

Project: Rio Blanco County, CO
 Site: ELU O13 496 Pad
 Well: ELU O13 FED 22B-13 496
 Wellbore: Wellbore #1
 Design: Design #1
 Latitude: 39.698721
 Longitude: -108.114501
 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 22B-13 496(0.0N, 0.0E)
 Measured Depth Reference: RKB @ 8148.0usft (30')
 Calculation Method: Minimum Curvature

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4130.0	4329.4	Wasatch
6530.0	6866.3	Wasatch G
6530.0	7183.5	Fort Union
8709.0	9145.8	Ohio Creek / TOG
9277.0	9713.9	Williams Fork
12348.0	12785.7	Cameo
12848.0	13285.9	Rollins

SECTION DETAILS

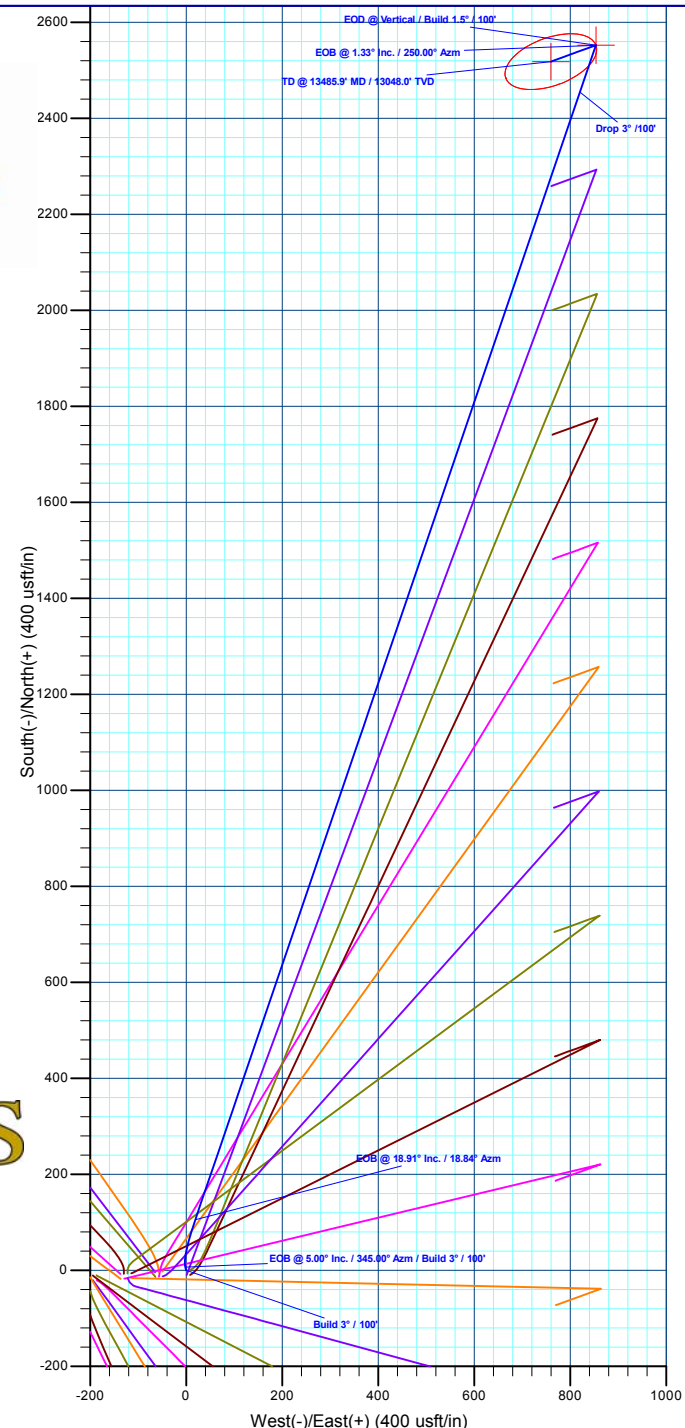
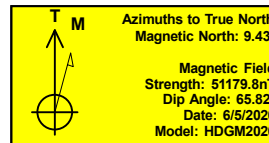
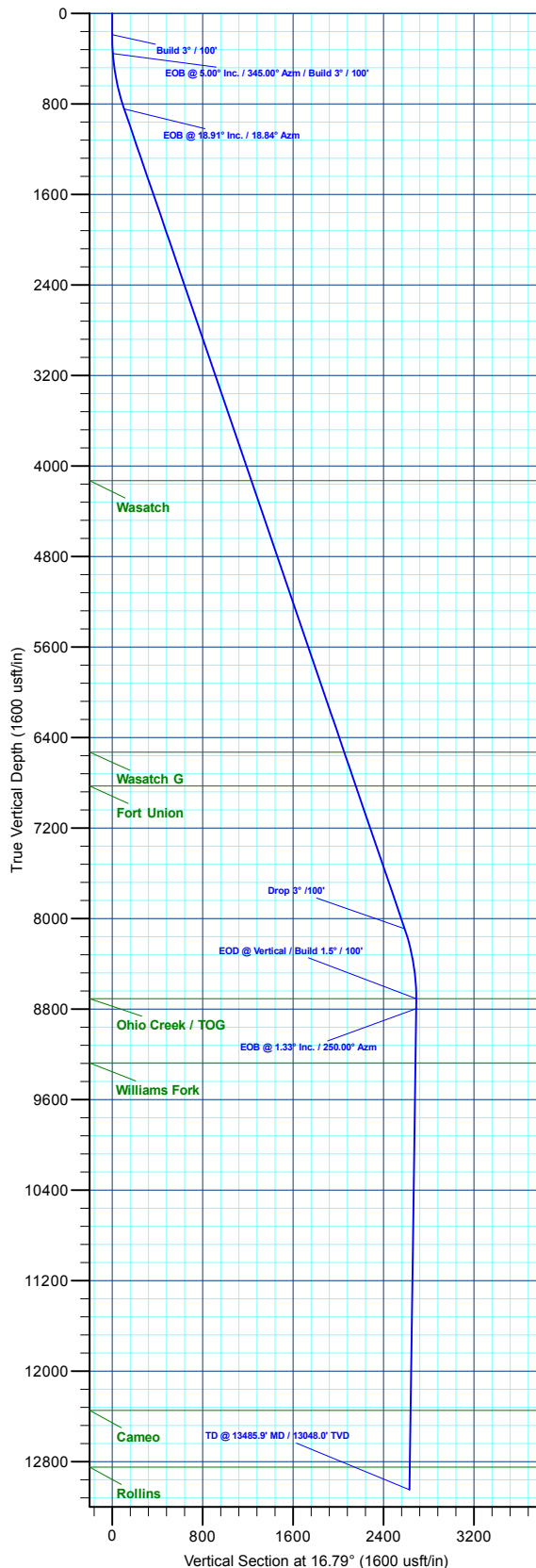
MD	Inc	Azi	TVD	+N-S	+E-W	Dieg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
190.0	0.00	0.00	190.0	0.0	0.0	0.00	0.00	0.0	EOB @ 5.00° Inc. / 345.00° Azm / Build 3° / 100'
