

Project: Rio Blanco County, CO
Site: ELU A18 495 Pad
Well: ELU A18 FED 21A-13 496
Wellbore: Wellbore #1
Design: Design #2
Latitude: 39.708961
Longitude: -108.103777
Ground Level: 8029.0
RKB @ 8059.0usft (30')

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 @ 8059.0usft (30')
Section (VS) Reference: Slot - 21A-13(0.0N, 0.0E)
Measured Depth Reference: RKB @ 8059.0usft (30')
Calculation Method: Minimum Curvature

SECTION DETAILS

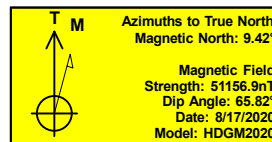
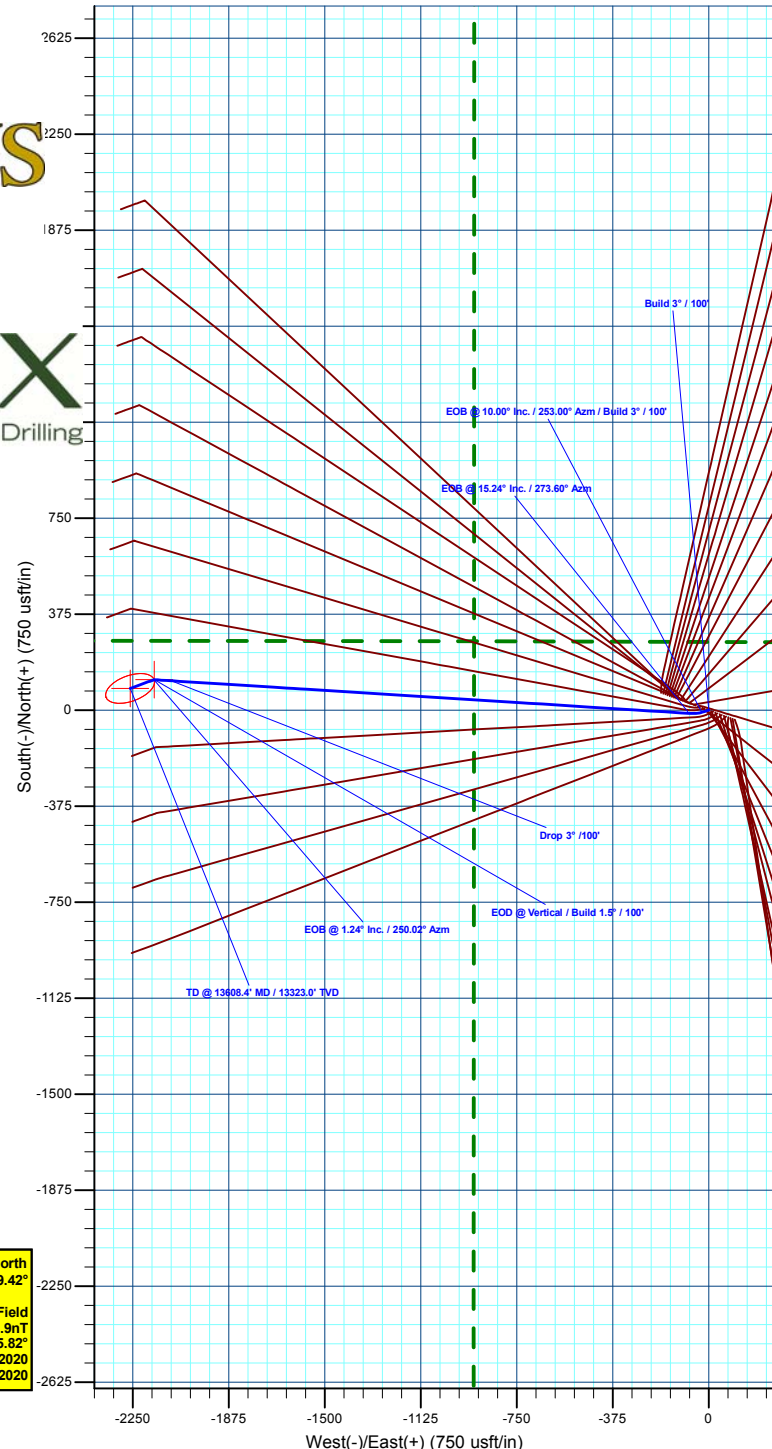
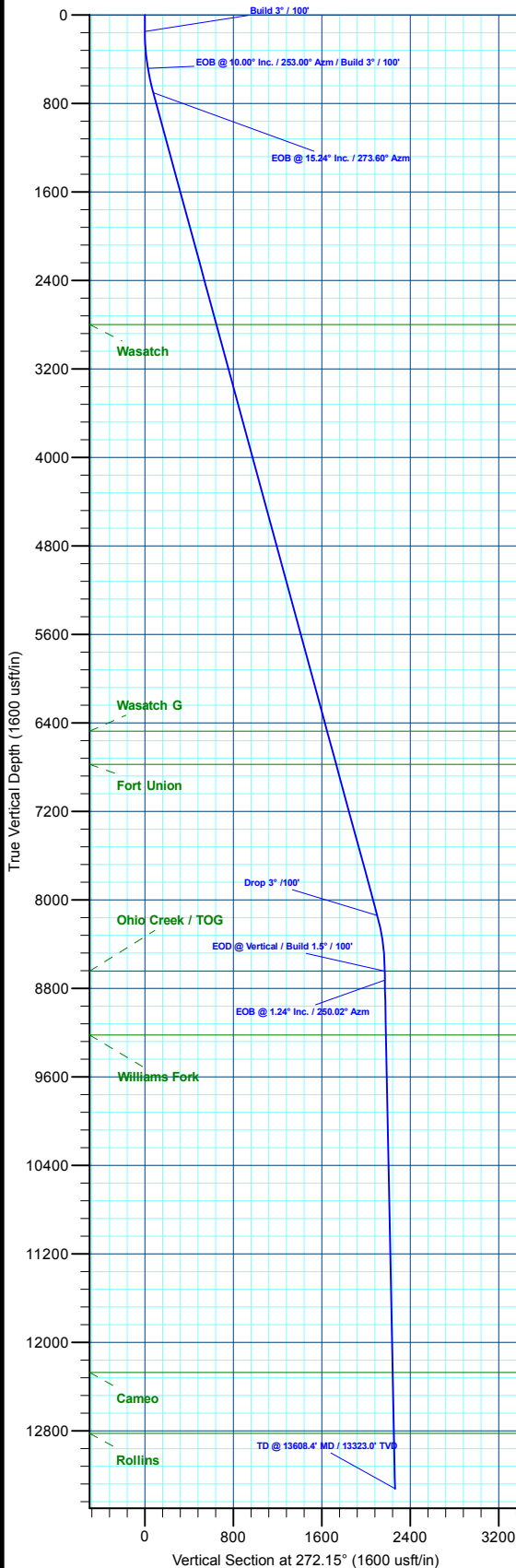
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
483.3	10.00	253.00	481.6	-8.5	-27.7	3.00	253.00	27.4	EOB @ 10.00° Inc. / 253.00° Azm / Build 3° / 100'
711.1	15.24	273.60	703.9	-12.4	-76.6	3.00	51.04	76.1	EOB @ 15.24° Inc. / 273.60° Azm
8420.2	15.24	273.60	8141.9	114.9	-2099.3	0.00	0.00	2102.2	Drop 3° / 100'
8928.3	0.00	0.00	8644.0	119.1	-2166.4	3.00	180.00	2169.3	EOD @ Vertical / Build 1.5° / 100'
9010.7	1.24	250.02	8726.3	118.8	-2167.2	1.50	250.02	2170.2	EOB @ 1.24° Inc. / 250.02° Azm
13608.4	1.24	250.02	13323.0	84.9	-2260.4	0.00	0.00	2262.0	TD @ 13608.4' MD / 13323.0' TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northings	Easting	Latitude	Longitude
21A-13 - OHCR8644.0	119.1	-2166.4	14433278.89	2452856.23	39.709287	-108.111474	
21A-13 - PBH113323.0	84.9	-2260.4	14433241.70	2452763.40	39.709194	-108.111808	

