

Project: Rio Blanco County, CO
 Site: ELU O13 496 Pad
 Well: ELU O13 FED 12B-13 496
 Wellbore: Wellbore #1
 Design: Design #1
 Latitude: 39.698712
 Longitude: -108.114705
 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 12B-13 496(0.0N, 0.0E)
 Measured Depth Reference: RKB @ 8148.0usft (30')
 Calculation Method: Minimum Curvature

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4051.0	4315.7	Wasatch
6451.0	6908.0	Wasatch G
6751.0	7229.8	Fort Union
8586.0	9171.5	Ohio Creek / TOG
9171.0	9756.6	Williams Fork
12056.0	12642.5	Cameo
12556.0	13142.6	Rollins

SECTION DETAILS

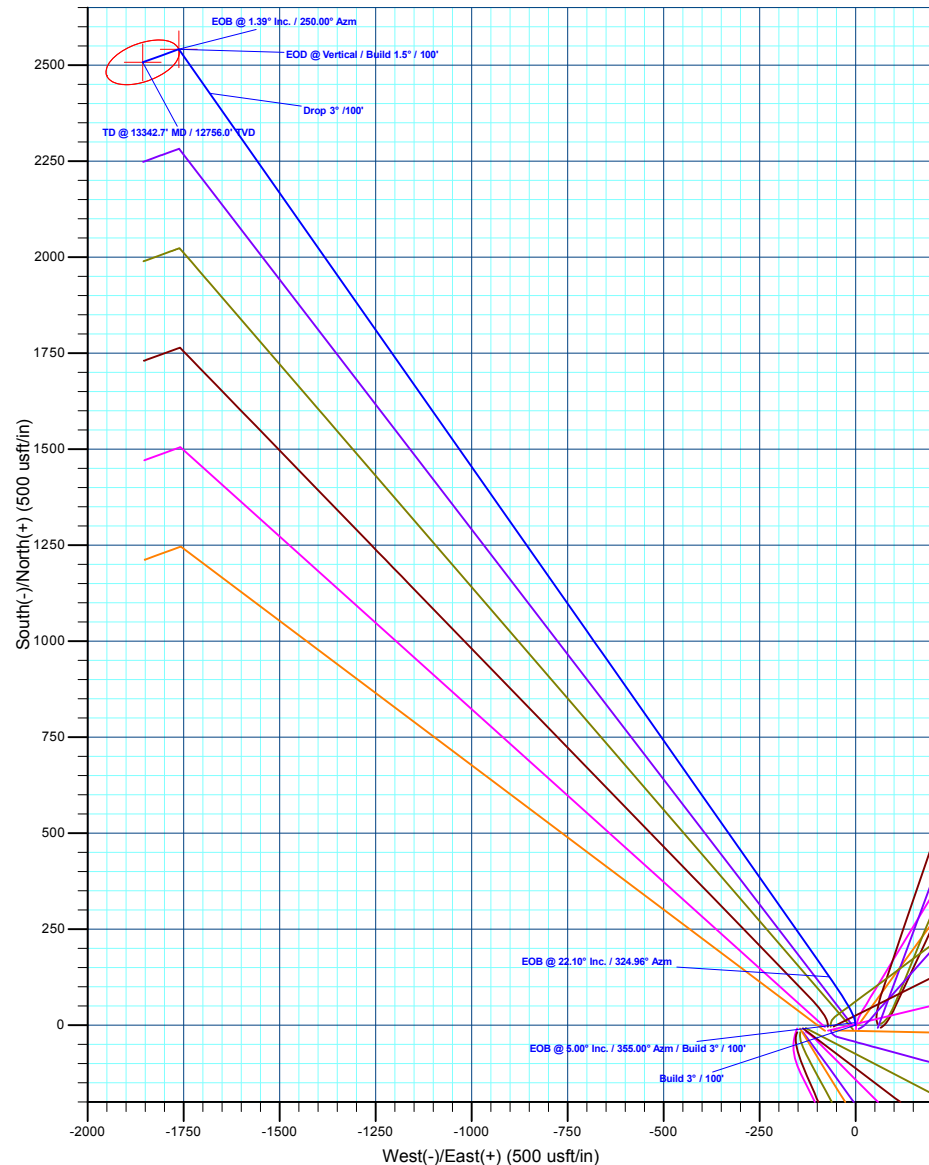
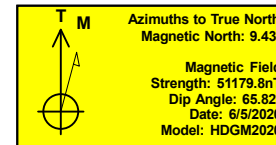
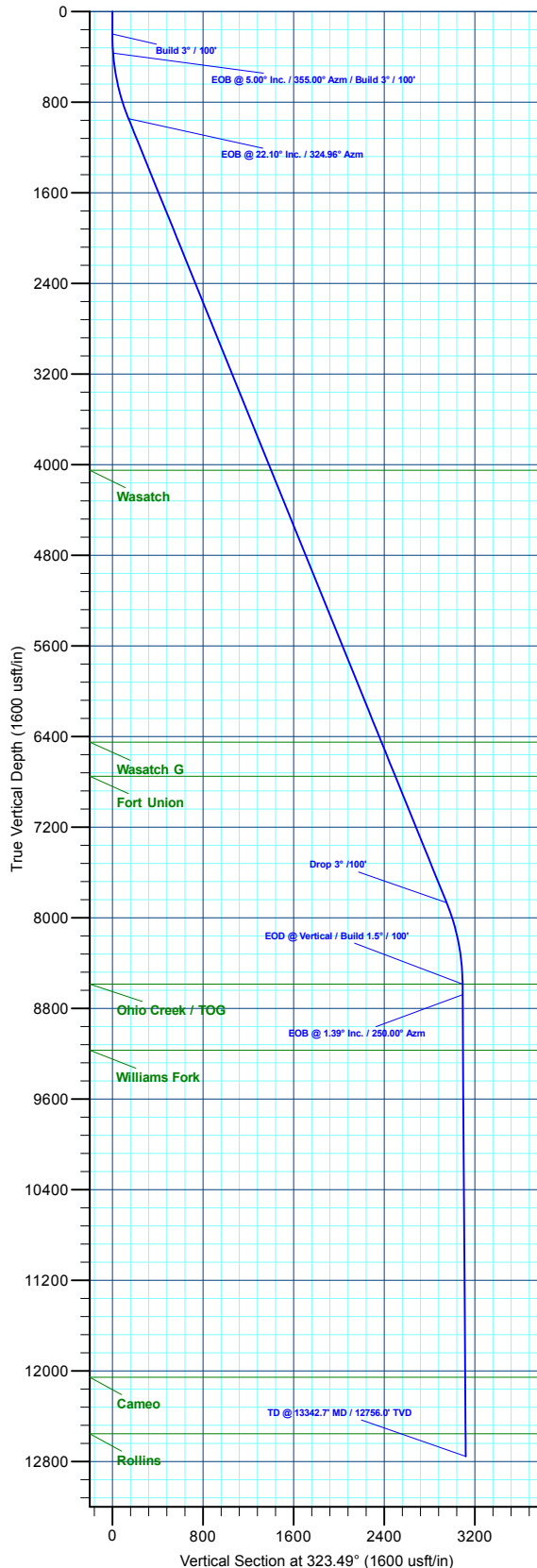
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dieg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
366.7	5.00	355.00	366.5	7.2	-0.6	3.00	355.00	6.2	EOB @ 5.00° Inc. / 355.00° Azm / Build 3° / 100'
964.6	22.10	324.96	946.0	126.2	-68.0	3.00	-37.70	141.9	EOB @ 22.10° Inc. / 324.96° Azm
8434.9	22.10	324.96	7867.5	2427.1	-1681.7	0.00	0.00	2951.3	Drop 3° / 100'
9171.5	0.00	0.00	8586.0	2541.9	-1762.3	3.00	180.00	3091.6	EOD @ Vertical / Build 1.5° / 100'
9264.1	1.39	250.00	8678.6	2541.6	-1763.4	1.50	250.00	3091.9	EOB @ 1.39° Inc. / 250.00° Azm
13342.7	1.39	250.00	12756.0	2507.7	-1856.3	0.00	0.00	3120.0	TD @ 13342.7 MD / 12756.0° TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
OHCR - 12B-13	8586.0	2541.9	-1762.3	14431881.91	2450228.22	39.705688	-108.120966
PBHL - 12B-13	12756.0	2507.7	-1856.3	14431844.70	2450135.40	39.705594	-108.121300

