

Project: Rio Blanco County, CO  
 Site: ELU O13 496 Pad  
 Well: ELU O13 FED 23B-13 496  
 Wellbore: Wellbore #1  
 Design: Design #1  
 Latitude: 39.698684  
 Longitude: -108.114703  
 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 23B-13 496(0.0N, 0.0E)  
 Measured Depth Reference: RKB @ 8148.0usft (30')  
 Calculation Method: Minimum Curvature

## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4066.0	4152.6	Wasatch
6466.0	6611.9	Wasatch G
6766.0	6919.3	Fort Union
8670.0	8863.3	Ohio Creek / TOG
9218.0	9411.5	Williams Fork
12205.0	12399.3	Cameo
12705.0	12899.5	Rollins

## SECTION DETAILS

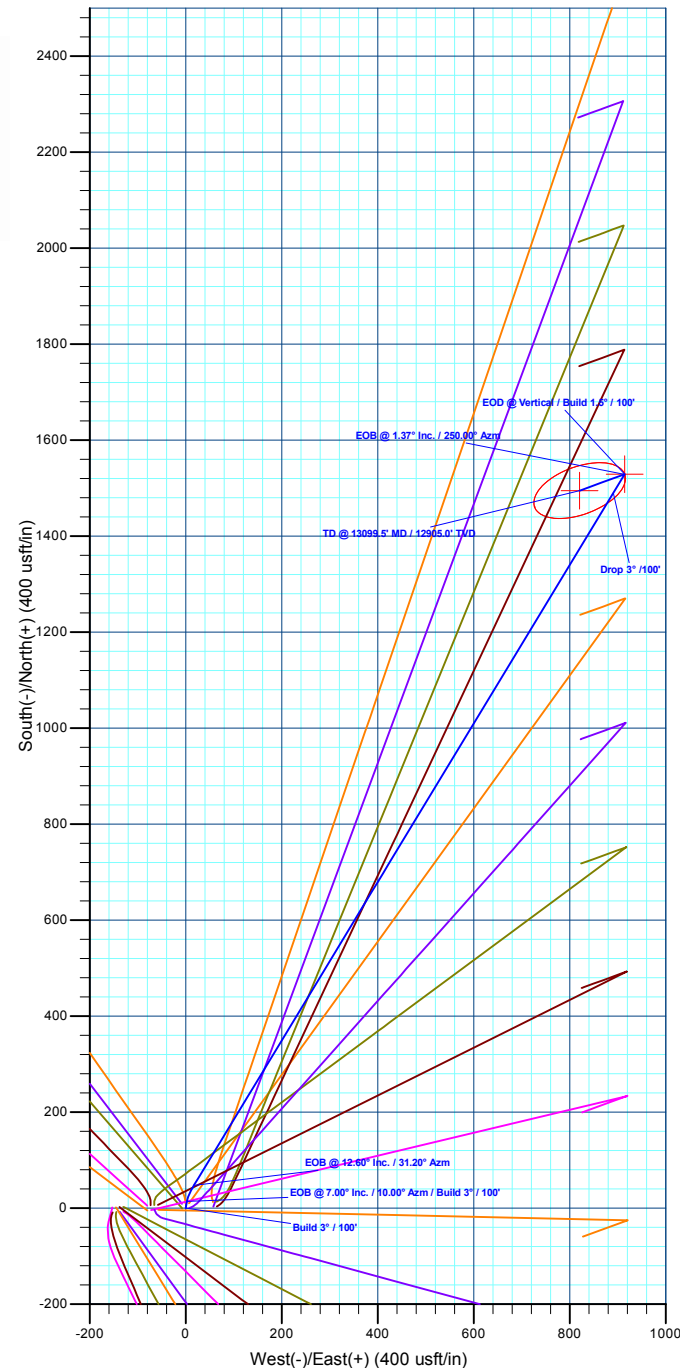
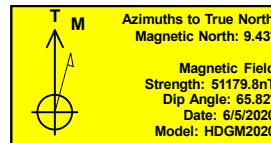
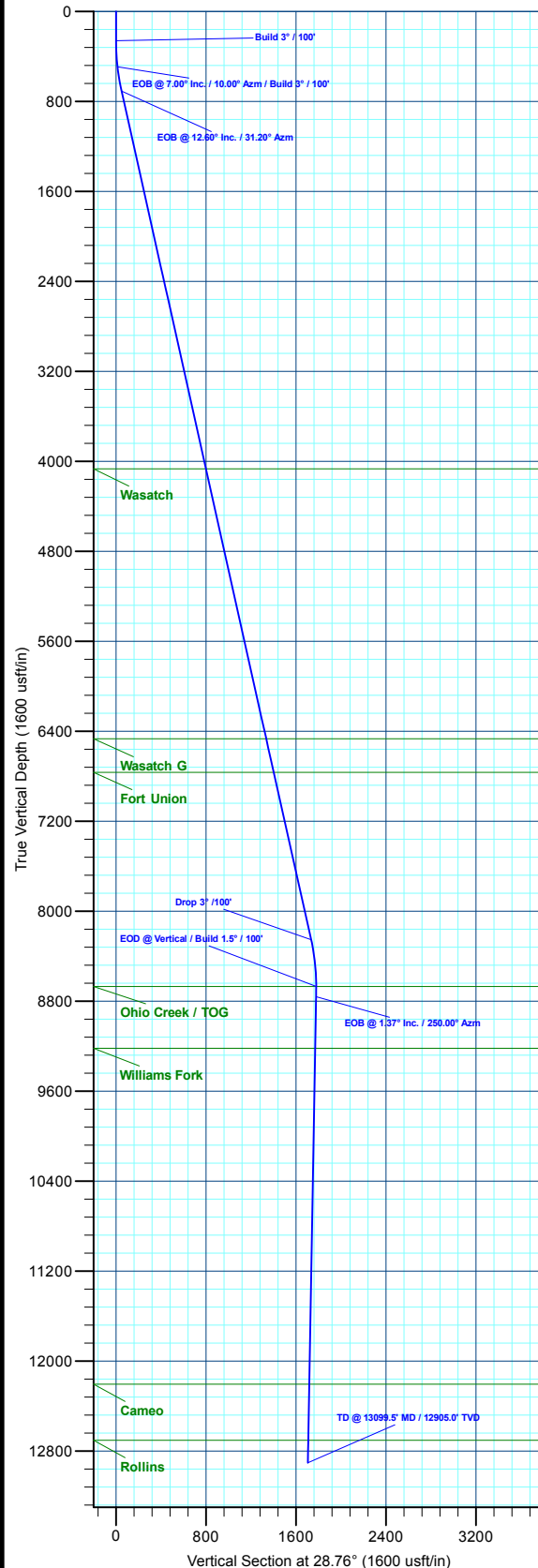
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dieg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
260.0	0.00	0.00	260.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