WELL DETAILS: ELU A18 FED 21A-13 496

+N/-S	+E/-W	Ground Level : 8029.0	Northings	Easting	Latitude	Longitude
0.0	0.0	14433229.83	2455025.34	39.708961	-108.103777	21A-13



Plan: Design #2 (ELU A18 FED 21A-13 496/Wellbore #1)

Created By: Will Jircik

Date: 13:28, May 18 2022



Caerus Oil & Gas

Rio Blanco County, CO

ELU A18 495 Pad

ELU A18 FED 21A-13 496 - Slot 21A-13

Wellbore #1

Plan: Design #2

KLX Well Planning Report

18 May, 2022



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU A18 FED 21A-13 496 - Slot 21A-13
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8059.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 8059.0usft (30')
Site:	ELU A18 495 Pad	North Reference:	True
Well:	ELU A18 FED 21A-13 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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		ELU A18 495 Pad			
Site Position:		Northing:	14,433,279.80 usft	Latitude:	39.709109
From:	Map	Easting:	2,454,904.40 usft	Longitude:	-108.104201
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.85 °

Well	ELU A18 FED 21A-13 496 - Slot 21A-13					
Well Position	+N/-S	-53.9 usft	Northing:	14,433,229.83 usft	Latitude:	39.708961
	+E/-W	119.3 usft	Easting:	2,455,025.34 usft	Longitude:	-108.103777
Position Uncertainty	0.0 usft		Wellhead Elevation:		Ground Level:	8,029.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2020	8/17/2020	9.42	65.82	51,156.90000000

Design	Design #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	272.15

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	
150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.00	0.00	
483.3	10.00	253.00	481.6	-8.5	-27.7	3.00	3.00	0.00	253.00	
711.1	15.24	273.60	703.9	-12.4	-76.6	3.00	2.30	9.05	51.04	
8,420.2	15.24	273.60	8,141.9	114.9	-2,099.3	0.00	0.00	0.00	0.00	
8,928.3	0.00	0.00	8,644.0	119.1	-2,166.4	3.00	-3.00	0.00	180.00	21A-13 - OHCR
9,010.7	1.24	250.02	8,726.3	118.8	-2,167.2	1.50	1.50	-133.56	250.02	
13,608.4	1.24	250.02	13,323.0	84.9	-2,260.4	0.00	0.00	0.00	0.00	21A-13 - PBHL