WELL DETAILS: ELU O13 FED 12B-13 496

	Ground Level : 8118.0				
+N/-S	0.0	+E/-W	0.0	Northing	Easting
				14429398.00	2452071.40
				Latitude	Longitude
				39.698712	-108.114705



Plan: Design #1 (ELU O13 FED 12B-13 496/Wellbore #1)

Created By: Will Jircik

Date: 16:07, June 18 2020



Caerus Oil & Gas

Rio Blanco County, CO

ELU O13 496 Pad

ELU O13 FED 12B-13 496 - Slot ELU O13 FED 12B-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 12B-13 496 - Slot ELU O13 FED 12B-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 12B-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 12B-13 496 - Slot ELU O13 FED 12B-13 496		
Well Position	+N/-S	0.0 usft	Northing: 14,429,398.00 usft
	+E/-W	0.0 usft	Easting: 2,452,071.40 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	Latitude: 39.698712
			Longitude: -108.114705
			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	323.49	

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	355.00	366.5	7.2	-0.6	3.00	3.00	0.00	355.00	
964.6	22.10	324.96	946.0	126.2	-68.0	3.00	2.86	-5.02	-37.70	
8,434.9	22.10	324.96	7,867.5	2,427.1	-1,681.7	0.00	0.00	0.00	0.00	
9,171.5	0.00	0.00	8,586.0	2,541.9	-1,762.3	3.00	-3.00	0.00	180.00	OHCR - 12B-13
9,264.1	1.39	250.00	8,678.6	2,541.6	-1,763.4	1.50	1.50	-118.78	250.00	
13,342.7	1.39	250.00	12,756.0	2,507.7	-1,856.3	0.00	0.00	0.00	0.00	PBHL - 12B-13

