

Project: Rio Blanco County, CO
 Site: ELU O13 496 Pad
 Well: ELU O13 FED 21C-24 496
 Wellbore: Wellbore #1
 Design: Design #1
 Latitude: 39.698663
 Longitude: -108.115217
 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 21C-24 496(0.0N, 0.0E)
 Measured Depth Reference: RKB @ 8148.0usft (30')
 Calculation Method: Minimum Curvature

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3917.0	4049.3	Wasatch
6317.0	6544.4	Wasatch G
6817.0	6856.3	Fort Union
8572.0	8874.8	Ohio Creek / TOG
9076.0	9378.9	Williams Fork
12006.0	12309.8	Cameo
12506.0	12810.0	Rollins

SECTION DETAILS

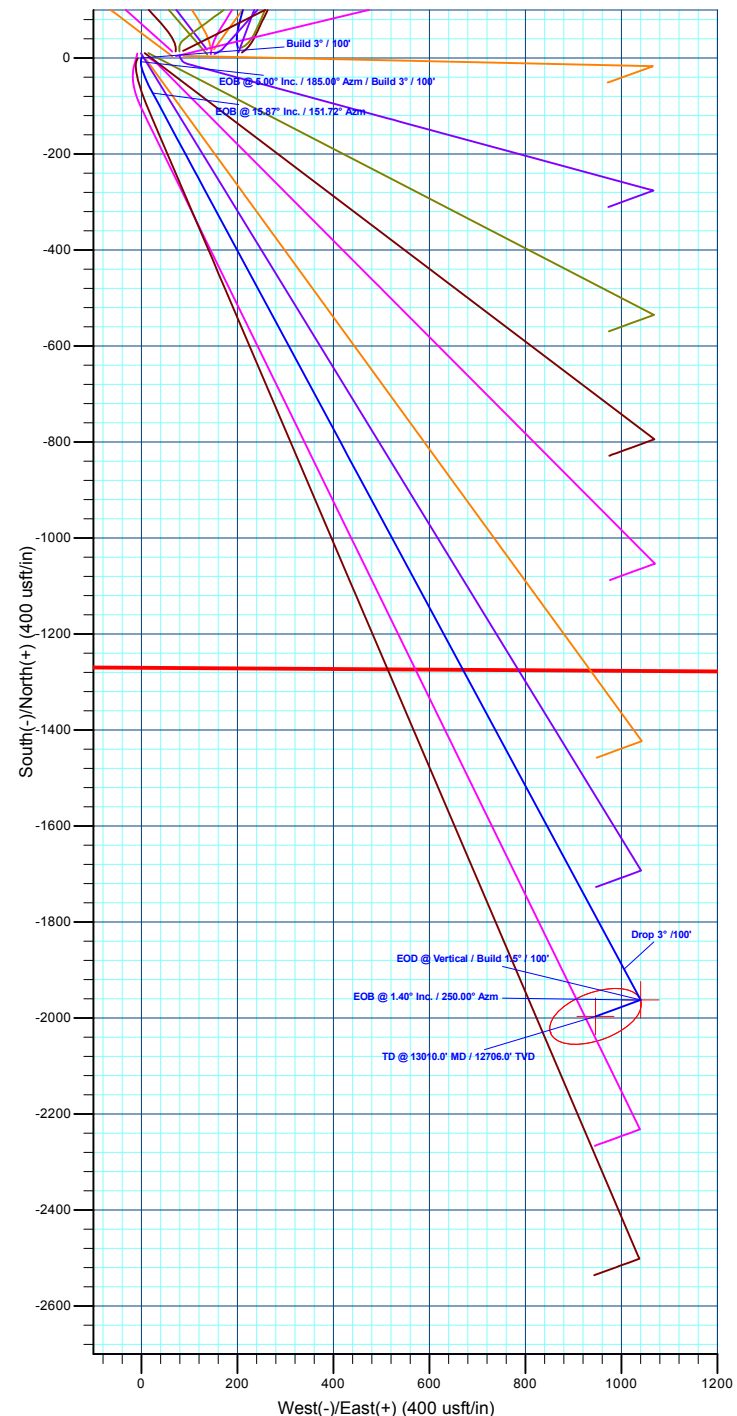
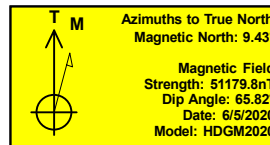
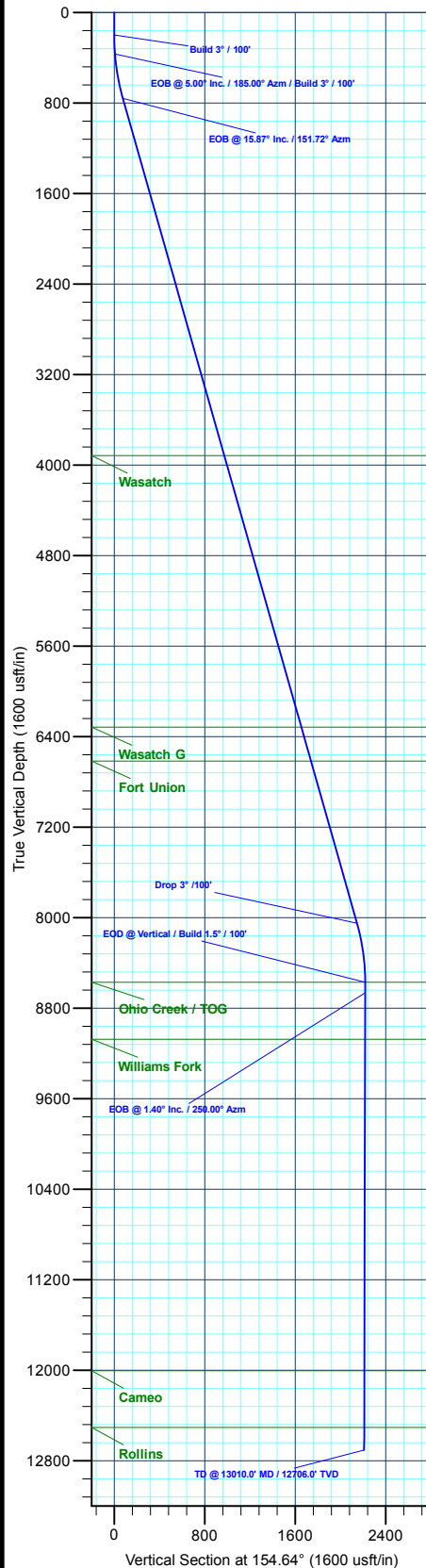
MD	Inc	Azi	TVD	+N-S	+E-W	Dieg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	EOB @ 5.00° Inc. / 185.00° Azm / Build 3° / 100'
366.7	5.00	185.00	366.5	-7.2	-0.6	3.00	185.00	6.3	EOB @ 15.87° Inc. / 151.72° Azm
