

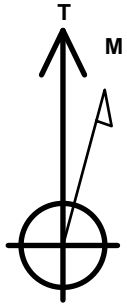
PDC Energy Inc. DJ Basin

Well Name: **Barr 11Y-214**

Surface Location: Barr 5N65W11TY Pad Sec.11-T5N-R65W
 North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
 Ground Elevation: 4611.0
 +N/-S +E/-W Northing Easting Longitude Slot
 0.0 0.0 1392431.42 3244256.12 40.407310 -104.622882
 Original Well Elev WELL @ 4634.0ft (Original Well Elev)

DESIGN TARGET DETAILS

| Name | TVD | +N/-S | +E/-W | Shape |
|------------------------------|--------|-------|---------|-------|
| SHL 244'FSL, 499'FEL, SEC.11 | 1.0 | 0.0 | 0.0 | Point |
| BHL 511'FSL, 500'FWL, SEC.11 | 6774.0 | 255.0 | -4263.0 | Point |
| WP1 (11Y-214) | 6775.6 | 253.0 | -3896.5 | Point |
| LPL 499'FSL, 84'FEL, SEC.11 | 6794.0 | 300.9 | 415.2 | Point |



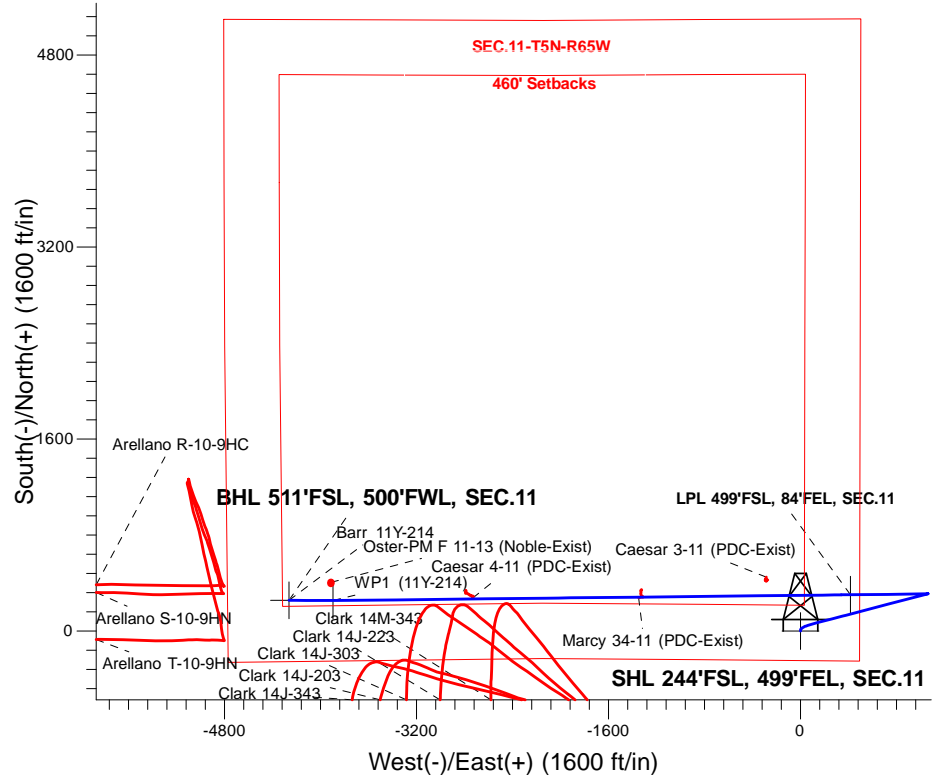
Azimuths to True North
 Magnetic North: 8.03°

Magnetic Field
 Strength: 52558.0snT
 Dip Angle: 66.88°
 Date: 2/1/2017
 Model: IGRF2010

Barr 5N65W11TY Pad Sec.11-T5N-R65W
 Barr 11Y-214
 Plan #3 (6-21-17)
 9:57, June 22 2017

