

Project: Garfield County, CO  
Site: BJU M23A 496 Pad  
Well: BJU M23A FED 15C-23 496  
Wellbore: Wellbore #1  
Design: Design #1  
Latitude: 39.684019  
Longitude: -108.140233  
Ground Level: 8104.0  
RKB @ 8134.0usft (30')

PROJECT DETAILS: Garfield 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 @ 8134.0usft (30')  
Section (VS) Reference: Slot - BJU M23A FED 15C-23 496(0.0N, 0.0E)  
Measured Depth Reference: RKB @ 8134.0usft (30')  
Calculation Method: Minimum Curvature

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3298.0	3319.9	Wasatch
5698.0	5737.9	Wasatch G
5998.0	6040.2	Fort Union
8015.0	8066.8	Ohio Creek
8015.0	8066.8	TOG
8356.0	8407.9	William Fork
11237.0	11289.8	Cameo
11737.0	11790.0	Rollins

SECTION DETAILS

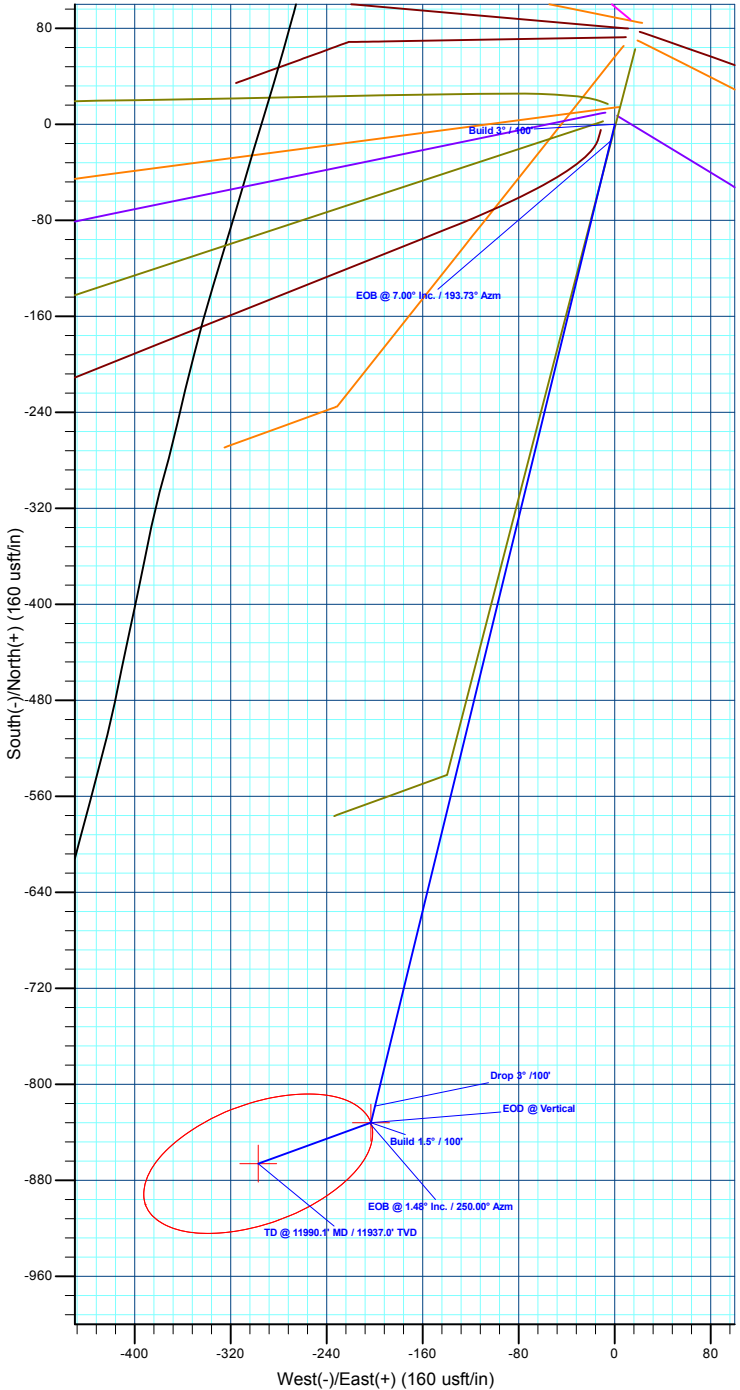
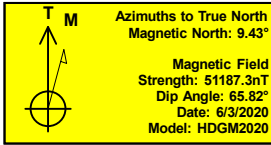
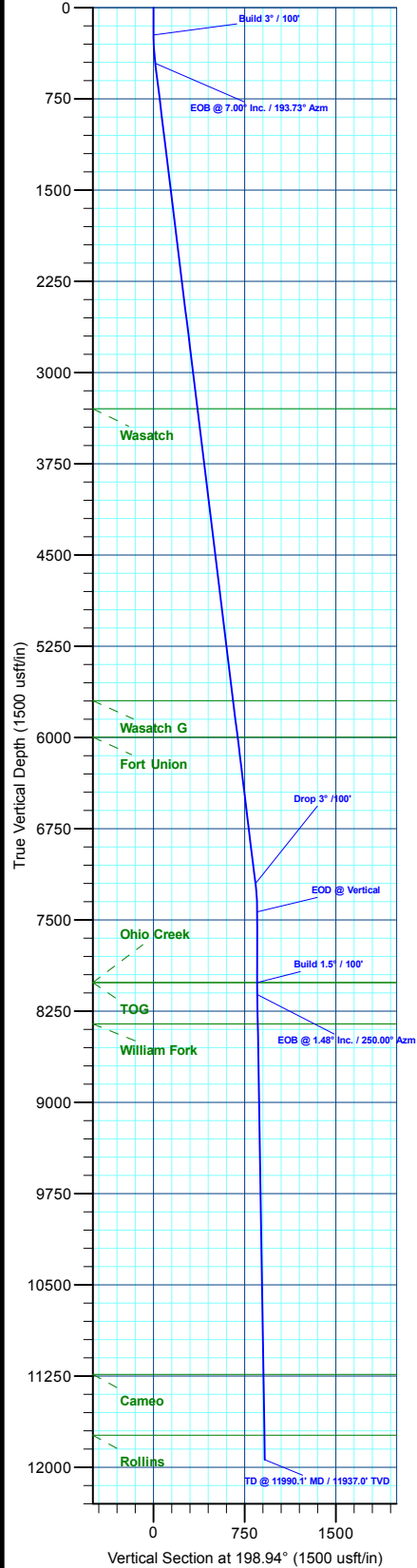
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dieg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
