

Project: Rio Blanco County, CO
 Site: PCU B27 197 Pad
 Well: RNPU B27 FED 14D-22 197
 Wellbore: OH
 Design: Prelim #2
 Latitude: 39.941145
 Longitude: -108.268569
 Ground Level: 6510.0
 RKB @ 6540.0usft (30')

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2507.0	2620.7	Orange Marker
2650.0	2775.3	Wasatch
5570.0	5931.8	Wasatch G
6032.0	6431.3	Fort Union
7549.0	8031.1	Ohio Creek
8299.0	8781.2	Williams Fork
11196.0	11678.6	Cameo
11746.0	12228.7	Rollins
11828.0	12310.7	Cozzette
12428.0	12910.8	Corcoran

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well RNPU B27 FED 14D-22 197 - Slot 14D-22, True North
 Vertical (TVD) Reference: RKB @ 6540.0usft (30')
 Section (VS) Reference: Slot - 14D-22(0.0N, 0.0E)
 Measured Depth Reference: RKB @ 6540.0usft (30')
 Calculation Method: Minimum Curvature

WELL DETAILS: RNPU B27 FED 14D-22 197

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14516335.30	2406084.50	39.941145	-108.268569

PROJECT DETAILS: Rio Blanco County, CO

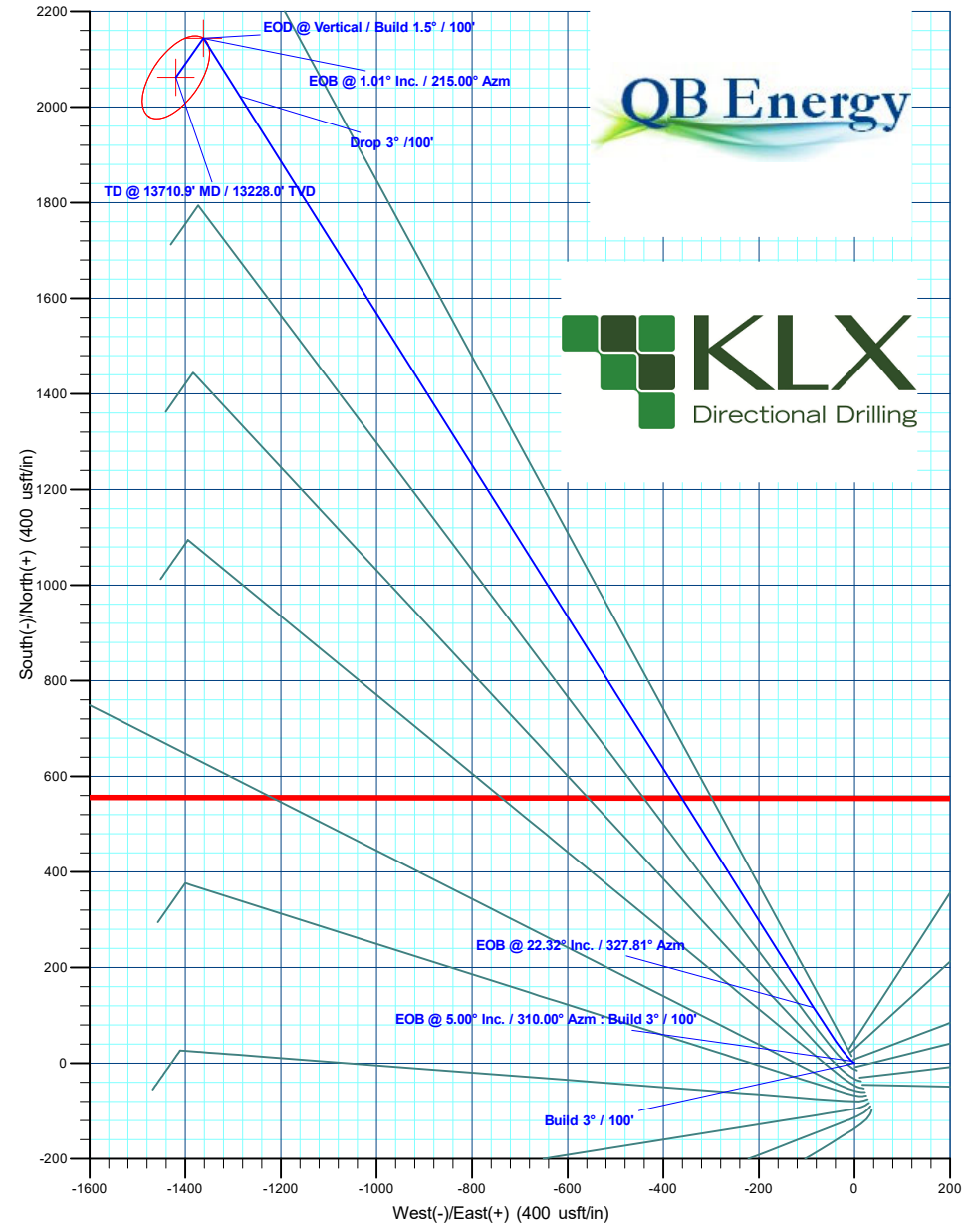
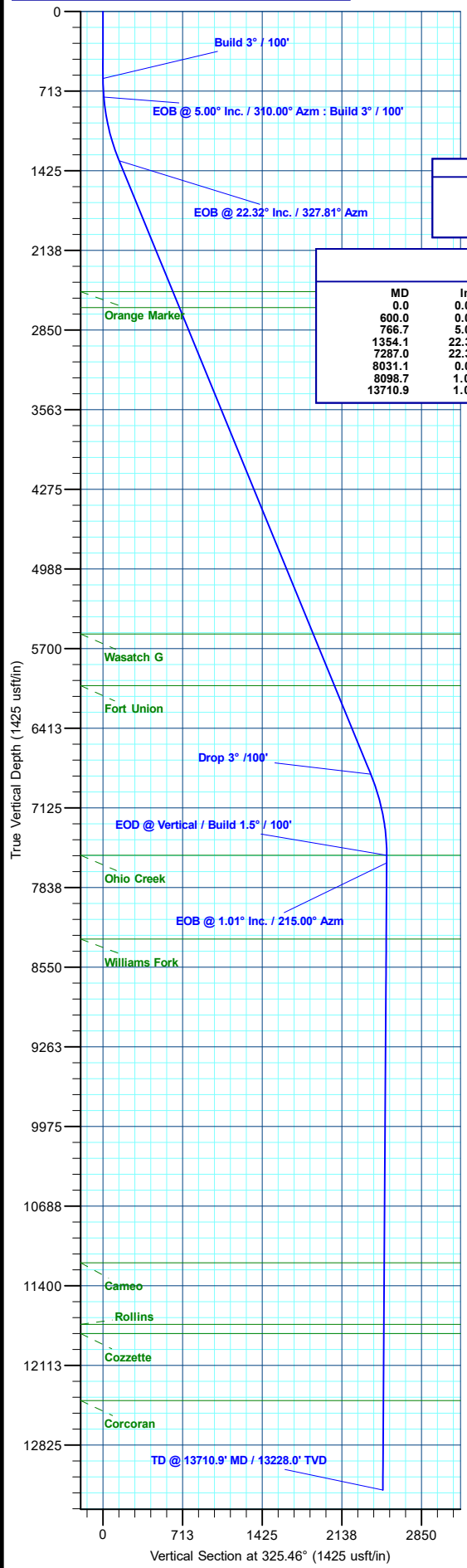
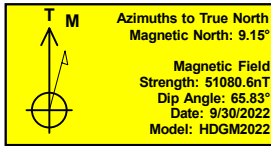
Geodetic System: Universal Transverse Mercator (US Survey Feet)
 Datum: NAD 1927 - Western US
 Ellipsoid: Clarke 1866
 Zone: Zone 12N (114 W to 108 W)
 System Datum: Mean Sea Level

