

Project: Rio Blanco County, CO
 Site: PCU B27 197 Pad
 Well: RNPU B27 FED 15B-22 197
 Wellbore: OH
 Design: Prelim #3
 Latitude: 39.941042
 Longitude: -108.268519
 Ground Level: 6510.0
 RKB @ 6540.0usft (30')

FORMATION TOP DETAILS			
TVDPath	MDPath	Formation	
2499.0	2583.7	Orange Marker	
2642.0	2736.7	Wasatch	
5544.0	5843.3	Wasatch G	
6011.0	6343.3	Fort Union	
7516.0	7921.7	Ohio Creek	
8266.0	8671.8	Williams Fork	
11150.0	11556.3	Cameo	
11700.0	12106.3	Rollins	
11794.0	12200.4	Cozzette	
12394.0	12800.4	Corcoran	

REFERENCE INFORMATION	
Co-ordinate (N/E) Reference:	Well RNPU B27 FED 15B-22 197 - Slot 15B-22, True North
Vertical (TVD) Reference:	RKB @ 6540.0usft (30')
Section (VS) Reference:	Slot - 15B-22(0.0N, 0.0E)
Measured Depth Reference:	RKB @ 6540.0usft (30')
Calculation Method:	Minimum Curvature

WELL DETAILS: RNPU B27 FED 15B-22 197					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14516298.20	2406099.60	39.941042	-108.268519
6510.0 15B-22					