493.3	7.00	10.00	492.8	14.0	2.5	3.00	10.00	13.5	EOB @ 7.00° Inc. / 10.00° Azm / Build 3° / 100'
712.4	12.60	31.20	708.6	47.6	17.2	3.00	43.58	50.0	EOB @ 12.60° Inc. / 31.20° Azm
8443.4	12.60	31.20	8253.4	1490.0	890.9	0.00	0.00	1734.9	Drop 3° / 100'
8863.3	0.00	0.00	8670.0	1529.4	914.7	3.00	180.00	1780.8	EOD @ Vertical / Build 1.5° / 100'
8954.5	1.37	250.00	8761.2	1529.0	913.7	1.50	250.00	1780.0	EOB @ 1.37° Inc. / 250.00° Azm
13099.5	1.37	250.00	12905.0	1495.2	820.7	0.00	0.00	1705.6	TD @ 13099.5' MD / 12905.0' TVD

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
OHCR - 23B-13	8670.0	1529.4	914.7	14430946.01	2452937.22	39.702881	-108.111453
PBHL - 23B-13	12905.0	1495.2	820.7	14430908.80	2452844.40	39.702768	-108.111787

## WELL DETAILS: ELU O13 FED 23B-13 496

	+N/-S	+E/-W	Ground Level : 8118.0				
	0.0	0.0	Northing	Easting	Latitude	Longitude	
			14429388.00	2452072.20	39.698684	-108.114703	



