

Project: Rio Blanco County, CO
 Site: ELU O13 496 Pad
 Well: ELU O13 FED 12D-13 496
 Wellbore: Wellbore #1
 Design: Design #1
 Latitude: 39.698683
 Longitude: -108.114729
 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 12D-13 496(0.0N, 0.0E)
 Measured Depth Reference: RKB @ 8148.0usft (30')
 Calculation Method: Minimum Curvature

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4025.0	4221.8	Wasatch
6425.0	6776.6	Wasatch G
6725.0	7095.9	Fort Union
8564.0	9024.9	Ohio Creek / TOG
9148.0	9609.0	Williams Fork
11993.0	12454.9	Cameo
12493.0	12955.0	Rollins

SECTION DETAILS

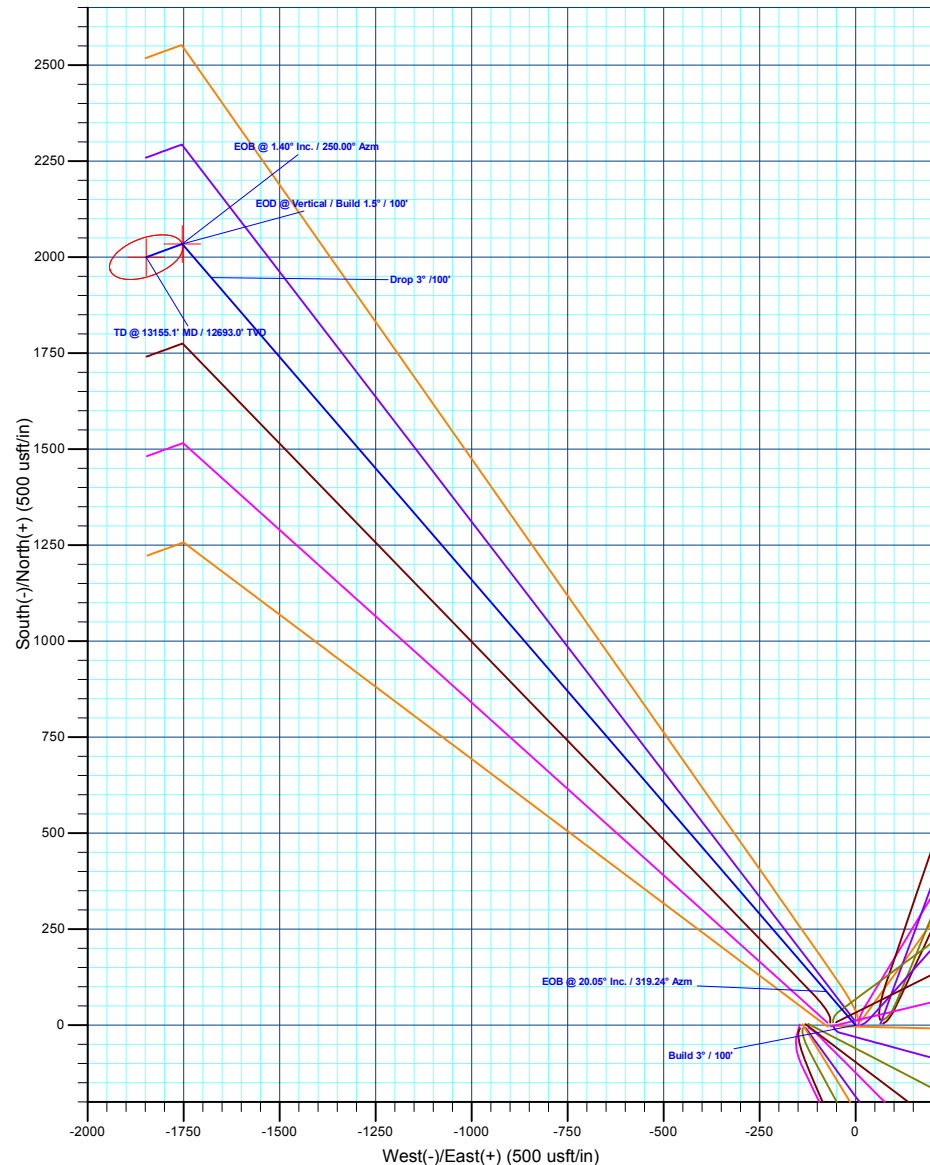
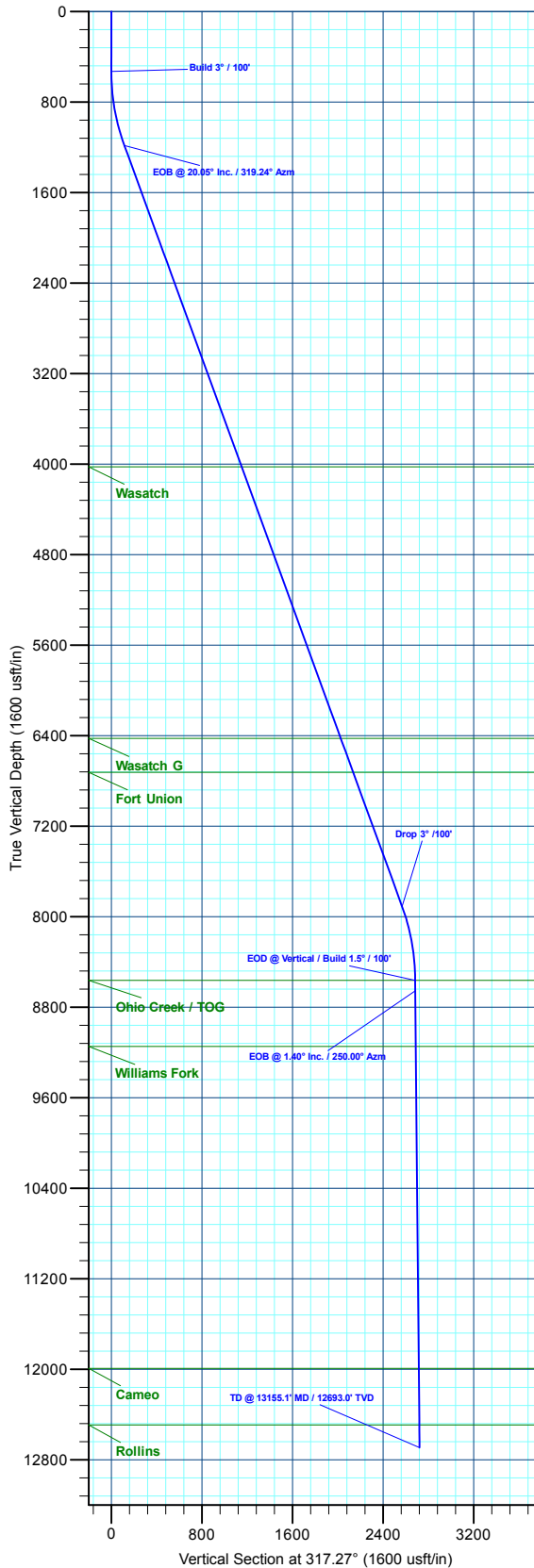
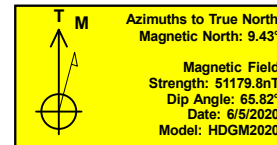
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dieg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
530.0	0.00	0.00	530.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
1198.3	20.05	319.24	1184.7	87.7	-75.6	3.00	319.24	115.7	EOB @ 20.05° Inc. / 319.24° Azm
8356.6	20.05	319.24	7909.3	1946.5	-1677.7	0.00	0.00	2568.2	Drop 3° / 100'
9024.9	0.00	0.00	8564.0	2034.2	-1753.2	3.00	180.00	2683.9	EOD @ Vertical / Build 1.5° / 100'
9118.4	1.40	250.00	8657.5	2033.8	-1754.3	1.50	250.00	2684.3	EOB @ 1.40° Inc. / 250.00° Azm
13155.1	1.40	250.00	12693.0	2000.0	-1847.2	0.00	0.00	2722.5	TD @ 13155.1' MD / 12693.0' TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
OHCR - 12D-13	8564.0	2034.2	-1753.2	14431364.11	2450247.02	39.704266	-108.120958
PBHL - 12D-13	12693.0	2000.0	-1847.2	14431326.90	2450154.20	39.704172	-108.121292