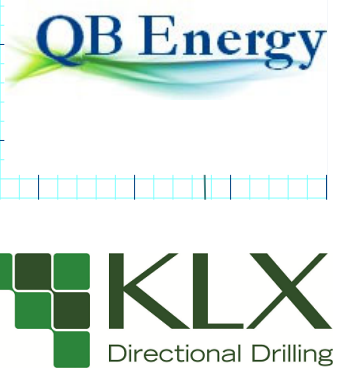
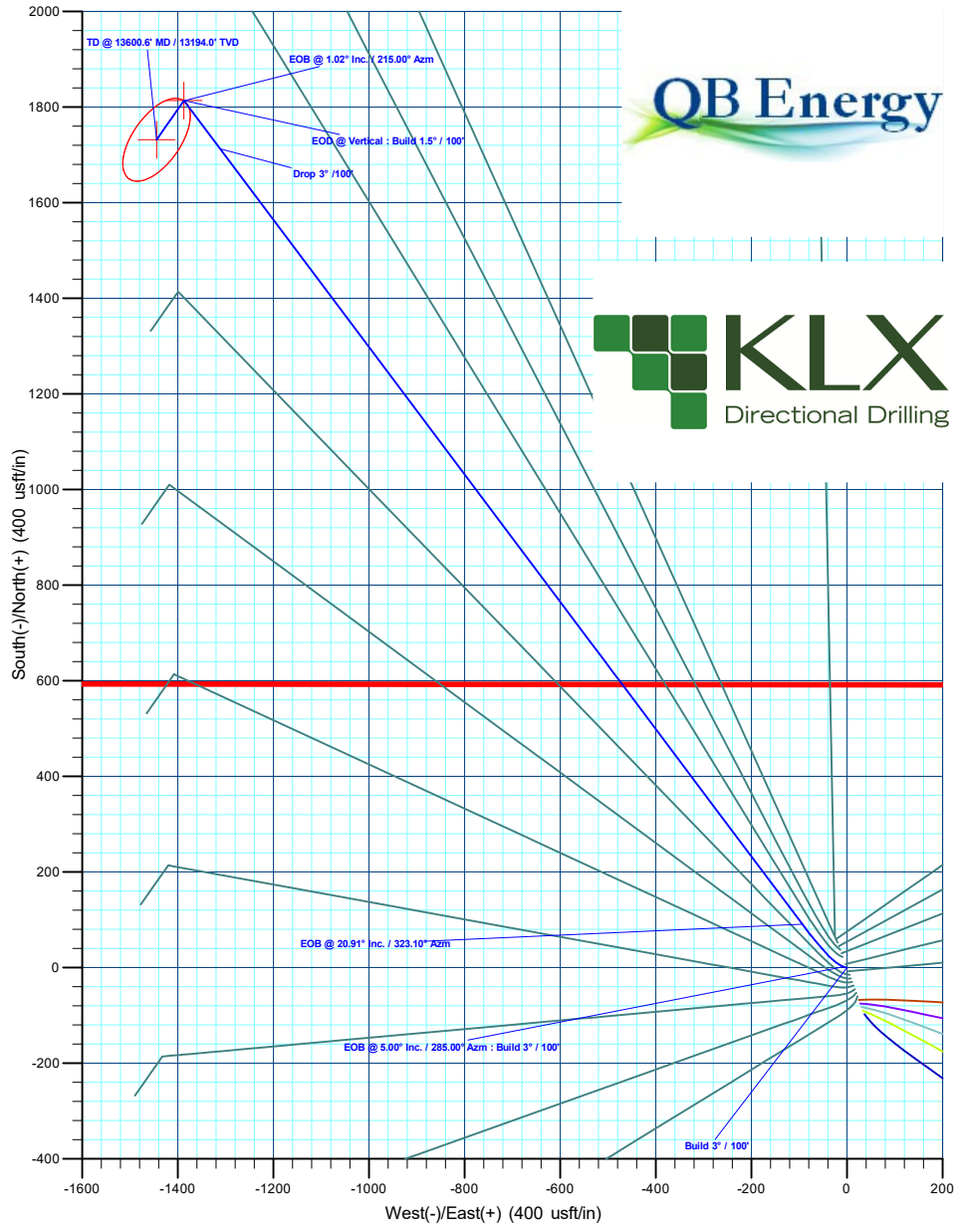
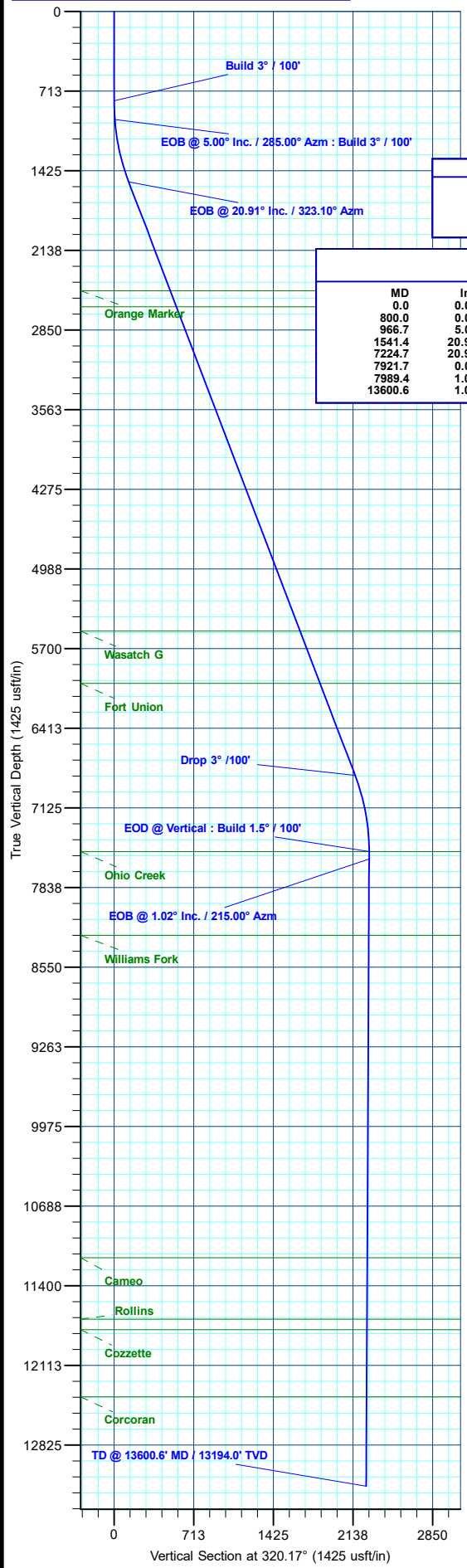
PROJECT DETAILS: Rio Blanco County, CO	
Geodetic System:	Universal Transverse Mercator (US Survey Feet)
Datum:	NAD 1927 - Western US
Ellipsoid:	Clarke 1866
Zone:	Zone 12N (114 W to 108 W)
System Datum:	Mean Sea Level