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
14D-22 - OHCR	7549.0	2144.3	-1362.0	14518436.93	2404657.53	39.947030	-108.273425
14D-22 - PBHL	13228.0	2062.4	-1419.3	14518353.30	2404602.70	39.946805	-108.273629

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'
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	EOB @ 5.00° Inc. / 310.00° Azm : Build 3° / 100'
766.7	5.00	310.00	766.5	4.7	-5.6	3.00	310.00	7.0	EOB @ 22.32° Inc. / 327.81° Azm
1354.1	22.32	327.81	1335.3	116.4	-85.2	3.00	22.56	144.2	Drop 3° / 100'
7287.0	22.32	327.81	6823.7	203.2	-1285.7	0.00	0.00	2395.6	EOD @ Vertical / Build 1.5° / 100'
8031.1	0.00	0.00	7549.0	2144.3	-1362.0	3.00	180.00	2538.6	EOD @ Vertical / Build 1.5° / 100'
8098.7	1.01	215.00	7616.7	2143.8	-1362.0	1.50	215.00	2538.4	EOB @ 1.01° Inc. / 215.00° Azm
13710.9	1.01	215.00	13228.0	2062.4	-1419.3	0.00	0.00	2503.6	TD @ 13710.9' MD / 13228.0' TVD



Plan: Prelim #2 (RNPU B27 FED 14D-22 197/OH)
 Created By: Will Jircik Date: 19:10, October 03 2024



QB Energy Operating, LLC

Rio Blanco County, CO

PCU B27 197 Pad

RNPU B27 FED 14D-22 197 - Slot 14D-22

OH

Plan: Prelim #2

KLX Well Planning Report

03 October, 2024



Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 14D-22 197 - Slot 14D-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 14D-22 197	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim #2		

Project	Rio Blanco County, CO		
Map System:	Universal Transverse Mercator (US Survey Fee	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 14D-22 197 - Slot 14D-22					
Well Position	+N/-S	90.0 usft	Northing:	14,516,335.30 usft	Latitude:	39.941145
	+E/-W	-33.6 usft	Easting:	2,406,084.50 usft	Longitude:	-108.268569
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 #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	325.46

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	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
766.7	5.00	310.00	766.5	4.7	-5.6	3.00	3.00	0.00	310.00	
1,354.1	22.32	327.81	1,335.3	116.4	-85.2	3.00	2.95	3.03	22.56	
7,287.0	22.32	327.81	6,823.7	2,023.2	-1,285.7	0.00	0.00	0.00	0.00	
8,031.1	0.00	0.00	7,549.0	2,144.3	-1,362.0	3.00	-3.00	0.00	180.00	14D-22 - OHCR
8,098.7	1.01	215.00	7,616.7	2,143.8	-1,362.3	1.50	1.50	-214.31	215.00	
13,710.9	1.01	215.00	13,228.0	2,062.4	-1,419.3	0.00	0.00	0.00	0.00	14D-22 - PBHL

