

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

4N-67W-33 CAMENISCH 10-33HZ PAD

CAMENISCH 33-8HZ

Plan A

Plan: Permit Rev-1

Standard Planning Report

14 December, 2021

Planning Report

| | | | |
|------------------|---------------------------------|-------------------------------------|-------------------------------|
| Database: | EDM 5000.16 Single User Db | Local Co-ordinate Reference: | Well CAMENISCH 33-8HZ |
| Company: | US ROCKIES WATTENBERG PLANNING | TVD Reference: | RKB = 17' @ 4887.00usft (RIG) |
| Project: | WELD-NAD83-UTMFT13N | MD Reference: | RKB = 17' @ 4887.00usft (RIG) |
| Site: | 4N-67W-33 CAMENISCH 10-33HZ PAD | North Reference: | True |
| Well: | CAMENISCH 33-8HZ | 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 | | 4N-67W-33 CAMENISCH 10-33HZ PAD | | | | |
| Site Position: | | Northing: | 14,624,597.34 | usft | Latitude: | 40.268698 |
| From: | Map | Easting: | 1,670,059.57 | usft | Longitude: | -104.893734 |
| Position Uncertainty: | | 0.00 | usft | Slot Radius: | 13-3/16 | " |

| Well | | CAMENISCH 33-8HZ | | | | |
|----------------------|-------|------------------|---------------------|--------------------|---------------|---------------|
| Well Position | +N/-S | 0.00 usft | Northing: | 14,624,660.06 usft | Latitude: | 40.268870 |
| | +E/-W | 0.00 usft | Easting: | 1,670,143.73 usft | Longitude: | -104.893432 |
| Position Uncertainty | | 3.28 usft | Wellhead Elevation: | usft | Ground Level: | 4,870.00 usft |
| Grid Convergence: | | 0.07 ° | | | | |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Plan A | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF202013 | 12/8/2021 | 7.86 | 66.51 | 51,820.64986553 |

| | | | | | |
|--------------------------|--------------------------------|---------------------|---------------------|----------------------|------|
| Design | Permit Rev-1 | | | | |
| Audit Notes: | | | | | |
| Version: | | Phase: | PLAN | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) | |
| | 0.00 | 0.00 | 0.00 | 91.15 | |

| | | | | | |
|---------------------------------|------------------------|--------------------------|-----------------------|---|--|
| Plan Survey Tool Program | Date | 12/14/2021 | | | |
| Depth From (usft) | Depth To (usft) | Survey (Wellbore) | Tool Name | Remarks | |
| 1 | 0.00 | 2,000.00 | Permit Rev-1 (Plan A) | APC_ISCWSA REV 2 MWD Fixed:v2:standard declination | |
| 2 | 2,000.00 | 17,942.64 | Permit Rev-1 (Plan A) | APC_ISCWSA REV 2 MWD+I Fixed:v2:Rockies, crustal dec + | |

Planning Report

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|-----------|---------------------------------|------------------------------|-------------------------------|
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| Company: | US ROCKIES WATTENBERG PLANNING | TVD Reference: | RKB = 17' @ 4887.00usft (RIG) |
| Project: | WELD-NAD83-UTMFT13N | MD Reference: | RKB = 17' @ 4887.00usft (RIG) |
| Site: | 4N-67W-33 CAMENISCH 10-33HZ PAD | North Reference: | True |
| Well: | CAMENISCH 33-8HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Plan A | | |
| Design: | Permit Rev-1 | | |

| 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 | |
| 375.00 | 0.00 | 0.00 | 375.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,780.33 | 36.08 | 269.67 | 2,624.49 | -4.22 | -732.63 | 1.50 | 1.50 | 0.00 | 269.67 | |
| 6,799.02 | 36.08 | 269.67 | 5,872.37 | -17.85 | -3,099.25 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8,374.25 | 89.95 | 91.15 | 7,010.00 | -50.93 | -2,521.47 | 8.00 | 3.42 | -11.33 | -178.17 | |
| 17,942.64 | 89.95 | 91.15 | 7,018.00 | -243.53 | 7,044.98 | 0.00 | 0.00 | 0.00 | 0.00 | CAMENISCH 33-8HZ |