225.0	0.00	0.00	225.0	0.0	0.0	0.00	0.00	0.0	Build 3" / 100'
458.3	7.00	193.73	457.7	-13.8	-3.4	3.00	193.73	14.2	EOB @ 7.00" Inc. / 193.73° Azm
7253.5	7.00	193.73	7202.3	-818.0	-199.8	0.00	0.00	838.6	Drop 3" / 100'
7486.8	0.00	0.00	7435.0	-831.9	-203.2	3.00	180.00	852.8	EOD @ Vertical
8066.8	0.00	0.00	8015.0	-831.9	-203.2	0.00	0.00	852.8	Build 1.5" / 100'
8165.4	1.48	250.00	8113.6	-832.3	-204.4	1.50	250.00	853.6	EOB @ 1.48" Inc. / 250.00° Azm
11990.1	1.48	250.00	11937.0	-866.1	-297.2	0.00	0.00	915.6	TD @ 11990.1 MD / 11937.0° TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
OHCR - 15C-23	8015.0	-831.9	-203.2	14422978.88	2444883.03	39.681736	-108.140955
PBHL - 15C-23	11937.0	-866.1	-297.2	14422941.70	2444790.20	39.681643	-108.141289

WELL DETAILS: BJU M23A FED 15C-23 496

+N/-S	+E/-W	Ground Level : 8104.0	Northing	Easting	Latitude	Longitude
0.0	0.0		14423816.80	2445059.60	39.684019	-108.140233



