

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
3N-65W-33 CANNON 1-33HZ
CANNON 2N-9HZ**

Plan A

Plan: Permit Rev-1

Standard Planning Report

16 November, 2016

Azimuths to True North
 Magnetic North: 8.07°
 Magnetic Field
 Strength: 52465.8snT
 Dip Angle: 66.71°
 Date: 10/26/2016
 Model: IGRF2010

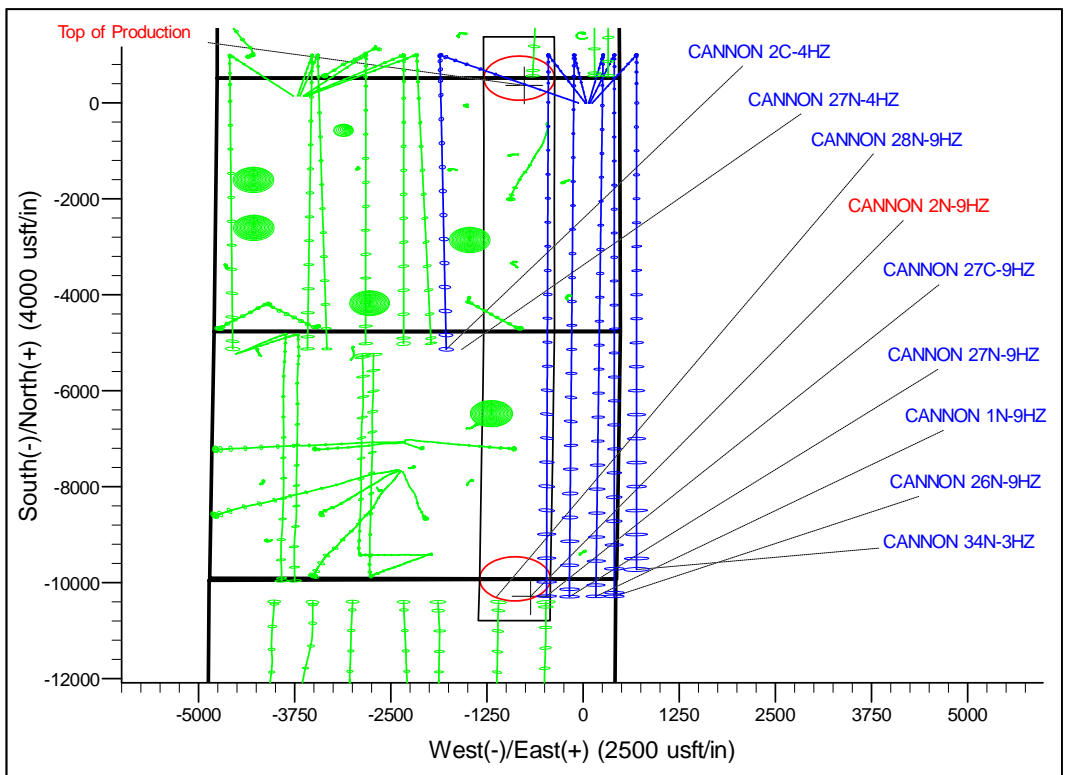
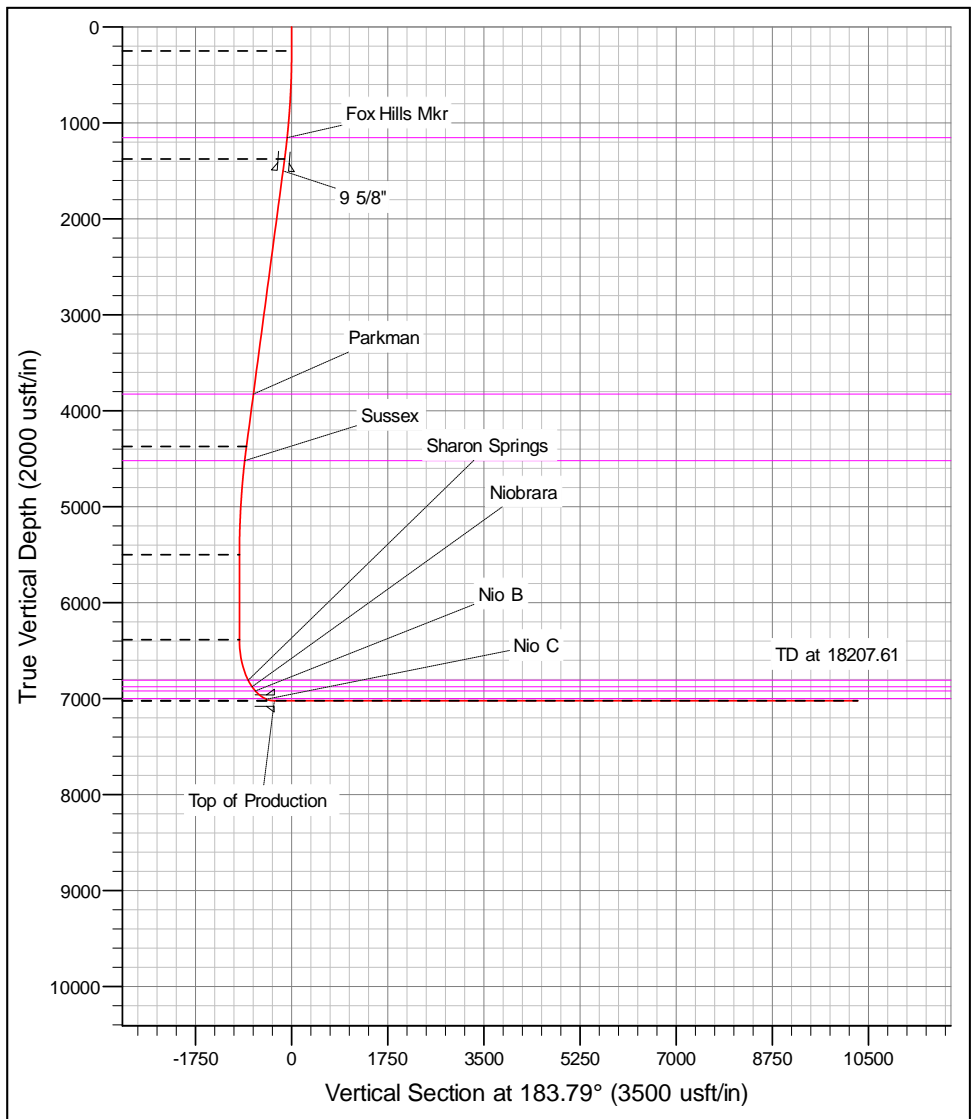
SITE: 3N-65W-33 CANNON 1-33HZ
 Well: CANNON 2N-9HZ
 Wellbore: Plan A
 Design: Permit Rev-1

