

PDC Energy Inc. DJ Basin



Spinney 02N
 Spinney 03N66W09 1-8
 North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
 Ground Elevation: 4861.0
 Slot
 +N/-S +E/-W Northing Easting Latitude Longitude
 0.0 0.0 1329170.95 3198980.13 40.234777 -104.787285
 P272 - RKB 28.5' WELL @ 4889.5ft (P272 - RKB 28.5')

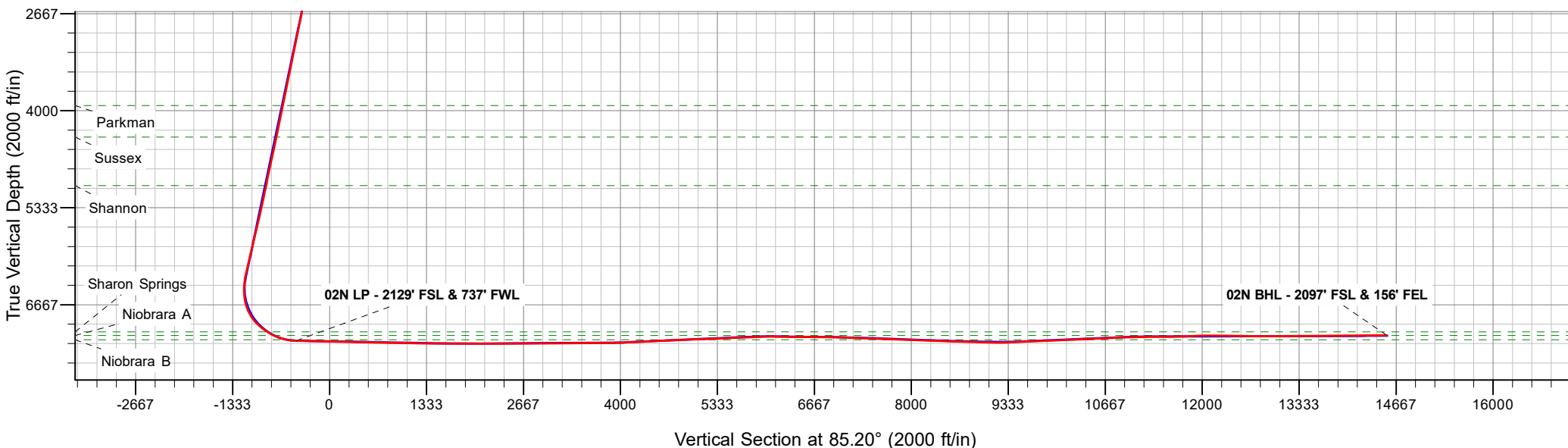
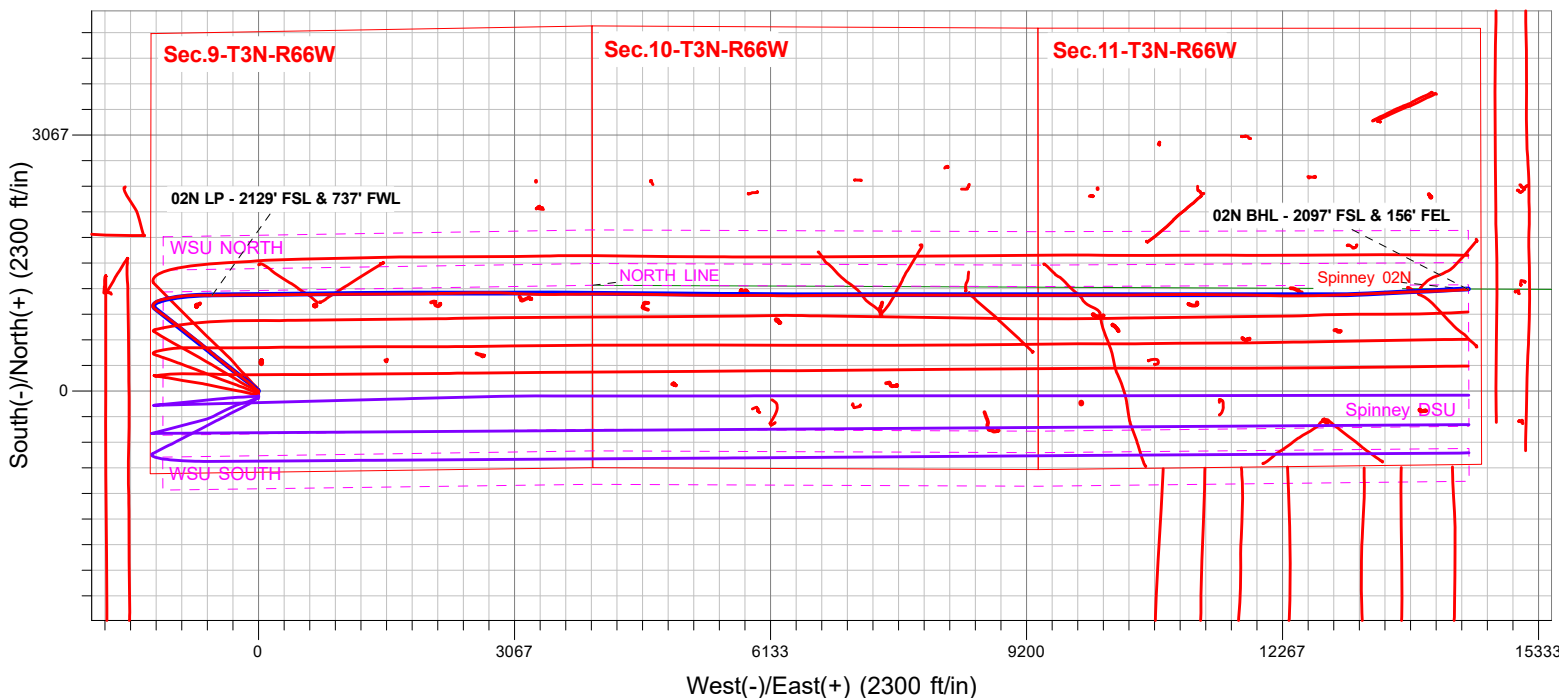
Spinney 03N66W09 1-8
 Spinney 02N
 Spinney 02N Final Surveys
 16:59, May 31 2023

M Azimuths to True North
 Magnetic North: 7.83°
 Magnetic Field
 Strength: 51693.4nT
 Dip Angle: 66.43°
 Date: 05/05/2023
 Model: HRGM

ANNOTATIONS

| MD | TVD | Annotation |
|---------|--------|--------------------------------|
| 7808.0 | 7161.0 | 02N LP - 2129' FSL & 737' FWL |
| 22861.0 | 7086.1 | 02N BHL - 2097' FSL & 156' FEL |

FINAL SURVEY
Projected Bottom Hole Location
22861.0' MD / 7086.1' TVD
91.00° INC / 86.82° AZM
2097' FSL / 156' FEL