Planning Report

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| Site: | 4N-67W-33 CAMENISCH 10-33HZ PAD | North Reference: | True |
| Well: | CAMENISCH 33-8HZ | 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 |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 375.00 | 0.00 | 0.00 | 375.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Begin Nudge @ 375.00ft | | | | | | | | | |
| 400.00 | 0.38 | 269.67 | 400.00 | 0.00 | -0.08 | -0.08 | 1.50 | 1.50 | 0.00 |
| 500.00 | 1.88 | 269.67 | 499.98 | -0.01 | -2.05 | -2.04 | 1.50 | 1.50 | 0.00 |
| 600.00 | 3.38 | 269.67 | 599.87 | -0.04 | -6.62 | -6.62 | 1.50 | 1.50 | 0.00 |
| 700.00 | 4.88 | 269.67 | 699.61 | -0.08 | -13.82 | -13.81 | 1.50 | 1.50 | 0.00 |
| 772.72 | 5.97 | 269.67 | 772.00 | -0.12 | -20.69 | -20.68 | 1.50 | 1.50 | 0.00 |
| Fox Hills | | | | | | | | | |
| 800.00 | 6.38 | 269.67 | 799.12 | -0.14 | -23.62 | -23.61 | 1.50 | 1.50 | 0.00 |
| 900.00 | 7.88 | 269.67 | 898.35 | -0.21 | -36.02 | -36.01 | 1.50 | 1.50 | 0.00 |
| 1,000.00 | 9.38 | 269.67 | 997.21 | -0.29 | -51.02 | -51.00 | 1.50 | 1.50 | 0.00 |
| 1,100.00 | 10.88 | 269.67 | 1,095.65 | -0.40 | -68.60 | -68.57 | 1.50 | 1.50 | 0.00 |
| 1,200.00 | 12.38 | 269.67 | 1,193.60 | -0.51 | -88.75 | -88.72 | 1.50 | 1.50 | 0.00 |
| 1,300.00 | 13.88 | 269.67 | 1,290.99 | -0.64 | -111.45 | -111.42 | 1.50 | 1.50 | 0.00 |
| 1,400.00 | 15.38 | 269.67 | 1,387.74 | -0.79 | -136.70 | -136.66 | 1.50 | 1.50 | 0.00 |
| 1,500.00 | 16.88 | 269.67 | 1,483.81 | -0.95 | -164.47 | -164.42 | 1.50 | 1.50 | 0.00 |
| 1,516.93 | 17.13 | 269.67 | 1,500.00 | -0.98 | -169.42 | -169.37 | 1.50 | 1.50 | 0.00 |
| 9 5/8" | | | | | | | | | |
| 1,600.00 | 18.38 | 269.67 | 1,579.11 | -1.12 | -194.75 | -194.69 | 1.50 | 1.50 | 0.00 |
| 1,700.00 | 19.88 | 269.67 | 1,673.59 | -1.31 | -227.51 | -227.44 | 1.50 | 1.50 | 0.00 |
| 1,800.00 | 21.38 | 269.67 | 1,767.17 | -1.51 | -262.74 | -262.65 | 1.50 | 1.50 | 0.00 |
| 1,900.00 | 22.88 | 269.67 | 1,859.81 | -1.73 | -300.40 | -300.30 | 1.50 | 1.50 | 0.00 |
| 2,000.00 | 24.38 | 269.67 | 1,951.42 | -1.96 | -340.47 | -340.36 | 1.50 | 1.50 | 0.00 |
| 2,100.00 | 25.88 | 269.67 | 2,041.96 | -2.21 | -382.93 | -382.81 | 1.50 | 1.50 | 0.00 |
| 2,200.00 | 27.38 | 269.67 | 2,131.35 | -2.46 | -427.74 | -427.60 | 1.50 | 1.50 | 0.00 |
| 2,300.00 | 28.88 | 269.67 | 2,219.54 | -2.74 | -474.88 | -474.73 | 1.50 | 1.50 | 0.00 |
| 2,400.00 | 30.38 | 269.67 | 2,306.47 | -3.02 | -524.31 | -524.14 | 1.50 | 1.50 | 0.00 |
| 2,500.00 | 31.88 | 269.67 | 2,392.07 | -3.32 | -576.00 | -575.81 | 1.50 | 1.50 | 0.00 |
| 2,600.00 | 33.38 | 269.67 | 2,476.29 | -3.63 | -629.91 | -629.71 | 1.50 | 1.50 | 0.00 |
| 2,700.00 | 34.88 | 269.67 | 2,559.07 | -3.95 | -686.00 | -685.79 | 1.50 | 1.50 | 0.00 |
| 2,780.33 | 36.08 | 269.67 | 2,624.49 | -4.22 | -732.63 | -732.39 | 1.50 | 1.50 | 0.00 |
| Hold Tangent @ 2780.33ft | | | | | | | | | |
| 2,800.00 | 36.08 | 269.67 | 2,640.38 | -4.29 | -744.21 | -743.97 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 36.08 | 269.67 | 2,721.20 | -4.63 | -803.10 | -802.84 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 36.08 | 269.67 | 2,802.02 | -4.96 | -861.99 | -861.72 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 36.08 | 269.67 | 2,882.84 | -5.30 | -920.88 | -920.59 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 36.08 | 269.67 | 2,963.66 | -5.64 | -979.77 | -979.46 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 36.08 | 269.67 | 3,044.48 | -5.98 | -1,038.66 | -1,038.33 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 36.08 | 269.67 | 3,125.30 | -6.32 | -1,097.55 | -1,097.20 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 36.08 | 269.67 | 3,206.12 | -6.66 | -1,156.44 | -1,156.08 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 36.08 | 269.67 | 3,286.94 | -7.00 | -1,215.33 | -1,214.95 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 36.08 | 269.67 | 3,367.76 | -7.34 | -1,274.22 | -1,273.82 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 36.08 | 269.67 | 3,448.58 | -7.68 | -1,333.11 | -1,332.69 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 36.08 | 269.67 | 3,529.40 | -8.02 | -1,392.00 | -1,391.56 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 36.08 | 269.67 | 3,610.22 | -8.36 | -1,450.89 | -1,450.43 | 0.00 | 0.00 | 0.00 |
| 4,065.31 | 36.08 | 269.67 | 3,663.00 | -8.58 | -1,489.36 | -1,488.88 | 0.00 | 0.00 | 0.00 |
| Parkman | | | | | | | | | |
| 4,100.00 | 36.08 | 269.67 | 3,691.04 | -8.70 | -1,509.78 | -1,509.31 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 36.08 | 269.67 | 3,771.86 | -9.04 | -1,568.68 | -1,568.18 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 36.08 | 269.67 | 3,852.67 | -9.37 | -1,627.57 | -1,627.05 | 0.00 | 0.00 | 0.00 |

