

Project: Garfield County, CO  
Site: BJU M23A 496 Pad  
Well: BJU M23A FED 24B-22 496  
Wellbore: Wellbore #1  
Design: Design #1  
Latitude: 39.684251  
Longitude: -108.140152  
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 24B-22 496(0.0N, 0.0E)  
Measured Depth Reference: RKB @ 8134.0usft (30')  
Calculation Method: Minimum Curvature

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3338.0	3491.9	Wasatch
5738.0	6093.2	Wasatch G
6038.0	6418.4	Fort Union
8030.0	8535.3	Ohio Creek
8030.0	8535.3	TOG
8436.0	8941.4	William Fork
11183.0	11689.4	Cameo
11683.0	12189.5	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	
1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
1756.3	22.69	281.33	1736.7	29.0	-144.9	3.00	281.33	147.8	EOB @ 22.69° Inc. / 281.33° Azm
7779.0	22.69	281.33	7293.3	485.5	-2422.8	0.00	0.00	2470.5	Drop 3° / 100'
8535.3	0.00	0.00	8030.0	514.5	-2567.7	3.00	180.00	2618.2	EOD @ Vertical / Build 1.5° / 100'
8635.7	1.51	250.00	8130.4	514.1	-2568.9	1.50	250.00	2619.4	EOB @ 1.51° Inc. / 250.00° Azm
12389.6	1.51	250.00	11883.0	480.3	-2661.6	0.00	0.00	2704.6	TD @ 12389.6' MD / 11883.0' TVD

