

Project: Garfield County, CO  
 Site: BJU M23A 496 Pad  
 Well: BJU M23A FED 15A-23 496  
 Wellbore: Wellbore #1  
 Design: Design #1  
 Latitude: 39.684199  
 Longitude: -108.140207  
 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 15A-23 496(0.0N, 0.0E)  
 Measured Depth Reference: RKB @ 8134.0usft (30')  
 Calculation Method: Minimum Curvature

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3343.0	3365.3	Wasatch
5743.0	5765.9	Wasatch G
6043.0	6065.9	Fort Union
8057.0	8079.9	Ohio Creek
8057.0	8079.9	TOG
8414.0	8437.0	William Fork
11288.0	11312.0	Cameo
11788.0	11812.1	Rollins

SECTION DETAILS

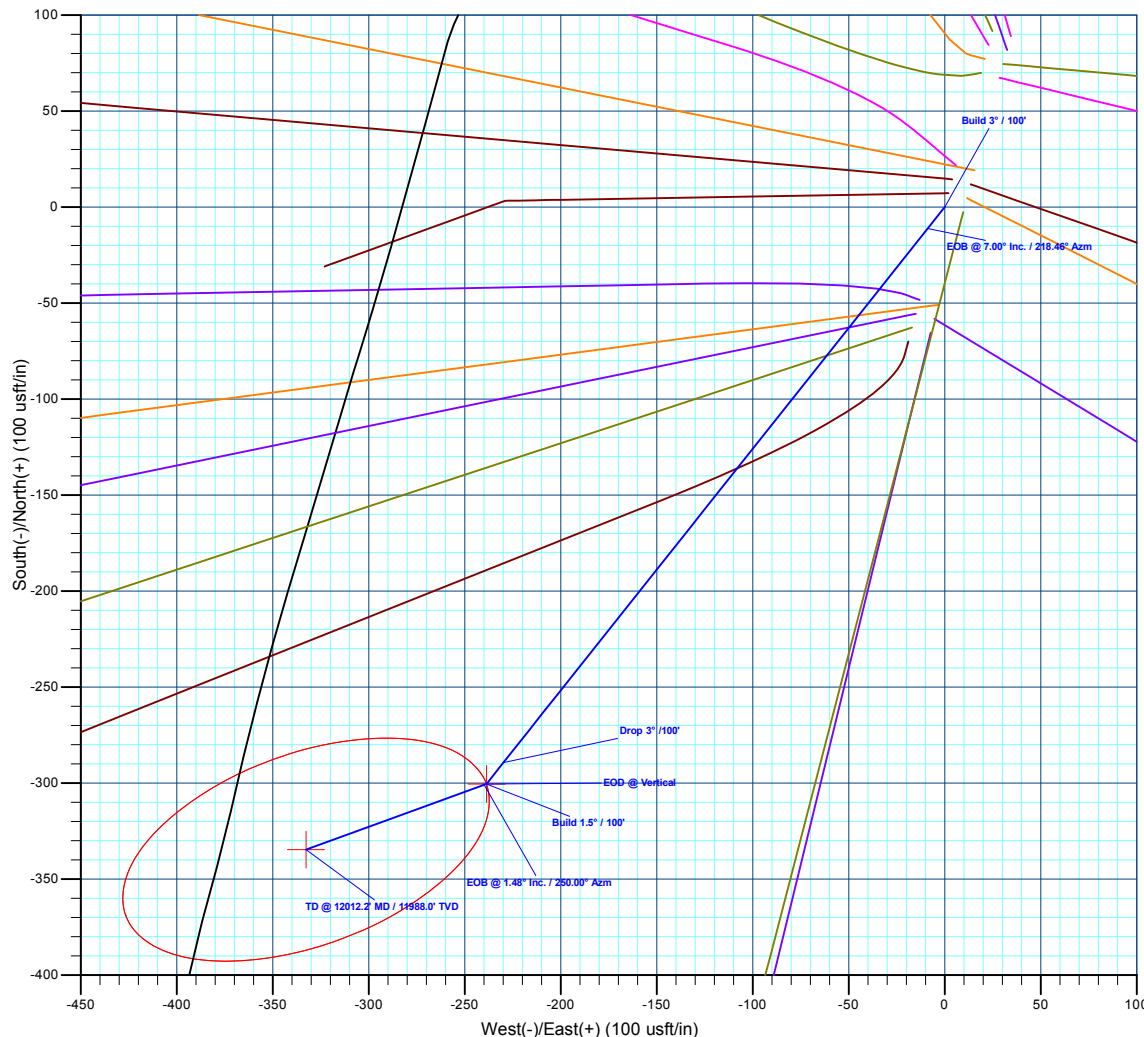
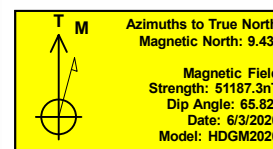
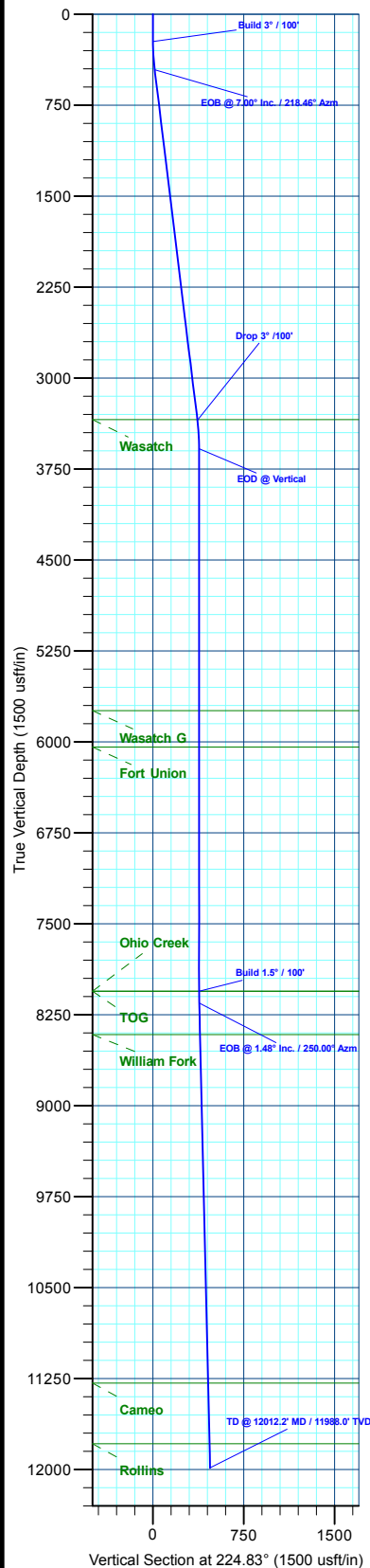
MD	Inc	Azi	TVD	+N/-S	+E/-W	Diep	TFace	Vsect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
225.0	0.00	0.00	225.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
458.5	7.00	218.46	457.9	-11.2	-8.9	3.00	218.46	14.2	EOB @ 7.00° Inc. / 218.46° Azm
3371.4	7.00	218.46	3349.1	-289.3	-229.8	0.00	0.00	367.2	Drop 3° / 100'
3604.9	0.00	0.00	3582.0	-300.5	-238.7	3.00	180.00	381.4	EOD @ Vertical
8079.9	0.00	0.00	8057.0	-300.5	-238.7	0.00	0.00	381.4	Build 1.5° / 100'
8178.3	1.48	250.00	8155.4	-300.9	-239.9	1.50	250.00	382.5	EOB @ 1.48° Inc. / 250.00° Azm
12012.2	1.48	250.00	11988.0	-334.7	-332.6	0.00	0.00	471.9	TD @ 12012.2' MD / 11988.0' TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
OHCR - 15A-23	8057.0	-300.5	-238.7	14423574.48	2444835.83	39.683374	-108.141055
PBHL - 15A-23	11988.0	-334.7	-332.6	14423537.30	2444743.00	39.683280	-108.141389