ANNOTATIONS

| TVD | MD | Annotation |
|--------|---------|----------------------------|
| 600.0 | 600.0 | Start Build 1.00 |
| 899.9 | 900.0 | Start DLS 1.50 TFO 86.84 |
| 5168.0 | 5293.8 | Start Drop -2.00 |
| 6078.1 | 6212.2 | Start Build 8.00 |
| 6794.0 | 7339.9 | Start DLS 1.00 TFO -104.82 |
| 6775.6 | 11578.7 | Start DLS 2.00 TFO 89.91 |
| 6774.0 | 11945.2 | TD at 11945.2 |

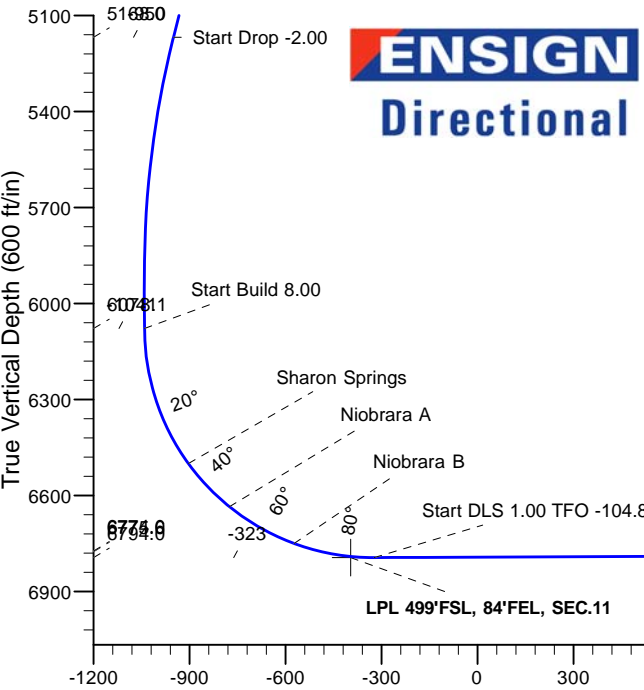


SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSec | Target |
|-----|---------|-------|--------|--------|-------|---------|------|---------|---------|------------------------------|
| 1 | 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 2 | 600.0 | 0.00 | 0.00 | 600.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 900.0 | 3.00 | 0.00 | 899.9 | 7.9 | 0.0 | 1.00 | 0.00 | 0.5 | |
| 4 | 1856.0 | 14.80 | 75.42 | 1844.2 | 63.9 | 118.8 | 1.50 | 86.84 | -114.8 | |
| 5 | 5293.8 | 14.80 | 75.42 | 5168.0 | 285.1 | 969.0 | 0.00 | 0.00 | -950.2 | |
| 6 | 6034.1 | 0.00 | 0.00 | 5900.0 | 309.0 | 1061.0 | 2.00 | 180.00 | -1040.7 | |
| 7 | 6212.2 | 0.00 | 0.00 | 6078.1 | 309.0 | 1061.0 | 0.00 | 0.00 | -1040.7 | |
| 8 | 7339.8 | 90.25 | 269.36 | 6794.0 | 300.9 | 342.0 | 8.00 | 269.36 | -323.5 | |
| 9 | 7339.9 | 90.25 | 269.36 | 6794.0 | 300.9 | 342.0 | 0.00 | 0.00 | -323.4 | |
| 10 | 7340.4 | 90.25 | 269.35 | 6794.0 | 300.9 | 341.5 | 1.00 | -104.82 | -322.9 | |
| 11 | 11578.7 | 90.25 | 269.35 | 6775.6 | 253.0 | -3896.5 | 0.00 | 0.00 | 3904.7 | WP1 (11Y-214) |
| 12 | 11630.3 | 90.25 | 270.39 | 6775.4 | 252.9 | -3948.2 | 2.00 | 89.91 | 3956.2 | |
| 13 | 11945.2 | 90.25 | 270.39 | 6774.0 | 255.0 | -4263.0 | 0.00 | 0.00 | 4270.6 | BHL 511'FSL, 500'FWL, SEC.11 |

