

Project: Garfield County, CO
 Site: BJU M23A 496 Pad
 Well: BJU M23A FED 12A-23 496
 Wellbore: Wellbore #1
 Design: Design #1
 Latitude: 39.684596
 Longitude: -108.140032
 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 12A-23 496(0.0N, 0.0E)
 Measured Depth Reference: RKB @ 8134.0usft (30')
 Calculation Method: Minimum Curvature

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3580.0	3800.8	Wasatch
5980.0	6384.9	Wasatch G
6280.0	6707.9	Fort Union
8208.0	8746.8	Ohio Creek
8208.0	8746.8	TOG
8675.0	9213.9	William Fork
11451.0	11990.8	Cameo
11951.0	12491.0	Rollins

SECTION DETAILS

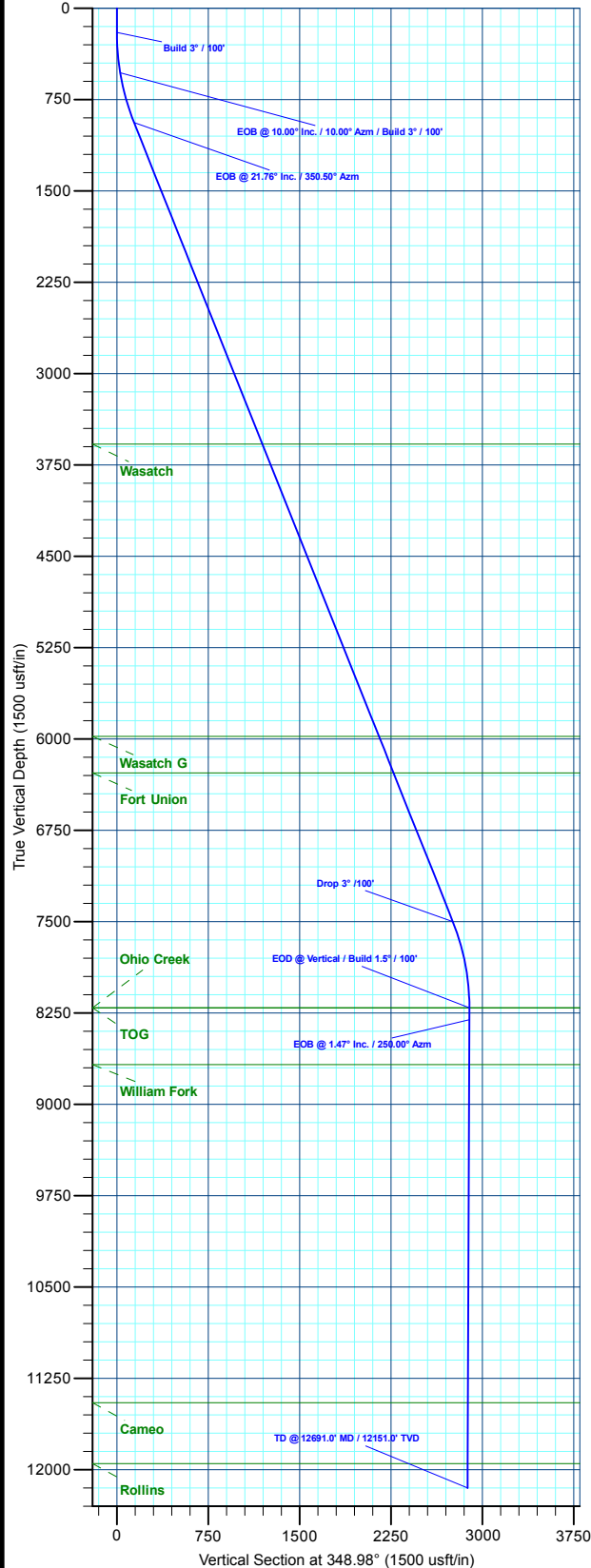
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dieg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
533.3	10.00	10.00	531.6	28.6	5.0	3.00	10.00	27.1	EOB @ 10.00° Inc. / 10.00° Azm / Build 3° / 100'
958.4	21.76	350.50	940.1	143.1	-1.6	3.00	-34.10	140.8	EOB @ 21.76° Inc. / 350.50° Azm
8021.6	21.76	350.50	7500.1	2725.1	-433.9	0.00	0.00	2757.8	Drop 3° / 100'
8746.8	0.00	0.00	8208.0	2859.3	-456.3	3.00	180.00	2893.8	EOD @ Vertical / Build 1.5° / 100'
8844.8	1.47	250.00	8306.1	2858.9	-457.5	1.50	250.00	2893.6	EOB @ 1.47° Inc. / 250.00° Azm
12691.0	1.47	250.00	12151.0	2825.1	-550.3	0.00	0.00	2878.2	TD @ 12691.0' MD / 12151.0' TVD