356.7	5.00	345.00	356.5	7.0	-1.9	3.00	345.00	6.2	EOB @ 18.91° Inc. / 18.84° Azm
857.1	18.91	18.84	845.2	105.4	18.8	3.00	44.18	106.3	Drop 3° / 100'
8515.3	18.91	18.84	8089.9	2454.9	820.3	0.00	0.00	2587.2	EOD @ Vertical / Build 1.5° / 100'
9145.8	0.00	0.00	8709.0	2552.5	853.6	3.00	180.00	2690.2	EOD @ 1.33° Inc. / 250.00° Azm
9234.7	1.33	250.00	8797.9	2552.1	852.6	1.50	250.00	2689.6	TD @ 13485.9' MD / 13048.0' TVD
13485.9	1.33	250.00	13048.0	2518.3	759.6	0.00	0.00	2630.3	

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
OHCR - 22B-13	8709.0	2552.5	853.6	14431981.61	2452899.62	39.705725	-108.111468
PBHL - 22B-13	13048.0	2518.3	759.6	14431944.40	2452806.80	39.705631	-108.111802

WELL DETAILS: ELU O13 FED 22B-13 496

+N-S	+E-W	Ground Level : 8118.0	Latitude	Longitude
0.0	0.0	Northing 14429403.00	2452128.60	39.698721
		Easting		-108.114501



