

Project: Rio Blanco County, CO
 Site: PCU B27 197 Pad
 Well: RNPU B27 FED 15A-22 197
 Wellbore: OH
 Design: Prelim #3
 Latitude: 39.941104
 Longitude: -108.268549
 Ground Level: 6510.0
 RKB @ 6540.0usft (30')

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2503.0	2604.0	Orange Marker
2645.0	2757.1	Wasatch
5553.0	5893.0	Wasatch G
6023.0	6399.8	Fort Union
7534.0	8025.4	Ohio Creek
8284.0	8775.5	Williams Fork
11171.0	11662.9	Cameo
11721.0	12214.0	Rollins
11815.0	12307.0	Cozzette
12415.0	12907.1	Corcoran

REFERENCE INFORMATION

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

WELL DETAILS: RNPU B27 FED 15A-22 197

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14516320.40	6510.0 2406090.50	39.941104	-108.268549

PROJECT DETAILS: Rio Blanco County, CO

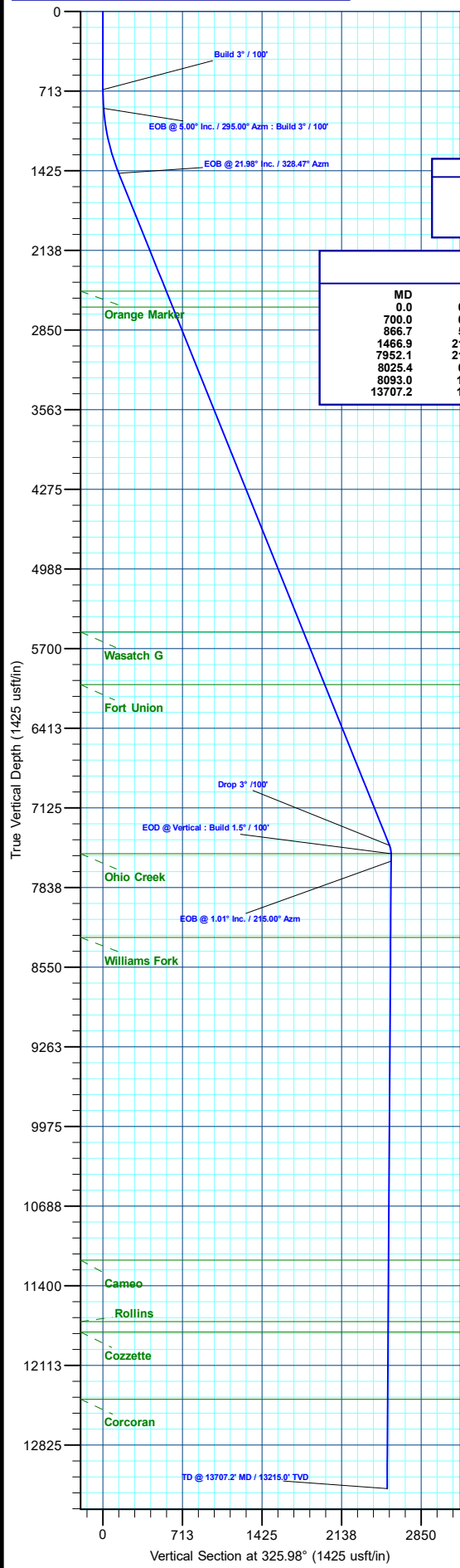
Geodetic System: Universal Transverse Mercator (US Survey Feet)
 Datum: NAD 1927 - Western US
 Ellipsoid: Clarke 1866
 Zone: Zone 12N (114 W to 108 W)
 System Datum: Mean Sea Level

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
15A-22 - OHCR	7534.0	2191.1	-1366.2	14518468.63	2404657.83	39.947117	-108.273420
15A-22 - PBHL	13215.0	2109.2	-1423.6	14518385.00	2404603.00	39.946892	-108.273625