DESIGN TARGET DETAILS

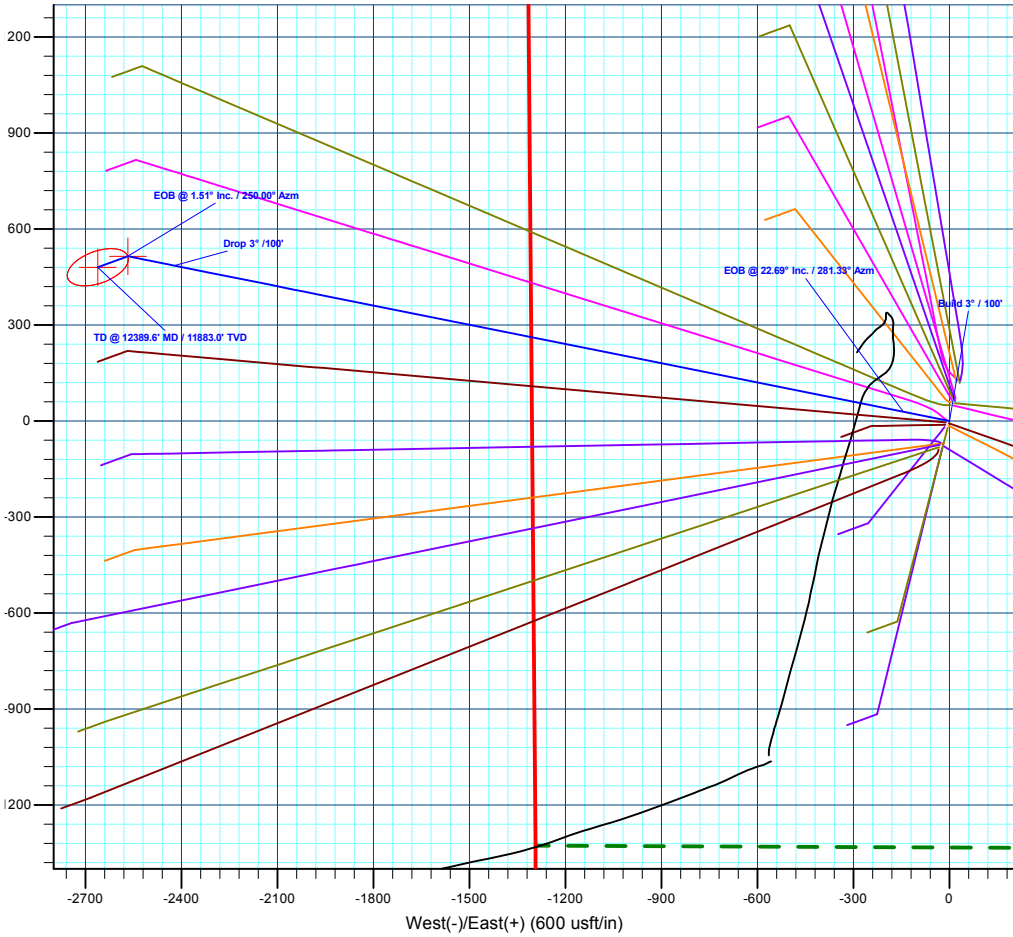
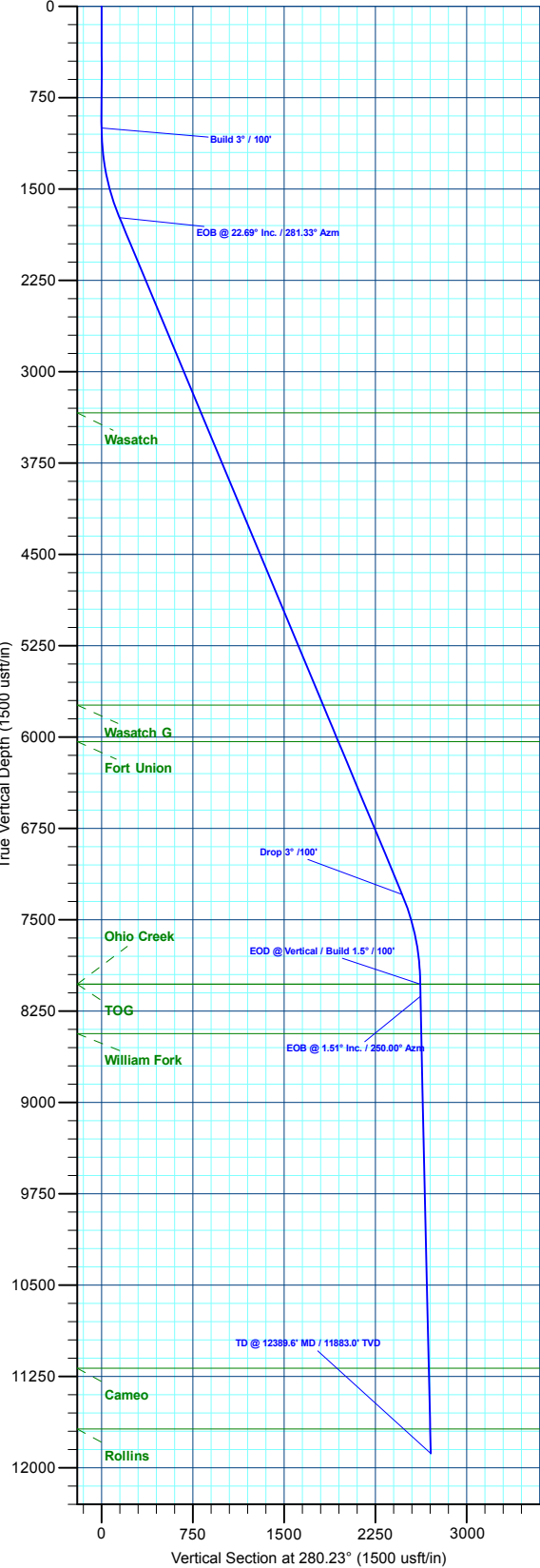
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
OHCR - 24B-22	8030.0	514.5	-2567.7	14424334.38	2442496.93	39.685663	-108.149272
PBHL - 24B-22	11883.0	480.3	-2661.6	14424297.20	2442404.10	39.685569	-108.149606

