

Project: Rio Blanco County, CO
 Site: ELU M12 496
 Well: ELU M12 FED 15B-12 496
 Wellbore: OH
 Design: Design #4
 Latitude: 39.712898
 Longitude: -108.122944
 Ground Level: 7985.0
 RKB=26' @ 8011.0usft (TBD)

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

REFERENCE INFORMATION

Vertical (TVD) Reference: RKB=26' @ 8011.0usft (TBD)
 Section (VS) Reference: Slot - 15B-12(0.0N, 0.0E)
 Measured Depth Reference: RKB=26' @ 8011.0usft (TBD)
 Calculation Method: Minimum Curvature

SECTION DETAILS

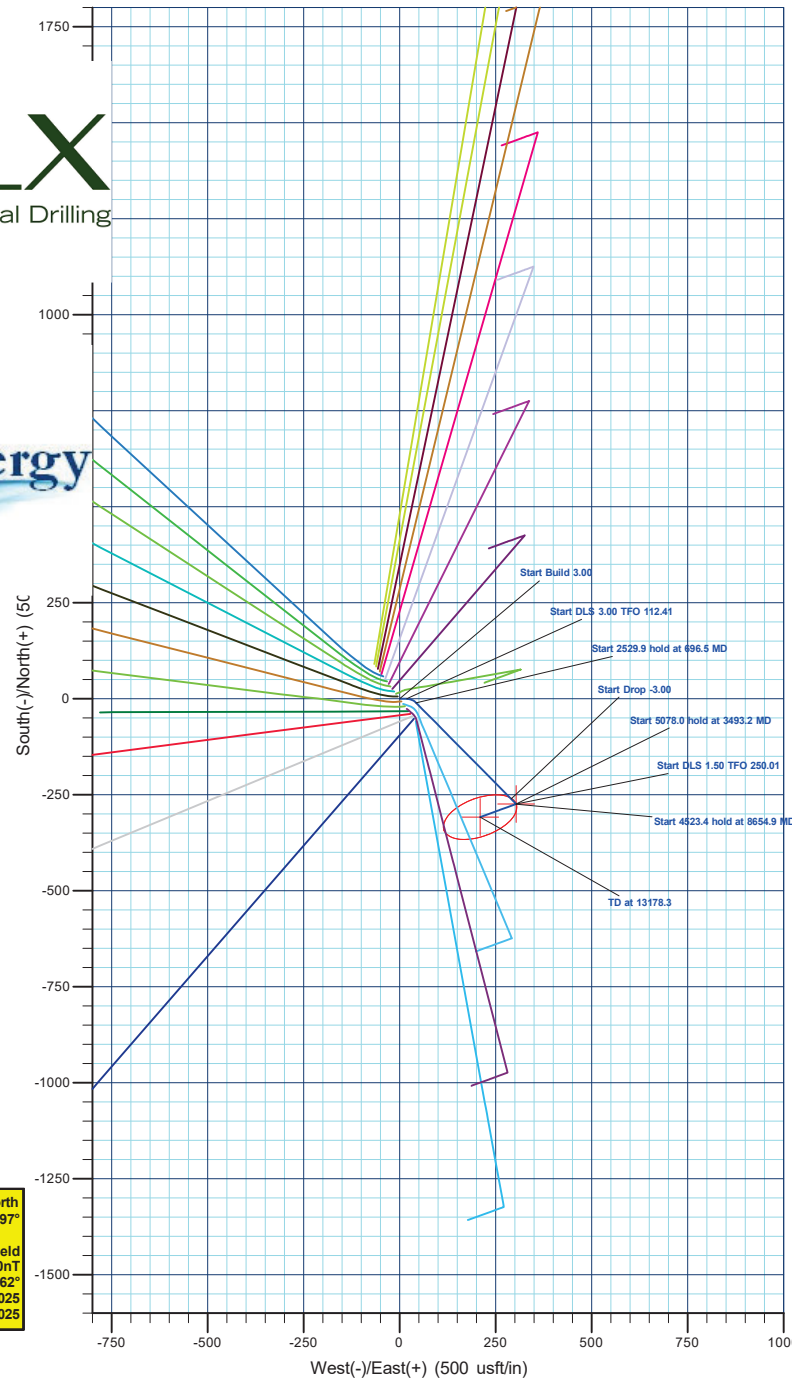
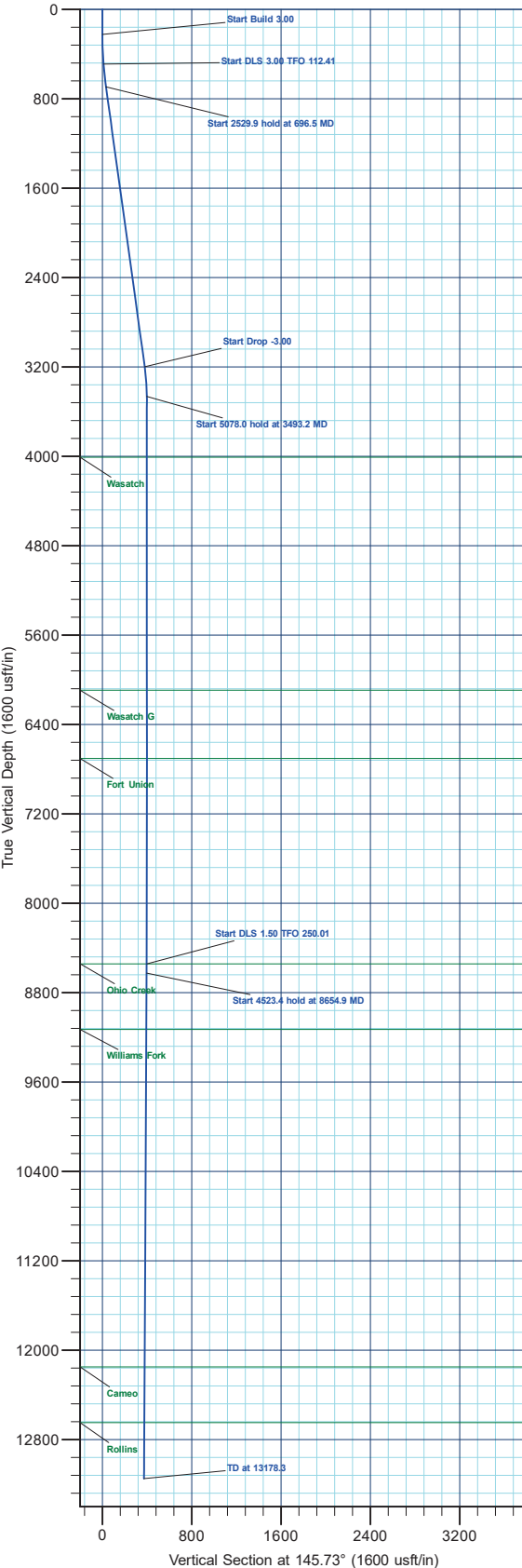
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
225.0	0.00	0.00	225.0	0.0	0.0	0.00	0.00	0.0	
491.7	8.00	90.00	490.8	0.0	18.6	3.00	90.00	10.5	
696.5	8.00	135.29	693.8	-10.1	42.9	3.00	112.41	32.5	
3226.4	8.00	135.29	3199.1	-260.5	290.7	0.00	0.00	379.0	
3493.2	0.00	0.00	3465.0	-273.7	303.8	3.00	180.00	397.3	
8543.0	0.00	0.00	8543.0	-273.7	303.8	0.00	0.00	397.3	
9130.0	1.26	250.01	8654.9	-274.0	302.9	1.50	250.01	397.0	
12149.0	1.26	250.01	13149.0	-307.9	209.8	0.00	0.00	372.6	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
15B-12 - OHCR	8543.0	-273.7	303.8	14434226.39	2449899.73	39.712147	-108.121865
15B-12 - PBHL	13149.0	-307.9	209.8	14434189.20	2449806.90	39.712053	-108.122199

WELL DETAILS: ELU M12 FED 15B-12 496

+N/-S	+E/-W	Ground Level : 7985.0	Northing	Easting	Latitude	Longitude
0.0	0.0	14434490.20	2449587.30	39.712898	-108.122944	15B-12



T M
 Azimuths to True North
 Magnetic North: 8.97°
 Magnetic Field
 Strength: 50694.0nT
 Dip Angle: 65.62°
 Date: 7/24/2025
 Model: HDGM2025

