

PDC Energy Inc. DJ Basin

Well Name: **J Clark 8N (Nio B)**

Surface Location: Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W

North American Datum 1983 , US State Plane 1983, Colorado Northern Zone

Ground Elevation: 4615.0

+N/-S +E/-W Northing Easting Longitude Slot

0.0 0.0 1391636.253242695.93 40.405170 -104.628512

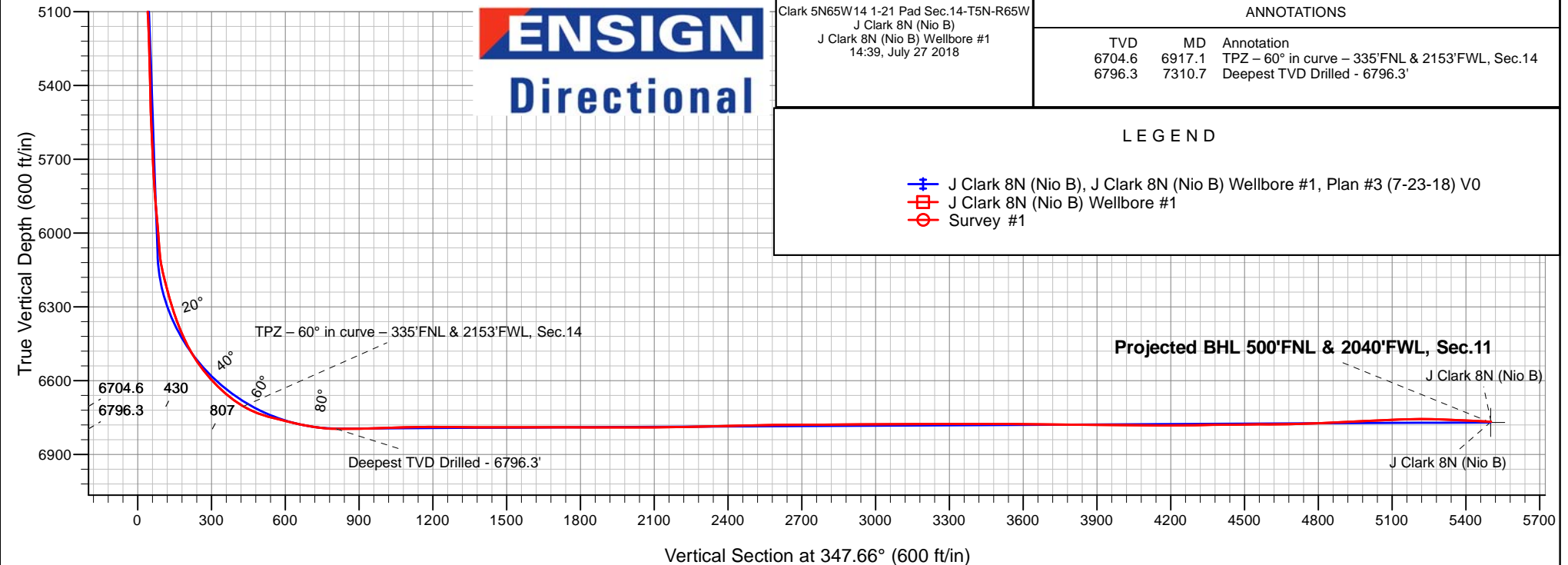
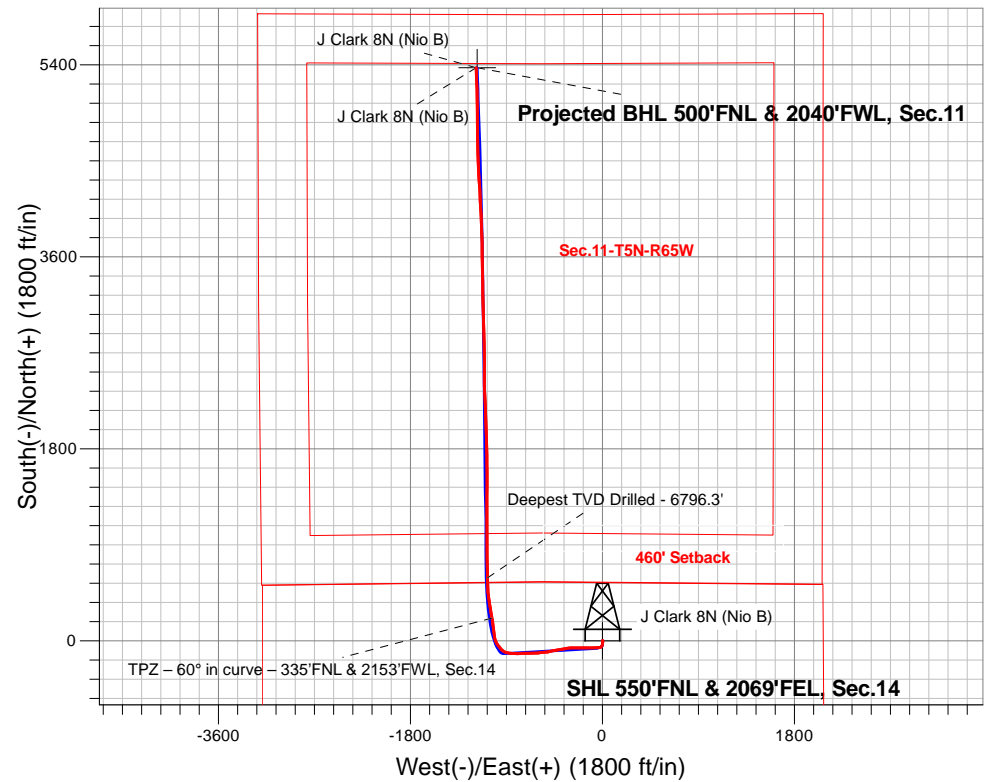
Original Well Elev WELL @ 4638.0ft (Original Well Elev)

