

Project: Rio Blanco County, CO
 Site: ELU O13 496 Pad
 Well: ELU O13 FED 23A-13 496
 Wellbore: Wellbore #1
 Design: Design #1
 Latitude: 39.698694
 Longitude: -108.114472
 Ground Level: 8118.0
 RKB @ 8148.0usft (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 @ 8148.0usft (30')
 Section (VS) Reference: Slot - ELU O13 FED 23A-13 496(0.0N, 0.0E)
 Measured Depth Reference: RKB @ 8148.0usft (30')
 Calculation Method: Minimum Curvature

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4077.0	4183.6	Wasatch
6477.0	6657.7	Wasatch G
6777.0	6967.0	Fort Union
8676.0	8915.0	Ohio Creek / TOG
9228.0	9467.1	Williams Fork
12233.0	12472.9	Cameo
12733.0	12973.1	Rollins

SECTION DETAILS

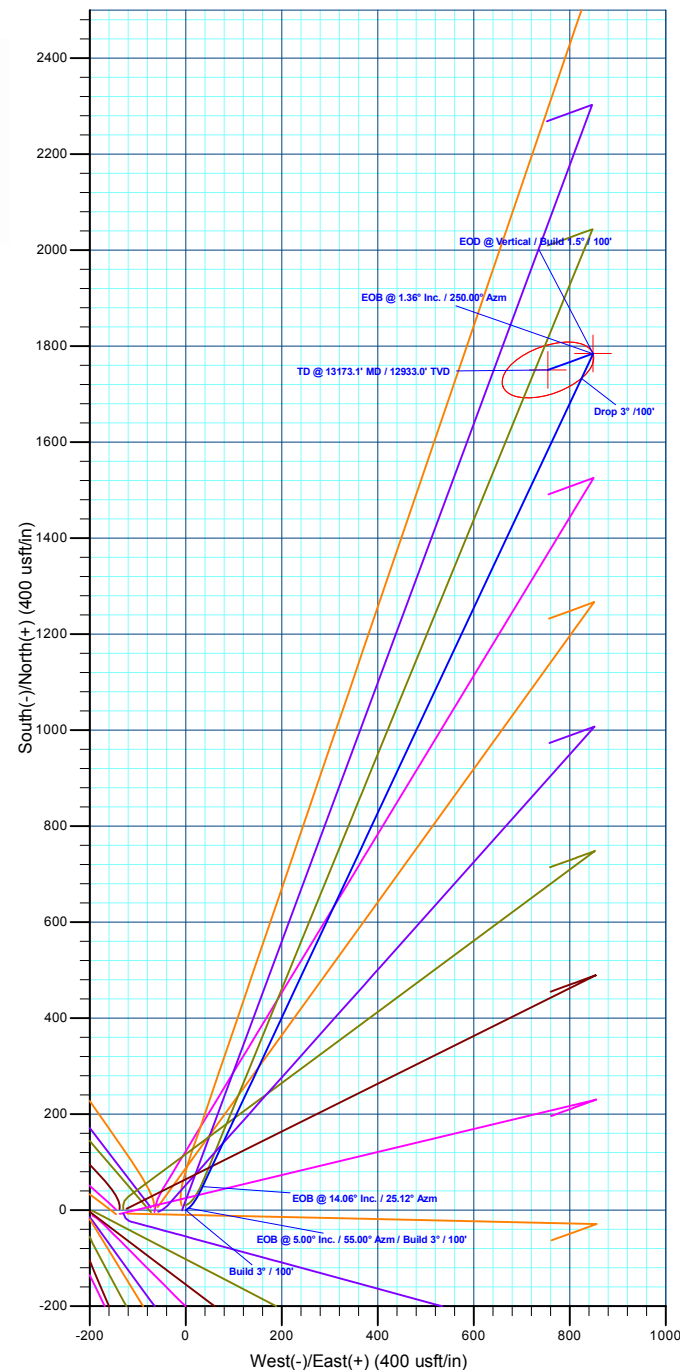
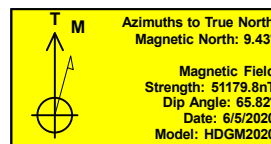
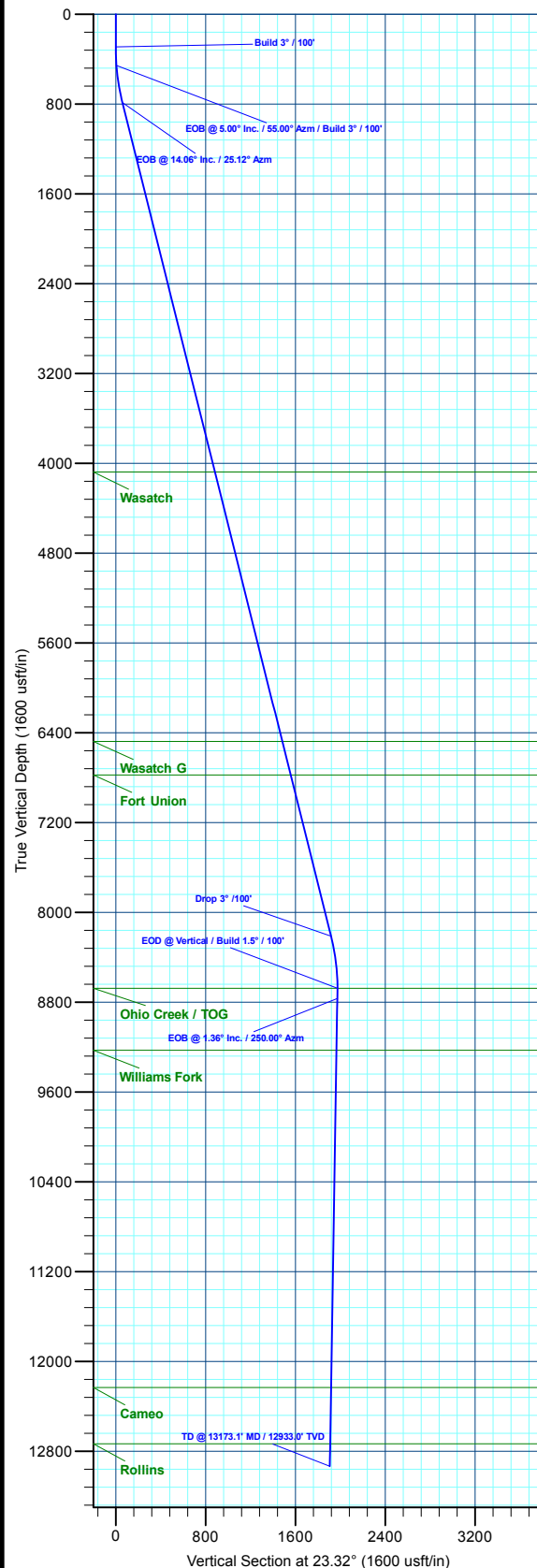
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dieg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
290.0	0.00	0.00	290.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