Plan: Design #4 (ELU M12 FED 15B-12 496/OH)

Created By: Will Jircik Date: 21:07, July 24 2025



QB Energy Operating, LLC

Rio Blanco County, CO

ELU M12 496

ELU M12 FED 15B-12 496 - Slot 15B-12

OH

Plan: Design #4

KLX Well Planning Report

24 July, 2025



Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well ELU M12 FED 15B-12 496 - Slot 15B-12
Company:	QB Energy Operating, LLC	TVD Reference:	RKB=26' @ 8011.0usft (TBD)
Project:	Rio Blanco County, CO	MD Reference:	RKB=26' @ 8011.0usft (TBD)
Site:	ELU M12 496	North Reference:	True
Well:	ELU M12 FED 15B-12 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #4		

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	ELU M12 496				
Site Position:	Northing:	14,434,433.20 usft	Latitude:	39.712738	
From: Map	Easting:	2,449,631.30 usft	Longitude:	-108.122795	
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.84 °

Well	ELU M12 FED 15B-12 496 - Slot 15B-12					
Well Position	+N/-S	58.4 usft	Northing:	14,434,490.20 usft	Latitude:	39.712898
	+E/-W	-42.1 usft	Easting:	2,449,587.30 usft	Longitude:	-108.122945
Position Uncertainty	0.0 usft	Wellhead Elevation:		Ground Level:	7,985.0 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2025	7/24/2025	8.97	65.62	50,694.00000000

Design	Design #4			
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	145.73

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	
225.0	0.00	0.00	225.0	0.0	0.0	0.00	0.00	0.00	0.00	
491.7	8.00	90.00	490.8	0.0	18.6	3.00	3.00	0.00	90.00	
696.5	8.00	135.29	693.8	-10.1	42.9	3.00	0.00	22.11	112.41	
3,226.4	8.00	135.29	3,199.1	-260.5	290.7	0.00	0.00	0.00	0.00	
3,493.2	0.00	0.00	3,465.0	-273.7	303.8	3.00	-3.00	0.00	180.00	
8,571.2	0.00	0.00	8,543.0	-273.7	303.8	0.00	0.00	0.00	0.00	15B-12 - OHCR
8,654.9	1.26	250.01	8,626.7	-274.0	302.9	1.50	1.50	-131.45	250.01	
13,178.3	1.26	250.01	13,149.0	-307.9	209.8	0.00	0.00	0.00	0.00	15B-12 - PBHL