FINAL SURVEY

Projected Bottom Hole Location

12,097'MD 6769'TVD 5373'N & 1185'W of SHL

87.2 degree Incl @ 357.6 degree AZM



Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W
J Clark 8N (Nio B)
J Clark 8N (Nio B) Wellbore #1
14:39, July 27 2018

ANNOTATIONS

| TVD | MD | Annotation |
|--------|--------|---|
| 6704.6 | 6917.1 | TPZ - 60° in curve - 335'FNL & 2153'FWL, Sec.14 |
| 6796.3 | 7310.7 | Deepest TVD Drilled - 6796.3' |

LEGEND

- J Clark 8N (Nio B), J Clark 8N (Nio B) Wellbore #1, Plan #3 (7-23-18) V0
- J Clark 8N (Nio B) Wellbore #1
- Survey #1



PDC Energy Inc. DJ Basin

SEC.14-T5N-R65W

Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W

J Clark 8N (Nio B)

J Clark 8N (Nio B) Wellbore #1

Survey: Survey #1

Standard Survey Report

27 July, 2018

| | | | |
|------------------|--|-------------------------------------|--------------------------------------|
| Company: | PDC Energy Inc. DJ Basin | Local Co-ordinate Reference: | Well J Clark 8N (Nio B) |
| Project: | SEC.14-T5N-R65W | TVD Reference: | WELL @ 4638.0ft (Original Well Elev) |
| Site: | Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W | MD Reference: | WELL @ 4638.0ft (Original Well Elev) |
| Well: | J Clark 8N (Nio B) | North Reference: | True |
| Wellbore: | J Clark 8N (Nio B) Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | J Clark 8N (Nio B) Wellbore #1 | Database: | US_EDM |

| | | | |
|--------------------|--|----------------------|-----------------------------|
| Project | SEC.14-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 | | Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W | | | | | | |
| Site Position: | | Northing: | 1,391,636.42 | usft | Latitude: | 40.405168 | | |
| From: | Lat/Long | Easting: | 3,242,770.94 | usft | Longitude: | -104.628243 | | |
| Position Uncertainty: | 0.0 | ft | Slot Radius: | 13-3/16 | " | Grid Convergence: | 0.56 | ° |

| Well | J Clark 8N (Nio B) | | | | | |
|----------------------|--------------------|--------|---------------------|-------------------|---------------|-------------|
| Well Position | +N/-S | 0.0 ft | Northing: | 1,391,636.25 usft | Latitude: | 40.405170 |
| | +E/-W | 0.0 ft | Easting: | 3,242,695.94 usft | Longitude: | -104.628513 |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | 0.0 ft | Ground Level: | 4,615.0 ft |

