

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_Buffalo & Badger 4E-15HZ Pad

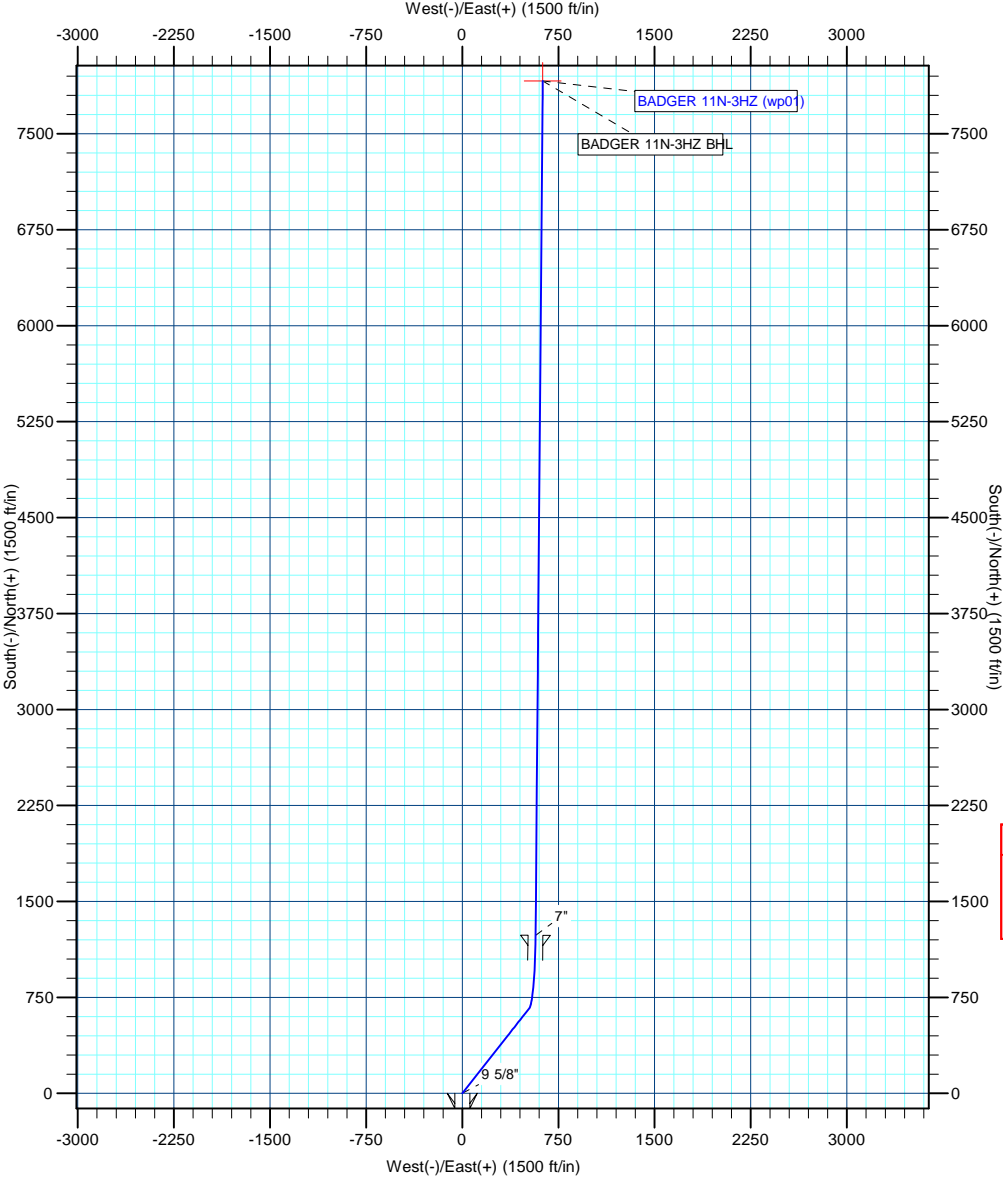
BADGER 11N-3HZ

BADGER 11N-3HZ

Plan: BADGER 11N-3HZ (wp01)

Standard Planning Report

16 July, 2012



Azimuths to True North
Magnetic North: 8.81°

Magnetic Field
Strength: 52809.1snT
Dip Angle: 66.70°
Date: 7/16/2012
Model: IGRF2010



Project: COLORADO NORTHERN ZONE - 83
Site: WELD Buffalo & Badger 4E-15HZ Pad
Well: BADGER 11N-3HZ
Wellbore: BADGER 11N-3HZ
Section:
SHL:
Design: BADGER 11N-3HZ (wp01)
Latitude: 40.057355
Longitude: -104.994633
GL: 5132.00
KB: gl + rkb @ 5149.00ft