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 12B-13 496 - Slot ELU O13 FED 12B-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 12B-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
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	355.00	300.0	2.6	-0.2	2.2	3.00	3.00	0.00
EOB @ 5.00° Inc. / 355.00° Azm / Build 3° / 100'									
366.7	5.00	355.00	366.5	7.2	-0.6	6.2	3.00	3.00	0.00
400.0	5.82	348.96	399.6	10.3	-1.1	9.0	3.00	2.47	-18.12
500.0	8.52	338.27	498.9	22.2	-4.8	20.7	3.00	2.70	-10.69
600.0	11.37	332.79	597.3	37.9	-12.1	37.6	3.00	2.85	-5.48
700.0	14.28	329.50	694.8	57.3	-22.8	59.6	3.00	2.91	-3.29
800.0	17.22	327.32	791.1	80.4	-37.1	86.7	3.00	2.94	-2.19
900.0	20.18	325.75	885.8	107.1	-54.8	118.7	3.00	2.96	-1.56
EOB @ 22.10° Inc. / 324.96° Azm									
964.6	22.10	324.96	946.0	126.2	-68.0	141.9	3.00	2.97	-1.23
1,000.0	22.10	324.96	978.8	137.2	-75.7	155.3	0.00	0.00	0.00
1,100.0	22.10	324.96	1,071.5	168.0	-97.3	192.9	0.00	0.00	0.00
1,200.0	22.10	324.96	1,164.1	198.8	-118.9	230.5	0.00	0.00	0.00
1,300.0	22.10	324.96	1,256.8	229.6	-140.5	268.1	0.00	0.00	0.00
1,400.0	22.10	324.96	1,349.4	260.4	-162.1	305.7	0.00	0.00	0.00
1,500.0	22.10	324.96	1,442.1	291.2	-183.7	343.3	0.00	0.00	0.00
1,600.0	22.10	324.96	1,534.8	322.0	-205.3	380.9	0.00	0.00	0.00
1,700.0	22.10	324.96	1,627.4	352.8	-226.9	418.5	0.00	0.00	0.00
1,800.0	22.10	324.96	1,720.1	383.6	-248.5	456.1	0.00	0.00	0.00
1,900.0	22.10	324.96	1,812.7	414.4	-270.1	493.7	0.00	0.00	0.00
2,000.0	22.10	324.96	1,905.4	445.2	-291.7	531.3	0.00	0.00	0.00
2,100.0	22.10	324.96	1,998.0	476.0	-313.3	569.0	0.00	0.00	0.00
2,200.0	22.10	324.96	2,090.7	506.8	-334.9	606.6	0.00	0.00	0.00
2,300.0	22.10	324.96	2,183.3	537.6	-356.5	644.2	0.00	0.00	0.00
2,400.0	22.10	324.96	2,276.0	568.4	-378.1	681.8	0.00	0.00	0.00
2,500.0	22.10	324.96	2,368.6	599.2	-399.7	719.4	0.00	0.00	0.00
2,600.0	22.10	324.96	2,461.3	630.0	-421.3	757.0	0.00	0.00	0.00
2,700.0	22.10	324.96	2,553.9	660.8	-442.9	794.6	0.00	0.00	0.00
2,800.0	22.10	324.96	2,646.6	691.6	-464.5	832.2	0.00	0.00	0.00
2,900.0	22.10	324.96	2,739.3	722.4	-486.1	869.8	0.00	0.00	0.00
3,000.0	22.10	324.96	2,831.9	753.2	-507.7	907.4	0.00	0.00	0.00
3,100.0	22.10	324.96	2,924.6	784.0	-529.3	945.0	0.00	0.00	0.00
3,200.0	22.10	324.96	3,017.2	814.8	-550.9	982.6	0.00	0.00	0.00
3,300.0	22.10	324.96	3,109.9	845.6	-572.5	1,020.2	0.00	0.00	0.00
3,400.0	22.10	324.96	3,202.5	876.4	-594.1	1,057.9	0.00	0.00	0.00
3,500.0	22.10	324.96	3,295.2	907.2	-615.7	1,095.5	0.00	0.00	0.00
3,600.0	22.10	324.96	3,387.8	938.0	-637.3	1,133.1	0.00	0.00	0.00
3,700.0	22.10	324.96	3,480.5	968.7	-658.9	1,170.7	0.00	0.00	0.00
3,800.0	22.10	324.96	3,573.1	999.5	-680.5	1,208.3	0.00	0.00	0.00
3,900.0	22.10	324.96	3,665.8	1,030.3	-702.1	1,245.9	0.00	0.00	0.00
4,000.0	22.10	324.96	3,758.4	1,061.1	-723.7	1,283.5	0.00	0.00	0.00
4,100.0	22.10	324.96	3,851.1	1,091.9	-745.3	1,321.1	0.00	0.00	0.00
4,200.0	22.10	324.96	3,943.8	1,122.7	-766.9	1,358.7	0.00	0.00	0.00
4,300.0	22.10	324.96	4,036.4	1,153.5	-788.5	1,396.3	0.00	0.00	0.00
Wasatch									
4,315.7	22.10	324.96	4,051.0	1,158.4	-791.9	1,402.2	0.00	0.00	0.00
4,400.0	22.10	324.96	4,129.1	1,184.3	-810.1	1,433.9	0.00	0.00	0.00
4,500.0	22.10	324.96	4,221.7	1,215.1	-831.7	1,471.5	0.00	0.00	0.00