456.7	5.00	55.00	456.5	4.2	6.0	3.00	55.00	6.2	EOB @ 5.00° Inc. / 55.00° Azm / Build 3° / 100'
791.0	14.06	25.12	786.0	49.4	35.2	3.00	-44.02	59.3	EOB @ 14.06° Inc. / 25.12° Azm
8446.4	14.06	25.12	8212.1	1733.0	824.4	0.00	0.00	1917.8	Drop 3° / 100'
8915.0	0.00	0.00	8676.0	1784.8	848.7	3.00	180.00	1975.0	EOD @ Vertical / Build 1.5° / 100'
9005.6	1.36	250.00	8766.7	1784.5	847.7	1.50	250.00	1974.3	EOB @ 1.36° Inc. / 250.00° Azm
13173.1	1.36	250.00	12933.0	1750.6	754.7	0.00	0.00	1906.4	TD @ 13173.1' MD / 12933.0' TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
OHCR - 23A-13	8676.0	1784.8	848.7	14431204.91	2452927.82	39.703592	-108.111457
PBHL - 23A-13	12933.0	1750.6	754.7	14431167.70	2452835.00	39.703498	-108.111791

WELL DETAILS: ELU O13 FED 23A-13 496

+N/-S	+E/-W	Ground Level : 8118.0	Latitude	Longitude
0.0	0.0	Northing 14429393.70	39.698694	-108.114472
		Easting 2452137.00		



Plan: Design #1 (ELU O13 FED 23A-13 496/Wellbore #1)