WELL DETAILS: BJU M23A FED 15A-23 496

+N/-S	+E/-W	Ground Level : 8104.0	Northing	Easting	Latitude	Longitude
0.0	0.0		14423882.40	2445064.80	39.684199	-108.140207



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

Created By: Will Jircik

Date: 9:43, June 05 2020



## **Caerus Oil & Gas**

**Garfield County, CO**

**BJU M23A 496 Pad**

**BJU M23A FED 15A-23 496 - Slot BJU M23A FED 15A-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 15A-23 496 - Slot BJU M23A FED 15A-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 15A-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 15A-23 496 - Slot BJU M23A FED 15A-23 496		
<b>Well Position</b>	<b>+N/-S</b>	-144.6 usft	<b>Northing:</b> 14,423,882.40 usft
	<b>+E/-W</b>	-49.4 usft	<b>Easting:</b> 2,445,064.80 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	224.83	

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
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	
458.5	7.00	218.46	457.9	-11.2	-8.9	3.00	3.00	0.00	218.46	
3,371.4	7.00	218.46	3,349.1	-289.3	-229.8	0.00	0.00	0.00	0.00	
3,604.9	0.00	0.00	3,582.0	-300.5	-238.7	3.00	-3.00	0.00	180.00	
8,079.9	0.00	0.00	8,057.0	-300.5	-238.7	0.00	0.00	0.00	0.00	OHCR - 15A-23
8,178.3	1.48	250.00	8,155.4	-300.9	-239.9	1.50	1.50	-111.81	250.00	
12,012.2	1.48	250.00	11,988.0	-334.7	-332.6	0.00	0.00	0.00	0.00	PBHL - 15A-23