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU A18 FED 21A-13 496 - Slot 21A-13
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8059.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 8059.0usft (30')
Site:	ELU A18 495 Pad	North Reference:	True
Well:	ELU A18 FED 21A-13 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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'									
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	1.50	253.00	200.0	-0.2	-0.6	0.6	3.00	3.00	0.00
300.0	4.50	253.00	299.8	-1.7	-5.6	5.6	3.00	3.00	0.00
400.0	7.50	253.00	399.3	-4.8	-15.6	15.4	3.00	3.00	0.00
EOB @ 10.00° Inc. / 253.00° Azm / Build 3° / 100'									
483.3	10.00	253.00	481.6	-8.5	-27.7	27.4	3.00	3.00	0.00
500.0	10.32	255.17	498.0	-9.3	-30.6	30.2	3.00	1.93	13.02
600.0	12.50	265.67	596.1	-12.4	-50.0	49.5	3.00	2.18	10.50
700.0	14.96	272.94	693.2	-12.6	-73.7	73.2	3.00	2.46	7.27
EOB @ 15.24° Inc. / 273.60° Azm									
711.1	15.24	273.60	703.9	-12.4	-76.6	76.1	3.00	2.57	5.97
800.0	15.24	273.60	789.7	-10.9	-99.9	99.4	0.00	0.00	0.00
900.0	15.24	273.60	886.2	-9.3	-126.2	125.7	0.00	0.00	0.00
1,000.0	15.24	273.60	982.7	-7.6	-152.4	152.0	0.00	0.00	0.00
1,100.0	15.24	273.60	1,079.2	-6.0	-178.6	178.3	0.00	0.00	0.00
1,200.0	15.24	273.60	1,175.6	-4.3	-204.9	204.6	0.00	0.00	0.00
1,300.0	15.24	273.60	1,272.1	-2.7	-231.1	230.9	0.00	0.00	0.00
1,400.0	15.24	273.60	1,368.6	-1.0	-257.4	257.1	0.00	0.00	0.00
1,500.0	15.24	273.60	1,465.1	0.6	-283.6	283.4	0.00	0.00	0.00
1,600.0	15.24	273.60	1,561.6	2.3	-309.8	309.7	0.00	0.00	0.00
1,700.0	15.24	273.60	1,658.1	3.9	-336.1	336.0	0.00	0.00	0.00
1,800.0	15.24	273.60	1,754.5	5.6	-362.3	362.3	0.00	0.00	0.00
1,900.0	15.24	273.60	1,851.0	7.2	-388.5	388.5	0.00	0.00	0.00
2,000.0	15.24	273.60	1,947.5	8.9	-414.8	414.8	0.00	0.00	0.00
2,100.0	15.24	273.60	2,044.0	10.5	-441.0	441.1	0.00	0.00	0.00
2,200.0	15.24	273.60	2,140.5	12.2	-467.3	467.4	0.00	0.00	0.00
2,300.0	15.24	273.60	2,236.9	13.8	-493.5	493.7	0.00	0.00	0.00
2,400.0	15.24	273.60	2,333.4	15.5	-519.7	520.0	0.00	0.00	0.00
2,500.0	15.24	273.60	2,429.9	17.1	-546.0	546.2	0.00	0.00	0.00
2,600.0	15.24	273.60	2,526.4	18.8	-572.2	572.5	0.00	0.00	0.00
2,700.0	15.24	273.60	2,622.9	20.4	-598.5	598.8	0.00	0.00	0.00
2,800.0	15.24	273.60	2,719.4	22.1	-624.7	625.1	0.00	0.00	0.00
Wasatch									
2,883.6	15.24	273.60	2,800.0	23.5	-646.6	647.0	0.00	0.00	0.00
2,900.0	15.24	273.60	2,815.8	23.8	-650.9	651.4	0.00	0.00	0.00
