

Project: Rio Blanco County, CO  
 Site: PCU B27 197 Pad  
 Well: RNPU B27 FED 21A-27 197  
 Wellbore: OH  
 Design: Prelim #4  
 Latitude: 39.941063  
 Longitude: -108.268529  
 Ground Level: 6510.0  
 RKB @ 6540.0usft (30')

**FORMATION TOP DETAILS**

TVDPath	MDPath	Formation
2458.0	2582.3	Orange Marker
2604.0	2738.6	Wasatch
5551.0	5892.6	Wasatch G
6028.0	6403.1	Fort Union
7536.0	7984.5	Ohio Creek
8286.0	8734.5	Williams Fork
11233.0	11681.7	Cameo
11783.0	12231.8	Rollins
11878.0	12326.8	Cozzette
12478.0	12926.8	Corcoran

**REFERENCE INFORMATION**

Co-ordinate (NE) Reference: Well RNPU B27 FED 21A-27 197 - Slot 21A-27, True North  
 Vertical (TVD) Reference: RKB @ 6540.0usft (30')  
 Section (VS) Reference: Slot - 21A-27(0.0N, 0.0E)  
 Measured Depth Reference: RKB @ 6540.0usft (30')  
 Calculation Method: Minimum Curvature

**WELL DETAILS: RNPU B27 FED 21A-27 197**

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14516305.60	2406096.60	39.942641	-108.268529

**PROJECT DETAILS: Rio Blanco County, CO**

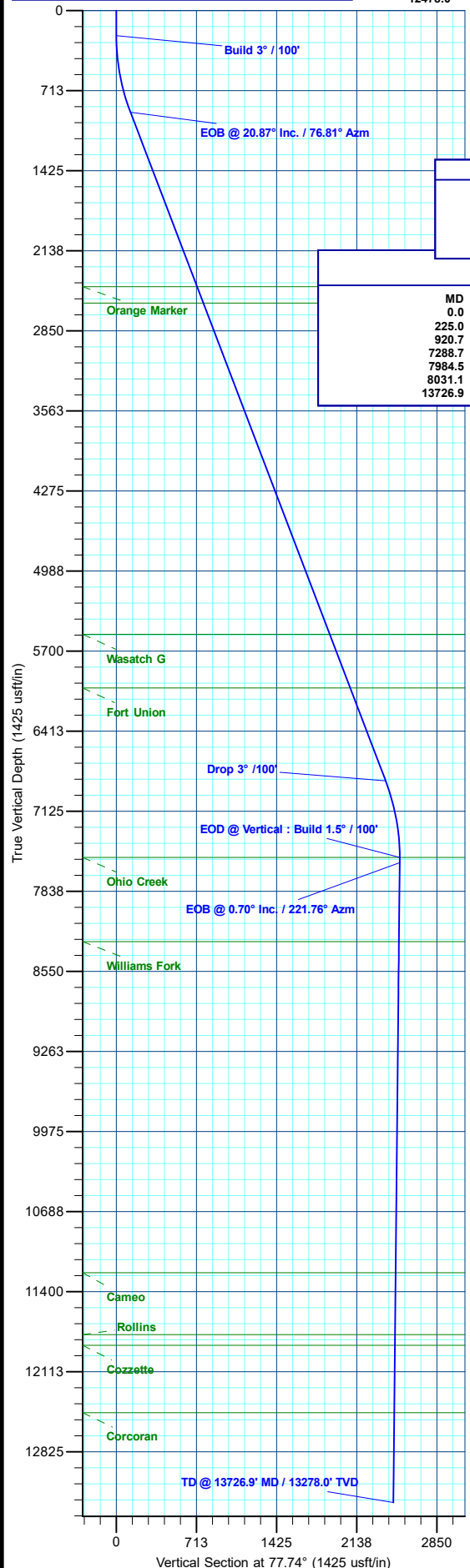
Geodetic System: Universal Transverse Mercator (US Survey Feet)  
 Datum: NAD 1927 - Western US  
 Ellipsoid: Clarke 1866  
 Zone: Zone 12N (114 W to 108 W)  
 System Datum: Mean Sea Level

**DESIGN TARGET DETAILS**

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
21A-27 - OHCR	7536.0	575.0	2453.0	14516955.43	2408530.85	39.942641	-108.259783
21A-27 - PBHL	13278.0	523.0	2406.5	14516902.00	2408486.00	39.942498	-108.259949
21A-27 - target	13278.0	492.0	2390.0	14516870.54	2408470.42	39.942413	-108.260008

