

Project: Rio Blanco County, CO  
 Site: ELU O13 496 Pad  
 Well: ELU O13 FED 22A-24 496  
 Wellbore: Wellbore #1  
 Design: Design #1  
 Latitude: 39.698661  
 Longitude: -108.115244  
 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 22A-24 496(0.0N, 0.0E)  
 Measured Depth Reference: RKB @ 8148.0usft (30')  
 Calculation Method: Minimum Curvature

## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3888.0	4084.3	Wasatch
6288.0	6631.1	Wasatch G
6588.0	6949.5	Fort Union
8538.0	8992.2	Ohio Creek / TOG
9047.0	9501.3	Williams Fork
11950.0	12405.2	Cameo
12450.0	12905.4	Rollins

## SECTION DETAILS

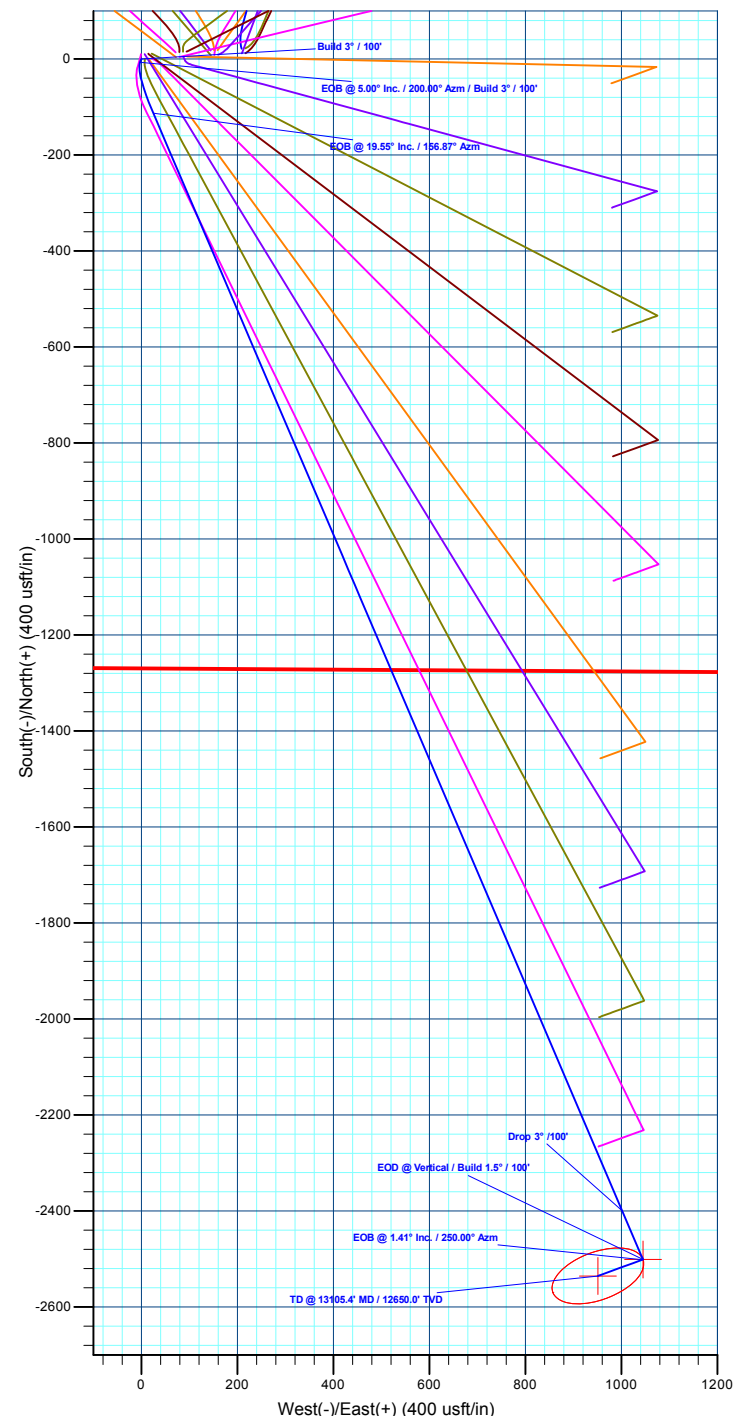
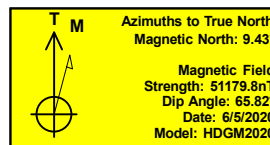
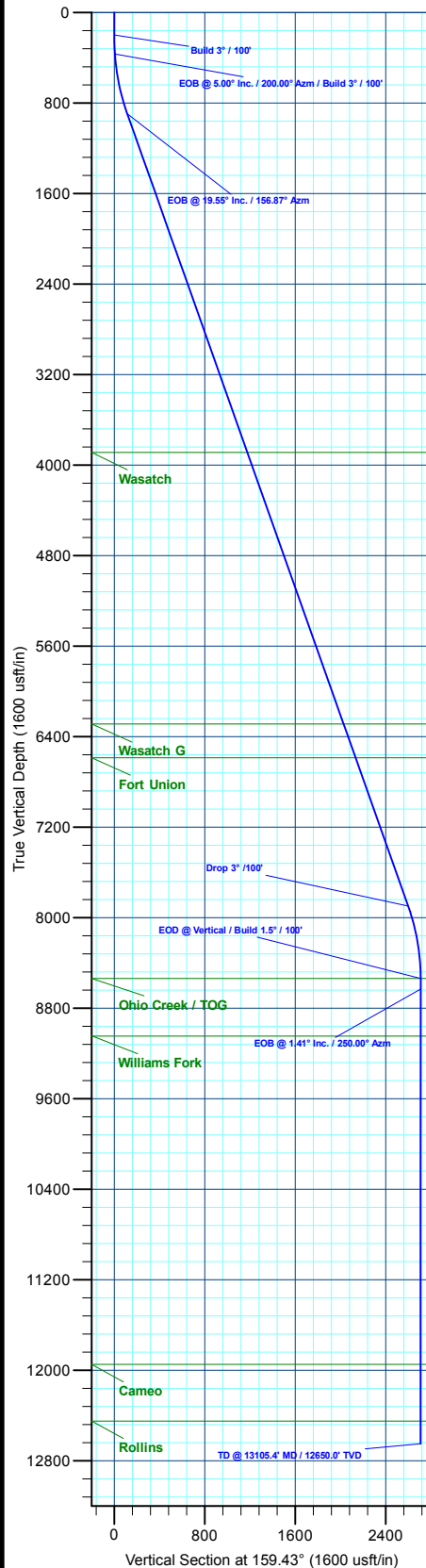
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dieg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	EOB @ 5.00° Inc. / 200.00° Azm / Build 3° / 100'
