

**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 697-10-08W**  
 8595.0  
 +N-S 0.0 +E-W 0.0 Northing 1634631.84 Easting 2236708.11 Latitude 39.544352 Longitude -108.207046

**Project: Garfield County, CO**  
 Site: CC 610-21-41 Pad  
 Well: CC 697-10-08W  
 Wellbore: Wellbore #1  
 Design: Design #2  
 Latitude: 39.544352  
 Longitude: -108.207046  
 Ground Level: 8595.0  
 RKB @ 8625.0usft (H&P #522)

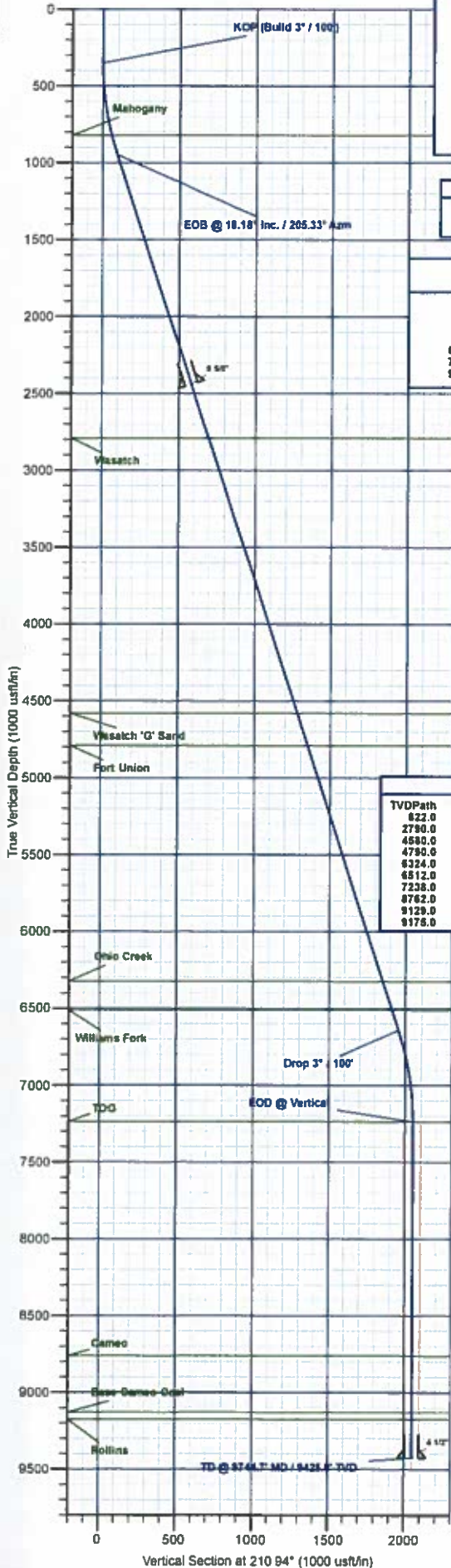
**REFERENCE INFORMATION**  
 Co-ordinate (N/E) Reference: Well CC 697-10-08W, True North  
 Vertical (TVD) Reference: RKB @ 8625.0usft (H&P #522)  
 Section (VS) Reference: Slot - (0.0N, 0.0E)  
 Measured Depth Reference: RKB @ 8625.0usft (H&P #522)  
 Calculation Method: Minimum Curvature

**DESIGN TARGET DETAILS**

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
PBHL - CC 697-10-08W	9425.0	-1863.5	-862.2	1632695.50	2235770.80	39.539236	-108.210174

**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	0.50	0.0	
350.0	0.00	0.00	350.0	0.0	0.0	0.00	0.50	0.0	KOP (Build 3° / 100')
956.1	18.18	205.33	946.0	-86.2	-40.8	3.00	205.33	94.9	EOB @ 18.18° Inc. / 205.33° Azm
6951.5	18.18	205.33	6642.0	-1777.3	-841.4	0.00	0.00	1958.9	Drop 3° / 100'
7957.7	0.00	0.00	7238.0	-1863.5	-862.2	3.50	180.00	2051.9	EOG @ Vertical
9744.7	0.00	0.00	9425.0	-1863.5	-862.2	0.00	0.00	2051.9	TD @ 9744.7' MD / 9425.0' TVD