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well ELU M12 FED 15B-12 496 - Slot 15B-12
Company:	QB Energy Operating, LLC	TVD Reference:	RKB=26' @ 8011.0usft (TBD)
Project:	Rio Blanco County, CO	MD Reference:	RKB=26' @ 8011.0usft (TBD)
Site:	ELU M12 496	North Reference:	True
Well:	ELU M12 FED 15B-12 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #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
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
225.0	0.00	0.00	225.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	2.25	90.00	300.0	0.0	1.5	0.8	3.00	3.00	0.00
400.0	5.25	90.00	399.8	0.0	8.0	4.5	3.00	3.00	0.00
491.7	8.00	90.00	490.8	0.0	18.6	10.5	3.00	3.00	0.00
500.0	7.91	91.68	499.1	0.0	19.7	11.1	3.00	-1.10	20.16
600.0	7.39	114.03	598.2	-2.8	32.5	20.6	3.00	-0.51	22.35
696.5	8.00	135.29	693.8	-10.1	42.9	32.5	3.00	0.63	22.03
700.0	8.00	135.29	697.3	-10.5	43.2	33.0	0.00	0.00	0.00
800.0	8.00	135.29	796.3	-20.4	53.0	46.7	0.00	0.00	0.00
900.0	8.00	135.29	895.4	-30.3	62.8	60.4	0.00	0.00	0.00
1,000.0	8.00	135.29	994.4	-40.2	72.6	74.1	0.00	0.00	0.00
1,100.0	8.00	135.29	1,093.4	-50.1	82.4	87.8	0.00	0.00	0.00
1,200.0	8.00	135.29	1,192.4	-60.0	92.2	101.5	0.00	0.00	0.00
1,300.0	8.00	135.29	1,291.5	-69.9	102.0	115.2	0.00	0.00	0.00
1,400.0	8.00	135.29	1,390.5	-79.8	111.8	128.9	0.00	0.00	0.00
1,500.0	8.00	135.29	1,489.5	-89.7	121.6	142.6	0.00	0.00	0.00
1,600.0	8.00	135.29	1,588.5	-99.5	131.4	156.3	0.00	0.00	0.00
1,700.0	8.00	135.29	1,687.6	-109.4	141.2	170.0	0.00	0.00	0.00
1,800.0	8.00	135.29	1,786.6	-119.3	151.0	183.6	0.00	0.00	0.00
1,900.0	8.00	135.29	1,885.6	-129.2	160.8	197.3	0.00	0.00	0.00
2,000.0	8.00	135.29	1,984.6	-139.1	170.6	211.0	0.00	0.00	0.00
2,100.0	8.00	135.29	2,083.7	-149.0	180.4	224.7	0.00	0.00	0.00
2,200.0	8.00	135.29	2,182.7	-158.9	190.2	238.4	0.00	0.00	0.00
2,300.0	8.00	135.29	2,281.7	-168.8	200.0	252.1	0.00	0.00	0.00
2,400.0	8.00	135.29	2,380.7	-178.7	209.8	265.8	0.00	0.00	0.00
2,500.0	8.00	135.29	2,479.8	-188.6	219.6	279.5	0.00	0.00	0.00
2,600.0	8.00	135.29	2,578.8	-198.5	229.4	293.2	0.00	0.00	0.00
2,700.0	8.00	135.29	2,677.8	-208.4	239.2	306.9	0.00	0.00	0.00
2,800.0	8.00	135.29	2,776.8	-218.3	248.9	320.6	0.00	0.00	0.00
2,900.0	8.00	135.29	2,875.9	-228.2	258.7	334.3	0.00	0.00	0.00
3,000.0	8.00	135.29	2,974.9	-238.1	268.5	348.0	0.00	0.00	0.00
3,100.0	8.00	135.29	3,073.9	-248.0	278.3	361.7	0.00	0.00	0.00
3,200.0	8.00	135.29	3,172.9	-257.9	288.1	375.4	0.00	0.00	0.00
3,226.4	8.00	135.29	3,199.1	-260.5	290.7	379.0	0.00	0.00	0.00
3,300.0	5.80	135.29	3,272.2	-266.8	296.9	387.7	3.00	-3.00	0.00
3,400.0	2.80	135.29	3,371.9	-272.1	302.2	395.0	3.00	-3.00	0.00
3,493.2	0.00	0.00	3,465.0	-273.7	303.8	397.3	3.00	-3.00	0.00
3,500.0	0.00	0.00	3,471.8	-273.7	303.8	397.3	0.00	0.00	0.00
3,600.0	0.00	0.00	3,571.8	-273.7	303.8	397.3	0.00	0.00	0.00
3,700.0	0.00	0.00	3,671.8	-273.7	303.8	397.3	0.00	0.00	0.00
3,800.0	0.00	0.00	3,771.8	-273.7	303.8	397.3	0.00	0.00	0.00
3,900.0	0.00	0.00	3,871.8	-273.7	303.8	397.3	0.00	0.00	0.00
4,000.0	0.00	0.00	3,971.8	-273.7	303.8	397.3	0.00	0.00	0.00
Wasatch									
4,037.2	0.00	0.00	4,009.0	-273.7	303.8	397.3	0.00	0.00	0.00
4,100.0	0.00	0.00	4,071.8	-273.7	303.8	397.3	0.00	0.00	0.00
4,200.0	0.00	0.00	4,171.8	-273.7	303.8	397.3	0.00	0.00	0.00
4,300.0	0.00	0.00	4,271.8	-273.7	303.8	397.3	0.00	0.00	0.00
4,400.0	0.00	0.00	4,371.8	-273.7	303.8	397.3	0.00	0.00	0.00
4,500.0	0.00	0.00	4,471.8	-273.7	303.8	397.3	0.00	0.00	0.00
4,600.0	0.00	0.00	4,571.8	-273.7	303.8	397.3	0.00	0.00	0.00