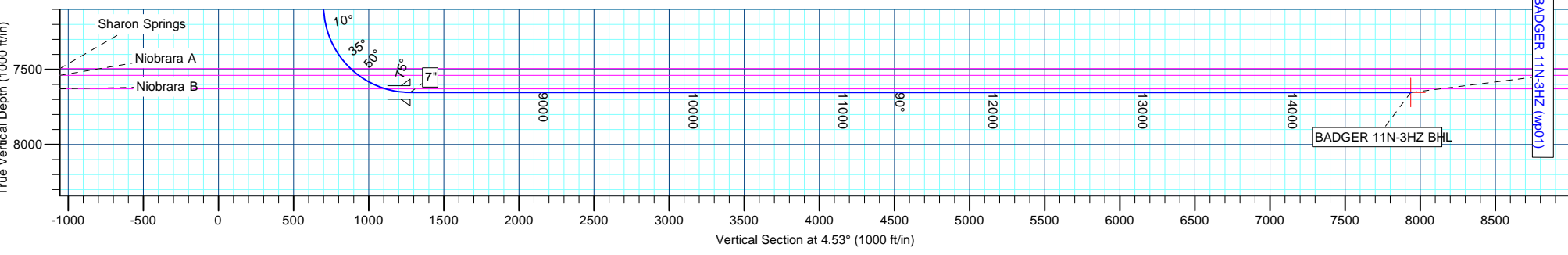
| WELL DETAILS: BADGER 11N-3HZ | | | | | | |
|------------------------------|-------|------------|-----------------------|------------------|-------------|------|
| +N/-S | +E/-W | Northing | Ground Level: Easting | 5132.00 Latitude | Longitude | Slot |
| 0.00 | 0.00 | 1264142.91 | 3141460.54 | 40.057355 | -104.994633 | |

| SECTION DETAILS | | | | | | | | |
|-----------------|-------|-------|---------|---------|--------|-------|--------|---------|
| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1000.00 | 0.00 | 0.00 | 1000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1404.85 | 8.10 | 38.14 | 1403.50 | 22.46 | 17.64 | 2.00 | 38.14 | 23.78 |
| 7205.01 | 8.10 | 38.14 | 7145.84 | 665.00 | 522.15 | 0.00 | 0.00 | 704.16 |
| 8040.99 | 90.00 | 0.48 | 7653.00 | 1234.00 | 571.00 | 10.00 | -37.94 | 1275.24 |
| 8060.39 | 90.00 | 0.48 | 7653.00 | 1253.40 | 571.16 | 0.00 | 0.00 | 1294.60 |
| 14719.34 | 90.00 | 0.48 | 7653.00 | 7912.12 | 626.82 | 0.00 | 0.00 | 7936.91 |

| WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG) | | | | | | |
|---|---------|---------|--------|-----------|-------------|-------|
| Name | TVD | +N/-S | +E/-W | Latitude | Longitude | Shape |
| BADGER 11N-3HZ BHL | 7653.00 | 7912.12 | 626.82 | 40.079075 | -104.992393 | Point |

| FORMATION TOP DETAILS | | |
|-----------------------|---------|----------------|
| TVDPath | MDPath | Formation |
| 4311.00 | 4341.62 | Parkman |
| 4757.00 | 4792.11 | Sussex |
| 5227.00 | 5266.85 | Shannon |
| 7494.00 | 7602.73 | Sharon Springs |
| 7539.00 | 7672.56 | Niobrara A |
| 7629.00 | 7874.25 | Niobrara B |

| CASING DETAILS | | | |
|----------------|---------|--------|-------|
| TVD | MD | Name | Size |
| 900.00 | 900.00 | 9 5/8" | 9-5/8 |
| 7653.00 | 8040.99 | 7" | 7 |