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

Created By: Will Jircik

Date: 15:54, June 18 2020



## **Caerus Oil & Gas**

**Rio Blanco County, CO**

**ELU O13 496 Pad**

**ELU O13 FED 23B-13 496 - Slot ELU O13 FED 23B-13 496**

**Wellbore #1**

**Plan: Design #1**

## **QES Well Planning Report**

**18 June, 2020**



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

<b>Project</b>	Rio Blanco County, CO		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Fee	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

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

<b>Well</b>	ELU O13 FED 23B-13 496 - Slot ELU O13 FED 23B-13 496		
<b>Well Position</b>	<b>+N/-S</b>	-10.0 usft	<b>Northing:</b>
	<b>+E/-W</b>	0.5 usft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

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

<b>Design</b>	Design #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	28.76

<b>Plan Sections</b>										
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	
260.0	0.00	0.00	260.0	0.0	0.0	0.00	0.00	0.00	0.00	
493.3	7.00	10.00	492.8	14.0	2.5	3.00	3.00	0.00	10.00	
712.4	12.60	31.20	708.6	47.6	17.2	3.00	2.56	9.68	43.58	
8,443.4	12.60	31.20	8,253.4	1,490.0	890.9	0.00	0.00	0.00	0.00	
8,863.3	0.00	0.00	8,670.0	1,529.4	914.7	3.00	-3.00	0.00	180.00	OHCR - 23B-13
8,954.5	1.37	250.00	8,761.1	1,529.0	913.7	1.50	1.50	-120.67	250.00	
13,099.5	1.37	250.00	12,905.0	1,495.2	820.7	0.00	0.00	0.00	0.00	PBHL - 23B-13