PDC Energy Inc. DJ Basin

SEC.9-T3N-R66W

Spinney 03N66W09 1-8

Spinney 02N

Spinney 02N Wellbore #1

Design: Spinney 02N Final Surveys

Standard Survey Report

31 May, 2023

| | | | |
|------------------|---------------------------|-------------------------------------|------------------------------------|
| Company: | PDC Energy Inc. DJ Basin | Local Co-ordinate Reference: | Well Spinney 02N |
| Project: | SEC.9-T3N-R66W | TVD Reference: | WELL @ 4889.5ft (P272 - RKB 28.5') |
| Site: | Spinney 03N66W09 1-8 | MD Reference: | WELL @ 4889.5ft (P272 - RKB 28.5') |
| Well: | Spinney 02N | North Reference: | True |
| Wellbore: | Spinney 02N Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Spinney 02N Final Surveys | Database: | US_EDM |

| | | | |
|--------------------|---------------------------------|----------------------|-----------------------------|
| Project | SEC.9-T3N-R66W, Weld County, CO | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Northern Zone | | Using geodetic scale factor |

| | | | | | |
|------------------------------|----------------------|---------------------|-------------------|--------------------------|-------------|
| Site | Spinney 03N66W09 1-8 | | | | |
| Site Position: | | Northing: | 1,329,140.91 usft | Latitude: | 40.234695 |
| From: | Lat/Long | Easting: | 3,198,980.07 usft | Longitude: | -104.787286 |
| Position Uncertainty: | 0.0 ft | Slot Radius: | 13-3/16 " | Grid Convergence: | 0.46 ° |

| | | | | | | |
|-----------------------------|--------------|--------|----------------------------|-------------------|----------------------|-------------|
| Well | Spinney 02N | | | | | |
| Well Position | +N/-S | 0.0 ft | Northing: | 1,329,170.95 usft | Latitude: | 40.234777 |
| | +E/-W | 0.0 ft | Easting: | 3,198,980.13 usft | Longitude: | -104.787285 |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | ft | Ground Level: | 4,861.0 ft |

| | | | | | |
|------------------|-------------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Spinney 02N Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | HRGM | 05/05/2023 | 7.83 | 66.43 | 51,693.35605196 |

| | | | | | |
|--------------------------|------------------------------|-------------------|-------------------|----------------------|-----|
| Design | Spinney 02N Final Surveys | | | | |
| 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 | 85.20 | |

| | | | | | |
|-----------------------|----------------|-------------------------------------|------------------|--------------------|--|
| Survey Program | Date | 05/31/2023 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description | |
| 159.5 | 22,861.0 | Survey #1 (Spinney 02N Wellbore #1) | MWD | MWD - Standard | |

| 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 |
| 159.5 | 0.09 | 176.60 | 159.5 | -0.1 | 0.0 | 0.0 | 0.06 | 0.06 | 0.00 |
| 250.5 | 0.26 | 259.74 | 250.5 | -0.2 | -0.2 | -0.2 | 0.29 | 0.19 | 91.36 |
| 342.5 | 0.18 | 27.71 | 342.5 | -0.1 | -0.3 | -0.3 | 0.43 | -0.09 | 139.10 |
| 457.5 | 2.55 | 303.34 | 457.5 | 1.4 | -2.4 | -2.3 | 2.21 | 2.06 | -73.37 |
| 543.5 | 2.37 | 310.55 | 543.4 | 3.6 | -5.3 | -5.0 | 0.42 | -0.21 | 8.38 |
| 628.5 | 4.04 | 305.45 | 628.2 | 6.5 | -9.1 | -8.5 | 1.99 | 1.96 | -6.00 |
| 713.5 | 6.42 | 302.99 | 712.9 | 10.8 | -15.5 | -14.6 | 2.81 | 2.80 | -2.89 |
| 798.5 | 8.44 | 311.07 | 797.2 | 17.5 | -24.2 | -22.7 | 2.67 | 2.38 | 9.51 |
| 883.5 | 8.35 | 309.84 | 881.3 | 25.6 | -33.7 | -31.4 | 0.24 | -0.11 | -1.45 |