Created By: Will Jircik

Date: 14:49, June 18 2020



Caerus Oil & Gas

Rio Blanco County, CO

ELU O13 496 Pad

ELU O13 FED 23A-13 496 - Slot ELU O13 FED 23A-13 496

Wellbore #1

Plan: Design #1

QES Well Planning Report

18 June, 2020



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 23A-13 496 - Slot ELU O13 FED 23A-13 496
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8148.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 8148.0usft (30')
Site:	ELU O13 496 Pad	North Reference:	True
Well:	ELU O13 FED 23A-13 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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 O13 496 Pad		
Site Position:		Northing:	14,429,398.00 usft
From:	Map	Easting:	2,452,071.40 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	39.698712
		Longitude:	-108.114705
		Grid Convergence:	1.84 °

Well	ELU O13 FED 23A-13 496 - Slot ELU O13 FED 23A-13 496		
Well Position	+N/-S	-6.4 usft	Northing: 14,429,393.70 usft
	+E/-W	65.4 usft	Easting: 2,452,137.00 usft
Position Uncertainty		0.0 usft	Wellhead Elevation:
			Ground Level: 8,118.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2020	6/5/2020	9.43	65.82	51,179.80000000

Design	Design #1			
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	23.32

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	
290.0	0.00	0.00	290.0	0.0	0.0	0.00	0.00	0.00	0.00	
456.7	5.00	55.00	456.5	4.2	6.0	3.00	3.00	0.00	55.00	
791.0	14.06	25.12	786.0	49.4	35.2	3.00	2.71	-8.94	-44.02	
8,446.4	14.06	25.12	8,212.1	1,733.0	824.4	0.00	0.00	0.00	0.00	
8,915.0	0.00	0.00	8,676.0	1,784.8	848.7	3.00	-3.00	0.00	180.00	OHCR - 23A-13
9,005.6	1.36	250.00	8,766.7	1,784.5	847.7	1.50	1.50	-121.31	250.00	
13,173.1	1.36	250.00	12,933.0	1,750.6	754.7	0.00	0.00	0.00	0.00	PBHL - 23A-13