| FORMATION TOP DETAILS | | |
|-----------------------|---------|----------------|
| TVDPath | MDPath | Formation |
| 1155.00 | 1163.69 | Fox Hills Mkr |
| 3827.00 | 3957.99 | Parkman |
| 4520.00 | 4682.34 | Sussex |
| 6810.00 | 7022.96 | Sharon Springs |
| 6877.00 | 7113.38 | Niobrara |
| 6921.00 | 7193.59 | Nio B |
| 7007.00 | 7413.35 | Nio C |

| WELL DETAILS: CANNON 2N-9HZ | | | | | | |
|-----------------------------|-------|-------------|---------------------------|-----------|-------------|------|
| +N/-S | +E/-W | GL: 4835.00 | RKB @ 4852.00usft (D Rig) | North | South | Slot |
| | | Northing | Easting | Latitude | Longitude | |
| 0.00 | 0.00 | 14595279.53 | 1735125.36 | 40.187741 | -104.660886 | |

| SECTION DETAILS | | | | | | | |
|-----------------|-------|--------|---------|-----------|---------|------|---------|
| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | VSect |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 250.00 | 0.00 | 0.00 | 250.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1393.15 | 17.15 | 322.49 | 1376.16 | 134.67 | -103.39 | 1.50 | -127.55 |
| 4530.27 | 17.15 | 322.49 | 4373.84 | 868.33 | -666.61 | 0.00 | -822.41 |
| 5673.42 | 0.00 | 0.00 | 5500.00 | 1003.00 | -770.00 | 1.50 | -949.96 |
| 6560.80 | 0.00 | 0.00 | 6387.38 | 1003.00 | -770.00 | 0.00 | -949.96 |
| 7560.80 | 90.00 | 179.55 | 7024.00 | 366.40 | -764.94 | 9.00 | -315.08 |
| 18207.61 | 90.00 | 179.55 | 7024.00 | -10280.07 | -680.40 | 0.00 | 0302.56 |

| DESIGN TARGET DETAILS | | | | | | | |
|-----------------------|---------|-----------|---------|-------------|------------|-----------|-------------|
| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
| CANNON 2N-9HZ_PBHL | 7024.00 | -10280.07 | -680.40 | 14584996.94 | 1734484.23 | 40.159511 | -104.663321 |



Corporate Planning Report

| | | | |
|------------------|--------------------------------|-------------------------------------|---------------------------|
| Database: | PLANNING | Local Co-ordinate Reference: | Well CANNON 2N-9HZ |
| Company: | US ROCKIES WATTENBERG PLANNING | TVD Reference: | RKB @ 4852.00usft (D Rig) |
| Project: | WELD-NAD83-UTMFT13N | MD Reference: | RKB @ 4852.00usft (D Rig) |
| Site: | 3N-65W-33 CANNON 1-33HZ | North Reference: | True |
| Well: | CANNON 2N-9HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Plan A | | |
| Design: | Permit Rev-1 | | |

| | | | |
|--------------------|--|----------------------|----------------|
| Project | WELD-NAD83-UTMFT13N | | |
| Map System: | Universal Transverse Mercator (US Survey Feet) | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Zone 13N (108 W to 102 W) | | |

| | | | |
|------------------------------|-------------------------|--------------------------|--------------------|
| Site | 3N-65W-33 CANNON 1-33HZ | | |
| Site Position: | | Northing: | 14,595,280.03 usft |
| From: | Lat/Long | Easting: | 1,735,065.31 usft |
| Position Uncertainty: | 0.00 usft | Slot Radius: | 13-3/16 " |
| | | Latitude: | 40.187743 |
| | | Longitude: | -104.661101 |
| | | Grid Convergence: | 0.22 ° |

| | | | | | | |
|-----------------------------|---------------|------------|----------------------------|--------------------|----------------------|---------------|
| Well | CANNON 2N-9HZ | | | | | |
| Well Position | +N-S | -0.73 usft | Northing: | 14,595,279.53 usft | Latitude: | 40.187741 |
| | +E-W | 60.05 usft | Easting: | 1,735,125.36 usft | Longitude: | -104.660886 |
| Position Uncertainty | | 3.28 usft | Wellhead Elevation: | 0.00 usft | Ground Level: | 4,835.00 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Plan A | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 10/26/2016 | 8.07 | 66.71 | 52,465.80197698 |

| | | | | |
|--------------------------|--------------------------------|--------------------|----------------------|----------------------|
| Design | Permit Rev-1 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PROTOTYPE | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (usft) | +N-S (usft) | +E-W (usft) | Direction (°) |
| | 0.00 | 0.00 | 0.00 | 183.79 |

