

Project: Rio Blanco County, CO
 Site: PCU B27 197 Pad
 Well: RNPU B27 FED 25A-22 197
 Wellbore: OH
 Design: Prelim #2
 Latitude: 39.941228
 Longitude: -108.268609
 Ground Level: 6510.0
 RKB @ 6540.0usft (30')

FORMATION TOP DETAILS			
TVDPATH	MDPATH	FORMATION	
2484.0	2596.5	Orange Marker	
2631.0	2752.4	Wasatch	
5595.0	5896.4	Wasatch G	
6078.0	6408.7	Fort Union	
7606.0	8003.3	Ohio Creek	
8356.0	8753.4	Williams Fork	
11321.0	11718.8	Cameo	
11871.0	12268.9	Rollins	
11946.0	12343.9	Cozzette	
12546.0	12944.0	Corcoran	

REFERENCE INFORMATION	
Co-ordinate (N/E) Reference:	Well RNPU B27 FED 25A-22 197 - Slot 25A-22, True North
Vertical (TVD) Reference:	RKB @ 6540.0usft (30')
Section (VS) Reference:	Slot - 25A-22(0.0N, 0.0E)
Measured Depth Reference:	RKB @ 6540.0usft (30')
Calculation Method:	Minimum Curvature

WELL DETAILS: RNPU B27 FED 25A-22 197					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14516364.90	2406072.40	39.941228	-108.268609
		6510.0		25A-22	