BHL 511'FSL, 500'FWL, SEC.11

WP1 (11Y-214)
 Start DLS 2.00 TFO 89.91



Vertical Section at 273.42° (600 ft/in)



Directional

PDC Energy Inc. DJ Basin

SEC.11-T5N-R65W

Barr 5N65W11TY Pad Sec.11-T5N-R65W

Barr 11Y-214

Wellbore #1

Plan #3 (6-21-17)

Anticollision Summary Report

22 June, 2017



| | | | |
|---------------------------|------------------------------------|-------------------------------------|--------------------------------------|
| Company: | PDC Energy Inc. DJ Basin | Local Co-ordinate Reference: | Well Barr 11Y-214 |
| Project: | SEC.11-T5N-R65W | TVD Reference: | WELL @ 4634.0ft (Original Well Elev) |
| Reference Site: | Barr 5N65W11TY Pad Sec.11-T5N-R65W | MD Reference: | WELL @ 4634.0ft (Original Well Elev) |
| Site Error: | 0.0 ft | North Reference: | True |
| Reference Well: | Barr 11Y-214 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 ft | Output errors are at | 2.45 sigma |
| Reference Wellbore | Wellbore #1 | Database: | US_EDM |
| Reference Design: | Plan #3 (6-21-17) | Offset TVD Reference: | Offset Datum |

| | | | |
|-------------------------------------|---|-----------------------|---------------------|
| Reference | Plan #3 (6-21-17) | | |
| Filter type: | NO GLOBAL FILTER: Using user defined selection & filtering criteria | | |
| Interpolation Method: | MD Interval 100.0ft | Error Model: | ISCWSA |
| Depth Range: | Unlimited | Scan Method: | Closest Approach 3D |
| Results Limited by: | Maximum center-center distance of 1,000.0 ft | Error Surface: | Elliptical Conic |
| Warning Levels Evaluated at: | 2.45 Sigma | Casing Method: | Not applied |

| | | | | |
|----------------------------|----------------|---------------------------------|------------------|--------------------|
| Survey Tool Program | Date | 6/22/2017 | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
| 0.0 | 11,945.1 | Plan #3 (6-21-17) (Wellbore #1) | MWD | MWD - Standard |