| | | | | | |
|---------------------------------|------------------------|--------------------------|-----------------------|---|--|
| Plan Survey Tool Program | Date | 11/16/2016 | | | |
| Depth From (usft) | Depth To (usft) | Survey (Wellbore) | Tool Name | Remarks | |
| 1 | 0.00 | 18,207.61 | Permit Rev-1 (Plan A) | APC_ISCWSA REV 2 MWI Fixed:v2:Rockies, crustal dex | |

| Plan Sections | | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|-------------|-------------|-------------------------|------------------------|-----------------------|---------|----------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N-S (usft) | +E-W (usft) | 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 | |
| 250.00 | 0.00 | 0.00 | 250.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,393.15 | 17.15 | 322.49 | 1,376.16 | 134.67 | -103.39 | 1.50 | 1.50 | 0.00 | 322.49 | |
| 4,530.27 | 17.15 | 322.49 | 4,373.84 | 868.33 | -666.61 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,673.42 | 0.00 | 0.00 | 5,500.00 | 1,003.00 | -770.00 | 1.50 | -1.50 | 0.00 | 180.00 | |
| 6,560.80 | 0.00 | 0.00 | 6,387.38 | 1,003.00 | -770.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7,560.80 | 90.00 | 179.55 | 7,024.00 | 366.40 | -764.94 | 9.00 | 9.00 | 0.00 | 179.55 | |
| 18,207.61 | 90.00 | 179.55 | 7,024.00 | -10,280.07 | -680.40 | 0.00 | 0.00 | 0.00 | 0.00 | CANNON 2N-9HZ_ |

Corporate Planning Report

| | | | |
|------------------|--------------------------------|-------------------------------------|---------------------------|
| Database: | PLANNING | Local Co-ordinate Reference: | Well CANNON 2N-9HZ |
| Company: | US ROCKIES WATTENBERG PLANNING | TVD Reference: | RKB @ 4852.00usft (D Rig) |
| Project: | WELD-NAD83-UTMFT13N | MD Reference: | RKB @ 4852.00usft (D Rig) |
| Site: | 3N-65W-33 CANNON 1-33HZ | North Reference: | True |
| Well: | CANNON 2N-9HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Plan A | | |
| Design: | Permit Rev-1 | | |

| Planned Survey | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|-------------|-------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/S (usft) | +E/W (usft) | Vertical Section (usft) | 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 |
| 250.00 | 0.00 | 0.00 | 250.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 300.00 | 0.75 | 322.49 | 300.00 | 0.26 | -0.20 | -0.25 | 1.50 | 1.50 | 0.00 |
| 400.00 | 2.25 | 322.49 | 399.96 | 2.34 | -1.79 | -2.21 | 1.50 | 1.50 | 0.00 |
| 500.00 | 3.75 | 322.49 | 499.82 | 6.49 | -4.98 | -6.14 | 1.50 | 1.50 | 0.00 |
| 600.00 | 5.25 | 322.49 | 599.51 | 12.71 | -9.76 | -12.04 | 1.50 | 1.50 | 0.00 |
| 700.00 | 6.75 | 322.49 | 698.96 | 21.00 | -16.12 | -19.89 | 1.50 | 1.50 | 0.00 |
| 800.00 | 8.25 | 322.49 | 798.10 | 31.35 | -24.07 | -29.70 | 1.50 | 1.50 | 0.00 |
| 900.00 | 9.75 | 322.49 | 896.87 | 43.76 | -33.60 | -41.45 | 1.50 | 1.50 | 0.00 |
| 1,000.00 | 11.25 | 322.49 | 995.19 | 58.22 | -44.69 | -55.14 | 1.50 | 1.50 | 0.00 |
| 1,100.00 | 12.75 | 322.49 | 1,093.00 | 74.71 | -57.35 | -70.76 | 1.50 | 1.50 | 0.00 |
| 1,163.69 | 13.71 | 322.49 | 1,155.00 | 86.27 | -66.23 | -81.71 | 1.50 | 1.50 | 0.00 |
| Fox Hills Mkr | | | | | | | | | |
| 1,200.00 | 14.25 | 322.49 | 1,190.24 | 93.23 | -71.57 | -88.30 | 1.50 | 1.50 | 0.00 |
| 1,300.00 | 15.75 | 322.49 | 1,286.83 | 113.75 | -87.33 | -107.74 | 1.50 | 1.50 | 0.00 |
| 1,393.15 | 17.15 | 322.49 | 1,376.16 | 134.67 | -103.39 | -127.55 | 1.50 | 1.50 | 0.00 |
| 1,400.00 | 17.15 | 322.49 | 1,382.71 | 136.28 | -104.62 | -129.07 | 0.00 | 0.00 | 0.00 |
| 1,500.00 | 17.15 | 322.49 | 1,478.26 | 159.66 | -122.57 | -151.22 | 0.00 | 0.00 | 0.00 |
| 1,522.75 | 17.15 | 322.49 | 1,500.00 | 164.98 | -126.66 | -156.26 | 0.00 | 0.00 | 0.00 |
| 9 5/8" | | | | | | | | | |
| 1,600.00 | 17.15 | 322.49 | 1,573.82 | 183.05 | -140.53 | -173.37 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 17.15 | 322.49 | 1,669.37 | 206.44 | -158.48 | -195.52 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 17.15 | 322.49 | 1,764.93 | 229.82 | -176.43 | -217.67 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 17.15 | 322.49 | 1,860.48 | 253.21 | -194.39 | -239.82 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 17.15 | 322.49 | 1,956.04 | 276.59 | -212.34 | -261.97 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 17.15 | 322.49 | 2,051.59 | 299.98 | -230.29 | -284.12 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 17.15 | 322.49 | 2,147.15 | 323.37 | -248.25 | -306.27 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 17.15 | 322.49 | 2,242.70 | 346.75 | -266.20 | -328.41 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 17.15 | 322.49 | 2,338.26 | 370.14 | -284.15 | -350.56 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 17.15 | 322.49 | 2,433.81 | 393.52 | -302.11 | -372.71 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 17.15 | 322.49 | 2,529.37 | 416.91 | -320.06 | -394.86 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 17.15 | 322.49 | 2,624.92 | 440.30 | -338.01 | -417.01 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 17.15 | 322.49 | 2,720.48 | 463.68 | -355.97 | -439.16 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 17.15 | 322.49 | 2,816.03 | 487.07 | -373.92 | -461.31 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 17.15 | 322.49 | 2,911.59 | 510.45 | -391.87 | -483.46 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 17.15 | 322.49 | 3,007.14 | 533.84 | -409.83 | -505.61 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 17.15 | 322.49 | 3,102.70 | 557.23 | -427.78 | -527.76 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 17.15 | 322.49 | 3,198.25 | 580.61 | -445.73 | -549.91 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 17.15 | 322.49 | 3,293.81 | 604.00 | -463.69 | -572.06 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 17.15 | 322.49 | 3,389.36 | 627.38 | -481.64 | -594.21 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 17.15 | 322.49 | 3,484.92 | 650.77 | -499.59 | -616.36 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 17.15 | 322.49 | 3,580.47 | 674.16 | -517.55 | -638.51 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 17.15 | 322.49 | 3,676.03 | 697.54 | -535.50 | -660.65 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 17.15 | 322.49 | 3,771.58 | 720.93 | -553.45 | -682.80 | 0.00 | 0.00 | 0.00 |
| 3,957.99 | 17.15 | 322.49 | 3,827.00 | 734.49 | -563.87 | -695.65 | 0.00 | 0.00 | 0.00 |
| Parkman | | | | | | | | | |
| 4,000.00 | 17.15 | 322.49 | 3,867.14 | 744.31 | -571.41 | -704.95 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 17.15 | 322.49 | 3,962.69 | 767.70 | -589.36 | -727.10 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 17.15 | 322.49 | 4,058.25 | 791.09 | -607.32 | -749.25 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 17.15 | 322.49 | 4,153.80 | 814.47 | -625.27 | -771.40 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 17.15 | 322.49 | 4,249.36 | 837.86 | -643.22 | -793.55 | 0.00 | 0.00 | 0.00 |