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 23A-13 496 - Slot ELU O13 FED 23A-13 496
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8148.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 8148.0usft (30')
Site:	ELU O13 496 Pad	North Reference:	True
Well:	ELU O13 FED 23A-13 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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
Build 3° / 100'									
290.0	0.00	0.00	290.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.30	55.00	300.0	0.0	0.0	0.0	3.00	3.00	0.00
400.0	3.30	55.00	399.9	1.8	2.6	2.7	3.00	3.00	0.00
EOB @ 5.00° Inc. / 55.00° Azm / Build 3° / 100'									
456.7	5.00	55.00	456.5	4.2	6.0	6.2	3.00	3.00	0.00
500.0	6.00	46.33	499.6	6.8	9.1	9.9	3.00	2.31	-20.01
600.0	8.62	34.67	598.8	16.6	17.2	22.0	3.00	2.62	-11.66
700.0	11.43	28.55	697.2	31.5	26.2	39.3	3.00	2.81	-6.12
EOB @ 14.06° Inc. / 25.12° Azm									
791.0	14.06	25.12	786.0	49.4	35.2	59.3	3.00	2.88	-3.77
800.0	14.06	25.12	794.7	51.4	36.1	61.5	0.00	0.00	0.00
900.0	14.06	25.12	891.7	73.4	46.4	85.8	0.00	0.00	0.00
1,000.0	14.06	25.12	988.7	95.4	56.7	110.0	0.00	0.00	0.00
1,100.0	14.06	25.12	1,085.7	117.4	67.1	134.3	0.00	0.00	0.00
1,200.0	14.06	25.12	1,182.7	139.4	77.4	158.6	0.00	0.00	0.00
1,300.0	14.06	25.12	1,279.7	161.3	87.7	182.9	0.00	0.00	0.00
1,400.0	14.06	25.12	1,376.8	183.3	98.0	207.2	0.00	0.00	0.00
1,500.0	14.06	25.12	1,473.8	205.3	108.3	231.4	0.00	0.00	0.00
1,600.0	14.06	25.12	1,570.8	227.3	118.6	255.7	0.00	0.00	0.00
1,700.0	14.06	25.12	1,667.8	249.3	128.9	280.0	0.00	0.00	0.00
1,800.0	14.06	25.12	1,764.8	271.3	139.2	304.3	0.00	0.00	0.00
1,900.0	14.06	25.12	1,861.8	293.3	149.5	328.5	0.00	0.00	0.00
2,000.0	14.06	25.12	1,958.8	315.3	159.8	352.8	0.00	0.00	0.00
2,100.0	14.06	25.12	2,055.8	337.3	170.1	377.1	0.00	0.00	0.00
2,200.0	14.06	25.12	2,152.8	359.3	180.5	401.4	0.00	0.00	0.00
2,300.0	14.06	25.12	2,249.8	381.3	190.8	425.6	0.00	0.00	0.00
2,400.0	14.06	25.12	2,346.8	403.3	201.1	449.9	0.00	0.00	0.00
2,500.0	14.06	25.12	2,443.8	425.3	211.4	474.2	0.00	0.00	0.00
2,600.0	14.06	25.12	2,540.8	447.3	221.7	498.5	0.00	0.00	0.00
2,700.0	14.06	25.12	2,637.8	469.2	232.0	522.8	0.00	0.00	0.00
2,800.0	14.06	25.12	2,734.8	491.2	242.3	547.0	0.00	0.00	0.00
2,900.0	14.06	25.12	2,831.8	513.2	252.6	571.3	0.00	0.00	0.00
3,000.0	14.06	25.12	2,928.8	535.2	262.9	595.6	0.00	0.00	0.00
3,100.0	14.06	25.12	3,025.8	557.2	273.2	619.9	0.00	0.00	0.00
3,200.0	14.06	25.12	3,122.8	579.2	283.6	644.1	0.00	0.00	0.00
3,300.0	14.06	25.12	3,219.9	601.2	293.9	668.4	0.00	0.00	0.00
3,400.0	14.06	25.12	3,316.9	623.2	304.2	692.7	0.00	0.00	0.00
3,500.0	14.06	25.12	3,413.9	645.2	314.5	717.0	0.00	0.00	0.00
3,600.0	14.06	25.12	3,510.9	667.2	324.8	741.3	0.00	0.00	0.00
3,700.0	14.06	25.12	3,607.9	689.2	335.1	765.5	0.00	0.00	0.00
3,800.0	14.06	25.12	3,704.9	711.2	345.4	789.8	0.00	0.00	0.00
3,900.0	14.06	25.12	3,801.9	733.2	355.7	814.1	0.00	0.00	0.00
4,000.0	14.06	25.12	3,898.9	755.2	366.0	838.4	0.00	0.00	0.00
4,100.0	14.06	25.12	3,995.9	777.1	376.3	862.6	0.00	0.00	0.00
Wasatch									
4,183.6	14.06	25.12	4,077.0	795.5	385.0	882.9	0.00	0.00	0.00
4,200.0	14.06	25.12	4,092.9	799.1	386.6	886.9	0.00	0.00	0.00
4,300.0	14.06	25.12	4,189.9	821.1	397.0	911.2	0.00	0.00	0.00
4,400.0	14.06	25.12	4,286.9	843.1	407.3	935.5	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 23A-13 496 - Slot ELU O13 FED 23A-13 496
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8148.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 8148.0usft (30')