366.7	5.00	200.00	366.5	-6.8	-2.5	3.00	200.00	5.5	EOB @ 19.55° Inc. / 156.87° Azm
908.2	19.55	156.87	894.9	-113.0	25.2	3.00	-54.84	114.7	Drop 3° / 100'
8340.6	19.55	156.87	7899.0	-2399.8	1002.1	0.00	0.00	2598.9	EOD @ Vertical / Build 1.5° / 100'
8992.2	0.00	0.00	8538.0	-2501.0	1045.3	3.00	180.00	2708.8	EOB @ 1.41° Inc. / 250.00° Azm
9086.1	1.41	250.00	8631.9	-2501.4	1044.2	1.50	250.00	2708.8	TD @ 13105.4' MD / 12650.0' TVD
13105.4	1.41	250.00	12650.0	-2535.2	951.3	0.00	0.00	2707.8	

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
OHCR - 22A-24	8538.0	-2501.0	1045.3	14426908.61	2453045.52	39.691798	-108.111531
PBHL - 22A-24	12650.0	-2535.2	951.3	14426871.40	2452952.70	39.691704	-108.111865

## WELL DETAILS: ELU O13 FED 22A-24 496

+N/-S	+E/-W	Ground Level : 8118.0	Latitude	Longitude
0.0	0.0	Northing 14429374.70	2451920.30	39.698661
		Easting		-108.115244



Plan: Design #1 (ELU O13 FED 22A-24 496/Wellbore #1)