Corporate Planning Report

| | | | |
|------------------|--------------------------------|-------------------------------------|---------------------------|
| Database: | PLANNING | Local Co-ordinate Reference: | Well CANNON 2N-9HZ |
| Company: | US ROCKIES WATTENBERG PLANNING | TVD Reference: | RKB @ 4852.00usft (D Rig) |
| Project: | WELD-NAD83-UTMFT13N | MD Reference: | RKB @ 4852.00usft (D Rig) |
| Site: | 3N-65W-33 CANNON 1-33HZ | North Reference: | True |
| Well: | CANNON 2N-9HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Plan A | | |
| Design: | Permit Rev-1 | | |

| Planned Survey | | | | | | | | | |
|--|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 4,500.00 | 17.15 | 322.49 | 4,344.91 | 861.25 | -661.18 | -815.70 | 0.00 | 0.00 | 0.00 |
| 4,530.27 | 17.15 | 322.49 | 4,373.84 | 868.33 | -666.61 | -822.41 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 16.10 | 322.49 | 4,440.65 | 884.15 | -678.76 | -837.39 | 1.50 | -1.50 | 0.00 |
| 4,682.34 | 14.87 | 322.49 | 4,520.00 | 901.58 | -692.14 | -853.90 | 1.50 | -1.50 | 0.00 |
| Sussex | | | | | | | | | |
| 4,700.00 | 14.60 | 322.49 | 4,537.08 | 905.15 | -694.88 | -857.28 | 1.50 | -1.50 | 0.00 |
| 4,800.00 | 13.10 | 322.49 | 4,634.17 | 924.14 | -709.46 | -875.26 | 1.50 | -1.50 | 0.00 |
| 4,900.00 | 11.60 | 322.49 | 4,731.85 | 941.10 | -722.48 | -891.33 | 1.50 | -1.50 | 0.00 |
| 5,000.00 | 10.10 | 322.49 | 4,830.06 | 956.04 | -733.95 | -905.48 | 1.50 | -1.50 | 0.00 |
| 5,100.00 | 8.60 | 322.49 | 4,928.73 | 968.92 | -743.84 | -917.68 | 1.50 | -1.50 | 0.00 |
| 5,200.00 | 7.10 | 322.49 | 5,027.79 | 979.76 | -752.16 | -927.95 | 1.50 | -1.50 | 0.00 |
| 5,300.00 | 5.60 | 322.49 | 5,127.17 | 988.53 | -758.89 | -936.26 | 1.50 | -1.50 | 0.00 |
| 5,400.00 | 4.10 | 322.49 | 5,226.81 | 995.24 | -764.04 | -942.61 | 1.50 | -1.50 | 0.00 |
| 5,500.00 | 2.60 | 322.49 | 5,326.64 | 999.88 | -767.60 | -947.00 | 1.50 | -1.50 | 0.00 |
| 5,600.00 | 1.10 | 322.49 | 5,426.58 | 1,002.44 | -769.57 | -949.43 | 1.50 | -1.50 | 0.00 |
| 5,673.42 | 0.00 | 0.00 | 5,500.00 | 1,003.00 | -770.00 | -949.96 | 1.50 | -1.50 | 0.00 |
| 5,700.00 | 0.00 | 0.00 | 5,526.58 | 1,003.00 | -770.00 | -949.96 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 0.00 | 0.00 | 5,626.58 | 1,003.00 | -770.00 | -949.96 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 0.00 | 0.00 | 5,726.58 | 1,003.00 | -770.00 | -949.96 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 0.00 | 0.00 | 5,826.58 | 1,003.00 | -770.00 | -949.96 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 0.00 | 0.00 | 5,926.58 | 1,003.00 | -770.00 | -949.96 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 0.00 | 0.00 | 6,026.58 | 1,003.00 | -770.00 | -949.96 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 0.00 | 0.00 | 6,126.58 | 1,003.00 | -770.00 | -949.96 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 0.00 | 0.00 | 6,226.58 | 1,003.00 | -770.00 | -949.96 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 0.00 | 0.00 | 6,326.58 | 1,003.00 | -770.00 | -949.96 | 0.00 | 0.00 | 0.00 |
| 6,560.80 | 0.00 | 0.00 | 6,387.38 | 1,003.00 | -770.00 | -949.96 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 3.53 | 179.55 | 6,426.56 | 1,001.79 | -769.99 | -948.75 | 9.00 | 9.00 | 0.00 |
| 6,700.00 | 12.53 | 179.55 | 6,525.47 | 987.84 | -769.88 | -934.84 | 9.00 | 9.00 | 0.00 |
| 6,800.00 | 21.53 | 179.55 | 6,620.99 | 958.59 | -769.65 | -905.67 | 9.00 | 9.00 | 0.00 |
| 6,900.00 | 30.53 | 179.55 | 6,710.76 | 914.76 | -769.30 | -861.95 | 9.00 | 9.00 | 0.00 |
| 7,000.00 | 39.53 | 179.55 | 6,792.56 | 857.42 | -768.84 | -804.77 | 9.00 | 9.00 | 0.00 |
| 7,022.96 | 41.59 | 179.55 | 6,810.00 | 842.49 | -768.73 | -789.88 | 9.00 | 9.00 | 0.00 |
| Sharon Springs | | | | | | | | | |
| 7,100.00 | 48.53 | 179.55 | 6,864.39 | 787.99 | -768.29 | -735.53 | 9.00 | 9.00 | 0.00 |
| 7,119.38 | 50.27 | 179.55 | 6,877.00 | 773.27 | -768.18 | -720.85 | 9.00 | 9.00 | 0.00 |
| Niobrara | | | | | | | | | |
| 7,193.59 | 56.95 | 179.55 | 6,921.00 | 713.57 | -767.70 | -661.31 | 9.00 | 9.00 | 0.00 |
| Nio B | | | | | | | | | |
| 7,200.00 | 57.53 | 179.55 | 6,924.47 | 708.18 | -767.66 | -655.94 | 9.00 | 9.00 | 0.00 |
| 7,300.00 | 66.53 | 179.55 | 6,971.32 | 619.96 | -766.96 | -567.95 | 9.00 | 9.00 | 0.00 |
| 7,400.00 | 75.53 | 179.55 | 7,003.80 | 525.49 | -766.21 | -473.74 | 9.00 | 9.00 | 0.00 |
| 7,413.35 | 76.73 | 179.55 | 7,007.00 | 512.53 | -766.11 | -460.82 | 9.00 | 9.00 | 0.00 |
| Nio C | | | | | | | | | |
| 7,500.00 | 84.53 | 179.55 | 7,021.10 | 427.11 | -765.43 | -375.62 | 9.00 | 9.00 | 0.00 |
| 7,560.80 | 90.00 | 179.55 | 7,024.00 | 366.40 | -764.94 | -315.08 | 9.00 | 9.00 | 0.00 |
| Top of Production - CANNON 2N-9HZ_PHL | | | | | | | | | |
| 7,600.00 | 90.00 | 179.55 | 7,024.00 | 327.20 | -764.63 | -275.99 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 90.00 | 179.55 | 7,024.00 | 227.20 | -763.84 | -176.26 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 90.00 | 179.55 | 7,024.00 | 127.21 | -763.05 | -76.54 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 90.00 | 179.55 | 7,024.00 | 27.21 | -762.25 | 23.19 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 90.00 | 179.55 | 7,024.00 | -72.79 | -761.46 | 122.91 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 90.00 | 179.55 | 7,024.00 | -172.78 | -760.66 | 222.64 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 90.00 | 179.55 | 7,024.00 | -272.78 | -759.87 | 322.37 | 0.00 | 0.00 | 0.00 |

Corporate Planning Report

| | | | |
|------------------|--------------------------------|-------------------------------------|---------------------------|
| Database: | PLANNING | Local Co-ordinate Reference: | Well CANNON 2N-9HZ |
| Company: | US ROCKIES WATTENBERG PLANNING | TVD Reference: | RKB @ 4852.00usft (D Rig) |
| Project: | WELD-NAD83-UTMFT13N | MD Reference: | RKB @ 4852.00usft (D Rig) |
| Site: | 3N-65W-33 CANNON 1-33HZ | North Reference: | True |
| Well: | CANNON 2N-9HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Plan A | | |
| Design: | Permit Rev-1 | | |