3,000.0	15.24	273.60	2,912.3	25.4	-677.2	677.6	0.00	0.00	0.00
3,100.0	15.24	273.60	3,008.8	27.1	-703.4	703.9	0.00	0.00	0.00
3,200.0	15.24	273.60	3,105.3	28.7	-729.6	730.2	0.00	0.00	0.00
3,300.0	15.24	273.60	3,201.8	30.4	-755.9	756.5	0.00	0.00	0.00
3,400.0	15.24	273.60	3,298.2	32.0	-782.1	782.8	0.00	0.00	0.00
3,500.0	15.24	273.60	3,394.7	33.7	-808.4	809.1	0.00	0.00	0.00
3,600.0	15.24	273.60	3,491.2	35.3	-834.6	835.3	0.00	0.00	0.00
3,700.0	15.24	273.60	3,587.7	37.0	-860.8	861.6	0.00	0.00	0.00
3,800.0	15.24	273.60	3,684.2	38.6	-887.1	887.9	0.00	0.00	0.00
3,900.0	15.24	273.60	3,780.7	40.3	-913.3	914.2	0.00	0.00	0.00
4,000.0	15.24	273.60	3,877.1	41.9	-939.5	940.5	0.00	0.00	0.00
4,100.0	15.24	273.60	3,973.6	43.6	-965.8	966.7	0.00	0.00	0.00
4,200.0	15.24	273.60	4,070.1	45.2	-992.0	993.0	0.00	0.00	0.00
4,300.0	15.24	273.60	4,166.6	46.9	-1,018.3	1,019.3	0.00	0.00	0.00
4,400.0	15.24	273.60	4,263.1	48.5	-1,044.5	1,045.6	0.00	0.00	0.00
4,500.0	15.24	273.60	4,359.6	50.2	-1,070.7	1,071.9	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU A18 FED 21A-13 496 - Slot 21A-13
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8059.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 8059.0usft (30')
Site:	ELU A18 495 Pad	North Reference:	True
Well:	ELU A18 FED 21A-13 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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	15.24	273.60	4,456.0	51.8	-1,097.0	1,098.1	0.00	0.00	0.00
4,700.0	15.24	273.60	4,552.5	53.5	-1,123.2	1,124.4	0.00	0.00	0.00
4,800.0	15.24	273.60	4,649.0	55.1	-1,149.5	1,150.7	0.00	0.00	0.00
4,900.0	15.24	273.60	4,745.5	56.8	-1,175.7	1,177.0	0.00	0.00	0.00
5,000.0	15.24	273.60	4,842.0	58.4	-1,201.9	1,203.3	0.00	0.00	0.00
5,100.0	15.24	273.60	4,938.4	60.1	-1,228.2	1,229.6	0.00	0.00	0.00
5,200.0	15.24	273.60	5,034.9	61.7	-1,254.4	1,255.8	0.00	0.00	0.00
5,300.0	15.24	273.60	5,131.4	63.4	-1,280.6	1,282.1	0.00	0.00	0.00
5,400.0	15.24	273.60	5,227.9	65.0	-1,306.9	1,308.4	0.00	0.00	0.00
5,500.0	15.24	273.60	5,324.4	66.7	-1,333.1	1,334.7	0.00	0.00	0.00
5,600.0	15.24	273.60	5,420.9	68.3	-1,359.4	1,361.0	0.00	0.00	0.00
5,700.0	15.24	273.60	5,517.3	70.0	-1,385.6	1,387.2	0.00	0.00	0.00
5,800.0	15.24	273.60	5,613.8	71.6	-1,411.8	1,413.5	0.00	0.00	0.00
5,900.0	15.24	273.60	5,710.3	73.3	-1,438.1	1,439.8	0.00	0.00	0.00
6,000.0	15.24	273.60	5,806.8	74.9	-1,464.3	1,466.1	0.00	0.00	0.00