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BJU M23A FED 15A-23 496 - Slot BJU M23A FED 15A-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 15A-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	218.46	300.0	-1.2	-0.9	1.5	3.00	3.00	0.00
400.0	5.25	218.46	399.8	-6.3	-5.0	8.0	3.00	3.00	0.00
<b>EOB @ 7.00° Inc. / 218.46° Azm</b>									
458.5	7.00	218.46	457.9	-11.2	-8.9	14.2	3.00	3.00	0.00
500.0	7.00	218.46	499.1	-15.1	-12.0	19.2	0.00	0.00	0.00
600.0	7.00	218.46	598.4	-24.7	-19.6	31.3	0.00	0.00	0.00
700.0	7.00	218.46	697.6	-34.2	-27.2	43.4	0.00	0.00	0.00
800.0	7.00	218.46	796.9	-43.8	-34.8	55.6	0.00	0.00	0.00
900.0	7.00	218.46	896.1	-53.3	-42.4	67.7	0.00	0.00	0.00
1,000.0	7.00	218.46	995.4	-62.9	-49.9	79.8	0.00	0.00	0.00
1,100.0	7.00	218.46	1,094.6	-72.4	-57.5	91.9	0.00	0.00	0.00
1,200.0	7.00	218.46	1,193.9	-82.0	-65.1	104.0	0.00	0.00	0.00
1,300.0	7.00	218.46	1,293.1	-91.5	-72.7	116.2	0.00	0.00	0.00
1,400.0	7.00	218.46	1,392.4	-101.1	-80.3	128.3	0.00	0.00	0.00
1,500.0	7.00	218.46	1,491.6	-110.6	-87.9	140.4	0.00	0.00	0.00
1,600.0	7.00	218.46	1,590.9	-120.2	-95.4	152.5	0.00	0.00	0.00
1,700.0	7.00	218.46	1,690.2	-129.7	-103.0	164.6	0.00	0.00	0.00
1,800.0	7.00	218.46	1,789.4	-139.3	-110.6	176.7	0.00	0.00	0.00
1,900.0	7.00	218.46	1,888.7	-148.8	-118.2	188.9	0.00	0.00	0.00
2,000.0	7.00	218.46	1,987.9	-158.4	-125.8	201.0	0.00	0.00	0.00
2,100.0	7.00	218.46	2,087.2	-167.9	-133.4	213.1	0.00	0.00	0.00
2,200.0	7.00	218.46	2,186.4	-177.4	-141.0	225.2	0.00	0.00	0.00
2,300.0	7.00	218.46	2,285.7	-187.0	-148.5	237.3	0.00	0.00	0.00
2,400.0	7.00	218.46	2,384.9	-196.5	-156.1	249.5	0.00	0.00	0.00
2,500.0	7.00	218.46	2,484.2	-206.1	-163.7	261.6	0.00	0.00	0.00
2,600.0	7.00	218.46	2,583.4	-215.6	-171.3	273.7	0.00	0.00	0.00
2,700.0	7.00	218.46	2,682.7	-225.2	-178.9	285.8	0.00	0.00	0.00
2,800.0	7.00	218.46	2,781.9	-234.7	-186.5	297.9	0.00	0.00	0.00
2,900.0	7.00	218.46	2,881.2	-244.3	-194.0	310.1	0.00	0.00	0.00
3,000.0	7.00	218.46	2,980.5	-253.8	-201.6	322.2	0.00	0.00	0.00
3,100.0	7.00	218.46	3,079.7	-263.4	-209.2	334.3	0.00	0.00	0.00
3,200.0	7.00	218.46	3,179.0	-272.9	-216.8	346.4	0.00	0.00	0.00
3,300.0	7.00	218.46	3,278.2	-282.5	-224.4	358.5	0.00	0.00	0.00
<b>Wasatch</b>									
3,365.3	7.00	218.46	3,343.0	-288.7	-229.3	366.4	0.00	0.00	0.00
<b>Drop 3° /100'</b>									
3,371.4	7.00	218.46	3,349.1	-289.3	-229.8	367.2	0.00	0.00	0.00
3,400.0	6.15	218.46	3,377.5	-291.9	-231.8	370.4	3.00	-3.00	0.00
3,500.0	3.15	218.46	3,477.2	-298.2	-236.9	378.5	3.00	-3.00	0.00
<b>EOD @ Vertical</b>									
3,604.9	0.00	0.00	3,582.0	-300.5	-238.7	381.4	3.00	-3.00	0.00
3,700.0	0.00	0.00	3,677.1	-300.5	-238.7	381.4	0.00	0.00	0.00
3,800.0	0.00	0.00	3,777.1	-300.5	-238.7	381.4	0.00	0.00	0.00
3,900.0	0.00	0.00	3,877.1	-300.5	-238.7	381.4	0.00	0.00	0.00
4,000.0	0.00	0.00	3,977.1	-300.5	-238.7	381.4	0.00	0.00	0.00
4,100.0	0.00	0.00	4,077.1	-300.5	-238.7	381.4	0.00	0.00	0.00
4,200.0	0.00	0.00	4,177.1	-300.5	-238.7	381.4	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 15A-23 496 - Slot BJU M23A FED 15A-23 496