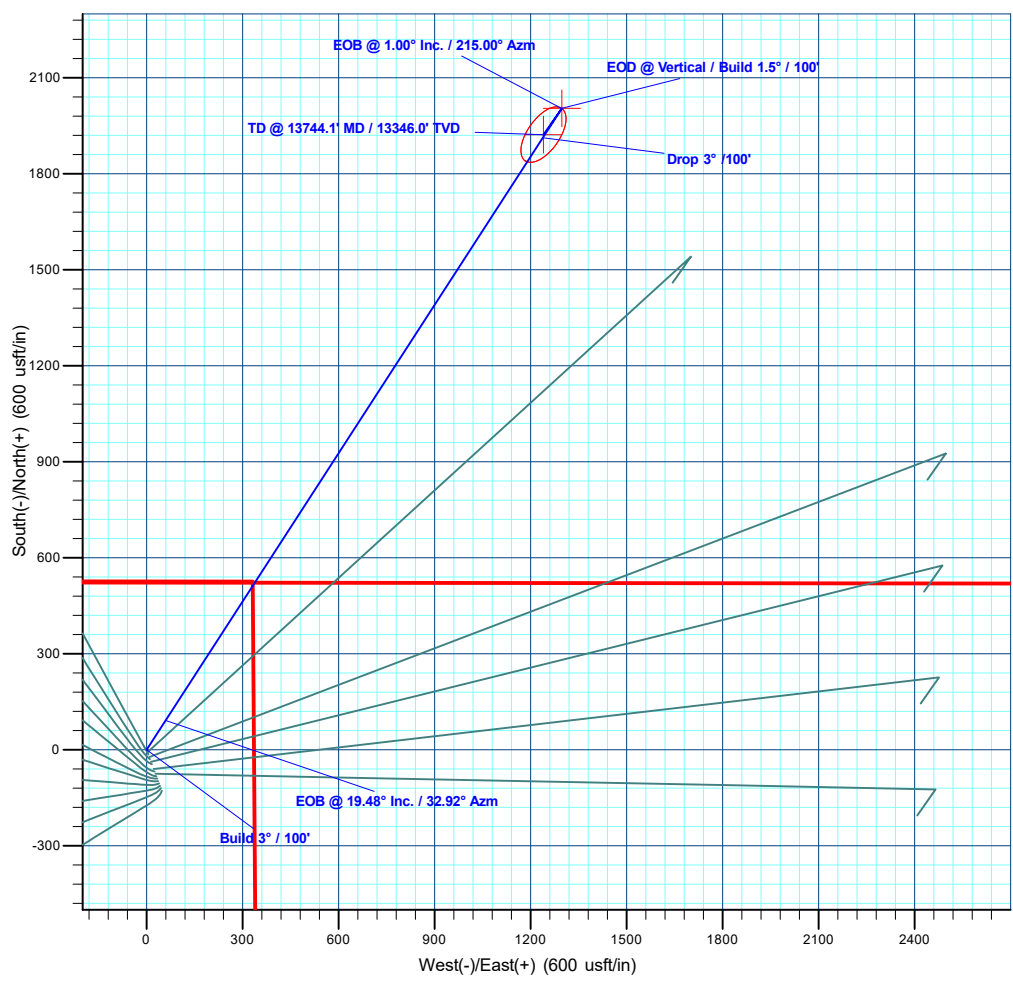
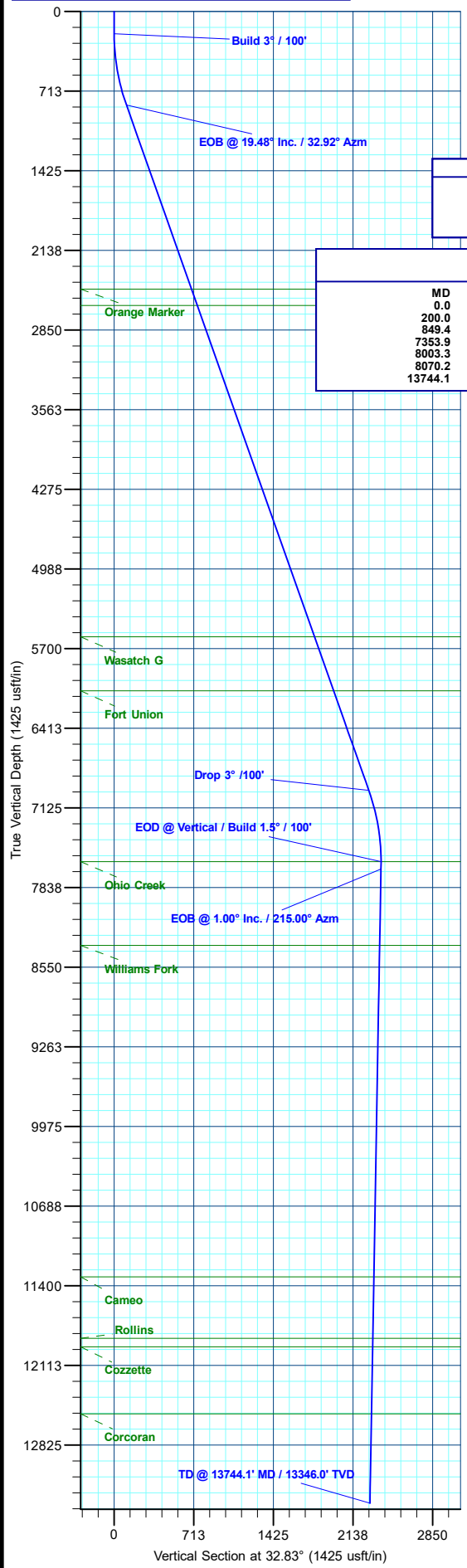
PROJECT DETAILS: Rio Blanco County, CO	
Geodetic System:	Universal Transverse Mercator (US Survey Feet)
Datum:	NAD 1927 - Western US
Ellipsoid:	Clarke 1866
Zone:	Zone 12N (114 W to 108 W)
System Datum:	Mean Sea Level

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
25A-22 - OHCR	7606.0	2004.5	1297.7	14518408.23	2407308.13	39.946729	-108.263982
25A-22 - PBHL	13346.0	1922.6	1240.3	14518324.60	2407253.30	39.946504	-108.264186

SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	EOB @ 19.48° Inc. / 32.92° Azm	
849.4	19.48	32.92	836.9	91.8	59.4	3.00	32.92	109.3	Drop 3° / 100'	
7353.9	19.48	32.92	6969.1	1912.8	1238.3	0.00	0.00	2278.6	EOD @ Vertical / 100'	
8003.3	0.00	0.00	7606.0	2004.5	1297.7	3.00	180.00	2387.9	Drop 3° / 100'	
8070.2	1.00	215.00	7672.9	2004.1	1297.4	1.50	215.00	2387.3	EOB @ 1.00° Inc. / 215.00° Azm	
13744.1	1.00	215.00	13346.0	1922.6	1240.3	0.00	0.00	2288.0	TD @ 13744.1' MD / 13346.0' TVD	



Plan: Prelim #2 (RNPU B27 FED 25A-22 197/OH)
 Created By: Will Jircik Date: 19:32, October 03 2024