DESIGN TARGET DETAILS

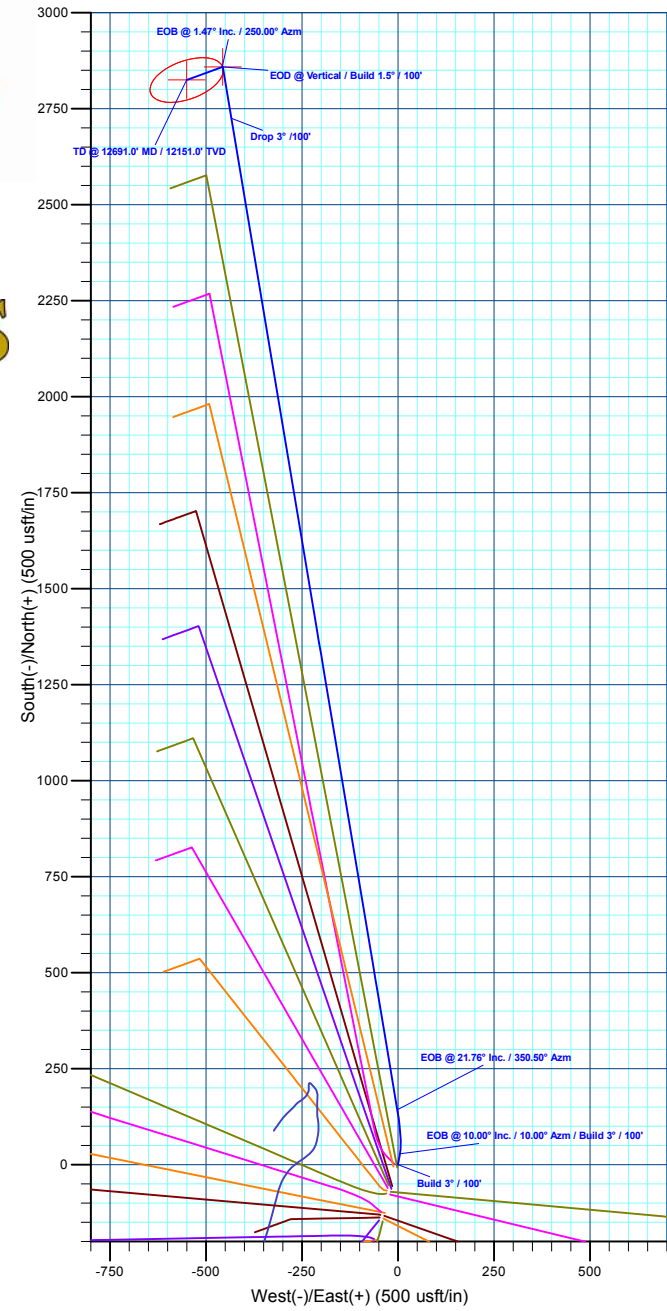
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
OHCR - 12A-23	8208.0	2859.3	-456.3	14426871.78	2444562.33	39.692443	-108.141653
PBHL - 12A-23	12151.0	2825.1	-550.3	14426834.60	2444469.50	39.692349	-108.141987

WELL DETAILS: BJU M23A FED 12A-23 496

+N/-S	+E/-W	Ground Level : 8104.0	Northing	Easting	Latitude	Longitude
0.0	0.0	14424028.50	2445109.60	39.684596	-108.140032	



T M Azimuths to True North
 Magnetic North: 9.43°
 Magnetic Field
 Strength: 51186.8nT
 Dip Angle: 65.82°
 Date: 6/3/2020
 Model: HDGM2020



Plan: Design #1 (BJU M23A FED 12A-23 496/Wellbore #1)