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|------------------|--------------------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | J Clark 8N (Nio B) Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | HDGM | 6/13/2018 | 8.12 | 66.88 | 52,240 |

| | | | | | |
|--------------------------|--------------------------------|-------------------|-------------------|----------------------|-----|
| Design | J Clark 8N (Nio B) 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 | 347.66 | |

| | | | | | |
|-----------------------|----------------|---|------------------|--------------------|--|
| Survey Program | Date | 7/27/2018 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description | |
| 152.0 | 12,097.0 | Survey #1 (J Clark 8N (Nio B) 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 | |
| 152.0 | 0.10 | 241.90 | 152.0 | -0.1 | -0.1 | 0.0 | 0.07 | 0.07 | 0.00 | |
| 248.0 | 0.30 | 264.40 | 248.0 | -0.1 | -0.4 | 0.0 | 0.22 | 0.21 | 23.44 | |
| 343.0 | 0.30 | 296.40 | 343.0 | 0.0 | -0.9 | 0.2 | 0.17 | 0.00 | 33.68 | |
| 438.0 | 0.40 | 288.80 | 438.0 | 0.2 | -1.4 | 0.5 | 0.12 | 0.11 | -8.00 | |
| 534.0 | 0.40 | 14.30 | 534.0 | 0.6 | -1.7 | 1.0 | 0.57 | 0.00 | 89.06 | |
| 629.0 | 0.70 | 44.00 | 629.0 | 1.3 | -1.2 | 1.6 | 0.43 | 0.32 | 31.26 | |
| 724.0 | 0.60 | 76.50 | 724.0 | 1.9 | -0.3 | 1.9 | 0.40 | -0.11 | 34.21 | |
| 820.0 | 1.10 | 147.30 | 820.0 | 1.2 | 0.7 | 1.1 | 1.11 | 0.52 | 73.75 | |
| 915.0 | 2.50 | 185.10 | 914.9 | -1.6 | 1.0 | -1.8 | 1.86 | 1.47 | 39.79 | |