Plan: Design #1 (ELU O13 FED 22B-13 496/Wellbore #1)

Created By: Will Jircik

Date: 14:29, June 18 2020



Caerus Oil & Gas

Rio Blanco County, CO

ELU O13 496 Pad

ELU O13 FED 22B-13 496 - Slot ELU O13 FED 22B-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 22B-13 496 - Slot ELU O13 FED 22B-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 22B-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 22B-13 496 - Slot ELU O13 FED 22B-13 496					
Well Position	+N/-S	3.2 usft	Northing:	14,429,403.00 usft	Latitude:	39.698721
	+E/-W	57.3 usft	Easting:	2,452,128.60 usft	Longitude:	-108.114501
Position Uncertainty		0.0 usft	Wellhead Elevation:		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	16.79	

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	
190.0	0.00	0.00	190.0	0.0	0.0	0.00	0.00	0.00	0.00	
356.7	5.00	345.00	356.5	7.0	-1.9	3.00	3.00	0.00	345.00	
857.1	18.91	18.84	845.2	105.4	18.8	3.00	2.78	6.76	44.18	
8,515.3	18.91	18.84	8,089.9	2,454.9	820.3	0.00	0.00	0.00	0.00	
9,145.8	0.00	0.00	8,709.0	2,552.5	853.6	3.00	-3.00	0.00	180.00	OHCR - 22B-13
9,234.7	1.33	250.00	8,797.9	2,552.1	852.6	1.50	1.50	-123.70	250.00	
13,485.9	1.33	250.00	13,048.0	2,518.3	759.6	0.00	0.00	0.00	0.00	PBHL - 22B-13

