

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_WARDELL 3 PAD

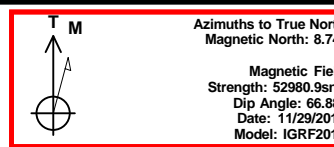
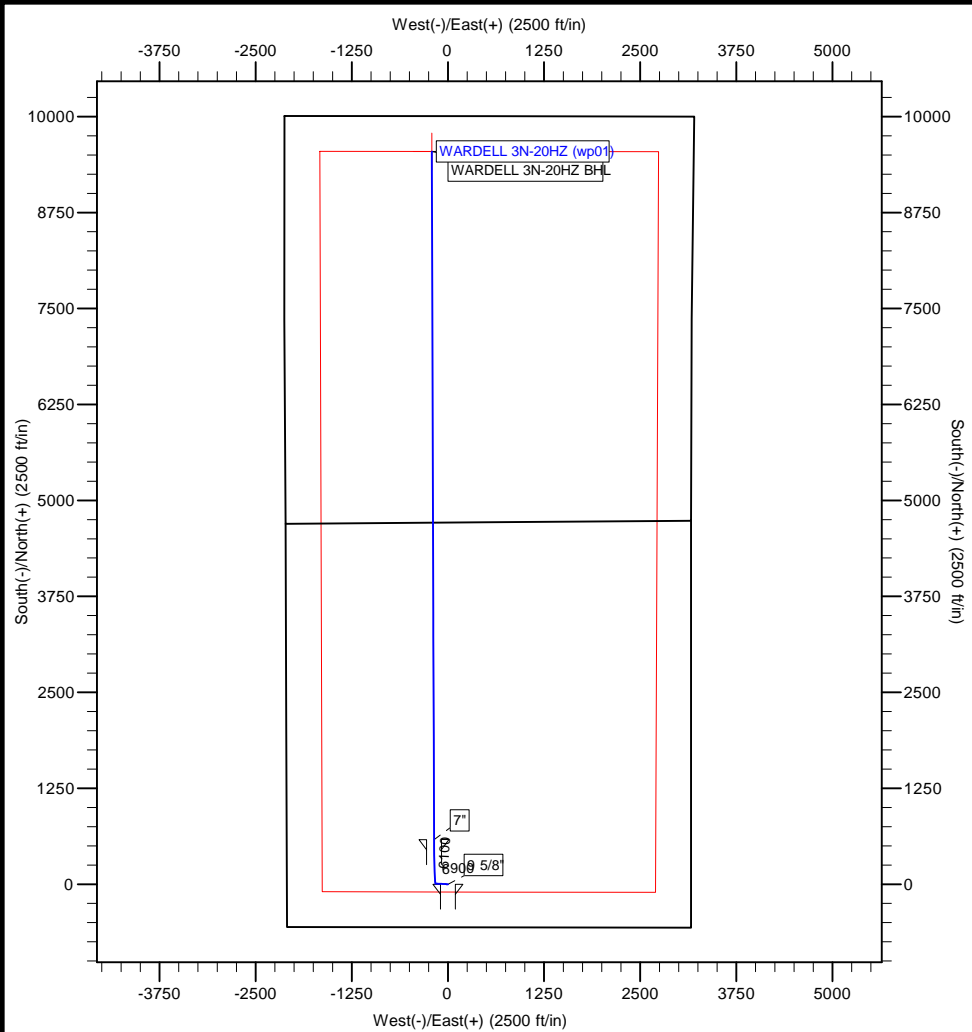
WARDELL 3N-20HZ

WARDELL 3N-20HZ

Plan: WARDELL 3N-20HZ (wp01)

Standard Planning Report

29 November, 2011



Project: COLORADO NORTHERN ZONE - 83
 Site: WELD WARDELL 3 PAD
 Well: WARDELL 3N-20HZ
 Wellbore: WARDELL 3N-20HZ
 Section:
 SHL:
 Design: WARDELL 3N-20HZ (wp01)
 Latitude: 40.190717
 Longitude: -104.689221
 GL: 4879.00
 KB: RKB + 4879 @ 4896.00ft

