

PROJECT DETAILS: Garfield County, CO

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

WELL DETAILS: CC 0697-03-14W

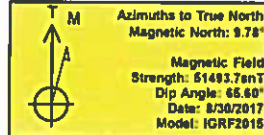
+N/-S 0.0 +E/-W 0.0 Northing 1639587.25 Easting 2237393.33 8428.0
Latitude 39.558281 Longitude -108.205151

Project: Garfield County, CO
Site: CC 0697-03-07 Pad
Well: CC 0697-03-14W
Wellbore: Wellbore #1
Design: Design #2
Latitude: 39.558281
Longitude: -108.205151
Ground Level: 8428.0
well @ 8458.0usft (30' RKB)



REFERENCE INFORMATION

Co-ordinate (NE) Reference: Well CC 0697-03-14W, True North
Vertical (TVD) Reference: well @ 8458.0usft (30' RKB)
Section (VS) Reference: Slot - (0.0N, 0.0E)
Measured Depth Reference: well @ 8458.0usft (30' RKB)
Calculation Method: Minimum Curvature



FORMATION TOP DETAILS

| TVDPath | MDPath | Formation |
|---------|--------|-----------------|
| 4468.0 | 4634.1 | G' Sand |
| 6868.0 | 6831.4 | Williams Fork |
| 7368.0 | 7650.8 | TOG |
| 8868.0 | 8850.8 | Cameo |
| 9228.0 | 9510.8 | Base Cameo Coal |
| 9268.0 | 9550.8 | Rollins |

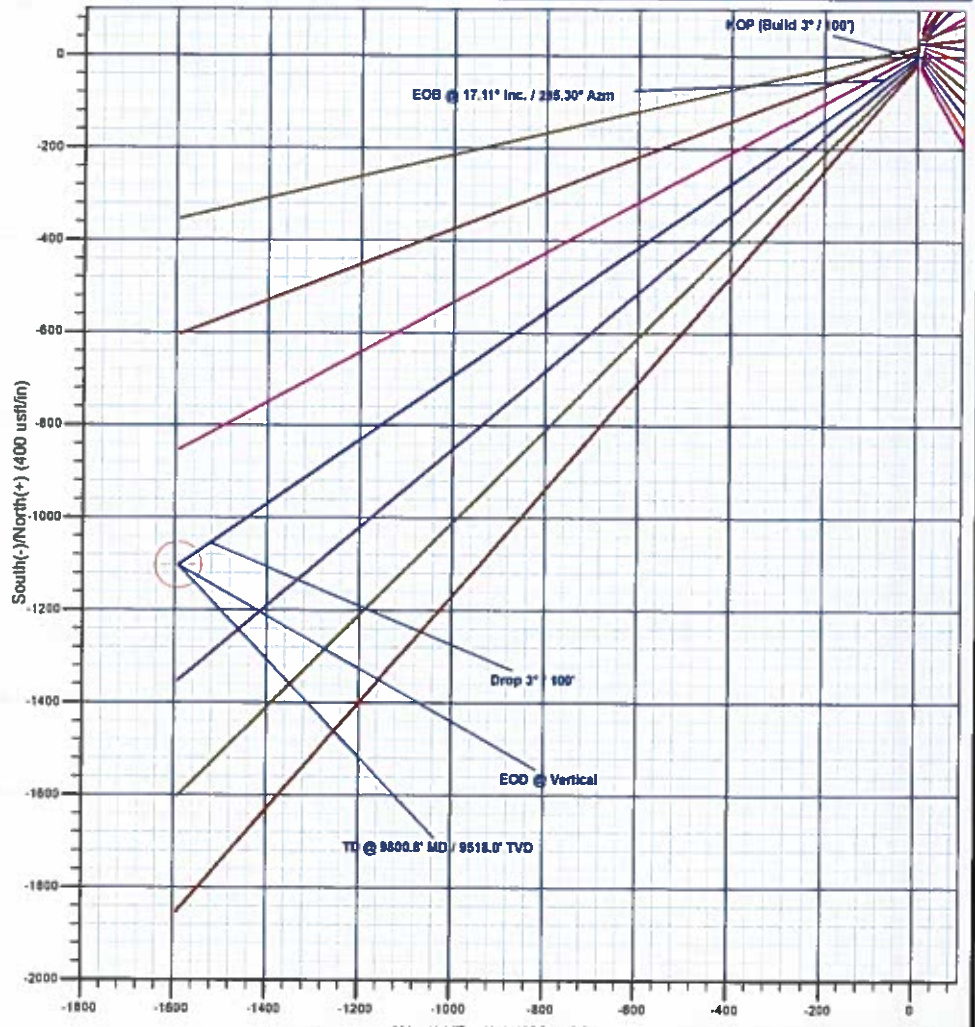
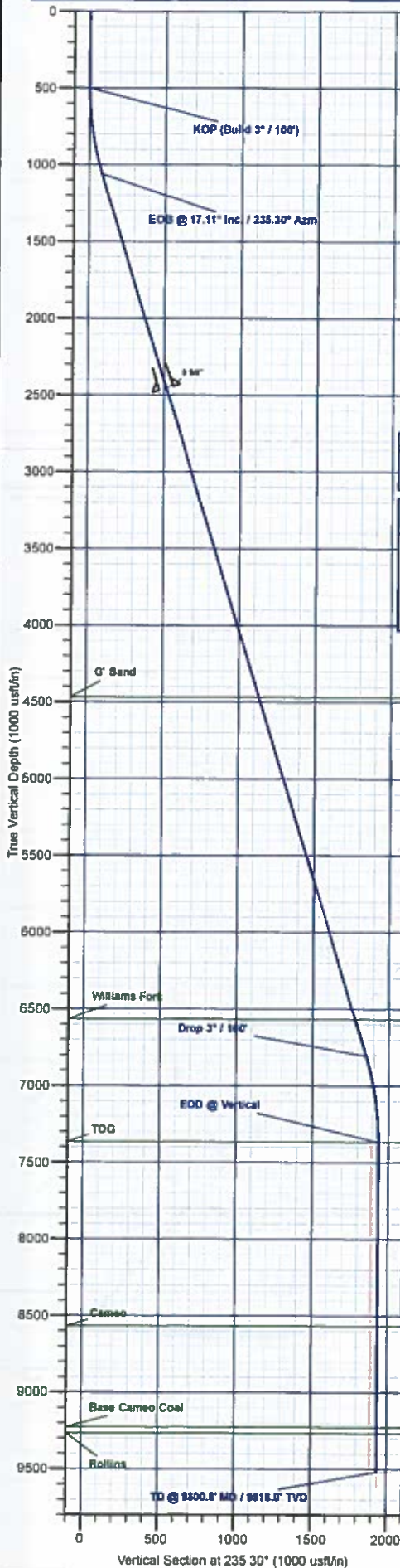