6,100.0	15.24	273.60	5,903.3	76.6	-1,490.6	1,492.4	0.00	0.00	0.00
6,200.0	15.24	273.60	5,999.8	78.2	-1,516.8	1,518.7	0.00	0.00	0.00
6,300.0	15.24	273.60	6,096.2	79.9	-1,543.0	1,544.9	0.00	0.00	0.00
6,400.0	15.24	273.60	6,192.7	81.5	-1,569.3	1,571.2	0.00	0.00	0.00
6,500.0	15.24	273.60	6,289.2	83.2	-1,595.5	1,597.5	0.00	0.00	0.00
6,600.0	15.24	273.60	6,385.7	84.8	-1,621.7	1,623.8	0.00	0.00	0.00
Wasatch G									
6,692.6	15.24	273.60	6,475.0	86.4	-1,646.0	1,648.1	0.00	0.00	0.00
6,700.0	15.24	273.60	6,482.2	86.5	-1,648.0	1,650.1	0.00	0.00	0.00
6,800.0	15.24	273.60	6,578.6	88.1	-1,674.2	1,676.3	0.00	0.00	0.00
6,900.0	15.24	273.60	6,675.1	89.8	-1,700.5	1,702.6	0.00	0.00	0.00
7,000.0	15.24	273.60	6,771.6	91.4	-1,726.7	1,728.9	0.00	0.00	0.00
Fort Union									
7,003.5	15.24	273.60	6,775.0	91.5	-1,727.6	1,729.8	0.00	0.00	0.00
7,100.0	15.24	273.60	6,868.1	93.1	-1,752.9	1,755.2	0.00	0.00	0.00
7,200.0	15.24	273.60	6,964.6	94.7	-1,779.2	1,781.5	0.00	0.00	0.00
7,300.0	15.24	273.60	7,061.1	96.4	-1,805.4	1,807.8	0.00	0.00	0.00
7,400.0	15.24	273.60	7,157.5	98.0	-1,831.6	1,834.0	0.00	0.00	0.00
7,500.0	15.24	273.60	7,254.0	99.7	-1,857.9	1,860.3	0.00	0.00	0.00
7,600.0	15.24	273.60	7,350.5	101.4	-1,884.1	1,886.6	0.00	0.00	0.00
7,700.0	15.24	273.60	7,447.0	103.0	-1,910.4	1,912.9	0.00	0.00	0.00
7,800.0	15.24	273.60	7,543.5	104.7	-1,936.6	1,939.2	0.00	0.00	0.00
7,900.0	15.24	273.60	7,640.0	106.3	-1,962.8	1,965.4	0.00	0.00	0.00
8,000.0	15.24	273.60	7,736.4	108.0	-1,989.1	1,991.7	0.00	0.00	0.00
8,100.0	15.24	273.60	7,832.9	109.6	-2,015.3	2,018.0	0.00	0.00	0.00
8,200.0	15.24	273.60	7,929.4	111.3	-2,041.6	2,044.3	0.00	0.00	0.00
8,300.0	15.24	273.60	8,025.9	112.9	-2,067.8	2,070.6	0.00	0.00	0.00
8,400.0	15.24	273.60	8,122.4	114.6	-2,094.0	2,096.9	0.00	0.00	0.00
Drop 3° /100'									
8,420.2	15.24	273.60	8,141.9	114.9	-2,099.3	2,102.2	0.00	0.00	0.00
8,500.0	12.85	273.60	8,219.3	116.1	-2,118.7	2,121.5	3.00	-3.00	0.00
8,600.0	9.85	273.60	8,317.3	117.3	-2,138.3	2,141.2	3.00	-3.00	0.00
8,700.0	6.85	273.60	8,416.2	118.3	-2,152.8	2,155.7	3.00	-3.00	0.00
8,800.0	3.85	273.60	8,515.8	118.8	-2,162.1	2,165.0	3.00	-3.00	0.00
8,900.0	0.85	273.60	8,615.7	119.1	-2,166.2	2,169.1	3.00	-3.00	0.00
EOD @ Vertical / Build 1.5° / 100' - Ohio Creek / TOG									
8,928.3	0.00	0.00	8,644.0	119.1	-2,166.4	2,169.3	3.00	-3.00	305.07
9,000.0	1.08	250.02	8,715.7	118.9	-2,167.0	2,170.0	1.50	1.50	-153.44