Site:	ELU O13 496 Pad	North Reference:	True
Well:	ELU O13 FED 23A-13 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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)
4,500.0	14.06	25.12	4,383.9	865.1	417.6	959.7	0.00	0.00	0.00
4,600.0	14.06	25.12	4,480.9	887.1	427.9	984.0	0.00	0.00	0.00
4,700.0	14.06	25.12	4,577.9	909.1	438.2	1,008.3	0.00	0.00	0.00
4,800.0	14.06	25.12	4,674.9	931.1	448.5	1,032.6	0.00	0.00	0.00
4,900.0	14.06	25.12	4,771.9	953.1	458.8	1,056.9	0.00	0.00	0.00
5,000.0	14.06	25.12	4,868.9	975.1	469.1	1,081.1	0.00	0.00	0.00
5,100.0	14.06	25.12	4,965.9	997.1	479.4	1,105.4	0.00	0.00	0.00
5,200.0	14.06	25.12	5,063.0	1,019.1	489.7	1,129.7	0.00	0.00	0.00
5,300.0	14.06	25.12	5,160.0	1,041.1	500.0	1,154.0	0.00	0.00	0.00
5,400.0	14.06	25.12	5,257.0	1,063.1	510.4	1,178.2	0.00	0.00	0.00
5,500.0	14.06	25.12	5,354.0	1,085.0	520.7	1,202.5	0.00	0.00	0.00
5,600.0	14.06	25.12	5,451.0	1,107.0	531.0	1,226.8	0.00	0.00	0.00
5,700.0	14.06	25.12	5,548.0	1,129.0	541.3	1,251.1	0.00	0.00	0.00
5,800.0	14.06	25.12	5,645.0	1,151.0	551.6	1,275.4	0.00	0.00	0.00
5,900.0	14.06	25.12	5,742.0	1,173.0	561.9	1,299.6	0.00	0.00	0.00
6,000.0	14.06	25.12	5,839.0	1,195.0	572.2	1,323.9	0.00	0.00	0.00
6,100.0	14.06	25.12	5,936.0	1,217.0	582.5	1,348.2	0.00	0.00	0.00
6,200.0	14.06	25.12	6,033.0	1,239.0	592.8	1,372.5	0.00	0.00	0.00
6,300.0	14.06	25.12	6,130.0	1,261.0	603.1	1,396.7	0.00	0.00	0.00
6,400.0	14.06	25.12	6,227.0	1,283.0	613.5	1,421.0	0.00	0.00	0.00
6,500.0	14.06	25.12	6,324.0	1,305.0	623.8	1,445.3	0.00	0.00	0.00
6,600.0	14.06	25.12	6,421.0	1,327.0	634.1	1,469.6	0.00	0.00	0.00
Wasatch G									
6,657.7	14.06	25.12	6,477.0	1,339.7	640.0	1,483.6	0.00	0.00	0.00
6,700.0	14.06	25.12	6,518.0	1,349.0	644.4	1,493.9	0.00	0.00	0.00
6,800.0	14.06	25.12	6,615.0	1,371.0	654.7	1,518.1	0.00	0.00	0.00
6,900.0	14.06	25.12	6,712.0	1,392.9	665.0	1,542.4	0.00	0.00	0.00
Fort Union									
6,967.0	14.06	25.12	6,777.0	1,407.7	671.9	1,558.7	0.00	0.00	0.00
7,000.0	14.06	25.12	6,809.0	1,414.9	675.3	1,566.7	0.00	0.00	0.00
7,100.0	14.06	25.12	6,906.1	1,436.9	685.6	1,591.0	0.00	0.00	0.00
7,200.0	14.06	25.12	7,003.1	1,458.9	695.9	1,615.2	0.00	0.00	0.00
7,300.0	14.06	25.12	7,100.1	1,480.9	706.2	1,639.5	0.00	0.00	0.00
7,400.0	14.06	25.12	7,197.1	1,502.9	716.5	1,663.8	0.00	0.00	0.00
7,500.0	14.06	25.12	7,294.1	1,524.9	726.9	1,688.1	0.00	0.00	0.00
7,600.0	14.06	25.12	7,391.1	1,546.9	737.2	1,712.3	0.00	0.00	0.00
7,700.0	14.06	25.12	7,488.1	1,568.9	747.5	1,736.6	0.00	0.00	0.00
7,800.0	14.06	25.12	7,585.1	1,590.9	757.8	1,760.9	0.00	0.00	0.00
7,900.0	14.06	25.12	7,682.1	1,612.9	768.1	1,785.2	0.00	0.00	0.00
8,000.0	14.06	25.12	7,779.1	1,634.9	778.4	1,809.5	0.00	0.00	0.00
8,100.0	14.06	25.12	7,876.1	1,656.9	788.7	1,833.7	0.00	0.00	0.00
8,200.0	14.06	25.12	7,973.1	1,678.9	799.0	1,858.0	0.00	0.00	0.00
8,300.0	14.06	25.12	8,070.1	1,700.8	809.3	1,882.3	0.00	0.00	0.00
8,400.0	14.06	25.12	8,167.1	1,722.8	819.6	1,906.6	0.00	0.00	0.00
Drop 3° /100'									
8,446.4	14.06	25.12	8,212.1	1,733.0	824.4	1,917.8	0.00	0.00	0.00
8,500.0	12.45	25.12	8,264.3	1,744.2	829.6	1,930.1	3.00	-3.00	0.00
8,600.0	9.45	25.12	8,362.5	1,761.4	837.7	1,949.1	3.00	-3.00	0.00
8,700.0	6.45	25.12	8,461.5	1,773.9	843.6	1,962.9	3.00	-3.00	0.00
8,800.0	3.45	25.12	8,561.1	1,781.7	847.2	1,971.5	3.00	-3.00	0.00
8,900.0	0.45	25.12	8,661.0	1,784.8	848.7	1,974.9	3.00	-3.00	0.00
EOD @ Vertical / Build 1.5° / 100' - Ohio Creek / TOG									

