

# **CRESTONE PEAK RESOURCES**

**ARAPAHOE COUNTY**

**SEC 19-T4S-R64W**

**LUSSING TRUST 4-64 19-20 2AH**

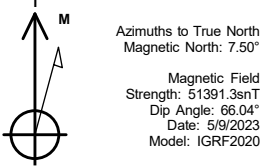
**OWB**

**Plan: PROPOSAL 1**

## **Standard Planning Report**

**11 May, 2023**

Project: ARAPAHOE COUNTY  
Site: SEC 19-T4S-R64W  
Well: LUSSING TRUST 4-64 19-20 2AH  
Wellbore: OWB  
Design: PROPOSAL 1



WELL DETAILS: LUSSING TRUST 4-64 19-20 2AH

| 5696.00 |       |            |            |             |              |      |
|---------|-------|------------|------------|-------------|--------------|------|
| +N/-S   | +E/-W | Northing   | Easting    | Latitude    | Longitude    | Slot |
| 0.00    | 0.00  | 1678386.76 | 3252960.34 | 39.692536°N | 104.601090°W |      |

SECTION DETAILS

| Sec | MD       | Inc   | Azi    | TVD     | +N/-S   | +E/-W   | Dleg  | TFace   | VSec    | Target                 |
|-----|----------|-------|--------|---------|---------|---------|-------|---------|---------|------------------------|
| 1   | 0.00     | 0.00  | 0.00   | 0.00    | 0.00    | 0.00    | 0.00  | 0.00    | 0.00    |                        |
| 2   | 700.00   | 0.00  | 0.00   | 700.00  | 0.00    | 0.00    | 0.00  | 0.00    | 0.00    |                        |
| 3   | 1117.41  | 8.35  | 262.38 | 1115.94 | -4.03   | -30.09  | 2.00  | 262.38  | -29.98  |                        |
| 4   | 7038.18  | 8.35  | 262.38 | 6973.97 | -118.08 | -882.13 | 0.00  | 0.00    | -879.09 |                        |
| 5   | 8020.70  | 90.00 | 91.07  | 7629.00 | -143.15 | -315.47 | 10.00 | -171.22 | -312.00 | LP-LT 4-64 19-20 2AH   |
| 6   | 13165.91 | 90.00 | 91.07  | 7629.00 | -238.86 | 4828.85 | 0.00  | 0.00    | 4833.15 | MP-LT 4-64 19-20 2AH   |
| 7   | 13223.72 | 90.00 | 89.91  | 7629.00 | -239.36 | 4886.65 | 2.00  | -90.00  | 4890.94 | PBHL-LT 4-64 19-20 2AH |
| 8   | 18145.61 | 90.00 | 89.91  | 7629.00 | -231.61 | 9808.55 | 0.00  | 0.00    | 9811.28 | PBHL-LT 4-64 19-20 2AH |

ANNOTATIONS

| MD       | Inc   | Azi    | TVD     | +N/-S   | +E/-W   | VSec    | Departure | Annotation                        |
|----------|-------|--------|---------|---------|---------|---------|-----------|-----------------------------------|
| 700.00   | 0.00  | 0.00   | 700.00  | 0.00    | 0.00    | 0.00    | 0.00      | Start Build 2.00                  |
| 1117.41  | 8.35  | 262.38 | 1115.94 | -4.03   | -30.09  | -29.98  | 30.36     | Start 5920.77 hold at 1117.41 MD  |
| 7038.18  | 8.35  | 262.38 | 6973.97 | -118.08 | -882.13 | -879.09 | 889.99    | Start DLS 10.00 TFO -171.22       |
| 8020.70  | 90.00 | 91.07  | 7629.00 | -143.15 | -315.47 | -312.00 | 1470.84   | Start 5145.21 hold at 8020.70 MD  |
| 13165.91 | 90.00 | 91.07  | 7629.00 | -238.86 | 4828.85 | 4833.15 | 6616.05   | Start DLS 2.00 TFO -90.00         |
| 13223.72 | 90.00 | 89.91  | 7629.00 | -239.36 | 4886.65 | 4890.94 | 6673.85   | Start 4921.90 hold at 13223.72 MD |
| 18145.61 | 90.00 | 89.91  | 7629.00 | -231.61 | 9808.55 | 9811.28 | 11595.75  | TD at 18145.61                    |

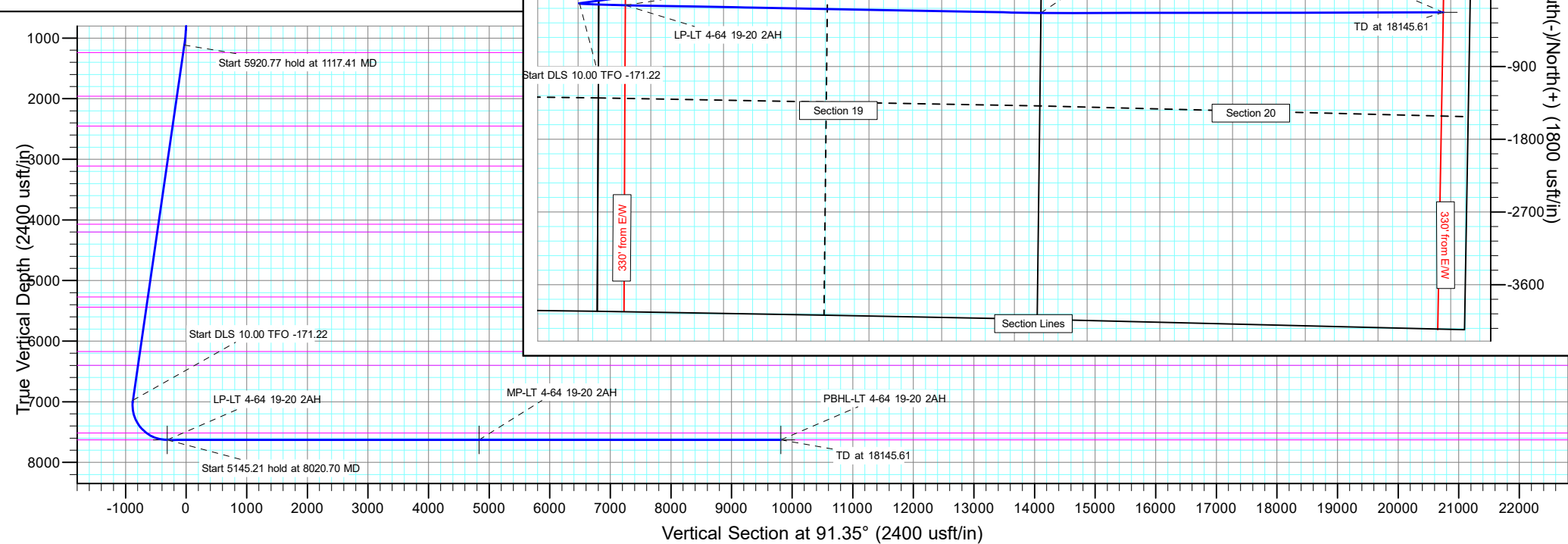
DESIGN TARGET DETAILS

| Name                      | TVD     | +N/-S   | +E/-W   | Northing   | Easting    | Latitude    | Longitude    | Shape |
|---------------------------|---------|---------|---------|------------|------------|-------------|--------------|-------|
| LP-LT 4-64 19-20 2AH      | 7629.00 | -143.15 | -315.47 | 1678240.49 | 3252646.31 | 39.692143°N | 104.602211°W | Point |
| - plan hits target center |         |         |         |            |            |             |              |       |
| MP-LT 4-64 19-20 2AH      | 7629.00 | -238.86 | 4828.85 | 1678195.69 | 3257791.27 | 39.691879°N | 104.583931°W | Point |
| - plan hits target center |         |         |         |            |            |             |              |       |
| PBHL-LT 4-64 19-20 2AH    | 7629.00 | -231.61 | 9808.55 | 1678252.21 | 3262770.59 | 39.691895°N | 104.566236°W | Point |
| - plan hits target center |         |         |         |            |            |             |              |       |