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

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
15B-22 - OHCR	7516.0	1813.7	-1386.9	14518068.63	2404657.83	39.946020	-108.273464
15B-22 - PBHL	13194.0	1731.8	-1444.3	14517985.00	2404603.00	39.945795	-108.273669

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	Build 3° / 100'	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	EOB @ 5.00° Inc. / 285.00° Azm : Build 3° / 100'	
966.7	5.00	285.00	966.5	1.9	-7.0	3.00	285.00	5.3	EOB @ 20.91° Inc. / 323.10° Azm	
1541.4	20.91	323.10	1525.4	91.1	-93.4	3.00	47.99	129.8	Drop 3° / 100'	
7224.7	20.91	323.10	6834.3	1713.2	-1314.4	0.00	0.00	2155.6	EOD @ Vertical : Build 1.5° / 100'	
7921.7	0.00	0.00	7516.0	1813.7	-1386.9	3.00	180.00	2281.2	EOD @ Vertical : Build 1.5° / 100'	
7921.7	1.02	215.00	7583.7	1813.3	-1387.2	1.50	215.00	2281.0	EOB @ 1.02° Inc. / 215.00° Azm	
13600.6	1.02	215.00	13194.0	1731.8	-1444.3	0.00	0.00	2255.0	TD @ 13600.6' MD / 13194.0' TVD	



Plan: Prelim #3 (RNPU B27 FED 15B-22 197/OH)
 Created By: Will Jircik Date: 13:02, June 18 2025



QB Energy Operating, LLC

Rio Blanco County, CO

PCU B27 197 Pad

RNPU B27 FED 15B-22 197 - Slot 15B-22

OH

Plan: Prelim #3

KLX Well Planning Report

18 June, 2025



Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 15B-22 197 - Slot 15B-22
Company:	QB Energy Operating, LLC	TVD Reference:	RKB @ 6540.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 6540.0usft (30')
Site:	PCU B27 197 Pad	North Reference:	True
Well:	RNPU B27 FED 15B-22 197	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim #3		

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

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

Well	RNPU B27 FED 15B-22 197 - Slot 15B-22					
Well Position	+N/-S	52.4 usft	Northing:	14,516,298.20 usft	Latitude:	39.941042
	+E/-W	-19.6 usft	Easting:	2,406,099.60 usft	Longitude:	-108.268519
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	6,510.0 usft

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

Design	Prelim #3			
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	320.17

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	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
966.7	5.00	285.00	966.5	1.9	-7.0	3.00	3.00	0.00	285.00	
1,541.4	20.91	323.10	1,525.4	91.1	-93.4	3.00	2.77	6.63	47.99	
7,224.7	20.91	323.10	6,834.3	1,713.2	-1,311.4	0.00	0.00	0.00	0.00	
7,921.7	0.00	0.00	7,516.0	1,813.7	-1,386.9	3.00	-3.00	0.00	180.00	15B-22 - OHCR
7,989.4	1.02	215.00	7,583.7	1,813.3	-1,387.2	1.50	1.50	-214.27	215.00	
13,600.6	1.02	215.00	13,194.0	1,731.8	-1,444.3	0.00	0.00	0.00	0.00	15B-22 - PBHL

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 15B-22 197 - Slot 15B-22
Company:	QB Energy Operating, LLC	TVD Reference:	RKB @ 6540.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 6540.0usft (30')
Site:	PCU B27 197 Pad	North Reference:	True
Well:	RNPU B27 FED 15B-22 197	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim #3		