DESIGN TARGET DETAILS

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|-----------------------|--------|---------|---------|------------|------------|-----------|-------------|
| PBHL - CC 0697-03-14W | 9518.0 | -1102.9 | -1592.5 | 1638532.28 | 2235768.68 | 39.555253 | -108.210789 |

SECTION DETAILS

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | Annotation |
|--------|-------|--------|--------|---------|---------|------|--------|--------|---------------------------------|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 500.0 | 0.00 | 0.00 | 500.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | KOP (Build 3' / 100') |
| 1070.3 | 17.11 | 235.30 | 1081.8 | -48.1 | -89.5 | 3.00 | 235.30 | 84.5 | EOB @ 17.11° Inc. / 235.30° Azm |
| 7085.5 | 17.11 | 235.30 | 6806.2 | -1054.8 | -1823.0 | 0.00 | 0.00 | 1882.6 | Drop 3' / 100' |
| 7650.8 | 0.00 | 0.00 | 7368.0 | -1102.9 | -1592.5 | 3.00 | 180.00 | 1937.1 | EOB @ Vertical |
| 9800.8 | 0.00 | 0.00 | 9518.0 | -1102.9 | -1592.5 | 0.00 | 0.00 | 1937.1 | TD @ 9800.8' MD / 9518.0' TVD |



Plan: Design #2 (CC 0697-03-14W/Wellbore #1)