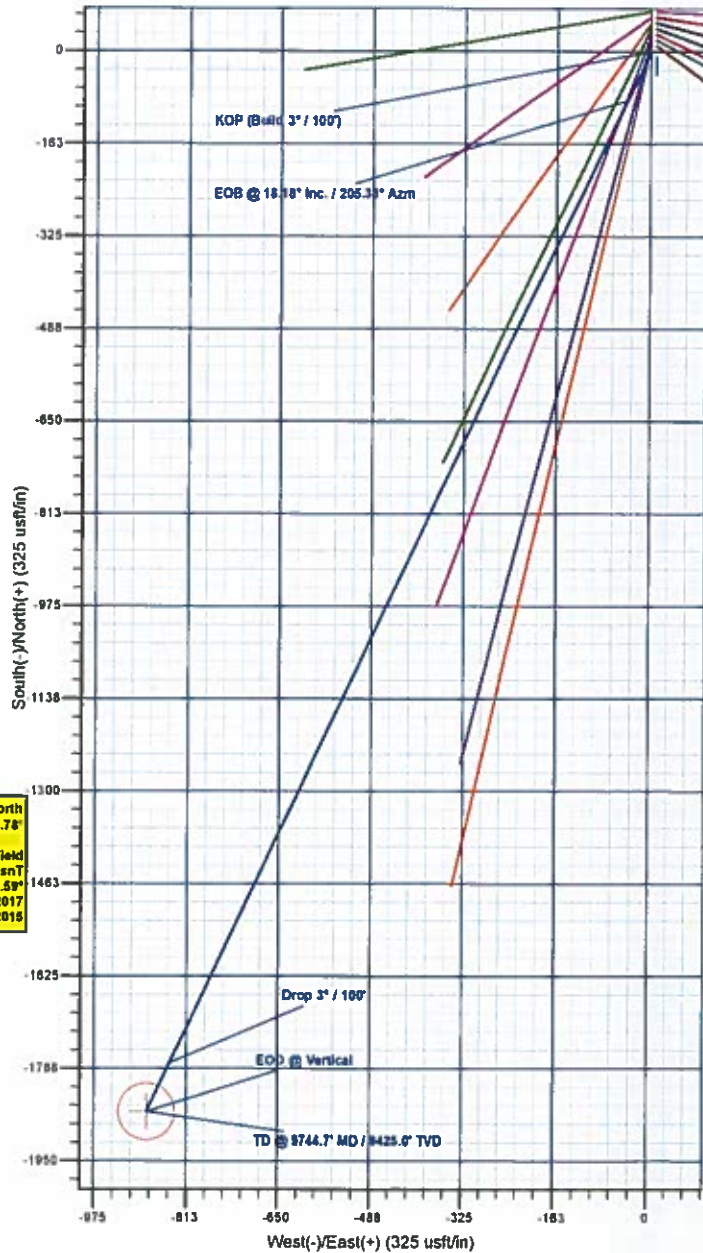


**FORMATION TOP DETAILS**

TVDPPath	MDPath	Formation
822.0	826.9	Mahogany
2790.0	2897.1	Wasatch
4580.0	4781.1	Wasatch 'G' Sand
4790.0	5002.2	Fort Union
6324.0	6516.8	Ohio Creek
6812.0	6814.7	Williams Fork
7238.0	7587.7	TOG
8762.0	9081.7	Cameo
9129.0	9448.7	Base Cameo Coal
9175.0	9494.7	Rollins