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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 12B-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)
4,600.0	22.10	324.96	4,314.4	1,245.9	-853.3	1,509.1	0.00	0.00	0.00
4,700.0	22.10	324.96	4,407.0	1,276.7	-874.9	1,546.8	0.00	0.00	0.00
4,800.0	22.10	324.96	4,499.7	1,307.5	-896.5	1,584.4	0.00	0.00	0.00
4,900.0	22.10	324.96	4,592.3	1,338.3	-918.1	1,622.0	0.00	0.00	0.00
5,000.0	22.10	324.96	4,685.0	1,369.1	-939.8	1,659.6	0.00	0.00	0.00
5,100.0	22.10	324.96	4,777.6	1,399.9	-961.4	1,697.2	0.00	0.00	0.00
5,200.0	22.10	324.96	4,870.3	1,430.7	-983.0	1,734.8	0.00	0.00	0.00
5,300.0	22.10	324.96	4,962.9	1,461.5	-1,004.6	1,772.4	0.00	0.00	0.00
5,400.0	22.10	324.96	5,055.6	1,492.3	-1,026.2	1,810.0	0.00	0.00	0.00
5,500.0	22.10	324.96	5,148.3	1,523.1	-1,047.8	1,847.6	0.00	0.00	0.00
5,600.0	22.10	324.96	5,240.9	1,553.9	-1,069.4	1,885.2	0.00	0.00	0.00
5,700.0	22.10	324.96	5,333.6	1,584.7	-1,091.0	1,922.8	0.00	0.00	0.00
5,800.0	22.10	324.96	5,426.2	1,615.5	-1,112.6	1,960.4	0.00	0.00	0.00
5,900.0	22.10	324.96	5,518.9	1,646.3	-1,134.2	1,998.0	0.00	0.00	0.00
6,000.0	22.10	324.96	5,611.5	1,677.1	-1,155.8	2,035.6	0.00	0.00	0.00
6,100.0	22.10	324.96	5,704.2	1,707.9	-1,177.4	2,073.3	0.00	0.00	0.00
6,200.0	22.10	324.96	5,796.8	1,738.7	-1,199.0	2,110.9	0.00	0.00	0.00
6,300.0	22.10	324.96	5,889.5	1,769.5	-1,220.6	2,148.5	0.00	0.00	0.00
6,400.0	22.10	324.96	5,982.1	1,800.3	-1,242.2	2,186.1	0.00	0.00	0.00
6,500.0	22.10	324.96	6,074.8	1,831.1	-1,263.8	2,223.7	0.00	0.00	0.00
6,600.0	22.10	324.96	6,167.4	1,861.9	-1,285.4	2,261.3	0.00	0.00	0.00
6,700.0	22.10	324.96	6,260.1	1,892.7	-1,307.0	2,298.9	0.00	0.00	0.00
6,800.0	22.10	324.96	6,352.8	1,923.5	-1,328.6	2,336.5	0.00	0.00	0.00
6,900.0	22.10	324.96	6,445.4	1,954.3	-1,350.2	2,374.1	0.00	0.00	0.00
Wasatch G									
6,906.0	22.10	324.96	6,451.0	1,956.2	-1,351.5	2,376.4	0.00	0.00	0.00
7,000.0	22.10	324.96	6,538.1	1,985.1	-1,371.8	2,411.7	0.00	0.00	0.00
7,100.0	22.10	324.96	6,630.7	2,015.9	-1,393.4	2,449.3	0.00	0.00	0.00
7,200.0	22.10	324.96	6,723.4	2,046.7	-1,415.0	2,486.9	0.00	0.00	0.00
Fort Union									
7,229.8	22.10	324.96	6,751.0	2,055.9	-1,421.4	2,498.2	0.00	0.00	0.00
7,300.0	22.10	324.96	6,816.0	2,077.5	-1,436.6	2,524.5	0.00	0.00	0.00
7,400.0	22.10	324.96	6,908.7	2,108.3	-1,458.2	2,562.2	0.00	0.00	0.00
7,500.0	22.10	324.96	7,001.3	2,139.1	-1,479.8	2,599.8	0.00	0.00	0.00
7,600.0	22.10	324.96	7,094.0	2,169.9	-1,501.4	2,637.4	0.00	0.00	0.00
7,700.0	22.10	324.96	7,186.6	2,200.7	-1,523.0	2,675.0	0.00	0.00	0.00
7,800.0	22.10	324.96	7,279.3	2,231.5	-1,544.6	2,712.6	0.00	0.00	0.00
7,900.0	22.10	324.96	7,371.9	2,262.3	-1,566.2	2,750.2	0.00	0.00	0.00
8,000.0	22.10	324.96	7,464.6	2,293.1	-1,587.8	2,787.8	0.00	0.00	0.00
8,100.0	22.10	324.96	7,557.3	2,323.9	-1,609.4	2,825.4	0.00	0.00	0.00
8,200.0	22.10	324.96	7,649.9	2,354.7	-1,631.0	2,863.0	0.00	0.00	0.00
8,300.0	22.10	324.96	7,742.6	2,385.5	-1,652.6	2,900.6	0.00	0.00	0.00
8,400.0	22.10	324.96	7,835.2	2,416.3	-1,674.2	2,938.2	0.00	0.00	0.00
Drop 3° /100'									
8,434.9	22.10	324.96	7,867.5	2,427.1	-1,681.7	2,951.3	0.00	0.00	0.00
8,500.0	20.14	324.96	7,928.3	2,446.3	-1,695.2	2,974.8	3.00	-3.00	0.00
8,600.0	17.14	324.96	8,023.0	2,472.5	-1,713.6	3,006.8	3.00	-3.00	0.00
8,700.0	14.14	324.96	8,119.3	2,494.5	-1,729.1	3,033.7	3.00	-3.00	0.00
8,800.0	11.14	324.96	8,216.9	2,512.5	-1,741.6	3,055.6	3.00	-3.00	0.00
8,900.0	8.14	324.96	8,315.4	2,526.2	-1,751.2	3,072.3	3.00	-3.00	0.00
9,000.0	5.14	324.96	8,414.8	2,535.6	-1,757.9	3,083.9	3.00	-3.00	0.00
9,100.0	2.14	324.96	8,514.5	2,540.8	-1,761.5	3,090.3	3.00	-3.00	0.00