Created By: Will Jircik Date: 17:50, June 04 2020



Caerus Oil & Gas

Garfield County, CO

BJU M23A 496 Pad

BJU M23A FED 12A-23 496 - Slot BJU M23A FED 12A-23 496

Wellbore #1

Plan: Design #1

QES Well Planning Report

04 June, 2020



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BJU M23A FED 12A-23 496 - Slot BJU M23A FED 12A-23 496
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8134.0usft (30')
Project:	Garfield County, CO	MD Reference:	RKB @ 8134.0usft (30')
Site:	BJU M23A 496 Pad	North Reference:	True
Well:	BJU M23A FED 12A-23 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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

Well	BJU M23A FED 12A-23 496 - Slot BJU M23A FED 12A-23 496		
Well Position	+N/-S 0.0 usft	Northing: 14,424,028.50 usft	Latitude: 39.684596
	+E/-W 0.0 usft	Easting: 2,445,109.60 usft	Longitude: -108.140032
Position Uncertainty	0.0 usft	Wellhead Elevation:	Ground Level: 8,104.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2020	6/3/2020	9.43	65.82	51,186.80000000

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	348.98

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		
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00		
533.3	10.00	10.00	531.6	28.6	5.0	3.00	3.00	0.00	10.00		
958.4	21.76	350.50	940.1	143.1	-1.6	3.00	2.77	-4.59	-34.10		
8,021.6	21.76	350.50	7,500.1	2,725.1	-433.9	0.00	0.00	0.00	0.00		
8,746.8	0.00	0.00	8,208.0	2,859.3	-456.3	3.00	-3.00	0.00	180.00	OHCR - 12A-23	
8,844.8	1.47	250.00	8,306.1	2,858.9	-457.5	1.50	1.50	-112.16	250.00		
12,691.0	1.47	250.00	12,151.0	2,825.1	-550.3	0.00	0.00	0.00	0.00	PBHL - 12A-23	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BJU M23A FED 12A-23 496 - Slot BJU M23A FED 12A-23 496
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8134.0usft (30')
Project:	Garfield County, CO	MD Reference:	RKB @ 8134.0usft (30')
Site:	BJU M23A 496 Pad	North Reference:	True
Well:	BJU M23A FED 12A-23 496	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'									
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	3.00	10.00	300.0	2.6	0.5	2.4	3.00	3.00	0.00
400.0	6.00	10.00	399.6	10.3	1.8	9.8	3.00	3.00	0.00
500.0	9.00	10.00	498.8	23.2	4.1	21.9	3.00	3.00	0.00
EOB @ 10.00° Inc. / 10.00° Azm / Build 3° / 100'									
533.3	10.00	10.00	531.6	28.6	5.0	27.1	3.00	3.00	0.00
600.0	11.71	4.47	597.1	41.0	6.6	39.0	3.00	2.56	-8.30
700.0	14.41	358.68	694.5	63.6	7.1	61.1	3.00	2.70	-5.79
800.0	17.21	354.71	790.7	90.8	5.4	88.1	3.00	2.80	-3.97
900.0	20.07	351.84	885.5	122.5	1.6	119.9	3.00	2.86	-2.88