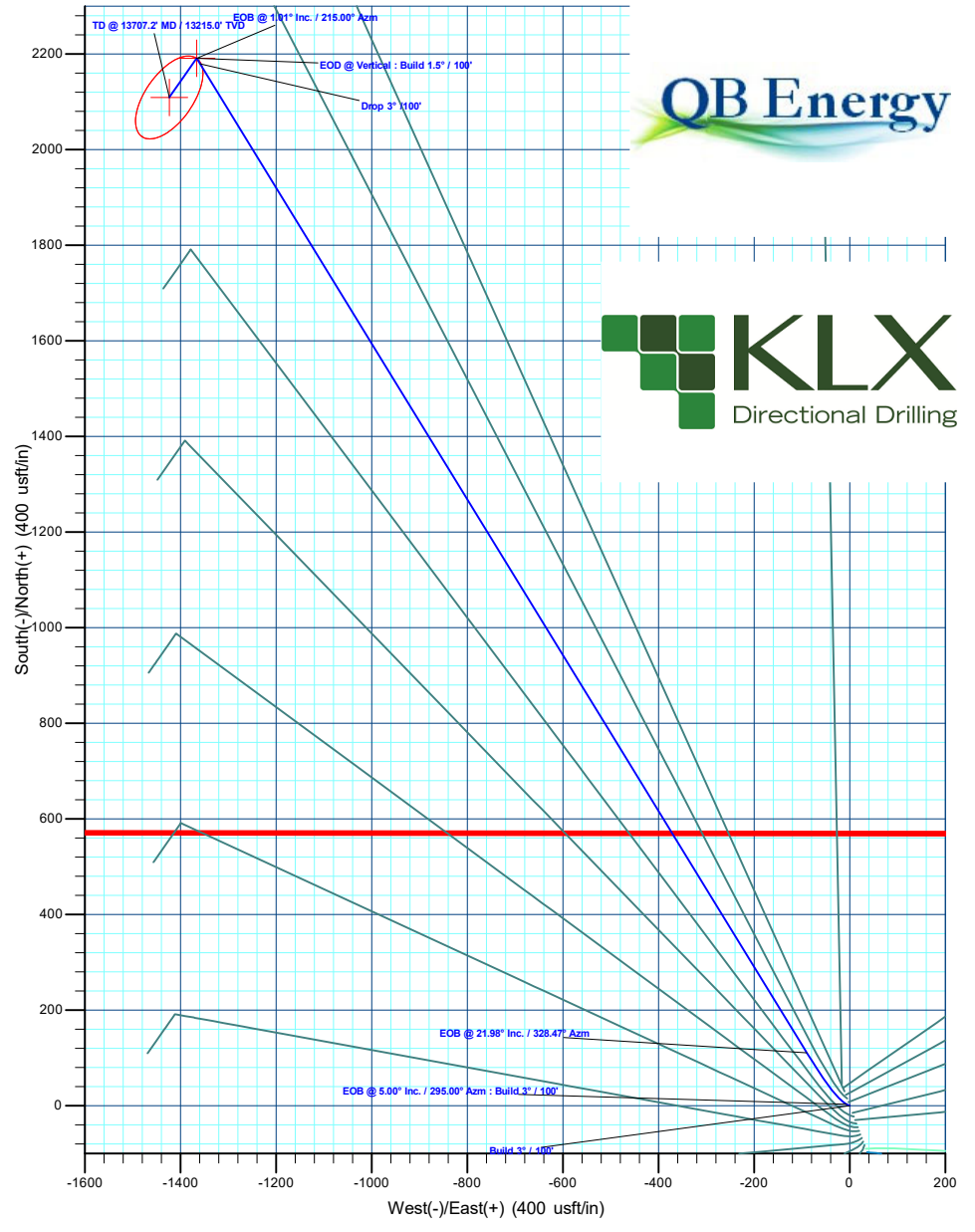
SECTION DETAILS

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	
700.0	0.00	0.00	700.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
866.7	5.00	295.00	866.5	3.1	-6.6	3.00	295.00	6.2	EOB @ 5.00° Inc. / 295.00° Azm : Build 3° / 100'
1466.9	21.98	328.47	1448.5	110.7	-89.7	3.00	41.88	142.0	EOB @ 21.98° Inc. / 328.47° Azm
7952.1	21.98	328.47	7462.5	2179.3	-1359.0	0.00	0.00	2566.6	Drop 3° / 100'
8025.4	0.00	0.00	7534.0	2191.1	-1366.2	30.00	180.00	2580.4	EOD @ Vertical : Build 1.5° / 100'
8093.0	1.01	215.00	7601.6	2190.6	-1366.6	1.50	215.00	2580.2	EOB @ 1.01° Inc. / 215.00° Azm
13707.2	1.01	215.00	13215.0	2109.2	-1423.6	0.00	0.00	2544.6	TD @ 13707.2' MD / 13215.0' TVD



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 #3 (RNPU B27 FED 15A-22 197/OH)
 Created By: Will Jircik Date: 12:58, June 18 2025



QB Energy Operating, LLC

Rio Blanco County, CO

PCU B27 197 Pad

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

OH

Plan: Prelim #3

KLX Well Planning Report

18 June, 2025



Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 15A-22 197 - Slot 15A-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 15A-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 15A-22 197 - Slot 15A-22					
Well Position	+N/-S	74.9 usft	Northing:	14,516,320.40 usft	Latitude:	39.941104
	+E/-W	-28.0 usft	Easting:	2,406,090.50 usft	Longitude:	-108.268549
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	325.98

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	
700.0	0.00	0.00	700.0	0.0	0.0	0.00	0.00	0.00	0.00	
866.7	5.00	295.00	866.5	3.1	-6.6	3.00	3.00	0.00	295.00	
1,466.9	21.98	328.47	1,448.5	110.7	-89.7	3.00	2.83	5.58	41.88	
7,952.1	21.98	328.47	7,462.5	2,179.3	-1,359.0	0.00	0.00	0.00	0.00	
8,025.4	0.00	0.00	7,534.0	2,191.1	-1,366.2	30.00	-30.00	0.00	180.00	15A-22 - OHCR
8,093.0	1.01	215.00	7,601.6	2,190.6	-1,366.6	1.50	1.50	-214.39	215.00	
13,707.2	1.01	215.00	13,215.0	2,109.2	-1,423.6	0.00	0.00	0.00	0.00	15A-22 - PBHL