WELL DETAILS: BJU M23A FED 24B-22 496

+N/-S	+E/-W	Ground Level : 8104.0	Northing	Easting	Latitude	Longitude
0.0	0.0		14423902.00	2445079.70	39.684251	-108.140152



Compass rose showing True North (T) and Magnetic North (M).  
Azimuths to True North: Magnetic North: 9.43°  
Magnetic Field Strength: 51187.3nT  
Dip Angle: 65.82°  
Date: 6/3/2020  
Model: HDGM2020



Plan: Design #1 (BJU M23A FED 24B-22 496/Wellbore #1)

Created By: Will Jircik Date: 10:16, June 05 2020



## **Caerus Oil & Gas**

**Garfield County, CO**

**BJU M23A 496 Pad**

**BJU M23A FED 24B-22 496 - Slot BJU M23A FED 24B-22 496**

**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 24B-22 496 - Slot BJU M23A FED 24B-22 496
<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 24B-22 496	<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 24B-22 496 - Slot BJU M23A FED 24B-22 496		
<b>Well Position</b>	<b>+N/-S</b>	-125.5 usft	<b>Northing:</b> 14,423,902.00 usft
	<b>+E/-W</b>	-33.9 usft	<b>Easting:</b> 2,445,079.70 usft
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	<b>Latitude:</b> 39.684251
			<b>Longitude:</b> -108.140153
			<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	280.23	

<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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,756.3	22.69	281.33	1,736.7	29.0	-144.9	3.00	3.00	0.00	281.33	
7,779.0	22.69	281.33	7,293.3	485.5	-2,422.8	0.00	0.00	0.00	0.00	
8,535.3	0.00	0.00	8,030.0	514.5	-2,567.7	3.00	-3.00	0.00	180.00	OHCR - 24B-22
8,635.7	1.51	250.00	8,130.4	514.1	-2,568.9	1.50	1.50	-109.54	250.00	
12,389.6	1.51	250.00	11,883.0	480.3	-2,661.6	0.00	0.00	0.00	0.00	PBHL - 24B-22