Plan: Design #1 (BJU M23A FED 15C-23 496/Wellbore #1)

Created By: Will Jircik Date: 10:52, June 05 2020



## **Caerus Oil & Gas**

**Garfield County, CO**

**BJU M23A 496 Pad**

**BJU M23A FED 15C-23 496 - Slot BJU M23A FED 15C-23 496**

**Wellbore #1**

**Plan: Design #1**

## **QES Well Planning Report**

**05 June, 2020**



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BJU M23A FED 15C-23 496 - Slot BJU M23A FED 15C-23 496
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	RKB @ 8134.0usft (30')
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	RKB @ 8134.0usft (30')
<b>Site:</b>	BJU M23A 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	BJU M23A FED 15C-23 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

<b>Project</b>	Garfield 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>	BJU M23A 496 Pad		
<b>Site Position:</b>		<b>Northing:</b>	14,424,028.50 usft
<b>From:</b>	Map	<b>Easting:</b>	2,445,109.60 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	39.684596
		<b>Longitude:</b>	-108.140032
		<b>Grid Convergence:</b>	1.83 °

<b>Well</b>	BJU M23A FED 15C-23 496 - Slot BJU M23A FED 15C-23 496		
<b>Well Position</b>	<b>+N/-S</b>	-210.0 usft	<b>Northing:</b> 14,423,816.80 usft
	<b>+E/-W</b>	-56.7 usft	<b>Easting:</b> 2,445,059.60 usft
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>
			<b>Ground Level:</b> 8,104.0 usft

<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	6/3/2020	9.43	65.82	51,187.30000000

<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	198.94

<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	
225.0	0.00	0.00	225.0	0.0	0.0	0.00	0.00	0.00	0.00	
458.3	7.00	193.73	457.7	-13.8	-3.4	3.00	3.00	0.00	193.73	
7,253.5	7.00	193.73	7,202.3	-818.0	-199.8	0.00	0.00	0.00	0.00	
7,486.8	0.00	0.00	7,435.0	-831.9	-203.2	3.00	-3.00	0.00	180.00	
8,066.8	0.00	0.00	8,015.0	-831.9	-203.2	0.00	0.00	0.00	0.00	OHCR - 15C-23
8,165.4	1.48	250.00	8,113.6	-832.3	-204.4	1.50	1.50	-111.55	250.00	
11,990.1	1.48	250.00	11,937.0	-866.1	-297.2	0.00	0.00	0.00	0.00	PBHL - 15C-23