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 15A-22 197 - Slot 15A-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 15A-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	
Build 3° / 100'										
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	
800.0	3.00	295.00	800.0	1.1	-2.4	2.2	3.00	3.00	0.00	
EOB @ 5.00° Inc. / 295.00° Azm : Build 3° / 100'										
866.7	5.00	295.00	866.5	3.1	-6.6	6.2	3.00	3.00	0.00	
900.0	5.78	301.64	899.6	4.6	-9.3	9.0	3.00	2.35	19.92	
1,000.0	8.41	313.56	998.9	12.3	-18.9	20.7	3.00	2.63	11.92	
1,100.0	11.23	319.70	1,097.4	24.7	-30.5	37.6	3.00	2.82	6.14	
1,200.0	14.12	323.37	1,195.0	41.9	-44.1	59.4	3.00	2.89	3.68	
1,300.0	17.05	325.81	1,291.3	63.9	-59.6	86.3	3.00	2.93	2.44	
1,400.0	20.00	327.55	1,386.1	90.4	-77.0	118.0	3.00	2.95	1.74	
EOB @ 21.98° Inc. / 328.47° Azm										
1,466.9	21.98	328.47	1,448.5	110.7	-89.7	142.0	3.00	2.96	1.36	
1,500.0	21.98	328.47	1,479.2	121.3	-96.2	154.4	0.00	0.00	0.00	
1,600.0	21.98	328.47	1,572.0	153.2	-115.8	191.7	0.00	0.00	0.00	
1,700.0	21.98	328.47	1,664.7	185.1	-135.3	229.1	0.00	0.00	0.00	
1,800.0	21.98	328.47	1,757.4	217.0	-154.9	266.5	0.00	0.00	0.00	
1,900.0	21.98	328.47	1,850.2	248.9	-174.5	303.9	0.00	0.00	0.00	
2,000.0	21.98	328.47	1,942.9	280.8	-194.1	341.3	0.00	0.00	0.00	
2,100.0	21.98	328.47	2,035.6	312.7	-213.6	378.7	0.00	0.00	0.00	
2,200.0	21.98	328.47	2,128.4	344.6	-233.2	416.1	0.00	0.00	0.00	
2,300.0	21.98	328.47	2,221.1	376.5	-252.8	453.4	0.00	0.00	0.00	
2,400.0	21.98	328.47	2,313.8	408.4	-272.3	490.8	0.00	0.00	0.00	
2,500.0	21.98	328.47	2,406.6	440.3	-291.9	528.2	0.00	0.00	0.00	
2,600.0	21.98	328.47	2,499.3	472.2	-311.5	565.6	0.00	0.00	0.00	
Orange Marker										
2,604.0	21.98	328.47	2,503.0	473.4	-312.3	567.1	0.00	0.00	0.00	
2,700.0	21.98	328.47	2,592.0	504.0	-331.1	603.0	0.00	0.00	0.00	
Wasatch										
2,757.1	21.98	328.47	2,645.0	522.3	-342.2	624.3	0.00	0.00	0.00	
2,800.0	21.98	328.47	2,684.8	535.9	-350.6	640.4	0.00	0.00	0.00	
2,900.0	21.98	328.47	2,777.5	567.8	-370.2	677.8	0.00	0.00	0.00	
3,000.0	21.98	328.47	2,870.2	599.7	-389.8	715.2	0.00	0.00	0.00	
3,100.0	21.98	328.47	2,963.0	631.6	-409.3	752.5	0.00	0.00	0.00	
3,200.0	21.98	328.47	3,055.7	663.5	-428.9	789.9	0.00	0.00	0.00	
3,300.0	21.98	328.47	3,148.4	695.4	-448.5	827.3	0.00	0.00	0.00	
3,400.0	21.98	328.47	3,241.2	727.3	-468.1	864.7	0.00	0.00	0.00	
3,500.0	21.98	328.47	3,333.9	759.2	-487.6	902.1	0.00	0.00	0.00	
3,600.0	21.98	328.47	3,426.6	791.1	-507.2	939.5	0.00	0.00	0.00	
3,700.0	21.98	328.47	3,519.4	823.0	-526.8	976.9	0.00	0.00	0.00	
3,800.0	21.98	328.47	3,612.1	854.9	-546.3	1,014.2	0.00	0.00	0.00	
3,900.0	21.98	328.47	3,704.9	886.8	-565.9	1,051.6	0.00	0.00	0.00	
4,000.0	21.98	328.47	3,797.6	918.7	-585.5	1,089.0	0.00	0.00	0.00	
4,100.0	21.98	328.47	3,890.3	950.6	-605.1	1,126.4	0.00	0.00	0.00	
4,200.0	21.98	328.47	3,983.1	982.5	-624.6	1,163.8	0.00	0.00	0.00	