Created By: Will Jircik

Date: 11:11, October 24 2017



Laramie Energy, LLC

Garfield County, CO

CC 0697-03-07 Pad

CC 0697-03-14W

Wellbore #1

Plan: Design #2

QES Well Planning Report

24 October, 2017





Well Planning Report



| | | | |
|------------------|---------------------------|-------------------------------------|-----------------------------|
| Database: | EDM 5000.1 Single User Db | Local Co-ordinate Reference: | Well CC 0697-03-14W |
| Company: | Laramie Energy, LLC | TVD Reference: | well @ 8458.0usft (30' RKB) |
| Project: | Garfield County, CO | MD Reference: | well @ 8458.0usft (30' RKB) |
| Site: | CC 0697-03-07 Pad | North Reference: | True |
| Well: | CC 0697-03-14W | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Design #2 | | |

| | | | |
|--------------------|---------------------------|----------------------|----------------|
| Project | Garfield County, CO | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Central Zone | | |

| | | | | | |
|-----------------------|----------|-------------------|-------------------|-------------------|-------------|
| Site | | CC 0697-03-07 Pad | | | |
| Site Position: | | Northing: | 1,638,132.68 usft | Latitude: | 39.554247 |
| From: | Lat/Long | Easting: | 2,236,874.96 usft | Longitude: | -108.206835 |
| Position Uncertainty: | 0.0 usft | Slot Radius: | 13-3/16 " | Grid Convergence: | -1.71 ° |

| | | | | | | |
|----------------------|----------------|--------------|---------------------|-------------------|---------------|--------------|
| Well | CC 0697-03-14W | | | | | |
| Well Position | +N/-S | 1,469.4 usft | Northing: | 1,639,587.25 usft | Latitude: | 39.558281 |
| | +E/-W | 474.8 usft | Easting: | 2,237,393.33 usft | Longitude: | -108.205151 |
| Position Uncertainty | | 0.0 usft | Wellhead Elevation: | | Ground Level: | 8,428.0 usft |

| | | | | | |
|------------------|-------------------|--------------------|----------------------------|--------------------------|--------------------------------|
| Wellbore | Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2015 | 8/30/2017 | 9.78 | 65.60 | 51,493.70129857 |

| | | | | |
|--------------------------|------------------------------------|-------------------------|-------------------------|--------------------------|
| Design | Design #2 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PLAN | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
| | 0.0 | 0.0 | 0.0 | 235.30 |

| 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 |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 500.0 | 0.00 | 0.00 | 500.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,070.3 | 17.11 | 235.30 | 1,061.8 | -48.1 | -69.5 | 3.00 | 3.00 | 0.00 | 235.30 | |
| 7,080.5 | 17.11 | 235.30 | 6,806.2 | -1,054.8 | -1,523.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7,650.8 | 0.00 | 0.00 | 7,368.0 | -1,102.9 | -1,592.5 | 3.00 | -3.00 | 0.00 | 180.00 | |
| 9,800.8 | 0.00 | 0.00 | 9,518.0 | -1,102.9 | -1,592.5 | 0.00 | 0.00 | 0.00 | 0.00 | PBHL - CC 0697-03-1 |



Well Planning Report



Database: EDM 5000.1 Single User Db
 Company: Laramie Energy, LLC
 Project: Garfield County, CO
 Site: CC 0697-03-07 Pad
 Well: CC 0697-03-14W
 Wellbore: Wellbore #1
 Design: Design #2

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Well CC 0697-03-14W
 well @ 8458.0usft (30' RKB)
 well @ 8458.0usft (30' RKB)
 True
 Minimum Curvature