Anadarko Petroleum Corp

Planning Report

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|------------------|-----------------------------------|-------------------------------------|----------------------|
| Database: | edmp | Local Co-ordinate Reference: | Well BADGER 11N-3HZ |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | gl + rkb @ 5149.00ft |
| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | gl + rkb @ 5149.00ft |
| Site: | WELD_Buffalo & Badger 4E-15HZ Pad | North Reference: | True |
| Well: | BADGER 11N-3HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | BADGER 11N-3HZ | | |
| Design: | BADGER 11N-3HZ (wp01) | | |

| | | | |
|--------------------|-----------------------------|----------------------|----------------|
| Project | COLORADO NORTHERN ZONE - 83 | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Northern Zone | | |

| Site | | WELD_Buffalo & Badger 4E-15HZ Pad | | | |
|-----------------------|----------|-----------------------------------|-------------------|-------------------|-------------|
| Site Position: | | Northing: | 1,264,141.85 usft | Latitude: | 40.057353 |
| From: | Lat/Long | Easting: | 3,141,400.65 usft | Longitude: | -104.994847 |
| Position Uncertainty: | 0.00 ft | Slot Radius: | 13-3/16 " | Grid Convergence: | 0.33 ° |

| Well | BADGER 11N-3HZ | | | | | |
|----------------------|----------------|----------|---------------------|-------------------|---------------|-------------|
| Well Position | +N/-S | 0.72 ft | Northing: | 1,264,142.91 usft | Latitude: | 40.057355 |
| | +E/-W | 59.90 ft | Easting: | 3,141,460.54 usft | Longitude: | -104.994633 |
| Position Uncertainty | | 0.00 ft | Wellhead Elevation: | | Ground Level: | 5,132.00 ft |

| | | | | | |
|------------------|-------------------|--------------------|----------------------------|--------------------------|--------------------------------|
| Wellbore | BADGER 11N-3HZ | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 7/16/2012 | 8.81 | 66.70 | 52,809 |

| | | | | | |
|--------------------------|----------------------------------|-----------------------|-----------------------|--------------------------|--|
| Design | BADGER 11N-3HZ (wp01) | | | | |
| Audit Notes: | | | | | |
| Version: | Phase: | PLAN | Tie On Depth: | 0.00 | |
| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) | |
| | 0.00 | 0.00 | 0.00 | 4.53 | |

| Plan Sections | | | | | | | | | | |
|---------------------------|--------------------|----------------|---------------------------|---------------|---------------|-------------------------------|------------------------------|-----------------------------|------------|------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,000.00 | 0.00 | 0.00 | 1,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,404.85 | 8.10 | 38.14 | 1,403.50 | 22.46 | 17.64 | 2.00 | 2.00 | 0.00 | 38.14 | |
| 7,205.01 | 8.10 | 38.14 | 7,145.84 | 665.00 | 522.15 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8,040.99 | 90.00 | 0.48 | 7,653.00 | 1,234.00 | 571.00 | 10.00 | 9.80 | -4.50 | -37.94 | |
| 8,060.39 | 90.00 | 0.48 | 7,653.00 | 1,253.40 | 571.16 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 14,719.34 | 90.00 | 0.48 | 7,653.00 | 7,912.12 | 626.82 | 0.00 | 0.00 | 0.00 | 0.00 | BADGER 11N-3HZ B |

Anadarko Petroleum Corp

Planning Report

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|------------------|-----------------------------------|-------------------------------------|----------------------|
| Database: | edmp | Local Co-ordinate Reference: | Well BADGER 11N-3HZ |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | gl + rkb @ 5149.00ft |
| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | gl + rkb @ 5149.00ft |
| Site: | WELD_Buffalo & Badger 4E-15HZ Pad | North Reference: | True |
| Well: | BADGER 11N-3HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | BADGER 11N-3HZ | | |
| Design: | BADGER 11N-3HZ (wp01) | | |