**Magnetic Field**  
 Strength: 51490.8nT  
 Dip Angle: 65.59°  
 Date: 8/10/2017  
 Model: IGRF2015

Azimuths to True North  
 Magnetic North: 3.78°



**Plan: Design #2 (CC 697-10-08W/Wellbore #1)**  
 Created By: Will Jircik Date: 17:15, September 17 2018



# **Laramie Energy, LLC**

**Garfield County, CO**

**CC 610-21-41 Pad**

**CC 697-10-08W**

**Wellbore #1**

**Plan: Design #2**

## **QES Well Planning Report**

**17 September, 2018**





# Well Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CC 697-10-08W
<b>Company:</b>	Laramie Energy, LLC	<b>TVD Reference:</b>	RKB @ 8625.0usft (H&P #522)
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	RKB @ 8625.0usft (H&P #522)
<b>Site:</b>	CC 610-21-41 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CC 697-10-08W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

<b>Project</b>	Garfield County, CO		
<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		

<b>Site</b>	CC 610-21-41 Pad				
<b>Site Position:</b>		<b>Northing:</b>	1,634,574.32 usft	<b>Latitude:</b>	39.544469
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,236,708.86 usft	<b>Longitude:</b>	-108.207048
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16"	<b>Grid Convergence:</b>	-1.71°

<b>Well</b>	CC 697-10-08W					
<b>Well Position</b>	<b>+N/-S</b>	-42.5 usft	<b>Northing:</b>	1,634,531.84 usft	<b>Latitude:</b>	39.544352
	<b>+E/-W</b>	0.5 usft	<b>Easting:</b>	2,236,708.11 usft	<b>Longitude:</b>	-108.207046
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	8,595.0 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	8/10/2017	9.78	65.59	51,490.75307049

<b>Design</b>	Design #2			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	210.94

<b>Plan Sections</b>										
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	
350.0	0.00	0.00	350.0	0.0	0.0	0.00	0.00	0.00	0.00	
956.1	18.18	205.33	946.0	-86.2	-40.8	3.00	3.00	0.00	205.33	
6,951.5	18.18	205.33	6,642.0	-1,777.3	-841.4	0.00	0.00	0.00	0.00	
7,557.7	0.00	0.00	7,238.0	-1,863.5	-882.2	3.00	-3.00	0.00	180.00	
9,744.7	0.00	0.00	9,425.0	-1,863.5	-882.2	0.00	0.00	0.00	0.00	PBHL - CC 697-10-



# Well Planning Report



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<b>Company:</b>	Laramie Energy, LLC	<b>TVD Reference:</b>	RKB @ 8625.0usft (H&P #522)
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	RKB @ 8625.0usft (H&P #522)
<b>Site:</b>	CC 610-21-41 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CC 697-10-08W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

