15.10	201.60	5,943.7	-900.7	-1,432.8	-1,297.6	4.78	0.00	-18.40
6,305.0	19.30	177.90	6,035.5	-928.3	-1,436.8	-1,297.9	8.43	4.38	-24.69
6,400.0	19.60	165.80	6,125.2	-959.4	-1,432.4	-1,289.2	4.25	0.32	-12.74
6,496.0	20.20	142.40	6,215.6	-988.2	-1,418.3	-1,271.4	8.27	0.63	-24.38
6,592.0	25.50	121.70	6,304.1	-1,012.2	-1,390.5	-1,240.6	9.95	5.52	-21.56
6,688.0	30.30	109.90	6,389.0	-1,031.4	-1,350.1	-1,198.0	7.60	5.00	-12.29
6,783.0	35.40	105.50	6,468.8	-1,046.9	-1,301.0	-1,147.2	5.92	5.37	-4.63
6,879.0	44.40	97.60	6,542.4	-1,058.8	-1,240.8	-1,085.9	10.74	9.38	-8.23
6,975.0	51.10	87.70	6,607.0	-1,061.7	-1,170.0	-1,015.4	10.33	6.98	-10.31
7,061.3	60.00	87.42	6,655.8	-1,058.7	-1,098.9	-945.4	10.32	10.32	-0.32
TPZ - 60° Incl in curve - 1187'FNL, 2886'FEL, SEC.5									
7,070.0	60.90	87.40	6,660.1	-1,058.4	-1,091.4	-938.0	10.32	10.32	-0.29
7,166.0	70.80	89.10	6,699.3	-1,055.7	-1,003.9	-851.7	10.44	10.31	1.77
7,261.0	80.60	90.90	6,722.8	-1,055.8	-912.0	-760.6	10.48	10.32	1.89
7,356.0	91.20	89.50	6,729.5	-1,056.1	-817.4	-666.8	11.25	11.16	-1.47
Deepest TVD Drilled - 6729.55' TVD									
7,446.4	92.80	89.03	6,726.4	-1,054.9	-727.0	-577.4	1.85	1.77	-0.52
LPL 1170'FNL, 2678'FWL, SEC.5									
7,452.0	92.90	89.00	6,726.1	-1,054.8	-721.5	-571.9	1.85	1.77	-0.52
7,548.0	91.50	88.40	6,722.4	-1,052.7	-625.6	-477.2	1.59	-1.46	-0.63
7,643.0	89.10	88.60	6,721.9	-1,050.2	-530.6	-383.5	2.54	-2.53	0.21
7,738.0	90.00	88.30	6,722.7	-1,047.6	-435.6	-289.7	1.00	0.95	-0.32
7,834.0	90.60	88.80	6,722.2	-1,045.2	-339.7	-195.0	0.81	0.63	0.52
7,929.0	89.10	88.40	6,722.4	-1,042.9	-244.7	-101.2	1.63	-1.58	-0.42
8,024.0	89.50	88.30	6,723.6	-1,040.1	-149.7	-7.5	0.43	0.42	-0.11
8,120.0	90.70	87.90	6,723.4	-1,036.9	-53.8	87.1	1.32	1.25	-0.42
8,216.0	90.80	89.10	6,722.2	-1,034.4	42.2	181.9	1.25	0.10	1.25
8,312.0	91.30	89.50	6,720.4	-1,033.3	138.1	276.8	0.67	0.52	0.42
8,408.0	92.40	89.10	6,717.3	-1,032.1	234.1	371.7	1.22	1.15	-0.42
8,503.0	91.30	89.30	6,714.2	-1,030.8	329.0	465.6	1.18	-1.16	0.21
8,599.0	91.70	89.80	6,711.7	-1,030.0	425.0	560.6	0.67	0.42	0.52
8,695.0	88.00	89.10	6,712.0	-1,029.1	521.0	655.5	3.92	-3.85	-0.73

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Wellbore:	Snowmass 5N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Snowmass 5N Wellbore #1	Database:	US_EDM