| | | | |
|------------------|---------------------------|-------------------------------------|------------------------------------|
| Company: | PDC Energy Inc. DJ Basin | Local Co-ordinate Reference: | Well Spinney 02N |
| Project: | SEC.9-T3N-R66W | TVD Reference: | WELL @ 4889.5ft (P272 - RKB 28.5') |
| Site: | Spinney 03N66W09 1-8 | MD Reference: | WELL @ 4889.5ft (P272 - RKB 28.5') |
| Well: | Spinney 02N | North Reference: | True |
| Wellbore: | Spinney 02N Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Spinney 02N Final Surveys | 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) |
|--------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|
| 972.5 | 10.64 | 313.36 | 969.0 | 35.4 | -44.6 | -41.5 | 2.65 | 2.57 | 3.96 |
| 1,057.5 | 12.31 | 314.59 | 1,052.3 | 47.1 | -56.8 | -52.6 | 1.99 | 1.96 | 1.45 |
| 1,088.9 | 12.98 | 314.24 | 1,083.0 | 51.9 | -61.7 | -57.1 | 2.13 | 2.12 | -1.12 |
| Fox Hills Aq Base | | | | | | | | | |
| 1,142.5 | 14.11 | 313.71 | 1,135.1 | 60.6 | -70.7 | -65.4 | 2.13 | 2.12 | -0.98 |
| 1,227.5 | 14.68 | 314.06 | 1,217.4 | 75.3 | -85.9 | -79.3 | 0.68 | 0.67 | 0.41 |
| 1,315.5 | 15.65 | 310.02 | 1,302.3 | 90.7 | -103.0 | -95.1 | 1.63 | 1.10 | -4.59 |
| 1,400.5 | 16.71 | 305.45 | 1,384.0 | 105.1 | -121.8 | -112.6 | 1.95 | 1.25 | -5.38 |
| 1,485.5 | 17.15 | 307.03 | 1,465.3 | 119.8 | -141.7 | -131.2 | 0.75 | 0.52 | 1.86 |
| 1,570.5 | 17.23 | 307.38 | 1,546.5 | 135.0 | -161.7 | -149.9 | 0.15 | 0.09 | 0.41 |
| 1,655.5 | 16.62 | 307.73 | 1,627.8 | 150.0 | -181.4 | -168.2 | 0.73 | -0.72 | 0.41 |
| 1,700.5 | 16.44 | 307.21 | 1,671.0 | 157.8 | -191.5 | -177.7 | 0.52 | -0.40 | -1.16 |
| 1,782.0 | 16.67 | 307.33 | 1,749.1 | 171.9 | -210.0 | -194.9 | 0.29 | 0.28 | 0.15 |
| 1,877.0 | 16.09 | 307.22 | 1,840.2 | 188.1 | -231.3 | -214.8 | 0.61 | -0.61 | -0.12 |
| 1,972.0 | 15.72 | 307.20 | 1,931.6 | 203.9 | -252.1 | -234.1 | 0.39 | -0.39 | -0.02 |
| 2,067.0 | 15.87 | 308.72 | 2,023.0 | 219.8 | -272.4 | -253.1 | 0.46 | 0.16 | 1.60 |
| 2,162.0 | 16.05 | 308.72 | 2,114.3 | 236.1 | -292.8 | -272.1 | 0.19 | 0.19 | 0.00 |
| 2,256.0 | 16.06 | 308.43 | 2,204.7 | 252.3 | -313.1 | -291.0 | 0.09 | 0.01 | -0.31 |
| 2,351.0 | 16.08 | 309.12 | 2,296.0 | 268.8 | -333.6 | -310.0 | 0.20 | 0.02 | 0.73 |
| 2,446.0 | 15.56 | 309.18 | 2,387.4 | 285.1 | -353.7 | -328.7 | 0.55 | -0.55 | 0.06 |
| 2,541.0 | 15.84 | 308.79 | 2,478.8 | 301.3 | -373.7 | -347.2 | 0.31 | 0.29 | -0.41 |
| 2,636.0 | 16.06 | 309.40 | 2,570.2 | 317.8 | -394.0 | -366.0 | 0.29 | 0.23 | 0.64 |
| 2,731.0 | 16.13 | 309.08 | 2,661.4 | 334.4 | -414.4 | -385.0 | 0.12 | 0.07 | -0.34 |
| 2,825.0 | 16.00 | 310.19 | 2,751.8 | 351.0 | -434.4 | -403.5 | 0.35 | -0.14 | 1.18 |
| 2,920.0 | 16.09 | 309.28 | 2,843.1 | 367.8 | -454.6 | -422.3 | 0.28 | 0.09 | -0.96 |
| 3,015.0 | 16.12 | 309.26 | 2,934.3 | 384.5 | -475.0 | -441.2 | 0.03 | 0.03 | -0.02 |
| 3,110.0 | 16.11 | 310.01 | 3,025.6 | 401.3 | -495.3 | -460.0 | 0.22 | -0.01 | 0.79 |
| 3,204.0 | 15.97 | 309.60 | 3,115.9 | 417.9 | -515.3 | -478.5 | 0.19 | -0.15 | -0.44 |
| 3,299.0 | 15.56 | 309.35 | 3,207.4 | 434.3 | -535.2 | -497.0 | 0.44 | -0.43 | -0.26 |
| 3,394.0 | 15.71 | 309.30 | 3,298.9 | 450.6 | -555.0 | -515.4 | 0.16 | 0.16 | -0.05 |
| 3,583.0 | 15.81 | 309.86 | 3,480.8 | 483.3 | -594.5 | -552.1 | 0.10 | 0.05 | 0.30 |
| 3,678.0 | 15.79 | 309.57 | 3,572.2 | 499.8 | -614.4 | -570.5 | 0.09 | -0.02 | -0.31 |
| 3,773.0 | 15.91 | 310.34 | 3,663.6 | 516.5 | -634.3 | -588.9 | 0.25 | 0.13 | 0.81 |
| 3,867.0 | 15.84 | 310.77 | 3,754.0 | 533.2 | -653.9 | -607.0 | 0.15 | -0.07 | 0.46 |
| 3,962.0 | 16.35 | 310.85 | 3,845.2 | 550.4 | -673.8 | -625.4 | 0.54 | 0.54 | 0.08 |
| 4,049.0 | 14.88 | 308.53 | 3,929.0 | 565.4 | -691.8 | -642.1 | 1.83 | -1.69 | -2.67 |
| Parkman | | | | | | | | | |
| 4,057.0 | 14.75 | 308.29 | 3,936.8 | 566.6 | -693.4 | -643.6 | 1.83 | -1.67 | -2.95 |
| 4,152.0 | 16.04 | 308.40 | 4,028.4 | 582.3 | -713.2 | -662.0 | 1.36 | 1.36 | 0.12 |
| 4,247.0 | 16.41 | 309.53 | 4,119.6 | 599.0 | -733.8 | -681.2 | 0.51 | 0.39 | 1.19 |
| 4,342.0 | 15.85 | 306.46 | 4,210.8 | 615.2 | -754.6 | -700.5 | 1.07 | -0.59 | -3.23 |
| 4,436.0 | 16.43 | 307.05 | 4,301.1 | 630.9 | -775.5 | -720.1 | 0.64 | 0.62 | 0.63 |
| 4,499.4 | 16.16 | 307.59 | 4,362.0 | 641.6 | -789.7 | -733.3 | 0.49 | -0.43 | 0.86 |
| Sussex | | | | | | | | | |