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 15A-22 197 - Slot 15A-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 15A-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	21.98	328.47	4,075.8	1,014.4	-644.2	1,201.2	0.00	0.00	0.00	
4,400.0	21.98	328.47	4,168.5	1,046.3	-663.8	1,238.6	0.00	0.00	0.00	
4,500.0	21.98	328.47	4,261.3	1,078.2	-683.3	1,276.0	0.00	0.00	0.00	
4,600.0	21.98	328.47	4,354.0	1,110.1	-702.9	1,313.3	0.00	0.00	0.00	
4,700.0	21.98	328.47	4,446.7	1,142.0	-722.5	1,350.7	0.00	0.00	0.00	
4,800.0	21.98	328.47	4,539.5	1,173.9	-742.1	1,388.1	0.00	0.00	0.00	
4,900.0	21.98	328.47	4,632.2	1,205.8	-761.6	1,425.5	0.00	0.00	0.00	
5,000.0	21.98	328.47	4,724.9	1,237.7	-781.2	1,462.9	0.00	0.00	0.00	
5,100.0	21.98	328.47	4,817.7	1,269.6	-800.8	1,500.3	0.00	0.00	0.00	
5,200.0	21.98	328.47	4,910.4	1,301.4	-820.3	1,537.7	0.00	0.00	0.00	
5,300.0	21.98	328.47	5,003.1	1,333.3	-839.9	1,575.1	0.00	0.00	0.00	
5,400.0	21.98	328.47	5,095.9	1,365.2	-859.5	1,612.4	0.00	0.00	0.00	
5,500.0	21.98	328.47	5,188.6	1,397.1	-879.1	1,649.8	0.00	0.00	0.00	
5,600.0	21.98	328.47	5,281.3	1,429.0	-898.6	1,687.2	0.00	0.00	0.00	
5,700.0	21.98	328.47	5,374.1	1,460.9	-918.2	1,724.6	0.00	0.00	0.00	
5,800.0	21.98	328.47	5,466.8	1,492.8	-937.8	1,762.0	0.00	0.00	0.00	
Wasatch G										
5,893.0	21.98	328.47	5,553.0	1,522.5	-956.0	1,796.7	0.00	0.00	0.00	
5,900.0	21.98	328.47	5,559.5	1,524.7	-957.3	1,799.4	0.00	0.00	0.00	
6,000.0	21.98	328.47	5,652.3	1,556.6	-976.9	1,836.8	0.00	0.00	0.00	
6,100.0	21.98	328.47	5,745.0	1,588.5	-996.5	1,874.1	0.00	0.00	0.00	
6,200.0	21.98	328.47	5,837.7	1,620.4	-1,016.1	1,911.5	0.00	0.00	0.00	
6,300.0	21.98	328.47	5,930.5	1,652.3	-1,035.6	1,948.9	0.00	0.00	0.00	
Fort Union										
6,399.8	21.98	328.47	6,023.0	1,684.1	-1,055.2	1,986.2	0.00	0.00	0.00	
6,400.0	21.98	328.47	6,023.2	1,684.2	-1,055.2	1,986.3	0.00	0.00	0.00	
6,500.0	21.98	328.47	6,115.9	1,716.1	-1,074.8	2,023.7	0.00	0.00	0.00	
6,600.0	21.98	328.47	6,208.7	1,748.0	-1,094.3	2,061.1	0.00	0.00	0.00	
6,700.0	21.98	328.47	6,301.4	1,779.9	-1,113.9	2,098.5	0.00	0.00	0.00	
6,800.0	21.98	328.47	6,394.1	1,811.8	-1,133.5	2,135.9	0.00	0.00	0.00	
6,900.0	21.98	328.47	6,486.9	1,843.7	-1,153.1	2,173.2	0.00	0.00	0.00	
7,000.0	21.98	328.47	6,579.6	1,875.6	-1,172.6	2,210.6	0.00	0.00	0.00	
7,100.0	21.98	328.47	6,672.3	1,907.5	-1,192.2	2,248.0	0.00	0.00	0.00	
7,200.0	21.98	328.47	6,765.1	1,939.4	-1,211.8	2,285.4	0.00	0.00	0.00	
7,300.0	21.98	328.47	6,857.8	1,971.3	-1,231.3	2,322.8	0.00	0.00	0.00	
7,400.0	21.98	328.47	6,950.5	2,003.2	-1,250.9	2,360.2	0.00	0.00	0.00	
7,500.0	21.98	328.47	7,043.3	2,035.1	-1,270.5	2,397.6	0.00	0.00	0.00	
7,600.0	21.98	328.47	7,136.0	2,067.0	-1,290.1	2,434.9	0.00	0.00	0.00	
7,700.0	21.98	328.47	7,228.7	2,098.8	-1,309.6	2,472.3	0.00	0.00	0.00	
7,800.0	21.98	328.47	7,321.5	2,130.7	-1,329.2	2,509.7	0.00	0.00	0.00	
7,900.0	21.98	328.47	7,414.2	2,162.6	-1,348.8	2,547.1	0.00	0.00	0.00	
Drop 3° /100'										
7,952.1	21.98	328.47	7,462.5	2,179.3	-1,359.0	2,566.6	0.00	0.00	0.00	
7,960.0	19.61	328.47	7,469.9	2,181.6	-1,360.4	2,569.4	30.00	-30.00	0.00	
7,970.0	16.61	328.47	7,479.4	2,184.3	-1,362.1	2,572.5	30.00	-30.00	0.00	
7,980.0	13.61	328.47	7,489.1	2,186.5	-1,363.4	2,575.1	30.00	-30.00	0.00	
7,990.0	10.61	328.47	7,498.8	2,188.3	-1,364.5	2,577.2	30.00	-30.00	0.00	
8,000.0	7.61	328.47	7,508.7	2,189.7	-1,365.3	2,578.8	30.00	-30.00	0.00	
8,010.0	4.61	328.47	7,518.7	2,190.6	-1,365.9	2,579.8	30.00	-30.00	0.00	
8,020.0	1.61	328.47	7,528.6	2,191.0	-1,366.2	2,580.4	30.00	-30.00	0.00	
EOD @ Vertical : Build 1.5° / 100' - Ohio Creek										
8,025.4	0.00	0.00	7,534.0	2,191.1	-1,366.2	2,580.4	30.00	-30.00	0.00	