PROJECT DETAILS: ARAPAHOE COUNTY

Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Central Zone  
System Datum: Mean Sea Level

SHL:  
1341' FNL, 645' FWL  
Sec 19-T4S-R64W  
  
LP:  
1490' FNL, 330' FWL  
Sec 19-T4S-R64W  
  
BHL:  
1380' FNL, 330' FEL  
Sec 20-T4S-R64W



## Planning Report

|                  |                              |                                     |                                   |
|------------------|------------------------------|-------------------------------------|-----------------------------------|
| <b>Database:</b> | EDT_32Bit_ODBC               | <b>Local Co-ordinate Reference:</b> | Well LUSSING TRUST 4-64 19-20 2AH |
| <b>Company:</b>  | CRESTONE PEAK RESOURCES      | <b>TVD Reference:</b>               | KB 25' @ 5721.00usft              |
| <b>Project:</b>  | ARAPAHOE COUNTY              | <b>MD Reference:</b>                | KB 25' @ 5721.00usft              |
| <b>Site:</b>     | SEC 19-T4S-R64W              | <b>North Reference:</b>             | True                              |
| <b>Well:</b>     | LUSSING TRUST 4-64 19-20 2AH | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Wellbore:</b> | OWB                          |                                     |                                   |
| <b>Design:</b>   | PROPOSAL 1                   |                                     |                                   |

|                    |                           |                      |                             |
|--------------------|---------------------------|----------------------|-----------------------------|
| <b>Project</b>     | ARAPAHOE COUNTY           |                      |                             |
| <b>Map System:</b> | US State Plane 1983       | <b>System Datum:</b> | Mean Sea Level              |
| <b>Geo Datum:</b>  | North American Datum 1983 |                      |                             |
| <b>Map Zone:</b>   | Colorado Central Zone     |                      | Using geodetic scale factor |

|                       |           |                 |                   |                   |              |
|-----------------------|-----------|-----------------|-------------------|-------------------|--------------|
| Site                  |           | SEC 19-T4S-R64W |                   |                   |              |
| Site Position:        |           | Northing:       | 1,679,733.25 usft | Latitude:         | 39.696250°N  |
| From:                 | Lat/Long  | Easting:        | 3,252,308.22 usft | Longitude:        | 104.603360°W |
| Position Uncertainty: | 0.00 usft | Slot Radius:    | 13.200 in         | Grid Convergence: | 0.57 °       |

| Well                 | LUSSING TRUST 4-64 19-20 2AH |                |                     |                   |               |               |
|----------------------|------------------------------|----------------|---------------------|-------------------|---------------|---------------|
| Well Position        | +N/-S                        | -1,352.88 usft | Northing:           | 1,678,386.75 usft | Latitude:     | 39.692536°N   |
|                      | +E/-W                        | 638.81 usft    | Easting:            | 3,252,960.34 usft | Longitude:    | 104.601090°W  |
| Position Uncertainty |                              | 0.00 usft      | Wellhead Elevation: |                   | Ground Level: | 5,696.00 usft |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | OWB               |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2020          | 5/9/2023           | 7.50                   | 66.04                | 51,391.26939766            |

|                          |                                |                     |                      |                      |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| <b>Design</b>            | PROPOSAL 1                     |                     |                      |                      |
| <b>Audit Notes:</b>      |                                |                     |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>                  | PROTOTYPE           | <b>Tie On Depth:</b> | 0.00                 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b>  | <b>Direction (°)</b> |
|                          | 0.00                           | 0.00                | 0.00                 | 91.35                |

|                                 |                        |                          |                  |                     |
|---------------------------------|------------------------|--------------------------|------------------|---------------------|
| <b>Plan Survey Tool Program</b> | <b>Date</b>            | 5/11/2023                |                  |                     |
| <b>Depth From (usft)</b>        | <b>Depth To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Remarks</b>      |
| 1                               | 0.00                   | 18,145.61                | PROPOSAL 1 (OWB) | MWD OWSG            |
|                                 |                        |                          |                  | OWSG MWD - Standard |

|                              |                        |                    |                              |                     |                     |                              |                             |                            |                |                      |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|------------------------------|-----------------------------|----------------------------|----------------|----------------------|
| <b>Plan Sections</b>         |                        |                    |                              |                     |                     |                              |                             |                            |                |                      |
| <b>Measured Depth (usft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Dogleg Rate (°/100ft)</b> | <b>Build Rate (°/100ft)</b> | <b>Turn Rate (°/100ft)</b> | <b>TFO (°)</b> | <b>Target</b>        |
| 0.00                         | 0.00                   | 0.00               | 0.00                         | 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           |                      |
| 1,117.41                     | 8.35                   | 262.38             | 1,115.94                     | -4.03               | -30.09              | 2.00                         | 2.00                        | 0.00                       | 262.38         |                      |
| 7,038.19                     | 8.35                   | 262.38             | 6,973.97                     | -118.08             | -882.13             | 0.00                         | 0.00                        | 0.00                       | 0.00           |                      |
| 8,020.70                     | 90.00                  | 91.07              | 7,629.00                     | -143.15             | -315.47             | 10.00                        | 8.31                        | -17.44                     | -171.22        | LP-LT 4-64 19-20 2AH |
| 13,165.91                    | 90.00                  | 91.07              | 7,629.00                     | -238.86             | 4,828.85            | 0.00                         | 0.00                        | 0.00                       | 0.00           | MP-LT 4-64 19-20 2A  |
| 13,223.72                    | 90.00                  | 89.91              | 7,629.00                     | -239.36             | 4,886.65            | 2.00                         | 0.00                        | -2.00                      | -90.00         | PBHL-LT 4-64 19-20 ; |
| 18,145.61                    | 90.00                  | 89.91              | 7,629.00                     | -231.61             | 9,808.55            | 0.00                         | 0.00                        | 0.00                       | 0.00           | PBHL-LT 4-64 19-20 ; |

# Planning Report

|                  |                              |                                     |                                   |
|------------------|------------------------------|-------------------------------------|-----------------------------------|
| <b>Database:</b> | EDT_32Bit_ODBC               | <b>Local Co-ordinate Reference:</b> | Well LUSSING TRUST 4-64 19-20 2AH |
| <b>Company:</b>  | CRESTONE PEAK RESOURCES      | <b>TVD Reference:</b>               | KB 25' @ 5721.00usft              |
| <b>Project:</b>  | ARAPAHOE COUNTY              | <b>MD Reference:</b>                | KB 25' @ 5721.00usft              |
| <b>Site:</b>     | SEC 19-T4S-R64W              | <b>North Reference:</b>             | True                              |
| <b>Well:</b>     | LUSSING TRUST 4-64 19-20 2AH | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Wellbore:</b> | OWB                          |                                     |                                   |
| <b>Design:</b>   | PROPOSAL 1                   |                                     |                                   |