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well ELU M12 FED 15B-12 496 - Slot 15B-12
Company:	QB Energy Operating, LLC	TVD Reference:	RKB=26' @ 8011.0usft (TBD)
Project:	Rio Blanco County, CO	MD Reference:	RKB=26' @ 8011.0usft (TBD)
Site:	ELU M12 496	North Reference:	True
Well:	ELU M12 FED 15B-12 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #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)	
4,700.0	0.00	0.00	4,671.8	-273.7	303.8	397.3	0.00	0.00	0.00	
4,800.0	0.00	0.00	4,771.8	-273.7	303.8	397.3	0.00	0.00	0.00	
4,900.0	0.00	0.00	4,871.8	-273.7	303.8	397.3	0.00	0.00	0.00	
5,000.0	0.00	0.00	4,971.8	-273.7	303.8	397.3	0.00	0.00	0.00	
5,100.0	0.00	0.00	5,071.8	-273.7	303.8	397.3	0.00	0.00	0.00	
5,200.0	0.00	0.00	5,171.8	-273.7	303.8	397.3	0.00	0.00	0.00	
5,300.0	0.00	0.00	5,271.8	-273.7	303.8	397.3	0.00	0.00	0.00	
5,400.0	0.00	0.00	5,371.8	-273.7	303.8	397.3	0.00	0.00	0.00	
5,500.0	0.00	0.00	5,471.8	-273.7	303.8	397.3	0.00	0.00	0.00	
5,600.0	0.00	0.00	5,571.8	-273.7	303.8	397.3	0.00	0.00	0.00	
5,700.0	0.00	0.00	5,671.8	-273.7	303.8	397.3	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,771.8	-273.7	303.8	397.3	0.00	0.00	0.00	
5,900.0	0.00	0.00	5,871.8	-273.7	303.8	397.3	0.00	0.00	0.00	
6,000.0	0.00	0.00	5,971.8	-273.7	303.8	397.3	0.00	0.00	0.00	
6,100.0	0.00	0.00	6,071.8	-273.7	303.8	397.3	0.00	0.00	0.00	
Wasatch G										
6,121.2	0.00	0.00	6,093.0	-273.7	303.8	397.3	0.00	0.00	0.00	
6,200.0	0.00	0.00	6,171.8	-273.7	303.8	397.3	0.00	0.00	0.00	
6,300.0	0.00	0.00	6,271.8	-273.7	303.8	397.3	0.00	0.00	0.00	
6,400.0	0.00	0.00	6,371.8	-273.7	303.8	397.3	0.00	0.00	0.00	
6,500.0	0.00	0.00	6,471.8	-273.7	303.8	397.3	0.00	0.00	0.00	
6,600.0	0.00	0.00	6,571.8	-273.7	303.8	397.3	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,671.8	-273.7	303.8	397.3	0.00	0.00	0.00	
Fort Union										
6,733.2	0.00	0.00	6,705.0	-273.7	303.8	397.3	0.00	0.00	0.00	
6,800.0	0.00	0.00	6,771.8	-273.7	303.8	397.3	0.00	0.00	0.00	
6,900.0	0.00	0.00	6,871.8	-273.7	303.8	397.3	0.00	0.00	0.00	
7,000.0	0.00	0.00	6,971.8	-273.7	303.8	397.3	0.00	0.00	0.00	
7,100.0	0.00	0.00	7,071.8	-273.7	303.8	397.3	0.00	0.00	0.00	
7,200.0	0.00	0.00	7,171.8	-273.7	303.8	397.3	0.00	0.00	0.00	
7,300.0	0.00	0.00	7,271.8	-273.7	303.8	397.3	0.00	0.00	0.00	
7,400.0	0.00	0.00	7,371.8	-273.7	303.8	397.3	0.00	0.00	0.00	
7,500.0	0.00	0.00	7,471.8	-273.7	303.8	397.3	0.00	0.00	0.00	
7,600.0	0.00	0.00	7,571.8	-273.7	303.8	397.3	0.00	0.00	0.00	
7,700.0	0.00	0.00	7,671.8	-273.7	303.8	397.3	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,771.8	-273.7	303.8	397.3	0.00	0.00	0.00	
7,900.0	0.00	0.00	7,871.8	-273.7	303.8	397.3	0.00	0.00	0.00	
8,000.0	0.00	0.00	7,971.8	-273.7	303.8	397.3	0.00	0.00	0.00	
8,100.0	0.00	0.00	8,071.8	-273.7	303.8	397.3	0.00	0.00	0.00	
8,200.0	0.00	0.00	8,171.8	-273.7	303.8	397.3	0.00	0.00	0.00	
8,300.0	0.00	0.00	8,271.8	-273.7	303.8	397.3	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,371.8	-273.7	303.8	397.3	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,471.8	-273.7	303.8	397.3	0.00	0.00	0.00	
Ohio Creek										
8,571.2	0.00	0.00	8,543.0	-273.7	303.8	397.3	0.00	0.00	0.00	
8,600.0	0.43	250.01	8,571.8	-273.7	303.7	397.2	1.50	1.50	0.00	
8,654.9	1.26	250.01	8,626.7	-274.0	302.9	397.0	1.50	1.50	0.00	
8,700.0	1.26	250.01	8,671.8	-274.4	302.0	396.8	0.00	0.00	0.00	
8,800.0	1.26	250.01	8,771.8	-275.1	300.0	396.2	0.00	0.00	0.00	
8,900.0	1.26	250.01	8,871.8	-275.9	297.9	395.7	0.00	0.00	0.00	
9,000.0	1.26	250.01	8,971.7	-276.6	295.8	395.2	0.00	0.00	0.00	
9,100.0	1.26	250.01	9,071.7	-277.3	293.8	394.6	0.00	0.00	0.00	
Williams Fork										