## 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
<b>KOP (Build 3° / 100')</b>									
350.0	0.00	0.00	350.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	1.50	205.33	400.0	-0.6	-0.3	0.7	3.00	3.00	0.00
500.0	4.50	205.33	499.8	-5.3	-2.5	5.9	3.00	3.00	0.00
600.0	7.50	205.33	599.3	-14.8	-7.0	16.3	3.00	3.00	0.00
700.0	10.50	205.33	698.0	-28.9	-13.7	31.8	3.00	3.00	0.00
800.0	13.50	205.33	795.8	-47.7	-22.6	52.5	3.00	3.00	0.00
<b>Mahogany</b>									
826.9	14.31	205.33	822.0	-53.5	-25.3	59.0	3.00	3.00	0.00
900.0	16.50	205.33	892.4	-71.1	-33.7	78.3	3.00	3.00	0.00
<b>EOB @ 18.18° Inc. / 205.33° Azm</b>									
956.1	18.18	205.33	946.0	-86.2	-40.8	94.9	3.00	3.00	0.00
1,000.0	18.18	205.33	987.7	-98.6	-46.7	108.5	0.00	0.00	0.00
1,100.0	18.18	205.33	1,082.7	-126.8	-60.0	139.6	0.00	0.00	0.00
1,200.0	18.18	205.33	1,177.7	-155.0	-73.4	170.7	0.00	0.00	0.00
1,300.0	18.18	205.33	1,272.7	-183.2	-86.7	201.7	0.00	0.00	0.00
1,400.0	18.18	205.33	1,367.7	-211.4	-100.1	232.8	0.00	0.00	0.00
1,500.0	18.18	205.33	1,462.7	-239.6	-113.4	263.8	0.00	0.00	0.00
1,600.0	18.18	205.33	1,557.7	-267.8	-126.8	294.9	0.00	0.00	0.00
1,700.0	18.18	205.33	1,652.7	-296.0	-140.1	326.0	0.00	0.00	0.00
1,800.0	18.18	205.33	1,747.7	-324.2	-153.5	357.0	0.00	0.00	0.00
1,900.0	18.18	205.33	1,842.7	-352.4	-166.8	388.1	0.00	0.00	0.00
2,000.0	18.18	205.33	1,937.7	-380.6	-180.2	419.1	0.00	0.00	0.00
2,100.0	18.18	205.33	2,032.8	-408.8	-193.6	450.2	0.00	0.00	0.00
2,200.0	18.18	205.33	2,127.8	-437.0	-206.9	481.2	0.00	0.00	0.00
2,300.0	18.18	205.33	2,222.8	-465.3	-220.3	512.3	0.00	0.00	0.00
2,400.0	18.18	205.33	2,317.8	-493.5	-233.6	543.4	0.00	0.00	0.00
2,500.0	18.18	205.33	2,412.8	-521.7	-247.0	574.4	0.00	0.00	0.00
<b>9 5/8"</b>									
2,530.0	18.18	205.33	2,441.3	-530.1	-251.0	583.7	0.00	0.00	0.00
2,600.0	18.18	205.33	2,507.8	-549.9	-260.3	605.5	0.00	0.00	0.00
2,700.0	18.18	205.33	2,602.8	-578.1	-273.7	636.5	0.00	0.00	0.00
2,800.0	18.18	205.33	2,697.8	-606.3	-287.0	667.6	0.00	0.00	0.00
<b>Wasatch</b>									
2,897.1	18.18	205.33	2,790.0	-633.7	-300.0	697.7	0.00	0.00	0.00
2,900.0	18.18	205.33	2,792.8	-634.5	-300.4	698.6	0.00	0.00	0.00
3,000.0	18.18	205.33	2,887.8	-662.7	-313.7	729.7	0.00	0.00	0.00
3,100.0	18.18	205.33	2,982.8	-690.9	-327.1	760.8	0.00	0.00	0.00
3,200.0	18.18	205.33	3,077.8	-719.1	-340.4	791.8	0.00	0.00	0.00
3,300.0	18.18	205.33	3,172.8	-747.3	-353.8	822.9	0.00	0.00	0.00
3,400.0	18.18	205.33	3,267.8	-775.5	-367.1	853.9	0.00	0.00	0.00
3,500.0	18.18	205.33	3,362.8	-803.7	-380.5	885.0	0.00	0.00	0.00
3,600.0	18.18	205.33	3,457.8	-831.9	-393.8	916.0	0.00	0.00	0.00
3,700.0	18.18	205.33	3,552.8	-860.1	-407.2	947.1	0.00	0.00	0.00
3,800.0	18.18	205.33	3,647.9	-888.3	-420.5	978.2	0.00	0.00	0.00
3,900.0	18.18	205.33	3,742.9	-916.5	-433.9	1,009.2	0.00	0.00	0.00
4,000.0	18.18	205.33	3,837.9	-944.8	-447.3	1,040.3	0.00	0.00	0.00
4,100.0	18.18	205.33	3,932.9	-973.0	-460.6	1,071.3	0.00	0.00	0.00
4,200.0	18.18	205.33	4,027.9	-1,001.2	-474.0	1,102.4	0.00	0.00	0.00
4,300.0	18.18	205.33	4,122.9	-1,029.4	-487.3	1,133.4	0.00	0.00	0.00



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<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	RKB @ 8625.0usft (H&P #522)
<b>Site:</b>	CC 610-21-41 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CC 697-10-08W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