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BJU M23A FED 24B-22 496 - Slot BJU M23A FED 24B-22 496
<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 24B-22 496	<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	
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	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00	
Build 3° / 100'										
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,100.0	3.00	281.33	1,100.0	0.5	-2.6	2.6	3.00	3.00	0.00	
1,200.0	6.00	281.33	1,199.6	2.1	-10.3	10.5	3.00	3.00	0.00	
1,300.0	9.00	281.33	1,298.8	4.6	-23.1	23.5	3.00	3.00	0.00	
1,400.0	12.00	281.33	1,397.1	8.2	-40.9	41.7	3.00	3.00	0.00	
1,500.0	15.00	281.33	1,494.3	12.8	-63.8	65.1	3.00	3.00	0.00	
1,600.0	18.00	281.33	1,590.2	18.4	-91.7	93.5	3.00	3.00	0.00	
1,700.0	21.00	281.33	1,684.4	24.9	-124.4	126.8	3.00	3.00	0.00	
EOB @ 22.69° Inc. / 281.33° Azm										
1,756.3	22.69	281.33	1,736.7	29.0	-144.9	147.8	3.00	3.00	0.00	
1,800.0	22.69	281.33	1,777.0	32.4	-161.4	164.6	0.00	0.00	0.00	
1,900.0	22.69	281.33	1,869.3	39.9	-199.3	203.2	0.00	0.00	0.00	
2,000.0	22.69	281.33	1,961.5	47.5	-237.1	241.8	0.00	0.00	0.00	
2,100.0	22.69	281.33	2,053.8	55.1	-274.9	280.3	0.00	0.00	0.00	
2,200.0	22.69	281.33	2,146.1	62.7	-312.7	318.9	0.00	0.00	0.00	
2,300.0	22.69	281.33	2,238.3	70.2	-350.6	357.5	0.00	0.00	0.00	
2,400.0	22.69	281.33	2,330.6	77.8	-388.4	396.0	0.00	0.00	0.00	
2,500.0	22.69	281.33	2,422.8	85.4	-426.2	434.6	0.00	0.00	0.00	
2,600.0	22.69	281.33	2,515.1	93.0	-464.0	473.1	0.00	0.00	0.00	
2,700.0	22.69	281.33	2,607.4	100.6	-501.8	511.7	0.00	0.00	0.00	
2,800.0	22.69	281.33	2,699.6	108.1	-539.7	550.3	0.00	0.00	0.00	
2,900.0	22.69	281.33	2,791.9	115.7	-577.5	588.8	0.00	0.00	0.00	
3,000.0	22.69	281.33	2,884.1	123.3	-615.3	627.4	0.00	0.00	0.00	
3,100.0	22.69	281.33	2,976.4	130.9	-653.1	666.0	0.00	0.00	0.00	
3,200.0	22.69	281.33	3,068.7	138.5	-690.9	704.5	0.00	0.00	0.00	
3,300.0	22.69	281.33	3,160.9	146.0	-728.8	743.1	0.00	0.00	0.00	
3,400.0	22.69	281.33	3,253.2	153.6	-766.6	781.7	0.00	0.00	0.00	
Wasatch										
3,491.9	22.69	281.33	3,338.0	160.6	-801.3	817.1	0.00	0.00	0.00	
3,500.0	22.69	281.33	3,345.4	161.2	-804.4	820.2	0.00	0.00	0.00	
3,600.0	22.69	281.33	3,437.7	168.8	-842.2	858.8	0.00	0.00	0.00	
3,700.0	22.69	281.33	3,530.0	176.3	-880.0	897.4	0.00	0.00	0.00	
3,800.0	22.69	281.33	3,622.2	183.9	-917.9	935.9	0.00	0.00	0.00	
3,900.0	22.69	281.33	3,714.5	191.5	-955.7	974.5	0.00	0.00	0.00	
4,000.0	22.69	281.33	3,806.8	199.1	-993.5	1,013.1	0.00	0.00	0.00	
4,100.0	22.69	281.33	3,899.0	206.7	-1,031.3	1,051.6	0.00	0.00	0.00	
4,200.0	22.69	281.33	3,991.3	214.2	-1,069.1	1,090.2	0.00	0.00	0.00	
4,300.0	22.69	281.33	4,083.5	221.8	-1,107.0	1,128.8	0.00	0.00	0.00	
4,400.0	22.69	281.33	4,175.8	229.4	-1,144.8	1,167.3	0.00	0.00	0.00	
4,500.0	22.69	281.33	4,268.1	237.0	-1,182.6	1,205.9	0.00	0.00	0.00	
4,600.0	22.69	281.33	4,360.3	244.6	-1,220.4	1,244.5	0.00	0.00	0.00	
4,700.0	22.69	281.33	4,452.6	252.1	-1,258.2	1,283.0	0.00	0.00	0.00	