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 14D-22 197 - Slot 14D-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 14D-22 197	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim #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
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
Build 3° / 100'									
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	3.00	310.00	700.0	1.7	-2.0	2.5	3.00	3.00	0.00
EOB @ 5.00° Inc. / 310.00° Azm : Build 3° / 100'									
766.7	5.00	310.00	766.5	4.7	-5.6	7.0	3.00	3.00	0.00
800.0	5.94	313.71	799.6	6.8	-7.9	10.1	3.00	2.81	11.14
900.0	8.83	320.04	898.8	16.3	-16.6	22.8	3.00	2.89	6.33
1,000.0	11.77	323.24	997.2	30.3	-27.6	40.6	3.00	2.95	3.20
1,100.0	14.74	325.18	1,094.5	48.9	-41.0	63.6	3.00	2.97	1.93
1,200.0	17.72	326.47	1,190.5	72.1	-56.7	91.5	3.00	2.98	1.29
1,300.0	20.70	327.40	1,284.9	99.7	-74.6	124.4	3.00	2.98	0.93
EOB @ 22.32° Inc. / 327.81° Azm									
1,354.1	22.32	327.81	1,335.3	116.4	-85.2	144.2	3.00	2.99	0.75
1,400.0	22.32	327.81	1,377.7	131.2	-94.5	161.6	0.00	0.00	0.00
1,500.0	22.32	327.81	1,470.2	163.3	-114.8	199.6	0.00	0.00	0.00
1,600.0	22.32	327.81	1,562.7	195.4	-135.0	237.5	0.00	0.00	0.00
1,700.0	22.32	327.81	1,655.2	227.6	-155.2	275.5	0.00	0.00	0.00
1,800.0	22.32	327.81	1,747.7	259.7	-175.5	313.4	0.00	0.00	0.00
1,900.0	22.32	327.81	1,840.3	291.9	-195.7	351.4	0.00	0.00	0.00
2,000.0	22.32	327.81	1,932.8	324.0	-215.9	389.3	0.00	0.00	0.00
2,100.0	22.32	327.81	2,025.3	356.1	-236.2	427.3	0.00	0.00	0.00
2,200.0	22.32	327.81	2,117.8	388.3	-256.4	465.2	0.00	0.00	0.00
2,300.0	22.32	327.81	2,210.3	420.4	-276.6	503.2	0.00	0.00	0.00
2,400.0	22.32	327.81	2,302.8	452.6	-296.9	541.1	0.00	0.00	0.00
2,500.0	22.32	327.81	2,395.3	484.7	-317.1	579.1	0.00	0.00	0.00
2,600.0	22.32	327.81	2,487.8	516.8	-337.3	617.0	0.00	0.00	0.00
Orange Marker									
2,620.7	22.32	327.81	2,507.0	523.5	-341.5	624.9	0.00	0.00	0.00
2,700.0	22.32	327.81	2,580.3	549.0	-357.6	654.9	0.00	0.00	0.00
Wasatch									
2,775.3	22.32	327.81	2,650.0	573.2	-372.8	683.5	0.00	0.00	0.00
2,800.0	22.32	327.81	2,672.8	581.1	-377.8	692.9	0.00	0.00	0.00
2,900.0	22.32	327.81	2,765.3	613.3	-398.0	730.8	0.00	0.00	0.00
3,000.0	22.32	327.81	2,857.8	645.4	-418.3	768.8	0.00	0.00	0.00
3,100.0	22.32	327.81	2,950.3	677.5	-438.5	806.7	0.00	0.00	0.00
3,200.0	22.32	327.81	3,042.8	709.7	-458.7	844.7	0.00	0.00	0.00
3,300.0	22.32	327.81	3,135.4	741.8	-479.0	882.6	0.00	0.00	0.00
3,400.0	22.32	327.81	3,227.9	774.0	-499.2	920.6	0.00	0.00	0.00
3,500.0	22.32	327.81	3,320.4	806.1	-519.4	958.5	0.00	0.00	0.00
3,600.0	22.32	327.81	3,412.9	838.2	-539.7	996.5	0.00	0.00	0.00
3,700.0	22.32	327.81	3,505.4	870.4	-559.9	1,034.4	0.00	0.00	0.00
3,800.0	22.32	327.81	3,597.9	902.5	-580.1	1,072.4	0.00	0.00	0.00
3,900.0	22.32	327.81	3,690.4	934.7	-600.4	1,110.3	0.00	0.00	0.00
4,000.0	22.32	327.81	3,782.9	966.8	-620.6	1,148.3	0.00	0.00	0.00
4,100.0	22.32	327.81	3,875.4	998.9	-640.8	1,186.2	0.00	0.00	0.00
4,200.0	22.32	327.81	3,967.9	1,031.1	-661.1	1,224.1	0.00	0.00	0.00