766.7	15.87	151.72	759.5	-73.0	23.9	3.00	-46.20	76.2	Drop 3° / 100'
8345.8	15.87	151.72	8049.7	-1898.3	1005.8	0.00	0.00	2146.1	EOD @ Vertical / Build 1.5° / 100'
8874.8	0.00	0.00	8572.0	-1962.4	1040.3	3.00	180.00	2218.8	EOB @ 1.40° Inc. / 250.00° Azm
8968.2	1.40	250.00	8665.4	-1962.8	1039.2	1.50	250.00	2218.7	TD @ 13010.0' MD / 12706.0' TVD
13010.0	1.40	250.00	12706.0	-1996.6	946.4	0.00	0.00	2209.5	

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
OHCR - 21C-24	8572.0	-1962.4	1040.3	14427447.51	2453030.72	39.693277	-108.111522
PBHL - 21C-24	12706.0	-1996.6	946.4	14427410.30	2452937.90	39.693183	-108.111855

WELL DETAILS: ELU O13 FED 21C-24 496

+N-S	+E-W	Ground Level : 8118.0	Northing	Easting	Latitude	Longitude
0.0	0.0		14429375.40	2451927.80	39.698663	ELU O13 FED 21C-24 496



Plan: Design #1 (ELU O13 FED 21C-24 496/Wellbore #1)