| Planned 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) |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 200.00 | 0.00 | 0.00 | 200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 400.00 | 0.00 | 0.00 | 400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 500.00 | 0.00 | 0.00 | 500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 600.00 | 0.00 | 0.00 | 600.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 700.00 | 0.00 | 0.00 | 700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 800.00 | 0.00 | 0.00 | 800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 900.00 | 0.00 | 0.00 | 900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 5/8" | | | | | | | | | |
| 1,000.00 | 0.00 | 0.00 | 1,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Start Build 2.00 | | | | | | | | | |
| 1,100.00 | 2.00 | 38.14 | 1,099.98 | 1.37 | 1.08 | 1.45 | 2.00 | 2.00 | 0.00 |
| 1,200.00 | 4.00 | 38.14 | 1,199.84 | 5.49 | 4.31 | 5.81 | 2.00 | 2.00 | 0.00 |
| 1,300.00 | 6.00 | 38.14 | 1,299.45 | 12.34 | 9.69 | 13.07 | 2.00 | 2.00 | 0.00 |
| 1,400.00 | 8.00 | 38.14 | 1,398.70 | 21.93 | 17.22 | 23.22 | 2.00 | 2.00 | 0.00 |
| 1,404.85 | 8.10 | 38.14 | 1,403.50 | 22.46 | 17.64 | 23.78 | 2.00 | 2.00 | 0.00 |
| Start 5800.16 hold at 1404.85 MD | | | | | | | | | |
| 1,500.00 | 8.10 | 38.14 | 1,497.71 | 33.00 | 25.91 | 34.95 | 0.00 | 0.00 | 0.00 |
| 1,600.00 | 8.10 | 38.14 | 1,596.71 | 44.08 | 34.61 | 46.68 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 8.10 | 38.14 | 1,695.71 | 55.16 | 43.31 | 58.41 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 8.10 | 38.14 | 1,794.71 | 66.24 | 52.01 | 70.14 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 8.10 | 38.14 | 1,893.72 | 77.31 | 60.71 | 81.87 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 8.10 | 38.14 | 1,992.72 | 88.39 | 69.40 | 93.60 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 8.10 | 38.14 | 2,091.72 | 99.47 | 78.10 | 105.33 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 8.10 | 38.14 | 2,190.73 | 110.55 | 86.80 | 117.06 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 8.10 | 38.14 | 2,289.73 | 121.63 | 95.50 | 128.79 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 8.10 | 38.14 | 2,388.73 | 132.70 | 104.20 | 140.52 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 8.10 | 38.14 | 2,487.74 | 143.78 | 112.90 | 152.25 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 8.10 | 38.14 | 2,586.74 | 154.86 | 121.59 | 163.98 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 8.10 | 38.14 | 2,685.74 | 165.94 | 130.29 | 175.71 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 8.10 | 38.14 | 2,784.75 | 177.02 | 138.99 | 187.44 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 8.10 | 38.14 | 2,883.75 | 188.09 | 147.69 | 199.17 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 8.10 | 38.14 | 2,982.75 | 199.17 | 156.39 | 210.90 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 8.10 | 38.14 | 3,081.76 | 210.25 | 165.09 | 222.63 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 8.10 | 38.14 | 3,180.76 | 221.33 | 173.78 | 234.36 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 8.10 | 38.14 | 3,279.76 | 232.41 | 182.48 | 246.09 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 8.10 | 38.14 | 3,378.76 | 243.48 | 191.18 | 257.82 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 8.10 | 38.14 | 3,477.77 | 254.56 | 199.88 | 269.55 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 8.10 | 38.14 | 3,576.77 | 265.64 | 208.58 | 281.28 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 8.10 | 38.14 | 3,675.77 | 276.72 | 217.28 | 293.01 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 8.10 | 38.14 | 3,774.78 | 287.80 | 225.97 | 304.74 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 8.10 | 38.14 | 3,873.78 | 298.87 | 234.67 | 316.47 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 8.10 | 38.14 | 3,972.78 | 309.95 | 243.37 | 328.20 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 8.10 | 38.14 | 4,071.79 | 321.03 | 252.07 | 339.93 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 8.10 | 38.14 | 4,170.79 | 332.11 | 260.77 | 351.66 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 8.10 | 38.14 | 4,269.79 | 343.19 | 269.46 | 363.40 | 0.00 | 0.00 | 0.00 |
| 4,341.62 | 8.10 | 38.14 | 4,311.00 | 347.80 | 273.09 | 368.28 | 0.00 | 0.00 | 0.00 |
| Parkman | | | | | | | | | |
| 4,400.00 | 8.10 | 38.14 | 4,368.80 | 354.26 | 278.16 | 375.13 | 0.00 | 0.00 | 0.00 |
| 4,500.00 | 8.10 | 38.14 | 4,467.80 | 365.34 | 286.86 | 386.86 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 8.10 | 38.14 | 4,566.80 | 376.42 | 295.56 | 398.59 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 8.10 | 38.14 | 4,665.81 | 387.50 | 304.26 | 410.32 | 0.00 | 0.00 | 0.00 |