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 14D-22 197 - Slot 14D-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 14D-22 197	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim #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)	
4,300.0	22.32	327.81	4,060.4	1,063.2	-681.3	1,262.1	0.00	0.00	0.00	
4,400.0	22.32	327.81	4,152.9	1,095.4	-701.5	1,300.0	0.00	0.00	0.00	
4,500.0	22.32	327.81	4,245.4	1,127.5	-721.8	1,338.0	0.00	0.00	0.00	
4,600.0	22.32	327.81	4,338.0	1,159.6	-742.0	1,375.9	0.00	0.00	0.00	
4,700.0	22.32	327.81	4,430.5	1,191.8	-762.3	1,413.9	0.00	0.00	0.00	
4,800.0	22.32	327.81	4,523.0	1,223.9	-782.5	1,451.8	0.00	0.00	0.00	
4,900.0	22.32	327.81	4,615.5	1,256.0	-802.7	1,489.8	0.00	0.00	0.00	
5,000.0	22.32	327.81	4,708.0	1,288.2	-823.0	1,527.7	0.00	0.00	0.00	
5,100.0	22.32	327.81	4,800.5	1,320.3	-843.2	1,565.7	0.00	0.00	0.00	
5,200.0	22.32	327.81	4,893.0	1,352.5	-863.4	1,603.6	0.00	0.00	0.00	
5,300.0	22.32	327.81	4,985.5	1,384.6	-883.7	1,641.6	0.00	0.00	0.00	
5,400.0	22.32	327.81	5,078.0	1,416.7	-903.9	1,679.5	0.00	0.00	0.00	
5,500.0	22.32	327.81	5,170.5	1,448.9	-924.1	1,717.5	0.00	0.00	0.00	
5,600.0	22.32	327.81	5,263.0	1,481.0	-944.4	1,755.4	0.00	0.00	0.00	
5,700.0	22.32	327.81	5,355.5	1,513.2	-964.6	1,793.4	0.00	0.00	0.00	
5,800.0	22.32	327.81	5,448.0	1,545.3	-984.8	1,831.3	0.00	0.00	0.00	
5,900.0	22.32	327.81	5,540.5	1,577.4	-1,005.1	1,869.2	0.00	0.00	0.00	
Wasatch G										
5,931.8	22.32	327.81	5,570.0	1,587.7	-1,011.5	1,881.3	0.00	0.00	0.00	
6,000.0	22.32	327.81	5,633.1	1,609.6	-1,025.3	1,907.2	0.00	0.00	0.00	
6,100.0	22.32	327.81	5,725.6	1,641.7	-1,045.5	1,945.1	0.00	0.00	0.00	
6,200.0	22.32	327.81	5,818.1	1,673.9	-1,065.8	1,983.1	0.00	0.00	0.00	
6,300.0	22.32	327.81	5,910.6	1,706.0	-1,086.0	2,021.0	0.00	0.00	0.00	
6,400.0	22.32	327.81	6,003.1	1,738.1	-1,106.2	2,059.0	0.00	0.00	0.00	