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 22B-13 496 - Slot ELU O13 FED 22B-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 22B-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'									
190.0	0.00	0.00	190.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.30	345.00	200.0	0.0	0.0	0.0	3.00	3.00	0.00
300.0	3.30	345.00	299.9	3.1	-0.8	2.7	3.00	3.00	0.00
EOB @ 5.00° Inc. / 345.00° Azm / Build 3° / 100'									
356.7	5.00	345.00	356.5	7.0	-1.9	6.2	3.00	3.00	0.00
400.0	6.00	353.70	399.6	11.1	-2.6	9.9	3.00	2.31	20.07
500.0	8.62	5.40	498.8	23.8	-2.5	22.0	3.00	2.62	11.70
600.0	11.43	11.55	597.2	40.9	0.2	39.2	3.00	2.81	6.14
700.0	14.31	15.27	694.7	62.6	5.4	61.5	3.00	2.88	3.72
800.0	17.24	17.75	790.9	88.6	13.2	88.6	3.00	2.92	2.49
EOB @ 18.91° Inc. / 18.84° Azm									
857.1	18.91	18.84	845.2	105.4	18.8	106.3	3.00	2.94	1.90
900.0	18.91	18.84	885.8	118.6	23.3	120.2	0.00	0.00	0.00
1,000.0	18.91	18.84	980.4	149.3	33.7	152.6	0.00	0.00	0.00
1,100.0	18.91	18.84	1,075.0	179.9	44.2	185.0	0.00	0.00	0.00
1,200.0	18.91	18.84	1,169.6	210.6	54.7	217.4	0.00	0.00	0.00
1,300.0	18.91	18.84	1,264.2	241.3	65.1	249.8	0.00	0.00	0.00
1,400.0	18.91	18.84	1,358.8	272.0	75.6	282.2	0.00	0.00	0.00
1,500.0	18.91	18.84	1,453.4	302.7	86.1	314.6	0.00	0.00	0.00
1,600.0	18.91	18.84	1,548.0	333.3	96.5	347.0	0.00	0.00	0.00
1,700.0	18.91	18.84	1,642.6	364.0	107.0	379.4	0.00	0.00	0.00
1,800.0	18.91	18.84	1,737.2	394.7	117.5	411.8	0.00	0.00	0.00
1,900.0	18.91	18.84	1,831.8	425.4	127.9	444.2	0.00	0.00	0.00
2,000.0	18.91	18.84	1,926.4	456.0	138.4	476.6	0.00	0.00	0.00
2,100.0	18.91	18.84	2,021.0	486.7	148.9	509.0	0.00	0.00	0.00
2,200.0	18.91	18.84	2,115.6	517.4	159.3	541.4	0.00	0.00	0.00
2,300.0	18.91	18.84	2,210.2	548.1	169.8	573.8	0.00	0.00	0.00
2,400.0	18.91	18.84	2,304.8	578.8	180.3	606.2	0.00	0.00	0.00
2,500.0	18.91	18.84	2,399.4	609.4	190.7	638.6	0.00	0.00	0.00
2,600.0	18.91	18.84	2,494.0	640.1	201.2	670.9	0.00	0.00	0.00
2,700.0	18.91	18.84	2,588.6	670.8	211.7	703.3	0.00	0.00	0.00
2,800.0	18.91	18.84	2,683.2	701.5	222.1	735.7	0.00	0.00	0.00
2,900.0	18.91	18.84	2,777.8	732.2	232.6	768.1	0.00	0.00	0.00
3,000.0	18.91	18.84	2,872.4	762.8	243.1	800.5	0.00	0.00	0.00
3,100.0	18.91	18.84	2,967.0	793.5	253.5	832.9	0.00	0.00	0.00
3,200.0	18.91	18.84	3,061.6	824.2	264.0	865.3	0.00	0.00	0.00
3,300.0	18.91	18.84	3,156.2	854.9	274.5	897.7	0.00	0.00	0.00
3,400.0	18.91	18.84	3,250.8	885.5	284.9	930.1	0.00	0.00	0.00
3,500.0	18.91	18.84	3,345.4	916.2	295.4	962.5	0.00	0.00	0.00
3,600.0	18.91	18.84	3,440.0	946.9	305.9	994.9	0.00	0.00	0.00
3,700.0	18.91	18.84	3,534.6	977.6	316.3	1,027.3	0.00	0.00	0.00
3,800.0	18.91	18.84	3,629.2	1,008.3	326.8	1,059.7	0.00	0.00	0.00
3,900.0	18.91	18.84	3,723.8	1,038.9	337.3	1,092.1	0.00	0.00	0.00
4,000.0	18.91	18.84	3,818.4	1,069.6	347.7	1,124.5	0.00	0.00	0.00
4,100.0	18.91	18.84	3,913.0	1,100.3	358.2	1,156.9	0.00	0.00	0.00
4,200.0	18.91	18.84	4,007.6	1,131.0	368.7	1,189.3	0.00	0.00	0.00
4,300.0	18.91	18.84	4,102.2	1,161.7	379.1	1,221.7	0.00	0.00	0.00
Wasatch									
4,329.4	18.91	18.84	4,130.0	1,170.7	382.2	1,231.2	0.00	0.00	0.00
4,400.0	18.91	18.84	4,196.8	1,192.3	389.6	1,254.0	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 22B-13 496 - Slot ELU O13 FED 22B-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 22B-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)