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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 12B-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)
EOD @ Vertical / Build 1.5° / 100' - Ohio Creek / TOG									
9,171.5	0.00	0.00	8,586.0	2,541.9	-1,762.3	3,091.6	3.00	-3.00	0.00
9,200.0	0.43	250.00	8,614.5	2,541.9	-1,762.4	3,091.6	1.50	1.50	0.00
EOB @ 1.39° Inc. / 250.00° Azm									
9,264.1	1.39	250.00	8,678.6	2,541.6	-1,763.4	3,091.9	1.50	1.50	0.00
9,300.0	1.39	250.00	8,714.5	2,541.3	-1,764.2	3,092.2	0.00	0.00	0.00
9,400.0	1.39	250.00	8,814.5	2,540.4	-1,766.4	3,092.8	0.00	0.00	0.00
9,500.0	1.39	250.00	8,914.5	2,539.6	-1,768.7	3,093.5	0.00	0.00	0.00
9,600.0	1.39	250.00	9,014.4	2,538.8	-1,771.0	3,094.2	0.00	0.00	0.00
9,700.0	1.39	250.00	9,114.4	2,537.9	-1,773.3	3,094.9	0.00	0.00	0.00
Williams Fork									
9,756.6	1.39	250.00	9,171.0	2,537.5	-1,774.6	3,095.3	0.00	0.00	0.00
9,800.0	1.39	250.00	9,214.4	2,537.1	-1,775.6	3,095.6	0.00	0.00	0.00
9,900.0	1.39	250.00	9,314.3	2,536.3	-1,777.8	3,096.3	0.00	0.00	0.00
10,000.0	1.39	250.00	9,414.3	2,535.4	-1,780.1	3,097.0	0.00	0.00	0.00
10,100.0	1.39	250.00	9,514.3	2,534.6	-1,782.4	3,097.7	0.00	0.00	0.00
10,200.0	1.39	250.00	9,614.2	2,533.8	-1,784.7	3,098.4	0.00	0.00	0.00
10,300.0	1.39	250.00	9,714.2	2,533.0	-1,787.0	3,099.0	0.00	0.00	0.00
10,400.0	1.39	250.00	9,814.2	2,532.1	-1,789.2	3,099.7	0.00	0.00	0.00
10,500.0	1.39	250.00	9,914.2	2,531.3	-1,791.5	3,100.4	0.00	0.00	0.00
10,600.0	1.39	250.00	10,014.1	2,530.5	-1,793.8	3,101.1	0.00	0.00	0.00
10,700.0	1.39	250.00	10,114.1	2,529.6	-1,796.1	3,101.8	0.00	0.00	0.00
10,800.0	1.39	250.00	10,214.1	2,528.8	-1,798.3	3,102.5	0.00	0.00	0.00
10,900.0	1.39	250.00	10,314.0	2,528.0	-1,800.6	3,103.2	0.00	0.00	0.00
11,000.0	1.39	250.00	10,414.0	2,527.2	-1,802.9	3,103.9	0.00	0.00	0.00
11,100.0	1.39	250.00	10,514.0	2,526.3	-1,805.2	3,104.6	0.00	0.00	0.00
11,200.0	1.39	250.00	10,614.0	2,525.5	-1,807.5	3,105.2	0.00	0.00	0.00
11,300.0	1.39	250.00	10,713.9	2,524.7	-1,809.7	3,105.9	0.00	0.00	0.00
11,400.0	1.39	250.00	10,813.9	2,523.8	-1,812.0	3,106.6	0.00	0.00	0.00
11,500.0	1.39	250.00	10,913.9	2,523.0	-1,814.3	3,107.3	0.00	0.00	0.00
11,600.0	1.39	250.00	11,013.8	2,522.2	-1,816.6	3,108.0	0.00	0.00	0.00
11,700.0	1.39	250.00	11,113.8	2,521.4	-1,818.8	3,108.7	0.00	0.00	0.00
11,800.0	1.39	250.00	11,213.8	2,520.5	-1,821.1	3,109.4	0.00	0.00	0.00
11,900.0	1.39	250.00	11,313.7	2,519.7	-1,823.4	3,110.1	0.00	0.00	0.00
12,000.0	1.39	250.00	11,413.7	2,518.9	-1,825.7	3,110.8	0.00	0.00	0.00