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BJU M23A FED 15C-23 496 - Slot BJU M23A FED 15C-23 496
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	RKB @ 8134.0usft (30')
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	RKB @ 8134.0usft (30')
<b>Site:</b>	BJU M23A 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	BJU M23A FED 15C-23 496	<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
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Build 3° / 100'</b>									
225.0	0.00	0.00	225.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	2.25	193.73	300.0	-1.4	-0.3	1.5	3.00	3.00	0.00
400.0	5.25	193.73	399.8	-7.8	-1.9	8.0	3.00	3.00	0.00
<b>EOB @ 7.00° Inc. / 193.73° Azm</b>									
458.3	7.00	193.73	457.7	-13.8	-3.4	14.2	3.00	3.00	0.00
500.0	7.00	193.73	499.1	-18.8	-4.6	19.2	0.00	0.00	0.00
600.0	7.00	193.73	598.4	-30.6	-7.5	31.4	0.00	0.00	0.00
700.0	7.00	193.73	697.6	-42.4	-10.4	43.5	0.00	0.00	0.00
800.0	7.00	193.73	796.9	-54.3	-13.3	55.6	0.00	0.00	0.00
900.0	7.00	193.73	896.1	-66.1	-16.1	67.8	0.00	0.00	0.00
1,000.0	7.00	193.73	995.4	-77.9	-19.0	79.9	0.00	0.00	0.00
1,100.0	7.00	193.73	1,094.6	-89.8	-21.9	92.0	0.00	0.00	0.00
1,200.0	7.00	193.73	1,193.9	-101.6	-24.8	104.2	0.00	0.00	0.00
1,300.0	7.00	193.73	1,293.2	-113.4	-27.7	116.3	0.00	0.00	0.00
1,400.0	7.00	193.73	1,392.4	-125.3	-30.6	128.4	0.00	0.00	0.00
1,500.0	7.00	193.73	1,491.7	-137.1	-33.5	140.6	0.00	0.00	0.00
1,600.0	7.00	193.73	1,590.9	-148.9	-36.4	152.7	0.00	0.00	0.00
1,700.0	7.00	193.73	1,690.2	-160.8	-39.3	164.8	0.00	0.00	0.00
1,800.0	7.00	193.73	1,789.4	-172.6	-42.2	177.0	0.00	0.00	0.00
1,900.0	7.00	193.73	1,888.7	-184.5	-45.1	189.1	0.00	0.00	0.00
2,000.0	7.00	193.73	1,987.9	-196.3	-47.9	201.2	0.00	0.00	0.00
2,100.0	7.00	193.73	2,087.2	-208.1	-50.8	213.4	0.00	0.00	0.00
2,200.0	7.00	193.73	2,186.4	-220.0	-53.7	225.5	0.00	0.00	0.00
2,300.0	7.00	193.73	2,285.7	-231.8	-56.6	237.6	0.00	0.00	0.00
2,400.0	7.00	193.73	2,385.0	-243.6	-59.5	249.8	0.00	0.00	0.00
2,500.0	7.00	193.73	2,484.2	-255.5	-62.4	261.9	0.00	0.00	0.00
2,600.0	7.00	193.73	2,583.5	-267.3	-65.3	274.0	0.00	0.00	0.00
2,700.0	7.00	193.73	2,682.7	-279.1	-68.2	286.2	0.00	0.00	0.00
2,800.0	7.00	193.73	2,782.0	-291.0	-71.1	298.3	0.00	0.00	0.00
2,900.0	7.00	193.73	2,881.2	-302.8	-74.0	310.4	0.00	0.00	0.00
3,000.0	7.00	193.73	2,980.5	-314.6	-76.9	322.5	0.00	0.00	0.00
3,100.0	7.00	193.73	3,079.7	-326.5	-79.7	334.7	0.00	0.00	0.00
3,200.0	7.00	193.73	3,179.0	-338.3	-82.6	346.8	0.00	0.00	0.00
3,300.0	7.00	193.73	3,278.3	-350.1	-85.5	358.9	0.00	0.00	0.00
<b>Wasatch</b>									
3,319.9	7.00	193.73	3,298.0	-352.5	-86.1	361.4	0.00	0.00	0.00
3,400.0	7.00	193.73	3,377.5	-362.0	-88.4	371.1	0.00	0.00	0.00
3,500.0	7.00	193.73	3,476.8	-373.8	-91.3	383.2	0.00	0.00	0.00
3,600.0	7.00	193.73	3,576.0	-385.6	-94.2	395.3	0.00	0.00	0.00