| Planned Survey                   |                 |             |                       |              |              |                         |                       |                      |                     |
|----------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-----------------------|----------------------|---------------------|
| Measured Depth (usft)            | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 0.00                             | 0.00            | 0.00        | 0.00                  | 0.00         | 0.00         | 0.00                    | 0.00                  | 0.00                 | 0.00                |
| 24.00                            | 0.00            | 0.00        | 24.00                 | 0.00         | 0.00         | 0.00                    | 0.00                  | 0.00                 | 0.00                |
| Denver                           |                 |             |                       |              |              |                         |                       |                      |                     |
| 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                |
| 639.00                           | 0.00            | 0.00        | 639.00                | 0.00         | 0.00         | 0.00                    | 0.00                  | 0.00                 | 0.00                |
| Arapahoe                         |                 |             |                       |              |              |                         |                       |                      |                     |
| 700.00                           | 0.00            | 0.00        | 700.00                | 0.00         | 0.00         | 0.00                    | 0.00                  | 0.00                 | 0.00                |
| Start Build 2.00                 |                 |             |                       |              |              |                         |                       |                      |                     |
| 800.00                           | 2.00            | 262.38      | 799.98                | -0.23        | -1.73        | -1.72                   | 2.00                  | 2.00                 | 0.00                |
| 900.00                           | 4.00            | 262.38      | 899.84                | -0.93        | -6.92        | -6.89                   | 2.00                  | 2.00                 | 0.00                |
| 1,000.00                         | 6.00            | 262.38      | 999.45                | -2.08        | -15.55       | -15.50                  | 2.00                  | 2.00                 | 0.00                |
| 1,100.00                         | 8.00            | 262.38      | 1,098.70              | -3.70        | -27.63       | -27.54                  | 2.00                  | 2.00                 | 0.00                |
| 1,117.41                         | 8.35            | 262.38      | 1,115.94              | -4.03        | -30.09       | -29.98                  | 2.00                  | 2.00                 | 0.00                |
| Start 5920.77 hold at 1117.41 MD |                 |             |                       |              |              |                         |                       |                      |                     |
| 1,200.00                         | 8.35            | 262.38      | 1,197.65              | -5.62        | -41.97       | -41.83                  | 0.00                  | 0.00                 | 0.00                |
| 1,241.79                         | 8.35            | 262.38      | 1,239.00              | -6.42        | -47.99       | -47.82                  | 0.00                  | 0.00                 | 0.00                |
| Laramie-Fox Hills Formation      |                 |             |                       |              |              |                         |                       |                      |                     |
| 1,300.00                         | 8.35            | 262.38      | 1,296.59              | -7.54        | -56.36       | -56.17                  | 0.00                  | 0.00                 | 0.00                |
| 1,400.00                         | 8.35            | 262.38      | 1,395.53              | -9.47        | -70.75       | -70.51                  | 0.00                  | 0.00                 | 0.00                |
| 1,500.00                         | 8.35            | 262.38      | 1,494.47              | -11.40       | -85.14       | -84.85                  | 0.00                  | 0.00                 | 0.00                |
| 1,600.00                         | 8.35            | 262.38      | 1,593.41              | -13.32       | -99.53       | -99.19                  | 0.00                  | 0.00                 | 0.00                |
| 1,700.00                         | 8.35            | 262.38      | 1,692.35              | -15.25       | -113.93      | -113.53                 | 0.00                  | 0.00                 | 0.00                |
| 1,800.00                         | 8.35            | 262.38      | 1,791.29              | -17.18       | -128.32      | -127.87                 | 0.00                  | 0.00                 | 0.00                |
| 1,900.00                         | 8.35            | 262.38      | 1,890.23              | -19.10       | -142.71      | -142.22                 | 0.00                  | 0.00                 | 0.00                |
| 1,969.50                         | 8.35            | 262.38      | 1,959.00              | -20.44       | -152.71      | -152.18                 | 0.00                  | 0.00                 | 0.00                |
| Pierre Formation                 |                 |             |                       |              |              |                         |                       |                      |                     |
| 2,000.00                         | 8.35            | 262.38      | 1,989.17              | -21.03       | -157.10      | -156.56                 | 0.00                  | 0.00                 | 0.00                |
| 2,100.00                         | 8.35            | 262.38      | 2,088.11              | -22.96       | -171.49      | -170.90                 | 0.00                  | 0.00                 | 0.00                |
| 2,200.00                         | 8.35            | 262.38      | 2,187.05              | -24.88       | -185.88      | -185.24                 | 0.00                  | 0.00                 | 0.00                |
| 2,300.00                         | 8.35            | 262.38      | 2,285.99              | -26.81       | -200.27      | -199.58                 | 0.00                  | 0.00                 | 0.00                |
| 2,400.00                         | 8.35            | 262.38      | 2,384.93              | -28.73       | -214.66      | -213.92                 | 0.00                  | 0.00                 | 0.00                |
| 2,464.75                         | 8.35            | 262.38      | 2,449.00              | -29.98       | -223.98      | -223.21                 | 0.00                  | 0.00                 | 0.00                |
| Upper Pierre aquifer             |                 |             |                       |              |              |                         |                       |                      |                     |
| 2,500.00                         | 8.35            | 262.38      | 2,483.87              | -30.66       | -229.05      | -228.26                 | 0.00                  | 0.00                 | 0.00                |
| 2,600.00                         | 8.35            | 262.38      | 2,582.81              | -32.59       | -243.44      | -242.60                 | 0.00                  | 0.00                 | 0.00                |
| 2,700.00                         | 8.35            | 262.38      | 2,681.76              | -34.51       | -257.83      | -256.95                 | 0.00                  | 0.00                 | 0.00                |
| 2,800.00                         | 8.35            | 262.38      | 2,780.70              | -36.44       | -272.22      | -271.29                 | 0.00                  | 0.00                 | 0.00                |
| 2,900.00                         | 8.35            | 262.38      | 2,879.64              | -38.37       | -286.61      | -285.63                 | 0.00                  | 0.00                 | 0.00                |
| 3,000.00                         | 8.35            | 262.38      | 2,978.58              | -40.29       | -301.00      | -299.97                 | 0.00                  | 0.00                 | 0.00                |
| 3,100.00                         | 8.35            | 262.38      | 3,077.52              | -42.22       | -315.39      | -314.31                 | 0.00                  | 0.00                 | 0.00                |
| 3,131.82                         | 8.35            | 262.38      | 3,109.00              | -42.83       | -319.97      | -318.87                 | 0.00                  | 0.00                 | 0.00                |
| Base of Upper Pierre aquifer     |                 |             |                       |              |              |                         |                       |                      |                     |
| 3,200.00                         | 8.35            | 262.38      | 3,176.46              | -44.15       | -329.79      | -328.65                 | 0.00                  | 0.00                 | 0.00                |
| 3,300.00                         | 8.35            | 262.38      | 3,275.40              | -46.07       | -344.18      | -342.99                 | 0.00                  | 0.00                 | 0.00                |
| 3,400.00                         | 8.35            | 262.38      | 3,374.34              | -48.00       | -358.57      | -357.33                 | 0.00                  | 0.00                 | 0.00                |
| 3,500.00                         | 8.35            | 262.38      | 3,473.28              | -49.92       | -372.96      | -371.67                 | 0.00                  | 0.00                 | 0.00                |
| 3,600.00                         | 8.35            | 262.38      | 3,572.22              | -51.85       | -387.35      | -386.02                 | 0.00                  | 0.00                 | 0.00                |
| 3,700.00                         | 8.35            | 262.38      | 3,671.16              | -53.78       | -401.74      | -400.36                 | 0.00                  | 0.00                 | 0.00                |