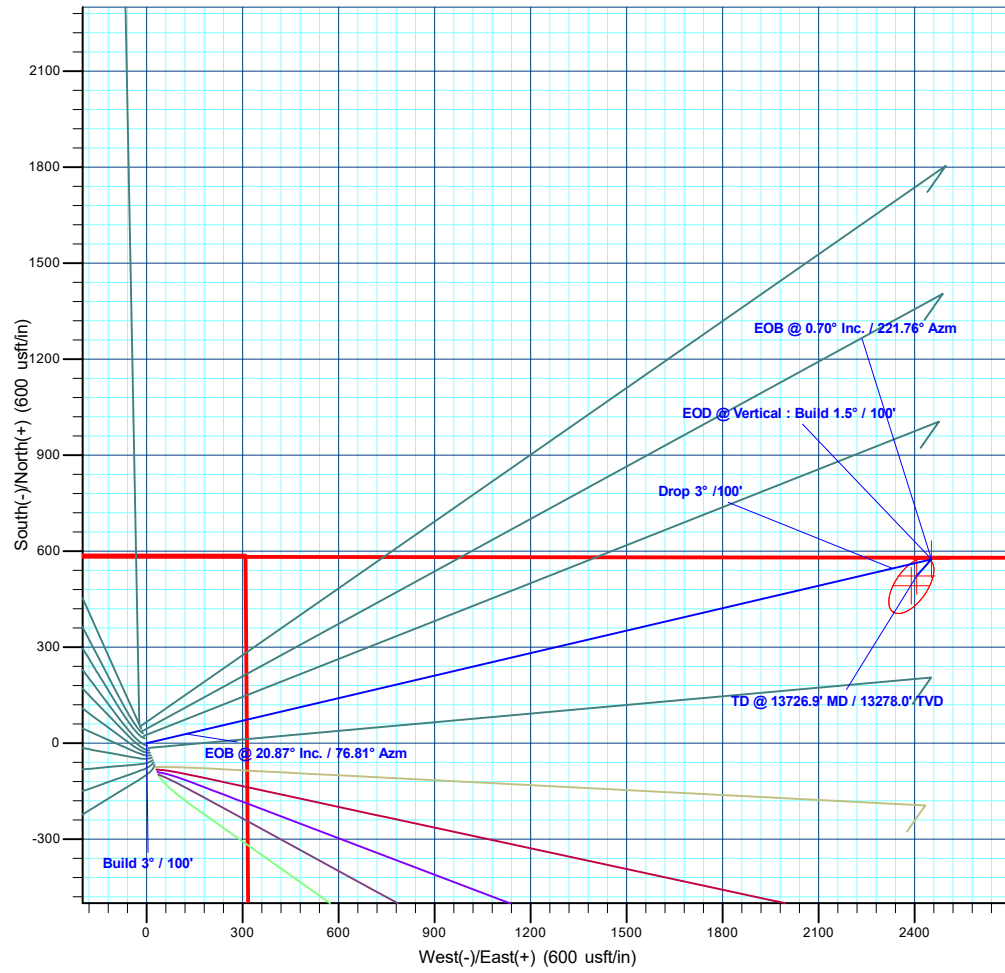
**SECTION DETAILS**

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	
225.0	0.00	0.00	225.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
920.7	20.87	76.81	905.5	58.6	122.0	3.00	76.81	125.3	EOB @ 20.87° Inc. / 76.81° Azm
7288.7	20.87	76.81	6855.5	246.4	2331.0	0.00	0.00	2393.8	Drop 3° / 100'
7984.5	0.00	0.00	7536.0	575.0	2453.0	3.00	180.00	2519.2	EOD @ Vertical : Build 1.5° / 100'
8031.1	0.70	221.76	7582.6	574.8	2452.8	1.50	221.76	2518.9	EOB @ 0.70° Inc. / 221.76° Azm
13726.9	0.70	221.76	13278.0	523.0	2406.5	0.00	0.00	2462.7	TD @ 13726.9' MD / 13278.0' TVD



**T M**  
 Azimuths to True North  
 Magnetic North: 9.15°

Magnetic Field  
 Strength: 51080.6nT  
 Dip Angle: 65.83°  
 Date: 9/30/2022  
 Model: HDGM2022