QB Energy Operating, LLC

Rio Blanco County, CO

PCU B27 197 Pad

RNPU B27 FED 25A-22 197 - Slot 25A-22

OH

Plan: Prelim #2

KLX Well Planning Report

03 October, 2024



Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 25A-22 197 - Slot 25A-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 25A-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 25A-22 197 - Slot 25A-22					
Well Position	+N/-S	119.9 usft	Northing:	14,516,364.90 usft	Latitude:	39.941228
	+E/-W	-44.8 usft	Easting:	2,406,072.40 usft	Longitude:	-108.268609
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	32.83

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		
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00		
849.4	19.48	32.92	836.9	91.8	59.4	3.00	3.00	0.00	32.92		
7,353.9	19.48	32.92	6,969.1	1,912.8	1,238.3	0.00	0.00	0.00	0.00		
8,003.3	0.00	0.00	7,606.0	2,004.5	1,297.7	3.00	-3.00	0.00	180.00	25A-22 - OHCR	
8,070.2	1.00	215.00	7,672.9	2,004.1	1,297.4	1.50	1.50	-216.64	215.00		
13,744.1	1.00	215.00	13,346.0	1,922.6	1,240.3	0.00	0.00	0.00	0.00	25A-22 - PBHL	

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 25A-22 197 - Slot 25A-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 25A-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
Build 3° / 100'									
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	3.00	32.92	300.0	2.2	1.4	2.6	3.00	3.00	0.00
400.0	6.00	32.92	399.6	8.8	5.7	10.5	3.00	3.00	0.00
500.0	9.00	32.92	498.8	19.7	12.8	23.5	3.00	3.00	0.00
600.0	12.00	32.92	597.1	35.0	22.7	41.7	3.00	3.00	0.00
700.0	15.00	32.92	694.3	54.6	35.4	65.1	3.00	3.00	0.00
800.0	18.00	32.92	790.2	78.5	50.8	93.5	3.00	3.00	0.00
EOB @ 19.48° Inc. / 32.92° Azm									
849.4	19.48	32.92	836.9	91.8	59.4	109.3	3.00	3.00	0.00
900.0	19.48	32.92	884.7	106.0	68.6	126.2	0.00	0.00	0.00
1,000.0	19.48	32.92	978.9	134.0	86.7	159.6	0.00	0.00	0.00
1,100.0	19.48	32.92	1,073.2	161.9	104.8	192.9	0.00	0.00	0.00
1,200.0	19.48	32.92	1,167.5	189.9	123.0	226.3	0.00	0.00	0.00
1,300.0	19.48	32.92	1,261.8	217.9	141.1	259.6	0.00	0.00	0.00
1,400.0	19.48	32.92	1,356.0	245.9	159.2	293.0	0.00	0.00	0.00
1,500.0	19.48	32.92	1,450.3	273.9	177.3	326.3	0.00	0.00	0.00
1,600.0	19.48	32.92	1,544.6	301.9	195.5	359.7	0.00	0.00	0.00
1,700.0	19.48	32.92	1,638.9	329.9	213.6	393.0	0.00	0.00	0.00
1,800.0	19.48	32.92	1,733.1	357.9	231.7	426.4	0.00	0.00	0.00
1,900.0	19.48	32.92	1,827.4	385.9	249.8	459.7	0.00	0.00	0.00
2,000.0	19.48	32.92	1,921.7	413.9	268.0	493.1	0.00	0.00	0.00
2,100.0	19.48	32.92	2,016.0	441.9	286.1	526.4	0.00	0.00	0.00
2,200.0	19.48	32.92	2,110.2	469.9	304.2	559.8	0.00	0.00	0.00
2,300.0	19.48	32.92	2,204.5	497.9	322.3	593.1	0.00	0.00	0.00
2,400.0	19.48	32.92	2,298.8	525.9	340.5	626.5	0.00	0.00	0.00
2,500.0	19.48	32.92	2,393.1	553.9	358.6	659.8	0.00	0.00	0.00
ORANGE_MARKER									
2,596.5	19.48	32.92	2,484.0	580.9	376.1	692.0	0.00	0.00	0.00
2,600.0	19.48	32.92	2,487.3	581.9	376.7	693.2	0.00	0.00	0.00
2,700.0	19.48	32.92	2,581.6	609.9	394.8	726.5	0.00	0.00	0.00
WASATCH									
2,752.4	19.48	32.92	2,631.0	624.5	404.3	744.0	0.00	0.00	0.00
2,800.0	19.48	32.92	2,675.9	637.9	412.9	759.9	0.00	0.00	0.00
2,900.0	19.48	32.92	2,770.2	665.9	431.1	793.2	0.00	0.00	0.00
3,000.0	19.48	32.92	2,864.4	693.9	449.2	826.6	0.00	0.00	0.00
3,100.0	19.48	32.92	2,958.7	721.9	467.3	859.9	0.00	0.00	0.00
3,200.0	19.48	32.92	3,053.0	749.9	485.4	893.3	0.00	0.00	0.00
3,300.0	19.48	32.92	3,147.3	777.8	503.6	926.6	0.00	0.00	0.00
3,400.0	19.48	32.92	3,241.5	805.8	521.7	960.0	0.00	0.00	0.00
3,500.0	19.48	32.92	3,335.8	833.8	539.8	993.3	0.00	0.00	0.00
3,600.0	19.48	32.92	3,430.1	861.8	557.9	1,026.7	0.00	0.00	0.00
3,700.0	19.48	32.92	3,524.4	889.8	576.1	1,060.0	0.00	0.00	0.00
3,800.0	19.48	32.92	3,618.6	917.8	594.2	1,093.4	0.00	0.00	0.00
3,900.0	19.48	32.92	3,712.9	945.8	612.3	1,126.7	0.00	0.00	0.00
4,000.0	19.48	32.92	3,807.2	973.8	630.4	1,160.1	0.00	0.00	0.00
4,100.0	19.48	32.92	3,901.5	1,001.8	648.6	1,193.4	0.00	0.00	0.00
4,200.0	19.48	32.92	3,995.7	1,029.8	666.7	1,226.8	0.00	0.00	0.00
4,300.0	19.48	32.92	4,090.0	1,057.8	684.8	1,260.1	0.00	0.00	0.00
4,400.0	19.48	32.92	4,184.3	1,085.8	702.9	1,293.5	0.00	0.00	0.00
4,500.0	19.48	32.92	4,278.6	1,113.8	721.1	1,326.8	0.00	0.00	0.00