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU A18 FED 21A-13 496 - Slot 21A-13
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8059.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 8059.0usft (30')
Site:	ELU A18 495 Pad	North Reference:	True
Well:	ELU A18 FED 21A-13 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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)
EOB @ 1.24° Inc. / 250.02° Azm									
9,010.7	1.24	250.02	8,726.3	118.8	-2,167.2	2,170.2	1.50	1.50	0.00
9,100.0	1.24	250.02	8,815.7	118.2	-2,169.0	2,171.9	0.00	0.00	0.00
9,200.0	1.24	250.02	8,915.6	117.4	-2,171.1	2,173.9	0.00	0.00	0.00
9,300.0	1.24	250.02	9,015.6	116.7	-2,173.1	2,175.9	0.00	0.00	0.00
9,400.0	1.24	250.02	9,115.6	115.9	-2,175.1	2,177.9	0.00	0.00	0.00
9,500.0	1.24	250.02	9,215.6	115.2	-2,177.1	2,179.9	0.00	0.00	0.00
Williams Fork									
9,506.4	1.24	250.02	9,222.0	115.2	-2,177.3	2,180.1	0.00	0.00	0.00
9,600.0	1.24	250.02	9,315.5	114.5	-2,179.2	2,181.9	0.00	0.00	0.00
9,700.0	1.24	250.02	9,415.5	113.7	-2,181.2	2,183.9	0.00	0.00	0.00
9,800.0	1.24	250.02	9,515.5	113.0	-2,183.2	2,185.9	0.00	0.00	0.00
9,900.0	1.24	250.02	9,615.5	112.3	-2,185.2	2,187.9	0.00	0.00	0.00
10,000.0	1.24	250.02	9,715.4	111.5	-2,187.3	2,189.9	0.00	0.00	0.00
10,100.0	1.24	250.02	9,815.4	110.8	-2,189.3	2,191.9	0.00	0.00	0.00
10,200.0	1.24	250.02	9,915.4	110.0	-2,191.3	2,193.9	0.00	0.00	0.00
10,300.0	1.24	250.02	10,015.4	109.3	-2,193.3	2,195.9	0.00	0.00	0.00
10,400.0	1.24	250.02	10,115.3	108.6	-2,195.4	2,197.9	0.00	0.00	0.00
10,500.0	1.24	250.02	10,215.3	107.8	-2,197.4	2,199.9	0.00	0.00	0.00
10,600.0	1.24	250.02	10,315.3	107.1	-2,199.4	2,201.9	0.00	0.00	0.00
10,700.0	1.24	250.02	10,415.3	106.4	-2,201.5	2,203.9	0.00	0.00	0.00
10,800.0	1.24	250.02	10,515.3	105.6	-2,203.5	2,205.9	0.00	0.00	0.00
10,900.0	1.24	250.02	10,615.2	104.9	-2,205.5	2,207.9	0.00	0.00	0.00
11,000.0	1.24	250.02	10,715.2	104.2	-2,207.5	2,209.9	0.00	0.00	0.00
11,100.0	1.24	250.02	10,815.2	103.4	-2,209.6	2,211.9	0.00	0.00	0.00
11,200.0	1.24	250.02	10,915.2	102.7	-2,211.6	2,213.9	0.00	0.00	0.00
11,300.0	1.24	250.02	11,015.1	101.9	-2,213.6	2,215.9	0.00	0.00	0.00
11,400.0	1.24	250.02	11,115.1	101.2	-2,215.6	2,217.9	0.00	0.00	0.00
11,500.0	1.24	250.02	11,215.1	100.5	-2,217.7	2,219.9	0.00	0.00	0.00
11,600.0	1.24	250.02	11,315.1	99.7	-2,219.7	2,221.9	0.00	0.00	0.00
11,700.0	1.24	250.02	11,415.0	99.0	-2,221.7	2,223.9	0.00	0.00	0.00
11,800.0	1.24	250.02	11,515.0	98.3	-2,223.7	2,225.9	0.00	0.00	0.00
11,900.0	1.24	250.02	11,615.0	97.5	-2,225.8	2,227.9	0.00	0.00	0.00
12,000.0	1.24	250.02	11,715.0	96.8	-2,227.8	2,229.9	0.00	0.00	0.00
12,100.0	1.24	250.02	11,815.0	96.1	-2,229.8	2,231.9	0.00	0.00	0.00