Created By: Will Jircik

Date: 11:30, June 19 2020



## **Caerus Oil & Gas**

**Rio Blanco County, CO**

**ELU O13 496 Pad**

**ELU O13 FED 22A-24 496 - Slot ELU O13 FED 22A-24 496**

**Wellbore #1**

**Plan: Design #1**

## **QES Well Planning Report**

**19 June, 2020**



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ELU O13 FED 22A-24 496 - Slot ELU O13 FED 22A-24 496
<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 22A-24 496	<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 22A-24 496 - Slot ELU O13 FED 22A-24 496		
<b>Well Position</b>	<b>+N/-S</b>	-18.4 usft	<b>Northing:</b>
	<b>+E/-W</b>	-151.8 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	159.43

<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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
366.7	5.00	200.00	366.5	-6.8	-2.5	3.00	3.00	0.00	200.00	
908.2	19.55	156.87	894.9	-113.0	25.2	3.00	2.69	-7.96	-54.84	
8,340.6	19.55	156.87	7,899.0	-2,399.8	1,002.1	0.00	0.00	0.00	0.00	
8,992.2	0.00	0.00	8,538.0	-2,501.0	1,045.3	3.00	-3.00	0.00	180.00	OHCR - 22A-24
9,086.1	1.41	250.00	8,631.9	-2,501.4	1,044.2	1.50	1.50	-117.09	250.00	
13,105.4	1.41	250.00	12,650.0	-2,535.2	951.3	0.00	0.00	0.00	0.00	PBHL - 22A-24