| | | | |
|------------------|---------------------------|-------------------------------------|------------------------------------|
| Company: | PDC Energy Inc. DJ Basin | Local Co-ordinate Reference: | Well Spinney 02N |
| Project: | SEC.9-T3N-R66W | TVD Reference: | WELL @ 4889.5ft (P272 - RKB 28.5') |
| Site: | Spinney 03N66W09 1-8 | MD Reference: | WELL @ 4889.5ft (P272 - RKB 28.5') |
| Well: | Spinney 02N | North Reference: | True |
| Wellbore: | Spinney 02N Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Spinney 02N Final Surveys | 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) | |
| 4,532.0 | 16.02 | 307.88 | 4,393.3 | 647.2 | -796.8 | -739.9 | 0.49 | -0.43 | 0.88 | |
| 4,627.0 | 16.20 | 307.47 | 4,484.6 | 663.3 | -817.7 | -759.4 | 0.22 | 0.19 | -0.43 | |
| 4,722.0 | 16.42 | 308.85 | 4,575.7 | 679.8 | -838.7 | -778.9 | 0.47 | 0.23 | 1.45 | |
| 4,816.0 | 15.96 | 307.64 | 4,666.0 | 696.0 | -859.3 | -798.1 | 0.61 | -0.49 | -1.29 | |
| 4,911.0 | 15.96 | 309.39 | 4,757.4 | 712.3 | -879.7 | -817.1 | 0.51 | 0.00 | 1.84 | |
| 5,005.0 | 16.11 | 309.05 | 4,847.7 | 728.7 | -899.8 | -835.7 | 0.19 | 0.16 | -0.36 | |
| 5,099.0 | 16.39 | 309.26 | 4,937.9 | 745.3 | -920.2 | -854.7 | 0.30 | 0.30 | 0.22 | |
| 5,193.0 | 16.07 | 308.15 | 5,028.2 | 761.7 | -940.7 | -873.7 | 0.47 | -0.34 | -1.18 | |
| 5,193.8 | 16.07 | 308.15 | 5,029.0 | 761.9 | -940.9 | -873.9 | 0.00 | 0.00 | 0.00 | |
| Shannon | | | | | | | | | | |
| 5,288.0 | 16.16 | 309.08 | 5,119.5 | 778.2 | -961.3 | -892.9 | 0.29 | 0.10 | 0.99 | |
| 5,382.0 | 15.98 | 307.88 | 5,209.8 | 794.4 | -981.7 | -911.8 | 0.40 | -0.19 | -1.28 | |
| 5,477.0 | 16.17 | 308.18 | 5,301.1 | 810.6 | -1,002.4 | -931.1 | 0.22 | 0.20 | 0.32 | |
| 5,570.0 | 16.64 | 306.33 | 5,390.3 | 826.5 | -1,023.3 | -950.6 | 0.76 | 0.51 | -1.99 | |
| 5,665.0 | 17.11 | 305.48 | 5,481.2 | 842.6 | -1,045.6 | -971.5 | 0.56 | 0.49 | -0.89 | |
| 5,760.0 | 17.05 | 306.42 | 5,572.0 | 859.0 | -1,068.2 | -992.7 | 0.30 | -0.06 | 0.99 | |
| 5,854.0 | 17.38 | 305.45 | 5,661.8 | 875.3 | -1,090.8 | -1,013.8 | 0.47 | 0.35 | -1.03 | |
| 5,949.0 | 17.18 | 305.10 | 5,752.5 | 891.6 | -1,113.8 | -1,035.4 | 0.24 | -0.21 | -0.37 | |
| 6,043.0 | 17.14 | 305.31 | 5,842.3 | 907.6 | -1,136.4 | -1,056.6 | 0.08 | -0.04 | 0.22 | |
| 6,138.0 | 17.12 | 305.35 | 5,933.1 | 923.8 | -1,159.3 | -1,078.0 | 0.02 | -0.02 | 0.04 | |
| 6,233.0 | 17.14 | 305.44 | 6,023.9 | 940.0 | -1,182.1 | -1,099.4 | 0.03 | 0.02 | 0.09 | |
| 6,328.0 | 17.37 | 305.99 | 6,114.6 | 956.5 | -1,205.0 | -1,120.8 | 0.30 | 0.24 | 0.58 | |
| 6,423.0 | 16.65 | 306.35 | 6,205.5 | 972.9 | -1,227.4 | -1,141.8 | 0.77 | -0.76 | 0.38 | |
| 6,517.0 | 14.76 | 309.31 | 6,296.0 | 988.4 | -1,247.5 | -1,160.5 | 2.18 | -2.01 | 3.15 | |
| 6,612.0 | 11.14 | 331.29 | 6,388.6 | 1,004.2 | -1,261.3 | -1,172.9 | 6.37 | -3.81 | 23.14 | |
| 6,707.0 | 10.95 | 0.08 | 6,481.9 | 1,021.2 | -1,265.7 | -1,175.9 | 5.75 | -0.20 | 30.31 | |
| 6,802.0 | 13.27 | 31.52 | 6,574.9 | 1,039.6 | -1,260.0 | -1,168.7 | 7.25 | 2.44 | 33.09 | |
| 6,896.0 | 18.13 | 51.73 | 6,665.4 | 1,057.9 | -1,242.8 | -1,150.1 | 7.71 | 5.17 | 21.50 | |
| 6,991.0 | 25.23 | 63.96 | 6,753.7 | 1,075.9 | -1,213.0 | -1,118.8 | 8.82 | 7.47 | 12.87 | |
| 7,086.0 | 33.69 | 74.88 | 6,836.4 | 1,091.7 | -1,169.2 | -1,073.9 | 10.52 | 8.91 | 11.49 | |
| 7,180.0 | 43.47 | 79.98 | 6,909.8 | 1,104.2 | -1,112.1 | -1,015.9 | 10.93 | 10.40 | 5.43 | |
| 7,274.0 | 51.76 | 78.96 | 6,973.1 | 1,116.9 | -1,043.9 | -946.9 | 8.86 | 8.82 | -1.09 | |
| 7,369.0 | 57.13 | 81.92 | 7,028.3 | 1,129.7 | -967.7 | -869.9 | 6.19 | 5.65 | 3.12 | |
| 7,389.8 | 58.04 | 82.76 | 7,039.5 | 1,132.0 | -950.3 | -852.3 | 5.52 | 4.35 | 4.02 | |
| Sharon Springs | | | | | | | | | | |
| 7,463.0 | 61.26 | 85.57 | 7,076.5 | 1,138.4 | -887.5 | -789.2 | 5.52 | 4.41 | 3.85 | |
| 7,491.1 | 63.42 | 85.81 | 7,089.5 | 1,140.3 | -862.7 | -764.3 | 7.72 | 7.68 | 0.86 | |
| Niobrara A | | | | | | | | | | |
| 7,558.0 | 68.56 | 86.35 | 7,116.7 | 1,144.5 | -801.7 | -703.2 | 7.72 | 7.68 | 0.81 | |
| 7,654.0 | 79.10 | 90.28 | 7,143.4 | 1,147.1 | -709.7 | -611.3 | 11.66 | 10.98 | 4.09 | |
| 7,676.9 | 80.44 | 90.60 | 7,147.5 | 1,146.9 | -687.2 | -588.9 | 6.01 | 5.85 | 1.38 | |
| Niobrara B | | | | | | | | | | |
| 7,749.0 | 84.66 | 91.58 | 7,156.8 | 1,145.5 | -615.7 | -517.8 | 6.01 | 5.85 | 1.36 | |
| 7,808.0 | 87.33 | 89.95 | 7,161.0 | 1,144.8 | -556.9 | -459.2 | 5.30 | 4.53 | -2.76 | |