Plan: Prelim #4 (RNPU B27 FED 21A-27 197/OH)

Created By: Will Jircik Date: 16:35, June 18 2025



# **QB Energy Operating, LLC**

**Rio Blanco County, CO**

**PCU B27 197 Pad**

**RNPU B27 FED 21A-27 197 - Slot 21A-27**

**OH**

**Plan: Prelim #4**

## **KLX Well Planning Report**

**18 June, 2025**



<b>Database:</b>	KLXDirectional-AD	<b>Local Co-ordinate Reference:</b>	Well RNPU B27 FED 21A-27 197 - Slot 21A-27
<b>Company:</b>	QB Energy Operating, LLC	<b>TVD Reference:</b>	RKB @ 6540.0usft (30')
<b>Project:</b>	Rio Blanco County, CO	<b>MD Reference:</b>	RKB @ 6540.0usft (30')
<b>Site:</b>	PCU B27 197 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RNPU B27 FED 21A-27 197	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Prelim #4		

<b>Project</b>	Rio Blanco County, CO		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Fee	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	PCU B27 197 Pad		
<b>Site Position:</b>		<b>Northing:</b>	14,516,246.39 usft
<b>From:</b>	Map	<b>Easting:</b>	2,406,120.81 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	39.940899
		<b>Longitude:</b>	-108.268449
		<b>Grid Convergence:</b>	1.75 °

<b>Well</b>	RNPU B27 FED 21A-27 197 - Slot 21A-27					
<b>Well Position</b>	<b>+N/-S</b>	59.9 usft	<b>Northing:</b>	14,516,305.60 usft	<b>Latitude:</b>	39.941063
	<b>+E/-W</b>	-22.4 usft	<b>Easting:</b>	2,406,096.60 usft	<b>Longitude:</b>	-108.268529
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	6,510.0 usft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM2022	9/30/2022	9.15	65.83	51,080.60000000

<b>Design</b>	Prelim #4			
<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	77.74

<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		
225.0	0.00	0.00	225.0	0.0	0.0	0.00	0.00	0.00	0.00		
920.7	20.87	76.81	905.5	28.6	122.0	3.00	3.00	0.00	76.81		
7,288.7	20.87	76.81	6,855.5	546.4	2,331.0	0.00	0.00	0.00	0.00		
7,984.5	0.00	0.00	7,536.0	575.0	2,453.0	3.00	-3.00	0.00	180.00	21A-27 - OHCR	
8,031.1	0.70	221.76	7,582.6	574.8	2,452.8	1.50	1.50	-296.70	221.76		
13,726.9	0.70	221.76	13,278.0	523.0	2,406.5	0.00	0.00	0.00	0.00	21A-27 - PBHL	

<b>Database:</b>	KLXDirectional-AD	<b>Local Co-ordinate Reference:</b>	Well RNPU B27 FED 21A-27 197 - Slot 21A-27
<b>Company:</b>	QB Energy Operating, LLC	<b>TVD Reference:</b>	RKB @ 6540.0usft (30')
<b>Project:</b>	Rio Blanco County, CO	<b>MD Reference:</b>	RKB @ 6540.0usft (30')
<b>Site:</b>	PCU B27 197 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RNPU B27 FED 21A-27 197	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Prelim #4		