Anadarko Petroleum Corp

Planning Report

| | | | |
|------------------|-----------------------------------|-------------------------------------|----------------------|
| Database: | edmp | Local Co-ordinate Reference: | Well BADGER 11N-3HZ |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | gl + rkb @ 5149.00ft |
| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | gl + rkb @ 5149.00ft |
| Site: | WELD_Buffalo & Badger 4E-15HZ Pad | North Reference: | True |
| Well: | BADGER 11N-3HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | BADGER 11N-3HZ | | |
| Design: | BADGER 11N-3HZ (wp01) | | |

| Planned 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) |
| 4,792.11 | 8.10 | 38.14 | 4,757.00 | 397.70 | 312.27 | 421.12 | 0.00 | 0.00 | 0.00 |
| Sussex | | | | | | | | | |
| 4,800.00 | 8.10 | 38.14 | 4,764.81 | 398.58 | 312.96 | 422.05 | 0.00 | 0.00 | 0.00 |
| 4,900.00 | 8.10 | 38.14 | 4,863.81 | 409.65 | 321.65 | 433.78 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 8.10 | 38.14 | 4,962.81 | 420.73 | 330.35 | 445.51 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 8.10 | 38.14 | 5,061.82 | 431.81 | 339.05 | 457.24 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 8.10 | 38.14 | 5,160.82 | 442.89 | 347.75 | 468.97 | 0.00 | 0.00 | 0.00 |
| 5,266.85 | 8.10 | 38.14 | 5,227.00 | 450.29 | 353.56 | 476.81 | 0.00 | 0.00 | 0.00 |
| Shannon | | | | | | | | | |
| 5,300.00 | 8.10 | 38.14 | 5,259.82 | 453.97 | 356.45 | 480.70 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 8.10 | 38.14 | 5,358.83 | 465.04 | 365.15 | 492.43 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 8.10 | 38.14 | 5,457.83 | 476.12 | 373.84 | 504.16 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 8.10 | 38.14 | 5,556.83 | 487.20 | 382.54 | 515.89 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 8.10 | 38.14 | 5,655.84 | 498.28 | 391.24 | 527.62 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 8.10 | 38.14 | 5,754.84 | 509.36 | 399.94 | 539.35 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 8.10 | 38.14 | 5,853.84 | 520.43 | 408.64 | 551.08 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 8.10 | 38.14 | 5,952.85 | 531.51 | 417.34 | 562.81 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 8.10 | 38.14 | 6,051.85 | 542.59 | 426.03 | 574.54 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 8.10 | 38.14 | 6,150.85 | 553.67 | 434.73 | 586.27 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 8.10 | 38.14 | 6,249.86 | 564.75 | 443.43 | 598.00 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 8.10 | 38.14 | 6,348.86 | 575.82 | 452.13 | 609.73 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 8.10 | 38.14 | 6,447.86 | 586.90 | 460.83 | 621.46 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 8.10 | 38.14 | 6,546.86 | 597.98 | 469.53 | 633.19 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 8.10 | 38.14 | 6,645.87 | 609.06 | 478.22 | 644.92 | 0.00 | 0.00 | 0.00 |