Created By: Will Jircik

Date: 11:25, June 19 2020



Caerus Oil & Gas

Rio Blanco County, CO

ELU O13 496 Pad

ELU O13 FED 21C-24 496 - Slot ELU O13 FED 21C-24 496

Wellbore #1

Plan: Design #1

QES Well Planning Report

19 June, 2020



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 21C-24 496 - Slot ELU O13 FED 21C-24 496
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 21C-24 496	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 21C-24 496 - Slot ELU O13 FED 21C-24 496		
Well Position	+N/-S	-18.0 usft	Northing:
	+E/-W	-144.3 usft	Easting:
Position Uncertainty		0.0 usft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

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	154.64	

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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
366.7	5.00	185.00	366.5	-7.2	-0.6	3.00	3.00	0.00	185.00	
766.7	15.87	151.72	759.5	-73.0	23.9	3.00	2.72	-8.32	-46.20	
8,345.8	15.87	151.72	8,049.7	-1,898.3	1,005.8	0.00	0.00	0.00	0.00	
8,874.8	0.00	0.00	8,572.0	-1,962.4	1,040.3	3.00	-3.00	0.00	180.00	OHCR - 21C-24
8,968.2	1.40	250.00	8,665.4	-1,962.8	1,039.2	1.50	1.50	-117.73	250.00	
13,010.0	1.40	250.00	12,706.0	-1,996.6	946.4	0.00	0.00	0.00	0.00	PBHL - 21C-24