EOB @ 21.76° Inc. / 350.50° Azm									
958.4	21.76	350.50	940.1	143.1	-1.6	140.8	3.00	2.89	-2.30
1,000.0	21.76	350.50	978.7	158.3	-4.1	156.2	0.00	0.00	0.00
1,100.0	21.76	350.50	1,071.5	194.8	-10.3	193.2	0.00	0.00	0.00
1,200.0	21.76	350.50	1,164.4	231.4	-16.4	230.3	0.00	0.00	0.00
1,300.0	21.76	350.50	1,257.3	268.0	-22.5	267.3	0.00	0.00	0.00
1,400.0	21.76	350.50	1,350.2	304.5	-28.6	304.4	0.00	0.00	0.00
1,500.0	21.76	350.50	1,443.1	341.1	-34.7	341.4	0.00	0.00	0.00
1,600.0	21.76	350.50	1,535.9	377.6	-40.9	378.5	0.00	0.00	0.00
1,700.0	21.76	350.50	1,628.8	414.2	-47.0	415.5	0.00	0.00	0.00
1,800.0	21.76	350.50	1,721.7	450.7	-53.1	452.6	0.00	0.00	0.00
1,900.0	21.76	350.50	1,814.6	487.3	-59.2	489.6	0.00	0.00	0.00
2,000.0	21.76	350.50	1,907.4	523.9	-65.3	526.7	0.00	0.00	0.00
2,100.0	21.76	350.50	2,000.3	560.4	-71.5	563.7	0.00	0.00	0.00
2,200.0	21.76	350.50	2,093.2	597.0	-77.6	600.8	0.00	0.00	0.00
2,300.0	21.76	350.50	2,186.1	633.5	-83.7	637.8	0.00	0.00	0.00
2,400.0	21.76	350.50	2,278.9	670.1	-89.8	674.9	0.00	0.00	0.00
2,500.0	21.76	350.50	2,371.8	706.6	-95.9	711.9	0.00	0.00	0.00
2,600.0	21.76	350.50	2,464.7	743.2	-102.1	749.0	0.00	0.00	0.00
2,700.0	21.76	350.50	2,557.6	779.7	-108.2	786.0	0.00	0.00	0.00
2,800.0	21.76	350.50	2,650.5	816.3	-114.3	823.1	0.00	0.00	0.00
2,900.0	21.76	350.50	2,743.3	852.9	-120.4	860.2	0.00	0.00	0.00
3,000.0	21.76	350.50	2,836.2	889.4	-126.5	897.2	0.00	0.00	0.00
3,100.0	21.76	350.50	2,929.1	926.0	-132.7	934.3	0.00	0.00	0.00
3,200.0	21.76	350.50	3,022.0	962.5	-138.8	971.3	0.00	0.00	0.00
3,300.0	21.76	350.50	3,114.8	999.1	-144.9	1,008.4	0.00	0.00	0.00
3,400.0	21.76	350.50	3,207.7	1,035.6	-151.0	1,045.4	0.00	0.00	0.00
3,500.0	21.76	350.50	3,300.6	1,072.2	-157.1	1,082.5	0.00	0.00	0.00
3,600.0	21.76	350.50	3,393.5	1,108.8	-163.3	1,119.5	0.00	0.00	0.00
3,700.0	21.76	350.50	3,486.4	1,145.3	-169.4	1,156.6	0.00	0.00	0.00
3,800.0	21.76	350.50	3,579.2	1,181.9	-175.5	1,193.6	0.00	0.00	0.00
Wasatch									
3,800.8	21.76	350.50	3,580.0	1,182.2	-175.5	1,193.9	0.00	0.00	0.00
3,900.0	21.76	350.50	3,672.1	1,218.4	-181.6	1,230.7	0.00	0.00	0.00
4,000.0	21.76	350.50	3,765.0	1,255.0	-187.7	1,267.7	0.00	0.00	0.00
4,100.0	21.76	350.50	3,857.9	1,291.5	-193.9	1,304.8	0.00	0.00	0.00
4,200.0	21.76	350.50	3,950.7	1,328.1	-200.0	1,341.8	0.00	0.00	0.00
4,300.0	21.76	350.50	4,043.6	1,364.6	-206.1	1,378.9	0.00	0.00	0.00
4,400.0	21.76	350.50	4,136.5	1,401.2	-212.2	1,415.9	0.00	0.00	0.00
4,500.0	21.76	350.50	4,229.4	1,437.8	-218.3	1,453.0	0.00	0.00	0.00