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	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	
Build 3° / 100'										
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	
900.0	3.00	285.00	900.0	0.7	-2.5	2.1	3.00	3.00	0.00	
EOB @ 5.00° Inc. / 285.00° Azm : Build 3° / 100'										
966.7	5.00	285.00	966.5	1.9	-7.0	5.9	3.00	3.00	0.00	
1,000.0	5.72	292.48	999.6	2.9	-10.0	8.6	3.00	2.15	22.44	
1,100.0	8.23	306.22	1,098.9	9.0	-20.3	20.0	3.00	2.51	13.75	
1,200.0	10.99	313.36	1,197.5	19.8	-33.0	36.4	3.00	2.76	7.13	
1,300.0	13.85	317.62	1,295.1	35.2	-48.0	57.8	3.00	2.86	4.26	
1,400.0	16.76	320.43	1,391.6	55.1	-65.3	84.2	3.00	2.91	2.82	
1,500.0	19.69	322.43	1,486.6	79.6	-84.8	115.4	3.00	2.93	2.00	
EOB @ 20.91° Inc. / 323.10° Azm										
1,541.4	20.91	323.10	1,525.4	91.1	-93.4	129.8	3.00	2.95	1.62	
1,600.0	20.91	323.10	1,580.1	107.8	-106.0	150.7	0.00	0.00	0.00	
1,700.0	20.91	323.10	1,673.5	136.3	-127.4	186.3	0.00	0.00	0.00	
1,800.0	20.91	323.10	1,767.0	164.9	-148.9	222.0	0.00	0.00	0.00	
1,900.0	20.91	323.10	1,860.4	193.4	-170.3	257.6	0.00	0.00	0.00	
2,000.0	20.91	323.10	1,953.8	221.9	-191.7	293.2	0.00	0.00	0.00	
2,100.0	20.91	323.10	2,047.2	250.5	-213.2	328.9	0.00	0.00	0.00	
2,200.0	20.91	323.10	2,140.6	279.0	-234.6	364.5	0.00	0.00	0.00	
2,300.0	20.91	323.10	2,234.0	307.6	-256.0	400.2	0.00	0.00	0.00	
2,400.0	20.91	323.10	2,327.4	336.1	-277.4	435.8	0.00	0.00	0.00	
2,500.0	20.91	323.10	2,420.9	364.7	-298.9	471.5	0.00	0.00	0.00	
Orange Marker										
2,583.7	20.91	323.10	2,499.0	388.5	-316.8	501.3	0.00	0.00	0.00	
2,600.0	20.91	323.10	2,514.3	393.2	-320.3	507.1	0.00	0.00	0.00	
2,700.0	20.91	323.10	2,607.7	421.7	-341.7	542.8	0.00	0.00	0.00	
Wasatch										
2,736.7	20.91	323.10	2,642.0	432.2	-349.6	555.9	0.00	0.00	0.00	
2,800.0	20.91	323.10	2,701.1	450.3	-363.2	578.4	0.00	0.00	0.00	
2,900.0	20.91	323.10	2,794.5	478.8	-384.6	614.0	0.00	0.00	0.00	
3,000.0	20.91	323.10	2,887.9	507.4	-406.0	649.7	0.00	0.00	0.00	
3,100.0	20.91	323.10	2,981.3	535.9	-427.5	685.3	0.00	0.00	0.00	
3,200.0	20.91	323.10	3,074.8	564.4	-448.9	721.0	0.00	0.00	0.00	
3,300.0	20.91	323.10	3,168.2	593.0	-470.3	756.6	0.00	0.00	0.00	
3,400.0	20.91	323.10	3,261.6	621.5	-491.7	792.3	0.00	0.00	0.00	
3,500.0	20.91	323.10	3,355.0	650.1	-513.2	827.9	0.00	0.00	0.00	
3,600.0	20.91	323.10	3,448.4	678.6	-534.6	863.6	0.00	0.00	0.00	
3,700.0	20.91	323.10	3,541.8	707.2	-556.0	899.2	0.00	0.00	0.00	
3,800.0	20.91	323.10	3,635.2	735.7	-577.5	934.9	0.00	0.00	0.00	
3,900.0	20.91	323.10	3,728.7	764.2	-598.9	970.5	0.00	0.00	0.00	
4,000.0	20.91	323.10	3,822.1	792.8	-620.3	1,006.1	0.00	0.00	0.00	
4,100.0	20.91	323.10	3,915.5	821.3	-641.8	1,041.8	0.00	0.00	0.00	
4,200.0	20.91	323.10	4,008.9	849.9	-663.2	1,077.4	0.00	0.00	0.00	