# Planning Report

|                  |                              |                                     |                                   |
|------------------|------------------------------|-------------------------------------|-----------------------------------|
| <b>Database:</b> | EDT_32Bit_ODBC               | <b>Local Co-ordinate Reference:</b> | Well LUSSING TRUST 4-64 19-20 2AH |
| <b>Company:</b>  | CRESTONE PEAK RESOURCES      | <b>TVD Reference:</b>               | KB 25' @ 5721.00usft              |
| <b>Project:</b>  | ARAPAHOE COUNTY              | <b>MD Reference:</b>                | KB 25' @ 5721.00usft              |
| <b>Site:</b>     | SEC 19-T4S-R64W              | <b>North Reference:</b>             | True                              |
| <b>Well:</b>     | LUSSING TRUST 4-64 19-20 2AH | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Wellbore:</b> | OWB                          |                                     |                                   |
| <b>Design:</b>   | PROPOSAL 1                   |                                     |                                   |

| Planned Survey                |                 |             |                       |              |              |                         |                       |                      |                     |
|-------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-----------------------|----------------------|---------------------|
| Measured Depth (usft)         | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 3,800.00                      | 8.35            | 262.38      | 3,770.10              | -55.70       | -416.13      | -414.70                 | 0.00                  | 0.00                 | 0.00                |
| 3,900.00                      | 8.35            | 262.38      | 3,869.04              | -57.63       | -430.52      | -429.04                 | 0.00                  | 0.00                 | 0.00                |
| 4,000.00                      | 8.35            | 262.38      | 3,967.98              | -59.56       | -444.91      | -443.38                 | 0.00                  | 0.00                 | 0.00                |
| 4,100.00                      | 8.35            | 262.38      | 4,066.92              | -61.48       | -459.30      | -457.72                 | 0.00                  | 0.00                 | 0.00                |
| 4,102.10                      | 8.35            | 262.38      | 4,069.00              | -61.52       | -459.60      | -458.02                 | 0.00                  | 0.00                 | 0.00                |
| Larimer ("Parkman") sandstone |                 |             |                       |              |              |                         |                       |                      |                     |
| 4,200.00                      | 8.35            | 262.38      | 4,165.86              | -63.41       | -473.69      | -472.06                 | 0.00                  | 0.00                 | 0.00                |
| 4,233.49                      | 8.35            | 262.38      | 4,199.00              | -64.05       | -478.51      | -476.87                 | 0.00                  | 0.00                 | 0.00                |
| Pierre Formation              |                 |             |                       |              |              |                         |                       |                      |                     |
| 4,300.00                      | 8.35            | 262.38      | 4,264.80              | -65.34       | -488.08      | -486.40                 | 0.00                  | 0.00                 | 0.00                |
| 4,400.00                      | 8.35            | 262.38      | 4,363.74              | -67.26       | -502.47      | -500.75                 | 0.00                  | 0.00                 | 0.00                |
| 4,500.00                      | 8.35            | 262.38      | 4,462.68              | -69.19       | -516.86      | -515.09                 | 0.00                  | 0.00                 | 0.00                |
| 4,600.00                      | 8.35            | 262.38      | 4,561.62              | -71.11       | -531.25      | -529.43                 | 0.00                  | 0.00                 | 0.00                |
| 4,700.00                      | 8.35            | 262.38      | 4,660.56              | -73.04       | -545.65      | -543.77                 | 0.00                  | 0.00                 | 0.00                |
| 4,800.00                      | 8.35            | 262.38      | 4,759.50              | -74.97       | -560.04      | -558.11                 | 0.00                  | 0.00                 | 0.00                |
| 4,900.00                      | 8.35            | 262.38      | 4,858.44              | -76.89       | -574.43      | -572.45                 | 0.00                  | 0.00                 | 0.00                |
| 5,000.00                      | 8.35            | 262.38      | 4,957.38              | -78.82       | -588.82      | -586.79                 | 0.00                  | 0.00                 | 0.00                |
| 5,100.00                      | 8.35            | 262.38      | 5,056.32              | -80.75       | -603.21      | -601.13                 | 0.00                  | 0.00                 | 0.00                |
| 5,200.00                      | 8.35            | 262.38      | 5,155.26              | -82.67       | -617.60      | -615.47                 | 0.00                  | 0.00                 | 0.00                |
| 5,300.00                      | 8.35            | 262.38      | 5,254.21              | -84.60       | -631.99      | -629.82                 | 0.00                  | 0.00                 | 0.00                |
| 5,314.95                      | 8.35            | 262.38      | 5,269.00              | -84.89       | -634.14      | -631.96                 | 0.00                  | 0.00                 | 0.00                |
| Terry ("Sussex") sandstone    |                 |             |                       |              |              |                         |                       |                      |                     |
| 5,400.00                      | 8.35            | 262.38      | 5,353.15              | -86.52       | -646.38      | -644.16                 | 0.00                  | 0.00                 | 0.00                |
| 5,486.77                      | 8.35            | 262.38      | 5,439.00              | -88.20       | -658.87      | -656.60                 | 0.00                  | 0.00                 | 0.00                |
| Pierre Formation              |                 |             |                       |              |              |                         |                       |                      |                     |
| 5,500.00                      | 8.35            | 262.38      | 5,452.09              | -88.45       | -660.77      | -658.50                 | 0.00                  | 0.00                 | 0.00                |
| 5,600.00                      | 8.35            | 262.38      | 5,551.03              | -90.38       | -675.16      | -672.84                 | 0.00                  | 0.00                 | 0.00                |
| 5,700.00                      | 8.35            | 262.38      | 5,649.97              | -92.30       | -689.55      | -687.18                 | 0.00                  | 0.00                 | 0.00                |
| 5,800.00                      | 8.35            | 262.38      | 5,748.91              | -94.23       | -703.94      | -701.52                 | 0.00                  | 0.00                 | 0.00                |
| 5,900.00                      | 8.35            | 262.38      | 5,847.85              | -96.16       | -718.33      | -715.86                 | 0.00                  | 0.00                 | 0.00                |
| 6,000.00                      | 8.35            | 262.38      | 5,946.79              | -98.08       | -732.72      | -730.20                 | 0.00                  | 0.00                 | 0.00                |
| 6,100.00                      | 8.35            | 262.38      | 6,045.73              | -100.01      | -747.11      | -744.55                 | 0.00                  | 0.00                 | 0.00                |
| 6,200.00                      | 8.35            | 262.38      | 6,144.67              | -101.94      | -761.50      | -758.89                 | 0.00                  | 0.00                 | 0.00                |
| 6,224.59                      | 8.35            | 262.38      | 6,169.00              | -102.41      | -765.04      | -762.41                 | 0.00                  | 0.00                 | 0.00                |
| Hygiene ("Shannon") sandstone |                 |             |                       |              |              |                         |                       |                      |                     |
| 6,300.00                      | 8.35            | 262.38      | 6,243.61              | -103.86      | -775.90      | -773.23                 | 0.00                  | 0.00                 | 0.00                |
| 6,400.00                      | 8.35            | 262.38      | 6,342.55              | -105.79      | -790.29      | -787.57                 | 0.00                  | 0.00                 | 0.00                |
| 6,457.06                      | 8.35            | 262.38      | 6,399.00              | -106.89      | -798.50      | -795.75                 | 0.00                  | 0.00                 | 0.00                |
| Pierre Formation              |                 |             |                       |              |              |                         |                       |                      |                     |
| 6,500.00                      | 8.35            | 262.38      | 6,441.49              | -107.71      | -804.68      | -801.91                 | 0.00                  | 0.00                 | 0.00                |
| 6,600.00                      | 8.35            | 262.38      | 6,540.43              | -109.64      | -819.07      | -816.25                 | 0.00                  | 0.00                 | 0.00                |
| 6,700.00                      | 8.35            | 262.38      | 6,639.37              | -111.57      | -833.46      | -830.59                 | 0.00                  | 0.00                 | 0.00                |
| 6,800.00                      | 8.35            | 262.38      | 6,738.31              | -113.49      | -847.85      | -844.93                 | 0.00                  | 0.00                 | 0.00                |
| 6,900.00                      | 8.35            | 262.38      | 6,837.25              | -115.42      | -862.24      | -859.27                 | 0.00                  | 0.00                 | 0.00                |
| 7,000.00                      | 8.35            | 262.38      | 6,936.19              | -117.35      | -876.63      | -873.62                 | 0.00                  | 0.00                 | 0.00                |
| 7,038.19                      | 8.35            | 262.38      | 6,973.97              | -118.08      | -882.13      | -879.09                 | 0.00                  | 0.00                 | 0.00                |
| Start DLS 10.00 TFO -171.22   |                 |             |                       |              |              |                         |                       |                      |                     |
| 7,050.00                      | 7.18            | 260.93      | 6,985.68              | -118.31      | -883.70      | -880.67                 | 10.00                 | -9.86                | -12.21              |
| 7,100.00                      | 2.43            | 239.55      | 7,035.49              | -119.34      | -887.71      | -884.64                 | 10.00                 | -9.51                | -42.77              |
| 7,150.00                      | 3.19            | 114.48      | 7,085.46              | -120.46      | -887.35      | -884.26                 | 10.00                 | 1.53                 | -250.13             |
| 7,200.00                      | 8.03            | 100.11      | 7,135.21              | -121.65      | -882.64      | -879.53                 | 10.00                 | 9.67                 | -28.75              |
| 7,250.00                      | 12.99           | 96.58       | 7,184.36              | -122.91      | -873.62      | -870.47                 | 10.00                 | 9.92                 | -7.05               |
| 7,300.00                      | 17.97           | 94.98       | 7,232.53              | -124.22      | -860.34      | -857.17                 | 10.00                 | 9.96                 | -3.19               |