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 15A-22 197 - Slot 15A-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 15A-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)	
EOB @ 1.01° Inc. / 215.00° Azm										
8,093.0	1.01	215.00	7,601.6	2,190.6	-1,366.6	2,580.2	1.50	1.50	0.00	
8,100.0	1.01	215.00	7,608.6	2,190.5	-1,366.6	2,580.2	0.00	0.00	0.00	
8,200.0	1.01	215.00	7,708.6	2,189.0	-1,367.7	2,579.6	0.00	0.00	0.00	
8,300.0	1.01	215.00	7,808.6	2,187.6	-1,368.7	2,578.9	0.00	0.00	0.00	
8,400.0	1.01	215.00	7,908.6	2,186.1	-1,369.7	2,578.3	0.00	0.00	0.00	
8,500.0	1.01	215.00	8,008.6	2,184.7	-1,370.7	2,577.7	0.00	0.00	0.00	
8,600.0	1.01	215.00	8,108.6	2,183.2	-1,371.7	2,577.0	0.00	0.00	0.00	
8,700.0	1.01	215.00	8,208.5	2,181.8	-1,372.7	2,576.4	0.00	0.00	0.00	
Williams Fork										
8,775.5	1.01	215.00	8,284.0	2,180.7	-1,373.5	2,575.9	0.00	0.00	0.00	
8,800.0	1.01	215.00	8,308.5	2,180.3	-1,373.8	2,575.8	0.00	0.00	0.00	
8,900.0	1.01	215.00	8,408.5	2,178.9	-1,374.8	2,575.1	0.00	0.00	0.00	
9,000.0	1.01	215.00	8,508.5	2,177.4	-1,375.8	2,574.5	0.00	0.00	0.00	
9,100.0	1.01	215.00	8,608.5	2,176.0	-1,376.8	2,573.9	0.00	0.00	0.00	
9,200.0	1.01	215.00	8,708.5	2,174.5	-1,377.8	2,573.2	0.00	0.00	0.00	
9,300.0	1.01	215.00	8,808.5	2,173.1	-1,378.8	2,572.6	0.00	0.00	0.00	
9,400.0	1.01	215.00	8,908.4	2,171.6	-1,379.8	2,572.0	0.00	0.00	0.00	
9,500.0	1.01	215.00	9,008.4	2,170.2	-1,380.9	2,571.3	0.00	0.00	0.00	
9,600.0	1.01	215.00	9,108.4	2,168.7	-1,381.9	2,570.7	0.00	0.00	0.00	
9,700.0	1.01	215.00	9,208.4	2,167.3	-1,382.9	2,570.0	0.00	0.00	0.00	
9,800.0	1.01	215.00	9,308.4	2,165.8	-1,383.9	2,569.4	0.00	0.00	0.00	
9,900.0	1.01	215.00	9,408.4	2,164.4	-1,384.9	2,568.8	0.00	0.00	0.00	
10,000.0	1.01	215.00	9,508.3	2,162.9	-1,385.9	2,568.1	0.00	0.00	0.00	
10,100.0	1.01	215.00	9,608.3	2,161.5	-1,387.0	2,567.5	0.00	0.00	0.00	
10,200.0	1.01	215.00	9,708.3	2,160.0	-1,388.0	2,566.9	0.00	0.00	0.00	
10,300.0	1.01	215.00	9,808.3	2,158.6	-1,389.0	2,566.2	0.00	0.00	0.00	
10,400.0	1.01	215.00	9,908.3	2,157.1	-1,390.0	2,565.6	0.00	0.00	0.00	
10,500.0	1.01	215.00	10,008.3	2,155.7	-1,391.0	2,565.0	0.00	0.00	0.00	
10,600.0	1.01	215.00	10,108.2	2,154.2	-1,392.0	2,564.3	0.00	0.00	0.00	
10,700.0	1.01	215.00	10,208.2	2,152.8	-1,393.0	2,563.7	0.00	0.00	0.00	
10,800.0	1.01	215.00	10,308.2	2,151.3	-1,394.1	2,563.1	0.00	0.00	0.00	
10,900.0	1.01	215.00	10,408.2	2,149.9	-1,395.1	2,562.4	0.00	0.00	0.00	
11,000.0	1.01	215.00	10,508.2	2,148.4	-1,396.1	2,561.8	0.00	0.00	0.00	
11,100.0	1.01	215.00	10,608.2	2,147.0	-1,397.1	2,561.2	0.00	0.00	0.00	
11,200.0	1.01	215.00	10,708.2	2,145.5	-1,398.1	2,560.5	0.00	0.00	0.00	
11,300.0	1.01	215.00	10,808.1	2,144.1	-1,399.1	2,559.9	0.00	0.00	0.00	
11,400.0	1.01	215.00	10,908.1	2,142.6	-1,400.2	2,559.3	0.00	0.00	0.00	
11,500.0	1.01	215.00	11,008.1	2,141.2	-1,401.2	2,558.6	0.00	0.00	0.00	
11,600.0	1.01	215.00	11,108.1	2,139.7	-1,402.2	2,558.0	0.00	0.00	0.00	
Cameo										
11,662.9	1.01	215.00	11,171.0	2,138.8	-1,402.8	2,557.6	0.00	0.00	0.00	
11,700.0	1.01	215.00	11,208.1	2,138.3	-1,403.2	2,557.4	0.00	0.00	0.00	
11,800.0	1.01	215.00	11,308.1	2,136.8	-1,404.2	2,556.7	0.00	0.00	0.00	
11,900.0	1.01	215.00	11,408.0	2,135.4	-1,405.2	2,556.1	0.00	0.00	0.00	
12,000.0	1.01	215.00	11,508.0	2,133.9	-1,406.3	2,555.5	0.00	0.00	0.00	
12,100.0	1.01	215.00	11,608.0	2,132.5	-1,407.3	2,554.8	0.00	0.00	0.00	
12,200.0	1.01	215.00	11,708.0	2,131.0	-1,408.3	2,554.2	0.00	0.00	0.00	
Rollins										
12,213.0	1.01	215.00	11,721.0	2,130.8	-1,408.4	2,554.1	0.00	0.00	0.00	
12,300.0	1.01	215.00	11,808.0	2,129.6	-1,409.3	2,553.6	0.00	0.00	0.00	
Cozzette										