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 15B-22 197 - Slot 15B-22
Company:	QB Energy Operating, LLC	TVD Reference:	RKB @ 6540.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 6540.0usft (30')
Site:	PCU B27 197 Pad	North Reference:	True
Well:	RNPU B27 FED 15B-22 197	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim #3		

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)	
4,300.0	20.91	323.10	4,102.3	878.4	-684.6	1,113.1	0.00	0.00	0.00	
4,400.0	20.91	323.10	4,195.7	906.9	-706.0	1,148.7	0.00	0.00	0.00	
4,500.0	20.91	323.10	4,289.1	935.5	-727.5	1,184.4	0.00	0.00	0.00	
4,600.0	20.91	323.10	4,382.5	964.0	-748.9	1,220.0	0.00	0.00	0.00	
4,700.0	20.91	323.10	4,476.0	992.6	-770.3	1,255.7	0.00	0.00	0.00	
4,800.0	20.91	323.10	4,569.4	1,021.1	-791.8	1,291.3	0.00	0.00	0.00	
4,900.0	20.91	323.10	4,662.8	1,049.7	-813.2	1,326.9	0.00	0.00	0.00	
5,000.0	20.91	323.10	4,756.2	1,078.2	-834.6	1,362.6	0.00	0.00	0.00	
5,100.0	20.91	323.10	4,849.6	1,106.7	-856.1	1,398.2	0.00	0.00	0.00	
5,200.0	20.91	323.10	4,943.0	1,135.3	-877.5	1,433.9	0.00	0.00	0.00	
5,300.0	20.91	323.10	5,036.4	1,163.8	-898.9	1,469.5	0.00	0.00	0.00	
5,400.0	20.91	323.10	5,129.9	1,192.4	-920.3	1,505.2	0.00	0.00	0.00	
5,500.0	20.91	323.10	5,223.3	1,220.9	-941.8	1,540.8	0.00	0.00	0.00	
5,600.0	20.91	323.10	5,316.7	1,249.4	-963.2	1,576.5	0.00	0.00	0.00	
5,700.0	20.91	323.10	5,410.1	1,278.0	-984.6	1,612.1	0.00	0.00	0.00	
5,800.0	20.91	323.10	5,503.5	1,306.5	-1,006.1	1,647.7	0.00	0.00	0.00	
Wasatch G										
5,843.3	20.91	323.10	5,544.0	1,318.9	-1,015.3	1,663.2	0.00	0.00	0.00	
5,900.0	20.91	323.10	5,596.9	1,335.1	-1,027.5	1,683.4	0.00	0.00	0.00	
6,000.0	20.91	323.10	5,690.3	1,363.6	-1,048.9	1,719.0	0.00	0.00	0.00	
6,100.0	20.91	323.10	5,783.8	1,392.2	-1,070.3	1,754.7	0.00	0.00	0.00	
6,200.0	20.91	323.10	5,877.2	1,420.7	-1,091.8	1,790.3	0.00	0.00	0.00	
6,300.0	20.91	323.10	5,970.6	1,449.2	-1,113.2	1,826.0	0.00	0.00	0.00	
Fort Union										
6,343.3	20.91	323.10	6,011.0	1,461.6	-1,122.5	1,841.4	0.00	0.00	0.00	
6,400.0	20.91	323.10	6,064.0	1,477.8	-1,134.6	1,861.6	0.00	0.00	0.00	
6,500.0	20.91	323.10	6,157.4	1,506.3	-1,156.1	1,897.3	0.00	0.00	0.00	
6,600.0	20.91	323.10	6,250.8	1,534.9	-1,177.5	1,932.9	0.00	0.00	0.00	
6,700.0	20.91	323.10	6,344.2	1,563.4	-1,198.9	1,968.5	0.00	0.00	0.00	
6,800.0	20.91	323.10	6,437.7	1,591.9	-1,220.4	2,004.2	0.00	0.00	0.00	
6,900.0	20.91	323.10	6,531.1	1,620.5	-1,241.8	2,039.8	0.00	0.00	0.00	
7,000.0	20.91	323.10	6,624.5	1,649.0	-1,263.2	2,075.5	0.00	0.00	0.00	
7,100.0	20.91	323.10	6,717.9	1,677.6	-1,284.6	2,111.1	0.00	0.00	0.00	
7,200.0	20.91	323.10	6,811.3	1,706.1	-1,306.1	2,146.8	0.00	0.00	0.00	
Drop 3° /100'										
7,224.7	20.91	323.10	6,834.3	1,713.2	-1,311.4	2,155.6	0.00	0.00	0.00	
7,300.0	18.65	323.10	6,905.2	1,733.5	-1,326.7	2,181.0	3.00	-3.00	0.00	
7,400.0	15.65	323.10	7,000.8	1,757.1	-1,344.4	2,210.5	3.00	-3.00	0.00	
7,500.0	12.65	323.10	7,097.7	1,776.7	-1,359.1	2,234.9	3.00	-3.00	0.00	
7,600.0	9.65	323.10	7,195.8	1,792.1	-1,370.7	2,254.2	3.00	-3.00	0.00	
7,700.0	6.65	323.10	7,294.8	1,803.5	-1,379.2	2,268.4	3.00	-3.00	0.00	
7,800.0	3.65	323.10	7,394.4	1,810.6	-1,384.6	2,277.3	3.00	-3.00	0.00	
7,900.0	0.65	323.10	7,494.3	1,813.6	-1,386.8	2,281.1	3.00	-3.00	0.00	
EOD @ Vertical : Build 1.5° / 100' - Ohio Creek										
7,921.7	0.00	0.00	7,516.0	1,813.7	-1,386.9	2,281.2	3.00	-3.00	0.00	
EOB @ 1.02° Inc. / 215.00° Azm										
7,989.4	1.02	215.00	7,583.7	1,813.3	-1,387.2	2,281.0	1.50	1.50	0.00	
8,000.0	1.02	215.00	7,594.3	1,813.1	-1,387.3	2,281.0	0.00	0.00	0.00	
8,100.0	1.02	215.00	7,694.3	1,811.6	-1,388.4	2,280.5	0.00	0.00	0.00	
8,200.0	1.02	215.00	7,794.3	1,810.2	-1,389.4	2,280.1	0.00	0.00	0.00	
8,300.0	1.02	215.00	7,894.3	1,808.7	-1,390.4	2,279.6	0.00	0.00	0.00	
8,400.0	1.02	215.00	7,994.2	1,807.3	-1,391.4	2,279.1	0.00	0.00	0.00	