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 21C-24 496 - Slot ELU O13 FED 21C-24 496
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 21C-24 496	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
Build 3° / 100'									
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	3.00	185.00	300.0	-2.6	-0.2	2.3	3.00	3.00	0.00
EOB @ 5.00° Inc. / 185.00° Azm / Build 3° / 100'									
366.7	5.00	185.00	366.5	-7.2	-0.6	6.3	3.00	3.00	0.00
400.0	5.74	177.76	399.6	-10.4	-0.7	9.1	3.00	2.21	-21.71
500.0	8.29	164.55	498.9	-22.3	1.4	20.8	3.00	2.55	-13.21
600.0	11.06	157.72	597.5	-38.1	7.0	37.4	3.00	2.78	-6.84
700.0	13.93	153.63	695.1	-57.8	16.0	59.1	3.00	2.87	-4.09
EOB @ 15.87° Inc. / 151.72° Azm									
766.7	15.87	151.72	759.5	-73.0	23.9	76.2	3.00	2.91	-2.87
800.0	15.87	151.72	791.6	-81.0	28.2	85.3	0.00	0.00	0.00
900.0	15.87	151.72	887.8	-105.1	41.1	112.6	0.00	0.00	0.00
1,000.0	15.87	151.72	983.9	-129.2	54.1	139.9	0.00	0.00	0.00
1,100.0	15.87	151.72	1,080.1	-153.3	67.0	167.2	0.00	0.00	0.00
1,200.0	15.87	151.72	1,176.3	-177.4	80.0	194.5	0.00	0.00	0.00
1,300.0	15.87	151.72	1,272.5	-201.5	92.9	221.8	0.00	0.00	0.00
1,400.0	15.87	151.72	1,368.7	-225.5	105.9	249.2	0.00	0.00	0.00
1,500.0	15.87	151.72	1,464.9	-249.6	118.9	276.5	0.00	0.00	0.00
1,600.0	15.87	151.72	1,561.1	-273.7	131.8	303.8	0.00	0.00	0.00
1,700.0	15.87	151.72	1,657.3	-297.8	144.8	331.1	0.00	0.00	0.00
1,800.0	15.87	151.72	1,753.5	-321.9	157.7	358.4	0.00	0.00	0.00
1,900.0	15.87	151.72	1,849.6	-345.9	170.7	385.7	0.00	0.00	0.00
2,000.0	15.87	151.72	1,945.8	-370.0	183.6	413.0	0.00	0.00	0.00
2,100.0	15.87	151.72	2,042.0	-394.1	196.6	440.3	0.00	0.00	0.00
2,200.0	15.87	151.72	2,138.2	-418.2	209.6	467.7	0.00	0.00	0.00
2,300.0	15.87	151.72	2,234.4	-442.3	222.5	495.0	0.00	0.00	0.00
2,400.0	15.87	151.72	2,330.6	-466.4	235.5	522.3	0.00	0.00	0.00
2,500.0	15.87	151.72	2,426.8	-490.4	248.4	549.6	0.00	0.00	0.00
2,600.0	15.87	151.72	2,523.0	-514.5	261.4	576.9	0.00	0.00	0.00
2,700.0	15.87	151.72	2,619.1	-538.6	274.3	604.2	0.00	0.00	0.00
2,800.0	15.87	151.72	2,715.3	-562.7	287.3	631.5	0.00	0.00	0.00
2,900.0	15.87	151.72	2,811.5	-586.8	300.3	658.8	0.00	0.00	0.00
3,000.0	15.87	151.72	2,907.7	-610.9	313.2	686.1	0.00	0.00	0.00
3,100.0	15.87	151.72	3,003.9	-634.9	326.2	713.5	0.00	0.00	0.00
3,200.0	15.87	151.72	3,100.1	-659.0	339.1	740.8	0.00	0.00	0.00
3,300.0	15.87	151.72	3,196.3	-683.1	352.1	768.1	0.00	0.00	0.00
3,400.0	15.87	151.72	3,292.5	-707.2	365.0	795.4	0.00	0.00	0.00
3,500.0	15.87	151.72	3,388.7	-731.3	378.0	822.7	0.00	0.00	0.00
3,600.0	15.87	151.72	3,484.8	-755.4	390.9	850.0	0.00	0.00	0.00
3,700.0	15.87	151.72	3,581.0	-779.4	403.9	877.3	0.00	0.00	0.00
3,800.0	15.87	151.72	3,677.2	-803.5	416.9	904.6	0.00	0.00	0.00
3,900.0	15.87	151.72	3,773.4	-827.6	429.8	931.9	0.00	0.00	0.00
4,000.0	15.87	151.72	3,869.6	-851.7	442.8	959.3	0.00	0.00	0.00
Wasatch									