| | | | |
|------------------|--|-------------------------------------|--------------------------------------|
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| Project: | SEC.14-T5N-R65W | TVD Reference: | WELL @ 4638.0ft (Original Well Elev) |
| Site: | Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W | MD Reference: | WELL @ 4638.0ft (Original Well Elev) |
| Well: | J Clark 8N (Nio B) | North Reference: | True |
| Wellbore: | J Clark 8N (Nio B) Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | J Clark 8N (Nio B) 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) |
| 1,010.0 | 4.60 | 179.80 | 1,009.7 | -7.5 | 0.8 | -7.5 | 2.24 | 2.21 | -5.58 |
| 1,106.0 | 4.60 | 185.60 | 1,105.4 | -15.2 | 0.5 | -14.9 | 0.48 | 0.00 | 6.04 |
| 1,201.0 | 4.90 | 187.60 | 1,200.1 | -23.0 | -0.5 | -22.3 | 0.36 | 0.32 | 2.11 |
| 1,296.0 | 5.10 | 179.30 | 1,294.7 | -31.2 | -0.9 | -30.3 | 0.79 | 0.21 | -8.74 |
| 1,391.0 | 4.90 | 201.80 | 1,389.4 | -39.2 | -2.4 | -37.8 | 2.06 | -0.21 | 23.68 |
| 1,486.0 | 4.10 | 209.20 | 1,484.1 | -45.9 | -5.6 | -43.7 | 1.04 | -0.84 | 7.79 |
| 1,582.0 | 4.60 | 216.00 | 1,579.8 | -52.1 | -9.5 | -48.8 | 0.75 | 0.52 | 7.08 |
| 1,625.0 | 4.60 | 222.40 | 1,622.7 | -54.7 | -11.7 | -51.0 | 1.19 | 0.00 | 14.88 |
| 1,677.0 | 4.80 | 229.40 | 1,674.5 | -57.7 | -14.7 | -53.2 | 1.17 | 0.38 | 13.46 |
| 1,773.0 | 6.40 | 254.60 | 1,770.1 | -61.7 | -22.9 | -55.4 | 3.02 | 1.67 | 26.25 |
| 1,868.0 | 8.20 | 265.60 | 1,864.3 | -63.6 | -34.8 | -54.7 | 2.39 | 1.89 | 11.58 |
| 1,964.0 | 9.40 | 266.30 | 1,959.2 | -64.7 | -49.5 | -52.6 | 1.25 | 1.25 | 0.73 |
| 2,058.0 | 12.00 | 268.80 | 2,051.5 | -65.4 | -66.9 | -49.6 | 2.81 | 2.77 | 2.66 |
| 2,153.0 | 12.40 | 269.90 | 2,144.4 | -65.6 | -87.0 | -45.5 | 0.49 | 0.42 | 1.16 |
| 2,249.0 | 11.90 | 267.70 | 2,238.2 | -66.0 | -107.2 | -41.6 | 0.71 | -0.52 | -2.29 |
| 2,345.0 | 11.00 | 267.90 | 2,332.3 | -66.7 | -126.2 | -38.2 | 0.94 | -0.94 | 0.21 |
| 2,440.0 | 12.50 | 270.20 | 2,425.3 | -67.0 | -145.5 | -34.4 | 1.65 | 1.58 | 2.42 |
| 2,536.0 | 13.50 | 271.40 | 2,518.9 | -66.7 | -167.1 | -29.5 | 1.08 | 1.04 | 1.25 |
| 2,632.0 | 13.40 | 270.70 | 2,612.2 | -66.3 | -189.5 | -24.3 | 0.20 | -0.10 | -0.73 |
| 2,727.0 | 13.50 | 270.90 | 2,704.6 | -66.0 | -211.6 | -19.3 | 0.12 | 0.11 | 0.21 |
| 2,823.0 | 13.10 | 270.90 | 2,798.0 | -65.7 | -233.6 | -14.2 | 0.42 | -0.42 | 0.00 |
| 2,918.0 | 12.50 | 270.00 | 2,890.7 | -65.5 | -254.7 | -9.6 | 0.67 | -0.63 | -0.95 |
| 3,014.0 | 12.00 | 269.70 | 2,984.5 | -65.5 | -275.0 | -5.3 | 0.53 | -0.52 | -0.31 |
| 3,110.0 | 11.10 | 268.50 | 3,078.6 | -65.8 | -294.3 | -1.4 | 0.97 | -0.94 | -1.25 |
| 3,205.0 | 13.80 | 263.00 | 3,171.3 | -67.5 | -314.7 | 1.3 | 3.10 | 2.84 | -5.79 |
| 3,301.0 | 12.40 | 260.00 | 3,264.8 | -70.6 | -336.2 | 2.8 | 1.62 | -1.46 | -3.13 |
| 3,396.0 | 11.20 | 257.20 | 3,357.8 | -74.5 | -355.2 | 3.2 | 1.40 | -1.26 | -2.95 |
| 3,491.0 | 13.10 | 262.80 | 3,450.7 | -77.9 | -374.9 | 4.1 | 2.35 | 2.00 | 5.89 |
| 3,587.0 | 12.70 | 261.80 | 3,544.3 | -80.7 | -396.1 | 5.8 | 0.48 | -0.42 | -1.04 |
| 3,683.0 | 12.80 | 261.40 | 3,637.9 | -83.8 | -417.1 | 7.2 | 0.14 | 0.10 | -0.42 |
| 3,778.0 | 12.90 | 259.80 | 3,730.5 | -87.3 | -437.9 | 8.3 | 0.39 | 0.11 | -1.68 |
| 3,874.0 | 12.70 | 258.40 | 3,824.1 | -91.3 | -458.8 | 8.9 | 0.38 | -0.21 | -1.46 |
| 3,969.0 | 12.50 | 256.70 | 3,916.8 | -95.8 | -479.1 | 8.8 | 0.44 | -0.21 | -1.79 |
| 4,064.0 | 11.90 | 254.90 | 4,009.7 | -100.7 | -498.5 | 8.2 | 0.75 | -0.63 | -1.89 |
| 4,160.0 | 13.00 | 264.10 | 4,103.4 | -104.4 | -518.8 | 8.9 | 2.36 | 1.15 | 9.58 |
| 4,255.0 | 13.10 | 266.90 | 4,196.0 | -106.0 | -540.2 | 11.8 | 0.67 | 0.11 | 2.95 |
| 4,351.0 | 12.30 | 264.40 | 4,289.6 | -107.6 | -561.2 | 14.8 | 1.01 | -0.83 | -2.60 |
| 4,446.0 | 11.80 | 262.70 | 4,382.5 | -109.8 | -580.9 | 16.8 | 0.65 | -0.53 | -1.79 |
| 4,542.0 | 11.00 | 260.00 | 4,476.7 | -112.7 | -599.7 | 18.1 | 1.00 | -0.83 | -2.81 |
| 4,638.0 | 11.70 | 268.30 | 4,570.8 | -114.6 | -618.4 | 20.2 | 1.85 | 0.73 | 8.65 |
| 4,733.0 | 12.40 | 270.90 | 4,663.7 | -114.7 | -638.3 | 24.4 | 0.93 | 0.74 | 2.74 |
| 4,829.0 | 11.60 | 269.70 | 4,757.6 | -114.6 | -658.2 | 28.7 | 0.87 | -0.83 | -1.25 |
| 4,925.0 | 10.80 | 267.70 | 4,851.8 | -115.0 | -676.9 | 32.3 | 0.93 | -0.83 | -2.08 |
| 5,021.0 | 11.00 | 263.20 | 4,946.0 | -116.4 | -695.0 | 34.8 | 0.91 | 0.21 | -4.69 |