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 15A-22 197 - Slot 15A-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 15A-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)	
12,307.0	1.01	215.00	11,815.0	2,129.5	-1,409.4	2,553.5	0.00	0.00	0.00	
12,400.0	1.01	215.00	11,908.0	2,128.1	-1,410.3	2,552.9	0.00	0.00	0.00	
12,500.0	1.01	215.00	12,007.9	2,126.7	-1,411.3	2,552.3	0.00	0.00	0.00	
12,600.0	1.01	215.00	12,107.9	2,125.2	-1,412.3	2,551.7	0.00	0.00	0.00	
12,700.0	1.01	215.00	12,207.9	2,123.8	-1,413.4	2,551.0	0.00	0.00	0.00	
12,800.0	1.01	215.00	12,307.9	2,122.3	-1,414.4	2,550.4	0.00	0.00	0.00	
12,900.0	1.01	215.00	12,407.9	2,120.9	-1,415.4	2,549.8	0.00	0.00	0.00	
Corcoran										
12,907.1	1.01	215.00	12,415.0	2,120.8	-1,415.5	2,549.7	0.00	0.00	0.00	
13,000.0	1.01	215.00	12,507.9	2,119.4	-1,416.4	2,549.1	0.00	0.00	0.00	
13,100.0	1.01	215.00	12,607.9	2,118.0	-1,417.4	2,548.5	0.00	0.00	0.00	
13,200.0	1.01	215.00	12,707.8	2,116.5	-1,418.4	2,547.9	0.00	0.00	0.00	
13,300.0	1.01	215.00	12,807.8	2,115.1	-1,419.5	2,547.2	0.00	0.00	0.00	
13,400.0	1.01	215.00	12,907.8	2,113.6	-1,420.5	2,546.6	0.00	0.00	0.00	
13,500.0	1.01	215.00	13,007.8	2,112.2	-1,421.5	2,546.0	0.00	0.00	0.00	
13,600.0	1.01	215.00	13,107.8	2,110.7	-1,422.5	2,545.3	0.00	0.00	0.00	
TD @ 13707.2' MD / 13215.0' TVD										
13,707.2	1.01	215.00	13,215.0	2,109.2	-1,423.6	2,544.6	0.00	0.00	0.00	