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ELU O13 FED 23B-13 496 - Slot ELU O13 FED 23B-13 496
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	RKB @ 8148.0usft (30')
<b>Project:</b>	Rio Blanco County, CO	<b>MD Reference:</b>	RKB @ 8148.0usft (30')
<b>Site:</b>	ELU O13 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	ELU O13 FED 23B-13 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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
<b>Build 3° / 100'</b>									
260.0	0.00	0.00	260.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	1.20	10.00	300.0	0.4	0.1	0.4	3.00	3.00	0.00
400.0	4.20	10.00	399.9	5.1	0.9	4.9	3.00	3.00	0.00
<b>EOB @ 7.00° Inc. / 10.00° Azm / Build 3° / 100'</b>									
493.3	7.00	10.00	492.8	14.0	2.5	13.5	3.00	3.00	0.00
500.0	7.15	11.11	499.4	14.8	2.6	14.3	3.00	2.19	16.62
600.0	9.57	23.38	598.3	28.6	7.1	28.5	3.00	2.43	12.27
700.0	12.26	30.53	696.5	45.3	15.8	47.4	3.00	2.68	7.15
<b>EOB @ 12.60° Inc. / 31.20° Azm</b>									
712.4	12.60	31.20	708.6	47.6	17.2	50.0	3.00	2.76	5.44
800.0	12.60	31.20	794.1	64.0	27.1	69.1	0.00	0.00	0.00
900.0	12.60	31.20	891.7	82.6	38.4	90.9	0.00	0.00	0.00
1,000.0	12.60	31.20	989.3	101.3	49.7	112.7	0.00	0.00	0.00
1,100.0	12.60	31.20	1,086.9	120.0	61.0	134.5	0.00	0.00	0.00
1,200.0	12.60	31.20	1,184.5	138.6	72.3	156.3	0.00	0.00	0.00
1,300.0	12.60	31.20	1,282.1	157.3	83.6	178.1	0.00	0.00	0.00
1,400.0	12.60	31.20	1,379.6	175.9	94.9	199.9	0.00	0.00	0.00
1,500.0	12.60	31.20	1,477.2	194.6	106.2	221.7	0.00	0.00	0.00
1,600.0	12.60	31.20	1,574.8	213.2	117.5	243.5	0.00	0.00	0.00
1,700.0	12.60	31.20	1,672.4	231.9	128.8	265.3	0.00	0.00	0.00
1,800.0	12.60	31.20	1,770.0	250.6	140.1	287.1	0.00	0.00	0.00
1,900.0	12.60	31.20	1,867.6	269.2	151.4	308.8	0.00	0.00	0.00
2,000.0	12.60	31.20	1,965.2	287.9	162.7	330.6	0.00	0.00	0.00
2,100.0	12.60	31.20	2,062.8	306.5	174.0	352.4	0.00	0.00	0.00
2,200.0	12.60	31.20	2,160.4	325.2	185.3	374.2	0.00	0.00	0.00
2,300.0	12.60	31.20	2,258.0	343.8	196.6	396.0	0.00	0.00	0.00
2,400.0	12.60	31.20	2,355.6	362.5	207.9	417.8	0.00	0.00	0.00
2,500.0	12.60	31.20	2,453.2	381.2	219.2	439.6	0.00	0.00	0.00
2,600.0	12.60	31.20	2,550.7	399.8	230.5	461.4	0.00	0.00	0.00
2,700.0	12.60	31.20	2,648.3	418.5	241.8	483.2	0.00	0.00	0.00
2,800.0	12.60	31.20	2,745.9	437.1	253.1	505.0	0.00	0.00	0.00
2,900.0	12.60	31.20	2,843.5	455.8	264.4	526.8	0.00	0.00	0.00
3,000.0	12.60	31.20	2,941.1	474.4	275.7	548.6	0.00	0.00	0.00
3,100.0	12.60	31.20	3,038.7	493.1	287.0	570.4	0.00	0.00	0.00
3,200.0	12.60	31.20	3,136.3	511.8	298.3	592.2	0.00	0.00	0.00
3,300.0	12.60	31.20	3,233.9	530.4	309.6	614.0	0.00	0.00	0.00
3,400.0	12.60	31.20	3,331.5	549.1	320.9	635.7	0.00	0.00	0.00
3,500.0	12.60	31.20	3,429.1	567.7	332.2	657.5	0.00	0.00	0.00
3,600.0	12.60	31.20	3,526.7	586.4	343.5	679.3	0.00	0.00	0.00
3,700.0	12.60	31.20	3,624.3	605.0	354.8	701.1	0.00	0.00	0.00
3,800.0	12.60	31.20	3,721.9	623.7	366.1	722.9	0.00	0.00	0.00
3,900.0	12.60	31.20	3,819.4	642.4	377.4	744.7	0.00	0.00	0.00
4,000.0	12.60	31.20	3,917.0	661.0	388.7	766.5	0.00	0.00	0.00