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well ELU M12 FED 15B-12 496 - Slot 15B-12
Company:	QB Energy Operating, LLC	TVD Reference:	RKB=26' @ 8011.0usft (TBD)
Project:	Rio Blanco County, CO	MD Reference:	RKB=26' @ 8011.0usft (TBD)
Site:	ELU M12 496	North Reference:	True
Well:	ELU M12 FED 15B-12 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #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)	
9,158.3	1.26	250.01	9,130.0	-277.8	292.6	394.3	0.00	0.00	0.00	
9,200.0	1.26	250.01	9,171.7	-278.1	291.7	394.1	0.00	0.00	0.00	
9,300.0	1.26	250.01	9,271.7	-278.8	289.7	393.5	0.00	0.00	0.00	
9,400.0	1.26	250.01	9,371.6	-279.6	287.6	393.0	0.00	0.00	0.00	
9,500.0	1.26	250.01	9,471.6	-280.3	285.5	392.5	0.00	0.00	0.00	
9,600.0	1.26	250.01	9,571.6	-281.1	283.5	391.9	0.00	0.00	0.00	
9,700.0	1.26	250.01	9,671.6	-281.8	281.4	391.4	0.00	0.00	0.00	
9,800.0	1.26	250.01	9,771.5	-282.6	279.4	390.8	0.00	0.00	0.00	
9,900.0	1.26	250.01	9,871.5	-283.3	277.3	390.3	0.00	0.00	0.00	
10,000.0	1.26	250.01	9,971.5	-284.1	275.2	389.8	0.00	0.00	0.00	
10,100.0	1.26	250.01	10,071.5	-284.8	273.2	389.2	0.00	0.00	0.00	
10,200.0	1.26	250.01	10,171.4	-285.6	271.1	388.7	0.00	0.00	0.00	
10,300.0	1.26	250.01	10,271.4	-286.3	269.1	388.1	0.00	0.00	0.00	
10,400.0	1.26	250.01	10,371.4	-287.1	267.0	387.6	0.00	0.00	0.00	
10,500.0	1.26	250.01	10,471.4	-287.8	265.0	387.1	0.00	0.00	0.00	
10,600.0	1.26	250.01	10,571.4	-288.6	262.9	386.5	0.00	0.00	0.00	
10,700.0	1.26	250.01	10,671.3	-289.3	260.8	386.0	0.00	0.00	0.00	
10,800.0	1.26	250.01	10,771.3	-290.1	258.8	385.4	0.00	0.00	0.00	
10,900.0	1.26	250.01	10,871.3	-290.8	256.7	384.9	0.00	0.00	0.00	
11,000.0	1.26	250.01	10,971.3	-291.6	254.7	384.4	0.00	0.00	0.00	
11,100.0	1.26	250.01	11,071.2	-292.3	252.6	383.8	0.00	0.00	0.00	
11,200.0	1.26	250.01	11,171.2	-293.1	250.5	383.3	0.00	0.00	0.00	
11,300.0	1.26	250.01	11,271.2	-293.8	248.5	382.7	0.00	0.00	0.00	
11,400.0	1.26	250.01	11,371.2	-294.6	246.4	382.2	0.00	0.00	0.00	
11,500.0	1.26	250.01	11,471.1	-295.3	244.4	381.7	0.00	0.00	0.00	
11,600.0	1.26	250.01	11,571.1	-296.1	242.3	381.1	0.00	0.00	0.00	
11,700.0	1.26	250.01	11,671.1	-296.8	240.3	380.6	0.00	0.00	0.00	