WELL DETAILS: ELU O13 FED 12D-13 496

+N/-S	+E/-W	Ground Level : 8118.0	Northing	Easting	Latitude	Longitude
0.0	0.0		14429387.40	2452064.80	39.698683	-108.114729



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

Created By: Will Jircik

Date: 16:23, June 18 2020



Caerus Oil & Gas

Rio Blanco County, CO

ELU O13 496 Pad

ELU O13 FED 12D-13 496 - Slot ELU O13 FED 12D-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 12D-13 496 - Slot ELU O13 FED 12D-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 12D-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 12D-13 496 - Slot ELU O13 FED 12D-13 496		
Well Position	+N/-S	-10.4 usft	Northing:
	+E/-W	-6.9 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	317.27	

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	
530.0	0.00	0.00	530.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,198.3	20.05	319.24	1,184.7	87.7	-75.6	3.00	3.00	0.00	319.24	
8,356.6	20.05	319.24	7,909.3	1,946.5	-1,677.7	0.00	0.00	0.00	0.00	
9,024.9	0.00	0.00	8,564.0	2,034.2	-1,753.2	3.00	-3.00	0.00	180.00	OHCR - 12D-13
9,118.4	1.40	250.00	8,657.5	2,033.8	-1,754.3	1.50	1.50	-117.58	250.00	
13,155.1	1.40	250.00	12,693.0	2,000.0	-1,847.2	0.00	0.00	0.00	0.00	PBHL - 12D-13