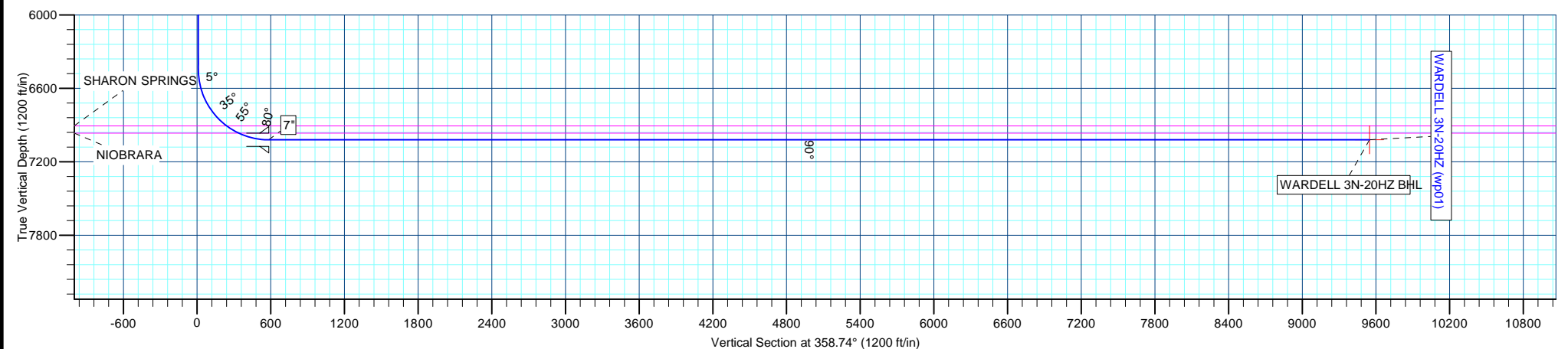
| WELL DETAILS: WARDELL 3N-20HZ | | | | | | |
|-------------------------------|-------|------------|--------------------------|---------------------|-------------|------|
| +N/-S | +E/-W | Northing | Ground Level: Easting | 4879.00 Latitude | Longitude | Slot |
| 0.00 | 0.00 | 1313356.32 | 3226504.27 | 40.190717 | -104.689221 | |

| 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 |
| 1100.00 | 0.00 | 0.00 | 1100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1187.36 | 1.75 | 272.52 | 1187.34 | 0.06 | -1.33 | 2.00 | 272.52 | 0.09 |
| 6451.59 | 1.75 | 272.52 | 6449.13 | 7.10 | -161.68 | 0.00 | 0.00 | 10.67 |
| 7350.77 | 90.00 | 359.81 | 7021.00 | 580.00 | -181.00 | 10.00 | 87.30 | 583.85 |
| 7369.09 | 90.00 | 359.81 | 7021.00 | 598.32 | -181.06 | 0.00 | 0.00 | 602.17 |
| 16315.80 | 90.00 | 359.81 | 7021.00 | 9544.98 | -210.56 | 0.00 | 0.00 | 9547.30 |

| WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG) | | | | | | | |
|---|---------|---------|---------|-----------|-------------|-------|--|
| Name | TVD | +N/-S | +E/-W | Latitude | Longitude | Shape | |
| WARDELL 3N-20HZ BHL | 7021.00 | 9544.98 | -210.56 | 40.216919 | -104.689975 | Point | |

| FORMATION TOP DETAILS | | |
|-----------------------|---------|----------------|
| TVDPath | MDPath | Formation |
| 3396.00 | 3397.04 | PARKMAN |
| 4118.00 | 4119.38 | SUSSEX |
| 4805.00 | 4806.70 | SHANNON |
| 6908.00 | 6984.64 | SHARON SPRINGS |
| 6966.00 | 7097.61 | NIOBRARA |

| CASING DETAILS | | | |
|----------------|---------|--------|-------|
| TVD | MD | Name | Size |
| 1000.00 | 1000.00 | 9 5/8" | 9-5/8 |
| 7021.00 | 7350.77 | 7" | 7 |