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Project:	Garfield County, CO	MD Reference:	RKB @ 8134.0usft (30')
Site:	BJU M23A 496 Pad	North Reference:	True
Well:	BJU M23A FED 12A-23 496	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)
4,600.0	21.76	350.50	4,322.2	1,474.3	-224.5	1,490.0	0.00	0.00	0.00
4,700.0	21.76	350.50	4,415.1	1,510.9	-230.6	1,527.1	0.00	0.00	0.00
4,800.0	21.76	350.50	4,508.0	1,547.4	-236.7	1,564.1	0.00	0.00	0.00
4,900.0	21.76	350.50	4,600.9	1,584.0	-242.8	1,601.2	0.00	0.00	0.00
5,000.0	21.76	350.50	4,693.8	1,620.5	-248.9	1,638.2	0.00	0.00	0.00
5,100.0	21.76	350.50	4,786.6	1,657.1	-255.1	1,675.3	0.00	0.00	0.00
5,200.0	21.76	350.50	4,879.5	1,693.7	-261.2	1,712.3	0.00	0.00	0.00
5,300.0	21.76	350.50	4,972.4	1,730.2	-267.3	1,749.4	0.00	0.00	0.00
5,400.0	21.76	350.50	5,065.3	1,766.8	-273.4	1,786.5	0.00	0.00	0.00
5,500.0	21.76	350.50	5,158.1	1,803.3	-279.5	1,823.5	0.00	0.00	0.00
5,600.0	21.76	350.50	5,251.0	1,839.9	-285.7	1,860.6	0.00	0.00	0.00
5,700.0	21.76	350.50	5,343.9	1,876.4	-291.8	1,897.6	0.00	0.00	0.00
5,800.0	21.76	350.50	5,436.8	1,913.0	-297.9	1,934.7	0.00	0.00	0.00
5,900.0	21.76	350.50	5,529.7	1,949.5	-304.0	1,971.7	0.00	0.00	0.00
6,000.0	21.76	350.50	5,622.5	1,986.1	-310.1	2,008.8	0.00	0.00	0.00
6,100.0	21.76	350.50	5,715.4	2,022.7	-316.3	2,045.8	0.00	0.00	0.00
6,200.0	21.76	350.50	5,808.3	2,059.2	-322.4	2,082.9	0.00	0.00	0.00
6,300.0	21.76	350.50	5,901.2	2,095.8	-328.5	2,119.9	0.00	0.00	0.00
Wasatch G									
6,384.9	21.76	350.50	5,980.0	2,126.8	-333.7	2,151.4	0.00	0.00	0.00
6,400.0	21.76	350.50	5,994.0	2,132.3	-334.6	2,157.0	0.00	0.00	0.00
6,500.0	21.76	350.50	6,086.9	2,168.9	-340.7	2,194.0	0.00	0.00	0.00
6,600.0	21.76	350.50	6,179.8	2,205.4	-346.9	2,231.1	0.00	0.00	0.00
6,700.0	21.76	350.50	6,272.7	2,242.0	-353.0	2,268.1	0.00	0.00	0.00
Fort Union									
6,707.9	21.76	350.50	6,280.0	2,244.9	-353.5	2,271.1	0.00	0.00	0.00
6,800.0	21.76	350.50	6,365.5	2,278.6	-359.1	2,305.2	0.00	0.00	0.00
6,900.0	21.76	350.50	6,458.4	2,315.1	-365.2	2,342.2	0.00	0.00	0.00
7,000.0	21.76	350.50	6,551.3	2,351.7	-371.3	2,379.3	0.00	0.00	0.00
7,100.0	21.76	350.50	6,644.2	2,388.2	-377.5	2,416.3	0.00	0.00	0.00
7,200.0	21.76	350.50	6,737.1	2,424.8	-383.6	2,453.4	0.00	0.00	0.00
7,300.0	21.76	350.50	6,829.9	2,461.3	-389.7	2,490.4	0.00	0.00	0.00
7,400.0	21.76	350.50	6,922.8	2,497.9	-395.8	2,527.5	0.00	0.00	0.00
7,500.0	21.76	350.50	7,015.7	2,534.5	-401.9	2,564.5	0.00	0.00	0.00
7,600.0	21.76	350.50	7,108.6	2,571.0	-408.1	2,601.6	0.00	0.00	0.00
7,700.0	21.76	350.50	7,201.4	2,607.6	-414.2	2,638.6	0.00	0.00	0.00
7,800.0	21.76	350.50	7,294.3	2,644.1	-420.3	2,675.7	0.00	0.00	0.00
7,900.0	21.76	350.50	7,387.2	2,680.7	-426.4	2,712.8	0.00	0.00	0.00
8,000.0	21.76	350.50	7,480.1	2,717.2	-432.5	2,749.8	0.00	0.00	0.00
Drop 3° /100'									
8,021.6	21.76	350.50	7,500.1	2,725.1	-433.9	2,757.8	0.00	0.00	0.00
8,100.0	19.40	350.50	7,573.5	2,752.3	-438.4	2,785.4	3.00	-3.00	0.00
8,200.0	16.40	350.50	7,668.7	2,782.6	-443.5	2,816.1	3.00	-3.00	0.00
8,300.0	13.40	350.50	7,765.3	2,808.0	-447.7	2,841.8	3.00	-3.00	0.00
8,400.0	10.40	350.50	7,863.1	2,828.3	-451.1	2,862.4	3.00	-3.00	0.00
8,500.0	7.40	350.50	7,961.9	2,843.6	-453.7	2,877.9	3.00	-3.00	0.00
8,600.0	4.40	350.50	8,061.4	2,853.7	-455.4	2,888.1	3.00	-3.00	0.00
8,700.0	1.40	350.50	8,161.2	2,858.7	-456.2	2,893.2	3.00	-3.00	0.00
EOD @ Vertical / Build 1.5° / 100' - Ohio Creek - TOG									
8,746.8	0.00	0.00	8,208.0	2,859.3	-456.3	2,893.8	3.00	-3.00	0.00
8,800.0	0.80	250.00	8,261.2	2,859.2	-456.7	2,893.7	1.50	1.50	0.00
EOB @ 1.47° Inc. / 250.00° Azm									