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<b>Site:</b>	BJU M23A 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	BJU M23A FED 15A-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)
4,300.0	0.00	0.00	4,277.1	-300.5	-238.7	381.4	0.00	0.00	0.00
4,400.0	0.00	0.00	4,377.1	-300.5	-238.7	381.4	0.00	0.00	0.00
4,500.0	0.00	0.00	4,477.1	-300.5	-238.7	381.4	0.00	0.00	0.00
4,600.0	0.00	0.00	4,577.1	-300.5	-238.7	381.4	0.00	0.00	0.00
4,700.0	0.00	0.00	4,677.1	-300.5	-238.7	381.4	0.00	0.00	0.00
4,800.0	0.00	0.00	4,777.1	-300.5	-238.7	381.4	0.00	0.00	0.00
4,900.0	0.00	0.00	4,877.1	-300.5	-238.7	381.4	0.00	0.00	0.00
5,000.0	0.00	0.00	4,977.1	-300.5	-238.7	381.4	0.00	0.00	0.00
5,100.0	0.00	0.00	5,077.1	-300.5	-238.7	381.4	0.00	0.00	0.00
5,200.0	0.00	0.00	5,177.1	-300.5	-238.7	381.4	0.00	0.00	0.00
5,300.0	0.00	0.00	5,277.1	-300.5	-238.7	381.4	0.00	0.00	0.00
5,400.0	0.00	0.00	5,377.1	-300.5	-238.7	381.4	0.00	0.00	0.00
5,500.0	0.00	0.00	5,477.1	-300.5	-238.7	381.4	0.00	0.00	0.00
5,600.0	0.00	0.00	5,577.1	-300.5	-238.7	381.4	0.00	0.00	0.00
5,700.0	0.00	0.00	5,677.1	-300.5	-238.7	381.4	0.00	0.00	0.00
<b>Wasatch G</b>									
5,765.9	0.00	0.00	5,743.0	-300.5	-238.7	381.4	0.00	0.00	0.00
5,800.0	0.00	0.00	5,777.1	-300.5	-238.7	381.4	0.00	0.00	0.00
5,900.0	0.00	0.00	5,877.1	-300.5	-238.7	381.4	0.00	0.00	0.00
6,000.0	0.00	0.00	5,977.1	-300.5	-238.7	381.4	0.00	0.00	0.00
<b>Fort Union</b>									
6,065.9	0.00	0.00	6,043.0	-300.5	-238.7	381.4	0.00	0.00	0.00
6,100.0	0.00	0.00	6,077.1	-300.5	-238.7	381.4	0.00	0.00	0.00
6,200.0	0.00	0.00	6,177.1	-300.5	-238.7	381.4	0.00	0.00	0.00
6,300.0	0.00	0.00	6,277.1	-300.5	-238.7	381.4	0.00	0.00	0.00
6,400.0	0.00	0.00	6,377.1	-300.5	-238.7	381.4	0.00	0.00	0.00
6,500.0	0.00	0.00	6,477.1	-300.5	-238.7	381.4	0.00	0.00	0.00
6,600.0	0.00	0.00	6,577.1	-300.5	-238.7	381.4	0.00	0.00	0.00
6,700.0	0.00	0.00	6,677.1	-300.5	-238.7	381.4	0.00	0.00	0.00
6,800.0	0.00	0.00	6,777.1	-300.5	-238.7	381.4	0.00	0.00	0.00
6,900.0	0.00	0.00	6,877.1	-300.5	-238.7	381.4	0.00	0.00	0.00
7,000.0	0.00	0.00	6,977.1	-300.5	-238.7	381.4	0.00	0.00	0.00
7,100.0	0.00	0.00	7,077.1	-300.5	-238.7	381.4	0.00	0.00	0.00
7,200.0	0.00	0.00	7,177.1	-300.5	-238.7	381.4	0.00	0.00	0.00
7,300.0	0.00	0.00	7,277.1	-300.5	-238.7	381.4	0.00	0.00	0.00
7,400.0	0.00	0.00	7,377.1	-300.5	-238.7	381.4	0.00	0.00	0.00
7,500.0	0.00	0.00	7,477.1	-300.5	-238.7	381.4	0.00	0.00	0.00
7,600.0	0.00	0.00	7,577.1	-300.5	-238.7	381.4	0.00	0.00	0.00
7,700.0	0.00	0.00	7,677.1	-300.5	-238.7	381.4	0.00	0.00	0.00
7,800.0	0.00	0.00	7,777.1	-300.5	-238.7	381.4	0.00	0.00	0.00
7,900.0	0.00	0.00	7,877.1	-300.5	-238.7	381.4	0.00	0.00	0.00
8,000.0	0.00	0.00	7,977.1	-300.5	-238.7	381.4	0.00	0.00	0.00
<b>Build 1.5° / 100' - Ohio Creek - TOG</b>									
8,079.9	0.00	0.00	8,057.0	-300.5	-238.7	381.4	0.00	0.00	0.00
8,100.0	0.30	250.00	8,077.1	-300.5	-238.7	381.4	1.50	1.50	0.00
<b>EOB @ 1.48° Inc. / 250.00° Azm</b>									
8,178.3	1.48	250.00	8,155.4	-300.9	-239.9	382.5	1.50	1.50	0.00