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)	
4,400.0	18.18	205.33	4,217.9	-1,057.6	-500.7	1,164.5	0.00	0.00	0.00	
4,500.0	18.18	205.33	4,312.9	-1,085.8	-514.0	1,195.6	0.00	0.00	0.00	
4,600.0	18.18	205.33	4,407.9	-1,114.0	-527.4	1,226.6	0.00	0.00	0.00	
4,700.0	18.18	205.33	4,502.9	-1,142.2	-540.7	1,257.7	0.00	0.00	0.00	
<b>Wasatch 'G' Sand</b>										
4,781.1	18.18	205.33	4,580.0	-1,165.1	-551.6	1,282.9	0.00	0.00	0.00	
4,800.0	18.18	205.33	4,597.9	-1,170.4	-554.1	1,288.7	0.00	0.00	0.00	
4,900.0	18.18	205.33	4,692.9	-1,198.6	-567.4	1,319.8	0.00	0.00	0.00	
5,000.0	18.18	205.33	4,787.9	-1,226.8	-580.8	1,350.9	0.00	0.00	0.00	
<b>Fort Union</b>										
5,002.2	18.18	205.33	4,790.0	-1,227.4	-581.1	1,351.5	0.00	0.00	0.00	
5,100.0	18.18	205.33	4,882.9	-1,255.0	-594.1	1,381.9	0.00	0.00	0.00	
5,200.0	18.18	205.33	4,977.9	-1,283.2	-607.5	1,413.0	0.00	0.00	0.00	
5,300.0	18.18	205.33	5,072.9	-1,311.4	-620.8	1,444.0	0.00	0.00	0.00	
5,400.0	18.18	205.33	5,167.9	-1,339.6	-634.2	1,475.1	0.00	0.00	0.00	
5,500.0	18.18	205.33	5,263.0	-1,367.8	-647.5	1,506.1	0.00	0.00	0.00	
5,600.0	18.18	205.33	5,358.0	-1,396.0	-660.9	1,537.2	0.00	0.00	0.00	
5,700.0	18.18	205.33	5,453.0	-1,424.2	-674.3	1,568.3	0.00	0.00	0.00	
5,800.0	18.18	205.33	5,548.0	-1,452.5	-687.6	1,599.3	0.00	0.00	0.00	
5,900.0	18.18	205.33	5,643.0	-1,480.7	-701.0	1,630.4	0.00	0.00	0.00	
6,000.0	18.18	205.33	5,738.0	-1,508.9	-714.3	1,661.4	0.00	0.00	0.00	
6,100.0	18.18	205.33	5,833.0	-1,537.1	-727.7	1,692.5	0.00	0.00	0.00	
6,200.0	18.18	205.33	5,928.0	-1,565.3	-741.0	1,723.5	0.00	0.00	0.00	
6,300.0	18.18	205.33	6,023.0	-1,593.5	-754.4	1,754.6	0.00	0.00	0.00	
6,400.0	18.18	205.33	6,118.0	-1,621.7	-767.7	1,785.7	0.00	0.00	0.00	
6,500.0	18.18	205.33	6,213.0	-1,649.9	-781.1	1,816.7	0.00	0.00	0.00	
6,600.0	18.18	205.33	6,308.0	-1,678.1	-794.4	1,847.8	0.00	0.00	0.00	
<b>Ohio Creek</b>										
6,616.8	18.18	205.33	6,324.0	-1,682.8	-796.7	1,853.0	0.00	0.00	0.00	
6,700.0	18.18	205.33	6,403.0	-1,706.3	-807.8	1,878.8	0.00	0.00	0.00	
6,800.0	18.18	205.33	6,498.0	-1,734.5	-821.1	1,909.9	0.00	0.00	0.00	
<b>Williams Fork</b>										
6,814.7	18.18	205.33	6,512.0	-1,738.7	-823.1	1,914.5	0.00	0.00	0.00	
6,900.0	18.18	205.33	6,593.0	-1,762.7	-834.5	1,940.9	0.00	0.00	0.00	
<b>Drop 3° / 100'</b>										
6,951.5	18.18	205.33	6,642.0	-1,777.3	-841.4	1,956.9	0.00	0.00	0.00	
7,000.0	16.73	205.33	6,688.2	-1,790.4	-847.6	1,971.4	3.00	-3.00	0.00	
7,100.0	13.73	205.33	6,784.7	-1,814.1	-858.8	1,997.6	3.00	-3.00	0.00	
7,200.0	10.73	205.33	6,882.4	-1,833.3	-867.9	2,018.6	3.00	-3.00	0.00	
7,300.0	7.73	205.33	6,981.1	-1,847.8	-874.8	2,034.6	3.00	-3.00	0.00	
7,400.0	4.73	205.33	7,080.5	-1,857.6	-879.4	2,045.4	3.00	-3.00	0.00	
7,500.0	1.73	205.33	7,180.4	-1,862.7	-881.8	2,051.0	3.00	-3.00	0.00	
<b>EOD @ Vertical - TOG</b>										
7,557.7	0.00	0.00	7,238.0	-1,863.5	-882.2	2,051.9	3.00	-3.00	0.00	
7,600.0	0.00	0.00	7,280.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
7,700.0	0.00	0.00	7,380.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,480.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
7,900.0	0.00	0.00	7,580.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
8,000.0	0.00	0.00	7,680.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
8,100.0	0.00	0.00	7,780.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
8,200.0	0.00	0.00	7,880.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
8,300.0	0.00	0.00	7,980.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,080.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	