# Planning Report

|                  |                              |                                     |                                   |
|------------------|------------------------------|-------------------------------------|-----------------------------------|
| <b>Database:</b> | EDT_32Bit_ODBC               | <b>Local Co-ordinate Reference:</b> | Well LUSSING TRUST 4-64 19-20 2AH |
| <b>Company:</b>  | CRESTONE PEAK RESOURCES      | <b>TVD Reference:</b>               | KB 25' @ 5721.00usft              |
| <b>Project:</b>  | ARAPAHOE COUNTY              | <b>MD Reference:</b>                | KB 25' @ 5721.00usft              |
| <b>Site:</b>     | SEC 19-T4S-R64W              | <b>North Reference:</b>             | True                              |
| <b>Well:</b>     | LUSSING TRUST 4-64 19-20 2AH | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Wellbore:</b> | OWB                          |                                     |                                   |
| <b>Design:</b>   | PROPOSAL 1                   |                                     |                                   |

| Planned Survey                                        |                 |             |                       |              |              |                         |                       |                      |                     |
|-------------------------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-----------------------|----------------------|---------------------|
| Measured Depth (usft)                                 | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 7,350.00                                              | 22.96           | 94.07       | 7,279.36              | -125.58      | -842.92      | -839.72                 | 10.00                 | 9.98                 | -1.84               |
| 7,400.00                                              | 27.96           | 93.46       | 7,324.49              | -126.98      | -821.48      | -818.25                 | 10.00                 | 9.99                 | -1.21               |
| 7,450.00                                              | 32.95           | 93.03       | 7,367.57              | -128.41      | -796.18      | -792.93                 | 10.00                 | 9.99                 | -0.87               |
| 7,500.00                                              | 37.95           | 92.70       | 7,408.29              | -129.85      | -767.23      | -763.95                 | 10.00                 | 9.99                 | -0.66               |
| 7,550.00                                              | 42.94           | 92.43       | 7,446.33              | -131.30      | -734.83      | -731.53                 | 10.00                 | 9.99                 | -0.53               |
| 7,600.00                                              | 47.94           | 92.21       | 7,481.40              | -132.74      | -699.25      | -695.92                 | 10.00                 | 10.00                | -0.44               |
| 7,650.00                                              | 52.94           | 92.03       | 7,513.23              | -134.16      | -660.73      | -657.38                 | 10.00                 | 10.00                | -0.37               |
| 7,651.28                                              | 53.07           | 92.02       | 7,514.00              | -134.20      | -659.72      | -656.37                 | 10.00                 | 10.00                | -0.35               |
| Sharon Springs Member                                 |                 |             |                       |              |              |                         |                       |                      |                     |
| 7,700.00                                              | 57.94           | 91.86       | 7,541.59              | -135.55      | -619.60      | -616.22                 | 10.00                 | 10.00                | -0.33               |
| 7,750.00                                              | 62.94           | 91.71       | 7,566.25              | -136.91      | -576.14      | -572.75                 | 10.00                 | 10.00                | -0.29               |
| 7,800.00                                              | 67.94           | 91.58       | 7,587.03              | -138.22      | -530.70      | -527.29                 | 10.00                 | 10.00                | -0.27               |
| 7,850.00                                              | 72.93           | 91.46       | 7,603.77              | -139.46      | -483.62      | -480.19                 | 10.00                 | 10.00                | -0.25               |
| 7,900.00                                              | 77.93           | 91.34       | 7,616.34              | -140.64      | -435.25      | -431.81                 | 10.00                 | 10.00                | -0.24               |
| 7,950.00                                              | 82.93           | 91.22       | 7,624.64              | -141.74      | -385.98      | -382.52                 | 10.00                 | 10.00                | -0.23               |
| 8,000.00                                              | 87.93           | 91.11       | 7,628.63              | -142.76      | -336.16      | -332.70                 | 10.00                 | 10.00                | -0.22               |
| 8,020.70                                              | 90.00           | 91.07       | 7,629.00              | -143.15      | -315.47      | -312.00                 | 10.00                 | 10.00                | -0.22               |
| Start 5145.21 hold at 8020.70 MD - Niobrara Formation |                 |             |                       |              |              |                         |                       |                      |                     |
| 8,100.00                                              | 90.00           | 91.07       | 7,629.00              | -144.63      | -236.18      | -232.70                 | 0.00                  | 0.00                 | 0.00                |
| 8,200.00                                              | 90.00           | 91.07       | 7,629.00              | -146.49      | -136.20      | -132.70                 | 0.00                  | 0.00                 | 0.00                |
| 8,300.00                                              | 90.00           | 91.07       | 7,629.00              | -148.35      | -36.22       | -32.71                  | 0.00                  | 0.00                 | 0.00                |
| 8,400.00                                              | 90.00           | 91.07       | 7,629.00              | -150.21      | 63.77        | 67.29                   | 0.00                  | 0.00                 | 0.00                |
| 8,500.00                                              | 90.00           | 91.07       | 7,629.00              | -152.07      | 163.75       | 167.29                  | 0.00                  | 0.00                 | 0.00                |
| 8,600.00                                              | 90.00           | 91.07       | 7,629.00              | -153.93      | 263.73       | 267.29                  | 0.00                  | 0.00                 | 0.00                |
| 8,700.00                                              | 90.00           | 91.07       | 7,629.00              | -155.79      | 363.71       | 367.29                  | 0.00                  | 0.00                 | 0.00                |
| 8,800.00                                              | 90.00           | 91.07       | 7,629.00              | -157.65      | 463.70       | 467.29                  | 0.00                  | 0.00                 | 0.00                |
| 8,900.00                                              | 90.00           | 91.07       | 7,629.00              | -159.51      | 563.68       | 567.29                  | 0.00                  | 0.00                 | 0.00                |
| 9,000.00                                              | 90.00           | 91.07       | 7,629.00              | -161.37      | 663.66       | 667.29                  | 0.00                  | 0.00                 | 0.00                |
| 9,100.00                                              | 90.00           | 91.07       | 7,629.00              | -163.23      | 763.64       | 767.28                  | 0.00                  | 0.00                 | 0.00                |
| 9,200.00                                              | 90.00           | 91.07       | 7,629.00              | -165.09      | 863.63       | 867.28                  | 0.00                  | 0.00                 | 0.00                |
| 9,300.00                                              | 90.00           | 91.07       | 7,629.00              | -166.95      | 963.61       | 967.28                  | 0.00                  | 0.00                 | 0.00                |
| 9,400.00                                              | 90.00           | 91.07       | 7,629.00              | -168.81      | 1,063.59     | 1,067.28                | 0.00                  | 0.00                 | 0.00                |
| 9,500.00                                              | 90.00           | 91.07       | 7,629.00              | -170.67      | 1,163.57     | 1,167.28                | 0.00                  | 0.00                 | 0.00                |
| 9,600.00                                              | 90.00           | 91.07       | 7,629.00              | -172.53      | 1,263.56     | 1,267.28                | 0.00                  | 0.00                 | 0.00                |
| 9,700.00                                              | 90.00           | 91.07       | 7,629.00              | -174.39      | 1,363.54     | 1,367.28                | 0.00                  | 0.00                 | 0.00                |
| 9,800.00                                              | 90.00           | 91.07       | 7,629.00              | -176.25      | 1,463.52     | 1,467.28                | 0.00                  | 0.00                 | 0.00                |
| 9,900.00                                              | 90.00           | 91.07       | 7,629.00              | -178.11      | 1,563.51     | 1,567.27                | 0.00                  | 0.00                 | 0.00                |
| 10,000.00                                             | 90.00           | 91.07       | 7,629.00              | -179.97      | 1,663.49     | 1,667.27                | 0.00                  | 0.00                 | 0.00                |
| 10,100.00                                             | 90.00           | 91.07       | 7,629.00              | -181.83      | 1,763.47     | 1,767.27                | 0.00                  | 0.00                 | 0.00                |
| 10,200.00                                             | 90.00           | 91.07       | 7,629.00              | -183.69      | 1,863.45     | 1,867.27                | 0.00                  | 0.00                 | 0.00                |
| 10,300.00                                             | 90.00           | 91.07       | 7,629.00              | -185.55      | 1,963.44     | 1,967.27                | 0.00                  | 0.00                 | 0.00                |
| 10,400.00                                             | 90.00           | 91.07       | 7,629.00              | -187.41      | 2,063.42     | 2,067.27                | 0.00                  | 0.00                 | 0.00                |
| 10,500.00                                             | 90.00           | 91.07       | 7,629.00              | -189.27      | 2,163.40     | 2,167.27                | 0.00                  | 0.00                 | 0.00                |
| 10,600.00                                             | 90.00           | 91.07       | 7,629.00              | -191.13      | 2,263.38     | 2,267.27                | 0.00                  | 0.00                 | 0.00                |
| 10,700.00                                             | 90.00           | 91.07       | 7,629.00              | -192.99      | 2,363.37     | 2,367.26                | 0.00                  | 0.00                 | 0.00                |
| 10,800.00                                             | 90.00           | 91.07       | 7,629.00              | -194.85      | 2,463.35     | 2,467.26                | 0.00                  | 0.00                 | 0.00                |
| 10,900.00                                             | 90.00           | 91.07       | 7,629.00              | -196.71      | 2,563.33     | 2,567.26                | 0.00                  | 0.00                 | 0.00                |
| 11,000.00                                             | 90.00           | 91.07       | 7,629.00              | -198.57      | 2,663.32     | 2,667.26                | 0.00                  | 0.00                 | 0.00                |
| 11,100.00                                             | 90.00           | 91.07       | 7,629.00              | -200.43      | 2,763.30     | 2,767.26                | 0.00                  | 0.00                 | 0.00                |
| 11,200.00                                             | 90.00           | 91.07       | 7,629.00              | -202.29      | 2,863.28     | 2,867.26                | 0.00                  | 0.00                 | 0.00                |
| 11,300.00                                             | 90.00           | 91.07       | 7,629.00              | -204.15      | 2,963.26     | 2,967.26                | 0.00                  | 0.00                 | 0.00                |
| 11,400.00                                             | 90.00           | 91.07       | 7,629.00              | -206.01      | 3,063.25     | 3,067.26                | 0.00                  | 0.00                 | 0.00                |
| 11,500.00                                             | 90.00           | 91.07       | 7,629.00              | -207.87      | 3,163.23     | 3,167.25                | 0.00                  | 0.00                 | 0.00                |
| 11,600.00                                             | 90.00           | 91.07       | 7,629.00              | -209.73      | 3,263.21     | 3,267.25                | 0.00                  | 0.00                 | 0.00                |