4,049.3	15.87	151.72	3,917.0	-863.6	449.2	972.7	0.00	0.00	0.00
4,100.0	15.87	151.72	3,965.8	-875.8	455.7	986.6	0.00	0.00	0.00
4,200.0	15.87	151.72	4,062.0	-899.8	468.7	1,013.9	0.00	0.00	0.00
4,300.0	15.87	151.72	4,158.2	-923.9	481.6	1,041.2	0.00	0.00	0.00
4,400.0	15.87	151.72	4,254.3	-948.0	494.6	1,068.5	0.00	0.00	0.00
4,500.0	15.87	151.72	4,350.5	-972.1	507.6	1,095.8	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 21C-24 496 - Slot ELU O13 FED 21C-24 496
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 21C-24 496	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)
4,600.0	15.87	151.72	4,446.7	-996.2	520.5	1,123.1	0.00	0.00	0.00
4,700.0	15.87	151.72	4,542.9	-1,020.3	533.5	1,150.4	0.00	0.00	0.00
4,800.0	15.87	151.72	4,639.1	-1,044.3	546.4	1,177.7	0.00	0.00	0.00
4,900.0	15.87	151.72	4,735.3	-1,068.4	559.4	1,205.1	0.00	0.00	0.00
5,000.0	15.87	151.72	4,831.5	-1,092.5	572.3	1,232.4	0.00	0.00	0.00
5,100.0	15.87	151.72	4,927.7	-1,116.6	585.3	1,259.7	0.00	0.00	0.00
5,200.0	15.87	151.72	5,023.8	-1,140.7	598.3	1,287.0	0.00	0.00	0.00
5,300.0	15.87	151.72	5,120.0	-1,164.8	611.2	1,314.3	0.00	0.00	0.00
5,400.0	15.87	151.72	5,216.2	-1,188.8	624.2	1,341.6	0.00	0.00	0.00
5,500.0	15.87	151.72	5,312.4	-1,212.9	637.1	1,368.9	0.00	0.00	0.00
5,600.0	15.87	151.72	5,408.6	-1,237.0	650.1	1,396.2	0.00	0.00	0.00
5,700.0	15.87	151.72	5,504.8	-1,261.1	663.0	1,423.5	0.00	0.00	0.00
5,800.0	15.87	151.72	5,601.0	-1,285.2	676.0	1,450.9	0.00	0.00	0.00
5,900.0	15.87	151.72	5,697.2	-1,309.3	688.9	1,478.2	0.00	0.00	0.00
6,000.0	15.87	151.72	5,793.4	-1,333.3	701.9	1,505.5	0.00	0.00	0.00
6,100.0	15.87	151.72	5,889.5	-1,357.4	714.9	1,532.8	0.00	0.00	0.00
6,200.0	15.87	151.72	5,985.7	-1,381.5	727.8	1,560.1	0.00	0.00	0.00
6,300.0	15.87	151.72	6,081.9	-1,405.6	740.8	1,587.4	0.00	0.00	0.00
6,400.0	15.87	151.72	6,178.1	-1,429.7	753.7	1,614.7	0.00	0.00	0.00
6,500.0	15.87	151.72	6,274.3	-1,453.8	766.7	1,642.0	0.00	0.00	0.00
Wasatch G									
6,544.4	15.87	151.72	6,317.0	-1,464.4	772.4	1,654.2	0.00	0.00	0.00
6,600.0	15.87	151.72	6,370.5	-1,477.8	779.6	1,669.3	0.00	0.00	0.00
6,700.0	15.87	151.72	6,466.7	-1,501.9	792.6	1,696.7	0.00	0.00	0.00
6,800.0	15.87	151.72	6,562.9	-1,526.0	805.6	1,724.0	0.00	0.00	0.00
Fort Union									
6,856.3	15.87	151.72	6,617.0	-1,539.6	812.8	1,739.3	0.00	0.00	0.00
6,900.0	15.87	151.72	6,659.0	-1,550.1	818.5	1,751.3	0.00	0.00	0.00
7,000.0	15.87	151.72	6,755.2	-1,574.2	831.5	1,778.6	0.00	0.00	0.00
7,100.0	15.87	151.72	6,851.4	-1,598.2	844.4	1,805.9	0.00	0.00	0.00
7,200.0	15.87	151.72	6,947.6	-1,622.3	857.4	1,833.2	0.00	0.00	0.00
7,300.0	15.87	151.72	7,043.8	-1,646.4	870.3	1,860.5	0.00	0.00	0.00
7,400.0	15.87	151.72	7,140.0	-1,670.5	883.3	1,887.8	0.00	0.00	0.00
7,500.0	15.87	151.72	7,236.2	-1,694.6	896.2	1,915.1	0.00	0.00	0.00
7,600.0	15.87	151.72	7,332.4	-1,718.7	909.2	1,942.5	0.00	0.00	0.00
7,700.0	15.87	151.72	7,428.6	-1,742.7	922.2	1,969.8	0.00	0.00	0.00