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 15B-22 197 - Slot 15B-22
Company:	QB Energy Operating, LLC	TVD Reference:	RKB @ 6540.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 6540.0usft (30')
Site:	PCU B27 197 Pad	North Reference:	True
Well:	RNPU B27 FED 15B-22 197	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim #3		

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	1.02	215.00	8,094.2	1,805.8	-1,392.4	2,278.7	0.00	0.00	0.00	
8,600.0	1.02	215.00	8,194.2	1,804.4	-1,393.4	2,278.2	0.00	0.00	0.00	
Williams Fork										
8,671.8	1.02	215.00	8,266.0	1,803.3	-1,394.2	2,277.9	0.00	0.00	0.00	
8,700.0	1.02	215.00	8,294.2	1,802.9	-1,394.5	2,277.7	0.00	0.00	0.00	
8,800.0	1.02	215.00	8,394.2	1,801.5	-1,395.5	2,277.3	0.00	0.00	0.00	
8,900.0	1.02	215.00	8,494.2	1,800.0	-1,396.5	2,276.8	0.00	0.00	0.00	
9,000.0	1.02	215.00	8,594.1	1,798.6	-1,397.5	2,276.3	0.00	0.00	0.00	
9,100.0	1.02	215.00	8,694.1	1,797.1	-1,398.5	2,275.9	0.00	0.00	0.00	
9,200.0	1.02	215.00	8,794.1	1,795.7	-1,399.5	2,275.4	0.00	0.00	0.00	
9,300.0	1.02	215.00	8,894.1	1,794.2	-1,400.6	2,275.0	0.00	0.00	0.00	
9,400.0	1.02	215.00	8,994.1	1,792.8	-1,401.6	2,274.5	0.00	0.00	0.00	
9,500.0	1.02	215.00	9,094.1	1,791.3	-1,402.6	2,274.0	0.00	0.00	0.00	
9,600.0	1.02	215.00	9,194.1	1,789.9	-1,403.6	2,273.6	0.00	0.00	0.00	
9,700.0	1.02	215.00	9,294.0	1,788.4	-1,404.6	2,273.1	0.00	0.00	0.00	
9,800.0	1.02	215.00	9,394.0	1,787.0	-1,405.6	2,272.6	0.00	0.00	0.00	
9,900.0	1.02	215.00	9,494.0	1,785.5	-1,406.6	2,272.2	0.00	0.00	0.00	
10,000.0	1.02	215.00	9,594.0	1,784.1	-1,407.7	2,271.7	0.00	0.00	0.00	
10,100.0	1.02	215.00	9,694.0	1,782.6	-1,408.7	2,271.2	0.00	0.00	0.00	
10,200.0	1.02	215.00	9,794.0	1,781.2	-1,409.7	2,270.8	0.00	0.00	0.00	
10,300.0	1.02	215.00	9,893.9	1,779.7	-1,410.7	2,270.3	0.00	0.00	0.00	
10,400.0	1.02	215.00	9,993.9	1,778.3	-1,411.7	2,269.9	0.00	0.00	0.00	
10,500.0	1.02	215.00	10,093.9	1,776.8	-1,412.7	2,269.4	0.00	0.00	0.00	
10,600.0	1.02	215.00	10,193.9	1,775.4	-1,413.8	2,268.9	0.00	0.00	0.00	
10,700.0	1.02	215.00	10,293.9	1,773.9	-1,414.8	2,268.5	0.00	0.00	0.00	
10,800.0	1.02	215.00	10,393.9	1,772.5	-1,415.8	2,268.0	0.00	0.00	0.00	
10,900.0	1.02	215.00	10,493.8	1,771.0	-1,416.8	2,267.5	0.00	0.00	0.00	
11,000.0	1.02	215.00	10,593.8	1,769.6	-1,417.8	2,267.1	0.00	0.00	0.00	
11,100.0	1.02	215.00	10,693.8	1,768.1	-1,418.8	2,266.6	0.00	0.00	0.00	
11,200.0	1.02	215.00	10,793.8	1,766.7	-1,419.9	2,266.1	0.00	0.00	0.00	
11,300.0	1.02	215.00	10,893.8	1,765.2	-1,420.9	2,265.7	0.00	0.00	0.00	
11,400.0	1.02	215.00	10,993.8	1,763.8	-1,421.9	2,265.2	0.00	0.00	0.00	
11,500.0	1.02	215.00	11,093.8	1,762.3	-1,422.9	2,264.8	0.00	0.00	0.00	
Cameo										
11,556.3	1.02	215.00	11,150.0	1,761.5	-1,423.5	2,264.5	0.00	0.00	0.00	
11,600.0	1.02	215.00	11,193.7	1,760.9	-1,423.9	2,264.3	0.00	0.00	0.00	
11,700.0	1.02	215.00	11,293.7	1,759.4	-1,424.9	2,263.8	0.00	0.00	0.00	
11,800.0	1.02	215.00	11,393.7	1,758.0	-1,426.0	2,263.4	0.00	0.00	0.00	
11,900.0	1.02	215.00	11,493.7	1,756.5	-1,427.0	2,262.9	0.00	0.00	0.00	
12,000.0	1.02	215.00	11,593.7	1,755.1	-1,428.0	2,262.4	0.00	0.00	0.00	
12,100.0	1.02	215.00	11,693.7	1,753.6	-1,429.0	2,262.0	0.00	0.00	0.00	
Rollins										
12,106.3	1.02	215.00	11,700.0	1,753.5	-1,429.1	2,261.9	0.00	0.00	0.00	
12,200.0	1.02	215.00	11,793.6	1,752.2	-1,430.0	2,261.5	0.00	0.00	0.00	
Cozette										
12,200.4	1.02	215.00	11,794.0	1,752.1	-1,430.0	2,261.5	0.00	0.00	0.00	
12,300.0	1.02	215.00	11,893.6	1,750.7	-1,431.0	2,261.0	0.00	0.00	0.00	
12,400.0	1.02	215.00	11,993.6	1,749.3	-1,432.1	2,260.6	0.00	0.00	0.00	
12,500.0	1.02	215.00	12,093.6	1,747.8	-1,433.1	2,260.1	0.00	0.00	0.00	
12,600.0	1.02	215.00	12,193.6	1,746.3	-1,434.1	2,259.7	0.00	0.00	0.00	
12,700.0	1.02	215.00	12,293.6	1,744.9	-1,435.1	2,259.2	0.00	0.00	0.00	
12,800.0	1.02	215.00	12,393.6	1,743.4	-1,436.1	2,258.7	0.00	0.00	0.00	