# Planning Report

|                  |                              |                                     |                                   |
|------------------|------------------------------|-------------------------------------|-----------------------------------|
| <b>Database:</b> | EDT_32Bit_ODBC               | <b>Local Co-ordinate Reference:</b> | Well LUSSING TRUST 4-64 19-20 2AH |
| <b>Company:</b>  | CRESTONE PEAK RESOURCES      | <b>TVD Reference:</b>               | KB 25' @ 5721.00usft              |
| <b>Project:</b>  | ARAPAHOE COUNTY              | <b>MD Reference:</b>                | KB 25' @ 5721.00usft              |
| <b>Site:</b>     | SEC 19-T4S-R64W              | <b>North Reference:</b>             | True                              |
| <b>Well:</b>     | LUSSING TRUST 4-64 19-20 2AH | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Wellbore:</b> | OWB                          |                                     |                                   |
| <b>Design:</b>   | PROPOSAL 1                   |                                     |                                   |

| Planned Survey                    |                 |             |                       |              |              |                         |                       |                      |                     |
|-----------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-----------------------|----------------------|---------------------|
| Measured Depth (usft)             | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 11,700.00                         | 90.00           | 91.07       | 7,629.00              | -211.59      | 3,363.19     | 3,367.25                | 0.00                  | 0.00                 | 0.00                |
| 11,800.00                         | 90.00           | 91.07       | 7,629.00              | -213.45      | 3,463.18     | 3,467.25                | 0.00                  | 0.00                 | 0.00                |
| 11,900.00                         | 90.00           | 91.07       | 7,629.00              | -215.31      | 3,563.16     | 3,567.25                | 0.00                  | 0.00                 | 0.00                |
| 12,000.00                         | 90.00           | 91.07       | 7,629.00              | -217.17      | 3,663.14     | 3,667.25                | 0.00                  | 0.00                 | 0.00                |
| 12,100.00                         | 90.00           | 91.07       | 7,629.00              | -219.03      | 3,763.12     | 3,767.25                | 0.00                  | 0.00                 | 0.00                |
| 12,200.00                         | 90.00           | 91.07       | 7,629.00              | -220.89      | 3,863.11     | 3,867.25                | 0.00                  | 0.00                 | 0.00                |
| 12,300.00                         | 90.00           | 91.07       | 7,629.00              | -222.75      | 3,963.09     | 3,967.24                | 0.00                  | 0.00                 | 0.00                |
| 12,400.00                         | 90.00           | 91.07       | 7,629.00              | -224.62      | 4,063.07     | 4,067.24                | 0.00                  | 0.00                 | 0.00                |
| 12,500.00                         | 90.00           | 91.07       | 7,629.00              | -226.48      | 4,163.06     | 4,167.24                | 0.00                  | 0.00                 | 0.00                |
| 12,600.00                         | 90.00           | 91.07       | 7,629.00              | -228.34      | 4,263.04     | 4,267.24                | 0.00                  | 0.00                 | 0.00                |
| 12,700.00                         | 90.00           | 91.07       | 7,629.00              | -230.20      | 4,363.02     | 4,367.24                | 0.00                  | 0.00                 | 0.00                |
| 12,800.00                         | 90.00           | 91.07       | 7,629.00              | -232.06      | 4,463.00     | 4,467.24                | 0.00                  | 0.00                 | 0.00                |
| 12,900.00                         | 90.00           | 91.07       | 7,629.00              | -233.92      | 4,562.99     | 4,567.24                | 0.00                  | 0.00                 | 0.00                |
| 13,000.00                         | 90.00           | 91.07       | 7,629.00              | -235.78      | 4,662.97     | 4,667.24                | 0.00                  | 0.00                 | 0.00                |
| 13,100.00                         | 90.00           | 91.07       | 7,629.00              | -237.64      | 4,762.95     | 4,767.23                | 0.00                  | 0.00                 | 0.00                |
| 13,165.91                         | 90.00           | 91.07       | 7,629.00              | -238.86      | 4,828.85     | 4,833.15                | 0.00                  | 0.00                 | 0.00                |
| Start DLS 2.00 TFO -90.00         |                 |             |                       |              |              |                         |                       |                      |                     |
| 13,200.00                         | 90.00           | 90.38       | 7,629.00              | -239.29      | 4,862.94     | 4,867.23                | 2.00                  | 0.00                 | -2.00               |
| 13,223.72                         | 90.00           | 89.91       | 7,629.00              | -239.36      | 4,886.65     | 4,890.94                | 2.00                  | 0.00                 | -2.00               |
| Start 4921.90 hold at 13223.72 MD |                 |             |                       |              |              |                         |                       |                      |                     |
| 13,300.00                         | 90.00           | 89.91       | 7,629.00              | -239.23      | 4,962.94     | 4,967.20                | 0.00                  | 0.00                 | 0.00                |
| 13,400.00                         | 90.00           | 89.91       | 7,629.00              | -239.08      | 5,062.94     | 5,067.17                | 0.00                  | 0.00                 | 0.00                |
| 13,500.00                         | 90.00           | 89.91       | 7,629.00              | -238.92      | 5,162.94     | 5,167.14                | 0.00                  | 0.00                 | 0.00                |