Anadarko Petroleum Corp

Planning Report

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|------------------|-----------------------------|-------------------------------------|------------------------|
| Database: | edmp | Local Co-ordinate Reference: | Well WARDELL 3N-20HZ |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | RKB + 4879 @ 4896.00ft |
| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | RKB + 4879 @ 4896.00ft |
| Site: | WELD_WARDELL 3 PAD | North Reference: | True |
| Well: | WARDELL 3N-20HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | WARDELL 3N-20HZ | | |
| Design: | WARDELL 3N-20HZ (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_WARDELL 3 PAD | | | |
| Site Position: | | Northing: | 1,313,356.25 usft | Latitude: 40.190716 |
| From: | Lat/Long | Easting: | 3,226,536.12 usft | Longitude: -104.689107 |
| Position Uncertainty: | 0.00 ft | Slot Radius: | 13-3/16 " | Grid Convergence: 0.52 ° |

| | | | | |
|-----------------------------|-----------------|-----------|----------------------------|----------------------------------|
| Well | WARDELL 3N-20HZ | | | |
| Well Position | +N/-S | 0.36 ft | Northing: | 1,313,356.32 usft |
| | +E/-W | -31.85 ft | Easting: | 3,226,504.27 usft |
| Position Uncertainty | | 0.00 ft | Wellhead Elevation: | Ground Level: 4,879.00 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | WARDELL 3N-20HZ | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 11/29/2011 | 8.74 | 66.88 | 52,981 |

| | | | | |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| Design | WARDELL 3N-20HZ (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 | 358.74 |

| 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 | |
| 1,100.00 | 0.00 | 0.00 | 1,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,187.36 | 1.75 | 272.52 | 1,187.34 | 0.06 | -1.33 | 2.00 | 2.00 | 0.00 | 272.52 | |
| 6,451.59 | 1.75 | 272.52 | 6,449.13 | 7.10 | -161.68 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7,350.77 | 90.00 | 359.81 | 7,021.00 | 580.00 | -181.00 | 10.00 | 9.81 | 9.71 | 87.30 | |
| 7,369.09 | 90.00 | 359.81 | 7,021.00 | 598.32 | -181.06 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 16,315.80 | 90.00 | 359.81 | 7,021.00 | 9,544.98 | -210.56 | 0.00 | 0.00 | 0.00 | 0.00 | WARDELL 3N-20HZ I |