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ELU O13 FED 22A-24 496 - Slot ELU O13 FED 22A-24 496
<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 22A-24 496	<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
<b>Build 3° / 100'</b>									
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	3.00	200.00	300.0	-2.5	-0.9	2.0	3.00	3.00	0.00
<b>EOB @ 5.00° Inc. / 200.00° Azm / Build 3° / 100'</b>									
366.7	5.00	200.00	366.5	-6.8	-2.5	5.5	3.00	3.00	0.00
400.0	5.64	191.65	399.6	-9.8	-3.3	8.0	3.00	1.91	-25.06
500.0	8.00	175.81	498.9	-21.5	-3.8	18.8	3.00	2.37	-15.83
600.0	10.69	167.50	597.6	-37.5	-1.3	34.7	3.00	2.69	-8.31
700.0	13.51	162.56	695.4	-57.7	4.2	55.5	3.00	2.82	-4.94
800.0	16.39	159.32	792.0	-82.1	12.7	81.3	3.00	2.88	-3.24
<b>EOB @ 19.55° Inc. / 156.87° Azm</b>									
908.2	19.55	156.87	894.9	-113.0	25.2	114.7	3.00	2.92	-2.26
1,000.0	19.55	156.87	981.4	-141.3	37.3	145.4	0.00	0.00	0.00
1,100.0	19.55	156.87	1,075.6	-172.0	50.4	178.8	0.00	0.00	0.00
1,200.0	19.55	156.87	1,169.9	-202.8	63.6	212.2	0.00	0.00	0.00
1,300.0	19.55	156.87	1,264.1	-233.6	76.7	245.6	0.00	0.00	0.00
1,400.0	19.55	156.87	1,358.4	-264.3	89.9	279.1	0.00	0.00	0.00
1,500.0	19.55	156.87	1,452.6	-295.1	103.0	312.5	0.00	0.00	0.00
1,600.0	19.55	156.87	1,546.8	-325.9	116.1	345.9	0.00	0.00	0.00
1,700.0	19.55	156.87	1,641.1	-356.6	129.3	379.3	0.00	0.00	0.00
1,800.0	19.55	156.87	1,735.3	-387.4	142.4	412.7	0.00	0.00	0.00
1,900.0	19.55	156.87	1,829.5	-418.2	155.6	446.2	0.00	0.00	0.00
2,000.0	19.55	156.87	1,923.8	-448.9	168.7	479.6	0.00	0.00	0.00
2,100.0	19.55	156.87	2,018.0	-479.7	181.9	513.0	0.00	0.00	0.00
2,200.0	19.55	156.87	2,112.3	-510.5	195.0	546.4	0.00	0.00	0.00
2,300.0	19.55	156.87	2,206.5	-541.2	208.1	579.9	0.00	0.00	0.00
2,400.0	19.55	156.87	2,300.7	-572.0	221.3	613.3	0.00	0.00	0.00
2,500.0	19.55	156.87	2,395.0	-602.8	234.4	646.7	0.00	0.00	0.00
2,600.0	19.55	156.87	2,489.2	-633.5	247.6	680.1	0.00	0.00	0.00
2,700.0	19.55	156.87	2,583.4	-664.3	260.7	713.6	0.00	0.00	0.00
2,800.0	19.55	156.87	2,677.7	-695.1	273.9	747.0	0.00	0.00	0.00
2,900.0	19.55	156.87	2,771.9	-725.8	287.0	780.4	0.00	0.00	0.00
3,000.0	19.55	156.87	2,866.2	-756.6	300.1	813.8	0.00	0.00	0.00
3,100.0	19.55	156.87	2,960.4	-787.4	313.3	847.3	0.00	0.00	0.00
3,200.0	19.55	156.87	3,054.6	-818.2	326.4	880.7	0.00	0.00	0.00
3,300.0	19.55	156.87	3,148.9	-848.9	339.6	914.1	0.00	0.00	0.00
3,400.0	19.55	156.87	3,243.1	-879.7	352.7	947.5	0.00	0.00	0.00
3,500.0	19.55	156.87	3,337.3	-910.5	365.9	980.9	0.00	0.00	0.00
3,600.0	19.55	156.87	3,431.6	-941.2	379.0	1,014.4	0.00	0.00	0.00
3,700.0	19.55	156.87	3,525.8	-972.0	392.1	1,047.8	0.00	0.00	0.00
3,800.0	19.55	156.87	3,620.0	-1,002.8	405.3	1,081.2	0.00	0.00	0.00
3,900.0	19.55	156.87	3,714.3	-1,033.5	418.4	1,114.6	0.00	0.00	0.00
4,000.0	19.55	156.87	3,808.5	-1,064.3	431.6	1,148.1	0.00	0.00	0.00
<b>Wasatch</b>									
4,084.3	19.55	156.87	3,888.0	-1,090.2	442.7	1,176.3	0.00	0.00	0.00
4,100.0	19.55	156.87	3,902.8	-1,095.1	444.7	1,181.5	0.00	0.00	0.00
4,200.0	19.55	156.87	3,997.0	-1,125.8	457.9	1,214.9	0.00	0.00	0.00
4,300.0	19.55	156.87	4,091.2	-1,156.6	471.0	1,248.3	0.00	0.00	0.00
4,400.0	19.55	156.87	4,185.5	-1,187.4	484.1	1,281.8	0.00	0.00	0.00
4,500.0	19.55	156.87	4,279.7	-1,218.1	497.3	1,315.2	0.00	0.00	0.00
4,600.0	19.55	156.87	4,373.9	-1,248.9	510.4	1,348.6	0.00	0.00	0.00