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) |
|---------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 100.0 | 0.00 | 0.00 | 100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 400.0 | 0.00 | 0.00 | 400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| KOP (Build 3° / 100') | | | | | | | | | |
| 500.0 | 0.00 | 0.00 | 500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 600.0 | 3.00 | 235.30 | 600.0 | -1.5 | -2.2 | 2.6 | 3.00 | 3.00 | 0.00 |
| 700.0 | 6.00 | 235.30 | 699.6 | -6.0 | -8.6 | 10.5 | 3.00 | 3.00 | 0.00 |
| 800.0 | 9.00 | 235.30 | 798.8 | -13.4 | -19.3 | 23.5 | 3.00 | 3.00 | 0.00 |
| 900.0 | 12.00 | 235.30 | 897.1 | -23.8 | -34.3 | 41.7 | 3.00 | 3.00 | 0.00 |
| 1,000.0 | 15.00 | 235.30 | 994.3 | -37.1 | -53.5 | 65.1 | 3.00 | 3.00 | 0.00 |
| EOB @ 17.11° Inc. / 235.30° Azm | | | | | | | | | |
| 1,070.3 | 17.11 | 235.30 | 1,061.8 | -48.1 | -69.5 | 84.5 | 3.00 | 3.00 | 0.00 |
| 1,100.0 | 17.11 | 235.30 | 1,090.2 | -53.1 | -76.7 | 93.3 | 0.00 | 0.00 | 0.00 |
| 1,200.0 | 17.11 | 235.30 | 1,185.8 | -69.8 | -100.8 | 122.7 | 0.00 | 0.00 | 0.00 |
| 1,300.0 | 17.11 | 235.30 | 1,281.4 | -86.6 | -125.0 | 152.1 | 0.00 | 0.00 | 0.00 |
| 1,400.0 | 17.11 | 235.30 | 1,377.0 | -103.3 | -149.2 | 181.5 | 0.00 | 0.00 | 0.00 |
| 1,500.0 | 17.11 | 235.30 | 1,472.5 | -120.1 | -173.4 | 210.9 | 0.00 | 0.00 | 0.00 |
| 1,600.0 | 17.11 | 235.30 | 1,568.1 | -136.8 | -197.6 | 240.3 | 0.00 | 0.00 | 0.00 |
| 1,700.0 | 17.11 | 235.30 | 1,663.7 | -153.6 | -221.8 | 269.6 | 0.00 | 0.00 | 0.00 |
| 1,800.0 | 17.11 | 235.30 | 1,759.3 | -170.3 | -246.0 | 299.2 | 0.00 | 0.00 | 0.00 |
| 1,900.0 | 17.11 | 235.30 | 1,854.8 | -187.1 | -270.1 | 328.6 | 0.00 | 0.00 | 0.00 |
| 2,000.0 | 17.11 | 235.30 | 1,950.4 | -203.8 | -294.3 | 358.0 | 0.00 | 0.00 | 0.00 |
| 2,100.0 | 17.11 | 235.30 | 2,046.0 | -220.6 | -318.5 | 387.4 | 0.00 | 0.00 | 0.00 |
| 2,200.0 | 17.11 | 235.30 | 2,141.6 | -237.3 | -342.7 | 416.9 | 0.00 | 0.00 | 0.00 |
| 2,300.0 | 17.11 | 235.30 | 2,237.1 | -254.1 | -366.9 | 446.3 | 0.00 | 0.00 | 0.00 |
| 2,400.0 | 17.11 | 235.30 | 2,332.7 | -270.8 | -391.1 | 475.7 | 0.00 | 0.00 | 0.00 |
| 2,500.0 | 17.11 | 235.30 | 2,428.3 | -287.6 | -415.3 | 505.1 | 0.00 | 0.00 | 0.00 |
| 9 5/8" | | | | | | | | | |
| 2,530.0 | 17.11 | 235.30 | 2,457.0 | -292.6 | -422.5 | 513.9 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 17.11 | 235.30 | 2,523.9 | -304.3 | -439.4 | 534.5 | 0.00 | 0.00 | 0.00 |
| 2,700.0 | 17.11 | 235.30 | 2,619.4 | -321.1 | -463.6 | 563.9 | 0.00 | 0.00 | 0.00 |
| 2,800.0 | 17.11 | 235.30 | 2,715.0 | -337.8 | -487.8 | 593.4 | 0.00 | 0.00 | 0.00 |
| 2,900.0 | 17.11 | 235.30 | 2,810.6 | -354.6 | -512.0 | 622.8 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 17.11 | 235.30 | 2,906.2 | -371.3 | -536.2 | 652.2 | 0.00 | 0.00 | 0.00 |
| 3,100.0 | 17.11 | 235.30 | 3,001.7 | -388.1 | -560.4 | 681.6 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 17.11 | 235.30 | 3,097.3 | -404.8 | -584.5 | 711.0 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 17.11 | 235.30 | 3,192.9 | -421.6 | -608.7 | 740.5 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 17.11 | 235.30 | 3,288.5 | -438.3 | -632.9 | 769.9 | 0.00 | 0.00 | 0.00 |
| 3,500.0 | 17.11 | 235.30 | 3,384.0 | -455.1 | -657.1 | 799.3 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 17.11 | 235.30 | 3,479.6 | -471.8 | -681.3 | 828.7 | 0.00 | 0.00 | 0.00 |
| 3,700.0 | 17.11 | 235.30 | 3,575.2 | -488.6 | -705.5 | 858.1 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 17.11 | 235.30 | 3,670.8 | -505.3 | -729.7 | 887.5 | 0.00 | 0.00 | 0.00 |
| 3,900.0 | 17.11 | 235.30 | 3,766.3 | -522.1 | -753.8 | 917.0 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 17.11 | 235.30 | 3,861.9 | -538.8 | -778.0 | 946.4 | 0.00 | 0.00 | 0.00 |
| 4,100.0 | 17.11 | 235.30 | 3,957.5 | -555.6 | -802.2 | 975.8 | 0.00 | 0.00 | 0.00 |
| 4,200.0 | 17.11 | 235.30 | 4,053.1 | -572.3 | -826.4 | 1,005.2 | 0.00 | 0.00 | 0.00 |
| 4,300.0 | 17.11 | 235.30 | 4,148.6 | -589.1 | -850.6 | 1,034.6 | 0.00 | 0.00 | 0.00 |
| 4,400.0 | 17.11 | 235.30 | 4,244.2 | -605.8 | -874.8 | 1,064.1 | 0.00 | 0.00 | 0.00 |
| 4,500.0 | 17.11 | 235.30 | 4,339.8 | -622.6 | -898.9 | 1,093.5 | 0.00 | 0.00 | 0.00 |
| 4,600.0 | 17.11 | 235.30 | 4,435.4 | -639.3 | -923.1 | 1,122.9 | 0.00 | 0.00 | 0.00 |
| G' Sand | | | | | | | | | |
| 4,634.1 | 17.11 | 235.30 | 4,468.0 | -645.0 | -931.4 | 1,132.9 | 0.00 | 0.00 | 0.00 |