| Summary | | | | | | |
|--|---------------------|---------------------|----------------------|-----------------------|-------------------|-----------------|
| Site Name | Reference | Offset | Distance | | Separation Factor | Warning |
| | Measured Depth (ft) | Measured Depth (ft) | Between Centres (ft) | Between Ellipses (ft) | | |
| Arellano 10-L Pad Sec.10-T5N-R65W | | | | | | |
| Arellano R-10-9HC - Wellbore #1 - Wellbore #1 | 11,945.2 | 6,589.0 | 698.5 | 608.5 | 7.763 | CC, ES, SF |
| Arellano S-10-9HN - Wellbore #1 - Wellbore #1 | 11,945.2 | 6,589.0 | 705.5 | 639.6 | 10.715 | CC, ES, SF |
| Arellano T-10-9HN - Wellbore #1 - Wellbore #1 | 11,945.2 | 6,685.0 | 758.9 | 604.7 | 4.923 | CC, ES, SF |
| Barr 5N65W11TY Pad Sec.11-T5N-R65W | | | | | | |
| Barr 11I-221 - Wellbore #1 - Plan #2 (6-19-17) | 1,368.6 | 1,366.5 | 38.0 | 30.7 | 5.216 | CC, ES |
| Barr 11I-221 - Wellbore #1 - Plan #2 (6-19-17) | 1,400.0 | 1,397.7 | 38.2 | 30.7 | 5.118 | SF |
| Barr 11I-301 - Wellbore #1 - Plan #2 (6-19-17) | 600.0 | 600.0 | 30.1 | 27.1 | 9.931 | CC |
| Barr 11I-301 - Wellbore #1 - Plan #2 (6-19-17) | 1,209.3 | 1,208.4 | 30.6 | 24.3 | 4.813 | ES |
| Barr 11I-301 - Wellbore #1 - Plan #2 (6-19-17) | 1,300.0 | 1,298.5 | 31.6 | 24.8 | 4.605 | SF |
| Barr 11L-201 - Wellbore #1 - Plan #2 (6-19-17) | 1,207.8 | 1,203.1 | 73.2 | 66.9 | 11.671 | CC, ES |
| Barr 11L-201 - Wellbore #1 - Plan #2 (6-19-17) | 1,500.0 | 1,487.8 | 80.9 | 73.0 | 10.219 | SF |
| Barr 11L-221 - Wellbore #1 - Plan #2 (6-19-17) | 400.0 | 400.0 | 120.0 | 118.1 | 62.279 | CC, ES |
| Barr 11L-221 - Wellbore #1 - Plan #2 (6-19-17) | 5,400.0 | 5,241.9 | 977.3 | 924.0 | 18.315 | SF |
| Barr 11L-301 - Wellbore #1 - Plan #2 (6-19-17) | 600.0 | 600.0 | 105.3 | 102.2 | 34.759 | CC, ES |
| Barr 11L-301 - Wellbore #1 - Plan #2 (6-19-17) | 5,000.0 | 4,826.5 | 995.0 | 945.0 | 19.904 | SF |
| Barr 11L-321 - Wellbore #1 - Plan #2 (6-19-17) | 200.0 | 200.0 | 135.1 | 134.2 | 163.524 | CC, ES |
| Barr 11L-321 - Wellbore #1 - Plan #2 (6-19-17) | 5,000.0 | 4,822.3 | 990.3 | 943.8 | 21.276 | SF |
| Barr 11L-341 - Wellbore #1 - Plan #3 (6-19-17) | 1,370.4 | 1,366.3 | 50.0 | 42.8 | 6.907 | CC |
| Barr 11L-341 - Wellbore #1 - Plan #3 (6-19-17) | 1,400.0 | 1,395.3 | 50.2 | 42.8 | 6.776 | ES |
| Barr 11L-341 - Wellbore #1 - Plan #3 (6-19-17) | 1,500.0 | 1,493.3 | 53.2 | 45.2 | 6.661 | SF |
| Barr 11L-401 - Wellbore #1 - Plan #2 (6-19-17) | 600.0 | 600.0 | 90.2 | 87.2 | 29.793 | CC |
| Barr 11L-401 - Wellbore #1 - Plan #2 (6-19-17) | 800.0 | 800.0 | 90.3 | 86.2 | 21.880 | ES |
| Barr 11L-401 - Wellbore #1 - Plan #2 (6-19-17) | 1,600.0 | 1,574.0 | 132.2 | 123.6 | 15.478 | SF |
| Barr 11X-334 - Wellbore #1 - Plan #2 (6-19-17) | 400.0 | 400.0 | 14.8 | 12.8 | 7.660 | CC |
| Barr 11X-334 - Wellbore #1 - Plan #2 (6-19-17) | 11,945.2 | 11,860.9 | 332.0 | -3.6 | 0.989 | Level 1, ES, SF |
| Barr 11X-404 - Wellbore #1 - Plan #2 (6-19-17) | 200.0 | 200.0 | 29.8 | 29.0 | 36.078 | CC |
| Barr 11X-404 - Wellbore #1 - Plan #2 (6-19-17) | 400.0 | 399.9 | 30.0 | 28.1 | 15.589 | ES |
| Barr 11X-404 - Wellbore #1 - Plan #2 (6-19-17) | 11,945.2 | 11,832.9 | 619.6 | 296.1 | 1.915 | SF |
| Barr 11Y-314 - Wellbore #1 - Plan #2 (6-19-17) | 600.0 | 600.0 | 15.0 | 12.0 | 4.965 | CC |
| Barr 11Y-314 - Wellbore #1 - Plan #2 (6-19-17) | 11,945.2 | 11,830.1 | 212.9 | -117.0 | 0.645 | Level 1, ES, SF |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---------------------------|------------------------------------|-------------------------------------|--------------------------------------|
| Company: | PDC Energy Inc. DJ Basin | Local Co-ordinate Reference: | Well Barr 11Y-214 |
| Project: | SEC.11-T5N-R65W | TVD Reference: | WELL @ 4634.0ft (Original Well Elev) |
| Reference Site: | Barr 5N65W11TY Pad Sec.11-T5N-R65W | MD Reference: | WELL @ 4634.0ft (Original Well Elev) |
| Site Error: | 0.0 ft | North Reference: | True |
| Reference Well: | Barr 11Y-214 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 ft | Output errors are at | 2.45 sigma |
| Reference Wellbore | Wellbore #1 | Database: | US_EDM |
| Reference Design: | Plan #3 (6-21-17) | Offset TVD Reference: | Offset Datum |