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 23A-13 496 - Slot ELU O13 FED 23A-13 496
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8148.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 8148.0usft (30')
Site:	ELU O13 496 Pad	North Reference:	True
Well:	ELU O13 FED 23A-13 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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)
8,915.0	0.00	0.00	8,676.0	1,784.8	848.7	1,975.0	3.00	-3.00	0.00
EOB @ 1.36° Inc. / 250.00° Azm									
9,005.6	1.36	250.00	8,766.7	1,784.5	847.7	1,974.3	1.50	1.50	0.00
9,100.0	1.36	250.00	8,861.0	1,783.7	845.6	1,972.7	0.00	0.00	0.00
9,200.0	1.36	250.00	8,961.0	1,782.9	843.4	1,971.1	0.00	0.00	0.00
9,300.0	1.36	250.00	9,061.0	1,782.1	841.1	1,969.5	0.00	0.00	0.00
9,400.0	1.36	250.00	9,160.9	1,781.3	838.9	1,967.8	0.00	0.00	0.00
Williams Fork									
9,467.1	1.36	250.00	9,228.0	1,780.7	837.4	1,966.7	0.00	0.00	0.00
9,500.0	1.36	250.00	9,260.9	1,780.4	836.7	1,966.2	0.00	0.00	0.00
9,600.0	1.36	250.00	9,360.9	1,779.6	834.4	1,964.6	0.00	0.00	0.00
9,700.0	1.36	250.00	9,460.8	1,778.8	832.2	1,962.9	0.00	0.00	0.00
9,800.0	1.36	250.00	9,560.8	1,778.0	830.0	1,961.3	0.00	0.00	0.00
9,900.0	1.36	250.00	9,660.8	1,777.2	827.7	1,959.7	0.00	0.00	0.00
10,000.0	1.36	250.00	9,760.8	1,776.4	825.5	1,958.1	0.00	0.00	0.00
10,100.0	1.36	250.00	9,860.7	1,775.6	823.3	1,956.4	0.00	0.00	0.00
10,200.0	1.36	250.00	9,960.7	1,774.8	821.0	1,954.8	0.00	0.00	0.00
10,300.0	1.36	250.00	10,060.7	1,773.9	818.8	1,953.2	0.00	0.00	0.00
10,400.0	1.36	250.00	10,160.6	1,773.1	816.6	1,951.5	0.00	0.00	0.00
10,500.0	1.36	250.00	10,260.6	1,772.3	814.4	1,949.9	0.00	0.00	0.00
10,600.0	1.36	250.00	10,360.6	1,771.5	812.1	1,948.3	0.00	0.00	0.00
10,700.0	1.36	250.00	10,460.6	1,770.7	809.9	1,946.7	0.00	0.00	0.00
10,800.0	1.36	250.00	10,560.5	1,769.9	807.7	1,945.0	0.00	0.00	0.00
10,900.0	1.36	250.00	10,660.5	1,769.1	805.4	1,943.4	0.00	0.00	0.00
11,000.0	1.36	250.00	10,760.5	1,768.3	803.2	1,941.8	0.00	0.00	0.00
11,100.0	1.36	250.00	10,860.4	1,767.5	801.0	1,940.1	0.00	0.00	0.00
11,200.0	1.36	250.00	10,960.4	1,766.6	798.7	1,938.5	0.00	0.00	0.00
11,300.0	1.36	250.00	11,060.4	1,765.8	796.5	1,936.9	0.00	0.00	0.00
11,400.0	1.36	250.00	11,160.4	1,765.0	794.3	1,935.3	0.00	0.00	0.00
11,500.0	1.36	250.00	11,260.3	1,764.2	792.0	1,933.6	0.00	0.00	0.00
11,600.0	1.36	250.00	11,360.3	1,763.4	789.8	1,932.0	0.00	0.00	0.00
11,700.0	1.36	250.00	11,460.3	1,762.6	787.6	1,930.4	0.00	0.00	0.00
11,800.0	1.36	250.00	11,560.3	1,761.8	785.4	1,928.7	0.00	0.00	0.00