8,200.0	1.48	250.00	8,177.1	-301.1	-240.4	383.0	0.00	0.00	0.00
8,300.0	1.48	250.00	8,277.0	-302.0	-242.8	385.3	0.00	0.00	0.00
8,400.0	1.48	250.00	8,377.0	-302.8	-245.2	387.7	0.00	0.00	0.00
<b>William Fork</b>									
8,437.0	1.48	250.00	8,414.0	-303.2	-246.1	388.5	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 15A-23 496 - Slot BJU M23A FED 15A-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 15A-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	8,477.0	-303.7	-247.6	390.0	0.00	0.00	0.00
8,600.0	1.48	250.00	8,576.9	-304.6	-250.1	392.3	0.00	0.00	0.00
8,700.0	1.48	250.00	8,676.9	-305.5	-252.5	394.7	0.00	0.00	0.00
8,800.0	1.48	250.00	8,776.9	-306.4	-254.9	397.0	0.00	0.00	0.00
8,900.0	1.48	250.00	8,876.8	-307.3	-257.3	399.3	0.00	0.00	0.00
9,000.0	1.48	250.00	8,976.8	-308.1	-259.7	401.7	0.00	0.00	0.00
9,100.0	1.48	250.00	9,076.8	-309.0	-262.2	404.0	0.00	0.00	0.00
9,200.0	1.48	250.00	9,176.7	-309.9	-264.6	406.3	0.00	0.00	0.00
9,300.0	1.48	250.00	9,276.7	-310.8	-267.0	408.6	0.00	0.00	0.00
9,400.0	1.48	250.00	9,376.7	-311.7	-269.4	411.0	0.00	0.00	0.00
9,500.0	1.48	250.00	9,476.6	-312.5	-271.8	413.3	0.00	0.00	0.00
9,600.0	1.48	250.00	9,576.6	-313.4	-274.3	415.6	0.00	0.00	0.00
9,700.0	1.48	250.00	9,676.6	-314.3	-276.7	418.0	0.00	0.00	0.00
9,800.0	1.48	250.00	9,776.5	-315.2	-279.1	420.3	0.00	0.00	0.00
9,900.0	1.48	250.00	9,876.5	-316.1	-281.5	422.6	0.00	0.00	0.00
10,000.0	1.48	250.00	9,976.5	-316.9	-283.9	425.0	0.00	0.00	0.00
10,100.0	1.48	250.00	10,076.5	-317.8	-286.4	427.3	0.00	0.00	0.00
10,200.0	1.48	250.00	10,176.4	-318.7	-288.8	429.6	0.00	0.00	0.00
10,300.0	1.48	250.00	10,276.4	-319.6	-291.2	432.0	0.00	0.00	0.00
10,400.0	1.48	250.00	10,376.4	-320.5	-293.6	434.3	0.00	0.00	0.00
10,500.0	1.48	250.00	10,476.3	-321.3	-296.0	436.6	0.00	0.00	0.00
10,600.0	1.48	250.00	10,576.3	-322.2	-298.5	438.9	0.00	0.00	0.00
10,700.0	1.48	250.00	10,676.3	-323.1	-300.9	441.3	0.00	0.00	0.00
10,800.0	1.48	250.00	10,776.2	-324.0	-303.3	443.6	0.00	0.00	0.00
10,900.0	1.48	250.00	10,876.2	-324.9	-305.7	445.9	0.00	0.00	0.00
11,000.0	1.48	250.00	10,976.2	-325.7	-308.1	448.3	0.00	0.00	0.00
11,100.0	1.48	250.00	11,076.1	-326.6	-310.6	450.6	0.00	0.00	0.00
11,200.0	1.48	250.00	11,176.1	-327.5	-313.0	452.9	0.00	0.00	0.00
11,300.0	1.48	250.00	11,276.1	-328.4	-315.4	455.3	0.00	0.00	0.00
<b>Cameo</b>									
11,312.0	1.48	250.00	11,288.0	-328.5	-315.7	455.5	0.00	0.00	0.00
11,400.0	1.48	250.00	11,376.0	-329.3	-317.8	457.6	0.00	0.00	0.00
11,500.0	1.48	250.00	11,476.0	-330.2	-320.2	459.9	0.00	0.00	0.00
11,600.0	1.48	250.00	11,576.0	-331.0	-322.7	462.3	0.00	0.00	0.00
11,700.0	1.48	250.00	11,675.9	-331.9	-325.1	464.6	0.00	0.00	0.00
11,800.0	1.48	250.00	11,775.9	-332.8	-327.5	466.9	0.00	0.00	0.00
<b>Rollins</b>									
11,812.1	1.48	250.00	11,788.0	-332.9	-327.8	467.2	0.00	0.00	0.00
11,900.0	1.48	250.00	11,875.9	-333.7	-329.9	469.2	0.00	0.00	0.00
12,000.0	1.48	250.00	11,975.8	-334.6	-332.3	471.6	0.00	0.00	0.00
<b>TD @ 12012.2' MD / 11988.0' TVD</b>									
12,012.2	1.48	250.00	11,988.0	-334.7	-332.6	471.9	0.00	0.00	0.00