| 6,800.00 | 8.10 | 38.14 | 6,744.87 | 620.14 | 486.92 | 656.65 | 0.00 | 0.00 | 0.00 |
| 6,900.00 | 8.10 | 38.14 | 6,843.87 | 631.21 | 495.62 | 668.38 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 8.10 | 38.14 | 6,942.88 | 642.29 | 504.32 | 680.11 | 0.00 | 0.00 | 0.00 |
| 7,100.00 | 8.10 | 38.14 | 7,041.88 | 653.37 | 513.02 | 691.84 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 8.10 | 38.14 | 7,140.88 | 664.45 | 521.71 | 703.57 | 0.00 | 0.00 | 0.00 |
| 7,205.01 | 8.10 | 38.14 | 7,145.84 | 665.00 | 522.15 | 704.16 | 0.00 | 0.00 | 0.00 |
| Start DLS 10.00 TFO -37.94 | | | | | | | | | |
| 7,300.00 | 16.64 | 17.39 | 7,238.58 | 683.29 | 530.36 | 723.04 | 10.00 | 8.99 | -21.85 |
| 7,400.00 | 26.34 | 10.59 | 7,331.53 | 718.85 | 538.74 | 759.15 | 10.00 | 9.70 | -6.80 |
| 7,500.00 | 36.20 | 7.30 | 7,416.91 | 770.08 | 546.59 | 810.84 | 10.00 | 9.86 | -3.29 |
| 7,600.00 | 46.11 | 5.28 | 7,492.11 | 835.41 | 553.68 | 876.53 | 10.00 | 9.91 | -2.02 |
| 7,602.73 | 46.38 | 5.23 | 7,494.00 | 837.37 | 553.86 | 878.50 | 10.00 | 9.93 | -1.66 |
| Sharon Springs | | | | | | | | | |
| 7,672.56 | 53.32 | 4.19 | 7,539.00 | 890.54 | 558.21 | 931.84 | 10.00 | 9.94 | -1.49 |
| Niobrara A | | | | | | | | | |
| 7,700.00 | 56.05 | 3.84 | 7,554.86 | 912.87 | 559.78 | 954.23 | 10.00 | 9.94 | -1.30 |
| 7,800.00 | 66.00 | 2.70 | 7,603.25 | 1,000.10 | 564.72 | 1,041.57 | 10.00 | 9.95 | -1.14 |
| 7,874.25 | 73.39 | 1.97 | 7,629.00 | 1,069.63 | 567.54 | 1,111.11 | 10.00 | 9.96 | -0.99 |
| Niobrara B | | | | | | | | | |
| 7,900.00 | 75.96 | 1.73 | 7,635.81 | 1,094.45 | 568.34 | 1,135.91 | 10.00 | 9.96 | -0.93 |
| 8,000.00 | 85.92 | 0.84 | 7,651.54 | 1,193.05 | 570.53 | 1,234.38 | 10.00 | 9.96 | -0.89 |
| 8,040.99 | 90.00 | 0.48 | 7,653.00 | 1,234.00 | 571.00 | 1,275.24 | 10.00 | 9.96 | -0.87 |
| Start 19.40 hold at 8040.99 MD - 7" | | | | | | | | | |
| 8,060.39 | 90.00 | 0.48 | 7,653.00 | 1,253.40 | 571.16 | 1,294.60 | 0.00 | 0.00 | 0.00 |
| Start 6658.95 hold at 8060.39 MD | | | | | | | | | |
| 8,100.00 | 90.00 | 0.48 | 7,653.00 | 1,293.01 | 571.49 | 1,334.10 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 90.00 | 0.48 | 7,653.00 | 1,393.01 | 572.33 | 1,433.85 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 90.00 | 0.48 | 7,653.00 | 1,493.00 | 573.17 | 1,533.60 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 90.00 | 0.48 | 7,653.00 | 1,593.00 | 574.01 | 1,633.35 | 0.00 | 0.00 | 0.00 |