3,700.0	7.00	193.73	3,675.3	-397.5	-97.1	407.5	0.00	0.00	0.00
3,800.0	7.00	193.73	3,774.5	-409.3	-100.0	419.6	0.00	0.00	0.00
3,900.0	7.00	193.73	3,873.8	-421.2	-102.9	431.7	0.00	0.00	0.00
4,000.0	7.00	193.73	3,973.0	-433.0	-105.8	443.9	0.00	0.00	0.00
4,100.0	7.00	193.73	4,072.3	-444.8	-108.7	456.0	0.00	0.00	0.00
4,200.0	7.00	193.73	4,171.5	-456.7	-111.5	468.1	0.00	0.00	0.00
4,300.0	7.00	193.73	4,270.8	-468.5	-114.4	480.3	0.00	0.00	0.00
4,400.0	7.00	193.73	4,370.1	-480.3	-117.3	492.4	0.00	0.00	0.00
4,500.0	7.00	193.73	4,469.3	-492.2	-120.2	504.5	0.00	0.00	0.00
4,600.0	7.00	193.73	4,568.6	-504.0	-123.1	516.7	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BJU M23A FED 15C-23 496 - Slot BJU M23A FED 15C-23 496
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	RKB @ 8134.0usft (30')
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	RKB @ 8134.0usft (30')
<b>Site:</b>	BJU M23A 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	BJU M23A FED 15C-23 496	<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	7.00	193.73	4,667.8	-515.8	-126.0	528.8	0.00	0.00	0.00
4,800.0	7.00	193.73	4,767.1	-527.7	-128.9	540.9	0.00	0.00	0.00
4,900.0	7.00	193.73	4,866.3	-539.5	-131.8	553.1	0.00	0.00	0.00
5,000.0	7.00	193.73	4,965.6	-551.3	-134.7	565.2	0.00	0.00	0.00
5,100.0	7.00	193.73	5,064.8	-563.2	-137.6	577.3	0.00	0.00	0.00
5,200.0	7.00	193.73	5,164.1	-575.0	-140.5	589.5	0.00	0.00	0.00
5,300.0	7.00	193.73	5,263.4	-586.8	-143.3	601.6	0.00	0.00	0.00
5,400.0	7.00	193.73	5,362.6	-598.7	-146.2	613.7	0.00	0.00	0.00
5,500.0	7.00	193.73	5,461.9	-610.5	-149.1	625.9	0.00	0.00	0.00
5,600.0	7.00	193.73	5,561.1	-622.3	-152.0	638.0	0.00	0.00	0.00
5,700.0	7.00	193.73	5,660.4	-634.2	-154.9	650.1	0.00	0.00	0.00
<b>Wasatch G</b>									
5,737.9	7.00	193.73	5,698.0	-638.7	-156.0	654.7	0.00	0.00	0.00
5,800.0	7.00	193.73	5,759.6	-646.0	-157.8	662.3	0.00	0.00	0.00
5,900.0	7.00	193.73	5,858.9	-657.9	-160.7	674.4	0.00	0.00	0.00
6,000.0	7.00	193.73	5,958.1	-669.7	-163.6	686.5	0.00	0.00	0.00
<b>Fort Union</b>									
6,040.2	7.00	193.73	5,998.0	-674.4	-164.7	691.4	0.00	0.00	0.00
6,100.0	7.00	193.73	6,057.4	-681.5	-166.5	698.7	0.00	0.00	0.00
6,200.0	7.00	193.73	6,156.6	-693.4	-169.4	710.8	0.00	0.00	0.00
6,300.0	7.00	193.73	6,255.9	-705.2	-172.3	722.9	0.00	0.00	0.00
6,400.0	7.00	193.73	6,355.2	-717.0	-175.1	735.1	0.00	0.00	0.00
6,500.0	7.00	193.73	6,454.4	-728.9	-178.0	747.2	0.00	0.00	0.00
6,600.0	7.00	193.73	6,553.7	-740.7	-180.9	759.3	0.00	0.00	0.00
6,700.0	7.00	193.73	6,652.9	-752.5	-183.8	771.5	0.00	0.00	0.00
6,800.0	7.00	193.73	6,752.2	-764.4	-186.7	783.6	0.00	0.00	0.00
6,900.0	7.00	193.73	6,851.4	-776.2	-189.6	795.7	0.00	0.00	0.00
7,000.0	7.00	193.73	6,950.7	-788.0	-192.5	807.9	0.00	0.00	0.00
7,100.0	7.00	193.73	7,049.9	-799.9	-195.4	820.0	0.00	0.00	0.00
7,200.0	7.00	193.73	7,149.2	-811.7	-198.3	832.1	0.00	0.00	0.00