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| Project: | WELD-NAD83-UTMFT13N | MD Reference: | RKB = 17' @ 4887.00usft (RIG) |
| Site: | 4N-67W-33 CAMENISCH 10-33HZ PAD | North Reference: | True |
| Well: | CAMENISCH 33-8HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Plan A | | |
| Design: | Permit Rev-1 | | |

Planned Survey

| Measured | | | Vertical | | | Vertical | Dogleg | Build | Turn |
|----------------------------------|-------------|---------|----------|--------|-----------|-----------|-------------|-------------|-------------|
| Depth | Inclination | Azimuth | Depth | +N/-S | +E/-W | Section | Rate | Rate | Rate |
| (usft) | (°) | (°) | (usft) | (usft) | (usft) | (usft) | (°/100usft) | (°/100usft) | (°/100usft) |
| 4,400.00 | 36.08 | 269.67 | 3,933.49 | -9.71 | -1,686.46 | -1,685.92 | 0.00 | 0.00 | 0.00 |
| 4,500.00 | 36.08 | 269.67 | 4,014.31 | -10.05 | -1,745.35 | -1,744.79 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 36.08 | 269.67 | 4,095.13 | -10.39 | -1,804.24 | -1,803.67 | 0.00 | 0.00 | 0.00 |
| 4,661.70 | 36.08 | 269.67 | 4,145.00 | -10.60 | -1,840.57 | -1,839.99 | 0.00 | 0.00 | 0.00 |
| Sussex | | | | | | | | | |
| 4,700.00 | 36.08 | 269.67 | 4,175.95 | -10.73 | -1,863.13 | -1,862.54 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 36.08 | 269.67 | 4,256.77 | -11.07 | -1,922.02 | -1,921.41 | 0.00 | 0.00 | 0.00 |
| 4,900.00 | 36.08 | 269.67 | 4,337.59 | -11.41 | -1,980.91 | -1,980.28 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 36.08 | 269.67 | 4,418.41 | -11.75 | -2,039.80 | -2,039.15 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 36.08 | 269.67 | 4,499.23 | -12.09 | -2,098.69 | -2,098.02 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 36.08 | 269.67 | 4,580.05 | -12.43 | -2,157.58 | -2,156.90 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 36.08 | 269.67 | 4,660.87 | -12.77 | -2,216.47 | -2,215.77 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 36.08 | 269.67 | 4,741.69 | -13.11 | -2,275.36 | -2,274.64 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 36.08 | 269.67 | 4,822.51 | -13.44 | -2,334.25 | -2,333.51 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 36.08 | 269.67 | 4,903.33 | -13.78 | -2,393.14 | -2,392.38 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 36.08 | 269.67 | 4,984.15 | -14.12 | -2,452.03 | -2,451.25 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 36.08 | 269.67 | 5,064.97 | -14.46 | -2,510.92 | -2,510.13 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 36.08 | 269.67 | 5,145.79 | -14.80 | -2,569.81 | -2,569.00 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 36.08 | 269.67 | 5,226.61 | -15.14 | -2,628.70 | -2,627.87 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 36.08 | 269.67 | 5,307.43 | -15.48 | -2,687.59 | -2,686.74 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 36.08 | 269.67 | 5,388.25 | -15.82 | -2,746.48 | -2,745.61 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 36.08 | 269.67 | 5,469.07 | -16.16 | -2,805.37 | -2,804.49 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 36.08 | 269.67 | 5,549.89 | -16.50 | -2,864.27 | -2,863.36 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 36.08 | 269.67 | 5,630.70 | -16.84 | -2,923.16 | -2,922.23 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 36.08 | 269.67 | 5,711.52 | -17.18 | -2,982.05 | -2,981.10 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 36.08 | 269.67 | 5,792.34 | -17.51 | -3,040.94 | -3,039.97 | 0.00 | 0.00 | 0.00 |
| 6,799.02 | 36.08 | 269.67 | 5,872.37 | -17.85 | -3,099.25 | -3,098.27 | 0.00 | 0.00 | 0.00 |
| KOP @ 6799.02ft :: DLS = 8°/100' | | | | | | | | | |
| 6,850.00 | 32.00 | 269.42 | 5,914.61 | -18.07 | -3,127.78 | -3,126.79 | 8.00 | -8.00 | -0.48 |
| 6,900.00 | 28.01 | 269.12 | 5,957.90 | -18.39 | -3,152.78 | -3,151.77 | 8.00 | -7.99 | -0.61 |
| 6,950.00 | 24.01 | 268.73 | 6,002.82 | -18.79 | -3,174.70 | -3,173.68 | 8.00 | -7.99 | -0.79 |
| 7,000.00 | 20.02 | 268.19 | 6,049.17 | -19.29 | -3,193.43 | -3,192.40 | 8.00 | -7.99 | -1.08 |
| 7,050.00 | 16.02 | 267.39 | 6,096.71 | -19.88 | -3,208.88 | -3,207.83 | 8.00 | -7.98 | -1.59 |
| 7,100.00 | 12.04 | 266.08 | 6,145.21 | -20.55 | -3,220.98 | -3,219.92 | 8.00 | -7.98 | -2.62 |
| 7,150.00 | 8.06 | 263.50 | 6,194.43 | -21.30 | -3,229.66 | -3,228.59 | 8.00 | -7.95 | -5.16 |
| 7,200.00 | 4.13 | 256.02 | 6,244.14 | -22.13 | -3,234.90 | -3,233.80 | 8.00 | -7.86 | -14.96 |
| 7,250.00 | 1.08 | 180.50 | 6,294.09 | -23.04 | -3,236.65 | -3,235.53 | 8.00 | -6.10 | -151.05 |
| 7,300.00 | 4.15 | 106.19 | 6,344.04 | -24.02 | -3,234.91 | -3,233.78 | 8.00 | 6.15 | -148.61 |
| 7,350.00 | 8.08 | 98.78 | 6,393.74 | -25.06 | -3,229.70 | -3,228.54 | 8.00 | 7.86 | -14.83 |
| 7,400.00 | 12.06 | 96.21 | 6,442.96 | -26.16 | -3,221.03 | -3,219.85 | 8.00 | 7.95 | -5.13 |
| 7,450.00 | 16.05 | 94.91 | 6,491.46 | -27.32 | -3,208.94 | -3,207.75 | 8.00 | 7.98 | -2.61 |
| 7,500.00 | 20.04 | 94.12 | 6,538.99 | -28.52 | -3,193.51 | -3,192.29 | 8.00 | 7.98 | -1.59 |
| 7,550.00 | 24.04 | 93.58 | 6,585.33 | -29.77 | -3,174.79 | -3,173.55 | 8.00 | 7.99 | -1.08 |
| 7,600.00 | 28.03 | 93.18 | 6,630.25 | -31.06 | -3,152.89 | -3,151.63 | 8.00 | 7.99 | -0.79 |
| 7,650.00 | 32.03 | 92.88 | 6,673.52 | -32.38 | -3,127.91 | -3,126.63 | 8.00 | 7.99 | -0.60 |
| 7,700.00 | 36.03 | 92.64 | 6,714.95 | -33.72 | -3,099.96 | -3,098.66 | 8.00 | 8.00 | -0.48 |
| 7,750.00 | 40.02 | 92.44 | 6,754.33 | -35.09 | -3,069.20 | -3,067.88 | 8.00 | 8.00 | -0.40 |
| 7,800.00 | 44.02 | 92.27 | 6,791.47 | -36.46 | -3,035.76 | -3,034.42 | 8.00 | 8.00 | -0.34 |
| 7,850.00 | 48.02 | 92.12 | 6,826.18 | -37.84 | -2,999.82 | -2,998.45 | 8.00 | 8.00 | -0.29 |
| 7,900.00 | 52.02 | 92.00 | 6,858.30 | -39.21 | -2,961.53 | -2,960.15 | 8.00 | 8.00 | -0.26 |
| 7,950.00 | 56.02 | 91.88 | 6,887.67 | -40.58 | -2,921.10 | -2,919.70 | 8.00 | 8.00 | -0.23 |
| 7,984.01 | 58.74 | 91.81 | 6,906.00 | -41.50 | -2,892.48 | -2,891.06 | 8.00 | 8.00 | -0.21 |