Anadarko Petroleum Corp

Planning Report

| | | | |
|------------------|-----------------------------------|-------------------------------------|----------------------|
| Database: | edmp | Local Co-ordinate Reference: | Well BADGER 11N-3HZ |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | gl + rkb @ 5149.00ft |
| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | gl + rkb @ 5149.00ft |
| Site: | WELD_Buffalo & Badger 4E-15HZ Pad | North Reference: | True |
| Well: | BADGER 11N-3HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | BADGER 11N-3HZ | | |
| Design: | BADGER 11N-3HZ (wp01) | | |

| Planned 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) |
| 8,500.00 | 90.00 | 0.48 | 7,653.00 | 1,693.00 | 574.85 | 1,733.10 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 90.00 | 0.48 | 7,653.00 | 1,792.99 | 575.68 | 1,832.85 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 90.00 | 0.48 | 7,653.00 | 1,892.99 | 576.52 | 1,932.61 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 90.00 | 0.48 | 7,653.00 | 1,992.98 | 577.36 | 2,032.36 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 90.00 | 0.48 | 7,653.00 | 2,092.98 | 578.20 | 2,132.11 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 90.00 | 0.48 | 7,653.00 | 2,192.98 | 579.03 | 2,231.86 | 0.00 | 0.00 | 0.00 |
| 9,100.00 | 90.00 | 0.48 | 7,653.00 | 2,292.97 | 579.87 | 2,331.61 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 90.00 | 0.48 | 7,653.00 | 2,392.97 | 580.71 | 2,431.36 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 90.00 | 0.48 | 7,653.00 | 2,492.97 | 581.55 | 2,531.11 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 90.00 | 0.48 | 7,653.00 | 2,592.96 | 582.38 | 2,630.86 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 90.00 | 0.48 | 7,653.00 | 2,692.96 | 583.22 | 2,730.61 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 90.00 | 0.48 | 7,653.00 | 2,792.96 | 584.06 | 2,830.36 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 90.00 | 0.48 | 7,653.00 | 2,892.95 | 584.90 | 2,930.11 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 90.00 | 0.48 | 7,653.00 | 2,992.95 | 585.74 | 3,029.86 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 90.00 | 0.48 | 7,653.00 | 3,092.95 | 586.57 | 3,129.61 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 90.00 | 0.48 | 7,653.00 | 3,192.94 | 587.41 | 3,229.36 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 90.00 | 0.48 | 7,653.00 | 3,292.94 | 588.25 | 3,329.11 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 90.00 | 0.48 | 7,653.00 | 3,392.94 | 589.09 | 3,428.86 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 90.00 | 0.48 | 7,653.00 | 3,492.93 | 589.92 | 3,528.61 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 90.00 | 0.48 | 7,653.00 | 3,592.93 | 590.76 | 3,628.36 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 90.00 | 0.48 | 7,653.00 | 3,692.93 | 591.60 | 3,728.11 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 90.00 | 0.48 | 7,653.00 | 3,792.92 | 592.44 | 3,827.86 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 90.00 | 0.48 | 7,653.00 | 3,892.92 | 593.28 | 3,927.61 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 90.00 | 0.48 | 7,653.00 | 3,992.91 | 594.11 | 4,027.36 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 90.00 | 0.48 | 7,653.00 | 4,092.91 | 594.95 | 4,127.11 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 90.00 | 0.48 | 7,653.00 | 4,192.91 | 595.79 | 4,226.86 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 90.00 | 0.48 | 7,653.00 | 4,292.90 | 596.63 | 4,326.61 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 90.00 | 0.48 | 7,653.00 | 4,392.90 | 597.46 | 4,426.36 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 90.00 | 0.48 | 7,653.00 | 4,492.90 | 598.30 | 4,526.11 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 90.00 | 0.48 | 7,653.00 | 4,592.89 | 599.14 | 4,625.86 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 90.00 | 0.48 | 7,653.00 | 4,692.89 | 599.98 | 4,725.61 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 90.00 | 0.48 | 7,653.00 | 4,792.89 | 600.82 | 4,825.37 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 90.00 | 0.48 | 7,653.00 | 4,892.88 | 601.65 | 4,925.12 | 0.00 | 0.00 | 0.00 |
| 11,800.00 | 90.00 | 0.48 | 7,653.00 | 4,992.88 | 602.49 | 5,024.87 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 90.00 | 0.48 | 7,653.00 | 5,092.88 | 603.33 | 5,124.62 | 0.00 | 0.00 | 0.00 |
| 12,000.00 | 90.00 | 0.48 | 7,653.00 | 5,192.87 | 604.17 | 5,224.37 | 0.00 | 0.00 | 0.00 |
| 12,100.00 | 90.00 | 0.48 | 7,653.00 | 5,292.87 | 605.00 | 5,324.12 | 0.00 | 0.00 | 0.00 |
| 12,200.00 | 90.00 | 0.48 | 7,653.00 | 5,392.87 | 605.84 | 5,423.87 | 0.00 | 0.00 | 0.00 |
| 12,300.00 | 90.00 | 0.48 | 7,653.00 | 5,492.86 | 606.68 | 5,523.62 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 90.00 | 0.48 | 7,653.00 | 5,592.86 | 607.52 | 5,623.37 | 0.00 | 0.00 | 0.00 |
| 12,500.00 | 90.00 | 0.48 | 7,653.00 | 5,692.86 | 608.36 | 5,723.12 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 90.00 | 0.48 | 7,653.00 | 5,792.85 | 609.19 | 5,822.87 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 90.00 | 0.48 | 7,653.00 | 5,892.85 | 610.03 | 5,922.62 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 90.00 | 0.48 | 7,653.00 | 5,992.84 | 610.87 | 6,022.37 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.00 | 0.48 | 7,653.00 | 6,092.84 | 611.71 | 6,122.12 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.00 | 0.48 | 7,653.00 | 6,192.84 | 612.54 | 6,221.87 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.00 | 0.48 | 7,653.00 | 6,292.83 | 613.38 | 6,321.62 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.00 | 0.48 | 7,653.00 | 6,392.83 | 614.22 | 6,421.37 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.00 | 0.48 | 7,653.00 | 6,492.83 | 615.06 | 6,521.12 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.00 | 0.48 | 7,653.00 | 6,592.82 | 615.89 | 6,620.87 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.00 | 0.48 | 7,653.00 | 6,692.82 | 616.73 | 6,720.62 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.00 | 0.48 | 7,653.00 | 6,792.82 | 617.57 | 6,820.37 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 90.00 | 0.48 | 7,653.00 | 6,892.81 | 618.41 | 6,920.12 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 90.00 | 0.48 | 7,653.00 | 6,992.81 | 619.25 | 7,019.87 | 0.00 | 0.00 | 0.00 |