| | | | |
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| Well: | J Clark 8N (Nio B) | North Reference: | True |
| Wellbore: | J Clark 8N (Nio B) Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | J Clark 8N (Nio B) 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) |
| 5,116.0 | 12.50 | 271.30 | 5,039.0 | -117.3 | -714.2 | 38.1 | 2.34 | 1.58 | 8.53 |
| 5,212.0 | 11.70 | 270.00 | 5,132.9 | -117.0 | -734.4 | 42.6 | 0.88 | -0.83 | -1.35 |
| 5,307.0 | 10.80 | 267.60 | 5,226.1 | -117.4 | -752.9 | 46.2 | 1.07 | -0.95 | -2.53 |
| 5,403.0 | 10.20 | 265.50 | 5,320.5 | -118.5 | -770.3 | 48.9 | 0.74 | -0.63 | -2.19 |
| 5,498.0 | 9.70 | 263.90 | 5,414.0 | -120.0 | -786.7 | 50.9 | 0.60 | -0.53 | -1.68 |
| 5,594.0 | 9.70 | 268.30 | 5,508.7 | -121.1 | -802.8 | 53.3 | 0.77 | 0.00 | 4.58 |
| 5,690.0 | 9.80 | 273.20 | 5,603.3 | -120.9 | -819.1 | 57.0 | 0.87 | 0.10 | 5.10 |
| 5,785.0 | 10.80 | 274.60 | 5,696.8 | -119.7 | -836.0 | 61.7 | 1.09 | 1.05 | 1.47 |
| 5,881.0 | 10.30 | 275.00 | 5,791.1 | -118.2 | -853.5 | 66.9 | 0.53 | -0.52 | 0.42 |
| 5,976.0 | 12.10 | 281.30 | 5,884.3 | -115.5 | -871.7 | 73.4 | 2.29 | 1.89 | 6.63 |
| 6,072.0 | 11.90 | 281.30 | 5,978.2 | -111.6 | -891.3 | 81.4 | 0.21 | -0.21 | 0.00 |
| 6,167.0 | 10.80 | 280.60 | 6,071.4 | -108.1 | -909.7 | 88.8 | 1.17 | -1.16 | -0.74 |
| 6,262.0 | 16.90 | 309.60 | 6,163.7 | -97.6 | -929.1 | 103.2 | 9.54 | 6.42 | 30.53 |
| 6,358.0 | 18.00 | 315.40 | 6,255.3 | -78.1 | -950.3 | 126.7 | 2.14 | 1.15 | 6.04 |
| 6,454.0 | 21.50 | 322.20 | 6,345.6 | -53.7 | -971.5 | 155.2 | 4.36 | 3.65 | 7.08 |
| 6,549.0 | 25.90 | 330.00 | 6,432.6 | -21.9 | -992.5 | 190.7 | 5.68 | 4.63 | 8.21 |
| 6,644.0 | 33.40 | 344.70 | 6,515.2 | 21.4 | -1,009.9 | 236.7 | 10.95 | 7.89 | 15.47 |
| 6,740.0 | 42.20 | 355.30 | 6,591.1 | 79.2 | -1,019.5 | 295.2 | 11.37 | 9.17 | 11.04 |
| 6,836.0 | 49.50 | 352.80 | 6,657.9 | 147.6 | -1,026.7 | 363.6 | 7.83 | 7.60 | -2.60 |
| 6,917.1 | 60.00 | 349.93 | 6,704.6 | 213.0 | -1,036.8 | 429.6 | 13.26 | 12.94 | -3.54 |
| TPZ - 60° in curve - 335'FNL & 2153'FWL, Sec.14 | | | | | | | | | |
| 6,931.0 | 61.80 | 349.50 | 6,711.4 | 224.9 | -1,038.9 | 441.7 | 13.26 | 12.98 | -3.07 |
| 7,027.0 | 75.30 | 351.60 | 6,746.4 | 312.9 | -1,053.5 | 530.8 | 14.21 | 14.06 | 2.19 |
| 7,123.0 | 76.50 | 351.40 | 6,769.8 | 405.0 | -1,067.2 | 623.7 | 1.27 | 1.25 | -0.21 |
| 7,218.0 | 81.00 | 357.20 | 6,788.4 | 497.6 | -1,076.5 | 716.1 | 7.63 | 4.74 | 6.11 |