4,100.0	12.60	31.20	4,014.6	679.7	400.0	788.3	0.00	0.00	0.00
<b>Wasatch</b>									
4,152.6	12.60	31.20	4,066.0	689.5	406.0	799.8	0.00	0.00	0.00
4,200.0	12.60	31.20	4,112.2	698.3	411.3	810.1	0.00	0.00	0.00
4,300.0	12.60	31.20	4,209.8	717.0	422.6	831.9	0.00	0.00	0.00
4,400.0	12.60	31.20	4,307.4	735.6	433.9	853.7	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ELU O13 FED 23B-13 496 - Slot ELU O13 FED 23B-13 496
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<b>Project:</b>	Rio Blanco County, CO	<b>MD Reference:</b>	RKB @ 8148.0usft (30')
<b>Site:</b>	ELU O13 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	ELU O13 FED 23B-13 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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	12.60	31.20	4,405.0	754.3	445.2	875.5	0.00	0.00	0.00
4,600.0	12.60	31.20	4,502.6	773.0	456.5	897.3	0.00	0.00	0.00
4,700.0	12.60	31.20	4,600.2	791.6	467.8	919.1	0.00	0.00	0.00
4,800.0	12.60	31.20	4,697.8	810.3	479.1	940.9	0.00	0.00	0.00
4,900.0	12.60	31.20	4,795.4	828.9	490.4	962.6	0.00	0.00	0.00
5,000.0	12.60	31.20	4,893.0	847.6	501.7	984.4	0.00	0.00	0.00
5,100.0	12.60	31.20	4,990.5	866.2	513.0	1,006.2	0.00	0.00	0.00
5,200.0	12.60	31.20	5,088.1	884.9	524.3	1,028.0	0.00	0.00	0.00
5,300.0	12.60	31.20	5,185.7	903.6	535.6	1,049.8	0.00	0.00	0.00
5,400.0	12.60	31.20	5,283.3	922.2	546.9	1,071.6	0.00	0.00	0.00
5,500.0	12.60	31.20	5,380.9	940.9	558.2	1,093.4	0.00	0.00	0.00
5,600.0	12.60	31.20	5,478.5	959.5	569.5	1,115.2	0.00	0.00	0.00
5,700.0	12.60	31.20	5,576.1	978.2	580.8	1,137.0	0.00	0.00	0.00
5,800.0	12.60	31.20	5,673.7	996.8	592.1	1,158.8	0.00	0.00	0.00
5,900.0	12.60	31.20	5,771.3	1,015.5	603.4	1,180.6	0.00	0.00	0.00
6,000.0	12.60	31.20	5,868.9	1,034.2	614.7	1,202.4	0.00	0.00	0.00
6,100.0	12.60	31.20	5,966.5	1,052.8	626.1	1,224.2	0.00	0.00	0.00
6,200.0	12.60	31.20	6,064.1	1,071.5	637.4	1,246.0	0.00	0.00	0.00
6,300.0	12.60	31.20	6,161.6	1,090.1	648.7	1,267.8	0.00	0.00	0.00
6,400.0	12.60	31.20	6,259.2	1,108.8	660.0	1,289.6	0.00	0.00	0.00
6,500.0	12.60	31.20	6,356.8	1,127.5	671.3	1,311.3	0.00	0.00	0.00
6,600.0	12.60	31.20	6,454.4	1,146.1	682.6	1,333.1	0.00	0.00	0.00
<b>Wasatch G</b>									
6,611.9	12.60	31.20	6,466.0	1,148.3	683.9	1,335.7	0.00	0.00	0.00
6,700.0	12.60	31.20	6,552.0	1,164.8	693.9	1,354.9	0.00	0.00	0.00
6,800.0	12.60	31.20	6,649.6	1,183.4	705.2	1,376.7	0.00	0.00	0.00
6,900.0	12.60	31.20	6,747.2	1,202.1	716.5	1,398.5	0.00	0.00	0.00
<b>Fort Union</b>									
6,919.3	12.60	31.20	6,766.0	1,205.7	718.6	1,402.7	0.00	0.00	0.00
7,000.0	12.60	31.20	6,844.8	1,220.7	727.8	1,420.3	0.00	0.00	0.00
7,100.0	12.60	31.20	6,942.4	1,239.4	739.1	1,442.1	0.00	0.00	0.00
7,200.0	12.60	31.20	7,040.0	1,258.1	750.4	1,463.9	0.00	0.00	0.00
7,300.0	12.60	31.20	7,137.6	1,276.7	761.7	1,485.7	0.00	0.00	0.00
7,400.0	12.60	31.20	7,235.2	1,295.4	773.0	1,507.5	0.00	0.00	0.00
7,500.0	12.60	31.20	7,332.8	1,314.0	784.3	1,529.3	0.00	0.00	0.00
7,600.0	12.60	31.20	7,430.3	1,332.7	795.6	1,551.1	0.00	0.00	0.00
7,700.0	12.60	31.20	7,527.9	1,351.3	806.9	1,572.9	0.00	0.00	0.00
7,800.0	12.60	31.20	7,625.5	1,370.0	818.2	1,594.7	0.00	0.00	0.00