Anadarko Petroleum Corp

Planning Report

| | | | |
|------------------|-----------------------------------|-------------------------------------|----------------------|
| Database: | edmp | Local Co-ordinate Reference: | Well BADGER 11N-3HZ |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | gl + rkb @ 5149.00ft |
| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | gl + rkb @ 5149.00ft |
| Site: | WELD_Buffalo & Badger 4E-15HZ Pad | North Reference: | True |
| Well: | BADGER 11N-3HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | BADGER 11N-3HZ | | |
| Design: | BADGER 11N-3HZ (wp01) | | |

| Planned 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) |
| 13,900.00 | 90.00 | 0.48 | 7,653.00 | 7,092.81 | 620.08 | 7,119.62 | 0.00 | 0.00 | 0.00 |
| 14,000.00 | 90.00 | 0.48 | 7,653.00 | 7,192.80 | 620.92 | 7,219.37 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 90.00 | 0.48 | 7,653.00 | 7,292.80 | 621.76 | 7,319.12 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 90.00 | 0.48 | 7,653.00 | 7,392.80 | 622.60 | 7,418.87 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 90.00 | 0.48 | 7,653.00 | 7,492.79 | 623.43 | 7,518.62 | 0.00 | 0.00 | 0.00 |
| 14,400.00 | 90.00 | 0.48 | 7,653.00 | 7,592.79 | 624.27 | 7,618.38 | 0.00 | 0.00 | 0.00 |
| 14,500.00 | 90.00 | 0.48 | 7,653.00 | 7,692.79 | 625.11 | 7,718.13 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 90.00 | 0.48 | 7,653.00 | 7,792.78 | 625.95 | 7,817.88 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 90.00 | 0.48 | 7,653.00 | 7,892.78 | 626.79 | 7,917.63 | 0.00 | 0.00 | 0.00 |
| 14,719.34 | 90.00 | 0.48 | 7,653.00 | 7,912.12 | 626.82 | 7,936.91 | 0.00 | 0.00 | 0.00 |
| TD at 14719.34 - BADGER 11N-3HZ BHL | | | | | | | | | |

| Design Targets | | | | | | | | | |
|---------------------------|---------------|--------------|----------|------------|------------|-----------------|----------------|-----------|-------------|
| Target Name | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
| - hit/miss target | | | | | | | | | |
| - Shape | | | | | | | | | |
| BADGER 11N-3HZ BHL | 0.00 | 0.00 | 7,653.00 | 7,912.12 | 626.82 | 1,272,058.46 | 3,142,042.26 | 40.079075 | -104.992393 |
| - plan hits target center | | | | | | | | | |
| - Point | | | | | | | | | |

| Casing Points | | | | | |
|---------------------|---------------------|--------|---------------------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (") | Hole Diameter (") | |
| 900.00 | 900.00 | 9 5/8" | 9-5/8 | 12-1/4 | |
| 8,040.99 | 7,653.00 | 7" | 7 | 8-3/4 | |

| Formations | | | | | | |
|---------------------|---------------------|----------------|-----------|---------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) | |
| 4,341.62 | 4,311.00 | Parkman | | | | |
| 4,792.11 | 4,757.00 | Sussex | | | | |
| 5,266.85 | 5,227.00 | Shannon | | | | |
| 7,602.73 | 7,494.00 | Sharon Springs | | | | |
| 7,672.56 | 7,539.00 | Niobrara A | | | | |
| 7,874.25 | 7,629.00 | Niobrara B | | | | |

Anadarko Petroleum Corp

Planning Report

| | | | |
|------------------|-----------------------------------|-------------------------------------|----------------------|
| Database: | edmp | Local Co-ordinate Reference: | Well BADGER 11N-3HZ |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | gl + rkb @ 5149.00ft |
| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | gl + rkb @ 5149.00ft |
| Site: | WELD_Buffalo & Badger 4E-15HZ Pad | North Reference: | True |
| Well: | BADGER 11N-3HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | BADGER 11N-3HZ | | |
| Design: | BADGER 11N-3HZ (wp01) | | |

| Plan Annotations | | | | |
|---------------------------|---------------------------|-------------------|---------------|----------------------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
| | | +N/-S (ft) | +E/-W (ft) | |
| 1,000.00 | 1,000.00 | 0.00 | 0.00 | Start Build 2.00 |
| 1,404.85 | 1,403.50 | 22.46 | 17.64 | Start 5800.16 hold at 1404.85 MD |
| 7,205.01 | 7,145.84 | 665.00 | 522.15 | Start DLS 10.00 TFO -37.94 |
| 8,040.99 | 7,653.00 | 1,234.00 | 571.00 | Start 19.40 hold at 8040.99 MD |
| 8,060.39 | 7,653.00 | 1,253.40 | 571.16 | Start 6658.95 hold at 8060.39 MD |
| 14,719.34 | 7,653.00 | 7,912.12 | 626.82 | TD at 14719.34 |