| Planned Survey | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 8,300.00 | 90.00 | 179.55 | 7,024.00 | -372.78 | -759.07 | 422.09 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 90.00 | 179.55 | 7,024.00 | -472.77 | -758.28 | 521.82 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 90.00 | 179.55 | 7,024.00 | -572.77 | -757.49 | 621.55 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 90.00 | 179.55 | 7,024.00 | -672.77 | -756.69 | 721.27 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 90.00 | 179.55 | 7,024.00 | -772.76 | -755.90 | 821.00 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 90.00 | 179.55 | 7,024.00 | -872.76 | -755.10 | 920.72 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 90.00 | 179.55 | 7,024.00 | -972.76 | -754.31 | 1,020.45 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 90.00 | 179.55 | 7,024.00 | -1,072.75 | -753.52 | 1,120.18 | 0.00 | 0.00 | 0.00 |
| 9,100.00 | 90.00 | 179.55 | 7,024.00 | -1,172.75 | -752.72 | 1,219.90 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 90.00 | 179.55 | 7,024.00 | -1,272.75 | -751.93 | 1,319.63 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 90.00 | 179.55 | 7,024.00 | -1,372.74 | -751.13 | 1,419.35 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 90.00 | 179.55 | 7,024.00 | -1,472.74 | -750.34 | 1,519.08 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 90.00 | 179.55 | 7,024.00 | -1,572.74 | -749.55 | 1,618.81 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 90.00 | 179.55 | 7,024.00 | -1,672.74 | -748.75 | 1,718.53 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 90.00 | 179.55 | 7,024.00 | -1,772.73 | -747.96 | 1,818.26 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 90.00 | 179.55 | 7,024.00 | -1,872.73 | -747.16 | 1,917.98 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 90.00 | 179.55 | 7,024.00 | -1,972.73 | -746.37 | 2,017.71 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 90.00 | 179.55 | 7,024.00 | -2,072.72 | -745.58 | 2,117.44 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 90.00 | 179.55 | 7,024.00 | -2,172.72 | -744.78 | 2,217.16 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 90.00 | 179.55 | 7,024.00 | -2,272.72 | -743.99 | 2,316.89 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 90.00 | 179.55 | 7,024.00 | -2,372.71 | -743.19 | 2,416.62 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 90.00 | 179.55 | 7,024.00 | -2,472.71 | -742.40 | 2,516.34 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 90.00 | 179.55 | 7,024.00 | -2,572.71 | -741.60 | 2,616.07 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 90.00 | 179.55 | 7,024.00 | -2,672.70 | -740.81 | 2,715.79 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 90.00 | 179.55 | 7,024.00 | -2,772.70 | -740.02 | 2,815.52 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 90.00 | 179.55 | 7,024.00 | -2,872.70 | -739.22 | 2,915.25 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 90.00 | 179.55 | 7,024.00 | -2,972.69 | -738.43 | 3,014.97 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 90.00 | 179.55 | 7,024.00 | -3,072.69 | -737.63 | 3,114.70 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 90.00 | 179.55 | 7,024.00 | -3,172.69 | -736.84 | 3,214.42 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 90.00 | 179.55 | 7,024.00 | -3,272.69 | -736.05 | 3,314.15 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 90.00 | 179.55 | 7,024.00 | -3,372.68 | -735.25 | 3,413.88 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 90.00 | 179.55 | 7,024.00 | -3,472.68 | -734.46 | 3,513.60 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 90.00 | 179.55 | 7,024.00 | -3,572.68 | -733.66 | 3,613.33 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 90.00 | 179.55 | 7,024.00 | -3,672.67 | -732.87 | 3,713.05 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 90.00 | 179.55 | 7,024.00 | -3,772.67 | -732.08 | 3,812.78 | 0.00 | 0.00 | 0.00 |
| 11,800.00 | 90.00 | 179.55 | 7,024.00 | -3,872.67 | -731.28 | 3,912.51 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 90.00 | 179.55 | 7,024.00 | -3,972.66 | -730.49 | 4,012.23 | 0.00 | 0.00 | 0.00 |
| 12,000.00 | 90.00 | 179.55 | 7,024.00 | -4,072.66 | -729.69 | 4,111.96 | 0.00 | 0.00 | 0.00 |
| 12,100.00 | 90.00 | 179.55 | 7,024.00 | -4,172.66 | -728.90 | 4,211.68 | 0.00 | 0.00 | 0.00 |
| 12,200.00 | 90.00 | 179.55 | 7,024.00 | -4,272.65 | -728.11 | 4,311.41 | 0.00 | 0.00 | 0.00 |
| 12,300.00 | 90.00 | 179.55 | 7,024.00 | -4,372.65 | -727.31 | 4,411.14 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 90.00 | 179.55 | 7,024.00 | -4,472.65 | -726.52 | 4,510.86 | 0.00 | 0.00 | 0.00 |
| 12,500.00 | 90.00 | 179.55 | 7,024.00 | -4,572.64 | -725.72 | 4,610.59 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 90.00 | 179.55 | 7,024.00 | -4,672.64 | -724.93 | 4,710.32 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 90.00 | 179.55 | 7,024.00 | -4,772.64 | -724.14 | 4,810.04 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 90.00 | 179.55 | 7,024.00 | -4,872.63 | -723.34 | 4,909.77 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.00 | 179.55 | 7,024.00 | -4,972.63 | -722.55 | 5,009.49 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.00 | 179.55 | 7,024.00 | -5,072.63 | -721.75 | 5,109.22 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.00 | 179.55 | 7,024.00 | -5,172.63 | -720.96 | 5,208.95 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.00 | 179.55 | 7,024.00 | -5,272.62 | -720.16 | 5,308.67 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.00 | 179.55 | 7,024.00 | -5,372.62 | -719.37 | 5,408.40 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.00 | 179.55 | 7,024.00 | -5,472.62 | -718.58 | 5,508.12 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.00 | 179.55 | 7,024.00 | -5,572.61 | -717.78 | 5,607.85 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.00 | 179.55 | 7,024.00 | -5,672.61 | -716.99 | 5,707.58 | 0.00 | 0.00 | 0.00 |