12,200.0	1.24	250.02	11,914.9	95.3	-2,231.8	2,233.8	0.00	0.00	0.00
12,300.0	1.24	250.02	12,014.9	94.6	-2,233.9	2,235.8	0.00	0.00	0.00
12,400.0	1.24	250.02	12,114.9	93.8	-2,235.9	2,237.8	0.00	0.00	0.00
12,500.0	1.24	250.02	12,214.9	93.1	-2,237.9	2,239.8	0.00	0.00	0.00
Cameo									
12,558.2	1.24	250.02	12,273.0	92.7	-2,239.1	2,241.0	0.00	0.00	0.00
12,600.0	1.24	250.02	12,314.8	92.4	-2,239.9	2,241.8	0.00	0.00	0.00
12,700.0	1.24	250.02	12,414.8	91.6	-2,242.0	2,243.8	0.00	0.00	0.00
12,800.0	1.24	250.02	12,514.8	90.9	-2,244.0	2,245.8	0.00	0.00	0.00
12,900.0	1.24	250.02	12,614.8	90.2	-2,246.0	2,247.8	0.00	0.00	0.00
13,000.0	1.24	250.02	12,714.7	89.4	-2,248.0	2,249.8	0.00	0.00	0.00
13,100.0	1.24	250.02	12,814.7	88.7	-2,250.1	2,251.8	0.00	0.00	0.00
Rollins									
13,108.3	1.24	250.02	12,823.0	88.6	-2,250.2	2,252.0	0.00	0.00	0.00
13,200.0	1.24	250.02	12,914.7	88.0	-2,252.1	2,253.8	0.00	0.00	0.00
13,300.0	1.24	250.02	13,014.7	87.2	-2,254.1	2,255.8	0.00	0.00	0.00
13,400.0	1.24	250.02	13,114.7	86.5	-2,256.2	2,257.8	0.00	0.00	0.00
13,500.0	1.24	250.02	13,214.6	85.7	-2,258.2	2,259.8	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU A18 FED 21A-13 496 - Slot 21A-13
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8059.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 8059.0usft (30')
Site:	ELU A18 495 Pad	North Reference:	True
Well:	ELU A18 FED 21A-13 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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)
TD @ 13608.4' MD / 13323.0' TVD									
13,608.4	1.24	250.02	13,323.0	84.9	-2,260.4	2,262.0	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
21A-13 - OHCR - hit/miss target - Shape - Point	0.00	0.00	8,644.0	119.1	-2,166.4	14,433,278.89	2,452,856.23	39.709287	-108.111474
21A-13 - PBHL - plan hits target center - Ellipse (radii L100.0 W50.0 on 250.00 azi)	0.00	0.00	13,323.0	84.9	-2,260.4	14,433,241.70	2,452,763.40	39.709194	-108.111808

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,883.6	2,800.0	Wasatch				
6,692.6	6,475.0	Wasatch G				
7,003.5	6,775.0	Fort Union				
8,928.3	8,644.0	Ohio Creek / TOG				
9,506.4	9,222.0	Williams Fork				
12,558.2	12,273.0	Cameo				
13,108.3	12,823.0	Rollins				

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
150.0	150.0	0.0	0.0	Build 3° / 100'
483.3	481.6	-8.5	-27.7	EOB @ 10.00° Inc. / 253.00° Azm / Build 3° / 100'
711.1	703.9	-12.4	-76.6	EOB @ 15.24° Inc. / 273.60° Azm
8,420.2	8,141.9	114.9	-2,099.3	Drop 3° / 100'
8,928.3	8,644.0	119.1	-2,166.4	EOD @ Vertical / Build 1.5° / 100'
9,010.7	8,726.3	118.8	-2,167.2	EOB @ 1.24° Inc. / 250.02° Azm
13,608.4	13,323.0	84.9	-2,260.4	TD @ 13608.4' MD / 13323.0' TVD