<b>Drop 3° /100'</b>									
7,253.5	7.00	193.73	7,202.3	-818.0	-199.8	838.6	0.00	0.00	0.00
7,300.0	5.60	193.73	7,248.5	-823.0	-201.0	843.7	3.00	-3.00	0.00
7,400.0	2.60	193.73	7,348.3	-829.9	-202.7	850.8	3.00	-3.00	0.00
<b>EOD @ Vertical</b>									
7,486.8	0.00	0.00	7,435.0	-831.9	-203.2	852.8	3.00	-3.00	0.00
7,500.0	0.00	0.00	7,448.2	-831.9	-203.2	852.8	0.00	0.00	0.00
7,600.0	0.00	0.00	7,548.2	-831.9	-203.2	852.8	0.00	0.00	0.00
7,700.0	0.00	0.00	7,648.2	-831.9	-203.2	852.8	0.00	0.00	0.00
7,800.0	0.00	0.00	7,748.2	-831.9	-203.2	852.8	0.00	0.00	0.00
7,900.0	0.00	0.00	7,848.2	-831.9	-203.2	852.8	0.00	0.00	0.00
8,000.0	0.00	0.00	7,948.2	-831.9	-203.2	852.8	0.00	0.00	0.00
<b>Build 1.5° / 100' - Ohio Creek - TOG</b>									
8,066.8	0.00	0.00	8,015.0	-831.9	-203.2	852.8	0.00	0.00	0.00
8,100.0	0.50	250.00	8,048.2	-831.9	-203.3	852.9	1.50	1.50	0.00
<b>EOB @ 1.48° Inc. / 250.00° Azm</b>									
8,165.4	1.48	250.00	8,113.6	-832.3	-204.4	853.6	1.50	1.50	0.00
8,200.0	1.48	250.00	8,148.2	-832.6	-205.2	854.1	0.00	0.00	0.00
8,300.0	1.48	250.00	8,248.2	-833.5	-207.7	855.8	0.00	0.00	0.00
8,400.0	1.48	250.00	8,348.1	-834.4	-210.1	857.4	0.00	0.00	0.00
<b>William Fork</b>									
8,407.9	1.48	250.00	8,356.0	-834.4	-210.3	857.5	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BJU M23A FED 15C-23 496 - Slot BJU M23A FED 15C-23 496
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	RKB @ 8134.0usft (30')
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	RKB @ 8134.0usft (30')
<b>Site:</b>	BJU M23A 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	BJU M23A FED 15C-23 496	<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)
8,500.0	1.48	250.00	8,448.1	-835.3	-212.5	859.0	0.00	0.00	0.00
8,600.0	1.48	250.00	8,548.1	-836.1	-214.9	860.6	0.00	0.00	0.00
8,700.0	1.48	250.00	8,648.0	-837.0	-217.4	862.3	0.00	0.00	0.00
8,800.0	1.48	250.00	8,748.0	-837.9	-219.8	863.9	0.00	0.00	0.00
8,900.0	1.48	250.00	8,848.0	-838.8	-222.2	865.5	0.00	0.00	0.00
9,000.0	1.48	250.00	8,947.9	-839.7	-224.6	867.1	0.00	0.00	0.00
9,100.0	1.48	250.00	9,047.9	-840.6	-227.1	868.7	0.00	0.00	0.00
9,200.0	1.48	250.00	9,147.9	-841.4	-229.5	870.4	0.00	0.00	0.00
9,300.0	1.48	250.00	9,247.8	-842.3	-231.9	872.0	0.00	0.00	0.00
9,400.0	1.48	250.00	9,347.8	-843.2	-234.3	873.6	0.00	0.00	0.00
9,500.0	1.48	250.00	9,447.8	-844.1	-236.8	875.2	0.00	0.00	0.00
9,600.0	1.48	250.00	9,547.7	-845.0	-239.2	876.9	0.00	0.00	0.00
9,700.0	1.48	250.00	9,647.7	-845.8	-241.6	878.5	0.00	0.00	0.00
9,800.0	1.48	250.00	9,747.7	-846.7	-244.0	880.1	0.00	0.00	0.00
9,900.0	1.48	250.00	9,847.6	-847.6	-246.5	881.7	0.00	0.00	0.00
10,000.0	1.48	250.00	9,947.6	-848.5	-248.9	883.3	0.00	0.00	0.00
10,100.0	1.48	250.00	10,047.6	-849.4	-251.3	885.0	0.00	0.00	0.00
10,200.0	1.48	250.00	10,147.5	-850.3	-253.7	886.6	0.00	0.00	0.00