Well Planning Report



Database: EDM 5000 1 Single User Db
Company: Laramie Energy, LLC
Project: Garfield County, CO
Site: CC 0697-03-07 Pad
Well: CC 0697-03-14W
Wellbore: Wellbore #1
Design: Design #2

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well CC 0697-03-14W
 well @ 8458.0usft (30' RKB)
 well @ 8458.0usft (30' RKB)
 True
 Minimum Curvature

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 4,700.0 | 17.11 | 235.30 | 4,530.9 | -656.1 | -947.3 | 1,152.3 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 17.11 | 235.30 | 4,626.5 | -672.8 | -971.5 | 1,181.7 | 0.00 | 0.00 | 0.00 |
| 4,900.0 | 17.11 | 235.30 | 4,722.1 | -689.5 | -995.7 | 1,211.1 | 0.00 | 0.00 | 0.00 |
| 5,000.0 | 17.11 | 235.30 | 4,817.7 | -706.3 | -1,019.9 | 1,240.6 | 0.00 | 0.00 | 0.00 |
| 5,100.0 | 17.11 | 235.30 | 4,913.2 | -723.0 | -1,044.1 | 1,270.0 | 0.00 | 0.00 | 0.00 |
| 5,200.0 | 17.11 | 235.30 | 5,008.8 | -739.8 | -1,068.2 | 1,299.4 | 0.00 | 0.00 | 0.00 |
| 5,300.0 | 17.11 | 235.30 | 5,104.4 | -756.5 | -1,092.4 | 1,328.8 | 0.00 | 0.00 | 0.00 |
| 5,400.0 | 17.11 | 235.30 | 5,200.0 | -773.3 | -1,116.6 | 1,358.2 | 0.00 | 0.00 | 0.00 |
| 5,500.0 | 17.11 | 235.30 | 5,295.5 | -790.0 | -1,140.8 | 1,387.7 | 0.00 | 0.00 | 0.00 |
| 5,600.0 | 17.11 | 235.30 | 5,391.1 | -806.8 | -1,165.0 | 1,417.1 | 0.00 | 0.00 | 0.00 |
| 5,700.0 | 17.11 | 235.30 | 5,486.7 | -823.5 | -1,189.2 | 1,446.5 | 0.00 | 0.00 | 0.00 |
| 5,800.0 | 17.11 | 235.30 | 5,582.3 | -840.3 | -1,213.4 | 1,475.9 | 0.00 | 0.00 | 0.00 |
| 5,900.0 | 17.11 | 235.30 | 5,677.8 | -857.0 | -1,237.5 | 1,505.3 | 0.00 | 0.00 | 0.00 |
| 6,000.0 | 17.11 | 235.30 | 5,773.4 | -873.8 | -1,261.7 | 1,534.7 | 0.00 | 0.00 | 0.00 |
| 6,100.0 | 17.11 | 235.30 | 5,869.0 | -890.5 | -1,285.9 | 1,564.2 | 0.00 | 0.00 | 0.00 |
| 6,200.0 | 17.11 | 235.30 | 5,964.6 | -907.3 | -1,310.1 | 1,593.6 | 0.00 | 0.00 | 0.00 |
| 6,300.0 | 17.11 | 235.30 | 6,060.1 | -924.0 | -1,334.3 | 1,623.0 | 0.00 | 0.00 | 0.00 |
| 6,400.0 | 17.11 | 235.30 | 6,155.7 | -940.8 | -1,358.5 | 1,652.4 | 0.00 | 0.00 | 0.00 |
| 6,500.0 | 17.11 | 235.30 | 6,251.3 | -957.5 | -1,382.6 | 1,681.8 | 0.00 | 0.00 | 0.00 |
| 6,600.0 | 17.11 | 235.30 | 6,346.9 | -974.3 | -1,406.8 | 1,711.3 | 0.00 | 0.00 | 0.00 |
| 6,700.0 | 17.11 | 235.30 | 6,442.4 | -991.0 | -1,431.0 | 1,740.7 | 0.00 | 0.00 | 0.00 |
| 6,800.0 | 17.11 | 235.30 | 6,538.0 | -1,007.8 | -1,455.2 | 1,770.1 | 0.00 | 0.00 | 0.00 |
| Williams Fork | | | | | | | | | |