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	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	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	0.00
<b>Build 3° / 100'</b>										
225.0	0.00	0.00	225.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
300.0	2.25	76.81	300.0	0.3	1.4	1.5	3.00	3.00	3.00	0.00
400.0	5.25	76.81	399.8	1.8	7.8	8.0	3.00	3.00	3.00	0.00
500.0	8.25	76.81	499.1	4.5	19.2	19.8	3.00	3.00	3.00	0.00
600.0	11.25	76.81	597.6	8.4	35.7	36.7	3.00	3.00	3.00	0.00
700.0	14.25	76.81	695.1	13.4	57.2	58.8	3.00	3.00	3.00	0.00
800.0	17.25	76.81	791.4	19.6	83.6	85.9	3.00	3.00	3.00	0.00
900.0	20.25	76.81	886.0	26.9	114.9	118.0	3.00	3.00	3.00	0.00
<b>EOB @ 20.87° Inc. / 76.81° Azm</b>										
920.7	20.87	76.81	905.5	28.6	122.0	125.3	3.00	3.00	3.00	0.00
1,000.0	20.87	76.81	979.5	35.0	149.5	153.5	0.00	0.00	0.00	0.00
1,100.0	20.87	76.81	1,072.9	43.2	184.2	189.2	0.00	0.00	0.00	0.00
1,200.0	20.87	76.81	1,166.4	51.3	218.9	224.8	0.00	0.00	0.00	0.00
1,300.0	20.87	76.81	1,259.8	59.4	253.6	260.4	0.00	0.00	0.00	0.00
1,400.0	20.87	76.81	1,353.3	67.6	288.3	296.0	0.00	0.00	0.00	0.00
1,500.0	20.87	76.81	1,446.7	75.7	323.0	331.7	0.00	0.00	0.00	0.00
1,600.0	20.87	76.81	1,540.1	83.8	357.6	367.3	0.00	0.00	0.00	0.00
1,700.0	20.87	76.81	1,633.6	92.0	392.3	402.9	0.00	0.00	0.00	0.00
1,800.0	20.87	76.81	1,727.0	100.1	427.0	438.5	0.00	0.00	0.00	0.00
1,900.0	20.87	76.81	1,820.5	108.2	461.7	474.2	0.00	0.00	0.00	0.00
2,000.0	20.87	76.81	1,913.9	116.4	496.4	509.8	0.00	0.00	0.00	0.00
2,100.0	20.87	76.81	2,007.3	124.5	531.1	545.4	0.00	0.00	0.00	0.00
2,200.0	20.87	76.81	2,100.8	132.6	565.8	581.0	0.00	0.00	0.00	0.00
2,300.0	20.87	76.81	2,194.2	140.8	600.5	616.7	0.00	0.00	0.00	0.00
2,400.0	20.87	76.81	2,287.6	148.9	635.2	652.3	0.00	0.00	0.00	0.00
2,500.0	20.87	76.81	2,381.1	157.0	669.8	687.9	0.00	0.00	0.00	0.00
<b>Orange Marker</b>										
2,582.3	20.87	76.81	2,458.0	163.7	698.4	717.2	0.00	0.00	0.00	0.00
2,600.0	20.87	76.81	2,474.5	165.1	704.5	723.5	0.00	0.00	0.00	0.00
2,700.0	20.87	76.81	2,568.0	173.3	739.2	759.2	0.00	0.00	0.00	0.00
<b>Wasatch</b>										
2,738.6	20.87	76.81	2,604.0	176.4	752.6	772.9	0.00	0.00	0.00	0.00
2,800.0	20.87	76.81	2,661.4	181.4	773.9	794.8	0.00	0.00	0.00	0.00
2,900.0	20.87	76.81	2,754.8	189.5	808.6	830.4	0.00	0.00	0.00	0.00
3,000.0	20.87	76.81	2,848.3	197.7	843.3	866.0	0.00	0.00	0.00	0.00
3,100.0	20.87	76.81	2,941.7	205.8	878.0	901.7	0.00	0.00	0.00	0.00
3,200.0	20.87	76.81	3,035.1	213.9	912.7	937.3	0.00	0.00	0.00	0.00
3,300.0	20.87	76.81	3,128.6	222.1	947.4	972.9	0.00	0.00	0.00	0.00
3,400.0	20.87	76.81	3,222.0	230.2	982.0	1,008.5	0.00	0.00	0.00	0.00
3,500.0	20.87	76.81	3,315.5	238.3	1,016.7	1,044.1	0.00	0.00	0.00	0.00
3,600.0	20.87	76.81	3,408.9	246.5	1,051.4	1,079.8	0.00	0.00	0.00	0.00
3,700.0	20.87	76.81	3,502.3	254.6	1,086.1	1,115.4	0.00	0.00	0.00	0.00
3,800.0	20.87	76.81	3,595.8	262.7	1,120.8	1,151.0	0.00	0.00	0.00	0.00
3,900.0	20.87	76.81	3,689.2	270.9	1,155.5	1,186.6	0.00	0.00	0.00	0.00
4,000.0	20.87	76.81	3,782.6	279.0	1,190.2	1,222.3	0.00	0.00	0.00	0.00
4,100.0	20.87	76.81	3,876.1	287.1	1,224.9	1,257.9	0.00	0.00	0.00	0.00
4,200.0	20.87	76.81	3,969.5	295.2	1,259.5	1,293.5	0.00	0.00	0.00	0.00
4,300.0	20.87	76.81	4,063.0	303.4	1,294.2	1,329.1	0.00	0.00	0.00	0.00
4,400.0	20.87	76.81	4,156.4	311.5	1,328.9	1,364.8	0.00	0.00	0.00	0.00