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Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8134.0usft (30')
Project:	Garfield County, CO	MD Reference:	RKB @ 8134.0usft (30')
Site:	BJU M23A 496 Pad	North Reference:	True
Well:	BJU M23A FED 12A-23 496	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)	
8,844.8	1.47	250.00	8,306.1	2,858.9	-457.5	2,893.6	1.50	1.50	0.00	
8,900.0	1.47	250.00	8,361.2	2,858.4	-458.8	2,893.4	0.00	0.00	0.00	
9,000.0	1.47	250.00	8,461.2	2,857.5	-461.3	2,893.0	0.00	0.00	0.00	
9,100.0	1.47	250.00	8,561.1	2,856.6	-463.7	2,892.6	0.00	0.00	0.00	
9,200.0	1.47	250.00	8,661.1	2,855.7	-466.1	2,892.2	0.00	0.00	0.00	
William Fork										
9,213.9	1.47	250.00	8,675.0	2,855.6	-466.4	2,892.1	0.00	0.00	0.00	
9,300.0	1.47	250.00	8,761.1	2,854.9	-468.5	2,891.8	0.00	0.00	0.00	
9,400.0	1.47	250.00	8,861.0	2,854.0	-470.9	2,891.4	0.00	0.00	0.00	
9,500.0	1.47	250.00	8,961.0	2,853.1	-473.3	2,891.0	0.00	0.00	0.00	
9,600.0	1.47	250.00	9,061.0	2,852.2	-475.7	2,890.6	0.00	0.00	0.00	
9,700.0	1.47	250.00	9,160.9	2,851.3	-478.1	2,890.2	0.00	0.00	0.00	
9,800.0	1.47	250.00	9,260.9	2,850.5	-480.6	2,889.8	0.00	0.00	0.00	
9,900.0	1.47	250.00	9,360.9	2,849.6	-483.0	2,889.4	0.00	0.00	0.00	
10,000.0	1.47	250.00	9,460.8	2,848.7	-485.4	2,889.0	0.00	0.00	0.00	
10,100.0	1.47	250.00	9,560.8	2,847.8	-487.8	2,888.6	0.00	0.00	0.00	
10,200.0	1.47	250.00	9,660.8	2,847.0	-490.2	2,888.2	0.00	0.00	0.00	
10,300.0	1.47	250.00	9,760.7	2,846.1	-492.6	2,887.8	0.00	0.00	0.00	
10,400.0	1.47	250.00	9,860.7	2,845.2	-495.0	2,887.4	0.00	0.00	0.00	
10,500.0	1.47	250.00	9,960.7	2,844.3	-497.4	2,887.0	0.00	0.00	0.00	
10,600.0	1.47	250.00	10,060.6	2,843.4	-499.9	2,886.6	0.00	0.00	0.00	
10,700.0	1.47	250.00	10,160.6	2,842.6	-502.3	2,886.2	0.00	0.00	0.00	
10,800.0	1.47	250.00	10,260.6	2,841.7	-504.7	2,885.8	0.00	0.00	0.00	
10,900.0	1.47	250.00	10,360.5	2,840.8	-507.1	2,885.4	0.00	0.00	0.00	
11,000.0	1.47	250.00	10,460.5	2,839.9	-509.5	2,885.0	0.00	0.00	0.00	
11,100.0	1.47	250.00	10,560.5	2,839.1	-511.9	2,884.6	0.00	0.00	0.00	
11,200.0	1.47	250.00	10,660.5	2,838.2	-514.3	2,884.2	0.00	0.00	0.00	
11,300.0	1.47	250.00	10,760.4	2,837.3	-516.7	2,883.8	0.00	0.00	0.00	
11,400.0	1.47	250.00	10,860.4	2,836.4	-519.2	2,883.4	0.00	0.00	0.00	
11,500.0	1.47	250.00	10,960.4	2,835.5	-521.6	2,883.0	0.00	0.00	0.00	
11,600.0	1.47	250.00	11,060.3	2,834.7	-524.0	2,882.6	0.00	0.00	0.00	