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 25A-22 197 - Slot 25A-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 25A-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)
4,600.0	19.48	32.92	4,372.8	1,141.8	739.2	1,360.2	0.00	0.00	0.00
4,700.0	19.48	32.92	4,467.1	1,169.8	757.3	1,393.5	0.00	0.00	0.00
4,800.0	19.48	32.92	4,561.4	1,197.8	775.4	1,426.9	0.00	0.00	0.00
4,900.0	19.48	32.92	4,655.7	1,225.8	793.5	1,460.2	0.00	0.00	0.00
5,000.0	19.48	32.92	4,749.9	1,253.8	811.7	1,493.6	0.00	0.00	0.00
5,100.0	19.48	32.92	4,844.2	1,281.8	829.8	1,526.9	0.00	0.00	0.00
5,200.0	19.48	32.92	4,938.5	1,309.8	847.9	1,560.3	0.00	0.00	0.00
5,300.0	19.48	32.92	5,032.8	1,337.8	866.0	1,593.6	0.00	0.00	0.00
5,400.0	19.48	32.92	5,127.0	1,365.8	884.2	1,627.0	0.00	0.00	0.00
5,500.0	19.48	32.92	5,221.3	1,393.7	902.3	1,660.3	0.00	0.00	0.00
5,600.0	19.48	32.92	5,315.6	1,421.7	920.4	1,693.7	0.00	0.00	0.00
5,700.0	19.48	32.92	5,409.9	1,449.7	938.5	1,727.0	0.00	0.00	0.00
5,800.0	19.48	32.92	5,504.1	1,477.7	956.7	1,760.4	0.00	0.00	0.00
WASATCH_G_ZONE									
5,896.4	19.48	32.92	5,595.0	1,504.7	974.1	1,792.5	0.00	0.00	0.00
5,900.0	19.48	32.92	5,598.4	1,505.7	974.8	1,793.7	0.00	0.00	0.00
6,000.0	19.48	32.92	5,692.7	1,533.7	992.9	1,827.1	0.00	0.00	0.00
6,100.0	19.48	32.92	5,787.0	1,561.7	1,011.0	1,860.4	0.00	0.00	0.00
6,200.0	19.48	32.92	5,881.2	1,589.7	1,029.2	1,893.8	0.00	0.00	0.00
6,300.0	19.48	32.92	5,975.5	1,617.7	1,047.3	1,927.1	0.00	0.00	0.00
6,400.0	19.48	32.92	6,069.8	1,645.7	1,065.4	1,960.5	0.00	0.00	0.00
FORT_UNION									
6,408.7	19.48	32.92	6,078.0	1,648.1	1,067.0	1,963.4	0.00	0.00	0.00
6,500.0	19.48	32.92	6,164.1	1,673.7	1,083.5	1,993.8	0.00	0.00	0.00
6,600.0	19.48	32.92	6,258.3	1,701.7	1,101.7	2,027.2	0.00	0.00	0.00
6,700.0	19.48	32.92	6,352.6	1,729.7	1,119.8	2,060.5	0.00	0.00	0.00
6,800.0	19.48	32.92	6,446.9	1,757.7	1,137.9	2,093.9	0.00	0.00	0.00
6,900.0	19.48	32.92	6,541.2	1,785.7	1,156.0	2,127.2	0.00	0.00	0.00
7,000.0	19.48	32.92	6,635.4	1,813.7	1,174.2	2,160.6	0.00	0.00	0.00
7,100.0	19.48	32.92	6,729.7	1,841.7	1,192.3	2,193.9	0.00	0.00	0.00
7,200.0	19.48	32.92	6,824.0	1,869.7	1,210.4	2,227.3	0.00	0.00	0.00
7,300.0	19.48	32.92	6,918.3	1,897.7	1,228.5	2,260.6	0.00	0.00	0.00
Drop 3° /100'									
7,353.9	19.48	32.92	6,969.1	1,912.8	1,238.3	2,278.6	0.00	0.00	0.00
7,400.0	18.10	32.92	7,012.7	1,925.2	1,246.4	2,293.4	3.00	-3.00	0.00
7,500.0	15.10	32.92	7,108.5	1,949.2	1,261.9	2,322.0	3.00	-3.00	0.00
7,600.0	12.10	32.92	7,205.7	1,968.9	1,274.7	2,345.5	3.00	-3.00	0.00
7,700.0	9.10	32.92	7,304.0	1,984.4	1,284.7	2,363.9	3.00	-3.00	0.00
7,800.0	6.10	32.92	7,403.1	1,995.5	1,291.8	2,377.1	3.00	-3.00	0.00
7,900.0	3.10	32.92	7,502.8	2,002.2	1,296.2	2,385.1	3.00	-3.00	0.00
EOD @ Vertical / Build 1.5° / 100' - OHIO_CREEK									
8,003.3	0.00	0.00	7,606.0	2,004.5	1,297.7	2,387.9	3.00	-3.00	0.00
EOB @ 1.00° Inc. / 215.00° Azm									
8,070.2	1.00	215.00	7,672.9	2,004.1	1,297.4	2,387.3	1.50	1.50	0.00
8,100.0	1.00	215.00	7,702.7	2,003.6	1,297.1	2,386.8	0.00	0.00	0.00
8,200.0	1.00	215.00	7,802.7	2,002.2	1,296.1	2,385.1	0.00	0.00	0.00
8,300.0	1.00	215.00	7,902.7	2,000.8	1,295.1	2,383.3	0.00	0.00	0.00
8,400.0	1.00	215.00	8,002.7	1,999.3	1,294.1	2,381.6	0.00	0.00	0.00
8,500.0	1.00	215.00	8,102.7	1,997.9	1,293.1	2,379.8	0.00	0.00	0.00
8,600.0	1.00	215.00	8,202.7	1,996.5	1,292.0	2,378.1	0.00	0.00	0.00
8,700.0	1.00	215.00	8,302.6	1,995.0	1,291.0	2,376.3	0.00	0.00	0.00
WILLIAMS_FORK									