10,300.0	1.48	250.00	10,247.5	-851.1	-256.2	888.2	0.00	0.00	0.00
10,400.0	1.48	250.00	10,347.5	-852.0	-258.6	889.8	0.00	0.00	0.00
10,500.0	1.48	250.00	10,447.4	-852.9	-261.0	891.5	0.00	0.00	0.00
10,600.0	1.48	250.00	10,547.4	-853.8	-263.4	893.1	0.00	0.00	0.00
10,700.0	1.48	250.00	10,647.4	-854.7	-265.9	894.7	0.00	0.00	0.00
10,800.0	1.48	250.00	10,747.3	-855.6	-268.3	896.3	0.00	0.00	0.00
10,900.0	1.48	250.00	10,847.3	-856.4	-270.7	897.9	0.00	0.00	0.00
11,000.0	1.48	250.00	10,947.3	-857.3	-273.1	899.6	0.00	0.00	0.00
11,100.0	1.48	250.00	11,047.2	-858.2	-275.6	901.2	0.00	0.00	0.00
11,200.0	1.48	250.00	11,147.2	-859.1	-278.0	902.8	0.00	0.00	0.00
<b>Cameo</b>									
11,289.8	1.48	250.00	11,237.0	-859.9	-280.2	904.3	0.00	0.00	0.00
11,300.0	1.48	250.00	11,247.2	-860.0	-280.4	904.4	0.00	0.00	0.00
11,400.0	1.48	250.00	11,347.1	-860.9	-282.9	906.1	0.00	0.00	0.00
11,500.0	1.48	250.00	11,447.1	-861.7	-285.3	907.7	0.00	0.00	0.00
11,600.0	1.48	250.00	11,547.1	-862.6	-287.7	909.3	0.00	0.00	0.00
11,700.0	1.48	250.00	11,647.0	-863.5	-290.1	910.9	0.00	0.00	0.00
<b>Rollins</b>									
11,790.0	1.48	250.00	11,737.0	-864.3	-292.3	912.4	0.00	0.00	0.00
11,800.0	1.48	250.00	11,747.0	-864.4	-292.6	912.5	0.00	0.00	0.00
11,900.0	1.48	250.00	11,847.0	-865.3	-295.0	914.2	0.00	0.00	0.00
<b>TD @ 11990.1' MD / 11937.0' TVD</b>									
11,990.1	1.48	250.00	11,937.0	-866.1	-297.2	915.6	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BJU M23A FED 15C-23 496 - Slot BJU M23A FED 15C-23 496
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	RKB @ 8134.0usft (30')
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	RKB @ 8134.0usft (30')
<b>Site:</b>	BJU M23A 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	BJU M23A FED 15C-23 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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 - 15C-23 - plan hits target center - Point	0.00	0.00	8,015.0	-831.9	-203.2	14,422,978.88	2,444,883.03	39.681737	-108.140955
PBHL - 15C-23 - plan hits target center - Ellipse (radii L100.0 W50.0 on 250.00 azi)	0.00	0.00	11,937.0	-866.1	-297.2	14,422,941.70	2,444,790.20	39.681643	-108.141289

#### Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,319.9	3,298.0	Wasatch			
5,737.9	5,698.0	Wasatch G			
6,040.2	5,998.0	Fort Union			
8,066.8	8,015.0	Ohio Creek			
8,066.8	8,015.0	TOG			
8,407.9	8,356.0	William Fork			
11,289.8	11,237.0	Cameo			
11,790.0	11,737.0	Rollins			

#### Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
225.0	225.0	0.0	0.0	Build 3° / 100'
458.3	457.7	-13.8	-3.4	EOB @ 7.00° Inc. / 193.73° Azm
7,253.5	7,202.3	-818.0	-199.8	Drop 3° / 100'
7,486.8	7,435.0	-831.9	-203.2	EOD @ Vertical
8,066.8	8,015.0	-831.9	-203.2	Build 1.5° / 100'
8,165.4	8,113.6	-832.3	-204.4	EOB @ 1.48° Inc. / 250.00° Azm
11,990.1	11,937.0	-866.1	-297.2	TD @ 11990.1' MD / 11937.0' TVD