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<b>Well:</b>	BJU M23A FED 24B-22 496	<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)
4,800.0	22.69	281.33	4,544.8	259.7	-1,296.1	1,321.6	0.00	0.00	0.00
4,900.0	22.69	281.33	4,637.1	267.3	-1,333.9	1,360.2	0.00	0.00	0.00
5,000.0	22.69	281.33	4,729.4	274.9	-1,371.7	1,398.7	0.00	0.00	0.00
5,100.0	22.69	281.33	4,821.6	282.4	-1,409.5	1,437.3	0.00	0.00	0.00
5,200.0	22.69	281.33	4,913.9	290.0	-1,447.4	1,475.9	0.00	0.00	0.00
5,300.0	22.69	281.33	5,006.2	297.6	-1,485.2	1,514.4	0.00	0.00	0.00
5,400.0	22.69	281.33	5,098.4	305.2	-1,523.0	1,553.0	0.00	0.00	0.00
5,500.0	22.69	281.33	5,190.7	312.8	-1,560.8	1,591.5	0.00	0.00	0.00
5,600.0	22.69	281.33	5,282.9	320.3	-1,598.6	1,630.1	0.00	0.00	0.00
5,700.0	22.69	281.33	5,375.2	327.9	-1,636.5	1,668.7	0.00	0.00	0.00
5,800.0	22.69	281.33	5,467.5	335.5	-1,674.3	1,707.2	0.00	0.00	0.00
5,900.0	22.69	281.33	5,559.7	343.1	-1,712.1	1,745.8	0.00	0.00	0.00
6,000.0	22.69	281.33	5,652.0	350.7	-1,749.9	1,784.4	0.00	0.00	0.00
<b>Wasatch G</b>									
6,093.2	22.69	281.33	5,738.0	357.7	-1,785.2	1,820.3	0.00	0.00	0.00
6,100.0	22.69	281.33	5,744.2	358.2	-1,787.7	1,822.9	0.00	0.00	0.00
6,200.0	22.69	281.33	5,836.5	365.8	-1,825.6	1,861.5	0.00	0.00	0.00
6,300.0	22.69	281.33	5,928.8	373.4	-1,863.4	1,900.1	0.00	0.00	0.00
6,400.0	22.69	281.33	6,021.0	381.0	-1,901.2	1,938.6	0.00	0.00	0.00
<b>Fort Union</b>									
6,418.4	22.69	281.33	6,038.0	382.4	-1,908.2	1,945.7	0.00	0.00	0.00
6,500.0	22.69	281.33	6,113.3	388.5	-1,939.0	1,977.2	0.00	0.00	0.00
6,600.0	22.69	281.33	6,205.6	396.1	-1,976.8	2,015.8	0.00	0.00	0.00
6,700.0	22.69	281.33	6,297.8	403.7	-2,014.7	2,054.3	0.00	0.00	0.00
6,800.0	22.69	281.33	6,390.1	411.3	-2,052.5	2,092.9	0.00	0.00	0.00
6,900.0	22.69	281.33	6,482.3	418.9	-2,090.3	2,131.5	0.00	0.00	0.00
7,000.0	22.69	281.33	6,574.6	426.4	-2,128.1	2,170.0	0.00	0.00	0.00
7,100.0	22.69	281.33	6,666.9	434.0	-2,165.9	2,208.6	0.00	0.00	0.00
7,200.0	22.69	281.33	6,759.1	441.6	-2,203.8	2,247.2	0.00	0.00	0.00
7,300.0	22.69	281.33	6,851.4	449.2	-2,241.6	2,285.7	0.00	0.00	0.00
7,400.0	22.69	281.33	6,943.6	456.8	-2,279.4	2,324.3	0.00	0.00	0.00
7,500.0	22.69	281.33	7,035.9	464.3	-2,317.2	2,362.9	0.00	0.00	0.00
7,600.0	22.69	281.33	7,128.2	471.9	-2,355.1	2,401.4	0.00	0.00	0.00
7,700.0	22.69	281.33	7,220.4	479.5	-2,392.9	2,440.0	0.00	0.00	0.00
<b>Drop 3° /100'</b>									
7,779.0	22.69	281.33	7,293.3	485.5	-2,422.8	2,470.5	0.00	0.00	0.00
7,800.0	22.06	281.33	7,312.7	487.0	-2,430.6	2,478.4	3.00	-3.00	0.00