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
15A-22 - OHCR - plan hits target center - Point	0.00	0.00	7,534.0	2,191.1	-1,366.2	14,518,468.63	2,404,657.83	39.947117	-108.273421
15A-22 - PBHL - plan hits target center - Ellipse (radii L100.0 W50.0 on 215.00 azi)	0.00	0.00	13,215.0	2,109.2	-1,423.6	14,518,385.00	2,404,603.00	39.946892	-108.273625

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,604.0	2,503.0	Orange Marker				
2,757.1	2,645.0	Wasatch				
5,893.0	5,553.0	Wasatch G				
6,399.8	6,023.0	Fort Union				
8,025.4	7,534.0	Ohio Creek				
8,775.5	8,284.0	Williams Fork				
11,662.9	11,171.0	Cameo				
12,213.0	11,721.0	Rollins				
12,307.0	11,815.0	Cozzette				
12,907.1	12,415.0	Corcoran				

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well RNPU B27 FED 15A-22 197 - Slot 15A-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 15A-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)	
700.0	700.0	0.0	0.0	Build 3° / 100'
866.7	866.5	3.1	-6.6	EOB @ 5.00° Inc. / 295.00° Azm : Build 3° / 100'
1,466.9	1,448.5	110.7	-89.7	EOB @ 21.98° Inc. / 328.47° Azm
7,952.1	7,462.5	2,179.3	-1,359.0	Drop 3° /100'
8,025.4	7,534.0	2,191.1	-1,366.2	EOD @ Vertical : Build 1.5° / 100'
8,093.0	7,601.6	2,190.6	-1,366.6	EOB @ 1.01° Inc. / 215.00° Azm
13,707.2	13,215.0	2,109.2	-1,423.6	TD @ 13707.2' MD / 13215.0' TVD