Corporate Planning Report

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|------------------|--------------------------------|-------------------------------------|---------------------------|
| Database: | PLANNING | Local Co-ordinate Reference: | Well CANNON 2N-9HZ |
| Company: | US ROCKIES WATTENBERG PLANNING | TVD Reference: | RKB @ 4852.00usft (D Rig) |
| Project: | WELD-NAD83-UTMFT13N | MD Reference: | RKB @ 4852.00usft (D Rig) |
| Site: | 3N-65W-33 CANNON 1-33HZ | North Reference: | True |
| Well: | CANNON 2N-9HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Plan A | | |
| Design: | Permit Rev-1 | | |

| Planned Survey | | | | | | | | | | |
|---------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | |
| 13,700.00 | 90.00 | 179.55 | 7,024.00 | -5,772.61 | -716.19 | 5,807.30 | 0.00 | 0.00 | 0.00 | |
| 13,800.00 | 90.00 | 179.55 | 7,024.00 | -5,872.60 | -715.40 | 5,907.03 | 0.00 | 0.00 | 0.00 | |
| 13,900.00 | 90.00 | 179.55 | 7,024.00 | -5,972.60 | -714.61 | 6,006.75 | 0.00 | 0.00 | 0.00 | |
| 14,000.00 | 90.00 | 179.55 | 7,024.00 | -6,072.60 | -713.81 | 6,106.48 | 0.00 | 0.00 | 0.00 | |
| 14,100.00 | 90.00 | 179.55 | 7,024.00 | -6,172.59 | -713.02 | 6,206.21 | 0.00 | 0.00 | 0.00 | |
| 14,200.00 | 90.00 | 179.55 | 7,024.00 | -6,272.59 | -712.22 | 6,305.93 | 0.00 | 0.00 | 0.00 | |
| 14,300.00 | 90.00 | 179.55 | 7,024.00 | -6,372.59 | -711.43 | 6,405.66 | 0.00 | 0.00 | 0.00 | |
| 14,400.00 | 90.00 | 179.55 | 7,024.00 | -6,472.58 | -710.64 | 6,505.39 | 0.00 | 0.00 | 0.00 | |
| 14,500.00 | 90.00 | 179.55 | 7,024.00 | -6,572.58 | -709.84 | 6,605.11 | 0.00 | 0.00 | 0.00 | |
| 14,600.00 | 90.00 | 179.55 | 7,024.00 | -6,672.58 | -709.05 | 6,704.84 | 0.00 | 0.00 | 0.00 | |
| 14,700.00 | 90.00 | 179.55 | 7,024.00 | -6,772.57 | -708.25 | 6,804.56 | 0.00 | 0.00 | 0.00 | |
| 14,800.00 | 90.00 | 179.55 | 7,024.00 | -6,872.57 | -707.46 | 6,904.29 | 0.00 | 0.00 | 0.00 | |
| 14,900.00 | 90.00 | 179.55 | 7,024.00 | -6,972.57 | -706.67 | 7,004.02 | 0.00 | 0.00 | 0.00 | |
| 15,000.00 | 90.00 | 179.55 | 7,024.00 | -7,072.57 | -705.87 | 7,103.74 | 0.00 | 0.00 | 0.00 | |
| 15,100.00 | 90.00 | 179.55 | 7,024.00 | -7,172.56 | -705.08 | 7,203.47 | 0.00 | 0.00 | 0.00 | |
| 15,200.00 | 90.00 | 179.55 | 7,024.00 | -7,272.56 | -704.28 | 7,303.19 | 0.00 | 0.00 | 0.00 | |
| 15,300.00 | 90.00 | 179.55 | 7,024.00 | -7,372.56 | -703.49 | 7,402.92 | 0.00 | 0.00 | 0.00 | |
| 15,400.00 | 90.00 | 179.55 | 7,024.00 | -7,472.55 | -702.69 | 7,502.65 | 0.00 | 0.00 | 0.00 | |
| 15,500.00 | 90.00 | 179.55 | 7,024.00 | -7,572.55 | -701.90 | 7,602.37 | 0.00 | 0.00 | 0.00 | |
| 15,600.00 | 90.00 | 179.55 | 7,024.00 | -7,672.55 | -701.11 | 7,702.10 | 0.00 | 0.00 | 0.00 | |