Fort Union										
6,431.3	22.32	327.81	6,032.0	1,748.2	-1,112.6	2,070.8	0.00	0.00	0.00	
6,500.0	22.32	327.81	6,095.6	1,770.3	-1,126.5	2,096.9	0.00	0.00	0.00	
6,600.0	22.32	327.81	6,188.1	1,802.4	-1,146.7	2,134.9	0.00	0.00	0.00	
6,700.0	22.32	327.81	6,280.6	1,834.6	-1,166.9	2,172.8	0.00	0.00	0.00	
6,800.0	22.32	327.81	6,373.1	1,866.7	-1,187.2	2,210.8	0.00	0.00	0.00	
6,900.0	22.32	327.81	6,465.6	1,898.8	-1,207.4	2,248.7	0.00	0.00	0.00	
7,000.0	22.32	327.81	6,558.1	1,931.0	-1,227.6	2,286.7	0.00	0.00	0.00	
7,100.0	22.32	327.81	6,650.6	1,963.1	-1,247.9	2,324.6	0.00	0.00	0.00	
7,200.0	22.32	327.81	6,743.1	1,995.3	-1,268.1	2,362.6	0.00	0.00	0.00	
Drop 3° /100'										
7,287.0	22.32	327.81	6,823.7	2,023.2	-1,285.7	2,395.6	0.00	0.00	0.00	
7,300.0	21.93	327.81	6,835.7	2,027.4	-1,288.3	2,400.5	3.00	-3.00	0.00	
7,400.0	18.93	327.81	6,929.4	2,056.9	-1,306.9	2,435.3	3.00	-3.00	0.00	
7,500.0	15.93	327.81	7,024.8	2,082.3	-1,322.9	2,465.3	3.00	-3.00	0.00	
7,600.0	12.93	327.81	7,121.6	2,103.3	-1,336.2	2,490.2	3.00	-3.00	0.00	
7,700.0	9.93	327.81	7,219.6	2,120.1	-1,346.7	2,510.0	3.00	-3.00	0.00	
7,800.0	6.93	327.81	7,318.5	2,132.5	-1,354.5	2,524.6	3.00	-3.00	0.00	
7,900.0	3.93	327.81	7,418.0	2,140.5	-1,359.6	2,534.1	3.00	-3.00	0.00	
8,000.0	0.93	327.81	7,517.9	2,144.1	-1,361.8	2,538.3	3.00	-3.00	0.00	
EOD @ Vertical / Build 1.5° / 100' - Ohio Creek										
8,031.1	0.00	0.00	7,549.0	2,144.3	-1,362.0	2,538.6	3.00	-3.00	0.00	
EOB @ 1.01° Inc. / 215.00° Azm										
8,098.7	1.01	215.00	7,616.7	2,143.8	-1,362.3	2,538.4	1.50	1.50	0.00	
8,100.0	1.01	215.00	7,617.9	2,143.8	-1,362.3	2,538.3	0.00	0.00	0.00	
8,200.0	1.01	215.00	7,717.9	2,142.4	-1,363.3	2,537.7	0.00	0.00	0.00	
8,300.0	1.01	215.00	7,817.9	2,140.9	-1,364.3	2,537.1	0.00	0.00	0.00	
8,400.0	1.01	215.00	7,917.9	2,139.5	-1,365.4	2,536.5	0.00	0.00	0.00	