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 15B-22 197 - Slot 15B-22
Company:	QB Energy Operating, LLC	TVD Reference:	RKB @ 6540.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 6540.0usft (30')
Site:	PCU B27 197 Pad	North Reference:	True
Well:	RNPU B27 FED 15B-22 197	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim #3		

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)	
Corcoran										
12,800.4	1.02	215.00	12,394.0	1,743.4	-1,436.1	2,258.7	0.00	0.00	0.00	
12,900.0	1.02	215.00	12,493.5	1,742.0	-1,437.1	2,258.3	0.00	0.00	0.00	
13,000.0	1.02	215.00	12,593.5	1,740.5	-1,438.2	2,257.8	0.00	0.00	0.00	
13,100.0	1.02	215.00	12,693.5	1,739.1	-1,439.2	2,257.3	0.00	0.00	0.00	
13,200.0	1.02	215.00	12,793.5	1,737.6	-1,440.2	2,256.9	0.00	0.00	0.00	
13,300.0	1.02	215.00	12,893.5	1,736.2	-1,441.2	2,256.4	0.00	0.00	0.00	
13,400.0	1.02	215.00	12,993.5	1,734.7	-1,442.2	2,255.9	0.00	0.00	0.00	
13,500.0	1.02	215.00	13,093.4	1,733.3	-1,443.2	2,255.5	0.00	0.00	0.00	
TD @ 13600.6' MD / 13194.0' TVD										
13,600.6	1.02	215.00	13,194.0	1,731.8	-1,444.3	2,255.0	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	
15B-22 - OHCR - hit/miss target - Shape - Point	0.00	0.00	7,516.0	1,813.7	-1,386.9	14,518,068.63	2,404,657.83	39.946020	-108.273464	
15B-22 - PBHL - plan hits target center - Ellipse (radii L100.0 W50.0 on 215.00 azi)	0.00	0.00	13,194.0	1,731.8	-1,444.3	14,517,985.00	2,404,603.00	39.945795	-108.273669	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,583.7	2,499.0	Orange Marker				
2,736.7	2,642.0	Wasatch				
5,843.3	5,544.0	Wasatch G				
6,343.3	6,011.0	Fort Union				
7,921.7	7,516.0	Ohio Creek				
8,671.8	8,266.0	Williams Fork				
11,556.3	11,150.0	Cameo				
12,106.3	11,700.0	Rollins				
12,200.4	11,794.0	Cozzette				
12,800.4	12,394.0	Corcoran				

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 15B-22 197 - Slot 15B-22
Company:	QB Energy Operating, LLC	TVD Reference:	RKB @ 6540.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 6540.0usft (30')
Site:	PCU B27 197 Pad	North Reference:	True
Well:	RNPU B27 FED 15B-22 197	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim #3		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
800.0	800.0	0.0	0.0	Build 3° / 100'
966.7	966.5	1.9	-7.0	EOB @ 5.00° Inc. / 285.00° Azm : Build 3° / 100'
1,541.4	1,525.4	91.1	-93.4	EOB @ 20.91° Inc. / 323.10° Azm
7,224.7	6,834.3	1,713.2	-1,311.4	Drop 3° /100'
7,921.7	7,516.0	1,813.7	-1,386.9	EOD @ Vertical : Build 1.5° / 100'
7,989.4	7,583.7	1,813.3	-1,387.2	EOB @ 1.02° Inc. / 215.00° Azm
13,600.6	13,194.0	1,731.8	-1,444.3	TD @ 13600.6' MD / 13194.0' TVD