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 25A-22 197 - Slot 25A-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 25A-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)	
8,753.4	1.00	215.00	8,356.0	1,994.3	1,290.5	2,375.4	0.00	0.00	0.00	
8,800.0	1.00	215.00	8,402.6	1,993.6	1,290.0	2,374.6	0.00	0.00	0.00	
8,900.0	1.00	215.00	8,502.6	1,992.1	1,289.0	2,372.8	0.00	0.00	0.00	
9,000.0	1.00	215.00	8,602.6	1,990.7	1,288.0	2,371.1	0.00	0.00	0.00	
9,100.0	1.00	215.00	8,702.6	1,989.3	1,287.0	2,369.3	0.00	0.00	0.00	
9,200.0	1.00	215.00	8,802.6	1,987.8	1,286.0	2,367.6	0.00	0.00	0.00	
9,300.0	1.00	215.00	8,902.5	1,986.4	1,285.0	2,365.8	0.00	0.00	0.00	
9,400.0	1.00	215.00	9,002.5	1,985.0	1,284.0	2,364.1	0.00	0.00	0.00	
9,500.0	1.00	215.00	9,102.5	1,983.5	1,283.0	2,362.3	0.00	0.00	0.00	
9,600.0	1.00	215.00	9,202.5	1,982.1	1,282.0	2,360.6	0.00	0.00	0.00	
9,700.0	1.00	215.00	9,302.5	1,980.7	1,281.0	2,358.8	0.00	0.00	0.00	
9,800.0	1.00	215.00	9,402.5	1,979.2	1,280.0	2,357.1	0.00	0.00	0.00	
9,900.0	1.00	215.00	9,502.5	1,977.8	1,279.0	2,355.3	0.00	0.00	0.00	
10,000.0	1.00	215.00	9,602.4	1,976.4	1,278.0	2,353.6	0.00	0.00	0.00	
10,100.0	1.00	215.00	9,702.4	1,974.9	1,277.0	2,351.8	0.00	0.00	0.00	
10,200.0	1.00	215.00	9,802.4	1,973.5	1,276.0	2,350.1	0.00	0.00	0.00	
10,300.0	1.00	215.00	9,902.4	1,972.1	1,275.0	2,348.3	0.00	0.00	0.00	
10,400.0	1.00	215.00	10,002.4	1,970.6	1,274.0	2,346.6	0.00	0.00	0.00	
10,500.0	1.00	215.00	10,102.4	1,969.2	1,273.0	2,344.8	0.00	0.00	0.00	
10,600.0	1.00	215.00	10,202.3	1,967.8	1,271.9	2,343.1	0.00	0.00	0.00	
10,700.0	1.00	215.00	10,302.3	1,966.3	1,270.9	2,341.3	0.00	0.00	0.00	
10,800.0	1.00	215.00	10,402.3	1,964.9	1,269.9	2,339.5	0.00	0.00	0.00	
10,900.0	1.00	215.00	10,502.3	1,963.4	1,268.9	2,337.8	0.00	0.00	0.00	
11,000.0	1.00	215.00	10,602.3	1,962.0	1,267.9	2,336.0	0.00	0.00	0.00	
11,100.0	1.00	215.00	10,702.3	1,960.6	1,266.9	2,334.3	0.00	0.00	0.00	
11,200.0	1.00	215.00	10,802.3	1,959.1	1,265.9	2,332.5	0.00	0.00	0.00	
11,300.0	1.00	215.00	10,902.2	1,957.7	1,264.9	2,330.8	0.00	0.00	0.00	
11,400.0	1.00	215.00	11,002.2	1,956.3	1,263.9	2,329.0	0.00	0.00	0.00	
11,500.0	1.00	215.00	11,102.2	1,954.8	1,262.9	2,327.3	0.00	0.00	0.00	
11,600.0	1.00	215.00	11,202.2	1,953.4	1,261.9	2,325.5	0.00	0.00	0.00	
11,700.0	1.00	215.00	11,302.2	1,952.0	1,260.9	2,323.8	0.00	0.00	0.00	
CAMEO										
11,718.8	1.00	215.00	11,321.0	1,951.7	1,260.7	2,323.5	0.00	0.00	0.00	
11,800.0	1.00	215.00	11,402.2	1,950.5	1,259.9	2,322.0	0.00	0.00	0.00	
11,900.0	1.00	215.00	11,502.1	1,949.1	1,258.9	2,320.3	0.00	0.00	0.00	
12,000.0	1.00	215.00	11,602.1	1,947.7	1,257.9	2,318.5	0.00	0.00	0.00	
12,100.0	1.00	215.00	11,702.1	1,946.2	1,256.9	2,316.8	0.00	0.00	0.00	
12,200.0	1.00	215.00	11,802.1	1,944.8	1,255.9	2,315.0	0.00	0.00	0.00	
ROLLINS										
12,268.9	1.00	215.00	11,871.0	1,943.8	1,255.2	2,313.8	0.00	0.00	0.00	
12,300.0	1.00	215.00	11,902.1	1,943.4	1,254.9	2,313.3	0.00	0.00	0.00	
COZZETTE										
12,343.9	1.00	215.00	11,946.0	1,942.7	1,254.4	2,312.5	0.00	0.00	0.00	
12,400.0	1.00	215.00	12,002.1	1,941.9	1,253.9	2,311.5	0.00	0.00	0.00	
12,500.0	1.00	215.00	12,102.1	1,940.5	1,252.8	2,309.8	0.00	0.00	0.00	
12,600.0	1.00	215.00	12,202.0	1,939.0	1,251.8	2,308.0	0.00	0.00	0.00	
12,700.0	1.00	215.00	12,302.0	1,937.6	1,250.8	2,306.3	0.00	0.00	0.00	
12,800.0	1.00	215.00	12,402.0	1,936.2	1,249.8	2,304.5	0.00	0.00	0.00	
12,900.0	1.00	215.00	12,502.0	1,934.7	1,248.8	2,302.8	0.00	0.00	0.00	
Corcoran										
12,944.0	1.00	215.00	12,546.0	1,934.1	1,248.4	2,302.0	0.00	0.00	0.00	
13,000.0	1.00	215.00	12,602.0	1,933.3	1,247.8	2,301.0	0.00	0.00	0.00	
13,100.0	1.00	215.00	12,702.0	1,931.9	1,246.8	2,299.3	0.00	0.00	0.00	