7,900.0	12.60	31.20	7,723.1	1,388.7	829.5	1,616.5	0.00	0.00	0.00
8,000.0	12.60	31.20	7,820.7	1,407.3	840.8	1,638.2	0.00	0.00	0.00
8,100.0	12.60	31.20	7,918.3	1,426.0	852.1	1,660.0	0.00	0.00	0.00
8,200.0	12.60	31.20	8,015.9	1,444.6	863.4	1,681.8	0.00	0.00	0.00
8,300.0	12.60	31.20	8,113.5	1,463.3	874.7	1,703.6	0.00	0.00	0.00
8,400.0	12.60	31.20	8,211.1	1,481.9	886.0	1,725.4	0.00	0.00	0.00
<b>Drop 3° /100'</b>									
8,443.4	12.60	31.20	8,253.4	1,490.0	890.9	1,734.9	0.00	0.00	0.00
8,500.0	10.90	31.20	8,308.8	1,499.9	896.9	1,746.4	3.00	-3.00	0.00
8,600.0	7.90	31.20	8,407.5	1,513.9	905.3	1,762.7	3.00	-3.00	0.00
8,700.0	4.90	31.20	8,506.9	1,523.4	911.1	1,773.8	3.00	-3.00	0.00
8,800.0	1.90	31.20	8,606.7	1,528.5	914.2	1,779.8	3.00	-3.00	0.00
<b>EOD @ Vertical / Build 1.5° / 100' - Ohio Creek / TOG</b>									
8,863.3	0.00	0.00	8,670.0	1,529.4	914.7	1,780.8	3.00	-3.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ELU O13 FED 23B-13 496 - Slot ELU O13 FED 23B-13 496
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	RKB @ 8148.0usft (30')
<b>Project:</b>	Rio Blanco County, CO	<b>MD Reference:</b>	RKB @ 8148.0usft (30')
<b>Site:</b>	ELU O13 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	ELU O13 FED 23B-13 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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)
8,900.0	0.55	250.00	8,706.7	1,529.3	914.5	1,780.7	1.50	1.50	0.00
<b>EOB @ 1.37° Inc. / 250.00° Azm</b>									
8,954.5	1.37	250.00	8,761.1	1,529.0	913.7	1,780.0	1.50	1.50	0.00
9,000.0	1.37	250.00	8,806.6	1,528.6	912.7	1,779.2	0.00	0.00	0.00
9,100.0	1.37	250.00	8,906.6	1,527.8	910.4	1,777.4	0.00	0.00	0.00
9,200.0	1.37	250.00	9,006.6	1,527.0	908.2	1,775.6	0.00	0.00	0.00
9,300.0	1.37	250.00	9,106.6	1,526.2	905.9	1,773.8	0.00	0.00	0.00
9,400.0	1.37	250.00	9,206.5	1,525.4	903.7	1,772.0	0.00	0.00	0.00
<b>Williams Fork</b>									
9,411.5	1.37	250.00	9,218.0	1,525.3	903.4	1,771.8	0.00	0.00	0.00
9,500.0	1.37	250.00	9,306.5	1,524.5	901.5	1,770.2	0.00	0.00	0.00
9,600.0	1.37	250.00	9,406.5	1,523.7	899.2	1,768.4	0.00	0.00	0.00
9,700.0	1.37	250.00	9,506.4	1,522.9	897.0	1,766.6	0.00	0.00	0.00
9,800.0	1.37	250.00	9,606.4	1,522.1	894.7	1,764.8	0.00	0.00	0.00
9,900.0	1.37	250.00	9,706.4	1,521.3	892.5	1,763.0	0.00	0.00	0.00
10,000.0	1.37	250.00	9,806.4	1,520.5	890.2	1,761.2	0.00	0.00	0.00
10,100.0	1.37	250.00	9,906.3	1,519.6	888.0	1,759.4	0.00	0.00	0.00
10,200.0	1.37	250.00	10,006.3	1,518.8	885.8	1,757.6	0.00	0.00	0.00
10,300.0	1.37	250.00	10,106.3	1,518.0	883.5	1,755.9	0.00	0.00	0.00
10,400.0	1.37	250.00	10,206.2	1,517.2	881.3	1,754.1	0.00	0.00	0.00
10,500.0	1.37	250.00	10,306.2	1,516.4	879.0	1,752.3	0.00	0.00	0.00
10,600.0	1.37	250.00	10,406.2	1,515.6	876.8	1,750.5	0.00	0.00	0.00
10,700.0	1.37	250.00	10,506.2	1,514.7	874.5	1,748.7	0.00	0.00	0.00
10,800.0	1.37	250.00	10,606.1	1,513.9	872.3	1,746.9	0.00	0.00	0.00
10,900.0	1.37	250.00	10,706.1	1,513.1	870.1	1,745.1	0.00	0.00	0.00
11,000.0	1.37	250.00	10,806.1	1,512.3	867.8	1,743.3	0.00	0.00	0.00
11,100.0	1.37	250.00	10,906.0	1,511.5	865.6	1,741.5	0.00	0.00	0.00