| 15,700.00 | 90.00 | 179.55 | 7,024.00 | -7,772.54 | -700.31 | 7,801.82 | 0.00 | 0.00 | 0.00 | |
| 15,800.00 | 90.00 | 179.55 | 7,024.00 | -7,872.54 | -699.52 | 7,901.55 | 0.00 | 0.00 | 0.00 | |
| 15,900.00 | 90.00 | 179.55 | 7,024.00 | -7,972.54 | -698.72 | 8,001.28 | 0.00 | 0.00 | 0.00 | |
| 16,000.00 | 90.00 | 179.55 | 7,024.00 | -8,072.53 | -697.93 | 8,101.00 | 0.00 | 0.00 | 0.00 | |
| 16,100.00 | 90.00 | 179.55 | 7,024.00 | -8,172.53 | -697.14 | 8,200.73 | 0.00 | 0.00 | 0.00 | |
| 16,200.00 | 90.00 | 179.55 | 7,024.00 | -8,272.53 | -696.34 | 8,300.46 | 0.00 | 0.00 | 0.00 | |
| 16,300.00 | 90.00 | 179.55 | 7,024.00 | -8,372.52 | -695.55 | 8,400.18 | 0.00 | 0.00 | 0.00 | |
| 16,400.00 | 90.00 | 179.55 | 7,024.00 | -8,472.52 | -694.75 | 8,499.91 | 0.00 | 0.00 | 0.00 | |
| 16,500.00 | 90.00 | 179.55 | 7,024.00 | -8,572.52 | -693.96 | 8,599.63 | 0.00 | 0.00 | 0.00 | |
| 16,600.00 | 90.00 | 179.55 | 7,024.00 | -8,672.51 | -693.17 | 8,699.36 | 0.00 | 0.00 | 0.00 | |
| 16,700.00 | 90.00 | 179.55 | 7,024.00 | -8,772.51 | -692.37 | 8,799.09 | 0.00 | 0.00 | 0.00 | |
| 16,800.00 | 90.00 | 179.55 | 7,024.00 | -8,872.51 | -691.58 | 8,898.81 | 0.00 | 0.00 | 0.00 | |
| 16,900.00 | 90.00 | 179.55 | 7,024.00 | -8,972.51 | -690.78 | 8,998.54 | 0.00 | 0.00 | 0.00 | |
| 17,000.00 | 90.00 | 179.55 | 7,024.00 | -9,072.50 | -689.99 | 9,098.26 | 0.00 | 0.00 | 0.00 | |
| 17,100.00 | 90.00 | 179.55 | 7,024.00 | -9,172.50 | -689.20 | 9,197.99 | 0.00 | 0.00 | 0.00 | |
| 17,200.00 | 90.00 | 179.55 | 7,024.00 | -9,272.50 | -688.40 | 9,297.72 | 0.00 | 0.00 | 0.00 | |
| 17,300.00 | 90.00 | 179.55 | 7,024.00 | -9,372.49 | -687.61 | 9,397.44 | 0.00 | 0.00 | 0.00 | |
| 17,400.00 | 90.00 | 179.55 | 7,024.00 | -9,472.49 | -686.81 | 9,497.17 | 0.00 | 0.00 | 0.00 | |
| 17,500.00 | 90.00 | 179.55 | 7,024.00 | -9,572.49 | -686.02 | 9,596.89 | 0.00 | 0.00 | 0.00 | |
| 17,600.00 | 90.00 | 179.55 | 7,024.00 | -9,672.48 | -685.22 | 9,696.62 | 0.00 | 0.00 | 0.00 | |
| 17,700.00 | 90.00 | 179.55 | 7,024.00 | -9,772.48 | -684.43 | 9,796.35 | 0.00 | 0.00 | 0.00 | |
| 17,800.00 | 90.00 | 179.55 | 7,024.00 | -9,872.48 | -683.64 | 9,896.07 | 0.00 | 0.00 | 0.00 | |
| 17,900.00 | 90.00 | 179.55 | 7,024.00 | -9,972.47 | -682.84 | 9,995.80 | 0.00 | 0.00 | 0.00 | |
| 18,000.00 | 90.00 | 179.55 | 7,024.00 | -10,072.47 | -682.05 | 10,095.52 | 0.00 | 0.00 | 0.00 | |
| 18,100.00 | 90.00 | 179.55 | 7,024.00 | -10,172.47 | -681.25 | 10,195.25 | 0.00 | 0.00 | 0.00 | |
| 18,200.00 | 90.00 | 179.55 | 7,024.00 | -10,272.46 | -680.46 | 10,294.98 | 0.00 | 0.00 | 0.00 | |
| 18,207.61 | 90.00 | 179.55 | 7,024.00 | -10,280.07 | -680.40 | 10,302.56 | 0.00 | 0.00 | 0.00 | |
| CANNON 2N-9HZ_PBHL | | | | | | | | | | |