7,800.0	15.87	151.72	7,524.7	-1,766.8	935.1	1,997.1	0.00	0.00	0.00
7,900.0	15.87	151.72	7,620.9	-1,790.9	948.1	2,024.4	0.00	0.00	0.00
8,000.0	15.87	151.72	7,717.1	-1,815.0	961.0	2,051.7	0.00	0.00	0.00
8,100.0	15.87	151.72	7,813.3	-1,839.1	974.0	2,079.0	0.00	0.00	0.00
8,200.0	15.87	151.72	7,909.5	-1,863.2	986.9	2,106.3	0.00	0.00	0.00
8,300.0	15.87	151.72	8,005.7	-1,887.2	999.9	2,133.6	0.00	0.00	0.00
Drop 3° /100'									
8,345.8	15.87	151.72	8,049.7	-1,898.3	1,005.8	2,146.1	0.00	0.00	0.00
8,400.0	14.24	151.72	8,102.1	-1,910.7	1,012.5	2,160.2	3.00	-3.00	0.00
8,500.0	11.24	151.72	8,199.6	-1,930.1	1,023.0	2,182.2	3.00	-3.00	0.00
8,600.0	8.24	151.72	8,298.1	-1,945.0	1,031.0	2,199.1	3.00	-3.00	0.00
8,700.0	5.24	151.72	8,397.4	-1,955.3	1,036.5	2,210.9	3.00	-3.00	0.00
8,800.0	2.24	151.72	8,497.2	-1,961.1	1,039.6	2,217.4	3.00	-3.00	0.00
EOD @ Vertical / Build 1.5° / 100' - Ohio Creek / TOG									
8,874.8	0.00	0.00	8,572.0	-1,962.4	1,040.3	2,218.8	3.00	-3.00	0.00
8,900.0	0.38	250.00	8,597.2	-1,962.4	1,040.2	2,218.8	1.50	1.50	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 21C-24 496 - Slot ELU O13 FED 21C-24 496
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 21C-24 496	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)
EOB @ 1.40° Inc. / 250.00° Azm									
8,968.2	1.40	250.00	8,665.4	-1,962.8	1,039.2	2,218.7	1.50	1.50	0.00
9,000.0	1.40	250.00	8,697.2	-1,963.0	1,038.5	2,218.7	0.00	0.00	0.00
9,100.0	1.40	250.00	8,797.1	-1,963.9	1,036.2	2,218.4	0.00	0.00	0.00
9,200.0	1.40	250.00	8,897.1	-1,964.7	1,033.9	2,218.2	0.00	0.00	0.00
9,300.0	1.40	250.00	8,997.1	-1,965.5	1,031.6	2,218.0	0.00	0.00	0.00
Williams Fork									
9,378.9	1.40	250.00	9,076.0	-1,966.2	1,029.8	2,217.8	0.00	0.00	0.00
9,400.0	1.40	250.00	9,097.1	-1,966.4	1,029.3	2,217.8	0.00	0.00	0.00
9,500.0	1.40	250.00	9,197.0	-1,967.2	1,027.0	2,217.5	0.00	0.00	0.00
9,600.0	1.40	250.00	9,297.0	-1,968.1	1,024.7	2,217.3	0.00	0.00	0.00
9,700.0	1.40	250.00	9,397.0	-1,968.9	1,022.4	2,217.1	0.00	0.00	0.00
9,800.0	1.40	250.00	9,496.9	-1,969.7	1,020.1	2,216.8	0.00	0.00	0.00
9,900.0	1.40	250.00	9,596.9	-1,970.6	1,017.8	2,216.6	0.00	0.00	0.00
10,000.0	1.40	250.00	9,696.9	-1,971.4	1,015.5	2,216.4	0.00	0.00	0.00
10,100.0	1.40	250.00	9,796.8	-1,972.2	1,013.2	2,216.2	0.00	0.00	0.00
10,200.0	1.40	250.00	9,896.8	-1,973.1	1,010.9	2,215.9	0.00	0.00	0.00
10,300.0	1.40	250.00	9,996.8	-1,973.9	1,008.6	2,215.7	0.00	0.00	0.00
10,400.0	1.40	250.00	10,096.8	-1,974.7	1,006.3	2,215.5	0.00	0.00	0.00
10,500.0	1.40	250.00	10,196.7	-1,975.6	1,004.0	2,215.2	0.00	0.00	0.00
10,600.0	1.40	250.00	10,296.7	-1,976.4	1,001.7	2,215.0	0.00	0.00	0.00
10,700.0	1.40	250.00	10,396.7	-1,977.3	999.4	2,214.8	0.00	0.00	0.00
10,800.0	1.40	250.00	10,496.6	-1,978.1	997.1	2,214.6	0.00	0.00	0.00
10,900.0	1.40	250.00	10,596.6	-1,978.9	994.8	2,214.3	0.00	0.00	0.00
11,000.0	1.40	250.00	10,696.6	-1,979.8	992.6	2,214.1	0.00	0.00	0.00