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 14D-22 197 - Slot 14D-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 14D-22 197	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim #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	1.01	215.00	8,017.9	2,138.0	-1,366.4	2,535.9	0.00	0.00	0.00
8,600.0	1.01	215.00	8,117.9	2,136.6	-1,367.4	2,535.3	0.00	0.00	0.00
8,700.0	1.01	215.00	8,217.8	2,135.1	-1,368.4	2,534.6	0.00	0.00	0.00
Williams Fork									
8,781.2	1.01	215.00	8,299.0	2,133.9	-1,369.2	2,534.1	0.00	0.00	0.00
8,800.0	1.01	215.00	8,317.8	2,133.7	-1,369.4	2,534.0	0.00	0.00	0.00
8,900.0	1.01	215.00	8,417.8	2,132.2	-1,370.4	2,533.4	0.00	0.00	0.00
9,000.0	1.01	215.00	8,517.8	2,130.8	-1,371.5	2,532.8	0.00	0.00	0.00
9,100.0	1.01	215.00	8,617.8	2,129.3	-1,372.5	2,532.2	0.00	0.00	0.00
9,200.0	1.01	215.00	8,717.8	2,127.9	-1,373.5	2,531.5	0.00	0.00	0.00
9,300.0	1.01	215.00	8,817.8	2,126.4	-1,374.5	2,530.9	0.00	0.00	0.00
9,400.0	1.01	215.00	8,917.7	2,125.0	-1,375.5	2,530.3	0.00	0.00	0.00
9,500.0	1.01	215.00	9,017.7	2,123.5	-1,376.5	2,529.7	0.00	0.00	0.00
9,600.0	1.01	215.00	9,117.7	2,122.1	-1,377.6	2,529.1	0.00	0.00	0.00
9,700.0	1.01	215.00	9,217.7	2,120.6	-1,378.6	2,528.4	0.00	0.00	0.00
9,800.0	1.01	215.00	9,317.7	2,119.2	-1,379.6	2,527.8	0.00	0.00	0.00
9,900.0	1.01	215.00	9,417.7	2,117.7	-1,380.6	2,527.2	0.00	0.00	0.00
10,000.0	1.01	215.00	9,517.6	2,116.3	-1,381.6	2,526.6	0.00	0.00	0.00
10,100.0	1.01	215.00	9,617.6	2,114.8	-1,382.6	2,526.0	0.00	0.00	0.00
10,200.0	1.01	215.00	9,717.6	2,113.4	-1,383.7	2,525.3	0.00	0.00	0.00
10,300.0	1.01	215.00	9,817.6	2,111.9	-1,384.7	2,524.7	0.00	0.00	0.00
10,400.0	1.01	215.00	9,917.6	2,110.5	-1,385.7	2,524.1	0.00	0.00	0.00
10,500.0	1.01	215.00	10,017.6	2,109.0	-1,386.7	2,523.5	0.00	0.00	0.00
10,600.0	1.01	215.00	10,117.6	2,107.6	-1,387.7	2,522.9	0.00	0.00	0.00
10,700.0	1.01	215.00	10,217.5	2,106.1	-1,388.7	2,522.3	0.00	0.00	0.00
10,800.0	1.01	215.00	10,317.5	2,104.7	-1,389.7	2,521.6	0.00	0.00	0.00
10,900.0	1.01	215.00	10,417.5	2,103.2	-1,390.8	2,521.0	0.00	0.00	0.00
11,000.0	1.01	215.00	10,517.5	2,101.8	-1,391.8	2,520.4	0.00	0.00	0.00
11,100.0	1.01	215.00	10,617.5	2,100.3	-1,392.8	2,519.8	0.00	0.00	0.00
11,200.0	1.01	215.00	10,717.5	2,098.8	-1,393.8	2,519.2	0.00	0.00	0.00
11,300.0	1.01	215.00	10,817.4	2,097.4	-1,394.8	2,518.5	0.00	0.00	0.00
11,400.0	1.01	215.00	10,917.4	2,095.9	-1,395.8	2,517.9	0.00	0.00	0.00
11,500.0	1.01	215.00	11,017.4	2,094.5	-1,396.9	2,517.3	0.00	0.00	0.00
11,600.0	1.01	215.00	11,117.4	2,093.0	-1,397.9	2,516.7	0.00	0.00	0.00
Cameo									
11,678.6	1.01	215.00	11,196.0	2,091.9	-1,398.7	2,516.2	0.00	0.00	0.00
11,700.0	1.01	215.00	11,217.4	2,091.6	-1,398.9	2,516.1	0.00	0.00	0.00
11,800.0	1.01	215.00	11,317.4	2,090.1	-1,399.9	2,515.4	0.00	0.00	0.00
11,900.0	1.01	215.00	11,417.3	2,088.7	-1,400.9	2,514.8	0.00	0.00	0.00
12,000.0	1.01	215.00	11,517.3	2,087.2	-1,401.9	2,514.2	0.00	0.00	0.00
12,100.0	1.01	215.00	11,617.3	2,085.8	-1,403.0	2,513.6	0.00	0.00	0.00
12,200.0	1.01	215.00	11,717.3	2,084.3	-1,404.0	2,513.0	0.00	0.00	0.00
Rollins									
12,228.7	1.01	215.00	11,746.0	2,083.9	-1,404.3	2,512.8	0.00	0.00	0.00
12,300.0	1.01	215.00	11,817.3	2,082.9	-1,405.0	2,512.3	0.00	0.00	0.00
Cozzette									
12,310.7	1.01	215.00	11,828.0	2,082.7	-1,405.1	2,512.3	0.00	0.00	0.00
12,400.0	1.01	215.00	11,917.3	2,081.4	-1,406.0	2,511.7	0.00	0.00	0.00
12,500.0	1.01	215.00	12,017.3	2,080.0	-1,407.0	2,511.1	0.00	0.00	0.00
12,600.0	1.01	215.00	12,117.2	2,078.5	-1,408.0	2,510.5	0.00	0.00	0.00
12,700.0	1.01	215.00	12,217.2	2,077.1	-1,409.0	2,509.9	0.00	0.00	0.00
12,800.0	1.01	215.00	12,317.2	2,075.6	-1,410.1	2,509.2	0.00	0.00	0.00