4,500.0	18.91	18.84	4,291.4	1,223.0	400.1	1,286.4	0.00	0.00	0.00
4,600.0	18.91	18.84	4,386.0	1,253.7	410.5	1,318.8	0.00	0.00	0.00
4,700.0	18.91	18.84	4,480.6	1,284.4	421.0	1,351.2	0.00	0.00	0.00
4,800.0	18.91	18.84	4,575.2	1,315.1	431.5	1,383.6	0.00	0.00	0.00
4,900.0	18.91	18.84	4,669.8	1,345.7	441.9	1,416.0	0.00	0.00	0.00
5,000.0	18.91	18.84	4,764.4	1,376.4	452.4	1,448.4	0.00	0.00	0.00
5,100.0	18.91	18.84	4,859.0	1,407.1	462.9	1,480.8	0.00	0.00	0.00
5,200.0	18.91	18.84	4,953.6	1,437.8	473.3	1,513.2	0.00	0.00	0.00
5,300.0	18.91	18.84	5,048.2	1,468.4	483.8	1,545.6	0.00	0.00	0.00
5,400.0	18.91	18.84	5,142.8	1,499.1	494.3	1,578.0	0.00	0.00	0.00
5,500.0	18.91	18.84	5,237.4	1,529.8	504.7	1,610.4	0.00	0.00	0.00
5,600.0	18.91	18.84	5,332.0	1,560.5	515.2	1,642.8	0.00	0.00	0.00
5,700.0	18.91	18.84	5,426.6	1,591.2	525.7	1,675.2	0.00	0.00	0.00
5,800.0	18.91	18.84	5,521.2	1,621.8	536.1	1,707.6	0.00	0.00	0.00
5,900.0	18.91	18.84	5,615.8	1,652.5	546.6	1,740.0	0.00	0.00	0.00
6,000.0	18.91	18.84	5,710.4	1,683.2	557.1	1,772.4	0.00	0.00	0.00
6,100.0	18.91	18.84	5,805.0	1,713.9	567.5	1,804.7	0.00	0.00	0.00
6,200.0	18.91	18.84	5,899.6	1,744.6	578.0	1,837.1	0.00	0.00	0.00
6,300.0	18.91	18.84	5,994.2	1,775.2	588.4	1,869.5	0.00	0.00	0.00
6,400.0	18.91	18.84	6,088.8	1,805.9	598.9	1,901.9	0.00	0.00	0.00
6,500.0	18.91	18.84	6,183.4	1,836.6	609.4	1,934.3	0.00	0.00	0.00
6,600.0	18.91	18.84	6,278.0	1,867.3	619.8	1,966.7	0.00	0.00	0.00
6,700.0	18.91	18.84	6,372.6	1,898.0	630.3	1,999.1	0.00	0.00	0.00
6,800.0	18.91	18.84	6,467.2	1,928.6	640.8	2,031.5	0.00	0.00	0.00
Wasatch G									
6,866.3	18.91	18.84	6,530.0	1,949.0	647.7	2,053.0	0.00	0.00	0.00
6,900.0	18.91	18.84	6,561.8	1,959.3	651.2	2,063.9	0.00	0.00	0.00
7,000.0	18.91	18.84	6,656.4	1,990.0	661.7	2,096.3	0.00	0.00	0.00
7,100.0	18.91	18.84	6,751.0	2,020.7	672.2	2,128.7	0.00	0.00	0.00
Fort Union									
7,183.5	18.91	18.84	6,830.0	2,046.3	680.9	2,155.7	0.00	0.00	0.00
7,200.0	18.91	18.84	6,845.6	2,051.3	682.6	2,161.1	0.00	0.00	0.00
7,300.0	18.91	18.84	6,940.2	2,082.0	693.1	2,193.5	0.00	0.00	0.00
7,400.0	18.91	18.84	7,034.8	2,112.7	703.6	2,225.9	0.00	0.00	0.00
7,500.0	18.91	18.84	7,129.4	2,143.4	714.0	2,258.3	0.00	0.00	0.00
7,600.0	18.91	18.84	7,224.0	2,174.1	724.5	2,290.7	0.00	0.00	0.00
7,700.0	18.91	18.84	7,318.6	2,204.7	735.0	2,323.1	0.00	0.00	0.00
7,800.0	18.91	18.84	7,413.2	2,235.4	745.4	2,355.5	0.00	0.00	0.00
7,900.0	18.91	18.84	7,507.8	2,266.1	755.9	2,387.8	0.00	0.00	0.00
8,000.0	18.91	18.84	7,602.4	2,296.8	766.4	2,420.2	0.00	0.00	0.00
8,100.0	18.91	18.84	7,697.0	2,327.5	776.8	2,452.6	0.00	0.00	0.00
8,200.0	18.91	18.84	7,791.6	2,358.1	787.3	2,485.0	0.00	0.00	0.00
8,300.0	18.91	18.84	7,886.2	2,388.8	797.8	2,517.4	0.00	0.00	0.00
8,400.0	18.91	18.84	7,980.8	2,419.5	808.2	2,549.8	0.00	0.00	0.00
8,500.0	18.91	18.84	8,075.4	2,450.2	818.7	2,582.2	0.00	0.00	0.00
Drop 3° /100'									
8,515.3	18.91	18.84	8,089.9	2,454.9	820.3	2,587.2	0.00	0.00	0.00
8,600.0	16.37	18.84	8,170.6	2,479.2	828.6	2,612.8	3.00	-3.00	0.00
8,700.0	13.37	18.84	8,267.3	2,503.5	836.9	2,638.5	3.00	-3.00	0.00
8,800.0	10.37	18.84	8,365.1	2,522.9	843.5	2,659.0	3.00	-3.00	0.00
8,900.0	7.37	18.84	8,463.9	2,537.5	848.5	2,674.4	3.00	-3.00	0.00
9,000.0	4.37	18.84	8,563.4	2,547.2	851.8	2,684.7	3.00	-3.00	0.00