7,900.0	19.06	281.33	7,406.4	493.9	-2,465.0	2,513.6	3.00	-3.00	0.00
8,000.0	16.06	281.33	7,501.7	499.9	-2,494.6	2,543.7	3.00	-3.00	0.00
8,100.0	13.06	281.33	7,598.5	504.8	-2,519.2	2,568.8	3.00	-3.00	0.00
8,200.0	10.06	281.33	7,696.4	508.7	-2,538.9	2,588.9	3.00	-3.00	0.00
8,300.0	7.06	281.33	7,795.3	511.7	-2,553.5	2,603.8	3.00	-3.00	0.00
8,400.0	4.06	281.33	7,894.8	513.6	-2,563.0	2,613.4	3.00	-3.00	0.00
8,500.0	1.06	281.33	7,994.7	514.4	-2,567.4	2,617.9	3.00	-3.00	0.00
<b>EOD @ Vertical / Build 1.5° / 100' - Ohio Creek - TOG</b>									
8,535.3	0.00	0.00	8,030.0	514.5	-2,567.7	2,618.2	3.00	-3.00	0.00
8,600.0	0.97	250.00	8,094.7	514.3	-2,568.2	2,618.7	1.50	1.50	0.00
<b>EOB @ 1.51° Inc. / 250.00° Azm</b>									
8,635.7	1.51	250.00	8,130.4	514.1	-2,568.9	2,619.4	1.50	1.50	0.00
8,700.0	1.51	250.00	8,194.7	513.5	-2,570.5	2,620.8	0.00	0.00	0.00
8,800.0	1.51	250.00	8,294.6	512.6	-2,573.0	2,623.1	0.00	0.00	0.00
8,900.0	1.51	250.00	8,394.6	511.7	-2,575.4	2,625.4	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 24B-22 496 - Slot BJU M23A FED 24B-22 496
<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 24B-22 496	<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)
<b>William Fork</b>									
8,941.4	1.51	250.00	8,436.0	511.3	-2,576.5	2,626.3	0.00	0.00	0.00
9,000.0	1.51	250.00	8,494.6	510.8	-2,577.9	2,627.6	0.00	0.00	0.00
9,100.0	1.51	250.00	8,594.5	509.9	-2,580.4	2,629.9	0.00	0.00	0.00
9,200.0	1.51	250.00	8,694.5	509.0	-2,582.8	2,632.2	0.00	0.00	0.00
9,300.0	1.51	250.00	8,794.5	508.1	-2,585.3	2,634.5	0.00	0.00	0.00
9,400.0	1.51	250.00	8,894.4	507.2	-2,587.8	2,636.7	0.00	0.00	0.00
9,500.0	1.51	250.00	8,994.4	506.3	-2,590.3	2,639.0	0.00	0.00	0.00
9,600.0	1.51	250.00	9,094.4	505.4	-2,592.7	2,641.3	0.00	0.00	0.00
9,700.0	1.51	250.00	9,194.3	504.5	-2,595.2	2,643.5	0.00	0.00	0.00
9,800.0	1.51	250.00	9,294.3	503.6	-2,597.7	2,645.8	0.00	0.00	0.00
9,900.0	1.51	250.00	9,394.3	502.7	-2,600.1	2,648.1	0.00	0.00	0.00
10,000.0	1.51	250.00	9,494.2	501.8	-2,602.6	2,650.4	0.00	0.00	0.00
10,100.0	1.51	250.00	9,594.2	500.9	-2,605.1	2,652.6	0.00	0.00	0.00
10,200.0	1.51	250.00	9,694.1	500.0	-2,607.6	2,654.9	0.00	0.00	0.00
10,300.0	1.51	250.00	9,794.1	499.1	-2,610.0	2,657.2	0.00	0.00	0.00
10,400.0	1.51	250.00	9,894.1	498.2	-2,612.5	2,659.4	0.00	0.00	0.00
10,500.0	1.51	250.00	9,994.0	497.3	-2,615.0	2,661.7	0.00	0.00	0.00
10,600.0	1.51	250.00	10,094.0	496.4	-2,617.4	2,664.0	0.00	0.00	0.00
10,700.0	1.51	250.00	10,194.0	495.5	-2,619.9	2,666.3	0.00	0.00	0.00
10,800.0	1.51	250.00	10,293.9	494.6	-2,622.4	2,668.5	0.00	0.00	0.00