| 7,310.7 | 89.11 | 358.94 | 6,796.3 | 589.8 | -1,079.6 | 806.9 | 8.95 | 8.75 | 1.88 |
| Deepest TVD Drilled - 6796.3' | | | | | | | | | |
| 7,314.0 | 89.40 | 359.00 | 6,796.4 | 593.1 | -1,079.6 | 810.1 | 8.95 | 8.75 | 1.86 |
| 7,409.0 | 91.50 | 359.70 | 6,795.6 | 688.1 | -1,080.7 | 903.2 | 2.33 | 2.21 | 0.74 |
| 7,505.0 | 91.60 | 359.50 | 6,793.0 | 784.1 | -1,081.4 | 997.0 | 0.23 | 0.10 | -0.21 |
| 7,600.0 | 92.10 | 359.00 | 6,790.0 | 879.0 | -1,082.6 | 1,090.1 | 0.74 | 0.53 | -0.53 |
| 7,696.0 | 90.00 | 0.00 | 6,788.2 | 975.0 | -1,083.4 | 1,184.0 | 2.42 | -2.19 | 1.04 |
| 7,792.0 | 89.30 | 359.90 | 6,788.8 | 1,071.0 | -1,083.5 | 1,277.8 | 0.74 | -0.73 | -0.10 |
| 7,887.0 | 89.60 | 359.90 | 6,789.7 | 1,166.0 | -1,083.7 | 1,370.6 | 0.32 | 0.32 | 0.00 |
| 7,982.0 | 90.00 | 0.00 | 6,790.1 | 1,261.0 | -1,083.8 | 1,463.5 | 0.43 | 0.42 | 0.11 |
| 8,078.0 | 90.10 | 0.40 | 6,790.0 | 1,357.0 | -1,083.4 | 1,557.2 | 0.43 | 0.10 | 0.42 |
| 8,174.0 | 90.00 | 0.00 | 6,789.9 | 1,453.0 | -1,083.1 | 1,650.9 | 0.43 | -0.10 | -0.42 |
| 8,269.0 | 90.00 | 0.20 | 6,789.9 | 1,548.0 | -1,082.9 | 1,743.6 | 0.21 | 0.00 | 0.21 |
| 8,365.0 | 89.60 | 359.20 | 6,790.2 | 1,644.0 | -1,083.4 | 1,837.5 | 1.12 | -0.42 | -1.04 |
| 8,460.0 | 90.00 | 359.20 | 6,790.6 | 1,739.0 | -1,084.8 | 1,930.6 | 0.42 | 0.42 | 0.00 |
| 8,556.0 | 90.00 | 358.60 | 6,790.6 | 1,835.0 | -1,086.6 | 2,024.8 | 0.63 | 0.00 | -0.63 |
| 8,652.0 | 90.60 | 358.10 | 6,790.1 | 1,930.9 | -1,089.4 | 2,119.1 | 0.81 | 0.63 | -0.52 |
| 8,748.0 | 90.80 | 357.90 | 6,788.9 | 2,026.8 | -1,092.7 | 2,213.5 | 0.29 | 0.21 | -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) |
| 8,843.0 | 91.30 | 358.30 | 6,787.1 | 2,121.8 | -1,095.9 | 2,306.9 | 0.67 | 0.53 | 0.42 |
| 8,939.0 | 91.50 | 357.40 | 6,784.8 | 2,217.7 | -1,099.5 | 2,401.4 | 0.96 | 0.21 | -0.94 |
| 9,035.0 | 91.80 | 356.90 | 6,782.0 | 2,313.5 | -1,104.3 | 2,496.0 | 0.61 | 0.31 | -0.52 |
| 9,130.0 | 90.40 | 359.90 | 6,780.2 | 2,408.5 | -1,106.9 | 2,589.4 | 3.48 | -1.47 | 3.16 |
| 9,226.0 | 90.30 | 0.00 | 6,779.6 | 2,504.5 | -1,107.0 | 2,683.2 | 0.15 | -0.10 | 0.10 |
| 9,322.0 | 90.30 | 359.50 | 6,779.1 | 2,600.5 | -1,107.4 | 2,777.0 | 0.52 | 0.00 | -0.52 |
| 9,417.0 | 90.50 | 359.30 | 6,778.5 | 2,695.4 | -1,108.4 | 2,870.0 | 0.30 | 0.21 | -0.21 |
| 9,513.0 | 90.40 | 359.00 | 6,777.7 | 2,791.4 | -1,109.8 | 2,964.1 | 0.33 | -0.10 | -0.31 |
| 9,609.0 | 90.30 | 358.30 | 6,777.1 | 2,887.4 | -1,112.1 | 3,058.3 | 0.74 | -0.10 | -0.73 |