Sharon Springs

Planning Report

| | | | |
|------------------|---------------------------------|-------------------------------------|-------------------------------|
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| 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) | |
| 8,000.00 | 60.02 | 91.78 | 6,914.15 | -41.93 | -2,878.72 | -2,877.30 | 8.00 | 8.00 | -0.20 | |
| 8,046.36 | 63.73 | 91.69 | 6,936.00 | -43.16 | -2,837.86 | -2,836.42 | 8.00 | 8.00 | -0.19 | |
| Niobrara | | | | | | | | | | |
| 8,050.00 | 64.02 | 91.68 | 6,937.60 | -43.26 | -2,834.60 | -2,833.16 | 8.00 | 8.00 | -0.19 | |
| 8,100.00 | 68.02 | 91.59 | 6,957.92 | -44.56 | -2,788.94 | -2,787.49 | 8.00 | 8.00 | -0.18 | |
| 8,150.00 | 72.02 | 91.50 | 6,975.01 | -45.83 | -2,741.98 | -2,740.51 | 8.00 | 8.00 | -0.17 | |
| 8,200.00 | 76.01 | 91.42 | 6,988.77 | -47.06 | -2,693.94 | -2,692.45 | 8.00 | 8.00 | -0.16 | |
| 8,250.00 | 80.01 | 91.34 | 6,999.15 | -48.23 | -2,645.05 | -2,643.55 | 8.00 | 8.00 | -0.16 | |
| 8,300.00 | 84.01 | 91.27 | 7,006.10 | -49.36 | -2,595.56 | -2,594.05 | 8.00 | 8.00 | -0.15 | |
| 8,350.00 | 88.01 | 91.19 | 7,009.57 | -50.43 | -2,545.70 | -2,544.18 | 8.00 | 8.00 | -0.15 | |
| 8,374.25 | 89.95 | 91.15 | 7,010.00 | -50.93 | -2,521.47 | -2,519.94 | 8.00 | 8.00 | -0.15 | |
| End Build @ 8374.25ft | | | | | | | | | | |
| 8,400.00 | 89.95 | 91.15 | 7,010.03 | -51.44 | -2,495.72 | -2,494.18 | 0.00 | 0.00 | 0.00 | |
| 8,500.00 | 89.95 | 91.15 | 7,010.11 | -53.46 | -2,395.74 | -2,394.18 | 0.00 | 0.00 | 0.00 | |
| 8,600.00 | 89.95 | 91.15 | 7,010.19 | -55.47 | -2,295.76 | -2,294.18 | 0.00 | 0.00 | 0.00 | |
| 8,700.00 | 89.95 | 91.15 | 7,010.28 | -57.48 | -2,195.78 | -2,194.18 | 0.00 | 0.00 | 0.00 | |
| 8,800.00 | 89.95 | 91.15 | 7,010.36 | -59.50 | -2,095.80 | -2,094.18 | 0.00 | 0.00 | 0.00 | |
| 8,900.00 | 89.95 | 91.15 | 7,010.44 | -61.51 | -1,995.82 | -1,994.18 | 0.00 | 0.00 | 0.00 | |
| 9,000.00 | 89.95 | 91.15 | 7,010.53 | -63.52 | -1,895.84 | -1,894.18 | 0.00 | 0.00 | 0.00 | |
| 9,100.00 | 89.95 | 91.15 | 7,010.61 | -65.53 | -1,795.86 | -1,794.18 | 0.00 | 0.00 | 0.00 | |
| 9,200.00 | 89.95 | 91.15 | 7,010.69 | -67.55 | -1,695.88 | -1,694.18 | 0.00 | 0.00 | 0.00 | |
| 9,300.00 | 89.95 | 91.15 | 7,010.78 | -69.56 | -1,595.90 | -1,594.18 | 0.00 | 0.00 | 0.00 | |
| 9,400.00 | 89.95 | 91.15 | 7,010.86 | -71.57 | -1,495.92 | -1,494.18 | 0.00 | 0.00 | 0.00 | |
| 9,500.00 | 89.95 | 91.15 | 7,010.94 | -73.59 | -1,395.94 | -1,394.18 | 0.00 | 0.00 | 0.00 | |
| 9,600.00 | 89.95 | 91.15 | 7,011.03 | -75.60 | -1,295.96 | -1,294.18 | 0.00 | 0.00 | 0.00 | |