10,900.0	1.51	250.00	10,393.9	493.7	-2,624.8	2,670.8	0.00	0.00	0.00
11,000.0	1.51	250.00	10,493.9	492.8	-2,627.3	2,673.1	0.00	0.00	0.00
11,100.0	1.51	250.00	10,593.8	491.9	-2,629.8	2,675.3	0.00	0.00	0.00
11,200.0	1.51	250.00	10,693.8	491.0	-2,632.3	2,677.6	0.00	0.00	0.00
11,300.0	1.51	250.00	10,793.8	490.1	-2,634.7	2,679.9	0.00	0.00	0.00
11,400.0	1.51	250.00	10,893.7	489.2	-2,637.2	2,682.2	0.00	0.00	0.00
11,500.0	1.51	250.00	10,993.7	488.3	-2,639.7	2,684.4	0.00	0.00	0.00
11,600.0	1.51	250.00	11,093.7	487.4	-2,642.1	2,686.7	0.00	0.00	0.00
<b>Cameo</b>									
11,689.4	1.51	250.00	11,183.0	486.6	-2,644.3	2,688.7	0.00	0.00	0.00
11,700.0	1.51	250.00	11,193.6	486.5	-2,644.6	2,689.0	0.00	0.00	0.00
11,800.0	1.51	250.00	11,293.6	485.6	-2,647.1	2,691.2	0.00	0.00	0.00
11,900.0	1.51	250.00	11,393.6	484.7	-2,649.5	2,693.5	0.00	0.00	0.00
12,000.0	1.51	250.00	11,493.5	483.8	-2,652.0	2,695.8	0.00	0.00	0.00
12,100.0	1.51	250.00	11,593.5	482.9	-2,654.5	2,698.1	0.00	0.00	0.00
<b>Rollins</b>									
12,189.5	1.51	250.00	11,683.0	482.1	-2,656.7	2,700.1	0.00	0.00	0.00
12,200.0	1.51	250.00	11,693.5	482.0	-2,657.0	2,700.3	0.00	0.00	0.00
12,300.0	1.51	250.00	11,793.4	481.1	-2,659.4	2,702.6	0.00	0.00	0.00
<b>TD @ 12389.6' MD / 11883.0' TVD</b>									
12,389.6	1.51	250.00	11,883.0	480.3	-2,661.6	2,704.6	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 24B-22 496 - Slot BJU M23A FED 24B-22 496
<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 24B-22 496	<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 - 24B-22 - plan hits target center - Point	0.00	0.00	8,030.0	514.5	-2,567.7	14,424,334.38	2,442,496.93	39.685663	-108.149273
PBHL - 24B-22 - plan hits target center - Ellipse (radii L100.0 W50.0 on 250.00 azi)	0.00	0.00	11,883.0	480.3	-2,661.6	14,424,297.20	2,442,404.10	39.685569	-108.149606

### Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,491.9	3,338.0	Wasatch			
6,093.2	5,738.0	Wasatch G			
6,418.4	6,038.0	Fort Union			
8,535.3	8,030.0	Ohio Creek			
8,535.3	8,030.0	TOG			
8,941.4	8,436.0	William Fork			
11,689.4	11,183.0	Cameo			
12,189.5	11,683.0	Rollins			

### Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,000.0	1,000.0	0.0	0.0	Build 3° / 100'
1,756.3	1,736.7	29.0	-144.9	EOB @ 22.69° Inc. / 281.33° Azm
7,779.0	7,293.3	485.5	-2,422.8	Drop 3° / 100'
8,535.3	8,030.0	514.5	-2,567.7	EOD @ Vertical / Build 1.5° / 100'
8,635.7	8,130.4	514.1	-2,568.9	EOB @ 1.51° Inc. / 250.00° Azm
12,389.6	11,883.0	480.3	-2,661.6	TD @ 12389.6' MD / 11883.0' TVD