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 14D-22 197 - Slot 14D-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 14D-22 197	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim #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)	
12,900.0	1.01	215.00	12,417.2	2,074.2	-1,411.1	2,508.6	0.00	0.00	0.00	
Corcoran										
12,910.8	1.01	215.00	12,428.0	2,074.0	-1,411.2	2,508.6	0.00	0.00	0.00	
13,000.0	1.01	215.00	12,517.2	2,072.7	-1,412.1	2,508.0	0.00	0.00	0.00	
13,100.0	1.01	215.00	12,617.2	2,071.3	-1,413.1	2,507.4	0.00	0.00	0.00	
13,200.0	1.01	215.00	12,717.1	2,069.8	-1,414.1	2,506.8	0.00	0.00	0.00	
13,300.0	1.01	215.00	12,817.1	2,068.4	-1,415.1	2,506.2	0.00	0.00	0.00	
13,400.0	1.01	215.00	12,917.1	2,066.9	-1,416.2	2,505.5	0.00	0.00	0.00	
13,500.0	1.01	215.00	13,017.1	2,065.5	-1,417.2	2,504.9	0.00	0.00	0.00	
13,600.0	1.01	215.00	13,117.1	2,064.0	-1,418.2	2,504.3	0.00	0.00	0.00	
13,700.0	1.01	215.00	13,217.1	2,062.6	-1,419.2	2,503.7	0.00	0.00	0.00	
TD @ 13710.9' MD / 13228.0' TVD										
13,710.9	1.01	215.00	13,228.0	2,062.4	-1,419.3	2,503.6	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	
14D-22 - OHCR - hit/miss target - Shape - Point	0.00	0.00	7,549.0	2,144.3	-1,362.0	14,518,436.93	2,404,657.53	39.947030	-108.273425	
14D-22 - PBHL - plan hits target center - Ellipse (radii L100.0 W50.0 on 215.00 azi)	0.00	0.00	13,228.0	2,062.4	-1,419.3	14,518,353.30	2,404,602.70	39.946806	-108.273630	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,620.7	2,507.0	Orange Marker				
2,775.3	2,650.0	Wasatch				
5,931.8	5,570.0	Wasatch G				
6,431.3	6,032.0	Fort Union				
8,031.1	7,549.0	Ohio Creek				
8,781.2	8,299.0	Williams Fork				
11,678.6	11,196.0	Cameo				
12,228.7	11,746.0	Rollins				
12,310.7	11,828.0	Cozzette				
12,910.8	12,428.0	Corcoran				

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 14D-22 197 - Slot 14D-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 14D-22 197	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim #2		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
600.0	600.0	0.0	0.0	Build 3° / 100'
766.7	766.5	4.7	-5.6	EOB @ 5.00° Inc. / 310.00° Azm : Build 3° / 100'
1,354.1	1,335.3	116.4	-85.2	EOB @ 22.32° Inc. / 327.81° Azm
7,287.0	6,823.7	2,023.2	-1,285.7	Drop 3° /100'
8,031.1	7,549.0	2,144.3	-1,362.0	EOD @ Vertical / Build 1.5° / 100'
8,098.7	7,616.7	2,143.8	-1,362.3	EOB @ 1.01° Inc. / 215.00° Azm
13,710.9	13,228.0	2,062.4	-1,419.3	TD @ 13710.9' MD / 13228.0' TVD