<b>Database:</b>	KLXDirectional-AD	<b>Local Co-ordinate Reference:</b>	Well RNPU B27 FED 21A-27 197 - Slot 21A-27
<b>Company:</b>	QB Energy Operating, LLC	<b>TVD Reference:</b>	RKB @ 6540.0usft (30')
<b>Project:</b>	Rio Blanco County, CO	<b>MD Reference:</b>	RKB @ 6540.0usft (30')
<b>Site:</b>	PCU B27 197 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RNPU B27 FED 21A-27 197	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Prelim #4		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,500.0	20.87	76.81	4,249.8	319.6	1,363.6	1,400.4	0.00	0.00	0.00	
4,600.0	20.87	76.81	4,343.3	327.8	1,398.3	1,436.0	0.00	0.00	0.00	
4,700.0	20.87	76.81	4,436.7	335.9	1,433.0	1,471.6	0.00	0.00	0.00	
4,800.0	20.87	76.81	4,530.1	344.0	1,467.7	1,507.3	0.00	0.00	0.00	
4,900.0	20.87	76.81	4,623.6	352.2	1,502.4	1,542.9	0.00	0.00	0.00	
5,000.0	20.87	76.81	4,717.0	360.3	1,537.1	1,578.5	0.00	0.00	0.00	
5,100.0	20.87	76.81	4,810.5	368.4	1,571.7	1,614.1	0.00	0.00	0.00	
5,200.0	20.87	76.81	4,903.9	376.6	1,606.4	1,649.8	0.00	0.00	0.00	
5,300.0	20.87	76.81	4,997.3	384.7	1,641.1	1,685.4	0.00	0.00	0.00	
5,400.0	20.87	76.81	5,090.8	392.8	1,675.8	1,721.0	0.00	0.00	0.00	
5,500.0	20.87	76.81	5,184.2	401.0	1,710.5	1,756.6	0.00	0.00	0.00	
5,600.0	20.87	76.81	5,277.6	409.1	1,745.2	1,792.3	0.00	0.00	0.00	
5,700.0	20.87	76.81	5,371.1	417.2	1,779.9	1,827.9	0.00	0.00	0.00	
5,800.0	20.87	76.81	5,464.5	425.3	1,814.6	1,863.5	0.00	0.00	0.00	
<b>Wasatch G</b>										
5,892.6	20.87	76.81	5,551.0	432.9	1,846.7	1,896.5	0.00	0.00	0.00	
5,900.0	20.87	76.81	5,558.0	433.5	1,849.3	1,899.1	0.00	0.00	0.00	
6,000.0	20.87	76.81	5,651.4	441.6	1,883.9	1,934.7	0.00	0.00	0.00	
6,100.0	20.87	76.81	5,744.8	449.7	1,918.6	1,970.4	0.00	0.00	0.00	
6,200.0	20.87	76.81	5,838.3	457.9	1,953.3	2,006.0	0.00	0.00	0.00	
6,300.0	20.87	76.81	5,931.7	466.0	1,988.0	2,041.6	0.00	0.00	0.00	
6,400.0	20.87	76.81	6,025.1	474.1	2,022.7	2,077.2	0.00	0.00	0.00	