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Planning Report

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|------------------|-----------------------------|-------------------------------------|------------------------|
| Database: | edmp | Local Co-ordinate Reference: | Well WARDELL 3N-20HZ |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | RKB + 4879 @ 4896.00ft |
| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | RKB + 4879 @ 4896.00ft |
| Site: | WELD_WARDELL 3 PAD | North Reference: | True |
| Well: | WARDELL 3N-20HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | WARDELL 3N-20HZ | | |
| Design: | WARDELL 3N-20HZ (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 |
| 1,000.00 | 0.00 | 0.00 | 1,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 5/8" | | | | | | | | | |
| 1,100.00 | 0.00 | 0.00 | 1,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,187.36 | 1.75 | 272.52 | 1,187.34 | 0.06 | -1.33 | 0.09 | 2.00 | 2.00 | 0.00 |
| 1,200.00 | 1.75 | 272.52 | 1,199.98 | 0.08 | -1.72 | 0.11 | 0.00 | 0.00 | 0.00 |
| 1,300.00 | 1.75 | 272.52 | 1,299.93 | 0.21 | -4.76 | 0.31 | 0.00 | 0.00 | 0.00 |
| 1,400.00 | 1.75 | 272.52 | 1,399.89 | 0.34 | -7.81 | 0.52 | 0.00 | 0.00 | 0.00 |
| 1,500.00 | 1.75 | 272.52 | 1,499.84 | 0.48 | -10.85 | 0.72 | 0.00 | 0.00 | 0.00 |
| 1,600.00 | 1.75 | 272.52 | 1,599.79 | 0.61 | -13.90 | 0.92 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 1.75 | 272.52 | 1,699.75 | 0.74 | -16.95 | 1.12 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 1.75 | 272.52 | 1,799.70 | 0.88 | -19.99 | 1.32 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 1.75 | 272.52 | 1,899.66 | 1.01 | -23.04 | 1.52 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 1.75 | 272.52 | 1,999.61 | 1.15 | -26.08 | 1.72 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 1.75 | 272.52 | 2,099.56 | 1.28 | -29.13 | 1.92 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 1.75 | 272.52 | 2,199.52 | 1.41 | -32.17 | 2.12 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 1.75 | 272.52 | 2,299.47 | 1.55 | -35.22 | 2.32 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 1.75 | 272.52 | 2,399.42 | 1.68 | -38.27 | 2.52 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 1.75 | 272.52 | 2,499.38 | 1.81 | -41.31 | 2.73 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 1.75 | 272.52 | 2,599.33 | 1.95 | -44.36 | 2.93 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 1.75 | 272.52 | 2,699.28 | 2.08 | -47.40 | 3.13 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 1.75 | 272.52 | 2,799.24 | 2.22 | -50.45 | 3.33 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 1.75 | 272.52 | 2,899.19 | 2.35 | -53.50 | 3.53 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 1.75 | 272.52 | 2,999.14 | 2.48 | -56.54 | 3.73 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 1.75 | 272.52 | 3,099.10 | 2.62 | -59.59 | 3.93 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 1.75 | 272.52 | 3,199.05 | 2.75 | -62.63 | 4.13 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 1.75 | 272.52 | 3,299.00 | 2.89 | -65.68 | 4.33 | 0.00 | 0.00 | 0.00 |
| 3,397.04 | 1.75 | 272.52 | 3,396.00 | 3.02 | -68.64 | 4.53 | 0.00 | 0.00 | 0.00 |
| PARKMAN | | | | | | | | | |
| 3,400.00 | 1.75 | 272.52 | 3,398.96 | 3.02 | -68.73 | 4.53 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 1.75 | 272.52 | 3,498.91 | 3.15 | -71.77 | 4.74 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 1.75 | 272.52 | 3,598.86 | 3.29 | -74.82 | 4.94 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 1.75 | 272.52 | 3,698.82 | 3.42 | -77.86 | 5.14 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 1.75 | 272.52 | 3,798.77 | 3.55 | -80.91 | 5.34 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 1.75 | 272.52 | 3,898.73 | 3.69 | -83.96 | 5.54 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 1.75 | 272.52 | 3,998.68 | 3.82 | -87.00 | 5.74 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 1.75 | 272.52 | 4,098.63 | 3.96 | -90.05 | 5.94 | 0.00 | 0.00 | 0.00 |
| 4,119.38 | 1.75 | 272.52 | 4,118.00 | 3.98 | -90.64 | 5.98 | 0.00 | 0.00 | 0.00 |
| SUSSEX | | | | | | | | | |
| 4,200.00 | 1.75 | 272.52 | 4,198.59 | 4.09 | -93.09 | 6.14 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 1.75 | 272.52 | 4,298.54 | 4.22 | -96.14 | 6.34 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 1.75 | 272.52 | 4,398.49 | 4.36 | -99.19 | 6.54 | 0.00 | 0.00 | 0.00 |
| 4,500.00 | 1.75 | 272.52 | 4,498.45 | 4.49 | -102.23 | 6.74 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 1.75 | 272.52 | 4,598.40 | 4.62 | -105.28 | 6.95 | 0.00 | 0.00 | 0.00 |