| | | | |
|------------------|---------------------------|-------------------------------------|------------------------------------|
| Company: | PDC Energy Inc. DJ Basin | Local Co-ordinate Reference: | Well Spinney 02N |
| Project: | SEC.9-T3N-R66W | TVD Reference: | WELL @ 4889.5ft (P272 - RKB 28.5') |
| Site: | Spinney 03N66W09 1-8 | MD Reference: | WELL @ 4889.5ft (P272 - RKB 28.5') |
| Well: | Spinney 02N | North Reference: | True |
| Wellbore: | Spinney 02N Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Spinney 02N Final Surveys | 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) |
| 02N LP - 2129' FSL & 737' FWL | | | | | | | | | |
| 7,843.0 | 88.92 | 88.99 | 7,162.1 | 1,145.1 | -521.9 | -424.3 | 5.30 | 4.53 | -2.75 |
| 7,938.0 | 88.85 | 88.79 | 7,164.0 | 1,146.9 | -426.9 | -329.5 | 0.22 | -0.07 | -0.21 |
| 8,033.0 | 88.88 | 88.50 | 7,165.8 | 1,149.2 | -332.0 | -234.7 | 0.31 | 0.03 | -0.31 |
| 8,128.0 | 88.73 | 88.96 | 7,167.8 | 1,151.3 | -237.0 | -139.9 | 0.51 | -0.16 | 0.48 |
| 8,222.0 | 88.67 | 90.53 | 7,170.0 | 1,151.7 | -143.0 | -46.3 | 1.67 | -0.06 | 1.67 |
| 8,317.0 | 88.68 | 89.66 | 7,172.2 | 1,151.5 | -48.1 | 48.4 | 0.92 | 0.01 | -0.92 |
| 8,506.0 | 88.83 | 89.56 | 7,176.3 | 1,152.8 | 140.9 | 236.8 | 0.10 | 0.08 | -0.05 |
| 8,601.0 | 88.81 | 89.92 | 7,178.2 | 1,153.3 | 235.9 | 331.4 | 0.38 | -0.02 | 0.38 |
| 8,696.0 | 88.81 | 89.43 | 7,180.2 | 1,153.8 | 330.8 | 426.1 | 0.52 | 0.00 | -0.52 |
| 8,791.0 | 88.81 | 89.19 | 7,182.2 | 1,154.9 | 425.8 | 520.9 | 0.25 | 0.00 | -0.25 |
| 8,885.0 | 88.89 | 89.70 | 7,184.0 | 1,155.8 | 519.8 | 614.6 | 0.55 | 0.09 | 0.54 |
| 8,980.0 | 89.12 | 89.34 | 7,185.7 | 1,156.6 | 614.8 | 709.3 | 0.45 | 0.24 | -0.38 |
| 9,075.0 | 88.98 | 89.63 | 7,187.3 | 1,157.5 | 709.8 | 804.0 | 0.34 | -0.15 | 0.31 |
| 9,170.0 | 88.88 | 89.78 | 7,189.0 | 1,158.0 | 804.7 | 898.7 | 0.19 | -0.11 | 0.16 |
| 9,265.0 | 89.00 | 89.49 | 7,190.8 | 1,158.6 | 899.7 | 993.4 | 0.33 | 0.13 | -0.31 |
| 9,360.0 | 89.01 | 90.21 | 7,192.5 | 1,158.8 | 994.7 | 1,088.1 | 0.76 | 0.01 | 0.76 |
| 9,454.0 | 88.84 | 89.79 | 7,194.2 | 1,158.8 | 1,088.7 | 1,181.8 | 0.48 | -0.18 | -0.45 |
| 9,549.0 | 88.91 | 89.82 | 7,196.1 | 1,159.2 | 1,183.7 | 1,276.4 | 0.08 | 0.07 | 0.03 |
| 9,644.0 | 89.00 | 89.98 | 7,197.8 | 1,159.3 | 1,278.7 | 1,371.1 | 0.19 | 0.09 | 0.17 |
| 9,739.0 | 88.97 | 89.77 | 7,199.5 | 1,159.5 | 1,373.6 | 1,465.8 | 0.22 | -0.03 | -0.22 |
| 9,834.0 | 89.93 | 89.81 | 7,200.4 | 1,159.9 | 1,468.6 | 1,560.5 | 1.01 | 1.01 | 0.04 |
| 9,929.0 | 89.97 | 89.36 | 7,200.5 | 1,160.6 | 1,563.6 | 1,655.2 | 0.48 | 0.04 | -0.47 |
| 10,023.0 | 89.80 | 89.29 | 7,200.7 | 1,161.7 | 1,657.6 | 1,748.9 | 0.20 | -0.18 | -0.07 |
| 10,117.0 | 89.94 | 89.41 | 7,200.9 | 1,162.7 | 1,751.6 | 1,842.7 | 0.20 | 0.15 | 0.13 |
| 10,212.0 | 89.91 | 89.86 | 7,201.0 | 1,163.4 | 1,846.6 | 1,937.4 | 0.47 | -0.03 | 0.47 |
| 10,307.0 | 90.11 | 89.69 | 7,201.0 | 1,163.7 | 1,941.6 | 2,032.1 | 0.28 | 0.21 | -0.18 |
| 10,402.0 | 90.12 | 89.13 | 7,200.8 | 1,164.7 | 2,036.6 | 2,126.8 | 0.59 | 0.01 | -0.59 |
| 10,497.0 | 90.04 | 88.25 | 7,200.7 | 1,166.9 | 2,131.6 | 2,221.7 | 0.93 | -0.08 | -0.93 |
| 10,592.0 | 89.88 | 89.62 | 7,200.7 | 1,168.6 | 2,226.6 | 2,316.5 | 1.45 | -0.17 | 1.44 |
| 10,687.0 | 89.93 | 88.52 | 7,200.9 | 1,170.2 | 2,321.5 | 2,411.2 | 1.16 | 0.05 | -1.16 |
| 10,782.0 | 90.01 | 88.99 | 7,201.0 | 1,172.2 | 2,416.5 | 2,506.1 | 0.50 | 0.08 | 0.49 |
| 10,876.0 | 90.47 | 88.35 | 7,200.6 | 1,174.4 | 2,510.5 | 2,599.9 | 0.84 | 0.49 | -0.68 |
| 10,971.0 | 90.57 | 88.77 | 7,199.7 | 1,176.8 | 2,605.5 | 2,694.7 | 0.45 | 0.11 | 0.44 |
| 11,066.0 | 90.46 | 89.68 | 7,198.8 | 1,178.1 | 2,700.5 | 2,789.5 | 0.96 | -0.12 | 0.96 |
| 11,161.0 | 90.25 | 90.89 | 7,198.3 | 1,177.6 | 2,795.4 | 2,884.1 | 1.29 | -0.22 | 1.27 |
| 11,255.0 | 90.44 | 90.76 | 7,197.7 | 1,176.3 | 2,889.4 | 2,977.7 | 0.24 | 0.20 | -0.14 |
| 11,350.0 | 90.24 | 89.89 | 7,197.1 | 1,175.7 | 2,984.4 | 3,072.3 | 0.94 | -0.21 | -0.92 |
| 11,539.0 | 91.26 | 97.43 | 7,194.6 | 1,163.7 | 3,172.9 | 3,259.1 | 4.03 | 0.54 | 3.99 |
| 11,634.0 | 90.36 | 90.60 | 7,193.3 | 1,157.0 | 3,267.6 | 3,352.9 | 7.25 | -0.95 | -7.19 |
| 11,729.0 | 90.42 | 89.84 | 7,192.7 | 1,156.7 | 3,362.6 | 3,447.5 | 0.80 | 0.06 | -0.80 |
| 11,824.0 | 90.38 | 89.77 | 7,192.0 | 1,157.0 | 3,457.6 | 3,542.2 | 0.08 | -0.04 | -0.07 |
| 11,919.0 | 90.35 | 89.39 | 7,191.4 | 1,157.7 | 3,552.6 | 3,636.9 | 0.40 | -0.03 | -0.40 |
| 12,014.0 | 90.43 | 89.58 | 7,190.7 | 1,158.5 | 3,647.6 | 3,731.7 | 0.22 | 0.08 | 0.20 |