Survey									
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8,791.0	88.30	89.10	6,715.1	-1,027.6	616.9	750.4	0.31	0.31	0.00
8,887.0	88.90	88.80	6,717.4	-1,025.8	712.8	845.2	0.70	0.63	-0.31
8,982.0	89.90	88.30	6,718.4	-1,023.4	807.8	939.0	1.18	1.05	-0.53
9,078.0	89.50	90.40	6,718.9	-1,022.3	903.8	1,033.9	2.23	-0.42	2.19
9,174.0	89.50	91.20	6,719.8	-1,023.7	999.8	1,129.2	0.83	0.00	0.83
9,269.0	91.00	91.40	6,719.3	-1,025.8	1,094.8	1,223.6	1.59	1.58	0.21
9,365.0	89.60	91.10	6,718.8	-1,027.9	1,190.7	1,319.0	1.49	-1.46	-0.31
9,461.0	90.20	91.20	6,719.0	-1,029.8	1,286.7	1,414.3	0.63	0.63	0.10
9,557.0	91.20	91.10	6,717.8	-1,031.8	1,382.7	1,509.7	1.05	1.04	-0.10
9,653.0	92.20	90.90	6,715.0	-1,033.4	1,478.6	1,605.0	1.06	1.04	-0.21
9,749.0	89.90	91.10	6,713.2	-1,035.1	1,574.6	1,700.3	2.40	-2.40	0.21
9,845.0	90.50	91.20	6,712.9	-1,037.0	1,670.6	1,795.6	0.63	0.63	0.10
9,941.0	91.50	91.10	6,711.2	-1,039.0	1,766.5	1,891.0	1.05	1.04	-0.10
10,037.0	88.50	89.80	6,711.2	-1,039.7	1,862.5	1,986.2	3.41	-3.13	-1.35
10,133.0	89.30	89.70	6,713.1	-1,039.3	1,958.5	2,081.2	0.84	0.83	-0.10
10,229.0	90.30	89.10	6,713.4	-1,038.3	2,054.5	2,176.2	1.21	1.04	-0.63
10,324.0	91.50	88.60	6,711.9	-1,036.4	2,149.5	2,270.0	1.37	1.26	-0.53
10,419.0	90.70	89.10	6,710.1	-1,034.5	2,244.4	2,363.8	0.99	-0.84	0.53
10,515.0	92.00	88.60	6,707.8	-1,032.6	2,340.4	2,458.7	1.45	1.35	-0.52
10,611.0	91.00	89.50	6,705.3	-1,031.0	2,436.3	2,553.5	1.40	-1.04	0.94
10,706.0	90.40	89.70	6,704.1	-1,030.3	2,531.3	2,647.5	0.67	-0.63	0.21
10,801.0	91.20	89.70	6,702.8	-1,029.8	2,626.3	2,741.6	0.84	0.84	0.00
10,896.0	90.00	88.80	6,701.8	-1,028.6	2,721.3	2,835.5	1.58	-1.26	-0.95
10,992.0	90.20	88.60	6,701.7	-1,026.4	2,817.3	2,930.3	0.29	0.21	-0.21
11,088.0	90.70	87.50	6,700.9	-1,023.1	2,913.2	3,024.9	1.26	0.52	-1.15
11,183.0	90.50	87.90	6,699.9	-1,019.3	3,008.1	3,118.5	0.47	-0.21	0.42
11,279.0	89.80	87.20	6,699.7	-1,015.2	3,104.0	3,212.9	1.03	-0.73	-0.73
11,375.0	90.70	89.50	6,699.2	-1,012.4	3,200.0	3,307.6	2.57	0.94	2.40
11,470.0	91.10	89.50	6,697.7	-1,011.6	3,295.0	3,401.6	0.42	0.42	0.00
11,565.0	91.90	89.50	6,695.3	-1,010.8	3,389.9	3,495.6	0.84	0.84	0.00
11,661.0	88.90	89.10	6,694.6	-1,009.6	3,485.9	3,590.5	3.15	-3.13	-0.42
11,756.0	89.80	89.00	6,695.7	-1,008.0	3,580.9	3,684.4	0.95	0.95	-0.11
11,852.0	90.60	89.00	6,695.3	-1,006.4	3,676.9	3,779.3	0.83	0.83	0.00
11,947.0	90.50	88.60	6,694.4	-1,004.4	3,771.8	3,873.1	0.43	-0.11	-0.42
12,043.0	90.60	89.10	6,693.5	-1,002.4	3,867.8	3,968.0	0.53	0.10	0.52
12,138.0	91.00	89.00	6,692.2	-1,000.9	3,962.8	4,061.8	0.43	0.42	-0.11
12,234.0	92.00	89.00	6,689.7	-999.2	4,058.7	4,156.7	1.04	1.04	0.00
12,330.0	89.70	90.20	6,688.2	-998.5	4,154.7	4,251.7	2.70	-2.40	1.25
12,426.0	90.00	90.20	6,688.5	-998.9	4,250.7	4,346.8	0.31	0.31	0.00
12,522.0	90.50	89.10	6,688.1	-998.3	4,346.7	4,441.9	1.26	0.52	-1.15
12,618.0	90.50	89.30	6,687.2	-996.9	4,442.7	4,536.8	0.21	0.00	0.21
12,713.0	91.00	89.50	6,686.0	-995.9	4,537.7	4,630.8	0.57	0.53	0.21
12,808.0	92.20	89.50	6,683.3	-995.1	4,632.7	4,724.7	1.26	1.26	0.00