| 9,703.0 | 90.30 | 358.30 | 6,776.6 | 2,981.4 | -1,114.9 | 3,150.7 | 0.00 | 0.00 | 0.00 |
| 9,799.0 | 90.10 | 358.10 | 6,776.3 | 3,077.3 | -1,117.9 | 3,245.1 | 0.29 | -0.21 | -0.21 |
| 9,895.0 | 90.30 | 357.70 | 6,775.9 | 3,173.2 | -1,121.4 | 3,339.6 | 0.47 | 0.21 | -0.42 |
| 9,990.0 | 89.80 | 0.20 | 6,775.9 | 3,268.2 | -1,123.1 | 3,432.7 | 2.68 | -0.53 | 2.63 |
| 10,086.0 | 89.60 | 359.50 | 6,776.4 | 3,364.2 | -1,123.4 | 3,526.6 | 0.76 | -0.21 | -0.73 |
| 10,181.0 | 89.30 | 358.80 | 6,777.3 | 3,459.2 | -1,124.8 | 3,619.7 | 0.80 | -0.32 | -0.74 |
| 10,277.0 | 89.30 | 358.10 | 6,778.5 | 3,555.2 | -1,127.4 | 3,714.0 | 0.73 | 0.00 | -0.73 |
| 10,372.0 | 89.90 | 359.30 | 6,779.1 | 3,650.1 | -1,129.6 | 3,807.2 | 1.41 | 0.63 | 1.26 |
| 10,468.0 | 89.50 | 0.00 | 6,779.6 | 3,746.1 | -1,130.1 | 3,901.1 | 0.84 | -0.42 | 0.73 |
| 10,563.0 | 89.10 | 357.60 | 6,780.8 | 3,841.1 | -1,132.1 | 3,994.3 | 2.56 | -0.42 | -2.53 |
| 10,658.0 | 89.10 | 356.50 | 6,782.3 | 3,936.0 | -1,137.0 | 4,088.0 | 1.16 | 0.00 | -1.16 |
| 10,753.0 | 90.70 | 357.40 | 6,782.4 | 4,030.8 | -1,142.1 | 4,181.8 | 1.93 | 1.68 | 0.95 |
| 10,849.0 | 90.90 | 357.20 | 6,781.1 | 4,126.7 | -1,146.6 | 4,276.4 | 0.29 | 0.21 | -0.21 |
| 10,945.0 | 90.60 | 356.90 | 6,779.8 | 4,222.6 | -1,151.5 | 4,371.1 | 0.44 | -0.31 | -0.31 |
| 11,040.0 | 90.50 | 356.20 | 6,778.9 | 4,317.4 | -1,157.3 | 4,465.0 | 0.74 | -0.11 | -0.74 |
| 11,135.0 | 90.40 | 357.60 | 6,778.2 | 4,412.2 | -1,162.4 | 4,558.7 | 1.48 | -0.11 | 1.47 |
| 11,231.0 | 90.80 | 357.20 | 6,777.2 | 4,508.1 | -1,166.7 | 4,653.3 | 0.59 | 0.42 | -0.42 |
| 11,326.0 | 91.50 | 358.60 | 6,775.3 | 4,603.1 | -1,170.2 | 4,746.8 | 1.65 | 0.74 | 1.47 |
| 11,421.0 | 92.40 | 0.00 | 6,772.0 | 4,698.0 | -1,171.4 | 4,839.8 | 1.75 | 0.95 | 1.47 |
| 11,517.0 | 93.10 | 359.90 | 6,767.4 | 4,793.9 | -1,171.5 | 4,933.5 | 0.74 | 0.73 | -0.10 |
| 11,613.0 | 92.90 | 359.20 | 6,762.4 | 4,889.7 | -1,172.2 | 5,027.3 | 0.76 | -0.21 | -0.73 |
| 11,708.0 | 92.10 | 358.30 | 6,758.3 | 4,984.6 | -1,174.3 | 5,120.4 | 1.27 | -0.84 | -0.95 |
| 11,804.0 | 89.90 | 359.20 | 6,756.6 | 5,080.6 | -1,176.4 | 5,214.6 | 2.48 | -2.29 | 0.94 |
| 11,899.0 | 88.00 | 358.60 | 6,758.3 | 5,175.5 | -1,178.2 | 5,307.8 | 2.10 | -2.00 | -0.63 |
| 11,995.0 | 87.60 | 357.90 | 6,762.0 | 5,271.4 | -1,181.1 | 5,402.1 | 0.84 | -0.42 | -0.73 |
| 12,040.0 | 87.20 | 357.60 | 6,764.1 | 5,316.3 | -1,182.9 | 5,446.3 | 1.11 | -0.89 | -0.67 |
| 12,097.0 | 87.20 | 357.60 | 6,766.8 | 5,373.2 | -1,185.3 | 5,502.4 | 0.00 | 0.00 | 0.00 |