| 6,831.4 | 17.11 | 235.30 | 6,568.0 | -1,013.0 | -1,462.8 | 1,779.3 | 0.00 | 0.00 | 0.00 |
| 6,900.0 | 17.11 | 235.30 | 6,633.6 | -1,024.5 | -1,479.4 | 1,799.5 | 0.00 | 0.00 | 0.00 |
| 7,000.0 | 17.11 | 235.30 | 6,729.2 | -1,041.3 | -1,503.6 | 1,828.9 | 0.00 | 0.00 | 0.00 |
| Drop 3° / 100' | | | | | | | | | |
| 7,080.5 | 17.11 | 235.30 | 6,806.2 | -1,054.8 | -1,523.0 | 1,852.6 | 0.00 | 0.00 | 0.00 |
| 7,100.0 | 16.52 | 235.30 | 6,824.6 | -1,058.0 | -1,527.7 | 1,858.2 | 3.00 | -3.00 | 0.00 |
| 7,200.0 | 13.52 | 235.30 | 6,921.3 | -1,072.7 | -1,549.0 | 1,884.2 | 3.00 | -3.00 | 0.00 |
| 7,300.0 | 10.52 | 235.30 | 7,019.1 | -1,084.6 | -1,566.1 | 1,905.0 | 3.00 | -3.00 | 0.00 |
| 7,400.0 | 7.52 | 235.30 | 7,117.9 | -1,093.5 | -1,579.0 | 1,920.7 | 3.00 | -3.00 | 0.00 |
| 7,500.0 | 4.52 | 235.30 | 7,217.3 | -1,099.5 | -1,587.6 | 1,931.2 | 3.00 | -3.00 | 0.00 |
| 7,600.0 | 1.52 | 235.30 | 7,317.2 | -1,102.5 | -1,592.0 | 1,936.5 | 3.00 | -3.00 | 0.00 |
| EOD @ Vertical - TOG | | | | | | | | | |
| 7,650.6 | 0.00 | 0.00 | 7,368.0 | -1,102.9 | -1,592.5 | 1,937.1 | 3.00 | -3.00 | 0.00 |
| 7,700.0 | 0.00 | 0.00 | 7,417.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 7,800.0 | 0.00 | 0.00 | 7,517.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 7,900.0 | 0.00 | 0.00 | 7,617.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 8,000.0 | 0.00 | 0.00 | 7,717.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 8,100.0 | 0.00 | 0.00 | 7,817.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 8,200.0 | 0.00 | 0.00 | 7,917.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 8,300.0 | 0.00 | 0.00 | 8,017.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 8,400.0 | 0.00 | 0.00 | 8,117.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 8,500.0 | 0.00 | 0.00 | 8,217.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 8,600.0 | 0.00 | 0.00 | 8,317.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 8,700.0 | 0.00 | 0.00 | 8,417.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 8,800.0 | 0.00 | 0.00 | 8,517.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| Cameo | | | | | | | | | |
| 8,850.8 | 0.00 | 0.00 | 8,568.0 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 8,900.0 | 0.00 | 0.00 | 8,617.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 9,000.0 | 0.00 | 0.00 | 8,717.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 9,100.0 | 0.00 | 0.00 | 8,817.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |



Well Planning Report



Database: EDM 5000.1 Single User Db
Company: Laramie Energy, LLC
Project: Garfield County, CO
Site: CC 0697-03-07 Pad
Well: CC 0697-03-14W
Wellbore: Wellbore #1
Design: Design #2

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well CC 0697-03-14W
 well @ 8458.0usft (30' RKB)
 well @ 8458.0usft (30' RKB)
 True
 Minimum Curvature

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) |
|--------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 9,200.0 | 0.00 | 0.00 | 8,917.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 9,300.0 | 0.00 | 0.00 | 9,017.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 9,400.0 | 0.00 | 0.00 | 9,117.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 9,500.0 | 0.00 | 0.00 | 9,217.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| Base Cameo Coal | | | | | | | | | |
| 9,510.8 | 0.00 | 0.00 | 9,228.0 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| Rollins | | | | | | | | | |
| 9,550.8 | 0.00 | 0.00 | 9,268.0 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 9,600.0 | 0.00 | 0.00 | 9,317.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 9,700.0 | 0.00 | 0.00 | 9,417.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| 9,800.0 | 0.00 | 0.00 | 9,517.2 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |
| TD @ 9800.8' MD / 9518.0' TVD | | | | | | | | | |
| 9,800.8 | 0.00 | 0.00 | 9,518.0 | -1,102.9 | -1,592.5 | 1,937.1 | 0.00 | 0.00 | 0.00 |

Design Targets

| Target Name - hit/mis target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|------------------------------------------------------------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|-----------|-------------|
| PBHL - CC 0697-03-14V - plan hits target center - Circle (radius 50.0) | 0.00 | 0.00 | 9,518.0 | -1,102.9 | -1,592.5 | 1,838,532.27 | 2,235,768.68 | 39.555253 | -108.210799 |

Casing Points

| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") |
|-----------------------|-----------------------|--------|---------------------|-------------------|
| 2,530.0 | 2,457.0 | 9 5/8" | 9-5/8 | 12-1/4 |

Formations

| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|-----------------------|-----------------------|-----------------|-----------|---------|-------------------|
| 4,834.1 | 4,468.0 | G' Sand | | | |
| 6,831.4 | 6,568.0 | Williams Fork | | | |
| 7,650.8 | 7,368.0 | TOG | | | |
| 8,850.8 | 8,568.0 | Cameo | | | |
| 9,510.8 | 9,228.0 | Base Cameo Coal | | | |
| 9,550.8 | 9,268.0 | Rollins | | | |



Well Planning Report



| | | | |
|------------------|---------------------------|-------------------------------------|-----------------------------|
| Database: | EDM 5000 1 Single User Db | Local Co-ordinate Reference: | Well CC 0697-03-14W |
| Company: | Laramie Energy, LLC | TVD Reference: | well @ 8458 0usft (30' RKB) |
| Project: | Garfield County, CO | MD Reference: | well @ 8458 0usft (30' RKB) |
| Site: | CC 0697-03-07 Pad | North Reference: | True |
| Well: | CC 0697-03-14W | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Design #2 | | |

Plan Annotations

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment |
|-----------------------------|-----------------------------|-------------------|-----------------|---------------------------------|
| | | +N/-S (usft) | +E/-W (usft) | |
| 500.0 | 500.0 | 0.0 | 0.0 | KOP (Build 3" / 100') |
| 1,070.3 | 1,061.8 | -48.1 | -69.5 | EOB @ 17.11" Inc. / 235.30° Azm |
| 7,080.5 | 6,806.2 | -1,054.8 | -1,523.0 | Drop 3" / 100' |
| 7,650.8 | 7,368.0 | -1,102.9 | -1,592.5 | EOD @ Vertical |
| 9,800.8 | 9,518.0 | -1,102.9 | -1,592.5 | TD @ 9800.8' MD / 9518.0' TVD |