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Project:	Rio Blanco County, CO	MD Reference:	RKB @ 8148.0usft (30')
Site:	ELU O13 496 Pad	North Reference:	True
Well:	ELU O13 FED 22B-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	1.37	18.84	8,663.2	2,551.9	853.4	2,689.7	3.00	-3.00	0.00
EOD @ Vertical / Build 1.5° / 100' - Ohio Creek / TOG									
9,145.8	0.00	0.00	8,709.0	2,552.5	853.6	2,690.2	3.00	-3.00	0.00
9,200.0	0.81	250.00	8,763.2	2,552.3	853.2	2,690.0	1.50	1.50	0.00
EOB @ 1.33° Inc. / 250.00° Azm									
9,234.7	1.33	250.00	8,797.9	2,552.1	852.6	2,689.6	1.50	1.50	0.00
9,300.0	1.33	250.00	8,863.2	2,551.6	851.2	2,688.7	0.00	0.00	0.00
9,400.0	1.33	250.00	8,963.2	2,550.8	849.0	2,687.3	0.00	0.00	0.00
9,500.0	1.33	250.00	9,063.2	2,550.0	846.8	2,685.9	0.00	0.00	0.00
9,600.0	1.33	250.00	9,163.1	2,549.2	844.6	2,684.5	0.00	0.00	0.00
9,700.0	1.33	250.00	9,263.1	2,548.4	842.5	2,683.1	0.00	0.00	0.00
Williams Fork									
9,713.9	1.33	250.00	9,277.0	2,548.3	842.1	2,682.9	0.00	0.00	0.00
9,800.0	1.33	250.00	9,363.1	2,547.6	840.3	2,681.7	0.00	0.00	0.00
9,900.0	1.33	250.00	9,463.0	2,546.8	838.1	2,680.3	0.00	0.00	0.00
10,000.0	1.33	250.00	9,563.0	2,546.0	835.9	2,678.9	0.00	0.00	0.00
10,100.0	1.33	250.00	9,663.0	2,545.2	833.7	2,677.5	0.00	0.00	0.00
10,200.0	1.33	250.00	9,763.0	2,544.4	831.5	2,676.1	0.00	0.00	0.00
10,300.0	1.33	250.00	9,862.9	2,543.6	829.3	2,674.7	0.00	0.00	0.00
10,400.0	1.33	250.00	9,962.9	2,542.8	827.1	2,673.4	0.00	0.00	0.00
10,500.0	1.33	250.00	10,062.9	2,542.0	825.0	2,672.0	0.00	0.00	0.00
10,600.0	1.33	250.00	10,162.9	2,541.2	822.8	2,670.6	0.00	0.00	0.00
10,700.0	1.33	250.00	10,262.8	2,540.4	820.6	2,669.2	0.00	0.00	0.00
10,800.0	1.33	250.00	10,362.8	2,539.6	818.4	2,667.8	0.00	0.00	0.00
10,900.0	1.33	250.00	10,462.8	2,538.8	816.2	2,666.4	0.00	0.00	0.00
11,000.0	1.33	250.00	10,562.7	2,538.1	814.0	2,665.0	0.00	0.00	0.00
11,100.0	1.33	250.00	10,662.7	2,537.3	811.8	2,663.6	0.00	0.00	0.00
11,200.0	1.33	250.00	10,762.7	2,536.5	809.6	2,662.2	0.00	0.00	0.00
11,300.0	1.33	250.00	10,862.7	2,535.7	807.5	2,660.8	0.00	0.00	0.00
11,400.0	1.33	250.00	10,962.6	2,534.9	805.3	2,659.4	0.00	0.00	0.00
11,500.0	1.33	250.00	11,062.6	2,534.1	803.1	2,658.0	0.00	0.00	0.00
11,600.0	1.33	250.00	11,162.6	2,533.3	800.9	2,656.6	0.00	0.00	0.00
11,700.0	1.33	250.00	11,262.6	2,532.5	798.7	2,655.2	0.00	0.00	0.00
11,800.0	1.33	250.00	11,362.5	2,531.7	796.5	2,653.8	0.00	0.00	0.00
11,900.0	1.33	250.00	11,462.5	2,530.9	794.3	2,652.4	0.00	0.00	0.00
12,000.0	1.33	250.00	11,562.5	2,530.1	792.1	2,651.1	0.00	0.00	0.00
12,100.0	1.33	250.00	11,662.5	2,529.3	790.0	2,649.7	0.00	0.00	0.00
12,200.0	1.33	250.00	11,762.4	2,528.5	787.8	2,648.3	0.00	0.00	0.00
12,300.0	1.33	250.00	11,862.4	2,527.7	785.6	2,646.9	0.00	0.00	0.00
12,400.0	1.33	250.00	11,962.4	2,526.9	783.4	2,645.5	0.00	0.00	0.00
12,500.0	1.33	250.00	12,062.3	2,526.1	781.2	2,644.1	0.00	0.00	0.00
12,600.0	1.33	250.00	12,162.3	2,525.3	779.0	2,642.7	0.00	0.00	0.00
12,700.0	1.33	250.00	12,262.3	2,524.5	776.8	2,641.3	0.00	0.00	0.00
Cameo									
12,785.7	1.33	250.00	12,348.0	2,523.8	775.0	2,640.1	0.00	0.00	0.00
12,800.0	1.33	250.00	12,362.3	2,523.7	774.6	2,639.9	0.00	0.00	0.00
12,900.0	1.33	250.00	12,462.2	2,522.9	772.5	2,638.5	0.00	0.00	0.00
13,000.0	1.33	250.00	12,562.2	2,522.1	770.3	2,637.1	0.00	0.00	0.00
13,100.0	1.33	250.00	12,662.2	2,521.3	768.1	2,635.7	0.00	0.00	0.00
13,200.0	1.33	250.00	12,762.2	2,520.5	765.9	2,634.3	0.00	0.00	0.00
Rollins									
13,285.9	1.33	250.00	12,848.0	2,519.9	764.0	2,633.1	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU O13 FED 22B-13 496 - Slot ELU O13 FED 22B-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 22B-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)	
13,300.0	1.33	250.00	12,862.1	2,519.7	763.7	2,632.9	0.00	0.00	0.00	
13,400.0	1.33	250.00	12,962.1	2,518.9	761.5	2,631.5	0.00	0.00	0.00	
TD @ 13485.9' MD / 13048.0' TVD										
13,485.9	1.33	250.00	13,048.0	2,518.3	759.6	2,630.3	0.00	0.00	0.00	