12,100.0	1.39	250.00	11,513.7	2,518.0	-1,828.0	3,111.4	0.00	0.00	0.00
12,200.0	1.39	250.00	11,613.7	2,517.2	-1,830.2	3,112.1	0.00	0.00	0.00
12,300.0	1.39	250.00	11,713.6	2,516.4	-1,832.5	3,112.8	0.00	0.00	0.00
12,400.0	1.39	250.00	11,813.6	2,515.5	-1,834.8	3,113.5	0.00	0.00	0.00
12,500.0	1.39	250.00	11,913.6	2,514.7	-1,837.1	3,114.2	0.00	0.00	0.00
12,600.0	1.39	250.00	12,013.5	2,513.9	-1,839.3	3,114.9	0.00	0.00	0.00
Cameo									
12,642.5	1.39	250.00	12,056.0	2,513.5	-1,840.3	3,115.2	0.00	0.00	0.00
12,700.0	1.39	250.00	12,113.5	2,513.1	-1,841.6	3,115.6	0.00	0.00	0.00
12,800.0	1.39	250.00	12,213.5	2,512.2	-1,843.9	3,116.3	0.00	0.00	0.00
12,900.0	1.39	250.00	12,313.5	2,511.4	-1,846.2	3,117.0	0.00	0.00	0.00
13,000.0	1.39	250.00	12,413.4	2,510.6	-1,848.5	3,117.6	0.00	0.00	0.00
13,100.0	1.39	250.00	12,513.4	2,509.7	-1,850.7	3,118.3	0.00	0.00	0.00
Rollins									
13,142.6	1.39	250.00	12,556.0	2,509.4	-1,851.7	3,118.6	0.00	0.00	0.00
13,200.0	1.39	250.00	12,613.4	2,508.9	-1,853.0	3,119.0	0.00	0.00	0.00
13,300.0	1.39	250.00	12,713.3	2,508.1	-1,855.3	3,119.7	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 12B-13 496 - Slot ELU O13 FED 12B-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 12B-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)	
TD @ 13342.7' MD / 12756.0' TVD										
13,342.7	1.39	250.00	12,756.0	2,507.7	-1,856.3	3,120.0	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	
- hit/miss target										
- Shape										
OHCR - 12B-13	0.00	0.00	8,586.0	2,541.9	-1,762.3	14,431,881.91	2,450,228.22	39.705688	-108.120966	
- plan hits target center										
- Point										
PBHL - 12B-13	0.00	0.00	12,756.0	2,507.7	-1,856.3	14,431,844.70	2,450,135.40	39.705594	-108.121300	
- 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 (°)		
4,315.7	4,051.0	Wasatch					
6,906.0	6,451.0	Wasatch G					
7,229.8	6,751.0	Fort Union					
9,171.5	8,586.0	Ohio Creek / TOG					
9,756.6	9,171.0	Williams Fork					
12,642.5	12,056.0	Cameo					
13,142.6	12,556.0	Rollins					

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
200.0	200.0	0.0	0.0	Build 3° / 100'	
366.7	366.5	7.2	-0.6	EOB @ 5.00° Inc. / 355.00° Azm / Build 3° / 100'	
964.6	946.0	126.2	-68.0	EOB @ 22.10° Inc. / 324.96° Azm	
8,434.9	7,867.5	2,427.1	-1,681.7	Drop 3° / 100'	
9,171.5	8,586.0	2,541.9	-1,762.3	EOD @ Vertical / Build 1.5° / 100'	
9,264.1	8,678.6	2,541.6	-1,763.4	EOB @ 1.39° Inc. / 250.00° Azm	
13,342.7	12,756.0	2,507.7	-1,856.3	TD @ 13342.7' MD / 12756.0' TVD	