11,200.0	1.37	250.00	11,006.0	1,510.7	863.3	1,739.7	0.00	0.00	0.00
11,300.0	1.37	250.00	11,106.0	1,509.9	861.1	1,737.9	0.00	0.00	0.00
11,400.0	1.37	250.00	11,206.0	1,509.0	858.8	1,736.1	0.00	0.00	0.00
11,500.0	1.37	250.00	11,305.9	1,508.2	856.6	1,734.3	0.00	0.00	0.00
11,600.0	1.37	250.00	11,405.9	1,507.4	854.4	1,732.5	0.00	0.00	0.00
11,700.0	1.37	250.00	11,505.9	1,506.6	852.1	1,730.7	0.00	0.00	0.00
11,800.0	1.37	250.00	11,605.8	1,505.8	849.9	1,728.9	0.00	0.00	0.00
11,900.0	1.37	250.00	11,705.8	1,505.0	847.6	1,727.1	0.00	0.00	0.00
12,000.0	1.37	250.00	11,805.8	1,504.1	845.4	1,725.3	0.00	0.00	0.00
12,100.0	1.37	250.00	11,905.8	1,503.3	843.2	1,723.6	0.00	0.00	0.00
12,200.0	1.37	250.00	12,005.7	1,502.5	840.9	1,721.8	0.00	0.00	0.00
12,300.0	1.37	250.00	12,105.7	1,501.7	838.7	1,720.0	0.00	0.00	0.00
<b>Cameo</b>									
12,399.3	1.37	250.00	12,205.0	1,500.9	836.4	1,718.2	0.00	0.00	0.00
12,400.0	1.37	250.00	12,205.7	1,500.9	836.4	1,718.2	0.00	0.00	0.00
12,500.0	1.37	250.00	12,305.6	1,500.1	834.2	1,716.4	0.00	0.00	0.00
12,600.0	1.37	250.00	12,405.6	1,499.2	831.9	1,714.6	0.00	0.00	0.00
12,700.0	1.37	250.00	12,505.6	1,498.4	829.7	1,712.8	0.00	0.00	0.00
12,800.0	1.37	250.00	12,605.6	1,497.6	827.5	1,711.0	0.00	0.00	0.00
<b>Rollins</b>									
12,899.5	1.37	250.00	12,705.0	1,496.8	825.2	1,709.2	0.00	0.00	0.00
12,900.0	1.37	250.00	12,705.5	1,496.8	825.2	1,709.2	0.00	0.00	0.00
13,000.0	1.37	250.00	12,805.5	1,496.0	823.0	1,707.4	0.00	0.00	0.00
<b>TD @ 13099.5' MD / 12905.0' TVD</b>									
13,099.5	1.37	250.00	12,905.0	1,495.2	820.7	1,705.6	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ELU O13 FED 23B-13 496 - Slot ELU O13 FED 23B-13 496
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	RKB @ 8148.0usft (30')
<b>Project:</b>	Rio Blanco County, CO	<b>MD Reference:</b>	RKB @ 8148.0usft (30')
<b>Site:</b>	ELU O13 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	ELU O13 FED 23B-13 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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 - 23B-13 - plan hits target center - Point	0.00	0.00	8,670.0	1,529.4	914.7	14,430,946.01	2,452,937.22	39.702881	-108.111454
PBHL - 23B-13 - plan hits target center - Ellipse (radii L100.0 W50.0 on 250.00 azi)	0.00	0.00	12,905.0	1,495.2	820.7	14,430,908.80	2,452,844.40	39.702788	-108.111787

#### Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,152.6	4,066.0	Wasatch			
6,611.9	6,466.0	Wasatch G			
6,919.3	6,766.0	Fort Union			
8,863.3	8,670.0	Ohio Creek / TOG			
9,411.5	9,218.0	Williams Fork			
12,399.3	12,205.0	Cameo			
12,899.5	12,705.0	Rollins			

#### Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
260.0	260.0	0.0	0.0	Build 3° / 100'
493.3	492.8	14.0	2.5	EOB @ 7.00° Inc. / 10.00° Azm / Build 3° / 100'
712.4	708.6	47.6	17.2	EOB @ 12.60° Inc. / 31.20° Azm
8,443.4	8,253.4	1,490.0	890.9	Drop 3° / 100'
8,863.3	8,670.0	1,529.4	914.7	EOD @ Vertical / Build 1.5° / 100'
8,954.5	8,761.1	1,529.0	913.7	EOB @ 1.37° Inc. / 250.00° Azm
13,099.5	12,905.0	1,495.2	820.7	TD @ 13099.5' MD / 12905.0' TVD