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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 22A-24 496	<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)
4,700.0	19.55	156.87	4,468.2	-1,279.7	523.6	1,382.0	0.00	0.00	0.00
4,800.0	19.55	156.87	4,562.4	-1,310.4	536.7	1,415.5	0.00	0.00	0.00
4,900.0	19.55	156.87	4,656.7	-1,341.2	549.9	1,448.9	0.00	0.00	0.00
5,000.0	19.55	156.87	4,750.9	-1,372.0	563.0	1,482.3	0.00	0.00	0.00
5,100.0	19.55	156.87	4,845.1	-1,402.7	576.1	1,515.7	0.00	0.00	0.00
5,200.0	19.55	156.87	4,939.4	-1,433.5	589.3	1,549.2	0.00	0.00	0.00
5,300.0	19.55	156.87	5,033.6	-1,464.3	602.4	1,582.6	0.00	0.00	0.00
5,400.0	19.55	156.87	5,127.8	-1,495.0	615.6	1,616.0	0.00	0.00	0.00
5,500.0	19.55	156.87	5,222.1	-1,525.8	628.7	1,649.4	0.00	0.00	0.00
5,600.0	19.55	156.87	5,316.3	-1,556.6	641.9	1,682.8	0.00	0.00	0.00
5,700.0	19.55	156.87	5,410.6	-1,587.3	655.0	1,716.3	0.00	0.00	0.00
5,800.0	19.55	156.87	5,504.8	-1,618.1	668.1	1,749.7	0.00	0.00	0.00
5,900.0	19.55	156.87	5,599.0	-1,648.9	681.3	1,783.1	0.00	0.00	0.00
6,000.0	19.55	156.87	5,693.3	-1,679.6	694.4	1,816.5	0.00	0.00	0.00
6,100.0	19.55	156.87	5,787.5	-1,710.4	707.6	1,850.0	0.00	0.00	0.00
6,200.0	19.55	156.87	5,881.7	-1,741.2	720.7	1,883.4	0.00	0.00	0.00
6,300.0	19.55	156.87	5,976.0	-1,771.9	733.9	1,916.8	0.00	0.00	0.00
6,400.0	19.55	156.87	6,070.2	-1,802.7	747.0	1,950.2	0.00	0.00	0.00
6,500.0	19.55	156.87	6,164.4	-1,833.5	760.1	1,983.7	0.00	0.00	0.00
6,600.0	19.55	156.87	6,258.7	-1,864.2	773.3	2,017.1	0.00	0.00	0.00
<b>Wasatch G</b>									
6,631.1	19.55	156.87	6,288.0	-1,873.8	777.4	2,027.5	0.00	0.00	0.00
6,700.0	19.55	156.87	6,352.9	-1,895.0	786.4	2,050.5	0.00	0.00	0.00
6,800.0	19.55	156.87	6,447.2	-1,925.8	799.6	2,083.9	0.00	0.00	0.00
6,900.0	19.55	156.87	6,541.4	-1,956.5	812.7	2,117.4	0.00	0.00	0.00
<b>Fort Union</b>									
6,949.5	19.55	156.87	6,588.0	-1,971.8	819.2	2,133.9	0.00	0.00	0.00
7,000.0	19.55	156.87	6,635.6	-1,987.3	825.9	2,150.8	0.00	0.00	0.00
7,100.0	19.55	156.87	6,729.9	-2,018.1	839.0	2,184.2	0.00	0.00	0.00
7,200.0	19.55	156.87	6,824.1	-2,048.9	852.1	2,217.6	0.00	0.00	0.00
7,300.0	19.55	156.87	6,918.3	-2,079.6	865.3	2,251.0	0.00	0.00	0.00
7,400.0	19.55	156.87	7,012.6	-2,110.4	878.4	2,284.5	0.00	0.00	0.00
7,500.0	19.55	156.87	7,106.8	-2,141.2	891.6	2,317.9	0.00	0.00	0.00
7,600.0	19.55	156.87	7,201.1	-2,171.9	904.7	2,351.3	0.00	0.00	0.00
7,700.0	19.55	156.87	7,295.3	-2,202.7	917.9	2,384.7	0.00	0.00	0.00
7,800.0	19.55	156.87	7,389.5	-2,233.5	931.0	2,418.2	0.00	0.00	0.00
7,900.0	19.55	156.87	7,483.8	-2,264.2	944.1	2,451.6	0.00	0.00	0.00
8,000.0	19.55	156.87	7,578.0	-2,295.0	957.3	2,485.0	0.00	0.00	0.00
8,100.0	19.55	156.87	7,672.2	-2,325.8	970.4	2,518.4	0.00	0.00	0.00
8,200.0	19.55	156.87	7,766.5	-2,356.5	983.6	2,551.9	0.00	0.00	0.00