11,800.0	1.26	250.01	11,771.1	-297.6	238.2	380.0	0.00	0.00	0.00	
11,900.0	1.26	250.01	11,871.0	-298.3	236.1	379.5	0.00	0.00	0.00	
12,000.0	1.26	250.01	11,971.0	-299.1	234.1	379.0	0.00	0.00	0.00	
12,100.0	1.26	250.01	12,071.0	-299.8	232.0	378.4	0.00	0.00	0.00	
Cameo										
12,178.0	1.26	250.01	12,149.0	-300.4	230.4	378.0	0.00	0.00	0.00	
12,200.0	1.26	250.01	12,171.0	-300.6	230.0	377.9	0.00	0.00	0.00	
12,300.0	1.26	250.01	12,270.9	-301.3	227.9	377.3	0.00	0.00	0.00	
12,400.0	1.26	250.01	12,370.9	-302.1	225.8	376.8	0.00	0.00	0.00	
12,500.0	1.26	250.01	12,470.9	-302.8	223.8	376.3	0.00	0.00	0.00	
12,600.0	1.26	250.01	12,570.9	-303.6	221.7	375.7	0.00	0.00	0.00	
Rollins										
12,678.1	1.26	250.01	12,649.0	-304.1	220.1	375.3	0.00	0.00	0.00	
12,700.0	1.26	250.01	12,670.8	-304.3	219.7	375.2	0.00	0.00	0.00	
12,800.0	1.26	250.01	12,770.8	-305.1	217.6	374.6	0.00	0.00	0.00	
12,900.0	1.26	250.01	12,870.8	-305.8	215.6	374.1	0.00	0.00	0.00	
13,000.0	1.26	250.01	12,970.8	-306.6	213.5	373.6	0.00	0.00	0.00	
13,100.0	1.26	250.01	13,070.8	-307.3	211.4	373.0	0.00	0.00	0.00	
13,178.3	1.26	250.01	13,149.0	-307.9	209.8	372.6	0.00	0.00	0.00	

Database:	KLXDirectional-AD	Local Co-ordinate Reference:	Well ELU M12 FED 15B-12 496 - Slot 15B-12
Company:	QB Energy Operating, LLC	TVD Reference:	RKB=26' @ 8011.0usft (TBD)
Project:	Rio Blanco County, CO	MD Reference:	RKB=26' @ 8011.0usft (TBD)
Site:	ELU M12 496	North Reference:	True
Well:	ELU M12 FED 15B-12 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #4		

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
15B-12 - OHCR - plan hits target center - Point	0.00	0.00	8,543.0	-273.7	303.8	14,434,226.39	2,449,899.73	39.712147	-108.121865
15B-12 - PBHL - plan hits target center - Ellipse (radii L100.0 W50.0 on 250.00 azi)	0.00	0.00	13,149.0	-307.9	209.8	14,434,189.20	2,449,806.90	39.712053	-108.122199

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,037.2	4,009.0	Wasatch				
6,121.2	6,093.0	Wasatch G				
6,733.2	6,705.0	Fort Union				
8,571.2	8,543.0	Ohio Creek				
9,158.3	9,130.0	Williams Fork				
12,178.0	12,149.0	Cameo				
12,678.1	12,649.0	Rollins				