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 12D-13 496 - Slot ELU O13 FED 12D-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 12D-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
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
Build 3° / 100'									
530.0	0.00	0.00	530.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	2.10	319.24	600.0	1.0	-0.8	1.3	3.00	3.00	0.00
700.0	5.10	319.24	699.8	5.7	-4.9	7.6	3.00	3.00	0.00
800.0	8.10	319.24	799.1	14.4	-12.4	19.0	3.00	3.00	0.00
900.0	11.10	319.24	897.7	27.1	-23.3	35.7	3.00	3.00	0.00
1,000.0	14.10	319.24	995.3	43.6	-37.6	57.5	3.00	3.00	0.00
1,100.0	17.10	319.24	1,091.6	64.0	-55.1	84.4	3.00	3.00	0.00
EOB @ 20.05° Inc. / 319.24° Azm									
1,198.3	20.05	319.24	1,184.7	87.7	-75.6	115.7	3.00	3.00	0.00
1,200.0	20.05	319.24	1,186.3	88.1	-75.9	116.3	0.00	0.00	0.00
1,300.0	20.05	319.24	1,280.3	114.1	-98.3	150.5	0.00	0.00	0.00
1,400.0	20.05	319.24	1,374.2	140.0	-120.7	184.8	0.00	0.00	0.00
1,500.0	20.05	319.24	1,468.2	166.0	-143.1	219.0	0.00	0.00	0.00
1,600.0	20.05	319.24	1,562.1	192.0	-165.5	253.3	0.00	0.00	0.00
1,700.0	20.05	319.24	1,656.0	217.9	-187.8	287.6	0.00	0.00	0.00
1,800.0	20.05	319.24	1,750.0	243.9	-210.2	321.8	0.00	0.00	0.00
1,900.0	20.05	319.24	1,843.9	269.9	-232.6	356.1	0.00	0.00	0.00
2,000.0	20.05	319.24	1,937.9	295.9	-255.0	390.3	0.00	0.00	0.00
2,100.0	20.05	319.24	2,031.8	321.8	-277.4	424.6	0.00	0.00	0.00
2,200.0	20.05	319.24	2,125.7	347.8	-299.8	458.9	0.00	0.00	0.00
2,300.0	20.05	319.24	2,219.7	373.8	-322.1	493.1	0.00	0.00	0.00
2,400.0	20.05	319.24	2,313.6	399.7	-344.5	527.4	0.00	0.00	0.00
2,500.0	20.05	319.24	2,407.6	425.7	-366.9	561.7	0.00	0.00	0.00
2,600.0	20.05	319.24	2,501.5	451.7	-389.3	595.9	0.00	0.00	0.00
2,700.0	20.05	319.24	2,595.4	477.6	-411.7	630.2	0.00	0.00	0.00
2,800.0	20.05	319.24	2,689.4	503.6	-434.0	664.4	0.00	0.00	0.00
2,900.0	20.05	319.24	2,783.3	529.6	-456.4	698.7	0.00	0.00	0.00
3,000.0	20.05	319.24	2,877.3	555.5	-478.8	733.0	0.00	0.00	0.00
3,100.0	20.05	319.24	2,971.2	581.5	-501.2	767.2	0.00	0.00	0.00
3,200.0	20.05	319.24	3,065.1	607.5	-523.6	801.5	0.00	0.00	0.00
3,300.0	20.05	319.24	3,159.1	633.4	-545.9	835.7	0.00	0.00	0.00
3,400.0	20.05	319.24	3,253.0	659.4	-568.3	870.0	0.00	0.00	0.00
3,500.0	20.05	319.24	3,347.0	685.4	-590.7	904.3	0.00	0.00	0.00
3,600.0	20.05	319.24	3,440.9	711.3	-613.1	938.5	0.00	0.00	0.00
3,700.0	20.05	319.24	3,534.8	737.3	-635.5	972.8	0.00	0.00	0.00
3,800.0	20.05	319.24	3,628.8	763.3	-657.9	1,007.1	0.00	0.00	0.00
3,900.0	20.05	319.24	3,722.7	789.2	-680.2	1,041.3	0.00	0.00	0.00
4,000.0	20.05	319.24	3,816.7	815.2	-702.6	1,075.6	0.00	0.00	0.00
4,100.0	20.05	319.24	3,910.6	841.2	-725.0	1,109.8	0.00	0.00	0.00
4,200.0	20.05	319.24	4,004.5	867.1	-747.4	1,144.1	0.00	0.00	0.00
Wasatch									
4,221.8	20.05	319.24	4,025.0	872.8	-752.2	1,151.6	0.00	0.00	0.00