11,100.0	1.40	250.00	10,796.5	-1,980.6	990.3	2,213.9	0.00	0.00	0.00
11,200.0	1.40	250.00	10,896.5	-1,981.4	988.0	2,213.6	0.00	0.00	0.00
11,300.0	1.40	250.00	10,996.5	-1,982.3	985.7	2,213.4	0.00	0.00	0.00
11,400.0	1.40	250.00	11,096.5	-1,983.1	983.4	2,213.2	0.00	0.00	0.00
11,500.0	1.40	250.00	11,196.4	-1,983.9	981.1	2,213.0	0.00	0.00	0.00
11,600.0	1.40	250.00	11,296.4	-1,984.8	978.8	2,212.7	0.00	0.00	0.00
11,700.0	1.40	250.00	11,396.4	-1,985.6	976.5	2,212.5	0.00	0.00	0.00
11,800.0	1.40	250.00	11,496.3	-1,986.5	974.2	2,212.3	0.00	0.00	0.00
11,900.0	1.40	250.00	11,596.3	-1,987.3	971.9	2,212.0	0.00	0.00	0.00
12,000.0	1.40	250.00	11,696.3	-1,988.1	969.6	2,211.8	0.00	0.00	0.00
12,100.0	1.40	250.00	11,796.2	-1,989.0	967.3	2,211.6	0.00	0.00	0.00
12,200.0	1.40	250.00	11,896.2	-1,989.8	965.0	2,211.4	0.00	0.00	0.00
12,300.0	1.40	250.00	11,996.2	-1,990.6	962.7	2,211.1	0.00	0.00	0.00
Cameo									
12,309.8	1.40	250.00	12,006.0	-1,990.7	962.4	2,211.1	0.00	0.00	0.00
12,400.0	1.40	250.00	12,096.2	-1,991.5	960.4	2,210.9	0.00	0.00	0.00
12,500.0	1.40	250.00	12,196.1	-1,992.3	958.1	2,210.7	0.00	0.00	0.00
12,600.0	1.40	250.00	12,296.1	-1,993.2	955.8	2,210.4	0.00	0.00	0.00
12,700.0	1.40	250.00	12,396.1	-1,994.0	953.5	2,210.2	0.00	0.00	0.00
12,800.0	1.40	250.00	12,496.0	-1,994.8	951.2	2,210.0	0.00	0.00	0.00
Rollins									
12,810.0	1.40	250.00	12,506.0	-1,994.9	951.0	2,210.0	0.00	0.00	0.00
12,900.0	1.40	250.00	12,596.0	-1,995.7	948.9	2,209.8	0.00	0.00	0.00
13,000.0	1.40	250.00	12,696.0	-1,996.5	946.6	2,209.5	0.00	0.00	0.00
TD @ 13010.0' MD / 12706.0' TVD									
13,010.0	1.40	250.00	12,706.0	-1,996.6	946.4	2,209.5	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 21C-24 496 - Slot ELU O13 FED 21C-24 496
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 21C-24 496	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 - 21C-24 - plan hits target center - Point	0.00	0.00	8,572.0	-1,962.4	1,040.3	14,427,447.51	2,453,030.72	39.693277	-108.111522
PBHL - 21C-24 - plan hits target center - Ellipse (radii L100.0 W50.0 on 250.00 azi)	0.00	0.00	12,706.0	-1,996.6	946.4	14,427,410.30	2,452,937.90	39.693183	-108.111856

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,049.3	3,917.0	Wasatch			
6,544.4	6,317.0	Wasatch G			
6,856.3	6,617.0	Fort Union			
8,874.8	8,572.0	Ohio Creek / TOG			
9,378.9	9,076.0	Williams Fork			
12,309.8	12,006.0	Cameo			
12,810.0	12,506.0	Rollins			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
200.0	200.0	0.0	0.0	Build 3° / 100'
366.7	366.5	-7.2	-0.6	EOB @ 5.00° Inc. / 185.00° Azm / Build 3° / 100'
766.7	759.5	-73.0	23.9	EOB @ 15.87° Inc. / 151.72° Azm
8,345.8	8,049.7	-1,898.3	1,005.8	Drop 3° / 100'
8,874.8	8,572.0	-1,962.4	1,040.3	EOD @ Vertical / Build 1.5° / 100'
8,968.2	8,665.4	-1,962.8	1,039.2	EOB @ 1.40° Inc. / 250.00° Azm
13,010.0	12,706.0	-1,996.6	946.4	TD @ 13010.0' MD / 12706.0' TVD