Corporate Planning Report

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|------------------|--------------------------------|-------------------------------------|---------------------------|
| Database: | PLANNING | Local Co-ordinate Reference: | Well CANNON 2N-9HZ |
| Company: | US ROCKIES WATTENBERG PLANNING | TVD Reference: | RKB @ 4852.00usft (D Rig) |
| Project: | WELD-NAD83-UTMFT13N | MD Reference: | RKB @ 4852.00usft (D Rig) |
| Site: | 3N-65W-33 CANNON 1-33HZ | North Reference: | True |
| Well: | CANNON 2N-9HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Plan A | | |
| Design: | Permit Rev-1 | | |

| Design Targets | | | | | | | | | | |
|--|-----------|----------|----------|------------|---------|---------------|--------------|-----------|-------------|--|
| Target Name | Dip Angle | Dip Dir. | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | |
| - hit/miss target | (°) | (°) | (usft) | (usft) | (usft) | (usft) | (usft) | | | |
| - Shape | | | | | | | | | | |
| CANNON 2N-9HZ_PI - plan hits target center - Point | 0.00 | 0.00 | 7,024.00 | 366.40 | -764.94 | 14,595,643.00 | 1,734,359.02 | 40.188747 | -104.663625 | |
| CANNON 2N-9HZ_PE - plan hits target center - Point | 0.00 | 0.00 | 7,024.00 | -10,280.07 | -680.40 | 14,584,996.93 | 1,734,484.23 | 40.159511 | -104.663321 | |

| Casing Points | | | | | | |
|----------------|----------------|-------------------|-----------------|---------------|--|--|
| Measured Depth | Vertical Depth | Name | Casing Diameter | Hole Diameter | | |
| (usft) | (usft) | | (") | (") | | |
| 1,522.75 | 1,500.00 | 9 5/8" | 9-5/8 | 13-1/2 | | |
| 7,560.80 | 7,024.00 | Top of Production | 5-1/2 | 8-1/2 | | |

| Formations | | | | | | |
|----------------|----------------|----------------|-----------|-----|---------------|--|
| Measured Depth | Vertical Depth | Name | Lithology | Dip | Dip Direction | |
| (usft) | (usft) | | | (°) | (°) | |
| 1,163.69 | 1,155.00 | Fox Hills Mkr | | | | |
| 3,957.99 | 3,827.00 | Parkman | | | | |
| 4,682.34 | 4,520.00 | Sussex | | | | |
| 7,022.96 | 6,810.00 | Sharon Springs | | | | |
| 7,119.38 | 6,877.00 | Niobrara | | | | |
| 7,193.59 | 6,921.00 | Nio B | | | | |
| 7,413.35 | 7,007.00 | Nio C | | | | |