| | | | |
|------------------|---------------------------|-------------------------------------|------------------------------------|
| Company: | PDC Energy Inc. DJ Basin | Local Co-ordinate Reference: | Well Spinney 02N |
| Project: | SEC.9-T3N-R66W | TVD Reference: | WELL @ 4889.5ft (P272 - RKB 28.5') |
| Site: | Spinney 03N66W09 1-8 | MD Reference: | WELL @ 4889.5ft (P272 - RKB 28.5') |
| Well: | Spinney 02N | North Reference: | True |
| Wellbore: | Spinney 02N Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Spinney 02N Final Surveys | 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) | |
| 12,109.0 | 90.54 | 89.81 | 7,189.9 | 1,159.1 | 3,742.6 | 3,826.4 | 0.27 | 0.12 | 0.24 | |
| 12,204.0 | 90.85 | 89.60 | 7,188.8 | 1,159.5 | 3,837.6 | 3,921.1 | 0.39 | 0.33 | -0.22 | |
| 12,299.0 | 92.11 | 89.46 | 7,186.3 | 1,160.3 | 3,932.5 | 4,015.8 | 1.33 | 1.33 | -0.15 | |
| 12,393.0 | 92.40 | 89.82 | 7,182.6 | 1,160.9 | 4,026.4 | 4,109.4 | 0.49 | 0.31 | 0.38 | |
| 12,488.0 | 92.32 | 89.31 | 7,178.7 | 1,161.6 | 4,121.4 | 4,204.0 | 0.54 | -0.08 | -0.54 | |
| 12,583.0 | 92.85 | 89.67 | 7,174.4 | 1,162.5 | 4,216.3 | 4,298.7 | 0.67 | 0.56 | 0.38 | |
| 12,678.0 | 92.69 | 89.99 | 7,169.8 | 1,162.8 | 4,311.2 | 4,393.3 | 0.38 | -0.17 | 0.34 | |
| 12,772.0 | 92.49 | 90.97 | 7,165.6 | 1,162.0 | 4,405.1 | 4,486.8 | 1.06 | -0.21 | 1.04 | |
| 12,867.0 | 92.59 | 90.97 | 7,161.4 | 1,160.4 | 4,499.9 | 4,581.2 | 0.11 | 0.11 | 0.00 | |
| 12,962.0 | 93.62 | 90.75 | 7,156.2 | 1,158.9 | 4,594.8 | 4,675.6 | 1.11 | 1.08 | -0.23 | |
| 13,152.0 | 91.94 | 91.61 | 7,147.0 | 1,155.0 | 4,784.5 | 4,864.3 | 0.99 | -0.88 | 0.45 | |
| 13,246.0 | 92.04 | 91.71 | 7,143.8 | 1,152.3 | 4,878.4 | 4,957.7 | 0.15 | 0.11 | 0.11 | |
| 13,341.0 | 92.02 | 90.36 | 7,140.4 | 1,150.6 | 4,973.3 | 5,052.1 | 1.42 | -0.02 | -1.42 | |
| 13,436.0 | 91.76 | 90.79 | 7,137.3 | 1,149.6 | 5,068.3 | 5,146.7 | 0.53 | -0.27 | 0.45 | |
| 13,531.0 | 92.06 | 90.83 | 7,134.1 | 1,148.3 | 5,163.2 | 5,241.1 | 0.32 | 0.32 | 0.04 | |
| 13,626.0 | 92.04 | 89.23 | 7,130.7 | 1,148.2 | 5,258.2 | 5,335.7 | 1.68 | -0.02 | -1.68 | |
| 13,721.0 | 92.23 | 90.39 | 7,127.2 | 1,148.6 | 5,353.1 | 5,430.4 | 1.24 | 0.20 | 1.22 | |
| 13,816.0 | 92.39 | 90.59 | 7,123.3 | 1,147.8 | 5,448.0 | 5,524.9 | 0.27 | 0.17 | 0.21 | |
| 14,006.0 | 92.41 | 90.39 | 7,115.4 | 1,146.1 | 5,637.8 | 5,713.9 | 0.11 | 0.01 | -0.11 | |
| 14,195.0 | 92.22 | 90.12 | 7,107.7 | 1,145.3 | 5,826.7 | 5,902.0 | 0.17 | -0.10 | -0.14 | |
| 14,290.0 | 92.29 | 90.01 | 7,104.0 | 1,145.2 | 5,921.6 | 5,996.6 | 0.14 | 0.07 | -0.12 | |
| 14,384.0 | 89.25 | 90.42 | 7,102.7 | 1,144.8 | 6,015.6 | 6,090.2 | 3.26 | -3.23 | 0.44 | |
| 14,479.0 | 89.19 | 90.53 | 7,104.0 | 1,144.0 | 6,110.6 | 6,184.8 | 0.13 | -0.06 | 0.12 | |
| 14,574.0 | 89.39 | 90.41 | 7,105.2 | 1,143.3 | 6,205.6 | 6,279.4 | 0.25 | 0.21 | -0.13 | |
| 14,669.0 | 89.17 | 90.25 | 7,106.4 | 1,142.7 | 6,300.6 | 6,374.0 | 0.29 | -0.23 | -0.17 | |
| 14,763.0 | 89.09 | 89.46 | 7,107.8 | 1,143.0 | 6,394.5 | 6,467.7 | 0.84 | -0.09 | -0.84 | |
| 14,858.0 | 89.11 | 89.29 | 7,109.3 | 1,144.0 | 6,489.5 | 6,562.4 | 0.18 | 0.02 | -0.18 | |
| 14,953.0 | 90.00 | 89.21 | 7,110.1 | 1,145.2 | 6,584.5 | 6,657.2 | 0.94 | 0.94 | -0.08 | |
| 15,046.0 | 89.38 | 89.29 | 7,110.6 | 1,146.4 | 6,677.5 | 6,750.0 | 0.67 | -0.67 | 0.09 | |
| 15,141.0 | 88.89 | 90.36 | 7,112.0 | 1,146.7 | 6,772.5 | 6,844.7 | 1.24 | -0.52 | 1.13 | |
| 15,236.0 | 88.91 | 90.65 | 7,113.8 | 1,145.9 | 6,867.5 | 6,939.2 | 0.31 | 0.02 | 0.31 | |
| 15,330.0 | 88.36 | 90.42 | 7,116.1 | 1,145.0 | 6,961.4 | 7,032.8 | 0.63 | -0.59 | -0.24 | |
| 15,425.0 | 88.04 | 89.44 | 7,119.0 | 1,145.1 | 7,056.4 | 7,127.4 | 1.08 | -0.34 | -1.03 | |
| 15,520.0 | 87.77 | 89.63 | 7,122.5 | 1,145.9 | 7,151.3 | 7,222.1 | 0.35 | -0.28 | 0.20 | |
| 15,615.0 | 87.87 | 89.72 | 7,126.1 | 1,146.4 | 7,246.3 | 7,316.7 | 0.14 | 0.11 | 0.09 | |
| 15,710.0 | 88.05 | 89.49 | 7,129.5 | 1,147.1 | 7,341.2 | 7,411.4 | 0.31 | 0.19 | -0.24 | |
| 15,804.0 | 88.07 | 89.53 | 7,132.7 | 1,147.9 | 7,435.1 | 7,505.1 | 0.05 | 0.02 | 0.04 | |
| 15,899.0 | 87.86 | 89.94 | 7,136.1 | 1,148.3 | 7,530.1 | 7,599.7 | 0.48 | -0.22 | 0.43 | |
| 15,994.0 | 88.13 | 89.45 | 7,139.4 | 1,148.9 | 7,625.0 | 7,694.4 | 0.59 | 0.28 | -0.52 | |
| 16,089.0 | 88.18 | 89.65 | 7,142.4 | 1,149.6 | 7,720.0 | 7,789.0 | 0.22 | 0.05 | 0.21 | |
| 16,184.0 | 87.87 | 89.75 | 7,145.7 | 1,150.1 | 7,814.9 | 7,883.7 | 0.34 | -0.33 | 0.11 | |
| 16,279.0 | 88.11 | 90.48 | 7,149.1 | 1,149.9 | 7,909.8 | 7,978.3 | 0.81 | 0.25 | 0.77 | |
| 16,374.0 | 88.12 | 90.32 | 7,152.2 | 1,149.2 | 8,004.8 | 8,072.8 | 0.17 | 0.01 | -0.17 | |