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Planning Report

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|------------------|-----------------------------|-------------------------------------|------------------------|
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| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | RKB + 4879 @ 4896.00ft |
| Site: | WELD_WARDELL 3 PAD | North Reference: | True |
| Well: | WARDELL 3N-20HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | WARDELL 3N-20HZ | | |
| Design: | WARDELL 3N-20HZ (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) |
| 4,700.00 | 1.75 | 272.52 | 4,698.35 | 4.76 | -108.32 | 7.15 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 1.75 | 272.52 | 4,798.31 | 4.89 | -111.37 | 7.35 | 0.00 | 0.00 | 0.00 |
| 4,806.70 | 1.75 | 272.52 | 4,805.00 | 4.90 | -111.57 | 7.36 | 0.00 | 0.00 | 0.00 |
| SHANNON | | | | | | | | | |
| 4,900.00 | 1.75 | 272.52 | 4,898.26 | 5.03 | -114.42 | 7.55 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 1.75 | 272.52 | 4,998.21 | 5.16 | -117.46 | 7.75 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 1.75 | 272.52 | 5,098.17 | 5.29 | -120.51 | 7.95 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 1.75 | 272.52 | 5,198.12 | 5.43 | -123.55 | 8.15 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 1.75 | 272.52 | 5,298.07 | 5.56 | -126.60 | 8.35 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 1.75 | 272.52 | 5,398.03 | 5.70 | -129.65 | 8.55 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 1.75 | 272.52 | 5,497.98 | 5.83 | -132.69 | 8.75 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 1.75 | 272.52 | 5,597.94 | 5.96 | -135.74 | 8.96 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 1.75 | 272.52 | 5,697.89 | 6.10 | -138.78 | 9.16 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 1.75 | 272.52 | 5,797.84 | 6.23 | -141.83 | 9.36 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 1.75 | 272.52 | 5,897.80 | 6.36 | -144.87 | 9.56 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 1.75 | 272.52 | 5,997.75 | 6.50 | -147.92 | 9.76 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 1.75 | 272.52 | 6,097.70 | 6.63 | -150.97 | 9.96 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 1.75 | 272.52 | 6,197.66 | 6.77 | -154.01 | 10.16 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 1.75 | 272.52 | 6,297.61 | 6.90 | -157.06 | 10.36 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 1.75 | 272.52 | 6,397.56 | 7.03 | -160.10 | 10.56 | 0.00 | 0.00 | 0.00 |
| 6,451.59 | 1.75 | 272.52 | 6,449.13 | 7.10 | -161.68 | 10.67 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 5.22 | 340.34 | 6,497.46 | 9.21 | -163.16 | 12.81 | 10.00 | 7.18 | 140.11 |
| 6,600.00 | 15.02 | 353.29 | 6,595.79 | 26.41 | -166.21 | 30.07 | 10.00 | 9.80 | 12.95 |
| 6,700.00 | 24.98 | 356.06 | 6,689.64 | 60.44 | -169.18 | 64.15 | 10.00 | 9.96 | 2.77 |
| 6,800.00 | 34.96 | 357.31 | 6,776.16 | 110.25 | -171.98 | 114.01 | 10.00 | 9.98 | 1.25 |
| 6,900.00 | 44.95 | 358.06 | 6,852.72 | 174.33 | -174.53 | 178.14 | 10.00 | 9.99 | 0.75 |
| WARDELL 3N-20HZ heel | | | | | | | | | |
| 6,984.64 | 53.41 | 358.51 | 6,908.00 | 238.30 | -176.42 | 242.13 | 10.00 | 9.99 | 0.53 |
| SHARON SPRINGS | | | | | | | | | |
| 7,000.00 | 54.94 | 358.58 | 6,916.99 | 250.75 | -176.74 | 254.58 | 10.00 | 9.99 | 0.46 |
| 7,097.61 | 64.70 | 358.98 | 6,966.00 | 335.00 | -178.51 | 338.86 | 10.00 | 9.99 | 0.41 |
| NIOBRARA | | | | | | | | | |
| 7,100.00 | 64.94 | 358.99 | 6,967.02 | 337.17 | -178.55 | 341.02 | 10.00 | 9.99 | 0.37 |
| 7,200.00 | 74.93 | 359.34 | 7,001.29 | 430.97 | -179.91 | 434.83 | 10.00 | 9.99 | 0.35 |
| 7,300.00 | 84.93 | 359.65 | 7,018.75 | 529.30 | -180.76 | 533.16 | 10.00 | 10.00 | 0.32 |
| 7,350.77 | 90.00 | 359.81 | 7,021.00 | 580.00 | -181.00 | 583.85 | 10.00 | 10.00 | 0.31 |
| 7" | | | | | | | | | |
| 7,369.09 | 90.00 | 359.81 | 7,021.00 | 598.32 | -181.06 | 602.17 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 90.00 | 359.81 | 7,021.00 | 629.23 | -181.16 | 633.07 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 90.00 | 359.81 | 7,021.00 | 729.23 | -181.49 | 733.06 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 90.00 | 359.81 | 7,021.00 | 829.23 | -181.83 | 833.04 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 90.00 | 359.81 | 7,021.00 | 929.23 | -182.16 | 933.02 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 90.00 | 359.81 | 7,021.00 | 1,029.23 | -182.49 | 1,033.00 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 90.00 | 359.81 | 7,021.00 | 1,129.23 | -182.82 | 1,132.99 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 90.00 | 359.81 | 7,021.00 | 1,229.23 | -183.15 | 1,232.97 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 90.00 | 359.81 | 7,021.00 | 1,329.23 | -183.48 | 1,332.95 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 90.00 | 359.81 | 7,021.00 | 1,429.23 | -183.82 | 1,432.93 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 90.00 | 359.81 | 7,021.00 | 1,529.23 | -184.15 | 1,532.92 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 90.00 | 359.81 | 7,021.00 | 1,629.23 | -184.48 | 1,632.90 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 90.00 | 359.81 | 7,021.00 | 1,729.22 | -184.81 | 1,732.88 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 90.00 | 359.81 | 7,021.00 | 1,829.22 | -185.14 | 1,832.86 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 90.00 | 359.81 | 7,021.00 | 1,929.22 | -185.47 | 1,932.84 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 90.00 | 359.81 | 7,021.00 | 2,029.22 | -185.81 | 2,032.83 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 90.00 | 359.81 | 7,021.00 | 2,129.22 | -186.14 | 2,132.81 | 0.00 | 0.00 | 0.00 |