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<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 15A-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 - 15A-23 - plan hits target center - Point	0.00	0.00	8,057.0	-300.5	-238.7	14,423,574.48	2,444,835.83	39.683374	-108.141055
PBHL - 15A-23 - plan hits target center - Ellipse (radii L100.0 W50.0 on 250.00 azi)	0.00	0.00	11,988.0	-334.7	-332.6	14,423,537.30	2,444,743.00	39.683280	-108.141389

### Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,365.3	3,343.0	Wasatch			
5,765.9	5,743.0	Wasatch G			
6,065.9	6,043.0	Fort Union			
8,079.9	8,057.0	Ohio Creek			
8,079.9	8,057.0	TOG			
8,437.0	8,414.0	William Fork			
11,312.0	11,288.0	Cameo			
11,812.1	11,788.0	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'
458.5	457.9	-11.2	-8.9	EOB @ 7.00° Inc. / 218.46° Azm
3,371.4	3,349.1	-289.3	-229.8	Drop 3° / 100'
3,604.9	3,582.0	-300.5	-238.7	EOD @ Vertical
8,079.9	8,057.0	-300.5	-238.7	Build 1.5° / 100'
8,178.3	8,155.4	-300.9	-239.9	EOB @ 1.48° Inc. / 250.00° Azm
12,012.2	11,988.0	-334.7	-332.6	TD @ 12012.2' MD / 11988.0' TVD