| 13,600.00                         | 90.00           | 89.91       | 7,629.00              | -238.76      | 5,262.94     | 5,267.11                | 0.00                  | 0.00                 | 0.00                |
| 13,700.00                         | 90.00           | 89.91       | 7,629.00              | -238.61      | 5,362.94     | 5,367.07                | 0.00                  | 0.00                 | 0.00                |
| 13,800.00                         | 90.00           | 89.91       | 7,629.00              | -238.45      | 5,462.94     | 5,467.04                | 0.00                  | 0.00                 | 0.00                |
| 13,900.00                         | 90.00           | 89.91       | 7,629.00              | -238.29      | 5,562.94     | 5,567.01                | 0.00                  | 0.00                 | 0.00                |
| 14,000.00                         | 90.00           | 89.91       | 7,629.00              | -238.13      | 5,662.94     | 5,666.98                | 0.00                  | 0.00                 | 0.00                |
| 14,100.00                         | 90.00           | 89.91       | 7,629.00              | -237.98      | 5,762.94     | 5,766.95                | 0.00                  | 0.00                 | 0.00                |
| 14,200.00                         | 90.00           | 89.91       | 7,629.00              | -237.82      | 5,862.94     | 5,866.92                | 0.00                  | 0.00                 | 0.00                |
| 14,300.00                         | 90.00           | 89.91       | 7,629.00              | -237.66      | 5,962.94     | 5,966.88                | 0.00                  | 0.00                 | 0.00                |
| 14,400.00                         | 90.00           | 89.91       | 7,629.00              | -237.50      | 6,062.94     | 6,066.85                | 0.00                  | 0.00                 | 0.00                |
| 14,500.00                         | 90.00           | 89.91       | 7,629.00              | -237.35      | 6,162.94     | 6,166.82                | 0.00                  | 0.00                 | 0.00                |
| 14,600.00                         | 90.00           | 89.91       | 7,629.00              | -237.19      | 6,262.94     | 6,266.79                | 0.00                  | 0.00                 | 0.00                |
| 14,700.00                         | 90.00           | 89.91       | 7,629.00              | -237.03      | 6,362.94     | 6,366.76                | 0.00                  | 0.00                 | 0.00                |
| 14,800.00                         | 90.00           | 89.91       | 7,629.00              | -236.87      | 6,462.94     | 6,466.73                | 0.00                  | 0.00                 | 0.00                |
| 14,900.00                         | 90.00           | 89.91       | 7,629.00              | -236.72      | 6,562.94     | 6,566.69                | 0.00                  | 0.00                 | 0.00                |
| 15,000.00                         | 90.00           | 89.91       | 7,629.00              | -236.56      | 6,662.94     | 6,666.66                | 0.00                  | 0.00                 | 0.00                |
| 15,100.00                         | 90.00           | 89.91       | 7,629.00              | -236.40      | 6,762.94     | 6,766.63                | 0.00                  | 0.00                 | 0.00                |
| 15,200.00                         | 90.00           | 89.91       | 7,629.00              | -236.24      | 6,862.94     | 6,866.60                | 0.00                  | 0.00                 | 0.00                |
| 15,300.00                         | 90.00           | 89.91       | 7,629.00              | -236.09      | 6,962.93     | 6,966.57                | 0.00                  | 0.00                 | 0.00                |
| 15,400.00                         | 90.00           | 89.91       | 7,629.00              | -235.93      | 7,062.93     | 7,066.54                | 0.00                  | 0.00                 | 0.00                |
| 15,500.00                         | 90.00           | 89.91       | 7,629.00              | -235.77      | 7,162.93     | 7,166.50                | 0.00                  | 0.00                 | 0.00                |
| 15,600.00                         | 90.00           | 89.91       | 7,629.00              | -235.62      | 7,262.93     | 7,266.47                | 0.00                  | 0.00                 | 0.00                |
| 15,700.00                         | 90.00           | 89.91       | 7,629.00              | -235.46      | 7,362.93     | 7,366.44                | 0.00                  | 0.00                 | 0.00                |
| 15,800.00                         | 90.00           | 89.91       | 7,629.00              | -235.30      | 7,462.93     | 7,466.41                | 0.00                  | 0.00                 | 0.00                |
| 15,900.00                         | 90.00           | 89.91       | 7,629.00              | -235.14      | 7,562.93     | 7,566.38                | 0.00                  | 0.00                 | 0.00                |
| 16,000.00                         | 90.00           | 89.91       | 7,629.00              | -234.99      | 7,662.93     | 7,666.35                | 0.00                  | 0.00                 | 0.00                |
| 16,100.00                         | 90.00           | 89.91       | 7,629.00              | -234.83      | 7,762.93     | 7,766.31                | 0.00                  | 0.00                 | 0.00                |
| 16,200.00                         | 90.00           | 89.91       | 7,629.00              | -234.67      | 7,862.93     | 7,866.28                | 0.00                  | 0.00                 | 0.00                |
| 16,300.00                         | 90.00           | 89.91       | 7,629.00              | -234.51      | 7,962.93     | 7,966.25                | 0.00                  | 0.00                 | 0.00                |
| 16,400.00                         | 90.00           | 89.91       | 7,629.00              | -234.36      | 8,062.93     | 8,066.22                | 0.00                  | 0.00                 | 0.00                |
| 16,500.00                         | 90.00           | 89.91       | 7,629.00              | -234.20      | 8,162.93     | 8,166.19                | 0.00                  | 0.00                 | 0.00                |
| 16,600.00                         | 90.00           | 89.91       | 7,629.00              | -234.04      | 8,262.93     | 8,266.16                | 0.00                  | 0.00                 | 0.00                |