4,300.0	20.05	319.24	4,098.5	893.1	-769.8	1,178.4	0.00	0.00	0.00
4,400.0	20.05	319.24	4,192.4	919.1	-792.1	1,212.6	0.00	0.00	0.00
4,500.0	20.05	319.24	4,286.4	945.0	-814.5	1,246.9	0.00	0.00	0.00
4,600.0	20.05	319.24	4,380.3	971.0	-836.9	1,281.1	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 12D-13 496 - Slot ELU O13 FED 12D-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 12D-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)
4,700.0	20.05	319.24	4,474.2	997.0	-859.3	1,315.4	0.00	0.00	0.00
4,800.0	20.05	319.24	4,568.2	1,022.9	-881.7	1,349.7	0.00	0.00	0.00
4,900.0	20.05	319.24	4,662.1	1,048.9	-904.0	1,383.9	0.00	0.00	0.00
5,000.0	20.05	319.24	4,756.1	1,074.9	-926.4	1,418.2	0.00	0.00	0.00
5,100.0	20.05	319.24	4,850.0	1,100.9	-948.8	1,452.5	0.00	0.00	0.00
5,200.0	20.05	319.24	4,943.9	1,126.8	-971.2	1,486.7	0.00	0.00	0.00
5,300.0	20.05	319.24	5,037.9	1,152.8	-993.6	1,521.0	0.00	0.00	0.00
5,400.0	20.05	319.24	5,131.8	1,178.8	-1,016.0	1,555.2	0.00	0.00	0.00
5,500.0	20.05	319.24	5,225.8	1,204.7	-1,038.3	1,589.5	0.00	0.00	0.00
5,600.0	20.05	319.24	5,319.7	1,230.7	-1,060.7	1,623.8	0.00	0.00	0.00
5,700.0	20.05	319.24	5,413.7	1,256.7	-1,083.1	1,658.0	0.00	0.00	0.00
5,800.0	20.05	319.24	5,507.6	1,282.6	-1,105.5	1,692.3	0.00	0.00	0.00
5,900.0	20.05	319.24	5,601.5	1,308.6	-1,127.9	1,726.5	0.00	0.00	0.00
6,000.0	20.05	319.24	5,695.5	1,334.6	-1,150.2	1,760.8	0.00	0.00	0.00
6,100.0	20.05	319.24	5,789.4	1,360.5	-1,172.6	1,795.1	0.00	0.00	0.00
6,200.0	20.05	319.24	5,883.4	1,386.5	-1,195.0	1,829.3	0.00	0.00	0.00
6,300.0	20.05	319.24	5,977.3	1,412.5	-1,217.4	1,863.6	0.00	0.00	0.00
6,400.0	20.05	319.24	6,071.2	1,438.4	-1,239.8	1,897.9	0.00	0.00	0.00
6,500.0	20.05	319.24	6,165.2	1,464.4	-1,262.1	1,932.1	0.00	0.00	0.00
6,600.0	20.05	319.24	6,259.1	1,490.4	-1,284.5	1,966.4	0.00	0.00	0.00
6,700.0	20.05	319.24	6,353.1	1,516.3	-1,306.9	2,000.6	0.00	0.00	0.00
Wasatch G									
6,776.6	20.05	319.24	6,425.0	1,536.2	-1,324.0	2,026.9	0.00	0.00	0.00
6,800.0	20.05	319.24	6,447.0	1,542.3	-1,329.3	2,034.9	0.00	0.00	0.00
6,900.0	20.05	319.24	6,540.9	1,568.3	-1,351.7	2,069.2	0.00	0.00	0.00
7,000.0	20.05	319.24	6,634.9	1,594.2	-1,374.0	2,103.4	0.00	0.00	0.00
Fort Union									
7,095.9	20.05	319.24	6,725.0	1,619.1	-1,395.5	2,136.3	0.00	0.00	0.00
7,100.0	20.05	319.24	6,728.8	1,620.2	-1,396.4	2,137.7	0.00	0.00	0.00
7,200.0	20.05	319.24	6,822.8	1,646.2	-1,418.8	2,171.9	0.00	0.00	0.00
7,300.0	20.05	319.24	6,916.7	1,672.1	-1,441.2	2,206.2	0.00	0.00	0.00
7,400.0	20.05	319.24	7,010.6	1,698.1	-1,463.6	2,240.5	0.00	0.00	0.00
7,500.0	20.05	319.24	7,104.6	1,724.1	-1,486.0	2,274.7	0.00	0.00	0.00
7,600.0	20.05	319.24	7,198.5	1,750.0	-1,508.3	2,309.0	0.00	0.00	0.00
7,700.0	20.05	319.24	7,292.5	1,776.0	-1,530.7	2,343.3	0.00	0.00	0.00
7,800.0	20.05	319.24	7,386.4	1,802.0	-1,553.1	2,377.5	0.00	0.00	0.00
7,900.0	20.05	319.24	7,480.3	1,827.9	-1,575.5	2,411.8	0.00	0.00	0.00