11,700.0	1.47	250.00	11,160.3	2,833.8	-526.4	2,882.2	0.00	0.00	0.00	
11,800.0	1.47	250.00	11,260.3	2,832.9	-528.8	2,881.8	0.00	0.00	0.00	
11,900.0	1.47	250.00	11,360.2	2,832.0	-531.2	2,881.3	0.00	0.00	0.00	
Cameo										
11,990.8	1.47	250.00	11,451.0	2,831.2	-533.4	2,881.0	0.00	0.00	0.00	
12,000.0	1.47	250.00	11,460.2	2,831.2	-533.6	2,880.9	0.00	0.00	0.00	
12,100.0	1.47	250.00	11,560.2	2,830.3	-536.0	2,880.5	0.00	0.00	0.00	
12,200.0	1.47	250.00	11,660.1	2,829.4	-538.5	2,880.1	0.00	0.00	0.00	
12,300.0	1.47	250.00	11,760.1	2,828.5	-540.9	2,879.7	0.00	0.00	0.00	
12,400.0	1.47	250.00	11,860.1	2,827.6	-543.3	2,879.3	0.00	0.00	0.00	
Rollins										
12,491.0	1.47	250.00	11,951.0	2,826.8	-545.5	2,879.0	0.00	0.00	0.00	
12,500.0	1.47	250.00	11,960.0	2,826.8	-545.7	2,878.9	0.00	0.00	0.00	
12,600.0	1.47	250.00	12,060.0	2,825.9	-548.1	2,878.5	0.00	0.00	0.00	
TD @ 12691.0' MD / 12151.0' TVD										
12,691.0	1.47	250.00	12,151.0	2,825.1	-550.3	2,878.2	0.00	0.00	0.00	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BJU M23A FED 12A-23 496 - Slot BJU M23A FED 12A-23 496
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8134.0usft (30')
Project:	Garfield County, CO	MD Reference:	RKB @ 8134.0usft (30')
Site:	BJU M23A 496 Pad	North Reference:	True
Well:	BJU M23A FED 12A-23 496	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 - 12A-23 - plan hits target center - Point	0.00	0.00	8,208.0	2,859.3	-456.3	14,426,871.78	2,444,562.33	39.692443	-108.141653
PBHL - 12A-23 - plan hits target center - Ellipse (radii L100.0 W50.0 on 250.00 azi)	0.00	0.00	12,151.0	2,825.1	-550.3	14,426,834.60	2,444,469.50	39.692349	-108.141987

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,800.8	3,580.0	Wasatch			
6,384.9	5,980.0	Wasatch G			
6,707.9	6,280.0	Fort Union			
8,746.8	8,208.0	Ohio Creek			
8,746.8	8,208.0	TOG			
9,213.9	8,675.0	William Fork			
11,990.8	11,451.0	Cameo			
12,491.0	11,951.0	Rollins			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
200.0	200.0	0.0	0.0	Build 3° / 100'
533.3	531.6	28.6	5.0	EOB @ 10.00° Inc. / 10.00° Azm / Build 3° / 100'
958.4	940.1	143.1	-1.6	EOB @ 21.76° Inc. / 350.50° Azm
8,021.6	7,500.1	2,725.1	-433.9	Drop 3° / 100'
8,746.8	8,208.0	2,859.3	-456.3	EOD @ Vertical / Build 1.5° / 100'
8,844.8	8,306.1	2,858.9	-457.5	EOB @ 1.47° Inc. / 250.00° Azm
12,691.0	12,151.0	2,825.1	-550.3	TD @ 12691.0' MD / 12151.0' TVD