| Summary | | | | | | |
|---|-------------------------------|----------------------------|-------------------------------|--------------------------------|-------------------|---------------------|
| Site Name | Reference Measured Depth (ft) | Offset Measured Depth (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Separation Factor | Warning |
| Offset Well - Wellbore - Design | | | | | | |
| Clark 5N65W14EJ Pad Sec.14-T5N-R65W | | | | | | |
| Clark 14J-203 - Wellbore #1 - Wellbore #1 | 11,110.2 | 6,744.0 | 688.1 | 524.1 | 4.195 | CC, ES |
| Clark 14J-203 - Wellbore #1 - Wellbore #1 | 11,300.0 | 6,761.4 | 713.4 | 541.4 | 4.149 | SF |
| Clark 14J-223 - Wellbore #1 - Wellbore #1 | 10,607.9 | 6,857.8 | 330.9 | 210.0 | 2.737 | CC, ES |
| Clark 14J-223 - Wellbore #1 - Wellbore #1 | 10,700.0 | 6,868.2 | 343.2 | 216.8 | 2.716 | SF |
| Clark 14J-303 - Wellbore #1 - Wellbore #1 | 10,884.3 | 6,946.0 | 278.1 | 141.0 | 2.028 | CC |
| Clark 14J-303 - Wellbore #1 - Wellbore #1 | 10,900.0 | 6,948.3 | 278.5 | 140.1 | 2.013 | ES, SF |
| Clark 14J-343 - Wellbore #1 - Wellbore #1 | 11,341.0 | 6,823.4 | 673.9 | 495.0 | 3.769 | CC |
| Clark 14J-343 - Wellbore #1 - Wellbore #1 | 11,400.0 | 6,840.0 | 676.4 | 493.6 | 3.701 | ES |
| Clark 14J-343 - Wellbore #1 - Wellbore #1 | 11,500.0 | 6,848.4 | 691.6 | 504.7 | 3.700 | SF |
| Clark 14M-343 - Wellbore #1 - Wellbore #1 | 10,235.1 | 6,845.4 | 266.1 | 154.5 | 2.384 | CC, ES |
| Clark 14M-343 - Wellbore #1 - Wellbore #1 | 10,300.0 | 6,851.2 | 273.8 | 158.6 | 2.378 | SF |
| Existing Wells Sec.11-T5N-R65W | | | | | | |
| Caesar 3-11 (PDC-Exist) - Wellbore #1 - Wellbore #1 | 7,967.1 | 6,765.5 | 151.1 | 91.5 | 2.535 | CC, ES, SF |
| Caesar 4-11 (PDC-Exist) - Wellbore #1 - Wellbore #1 | 10,412.3 | 6,763.2 | 15.0 | -124.1 | 0.108 | Level 1, CC, ES, SF |
| Marcy 34-11 (PDC-Exist) - Wellbore #1 - Wellbore #1 | 9,021.4 | 6,766.9 | 1.7 | -227.4 | 0.008 | Level 1, CC, ES, SF |
| Oster-PM F 11-13 (Noble-Exist) - Wellbore #1 - Wellbore | 11,596.0 | 6,759.5 | 150.4 | -176.3 | 0.460 | Level 1, CC, ES, SF |