<b>Fort Union</b>										
6,403.1	20.87	76.81	6,028.0	474.4	2,023.8	2,078.3	0.00	0.00	0.00	
6,500.0	20.87	76.81	6,118.6	482.3	2,057.4	2,112.9	0.00	0.00	0.00	
6,600.0	20.87	76.81	6,212.0	490.4	2,092.1	2,148.5	0.00	0.00	0.00	
6,700.0	20.87	76.81	6,305.5	498.5	2,126.8	2,184.1	0.00	0.00	0.00	
6,800.0	20.87	76.81	6,398.9	506.7	2,161.4	2,219.7	0.00	0.00	0.00	
6,900.0	20.87	76.81	6,492.3	514.8	2,196.1	2,255.4	0.00	0.00	0.00	
7,000.0	20.87	76.81	6,585.8	522.9	2,230.8	2,291.0	0.00	0.00	0.00	
7,100.0	20.87	76.81	6,679.2	531.1	2,265.5	2,326.6	0.00	0.00	0.00	
7,200.0	20.87	76.81	6,772.6	539.2	2,300.2	2,362.2	0.00	0.00	0.00	
<b>Drop 3° /100'</b>										
7,288.7	20.87	76.81	6,855.5	546.4	2,331.0	2,393.8	0.00	0.00	0.00	
7,300.0	20.53	76.81	6,866.1	547.3	2,334.9	2,397.8	3.00	-3.00	0.00	
7,400.0	17.53	76.81	6,960.6	554.7	2,366.6	2,430.4	3.00	-3.00	0.00	
7,500.0	14.53	76.81	7,056.7	561.1	2,393.5	2,458.0	3.00	-3.00	0.00	
7,600.0	11.53	76.81	7,154.1	566.2	2,415.5	2,480.6	3.00	-3.00	0.00	
7,700.0	8.53	76.81	7,252.6	570.2	2,432.4	2,498.0	3.00	-3.00	0.00	
7,800.0	5.53	76.81	7,351.8	573.0	2,444.3	2,510.3	3.00	-3.00	0.00	
7,900.0	2.53	76.81	7,451.6	574.6	2,451.2	2,517.3	3.00	-3.00	0.00	
<b>EOD @ Vertical : Build 1.5° / 100' - Ohio Creek</b>										
7,984.5	0.00	0.00	7,536.0	575.0	2,453.0	2,519.2	3.00	-3.00	0.00	
8,000.0	0.23	221.76	7,551.5	575.0	2,453.0	2,519.1	1.50	1.50	0.00	
<b>EOB @ 0.70° Inc. / 221.76° Azm</b>										
8,031.1	0.70	221.76	7,582.6	574.8	2,452.8	2,518.9	1.50	1.50	0.00	
8,100.0	0.70	221.76	7,651.5	574.2	2,452.3	2,518.2	0.00	0.00	0.00	
8,200.0	0.70	221.76	7,751.5	573.3	2,451.4	2,517.3	0.00	0.00	0.00	
8,300.0	0.70	221.76	7,851.5	572.3	2,450.6	2,516.3	0.00	0.00	0.00	
8,400.0	0.70	221.76	7,951.5	571.4	2,449.8	2,515.3	0.00	0.00	0.00	
8,500.0	0.70	221.76	8,051.5	570.5	2,449.0	2,514.3	0.00	0.00	0.00	
8,600.0	0.70	221.76	8,151.5	569.6	2,448.2	2,513.3	0.00	0.00	0.00	