11,900.0	1.36	250.00	11,660.2	1,761.0	783.1	1,927.1	0.00	0.00	0.00
12,000.0	1.36	250.00	11,760.2	1,760.1	780.9	1,925.5	0.00	0.00	0.00
12,100.0	1.36	250.00	11,860.2	1,759.3	778.7	1,923.9	0.00	0.00	0.00
12,200.0	1.36	250.00	11,960.1	1,758.5	776.4	1,922.2	0.00	0.00	0.00
12,300.0	1.36	250.00	12,060.1	1,757.7	774.2	1,920.6	0.00	0.00	0.00
12,400.0	1.36	250.00	12,160.1	1,756.9	772.0	1,919.0	0.00	0.00	0.00
Cameo									
12,472.9	1.36	250.00	12,233.0	1,756.3	770.3	1,917.8	0.00	0.00	0.00
12,500.0	1.36	250.00	12,260.1	1,756.1	769.7	1,917.3	0.00	0.00	0.00
12,600.0	1.36	250.00	12,360.0	1,755.3	767.5	1,915.7	0.00	0.00	0.00
12,700.0	1.36	250.00	12,460.0	1,754.5	765.3	1,914.1	0.00	0.00	0.00
12,800.0	1.36	250.00	12,560.0	1,753.6	763.1	1,912.5	0.00	0.00	0.00
12,900.0	1.36	250.00	12,659.9	1,752.8	760.8	1,910.8	0.00	0.00	0.00
Rollins									
12,973.1	1.36	250.00	12,733.0	1,752.2	759.2	1,909.6	0.00	0.00	0.00
13,000.0	1.36	250.00	12,759.9	1,752.0	758.6	1,909.2	0.00	0.00	0.00
13,100.0	1.36	250.00	12,859.9	1,751.2	756.4	1,907.6	0.00	0.00	0.00
TD @ 13173.1' MD / 12933.0' TVD									
13,173.1	1.36	250.00	12,933.0	1,750.6	754.7	1,906.4	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 23A-13 496 - Slot ELU O13 FED 23A-13 496
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8148.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 8148.0usft (30')
Site:	ELU O13 496 Pad	North Reference:	True
Well:	ELU O13 FED 23A-13 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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
OHCR - 23A-13 - plan hits target center - Point	0.00	0.00	8,676.0	1,784.8	848.7	14,431,204.91	2,452,927.82	39.703592	-108.111457
PBHL - 23A-13 - plan hits target center - Ellipse (radii L100.0 W50.0 on 250.00 azi)	0.00	0.00	12,933.0	1,750.6	754.7	14,431,167.70	2,452,835.00	39.703499	-108.111791

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,183.6	4,077.0	Wasatch			
6,657.7	6,477.0	Wasatch G			
6,967.0	6,777.0	Fort Union			
8,915.0	8,676.0	Ohio Creek / TOG			
9,467.1	9,228.0	Williams Fork			
12,472.9	12,233.0	Cameo			
12,973.1	12,733.0	Rollins			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
290.0	290.0	0.0	0.0	Build 3° / 100'
456.7	456.5	4.2	6.0	EOB @ 5.00° Inc. / 55.00° Azm / Build 3° / 100'
791.0	786.0	49.4	35.2	EOB @ 14.06° Inc. / 25.12° Azm
8,446.4	8,212.1	1,733.0	824.4	Drop 3° / 100'
8,915.0	8,676.0	1,784.8	848.7	EOD @ Vertical / Build 1.5° / 100'
9,005.6	8,766.7	1,784.5	847.7	EOB @ 1.36° Inc. / 250.00° Azm
13,173.1	12,933.0	1,750.6	754.7	TD @ 13173.1' MD / 12933.0' TVD