Well Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CC 697-10-08W
<b>Company:</b>	Laramie Energy, LLC	<b>TVD Reference:</b>	RKB @ 8625.0usft (H&P #522)
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	RKB @ 8625.0usft (H&P #522)
<b>Site:</b>	CC 610-21-41 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CC 697-10-08W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	CC 697-10-08W		
<b>Design:</b>	Design #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,500.0	0.00	0.00	8,180.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,280.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
8,700.0	0.00	0.00	8,380.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,480.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,580.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
9,000.0	0.00	0.00	8,680.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
<b>Cameo</b>										
9,081.7	0.00	0.00	8,762.0	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
9,100.0	0.00	0.00	8,780.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
9,200.0	0.00	0.00	8,880.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
9,300.0	0.00	0.00	8,980.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
9,400.0	0.00	0.00	9,080.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
<b>Base Cameo Coal</b>										
9,448.7	0.00	0.00	9,129.0	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
<b>Rollins</b>										
9,494.7	0.00	0.00	9,175.0	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,180.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
9,600.0	0.00	0.00	9,280.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
9,700.0	0.00	0.00	9,380.3	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	
<b>TD @ 9744.7' MD / 9425.0' TVD</b>										
9,744.7	0.00	0.00	9,425.0	-1,863.5	-882.2	2,051.9	0.00	0.00	0.00	

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL - CC 697-10-08	0.00	0.00	9,425.0	-1,863.5	-882.2	1,632,695.50	2,235,770.80	39.539236	-108.210174
- hit/miss target									
- Shape									
- plan hits target center									
- Circle (radius 50.0)									

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")		
2,530.0	2,441.3	9 5/8"	9-5/8	14-1/2		
9,744.7	9,425.0	4 1/2"	4-1/2	8-3/4		



# Well Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CC 697-10-08W
<b>Company:</b>	Laramie Energy, LLC	<b>TVD Reference:</b>	RKB @ 8625.0usft (H&P #522)
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	RKB @ 8625.0usft (H&P #522)
<b>Site:</b>	CC 610-21-41 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CC 697-10-08W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
826.9	822.0	Mahogany				
2,897.1	2,790.0	Wasatch				
4,781.1	4,580.0	Wasatch 'G' Sand				
5,002.2	4,790.0	Fort Union				
6,616.8	6,324.0	Ohio Creek				
6,814.7	6,512.0	Williams Fork				
7,557.7	7,238.0	TOG				
9,081.7	8,762.0	Cameo				
9,448.7	9,129.0	Base Cameo Coal				
9,494.7	9,175.0	Rollins				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
350.0	350.0	0.0	0.0	KOP (Build 3° / 100')	
956.1	946.0	-86.2	-40.8	EOB @ 18.18° Inc. / 205.33° Azm	
6,951.5	6,642.0	-1,777.3	-841.4	Drop 3° / 100'	
7,557.7	7,238.0	-1,863.5	-882.2	EOD @ Vertical	
9,744.7	9,425.0	-1,863.5	-882.2	TD @ 9744.7' MD / 9425.0' TVD	