| 9,700.00 | 89.95 | 91.15 | 7,011.11 | -77.61 | -1,195.98 | -1,194.18 | 0.00 | 0.00 | 0.00 | |
| 9,800.00 | 89.95 | 91.15 | 7,011.20 | -79.62 | -1,096.00 | -1,094.18 | 0.00 | 0.00 | 0.00 | |
| 9,900.00 | 89.95 | 91.15 | 7,011.28 | -81.64 | -996.02 | -994.18 | 0.00 | 0.00 | 0.00 | |
| 10,000.00 | 89.95 | 91.15 | 7,011.36 | -83.65 | -896.04 | -894.18 | 0.00 | 0.00 | 0.00 | |
| 10,100.00 | 89.95 | 91.15 | 7,011.45 | -85.66 | -796.06 | -794.18 | 0.00 | 0.00 | 0.00 | |
| 10,200.00 | 89.95 | 91.15 | 7,011.53 | -87.68 | -696.08 | -694.18 | 0.00 | 0.00 | 0.00 | |
| 10,300.00 | 89.95 | 91.15 | 7,011.61 | -89.69 | -596.10 | -594.18 | 0.00 | 0.00 | 0.00 | |
| 10,400.00 | 89.95 | 91.15 | 7,011.70 | -91.70 | -496.12 | -494.18 | 0.00 | 0.00 | 0.00 | |
| 10,500.00 | 89.95 | 91.15 | 7,011.78 | -93.72 | -396.14 | -394.18 | 0.00 | 0.00 | 0.00 | |
| 10,600.00 | 89.95 | 91.15 | 7,011.86 | -95.73 | -296.17 | -294.18 | 0.00 | 0.00 | 0.00 | |
| 10,700.00 | 89.95 | 91.15 | 7,011.95 | -97.74 | -196.19 | -194.18 | 0.00 | 0.00 | 0.00 | |
| 10,800.00 | 89.95 | 91.15 | 7,012.03 | -99.75 | -96.21 | -94.18 | 0.00 | 0.00 | 0.00 | |
| 10,900.00 | 89.95 | 91.15 | 7,012.11 | -101.77 | 3.77 | 5.82 | 0.00 | 0.00 | 0.00 | |
| 11,000.00 | 89.95 | 91.15 | 7,012.20 | -103.78 | 103.75 | 105.82 | 0.00 | 0.00 | 0.00 | |
| 11,100.00 | 89.95 | 91.15 | 7,012.28 | -105.79 | 203.73 | 205.82 | 0.00 | 0.00 | 0.00 | |
| 11,200.00 | 89.95 | 91.15 | 7,012.37 | -107.81 | 303.71 | 305.82 | 0.00 | 0.00 | 0.00 | |
| 11,300.00 | 89.95 | 91.15 | 7,012.45 | -109.82 | 403.69 | 405.82 | 0.00 | 0.00 | 0.00 | |
| 11,400.00 | 89.95 | 91.15 | 7,012.53 | -111.83 | 503.67 | 505.82 | 0.00 | 0.00 | 0.00 | |
| 11,500.00 | 89.95 | 91.15 | 7,012.62 | -113.84 | 603.65 | 605.82 | 0.00 | 0.00 | 0.00 | |
| 11,600.00 | 89.95 | 91.15 | 7,012.70 | -115.86 | 703.63 | 705.82 | 0.00 | 0.00 | 0.00 | |
| 11,700.00 | 89.95 | 91.15 | 7,012.78 | -117.87 | 803.61 | 805.82 | 0.00 | 0.00 | 0.00 | |
| 11,800.00 | 89.95 | 91.15 | 7,012.87 | -119.88 | 903.59 | 905.82 | 0.00 | 0.00 | 0.00 | |
| 11,900.00 | 89.95 | 91.15 | 7,012.95 | -121.90 | 1,003.57 | 1,005.82 | 0.00 | 0.00 | 0.00 | |
| 12,000.00 | 89.95 | 91.15 | 7,013.03 | -123.91 | 1,103.55 | 1,105.82 | 0.00 | 0.00 | 0.00 | |
| 12,100.00 | 89.95 | 91.15 | 7,013.12 | -125.92 | 1,203.53 | 1,205.82 | 0.00 | 0.00 | 0.00 | |
| 12,200.00 | 89.95 | 91.15 | 7,013.20 | -127.94 | 1,303.51 | 1,305.82 | 0.00 | 0.00 | 0.00 | |
| 12,300.00 | 89.95 | 91.15 | 7,013.28 | -129.95 | 1,403.49 | 1,405.82 | 0.00 | 0.00 | 0.00 | |
| 12,400.00 | 89.95 | 91.15 | 7,013.37 | -131.96 | 1,503.47 | 1,505.82 | 0.00 | 0.00 | 0.00 | |