| | | | |
|------------------|---------------------------|-------------------------------------|------------------------------------|
| Company: | PDC Energy Inc. DJ Basin | Local Co-ordinate Reference: | Well Spinney 02N |
| Project: | SEC.9-T3N-R66W | TVD Reference: | WELL @ 4889.5ft (P272 - RKB 28.5') |
| Site: | Spinney 03N66W09 1-8 | MD Reference: | WELL @ 4889.5ft (P272 - RKB 28.5') |
| Well: | Spinney 02N | North Reference: | True |
| Wellbore: | Spinney 02N Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Spinney 02N Final Surveys | 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) | |
| 16,469.0 | 88.15 | 90.18 | 7,155.3 | 1,148.8 | 8,099.7 | 8,167.4 | 0.15 | 0.03 | -0.15 | |
| 16,563.0 | 88.10 | 90.41 | 7,158.3 | 1,148.3 | 8,193.7 | 8,261.0 | 0.25 | -0.05 | 0.24 | |
| 16,658.0 | 87.84 | 90.58 | 7,161.7 | 1,147.5 | 8,288.6 | 8,355.5 | 0.33 | -0.27 | 0.18 | |
| 16,753.0 | 87.83 | 90.12 | 7,165.3 | 1,146.9 | 8,383.6 | 8,450.1 | 0.48 | -0.01 | -0.48 | |
| 16,848.0 | 87.71 | 90.22 | 7,169.0 | 1,146.7 | 8,478.5 | 8,544.7 | 0.16 | -0.13 | 0.11 | |
| 16,943.0 | 87.89 | 89.88 | 7,172.6 | 1,146.6 | 8,573.4 | 8,639.3 | 0.40 | 0.19 | -0.36 | |
| 17,038.0 | 88.00 | 90.00 | 7,176.1 | 1,146.7 | 8,668.4 | 8,733.9 | 0.17 | 0.12 | 0.13 | |
| 17,132.0 | 88.18 | 89.96 | 7,179.2 | 1,146.7 | 8,762.3 | 8,827.5 | 0.20 | 0.19 | -0.04 | |
| 17,227.0 | 88.08 | 90.44 | 7,182.3 | 1,146.4 | 8,857.3 | 8,922.1 | 0.52 | -0.11 | 0.51 | |
| 17,322.0 | 89.18 | 89.78 | 7,184.6 | 1,146.2 | 8,952.2 | 9,016.7 | 1.35 | 1.16 | -0.69 | |
| 17,416.0 | 89.29 | 89.82 | 7,185.8 | 1,146.5 | 9,046.2 | 9,110.4 | 0.12 | 0.12 | 0.04 | |
| 17,511.0 | 89.99 | 90.50 | 7,186.4 | 1,146.3 | 9,141.2 | 9,205.0 | 1.03 | 0.74 | 0.72 | |
| 17,606.0 | 91.98 | 89.66 | 7,184.8 | 1,146.1 | 9,236.2 | 9,299.7 | 2.27 | 2.09 | -0.88 | |
| 17,701.0 | 92.55 | 89.98 | 7,181.0 | 1,146.4 | 9,331.1 | 9,394.3 | 0.69 | 0.60 | 0.34 | |
| 17,795.0 | 92.67 | 90.02 | 7,176.7 | 1,146.4 | 9,425.0 | 9,487.9 | 0.13 | 0.13 | 0.04 | |
| 17,890.0 | 92.30 | 90.18 | 7,172.6 | 1,146.3 | 9,519.9 | 9,582.4 | 0.42 | -0.39 | 0.17 | |
| 17,985.0 | 92.09 | 89.93 | 7,169.0 | 1,146.2 | 9,614.9 | 9,677.0 | 0.34 | -0.22 | -0.26 | |
| 18,080.0 | 92.37 | 89.57 | 7,165.3 | 1,146.6 | 9,709.8 | 9,771.6 | 0.48 | 0.29 | -0.38 | |
| 18,175.0 | 92.49 | 89.41 | 7,161.3 | 1,147.4 | 9,804.7 | 9,866.3 | 0.21 | 0.13 | -0.17 | |
| 18,270.0 | 92.69 | 89.47 | 7,157.0 | 1,148.4 | 9,899.6 | 9,960.9 | 0.22 | 0.21 | 0.06 | |
| 18,365.0 | 92.56 | 89.77 | 7,152.6 | 1,149.0 | 9,994.5 | 10,055.6 | 0.34 | -0.14 | 0.32 | |
| 18,460.0 | 92.26 | 90.31 | 7,148.6 | 1,148.9 | 10,089.4 | 10,150.1 | 0.65 | -0.32 | 0.57 | |
| 18,555.0 | 92.26 | 89.99 | 7,144.9 | 1,148.7 | 10,184.3 | 10,244.7 | 0.34 | 0.00 | -0.34 | |
| 18,650.0 | 92.50 | 89.53 | 7,140.9 | 1,149.1 | 10,279.2 | 10,339.3 | 0.55 | 0.25 | -0.48 | |
| 18,744.0 | 92.54 | 89.44 | 7,136.8 | 1,149.9 | 10,373.2 | 10,433.0 | 0.10 | 0.04 | -0.10 | |
| 18,839.0 | 92.43 | 89.65 | 7,132.7 | 1,150.7 | 10,468.1 | 10,527.6 | 0.25 | -0.12 | 0.22 | |
| 18,933.0 | 92.40 | 89.95 | 7,128.7 | 1,151.0 | 10,562.0 | 10,621.2 | 0.32 | -0.03 | 0.32 | |
| 19,028.0 | 92.47 | 89.48 | 7,124.7 | 1,151.5 | 10,656.9 | 10,715.8 | 0.50 | 0.07 | -0.49 | |
| 19,123.0 | 92.68 | 89.29 | 7,120.4 | 1,152.5 | 10,751.8 | 10,810.5 | 0.30 | 0.22 | -0.20 | |
| 19,218.0 | 92.67 | 89.47 | 7,116.0 | 1,153.5 | 10,846.7 | 10,905.1 | 0.19 | -0.01 | 0.19 | |
| 19,313.0 | 92.80 | 89.28 | 7,111.4 | 1,154.5 | 10,941.6 | 10,999.8 | 0.24 | 0.14 | -0.20 | |
| 19,407.0 | 90.41 | 89.64 | 7,108.8 | 1,155.4 | 11,035.5 | 11,093.5 | 2.57 | -2.54 | 0.38 | |
| 19,502.0 | 90.65 | 89.63 | 7,107.9 | 1,156.0 | 11,130.5 | 11,188.2 | 0.25 | 0.25 | -0.01 | |
| 19,597.0 | 90.28 | 90.18 | 7,107.2 | 1,156.2 | 11,225.5 | 11,282.9 | 0.70 | -0.39 | 0.58 | |
| 19,692.0 | 90.56 | 89.67 | 7,106.5 | 1,156.3 | 11,320.5 | 11,377.5 | 0.61 | 0.29 | -0.54 | |
| 19,787.0 | 90.37 | 90.63 | 7,105.7 | 1,156.1 | 11,415.5 | 11,472.2 | 1.03 | -0.20 | 1.01 | |
| 19,881.0 | 90.66 | 90.88 | 7,104.8 | 1,154.8 | 11,509.5 | 11,565.7 | 0.41 | 0.31 | 0.27 | |
| 19,976.0 | 91.43 | 90.86 | 7,103.1 | 1,153.4 | 11,604.5 | 11,660.3 | 0.81 | 0.81 | -0.02 | |
| 20,071.0 | 92.18 | 90.92 | 7,100.1 | 1,151.9 | 11,699.4 | 11,754.7 | 0.79 | 0.79 | 0.06 | |
| 20,165.0 | 91.84 | 91.46 | 7,096.8 | 1,150.0 | 11,793.3 | 11,848.2 | 0.68 | -0.36 | 0.57 | |
| 20,355.0 | 91.19 | 91.34 | 7,091.8 | 1,145.3 | 11,983.2 | 12,037.0 | 0.35 | -0.34 | -0.06 | |
| 20,450.0 | 89.86 | 91.47 | 7,090.9 | 1,143.0 | 12,078.2 | 12,131.4 | 1.41 | -1.40 | 0.14 | |
| 20,545.0 | 89.37 | 91.25 | 7,091.6 | 1,140.7 | 12,173.1 | 12,225.9 | 0.57 | -0.52 | -0.23 | |