8,000.0	20.05	319.24	7,574.3	1,853.9	-1,597.9	2,446.0	0.00	0.00	0.00
8,100.0	20.05	319.24	7,668.2	1,879.9	-1,620.2	2,480.3	0.00	0.00	0.00
8,200.0	20.05	319.24	7,762.2	1,905.8	-1,642.6	2,514.6	0.00	0.00	0.00
8,300.0	20.05	319.24	7,856.1	1,931.8	-1,665.0	2,548.8	0.00	0.00	0.00
Drop 3° /100'									
8,356.6	20.05	319.24	7,909.3	1,946.5	-1,677.7	2,568.2	0.00	0.00	0.00
8,400.0	18.75	319.24	7,950.2	1,957.4	-1,687.1	2,582.6	3.00	-3.00	0.00
8,500.0	15.75	319.24	8,045.7	1,979.9	-1,706.4	2,612.2	3.00	-3.00	0.00
8,600.0	12.75	319.24	8,142.6	1,998.5	-1,722.5	2,636.8	3.00	-3.00	0.00
8,700.0	9.75	319.24	8,240.7	2,013.3	-1,735.2	2,656.3	3.00	-3.00	0.00
8,800.0	6.75	319.24	8,339.6	2,024.2	-1,744.6	2,670.7	3.00	-3.00	0.00
8,900.0	3.75	319.24	8,439.2	2,031.1	-1,750.6	2,679.8	3.00	-3.00	0.00
9,000.0	0.75	319.24	8,539.1	2,034.1	-1,753.1	2,683.7	3.00	-3.00	0.00
EOD @ Vertical / Build 1.5° / 100° - Ohio Creek / TOG									
9,024.9	0.00	0.00	8,564.0	2,034.2	-1,753.2	2,683.9	3.00	-3.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 12D-13 496 - Slot ELU O13 FED 12D-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 12D-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)
9,100.0	1.13	250.00	8,639.1	2,033.9	-1,753.9	2,684.2	1.50	1.50	0.00
EOB @ 1.40° Inc. / 250.00° Azm									
9,118.4	1.40	250.00	8,657.5	2,033.8	-1,754.3	2,684.3	1.50	1.50	0.00
9,200.0	1.40	250.00	8,739.1	2,033.1	-1,756.2	2,685.1	0.00	0.00	0.00
9,300.0	1.40	250.00	8,839.0	2,032.3	-1,758.5	2,686.0	0.00	0.00	0.00
9,400.0	1.40	250.00	8,939.0	2,031.4	-1,760.8	2,687.0	0.00	0.00	0.00
9,500.0	1.40	250.00	9,039.0	2,030.6	-1,763.1	2,687.9	0.00	0.00	0.00
9,600.0	1.40	250.00	9,139.0	2,029.8	-1,765.4	2,688.9	0.00	0.00	0.00
Williams Fork									
9,609.0	1.40	250.00	9,148.0	2,029.7	-1,765.6	2,689.0	0.00	0.00	0.00
9,700.0	1.40	250.00	9,238.9	2,028.9	-1,767.7	2,689.8	0.00	0.00	0.00
9,800.0	1.40	250.00	9,338.9	2,028.1	-1,770.0	2,690.8	0.00	0.00	0.00
9,900.0	1.40	250.00	9,438.9	2,027.2	-1,772.3	2,691.7	0.00	0.00	0.00
10,000.0	1.40	250.00	9,538.8	2,026.4	-1,774.6	2,692.7	0.00	0.00	0.00
10,100.0	1.40	250.00	9,638.8	2,025.6	-1,776.9	2,693.6	0.00	0.00	0.00
10,200.0	1.40	250.00	9,738.8	2,024.7	-1,779.2	2,694.6	0.00	0.00	0.00
10,300.0	1.40	250.00	9,838.7	2,023.9	-1,781.5	2,695.5	0.00	0.00	0.00
10,400.0	1.40	250.00	9,938.7	2,023.1	-1,783.8	2,696.4	0.00	0.00	0.00
10,500.0	1.40	250.00	10,038.7	2,022.2	-1,786.1	2,697.4	0.00	0.00	0.00
10,600.0	1.40	250.00	10,138.7	2,021.4	-1,788.4	2,698.3	0.00	0.00	0.00
10,700.0	1.40	250.00	10,238.6	2,020.5	-1,790.7	2,699.3	0.00	0.00	0.00
10,800.0	1.40	250.00	10,338.6	2,019.7	-1,793.0	2,700.2	0.00	0.00	0.00
10,900.0	1.40	250.00	10,438.6	2,018.9	-1,795.3	2,701.2	0.00	0.00	0.00
11,000.0	1.40	250.00	10,538.5	2,018.0	-1,797.6	2,702.1	0.00	0.00	0.00
11,100.0	1.40	250.00	10,638.5	2,017.2	-1,799.9	2,703.1	0.00	0.00	0.00