Anadarko Petroleum Corp

Planning Report

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|------------------|-----------------------------|-------------------------------------|------------------------|
| Database: | edmp | Local Co-ordinate Reference: | Well WARDELL 3N-20HZ |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | RKB + 4879 @ 4896.00ft |
| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | RKB + 4879 @ 4896.00ft |
| Site: | WELD_WARDELL 3 PAD | North Reference: | True |
| Well: | WARDELL 3N-20HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | WARDELL 3N-20HZ | | |
| Design: | WARDELL 3N-20HZ (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) |
| 9,000.00 | 90.00 | 359.81 | 7,021.00 | 2,229.22 | -186.47 | 2,232.79 | 0.00 | 0.00 | 0.00 |
| 9,100.00 | 90.00 | 359.81 | 7,021.00 | 2,329.22 | -186.80 | 2,332.77 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 90.00 | 359.81 | 7,021.00 | 2,429.22 | -187.13 | 2,432.76 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 90.00 | 359.81 | 7,021.00 | 2,529.22 | -187.46 | 2,532.74 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 90.00 | 359.81 | 7,021.00 | 2,629.22 | -187.80 | 2,632.72 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 90.00 | 359.81 | 7,021.00 | 2,729.22 | -188.13 | 2,732.70 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 90.00 | 359.81 | 7,021.00 | 2,829.22 | -188.46 | 2,832.69 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 90.00 | 359.81 | 7,021.00 | 2,929.22 | -188.79 | 2,932.67 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 90.00 | 359.81 | 7,021.00 | 3,029.22 | -189.12 | 3,032.65 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 90.00 | 359.81 | 7,021.00 | 3,129.22 | -189.45 | 3,132.63 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 90.00 | 359.81 | 7,021.00 | 3,229.22 | -189.79 | 3,232.62 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 90.00 | 359.81 | 7,021.00 | 3,329.22 | -190.12 | 3,332.60 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 90.00 | 359.81 | 7,021.00 | 3,429.22 | -190.45 | 3,432.58 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 90.00 | 359.81 | 7,021.00 | 3,529.21 | -190.78 | 3,532.56 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 90.00 | 359.81 | 7,021.00 | 3,629.21 | -191.11 | 3,632.55 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 90.00 | 359.81 | 7,021.00 | 3,729.21 | -191.44 | 3,732.53 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 90.00 | 359.81 | 7,021.00 | 3,829.21 | -191.77 | 3,832.51 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 90.00 | 359.81 | 7,021.00 | 3,929.21 | -192.11 | 3,932.49 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 90.00 | 359.81 | 7,021.00 | 4,029.21 | -192.44 | 4,032.48 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 90.00 | 359.81 | 7,021.00 | 4,129.21 | -192.77 | 4,132.46 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 90.00 | 359.81 | 7,021.00 | 4,229.21 | -193.10 | 4,232.44 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 90.00 | 359.81 | 7,021.00 | 4,329.21 | -193.43 | 4,332.42 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 90.00 | 359.81 | 7,021.00 | 4,429.21 | -193.76 | 4,432.41 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 90.00 | 359.81 | 