Planning Report

| | | | |
|------------------|---------------------------------|-------------------------------------|-------------------------------|
| Database: | EDM 5000.16 Single User Db | Local Co-ordinate Reference: | Well CAMENISCH 33-8HZ |
| Company: | US ROCKIES WATTENBERG PLANNING | TVD Reference: | RKB = 17' @ 4887.00usft (RIG) |
| Project: | WELD-NAD83-UTMFT13N | MD Reference: | RKB = 17' @ 4887.00usft (RIG) |
| Site: | 4N-67W-33 CAMENISCH 10-33HZ PAD | North Reference: | True |
| Well: | CAMENISCH 33-8HZ | 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) |
| 12,500.00 | 89.95 | 91.15 | 7,013.45 | -133.97 | 1,603.45 | 1,605.82 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 89.95 | 91.15 | 7,013.54 | -135.99 | 1,703.43 | 1,705.82 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 89.95 | 91.15 | 7,013.62 | -138.00 | 1,803.41 | 1,805.82 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 89.95 | 91.15 | 7,013.70 | -140.01 | 1,903.39 | 1,905.82 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 89.95 | 91.15 | 7,013.79 | -142.03 | 2,003.37 | 2,005.82 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 89.95 | 91.15 | 7,013.87 | -144.04 | 2,103.35 | 2,105.82 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 89.95 | 91.15 | 7,013.95 | -146.05 | 2,203.33 | 2,205.82 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 89.95 | 91.15 | 7,014.04 | -148.06 | 2,303.31 | 2,305.82 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 89.95 | 91.15 | 7,014.12 | -150.08 | 2,403.29 | 2,405.82 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 89.95 | 91.15 | 7,014.20 | -152.09 | 2,503.27 | 2,505.81 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 89.95 | 91.15 | 7,014.29 | -154.10 | 2,603.25 | 2,605.81 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 89.95 | 91.15 | 7,014.37 | -156.12 | 2,703.23 | 2,705.81 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 89.95 | 91.15 | 7,014.45 | -158.13 | 2,803.21 | 2,805.81 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 89.95 | 91.15 | 7,014.54 | -160.14 | 2,903.19 | 2,905.81 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 89.95 | 91.15 | 7,014.62 | -162.15 | 3,003.17 | 3,005.81 | 0.00 | 0.00 | 0.00 |
| 14,000.00 | 89.95 | 91.15 | 7,014.71 | -164.17 | 3,103.14 | 3,105.81 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 89.95 | 91.15 | 7,014.79 | -166.18 | 3,203.12 | 3,205.81 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 89.95 | 91.15 | 7,014.87 | -168.19 | 3,303.10 | 3,305.81 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 89.95 | 91.15 | 7,014.96 | -170.21 | 3,403.08 | 3,405.81 | 0.00 | 0.00 | 0.00 |
| 14,400.00 | 89.95 | 91.15 | 7,015.04 | -172.22 | 3,503.06 | 3,505.81 | 0.00 | 0.00 | 0.00 |
| 14,500.00 | 89.95 | 91.15 | 7,015.12 | -174.23 | 3,603.04 | 3,605.81 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 89.95 | 91.15 | 7,015.21 | -176.25 | 3,703.02 | 3,705.81 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 89.95 | 91.15 | 7,015.29 | -178.26 | 3,803.00 | 3,805.81 | 0.00 | 0.00 | 0.00 |