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Snowmass 5N
Project:	SEC.5-T5N-R64W	TVD Reference:	WELL @ 4657.0ft (Ensign Rig #152 - RKB - 23')
Site:	Snowmass 5N64W05 Pad Sec.5-T5N-R64W	MD Reference:	WELL @ 4657.0ft (Ensign Rig #152 - RKB - 23')
Well:	Snowmass 5N	North Reference:	True
Wellbore:	Snowmass 5N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Snowmass 5N 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)	
12,904.0	89.60	89.50	6,681.8	-994.3	4,728.6	4,819.7	2.71	-2.71	0.00	
13,000.0	90.20	89.30	6,682.0	-993.3	4,824.6	4,914.7	0.66	0.63	-0.21	
13,095.0	90.70	89.10	6,681.2	-991.9	4,919.6	5,008.6	0.57	0.53	-0.21	
13,191.0	91.50	88.60	6,679.4	-990.0	5,015.6	5,103.4	0.98	0.83	-0.52	
13,287.0	89.30	89.80	6,678.7	-988.7	5,111.6	5,198.4	2.61	-2.29	1.25	
13,383.0	90.90	89.70	6,678.6	-988.3	5,207.5	5,293.4	1.67	1.67	-0.10	
13,478.0	91.80	89.00	6,676.3	-987.2	5,302.5	5,387.4	1.20	0.95	-0.74	
13,574.0	89.10	89.00	6,675.6	-985.5	5,398.5	5,482.2	2.81	-2.81	0.00	
13,669.0	89.80	88.60	6,676.5	-983.5	5,493.5	5,576.1	0.85	0.74	-0.42	
13,765.0	90.70	88.40	6,676.1	-981.0	5,589.4	5,670.8	0.96	0.94	-0.21	
13,861.0	92.00	88.10	6,673.8	-978.1	5,685.4	5,765.4	1.39	1.35	-0.31	
13,957.0	90.90	88.60	6,671.4	-975.3	5,781.3	5,860.1	1.26	-1.15	0.52	
14,052.0	88.70	89.50	6,671.7	-973.7	5,876.3	5,954.0	2.50	-2.32	0.95	
14,148.0	89.40	89.30	6,673.3	-972.7	5,972.2	6,049.0	0.76	0.73	-0.21	
14,244.0	90.50	88.80	6,673.4	-971.1	6,068.2	6,143.8	1.26	1.15	-0.52	
14,339.0	90.10	89.80	6,672.9	-970.0	6,163.2	6,237.8	1.13	-0.42	1.05	
14,434.0	90.70	89.70	6,672.2	-969.6	6,258.2	6,331.9	0.64	0.63	-0.11	
14,530.0	91.30	89.50	6,670.5	-968.9	6,354.2	6,426.9	0.66	0.63	-0.21	
14,626.0	88.60	89.50	6,670.6	-968.1	6,450.2	6,521.9	2.81	-2.81	0.00	
14,720.0	89.10	89.10	6,672.5	-966.9	6,544.2	6,614.8	0.68	0.53	-0.43	
14,816.0	89.90	88.80	6,673.3	-965.1	6,640.1	6,709.7	0.89	0.83	-0.31	
14,912.0	90.50	88.80	6,673.0	-963.1	6,736.1	6,804.5	0.63	0.63	0.00	
15,007.0	90.90	88.40	6,671.9	-960.8	6,831.1	6,898.3	0.60	0.42	-0.42	
15,071.0	91.30	88.10	6,670.6	-958.9	6,895.0	6,961.4	0.78	0.63	-0.47	
15,199.0	90.80	87.90	6,668.3	-954.4	7,022.9	7,087.5	0.42	-0.39	-0.16	
15,255.0	90.80	87.90	6,667.5	-952.3	7,078.9	7,142.7	0.00	0.00	0.00	
BHL 1170'FNL, 0'FEL, SEC.4										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude		
SHL 128'FNL, 1787'FEL	0.00	0.00	1.0	0.0	0.0	1,402,639.72	3,258,541.57	40.434931		
- hit/miss target										
- Shape										
- Point										
BHL 1170'FNL, 0'FEL, S	0.00	0.00	6,665.0	-968.4	7,084.2	1,401,745.58	3,265,635.21	40.432270		
- survey misses target center by 17.1ft at 15255.0ft MD (6667.5 TVD, -952.3 N, 7078.9 E)										
- Point										

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Project:	SEC.5-T5N-R64W	TVD Reference:	WELL @ 4657.0ft (Ensign Rig #152 - RKB - 23')
Site:	Snowmass 5N64W05 Pad Sec.5-T5N-R64W	MD Reference:	WELL @ 4657.0ft (Ensign Rig #152 - RKB - 23')
Well:	Snowmass 5N	North Reference:	True
Wellbore:	Snowmass 5N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Snowmass 5N Wellbore #1	Database:	US_EDM

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
7,061.3	6,655.8	-1,058.7	-1,098.9	TPZ - 60° Incl in curve - 1187°FNL, 2886°FEL, SEC.5
7,356.0	6,729.5	-1,056.1	-817.4	Deepest TVD Drilled - 6729.55' TVD

Checked By: _____	Approved By: _____	Date: _____
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