<b>Database:</b>	KLXDirectional-AD	<b>Local Co-ordinate Reference:</b>	Well RNPU B27 FED 21A-27 197 - Slot 21A-27
<b>Company:</b>	QB Energy Operating, LLC	<b>TVD Reference:</b>	RKB @ 6540.0usft (30')
<b>Project:</b>	Rio Blanco County, CO	<b>MD Reference:</b>	RKB @ 6540.0usft (30')
<b>Site:</b>	PCU B27 197 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RNPU B27 FED 21A-27 197	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Prelim #4		

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)	
8,700.0	0.70	221.76	8,251.5	568.7	2,447.4	2,512.3	0.00	0.00	0.00	
<b>Williams Fork</b>										
8,734.5	0.70	221.76	8,286.0	568.4	2,447.1	2,512.0	0.00	0.00	0.00	
8,800.0	0.70	221.76	8,351.5	567.8	2,446.6	2,511.3	0.00	0.00	0.00	
8,900.0	0.70	221.76	8,451.5	566.9	2,445.8	2,510.4	0.00	0.00	0.00	
9,000.0	0.70	221.76	8,551.5	566.0	2,444.9	2,509.4	0.00	0.00	0.00	
9,100.0	0.70	221.76	8,651.5	565.1	2,444.1	2,508.4	0.00	0.00	0.00	
9,200.0	0.70	221.76	8,751.4	564.2	2,443.3	2,507.4	0.00	0.00	0.00	
9,300.0	0.70	221.76	8,851.4	563.2	2,442.5	2,506.4	0.00	0.00	0.00	
9,400.0	0.70	221.76	8,951.4	562.3	2,441.7	2,505.4	0.00	0.00	0.00	
9,500.0	0.70	221.76	9,051.4	561.4	2,440.9	2,504.4	0.00	0.00	0.00	
9,600.0	0.70	221.76	9,151.4	560.5	2,440.1	2,503.4	0.00	0.00	0.00	
9,700.0	0.70	221.76	9,251.4	559.6	2,439.3	2,502.5	0.00	0.00	0.00	
9,800.0	0.70	221.76	9,351.4	558.7	2,438.4	2,501.5	0.00	0.00	0.00	
9,900.0	0.70	221.76	9,451.4	557.8	2,437.6	2,500.5	0.00	0.00	0.00	
10,000.0	0.70	221.76	9,551.4	556.9	2,436.8	2,499.5	0.00	0.00	0.00	
10,100.0	0.70	221.76	9,651.4	556.0	2,436.0	2,498.5	0.00	0.00	0.00	
10,200.0	0.70	221.76	9,751.4	555.1	2,435.2	2,497.5	0.00	0.00	0.00	
10,300.0	0.70	221.76	9,851.4	554.1	2,434.4	2,496.5	0.00	0.00	0.00	
10,400.0	0.70	221.76	9,951.4	553.2	2,433.6	2,495.5	0.00	0.00	0.00	
10,500.0	0.70	221.76	10,051.4	552.3	2,432.8	2,494.6	0.00	0.00	0.00	
10,600.0	0.70	221.76	10,151.3	551.4	2,431.9	2,493.6	0.00	0.00	0.00	
10,700.0	0.70	221.76	10,251.3	550.5	2,431.1	2,492.6	0.00	0.00	0.00	
10,800.0	0.70	221.76	10,351.3	549.6	2,430.3	2,491.6	0.00	0.00	0.00	
10,900.0	0.70	221.76	10,451.3	548.7	2,429.5	2,490.6	0.00	0.00	0.00	
11,000.0	0.70	221.76	10,551.3	547.8	2,428.7	2,489.6	0.00	0.00	0.00	
11,100.0	0.70	221.76	10,651.3	546.9	2,427.9	2,488.6	0.00	0.00	0.00	
11,200.0	0.70	221.76	10,751.3	546.0	2,427.1	2,487.6	0.00	0.00	0.00	
11,300.0	0.70	221.76	10,851.3	545.0	2,426.3	2,486.7	0.00	0.00	0.00	
11,400.0	0.70	221.76	10,951.3	544.1	2,425.4	2,485.7	0.00	0.00	0.00	
11,500.0	0.70	221.76	11,051.3	543.2	2,424.6	2,484.7	0.00	0.00	0.00	
11,600.0	0.70	221.76	11,151.3	542.3	2,423.8	2,483.7	0.00	0.00	0.00	
<b>Cameo</b>										
11,681.7	0.70	221.76	11,233.0	541.6	2,423.2	2,482.9	0.00	0.00	0.00	
11,700.0	0.70	221.76	11,251.3	541.4	2,423.0	2,482.7	0.00	0.00	0.00	
11,800.0	0.70	221.76	11,351.3	540.5	2,422.2	2,481.7	0.00	0.00	0.00	
11,900.0	0.70	221.76	11,451.2	539.6	2,421.4	2,480.7	0.00	0.00	0.00	
12,000.0	0.70	221.76	11,551.2	538.7	2,420.6	2,479.8	0.00	0.00	0.00	
12,100.0	0.70	221.76	11,651.2	537.8	2,419.8	2,478.8	0.00	0.00	0.00	
12,200.0	0.70	221.76	11,751.2	536.9	2,418.9	2,477.8	0.00	0.00	0.00	
<b>Rollins</b>										
12,231.8	0.70	221.76	11,783.0	536.6	2,418.7	2,477.5	0.00	0.00	0.00	
12,300.0	0.70	221.76	11,851.2	535.9	2,418.1	2,476.8	0.00	0.00	0.00	
<b>Cozzette</b>										
12,326.8	0.70	221.76	11,878.0	535.7	2,417.9	2,476.5	0.00	0.00	0.00	
12,400.0	0.70	221.76	11,951.2	535.0	2,417.3	2,475.8	0.00	0.00	0.00	
12,500.0	0.70	221.76	12,051.2	534.1	2,416.5	2,474.8	0.00	0.00	0.00	
12,600.0	0.70	221.76	12,151.2	533.2	2,415.7	2,473.8	0.00	0.00	0.00	
12,700.0	0.70	221.76	12,251.2	532.3	2,414.9	2,472.8	0.00	0.00	0.00	
12,800.0	0.70	221.76	12,351.2	531.4	2,414.1	2,471.9	0.00	0.00	0.00	
12,900.0	0.70	221.76	12,451.2	530.5	2,413.3	2,470.9	0.00	0.00	0.00	
<b>Corcoran</b>										