| | | | |
|------------------|--|-------------------------------------|--------------------------------------|
| Company: | PDC Energy Inc. DJ Basin | Local Co-ordinate Reference: | Well J Clark 8N (Nio B) |
| Project: | SEC.14-T5N-R65W | TVD Reference: | WELL @ 4638.0ft (Original Well Elev) |
| Site: | Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W | MD Reference: | WELL @ 4638.0ft (Original Well Elev) |
| Well: | J Clark 8N (Nio B) | North Reference: | True |
| Wellbore: | J Clark 8N (Nio B) Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | J Clark 8N (Nio B) Wellbore #1 | Database: | US_EDM |

| Design Targets | | | | | | | | | |
|---|-----------|----------|---------|---------|----------|--------------|--------------|-----------|-------------|
| Target Name | Dip Angle | Dip Dir. | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
| - hit/miss target | (°) | (°) | (ft) | (ft) | (ft) | (usft) | (usft) | | |
| - Shape | | | | | | | | | |
| SHL 550'FNL & 2069'FE | 0.00 | 0.00 | 1.0 | 0.0 | 0.0 | 1,391,636.27 | 3,242,695.94 | 40.405170 | -104.628513 |
| - survey hits target center | | | | | | | | | |
| - Point | | | | | | | | | |
| BHL 500'FNL & 2050'FM | 0.00 | 0.00 | 6,770.0 | 5,373.7 | -1,175.4 | 1,396,997.88 | 3,241,467.80 | 40.419920 | -104.632734 |
| - survey misses target center by 10.4ft at 12097.0ft MD (6766.8 TVD, 5373.2 N, -1185.3 E) | | | | | | | | | |
| - Point | | | | | | | | | |

| Survey Annotations | | | | |
|--------------------|----------------|-------------------|------------|---|
| Measured Depth | Vertical Depth | Local Coordinates | | Comment |
| (ft) | (ft) | +N/-S (ft) | +E/-W (ft) | |
| 6,917.1 | 6,704.6 | 213.0 | -1,036.8 | TPZ – 60° in curve – 335'FNL & 2153'FWL, Sec.14 |
| 7,310.7 | 6,796.3 | 589.8 | -1,079.6 | Deepest TVD Drilled - 6796.3' |

| | | |
|-------------------|--------------------|-------------|
| Checked By: _____ | Approved By: _____ | Date: _____ |
|-------------------|--------------------|-------------|