| 14,800.00 | 89.95 | 91.15 | 7,015.37 | -180.27 | 3,902.98 | 3,905.81 | 0.00 | 0.00 | 0.00 |
| 14,900.00 | 89.95 | 91.15 | 7,015.46 | -182.28 | 4,002.96 | 4,005.81 | 0.00 | 0.00 | 0.00 |
| 15,000.00 | 89.95 | 91.15 | 7,015.54 | -184.30 | 4,102.94 | 4,105.81 | 0.00 | 0.00 | 0.00 |
| 15,100.00 | 89.95 | 91.15 | 7,015.62 | -186.31 | 4,202.92 | 4,205.81 | 0.00 | 0.00 | 0.00 |
| 15,200.00 | 89.95 | 91.15 | 7,015.71 | -188.32 | 4,302.90 | 4,305.81 | 0.00 | 0.00 | 0.00 |
| 15,300.00 | 89.95 | 91.15 | 7,015.79 | -190.34 | 4,402.88 | 4,405.81 | 0.00 | 0.00 | 0.00 |
| 15,400.00 | 89.95 | 91.15 | 7,015.88 | -192.35 | 4,502.86 | 4,505.81 | 0.00 | 0.00 | 0.00 |
| 15,500.00 | 89.95 | 91.15 | 7,015.96 | -194.36 | 4,602.84 | 4,605.81 | 0.00 | 0.00 | 0.00 |
| 15,600.00 | 89.95 | 91.15 | 7,016.04 | -196.37 | 4,702.82 | 4,705.81 | 0.00 | 0.00 | 0.00 |
| 15,700.00 | 89.95 | 91.15 | 7,016.13 | -198.39 | 4,802.80 | 4,805.81 | 0.00 | 0.00 | 0.00 |
| 15,800.00 | 89.95 | 91.15 | 7,016.21 | -200.40 | 4,902.78 | 4,905.81 | 0.00 | 0.00 | 0.00 |
| 15,900.00 | 89.95 | 91.15 | 7,016.29 | -202.41 | 5,002.76 | 5,005.81 | 0.00 | 0.00 | 0.00 |
| 16,000.00 | 89.95 | 91.15 | 7,016.38 | -204.43 | 5,102.74 | 5,105.81 | 0.00 | 0.00 | 0.00 |
| 16,100.00 | 89.95 | 91.15 | 7,016.46 | -206.44 | 5,202.72 | 5,205.81 | 0.00 | 0.00 | 0.00 |
| 16,200.00 | 89.95 | 91.15 | 7,016.54 | -208.45 | 5,302.70 | 5,305.81 | 0.00 | 0.00 | 0.00 |
| 16,300.00 | 89.95 | 91.15 | 7,016.63 | -210.47 | 5,402.68 | 5,405.81 | 0.00 | 0.00 | 0.00 |
| 16,400.00 | 89.95 | 91.15 | 7,016.71 | -212.48 | 5,502.66 | 5,505.81 | 0.00 | 0.00 | 0.00 |
| 16,500.00 | 89.95 | 91.15 | 7,016.79 | -214.49 | 5,602.64 | 5,605.81 | 0.00 | 0.00 | 0.00 |
| 16,600.00 | 89.95 | 91.15 | 7,016.88 | -216.50 | 5,702.62 | 5,705.81 | 0.00 | 0.00 | 0.00 |
| 16,700.00 | 89.95 | 91.15 | 7,016.96 | -218.52 | 5,802.60 | 5,805.81 | 0.00 | 0.00 | 0.00 |
| 16,800.00 | 89.95 | 91.15 | 7,017.05 | -220.53 | 5,902.58 | 5,905.81 | 0.00 | 0.00 | 0.00 |
| 16,900.00 | 89.95 | 91.15 | 7,017.13 | -222.54 | 6,002.56 | 6,005.81 | 0.00 | 0.00 | 0.00 |
| 17,000.00 | 89.95 | 91.15 | 7,017.21 | -224.56 | 6,102.54 | 6,105.81 | 0.00 | 0.00 | 0.00 |
| 17,100.00 | 89.95 | 91.15 | 7,017.30 | -226.57 | 6,202.52 | 6,205.81 | 0.00 | 0.00 | 0.00 |
| 17,200.00 | 89.95 | 91.15 | 7,017.38 | -228.58 | 6,302.50 | 6,305.81 | 0.00 | 0.00 | 0.00 |
| 17,300.00 | 89.95 | 91.15 | 7,017.46 | -230.59 | 6,402.48 | 6,405.81 | 0.00 | 0.00 | 0.00 |
| 17,400.00 | 89.95 | 91.15 | 7,017.55 | -232.61 | 6,502.45 | 6,505.81 | 0.00 | 0.00 | 0.00 |
| 17,500.00 | 89.95 | 91.15 | 7,017.63 | -234.62 | 6,602.43 | 6,605.81 | 0.00 | 0.00 | 0.00 |
| 17,600.00 | 89.95 | 91.15 | 7,017.71 | -236.63 | 6,702.41 | 6,705.81 | 0.00 | 0.00 | 0.00 |
| 17,700.00 | 89.95 | 91.15 | 7,017.80 | -238.65 | 6,802.39 | 6,805.81 | 0.00 | 0.00 | 0.00 |
| 17,800.00 | 89.95 | 91.15 | 7,017.88 | -240.66 | 6,902.37 | 6,905.81 | 0.00 | 0.00 | 0.00 |