8,300.0	19.55	156.87	7,860.7	-2,387.3	996.7	2,585.3	0.00	0.00	0.00
<b>Drop 3° /100'</b>									
8,340.6	19.55	156.87	7,899.0	-2,399.8	1,002.1	2,598.9	0.00	0.00	0.00
8,400.0	17.77	156.87	7,955.3	-2,417.3	1,009.5	2,617.8	3.00	-3.00	0.00
8,500.0	14.77	156.87	8,051.2	-2,443.0	1,020.5	2,645.8	3.00	-3.00	0.00
8,600.0	11.77	156.87	8,148.6	-2,464.1	1,029.5	2,668.7	3.00	-3.00	0.00
8,700.0	8.77	156.87	8,246.9	-2,480.5	1,036.5	2,686.5	3.00	-3.00	0.00
8,800.0	5.77	156.87	8,346.1	-2,492.1	1,041.5	2,699.2	3.00	-3.00	0.00
8,900.0	2.77	156.87	8,445.8	-2,499.0	1,044.4	2,706.6	3.00	-3.00	0.00
<b>EOD @ Vertical / Build 1.5° / 100' - Ohio Creek / TOG</b>									
8,992.2	0.00	0.00	8,538.0	-2,501.0	1,045.3	2,708.8	3.00	-3.00	0.00
9,000.0	0.12	250.00	8,545.8	-2,501.0	1,045.3	2,708.8	1.50	1.50	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ELU O13 FED 22A-24 496 - Slot ELU O13 FED 22A-24 496
<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 22A-24 496	<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)
<b>EOB @ 1.41° Inc. / 250.00° Azm</b>									
9,086.1	1.41	250.00	8,631.9	-2,501.4	1,044.2	2,708.8	1.50	1.50	0.00
9,100.0	1.41	250.00	8,645.8	-2,501.5	1,043.9	2,708.8	0.00	0.00	0.00
9,200.0	1.41	250.00	8,745.8	-2,502.4	1,041.6	2,708.8	0.00	0.00	0.00
9,300.0	1.41	250.00	8,845.7	-2,503.2	1,039.3	2,708.8	0.00	0.00	0.00
9,400.0	1.41	250.00	8,945.7	-2,504.1	1,037.0	2,708.7	0.00	0.00	0.00
9,500.0	1.41	250.00	9,045.7	-2,504.9	1,034.6	2,708.7	0.00	0.00	0.00
<b>Williams Fork</b>									
9,501.3	1.41	250.00	9,047.0	-2,504.9	1,034.6	2,708.7	0.00	0.00	0.00
9,600.0	1.41	250.00	9,145.6	-2,505.7	1,032.3	2,708.7	0.00	0.00	0.00
9,700.0	1.41	250.00	9,245.6	-2,506.6	1,030.0	2,708.7	0.00	0.00	0.00
9,800.0	1.41	250.00	9,345.6	-2,507.4	1,027.7	2,708.6	0.00	0.00	0.00
9,900.0	1.41	250.00	9,445.6	-2,508.3	1,025.4	2,708.6	0.00	0.00	0.00
10,000.0	1.41	250.00	9,545.5	-2,509.1	1,023.1	2,708.6	0.00	0.00	0.00
10,100.0	1.41	250.00	9,645.5	-2,509.9	1,020.8	2,708.6	0.00	0.00	0.00
10,200.0	1.41	250.00	9,745.5	-2,510.8	1,018.5	2,708.5	0.00	0.00	0.00
10,300.0	1.41	250.00	9,845.4	-2,511.6	1,016.2	2,708.5	0.00	0.00	0.00
10,400.0	1.41	250.00	9,945.4	-2,512.5	1,013.8	2,708.5	0.00	0.00	0.00
10,500.0	1.41	250.00	10,045.4	-2,513.3	1,011.5	2,708.5	0.00	0.00	0.00
10,600.0	1.41	250.00	10,145.3	-2,514.1	1,009.2	2,708.4	0.00	0.00	0.00
10,700.0	1.41	250.00	10,245.3	-2,515.0	1,006.9	2,708.4	0.00	0.00	0.00
10,800.0	1.41	250.00	10,345.3	-2,515.8	1,004.6	2,708.4	0.00	0.00	0.00
10,900.0	1.41	250.00	10,445.3	-2,516.7	1,002.3	2,708.4	0.00	0.00	0.00
11,000.0	1.41	250.00	10,545.2	-2,517.5	1,000.0	2,708.3	0.00	0.00	0.00
11,100.0	1.41	250.00	10,645.2	-2,518.4	997.7	2,708.3	0.00	0.00	0.00
11,200.0	1.41	250.00	10,745.2	-2,519.2	995.4	2,708.3	0.00	0.00	0.00