7,021.00 | 4,529.21 | -194.10 | 4,532.39 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 90.00 | 359.81 | 7,021.00 | 4,629.21 | -194.43 | 4,632.37 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 90.00 | 359.81 | 7,021.00 | 4,729.21 | -194.76 | 4,732.35 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 90.00 | 359.81 | 7,021.00 | 4,829.21 | -195.09 | 4,832.34 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 90.00 | 359.81 | 7,021.00 | 4,929.21 | -195.42 | 4,932.32 | 0.00 | 0.00 | 0.00 |
| 11,800.00 | 90.00 | 359.81 | 7,021.00 | 5,029.21 | -195.75 | 5,032.30 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 90.00 | 359.81 | 7,021.00 | 5,129.21 | -196.09 | 5,132.28 | 0.00 | 0.00 | 0.00 |
| 12,000.00 | 90.00 | 359.81 | 7,021.00 | 5,229.21 | -196.42 | 5,232.27 | 0.00 | 0.00 | 0.00 |
| 12,100.00 | 90.00 | 359.81 | 7,021.00 | 5,329.20 | -196.75 | 5,332.25 | 0.00 | 0.00 | 0.00 |
| 12,200.00 | 90.00 | 359.81 | 7,021.00 | 5,429.20 | -197.08 | 5,432.23 | 0.00 | 0.00 | 0.00 |
| 12,300.00 | 90.00 | 359.81 | 7,021.00 | 5,529.20 | -197.41 | 5,532.21 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 90.00 | 359.81 | 7,021.00 | 5,629.20 | -197.74 | 5,632.20 | 0.00 | 0.00 | 0.00 |
| 12,500.00 | 90.00 | 359.81 | 7,021.00 | 5,729.20 | -198.08 | 5,732.18 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 90.00 | 359.81 | 7,021.00 | 5,829.20 | -198.41 | 5,832.16 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 90.00 | 359.81 | 7,021.00 | 5,929.20 | -198.74 | 5,932.14 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 90.00 | 359.81 | 7,021.00 | 6,029.20 | -199.07 | 6,032.13 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.00 | 359.81 | 7,021.00 | 6,129.20 | -199.40 | 6,132.11 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.00 | 359.81 | 7,021.00 | 6,229.20 | -199.73 | 6,232.09 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.00 | 359.81 | 7,021.00 | 6,329.20 | -200.06 | 6,332.07 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.00 | 359.81 | 7,021.00 | 6,429.20 | -200.40 | 6,432.05 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.00 | 359.81 | 7,021.00 | 6,529.20 | -200.73 | 6,532.04 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.00 | 359.81 | 7,021.00 | 6,629.20 | -201.06 | 6,632.02 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.00 | 359.81 | 7,021.00 | 6,729.20 | -201.39 | 6,732.00 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.00 | 359.81 | 7,021.00 | 6,829.20 | -201.72 | 6,831.98 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 90.00 | 359.81 | 7,021.00 | 6,929.20 | -202.05 | 6,931.97 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 90.00 | 359.81 | 7,021.00 | 7,029.20 | -202.39 | 7,031.95 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 90.00 | 359.81 | 7,021.00 | 7,129.20 | -202.72 | 7,131.93 | 0.00 | 0.00 | 0.00 |
| 14,000.00 | 90.00 | 359.81 | 7,021.00 | 7,229.19 | -203.05 | 7,231.91 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 90.00 | 359.81 | 7,021.00 | 7,329.19 | -203.38 | 7,331.90 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 90.00 | 359.81 | 7,021.00 | 7,429.19 | -203.71 | 7,431.88 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 90.00 | 359.81 | 7,021.00 | 7,529.19 | -204.04 | 7,531.86 | 0.00 | 0.00 | 0.00 |