Design Targets										
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
OHCR - 22B-13	- plan hits target center	0.00	0.00	8,709.0	2,552.5	853.6	14,431,981.61	2,452,899.62	39.705725	-108.111469
	- Point									
PBHL - 22B-13	- plan hits target center	0.00	0.00	13,048.0	2,518.3	759.6	14,431,944.40	2,452,806.80	39.705631	-108.111802
	- Ellipse (radii L100.0 W50.0 on 250.00 azi)									

Formations							
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)		
4,329.4	4,130.0	Wasatch					
6,866.3	6,530.0	Wasatch G					
7,183.5	6,830.0	Fort Union					
9,145.8	8,709.0	Ohio Creek / TOG					
9,713.9	9,277.0	Williams Fork					
12,785.7	12,348.0	Cameo					
13,285.9	12,848.0	Rollins					

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
190.0	190.0	0.0	0.0	Build 3° / 100'	
356.7	356.5	7.0	-1.9	EOB @ 5.00° Inc. / 345.00° Azm / Build 3° / 100'	
857.1	845.2	105.4	18.8	EOB @ 18.91° Inc. / 18.84° Azm	
8,515.3	8,089.9	2,454.9	820.3	Drop 3° / 100'	
9,145.8	8,709.0	2,552.5	853.6	EOD @ Vertical / Build 1.5° / 100'	
9,234.7	8,797.9	2,552.1	852.6	EOB @ 1.33° Inc. / 250.00° Azm	
13,485.9	13,048.0	2,518.3	759.6	TD @ 13485.9' MD / 13048.0' TVD	