| | | | |
|------------------|---------------------------|-------------------------------------|------------------------------------|
| Company: | PDC Energy Inc. DJ Basin | Local Co-ordinate Reference: | Well Spinney 02N |
| Project: | SEC.9-T3N-R66W | TVD Reference: | WELL @ 4889.5ft (P272 - RKB 28.5') |
| Site: | Spinney 03N66W09 1-8 | MD Reference: | WELL @ 4889.5ft (P272 - RKB 28.5') |
| Well: | Spinney 02N | North Reference: | True |
| Wellbore: | Spinney 02N Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Spinney 02N Final Surveys | 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) | |
| 20,639.0 | 89.15 | 90.16 | 7,092.8 | 1,139.6 | 12,267.1 | 12,319.4 | 1.18 | -0.23 | -1.16 | |
| 20,734.0 | 89.23 | 89.53 | 7,094.1 | 1,139.8 | 12,362.1 | 12,414.1 | 0.67 | 0.08 | -0.66 | |
| 20,828.0 | 89.15 | 89.58 | 7,095.5 | 1,140.6 | 12,456.1 | 12,507.8 | 0.10 | -0.09 | 0.05 | |
| 20,923.0 | 89.33 | 89.52 | 7,096.7 | 1,141.3 | 12,551.1 | 12,602.6 | 0.20 | 0.19 | -0.06 | |
| 21,018.0 | 89.34 | 89.29 | 7,097.8 | 1,142.3 | 12,646.1 | 12,697.3 | 0.24 | 0.01 | -0.24 | |
| 21,113.0 | 89.85 | 89.13 | 7,098.5 | 1,143.6 | 12,741.1 | 12,792.1 | 0.56 | 0.54 | -0.17 | |
| 21,208.0 | 89.76 | 88.27 | 7,098.8 | 1,145.8 | 12,836.0 | 12,886.9 | 0.91 | -0.09 | -0.91 | |
| 21,304.0 | 90.28 | 87.29 | 7,098.8 | 1,149.5 | 12,932.0 | 12,982.8 | 1.16 | 0.54 | -1.02 | |
| 21,398.0 | 90.20 | 87.08 | 7,098.4 | 1,154.1 | 13,025.8 | 13,076.7 | 0.24 | -0.09 | -0.22 | |
| 21,493.0 | 90.40 | 87.41 | 7,097.9 | 1,158.7 | 13,120.7 | 13,171.7 | 0.41 | 0.21 | 0.35 | |
| 21,589.0 | 90.58 | 87.91 | 7,097.1 | 1,162.6 | 13,216.7 | 13,267.6 | 0.55 | 0.19 | 0.52 | |
| 21,684.0 | 90.45 | 87.77 | 7,096.2 | 1,166.2 | 13,311.6 | 13,362.5 | 0.20 | -0.14 | -0.15 | |
| 21,778.0 | 90.44 | 87.88 | 7,095.5 | 1,169.7 | 13,405.5 | 13,456.4 | 0.12 | -0.01 | 0.12 | |
| 21,873.0 | 90.21 | 87.80 | 7,094.9 | 1,173.3 | 13,500.4 | 13,551.3 | 0.26 | -0.24 | -0.08 | |
| 21,968.0 | 90.46 | 87.71 | 7,094.4 | 1,177.0 | 13,595.4 | 13,646.2 | 0.28 | 0.26 | -0.09 | |
| 22,063.0 | 90.29 | 87.64 | 7,093.8 | 1,180.9 | 13,690.3 | 13,741.1 | 0.19 | -0.18 | -0.07 | |
| 22,157.0 | 90.15 | 87.60 | 7,093.4 | 1,184.8 | 13,784.2 | 13,835.0 | 0.15 | -0.15 | -0.04 | |
| 22,251.0 | 90.42 | 87.90 | 7,092.9 | 1,188.5 | 13,878.1 | 13,928.9 | 0.43 | 0.29 | 0.32 | |
| 22,346.0 | 90.59 | 87.71 | 7,092.1 | 1,192.1 | 13,973.1 | 14,023.8 | 0.27 | 0.18 | -0.20 | |
| 22,441.0 | 91.36 | 87.97 | 7,090.5 | 1,195.7 | 14,068.0 | 14,118.7 | 0.86 | 0.81 | 0.27 | |
| 22,536.0 | 90.34 | 87.74 | 7,089.1 | 1,199.3 | 14,162.9 | 14,213.6 | 1.10 | -1.07 | -0.24 | |
| 22,630.0 | 90.36 | 87.51 | 7,088.5 | 1,203.2 | 14,256.8 | 14,307.5 | 0.25 | 0.02 | -0.24 | |
| 22,726.0 | 90.39 | 86.85 | 7,087.9 | 1,207.9 | 14,352.7 | 14,403.4 | 0.69 | 0.03 | -0.69 | |
| 22,828.0 | 91.00 | 86.82 | 7,086.6 | 1,213.5 | 14,454.5 | 14,505.4 | 0.60 | 0.60 | -0.03 | |
| 22,861.0 | 91.00 | 86.82 | 7,086.1 | 1,215.3 | 14,487.5 | 14,538.4 | 0.00 | 0.00 | 0.00 | |
| 02N BHL - 2097' FSL & 156' FEL | | | | | | | | | | |

| Formations | | | | | | |
|---------------------|---------------------|-------------------|-----------|---------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) | |
| 1,088.9 | 1,083.0 | Fox Hills Aq Base | | | | |
| 4,049.0 | 3,929.0 | Parkman | | | | |
| 4,499.4 | 4,362.0 | Sussex | | | | |
| 5,193.8 | 5,029.0 | Shannon | | | | |
| 7,389.8 | 7,039.5 | Sharon Springs | | | | |
| 7,491.1 | 7,089.5 | Niobrara A | | | | |
| 7,676.9 | 7,147.5 | Niobrara B | | | | |

| | | | |
|------------------|---------------------------|-------------------------------------|------------------------------------|
| Company: | PDC Energy Inc. DJ Basin | Local Co-ordinate Reference: | Well Spinney 02N |
| Project: | SEC.9-T3N-R66W | TVD Reference: | WELL @ 4889.5ft (P272 - RKB 28.5') |
| Site: | Spinney 03N66W09 1-8 | MD Reference: | WELL @ 4889.5ft (P272 - RKB 28.5') |
| Well: | Spinney 02N | North Reference: | True |
| Wellbore: | Spinney 02N Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Spinney 02N Final Surveys | Database: | US_EDM |

| Design Annotations | | | | |
|---------------------|---------------------|-------------------|------------|--------------------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
| | | +N/-S (ft) | +E/-W (ft) | |
| 7,808.0 | 7,161.0 | 1,144.8 | -556.9 | 02N LP - 2129' FSL & 737' FWL |
| 22,861.0 | 7,086.1 | 1,215.3 | 14,487.5 | 02N BHL - 2097' FSL & 156' FEL |

Checked By: _____ Approved By: _____ Date: _____