Anadarko Petroleum Corp

Planning Report

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|------------------|-----------------------------|-------------------------------------|------------------------|
| Database: | edmp | Local Co-ordinate Reference: | Well WARDELL 3N-20HZ |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | RKB + 4879 @ 4896.00ft |
| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | RKB + 4879 @ 4896.00ft |
| Site: | WELD_WARDELL 3 PAD | North Reference: | True |
| Well: | WARDELL 3N-20HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | WARDELL 3N-20HZ | | |
| Design: | WARDELL 3N-20HZ (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) |
| 14,400.00 | 90.00 | 359.81 | 7,021.00 | 7,629.19 | -204.38 | 7,631.84 | 0.00 | 0.00 | 0.00 |
| 14,500.00 | 90.00 | 359.81 | 7,021.00 | 7,729.19 | -204.71 | 7,731.83 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 90.00 | 359.81 | 7,021.00 | 7,829.19 | -205.04 | 7,831.81 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 90.00 | 359.81 | 7,021.00 | 7,929.19 | -205.37 | 7,931.79 | 0.00 | 0.00 | 0.00 |
| 14,800.00 | 90.00 | 359.81 | 7,021.00 | 8,029.19 | -205.70 | 8,031.77 | 0.00 | 0.00 | 0.00 |
| 14,900.00 | 90.00 | 359.81 | 7,021.00 | 8,129.19 | -206.03 | 8,131.76 | 0.00 | 0.00 | 0.00 |
| 15,000.00 | 90.00 | 359.81 | 7,021.00 | 8,229.19 | -206.37 | 8,231.74 | 0.00 | 0.00 | 0.00 |
| 15,100.00 | 90.00 | 359.81 | 7,021.00 | 8,329.19 | -206.70 | 8,331.72 | 0.00 | 0.00 | 0.00 |
| 15,200.00 | 90.00 | 359.81 | 7,021.00 | 8,429.19 | -207.03 | 8,431.70 | 0.00 | 0.00 | 0.00 |
| 15,300.00 | 90.00 | 359.81 | 7,021.00 | 8,529.19 | -207.36 | 8,531.69 | 0.00 | 0.00 | 0.00 |
| 15,400.00 | 90.00 | 359.81 | 7,021.00 | 8,629.19 | -207.69 | 8,631.67 | 0.00 | 0.00 | 0.00 |
| 15,500.00 | 90.00 | 359.81 | 7,021.00 | 8,729.19 | -208.02 | 8,731.65 | 0.00 | 0.00 | 0.00 |
| 15,600.00 | 90.00 | 359.81 | 7,021.00 | 8,829.19 | -208.36 | 8,831.63 | 0.00 | 0.00 | 0.00 |
| 15,700.00 | 90.00 | 359.81 | 7,021.00 | 8,929.19 | -208.69 | 8,931.62 | 0.00 | 0.00 | 0.00 |
| 15,800.00 | 90.00 | 359.81 | 7,021.00 | 9,029.18 | -209.02 | 9,031.60 | 0.00 | 0.00 | 0.00 |
| 15,900.00 | 90.00 | 359.81 | 7,021.00 | 9,129.18 | -209.35 | 9,131.58 | 0.00 | 0.00 | 0.00 |
| 16,000.00 | 90.00 | 359.81 | 7,021.00 | 9,229.18 | -209.68 | 9,231.56 | 0.00 | 0.00 | 0.00 |
| 16,100.00 | 90.00 | 359.81 | 7,021.00 | 9,329.18 | -210.01 | 9,331.55 | 0.00 | 0.00 | 0.00 |
| 16,200.00 | 90.00 | 359.81 | 7,021.00 | 9,429.18 | -210.34 | 9,431.53 | 0.00 | 0.00 | 0.00 |
| 16,300.00 | 90.00 | 359.81 | 7,021.00 | 9,529.18 | -210.68 | 9,531.51 | 0.00 | 0.00 | 0.00 |
| 16,315.80 | 90.00 | 359.81 | 7,021.00 | 9,544.98 | -210.56 | 9,547.30 | 0.00 | 0.00 | 0.00 |
| WARDELL 3N-20HZ BHL | | | | | | | | | |

| Design Targets | | | | | | | | | |
|---------------------------|---------------|--------------|----------|------------|------------|-----------------|----------------|-----------|-------------|
| Target Name | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
| WARDELL 3N-20HZ BH | 0.00 | 0.00 | 7,021.00 | 9,544.98 | -210.56 | 1,322,898.96 | 3,226,206.45 | 40.216919 | -104.689975 |
| - hit/miss target | | | | | | | | | |
| - Shape | | | | | | | | | |
| - plan hits target center | | | | | | | | | |
| - Point | | | | | | | | | |

| Casing Points | | | | | |
|---------------------|---------------------|--------|---------------------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (") | Hole Diameter (") | |
| 1,000.00 | 1,000.00 | 9 5/8" | 9-5/8 | 12-1/4 | |
| 7,350.77 | 7,021.00 | 7" | 7 | 8-3/4 | |

| Formations | | | | | |
|---------------------|---------------------|----------------|-----------|---------|-------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) |
| 3,397.04 | 3,396.00 | PARKMAN | | 0.00 | |
| 4,119.38 | 4,118.00 | SUSSEX | | 0.00 | |
| 4,806.70 | 4,805.00 | SHANNON | | 0.00 | |
| 6,984.64 | 6,908.00 | SHARON SPRINGS | | 0.00 | |
| 7,097.61 | 6,966.00 | NIOBRARA | | 0.00 | |

Anadarko Petroleum Corp

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| Design: | WARDELL 3N-20HZ (wp01) | | |