<b>Database:</b>	KLXDirectional-AD	<b>Local Co-ordinate Reference:</b>	Well RNPU B27 FED 21A-27 197 - Slot 21A-27
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<b>Project:</b>	Rio Blanco County, CO	<b>MD Reference:</b>	RKB @ 6540.0usft (30')
<b>Site:</b>	PCU B27 197 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RNPU B27 FED 21A-27 197	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Prelim #4		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
12,926.8	0.70	221.76	12,478.0	530.2	2,413.0	2,470.6	0.00	0.00	0.00	
13,000.0	0.70	221.76	12,551.2	529.6	2,412.4	2,469.9	0.00	0.00	0.00	
13,100.0	0.70	221.76	12,651.2	528.7	2,411.6	2,468.9	0.00	0.00	0.00	
13,200.0	0.70	221.76	12,751.2	527.8	2,410.8	2,467.9	0.00	0.00	0.00	
13,300.0	0.70	221.76	12,851.1	526.8	2,410.0	2,466.9	0.00	0.00	0.00	
13,400.0	0.70	221.76	12,951.1	525.9	2,409.2	2,465.9	0.00	0.00	0.00	
13,500.0	0.70	221.76	13,051.1	525.0	2,408.4	2,464.9	0.00	0.00	0.00	
13,600.0	0.70	221.76	13,151.1	524.1	2,407.6	2,464.0	0.00	0.00	0.00	
13,700.0	0.70	221.76	13,251.1	523.2	2,406.8	2,463.0	0.00	0.00	0.00	
<b>TD @ 13726.9' MD / 13278.0' TVD</b>										
13,726.9	0.70	221.76	13,278.0	523.0	2,406.5	2,462.7	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	
21A-27 - OHCR - hit/miss target - Shape - Point	0.00	0.00	7,536.0	575.0	2,453.0	14,516,955.44	2,408,530.85	39.942641	-108.259784	
21A-27 - PBHL - plan hits target center - Point	0.00	0.00	13,278.0	523.0	2,406.5	14,516,902.00	2,408,486.00	39.942498	-108.259949	
21A-27 - target - plan misses target center by 35.1usft at 13726.9usft MD (13278.0 TVD, 523.0 N, 2406.5 E) - Ellipse (radii L100.0 W50.0 on 215.00 azi)	0.00	0.00	13,278.0	492.0	2,390.0	14,516,870.55	2,408,470.42	39.942413	-108.260008	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,582.3	2,458.0	Orange Marker				
2,738.6	2,604.0	Wasatch				
5,892.6	5,551.0	Wasatch G				
6,403.1	6,028.0	Fort Union				
7,984.5	7,536.0	Ohio Creek				
8,734.5	8,286.0	Williams Fork				
11,681.7	11,233.0	Cameo				
12,231.8	11,783.0	Rollins				
12,326.8	11,878.0	Cozzette				
12,926.8	12,478.0	Corcoran				

<b>Database:</b>	KLXDirectional-AD	<b>Local Co-ordinate Reference:</b>	Well RNPU B27 FED 21A-27 197 - Slot 21A-27
<b>Company:</b>	QB Energy Operating, LLC	<b>TVD Reference:</b>	RKB @ 6540.0usft (30')
<b>Project:</b>	Rio Blanco County, CO	<b>MD Reference:</b>	RKB @ 6540.0usft (30')
<b>Site:</b>	PCU B27 197 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RNPU B27 FED 21A-27 197	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Prelim #4		

**Plan Annotations**

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
225.0	225.0	0.0	0.0	Build 3° / 100'
920.7	905.5	28.6	122.0	EOB @ 20.87° Inc. / 76.81° Azm
7,288.7	6,855.5	546.4	2,331.0	Drop 3° /100'
7,984.5	7,536.0	575.0	2,453.0	EOD @ Vertical : Build 1.5° / 100'
8,031.1	7,582.6	574.8	2,452.8	EOB @ 0.70° Inc. / 221.76° Azm
13,726.9	13,278.0	523.0	2,406.5	TD @ 13726.9' MD / 13278.0' TVD