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 25A-22 197 - Slot 25A-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 25A-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)	
13,200.0	1.00	215.00	12,801.9	1,930.4	1,245.8	2,297.5	0.00	0.00	0.00	
13,300.0	1.00	215.00	12,901.9	1,929.0	1,244.8	2,295.8	0.00	0.00	0.00	
13,400.0	1.00	215.00	13,001.9	1,927.6	1,243.8	2,294.0	0.00	0.00	0.00	
13,500.0	1.00	215.00	13,101.9	1,926.1	1,242.8	2,292.3	0.00	0.00	0.00	
13,600.0	1.00	215.00	13,201.9	1,924.7	1,241.8	2,290.5	0.00	0.00	0.00	
13,700.0	1.00	215.00	13,301.9	1,923.3	1,240.8	2,288.8	0.00	0.00	0.00	
TD @ 13744.1' MD / 13346.0' TVD										
13,744.1	1.00	215.00	13,346.0	1,922.6	1,240.3	2,288.0	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	
25A-22 - OHCR - hit/miss target - Shape - Point	0.00	0.00	7,606.0	2,004.5	1,297.7	14,518,408.23	2,407,308.13	39.946729	-108.263982	
25A-22 - PBHL - plan hits target center - Ellipse (radii L100.0 W50.0 on 215.00 azi)	0.00	0.00	13,346.0	1,922.6	1,240.3	14,518,324.60	2,407,253.30	39.946504	-108.264187	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,596.5	2,484.0	ORANGE_MARKER				
2,752.4	2,631.0	WASATCH				
5,896.4	5,595.0	WASATCH_G_ZONE				
6,408.7	6,078.0	FORT_UNION				
8,003.3	7,606.0	OHIO_CREEK				
8,753.4	8,356.0	WILLIAMS_FORK				
11,718.8	11,321.0	CAMEO				
12,268.9	11,871.0	ROLLINS				
12,343.9	11,946.0	COZZETTE				
12,944.0	12,546.0	Corcoran				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
200.0	200.0	0.0	0.0	Build 3° / 100'	
849.4	836.9	91.8	59.4	EOB @ 19.48° Inc. / 32.92° Azm	
7,353.9	6,969.1	1,912.8	1,238.3	Drop 3° / 100'	
8,003.3	7,606.0	2,004.5	1,297.7	EOD @ Vertical / Build 1.5° / 100'	
8,070.2	7,672.9	2,004.1	1,297.4	EOB @ 1.00° Inc. / 215.00° Azm	
13,744.1	13,346.0	1,922.6	1,240.3	TD @ 13744.1' MD / 13346.0' TVD	