11,300.0	1.41	250.00	10,845.1	-2,520.0	993.0	2,708.3	0.00	0.00	0.00
11,400.0	1.41	250.00	10,945.1	-2,520.9	990.7	2,708.2	0.00	0.00	0.00
11,500.0	1.41	250.00	11,045.1	-2,521.7	988.4	2,708.2	0.00	0.00	0.00
11,600.0	1.41	250.00	11,145.0	-2,522.6	986.1	2,708.2	0.00	0.00	0.00
11,700.0	1.41	250.00	11,245.0	-2,523.4	983.8	2,708.2	0.00	0.00	0.00
11,800.0	1.41	250.00	11,345.0	-2,524.2	981.5	2,708.2	0.00	0.00	0.00
11,900.0	1.41	250.00	11,444.9	-2,525.1	979.2	2,708.1	0.00	0.00	0.00
12,000.0	1.41	250.00	11,544.9	-2,525.9	976.9	2,708.1	0.00	0.00	0.00
12,100.0	1.41	250.00	11,644.9	-2,526.8	974.6	2,708.1	0.00	0.00	0.00
12,200.0	1.41	250.00	11,744.9	-2,527.6	972.3	2,708.1	0.00	0.00	0.00
12,300.0	1.41	250.00	11,844.8	-2,528.4	969.9	2,708.0	0.00	0.00	0.00
12,400.0	1.41	250.00	11,944.8	-2,529.3	967.6	2,708.0	0.00	0.00	0.00
<b>Cameo</b>									
12,405.2	1.41	250.00	11,950.0	-2,529.3	967.5	2,708.0	0.00	0.00	0.00
12,500.0	1.41	250.00	12,044.8	-2,530.1	965.3	2,708.0	0.00	0.00	0.00
12,600.0	1.41	250.00	12,144.7	-2,531.0	963.0	2,708.0	0.00	0.00	0.00
12,700.0	1.41	250.00	12,244.7	-2,531.8	960.7	2,707.9	0.00	0.00	0.00
12,800.0	1.41	250.00	12,344.7	-2,532.7	958.4	2,707.9	0.00	0.00	0.00
12,900.0	1.41	250.00	12,444.6	-2,533.5	956.1	2,707.9	0.00	0.00	0.00
<b>Rollins</b>									
12,905.4	1.41	250.00	12,450.0	-2,533.5	956.0	2,707.9	0.00	0.00	0.00
13,000.0	1.41	250.00	12,544.6	-2,534.3	953.8	2,707.9	0.00	0.00	0.00
<b>TD @ 13105.4' MD / 12650.0' TVD</b>									
13,105.4	1.41	250.00	12,650.0	-2,535.2	951.3	2,707.8	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 22A-24 496 - Slot ELU O13 FED 22A-24 496
<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 22A-24 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
OHCR - 22A-24	0.00	0.00	8,538.0	-2,501.0	1,045.3	14,426,908.61	2,453,045.52	39.691798	-108.111531
- plan hits target center									
- Point									
PBHL - 22A-24	0.00	0.00	12,650.0	-2,535.2	951.3	14,426,871.40	2,452,952.70	39.691704	-108.111865
- plan hits target center									
- Ellipse (radii L100.0 W50.0 on 250.00 azi)									

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,084.3	3,888.0	Wasatch				
6,631.1	6,288.0	Wasatch G				
6,949.5	6,588.0	Fort Union				
8,992.2	8,538.0	Ohio Creek / TOG				
9,501.3	9,047.0	Williams Fork				
12,405.2	11,950.0	Cameo				
12,905.4	12,450.0	Rollins				

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
200.0	200.0	0.0	0.0	Build 3° / 100'
366.7	366.5	-6.8	-2.5	EOB @ 5.00° Inc. / 200.00° Azm / Build 3° / 100'
908.2	894.9	-113.0	25.2	EOB @ 19.55° Inc. / 156.87° Azm
8,340.6	7,899.0	-2,399.8	1,002.1	Drop 3° / 100'
8,992.2	8,538.0	-2,501.0	1,045.3	EOD @ Vertical / Build 1.5° / 100'
9,086.1	8,631.9	-2,501.4	1,044.2	EOB @ 1.41° Inc. / 250.00° Azm
13,105.4	12,650.0	-2,535.2	951.3	TD @ 13105.4' MD / 12650.0' TVD