Planning Report

| | | | |
|------------------|---------------------------------|-------------------------------------|-------------------------------|
| Database: | EDM 5000.16 Single User Db | Local Co-ordinate Reference: | Well CAMENISCH 33-8HZ |
| Company: | US ROCKIES WATTENBERG PLANNING | TVD Reference: | RKB = 17' @ 4887.00usft (RIG) |
| Project: | WELD-NAD83-UTMFT13N | MD Reference: | RKB = 17' @ 4887.00usft (RIG) |
| Site: | 4N-67W-33 CAMENISCH 10-33HZ PAD | North Reference: | True |
| Well: | CAMENISCH 33-8HZ | 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) | |
| 17,900.00 | 89.95 | 91.15 | 7,017.96 | -242.67 | 7,002.35 | 7,005.81 | 0.00 | 0.00 | 0.00 | |
| 17,942.64 | 89.95 | 91.15 | 7,018.00 | -243.53 | 7,044.98 | 7,048.45 | 0.00 | 0.00 | 0.00 | |
| TD Well @ 17942.64ft | | | | | | | | | | |

| Casing Points | | | | | |
|-----------------------|-----------------------|----------|---------------------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") | |
| 1,516.93 | 1,500.00 | 9 5/8" | 9-5/8 | 13-1/2 | |
| 17,942.64 | 7,018.00 | 5.5" CSG | 5-1/2 | 7-7/8 | |

| Formations | | | | | | |
|-----------------------|-----------------------|----------------|-----------|---------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) | |
| 772.72 | 772.00 | Fox Hills | | | | |
| 4,065.31 | 3,663.00 | Parkman | | | | |
| 4,661.70 | 4,145.00 | Sussex | | | | |
| 7,984.01 | 6,906.00 | Sharon Springs | | | | |
| 8,046.36 | 6,936.00 | Niobrara | | | | |

| Plan Annotations | | | | | |
|-----------------------|-----------------------|-------------------|--------------|----------------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment | |
| | | +N/-S (usft) | +E/-W (usft) | | |
| 375.00 | 375.00 | 0.00 | 0.00 | Begin Nudge @ 375.00ft | |
| 2,780.33 | 2,624.49 | -4.22 | -732.63 | Hold Tangent @ 2780.33ft | |
| 6,799.02 | 5,872.37 | -17.85 | -3,099.25 | KOP @ 6799.02ft :: DLS = 8°/100' | |
| 8,374.25 | 7,010.00 | -50.93 | -2,521.47 | End Build @ 8374.25ft | |
| 17,942.64 | 7,018.00 | -243.53 | 7,044.98 | TD Well @ 17942.64ft | |