## Planning Report

|                  |                              |                                     |                                   |
|------------------|------------------------------|-------------------------------------|-----------------------------------|
| <b>Database:</b> | EDT_32Bit_ODBC               | <b>Local Co-ordinate Reference:</b> | Well LUSSING TRUST 4-64 19-20 2AH |
| <b>Company:</b>  | CRESTONE PEAK RESOURCES      | <b>TVD Reference:</b>               | KB 25' @ 5721.00usft              |
| <b>Project:</b>  | ARAPAHOE COUNTY              | <b>MD Reference:</b>                | KB 25' @ 5721.00usft              |
| <b>Site:</b>     | SEC 19-T4S-R64W              | <b>North Reference:</b>             | True                              |
| <b>Well:</b>     | LUSSING TRUST 4-64 19-20 2AH | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Wellbore:</b> | OWB                          |                                     |                                   |
| <b>Design:</b>   | PROPOSAL 1                   |                                     |                                   |

| Planned Survey        |                 |             |                       |              |              |                         |                       |                      |                     |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-----------------------|----------------------|---------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 16,700.00             | 90.00           | 89.91       | 7,629.00              | -233.88      | 8,362.93     | 8,366.12                | 0.00                  | 0.00                 | 0.00                |
| 16,800.00             | 90.00           | 89.91       | 7,629.00              | -233.73      | 8,462.93     | 8,466.09                | 0.00                  | 0.00                 | 0.00                |
| 16,900.00             | 90.00           | 89.91       | 7,629.00              | -233.57      | 8,562.93     | 8,566.06                | 0.00                  | 0.00                 | 0.00                |
| 17,000.00             | 90.00           | 89.91       | 7,629.00              | -233.41      | 8,662.93     | 8,666.03                | 0.00                  | 0.00                 | 0.00                |
| 17,100.00             | 90.00           | 89.91       | 7,629.00              | -233.25      | 8,762.93     | 8,766.00                | 0.00                  | 0.00                 | 0.00                |
| 17,200.00             | 90.00           | 89.91       | 7,629.00              | -233.10      | 8,862.93     | 8,865.97                | 0.00                  | 0.00                 | 0.00                |
| 17,300.00             | 90.00           | 89.91       | 7,629.00              | -232.94      | 8,962.93     | 8,965.93                | 0.00                  | 0.00                 | 0.00                |
| 17,400.00             | 90.00           | 89.91       | 7,629.00              | -232.78      | 9,062.93     | 9,065.90                | 0.00                  | 0.00                 | 0.00                |
| 17,500.00             | 90.00           | 89.91       | 7,629.00              | -232.63      | 9,162.93     | 9,165.87                | 0.00                  | 0.00                 | 0.00                |
| 17,600.00             | 90.00           | 89.91       | 7,629.00              | -232.47      | 9,262.93     | 9,265.84                | 0.00                  | 0.00                 | 0.00                |
| 17,700.00             | 90.00           | 89.91       | 7,629.00              | -232.31      | 9,362.93     | 9,365.81                | 0.00                  | 0.00                 | 0.00                |
| 17,800.00             | 90.00           | 89.91       | 7,629.00              | -232.15      | 9,462.93     | 9,465.78                | 0.00                  | 0.00                 | 0.00                |
| 17,900.00             | 90.00           | 89.91       | 7,629.00              | -232.00      | 9,562.93     | 9,565.74                | 0.00                  | 0.00                 | 0.00                |
| 18,000.00             | 90.00           | 89.91       | 7,629.00              | -231.84      | 9,662.93     | 9,665.71                | 0.00                  | 0.00                 | 0.00                |
| 18,100.00             | 90.00           | 89.91       | 7,629.00              | -231.68      | 9,762.93     | 9,765.68                | 0.00                  | 0.00                 | 0.00                |
| 18,145.61             | 90.00           | 89.91       | 7,629.00              | -231.61      | 9,808.55     | 9,811.28                | 0.00                  | 0.00                 | 0.00                |
| TD at 18145.61        |                 |             |                       |              |              |                         |                       |                      |                     |

| Design Targets                                                 |               |              |            |              |              |                 |                |             |              |
|----------------------------------------------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|-------------|--------------|
| Target Name<br>- hit/miss target<br>- Shape                    | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude    | Longitude    |
| LP-LT 4-64 19-20 2AH<br>- plan hits target center<br>- Point   | 0.00          | 0.00         | 7,629.00   | -143.15      | -315.47      | 1,678,240.49    | 3,252,646.31   | 39.692143°N | 104.602211°W |
| PBHL-LT 4-64 19-20 2AI<br>- plan hits target center<br>- Point | 0.00          | 0.00         | 7,629.00   | -231.61      | 9,808.55     | 1,678,252.21    | 3,262,770.60   | 39.691895°N | 104.566236°W |
| MP-LT 4-64 19-20 2AH<br>- plan hits target center<br>- Point   | 0.00          | 0.00         | 7,629.00   | -238.86      | 4,828.85     | 1,678,195.69    | 3,257,791.27   | 39.691879°N | 104.583931°W |



## Planning Report

|                  |                              |                                     |                                   |
|------------------|------------------------------|-------------------------------------|-----------------------------------|
| <b>Database:</b> | EDT_32Bit_ODBC               | <b>Local Co-ordinate Reference:</b> | Well LUSSING TRUST 4-64 19-20 2AH |
| <b>Company:</b>  | CRESTONE PEAK RESOURCES      | <b>TVD Reference:</b>               | KB 25' @ 5721.00usft              |
| <b>Project:</b>  | ARAPAHOE COUNTY              | <b>MD Reference:</b>                | KB 25' @ 5721.00usft              |
| <b>Site:</b>     | SEC 19-T4S-R64W              | <b>North Reference:</b>             | True                              |
| <b>Well:</b>     | LUSSING TRUST 4-64 19-20 2AH | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Wellbore:</b> | OWB                          |                                     |                                   |
| <b>Design:</b>   | PROPOSAL 1                   |                                     |                                   |

| Formations            |                       |                               |           |         |                   |  |
|-----------------------|-----------------------|-------------------------------|-----------|---------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name                          | Lithology | Dip (°) | Dip Direction (°) |  |
| 24.00                 | 24.00                 | Denver                        |           |         |                   |  |
| 639.00                | 639.00                | Arapahoe                      |           |         |                   |  |
| 1,241.79              | 1,239.00              | Laramie-Fox Hills Formation   |           |         |                   |  |
| 1,969.50              | 1,959.00              | Pierre Formation              |           |         |                   |  |
| 2,464.75              | 2,449.00              | Upper Pierre aquifer          |           |         |                   |  |
| 3,131.82              | 3,109.00              | Base of Upper Pierre aquifer  |           |         |                   |  |
| 4,102.10              | 4,069.00              | Larimer ("Parkman") sandstone |           |         |                   |  |
| 4,233.49              | 4,199.00              | Pierre Formation              |           |         |                   |  |
| 5,314.95              | 5,269.00              | Terry ("Sussex") sandstone    |           |         |                   |  |
| 5,486.77              | 5,439.00              | Pierre Formation              |           |         |                   |  |
| 6,224.59              | 6,169.00              | Hygiene ("Shannon") sandstone |           |         |                   |  |
| 6,457.06              | 6,399.00              | Pierre Formation              |           |         |                   |  |
| 7,651.28              | 7,514.00              | Sharon Springs Member         |           |         |                   |  |
| 8,020.70              | 7,629.00              | Niobrara Formation            |           |         |                   |  |

| Plan Annotations      |                       |                   |              |                                   |  |
|-----------------------|-----------------------|-------------------|--------------|-----------------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              |                                   |  |
|                       |                       | +N/-S (usft)      | +E/-W (usft) | Comment                           |  |
| 700.00                | 700.00                | 0.00              | 0.00         | Start Build 2.00                  |  |
| 1,117.41              | 1,115.94              | -4.03             | -30.09       | Start 5920.77 hold at 1117.41 MD  |  |
| 7,038.19              | 6,973.97              | -118.08           | -882.13      | Start DLS 10.00 TFO -171.22       |  |
| 8,020.70              | 7,629.00              | -143.15           | -315.47      | Start 5145.21 hold at 8020.70 MD  |  |
| 13,165.91             | 7,629.00              | -238.86           | 4,828.85     | Start DLS 2.00 TFO -90.00         |  |
| 13,223.72             | 7,629.00              | -239.36           | 4,886.65     | Start 4921.90 hold at 13223.72 MD |  |
| 18,145.61             | 7,629.00              | -231.61           | 9,808.55     | TD at 18145.61                    |  |