11,200.0	1.40	250.00	10,738.5	2,016.4	-1,802.2	2,704.0	0.00	0.00	0.00
11,300.0	1.40	250.00	10,838.4	2,015.5	-1,804.5	2,705.0	0.00	0.00	0.00
11,400.0	1.40	250.00	10,938.4	2,014.7	-1,806.8	2,705.9	0.00	0.00	0.00
11,500.0	1.40	250.00	11,038.4	2,013.8	-1,809.1	2,706.9	0.00	0.00	0.00
11,600.0	1.40	250.00	11,138.4	2,013.0	-1,811.4	2,707.8	0.00	0.00	0.00
11,700.0	1.40	250.00	11,238.3	2,012.2	-1,813.7	2,708.7	0.00	0.00	0.00
11,800.0	1.40	250.00	11,338.3	2,011.3	-1,816.0	2,709.7	0.00	0.00	0.00
11,900.0	1.40	250.00	11,438.3	2,010.5	-1,818.3	2,710.6	0.00	0.00	0.00
12,000.0	1.40	250.00	11,538.2	2,009.7	-1,820.6	2,711.6	0.00	0.00	0.00
12,100.0	1.40	250.00	11,638.2	2,008.8	-1,822.9	2,712.5	0.00	0.00	0.00
12,200.0	1.40	250.00	11,738.2	2,008.0	-1,825.2	2,713.5	0.00	0.00	0.00
12,300.0	1.40	250.00	11,838.1	2,007.1	-1,827.5	2,714.4	0.00	0.00	0.00
12,400.0	1.40	250.00	11,938.1	2,006.3	-1,829.8	2,715.4	0.00	0.00	0.00
Cameo									
12,454.9	1.40	250.00	11,993.0	2,005.8	-1,831.1	2,715.9	0.00	0.00	0.00
12,500.0	1.40	250.00	12,038.1	2,005.5	-1,832.1	2,716.3	0.00	0.00	0.00
12,600.0	1.40	250.00	12,138.1	2,004.6	-1,834.4	2,717.3	0.00	0.00	0.00
12,700.0	1.40	250.00	12,238.0	2,003.8	-1,836.7	2,718.2	0.00	0.00	0.00
12,800.0	1.40	250.00	12,338.0	2,003.0	-1,839.0	2,719.1	0.00	0.00	0.00
12,900.0	1.40	250.00	12,438.0	2,002.1	-1,841.3	2,720.1	0.00	0.00	0.00
Rollins									
12,955.0	1.40	250.00	12,493.0	2,001.7	-1,842.6	2,720.6	0.00	0.00	0.00
13,000.0	1.40	250.00	12,537.9	2,001.3	-1,843.6	2,721.0	0.00	0.00	0.00
13,100.0	1.40	250.00	12,637.9	2,000.4	-1,845.9	2,722.0	0.00	0.00	0.00
TD @ 13155.1' MD / 12693.0' TVD									
13,155.1	1.40	250.00	12,693.0	2,000.0	-1,847.2	2,722.5	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 12D-13 496 - Slot ELU O13 FED 12D-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 12D-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 - 12D-13 - plan hits target center - Point	0.00	0.00	8,564.0	2,034.2	-1,753.2	14,431,364.11	2,450,247.02	39.704266	-108.120958
PBHL - 12D-13 - plan hits target center - Ellipse (radii L100.0 W50.0 on 250.00 azi)	0.00	0.00	12,693.0	2,000.0	-1,847.2	14,431,326.90	2,450,154.20	39.704172	-108.121292

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,221.8	4,025.0	Wasatch			
6,776.6	6,425.0	Wasatch G			
7,095.9	6,725.0	Fort Union			
9,024.9	8,564.0	Ohio Creek / TOG			
9,609.0	9,148.0	Williams Fork			
12,454.9	11,993.0	Cameo			
12,955.0	12,493.0	Rollins			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
530.0	530.0	0.0	0.0	Build 3° / 100'
1,198.3	1,184.7	87.7	-75.6	EOB @ 20.05° Inc. / 319.24° Azm
8,356.6	7,909.3	1,946.5	-1,677.7	Drop 3° / 100'
9,024.9	8,564.0	2,034.2	-1,753.2	EOD @ Vertical / Build 1.5° / 100'
9,118.4	8,657.5	2,033.8	-1,754.3	EOB @ 1.40° Inc. / 250.00° Azm
13,155.1	12,693.0	2,000.0	-1,847.2	TD @ 13155.1' MD / 12693.0' TVD