

Plan: Design #2 (BJU M23A FED 15C-23 496/Wellbore #1)	
Created By: Will Jircik	Date: 15:08, July 18 2022



Caerus Oil & Gas

Garfield County, CO

BJU M23A 496 Pad

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

Wellbore #1

Plan: Design #2

KLX Well Planning Report

18 July, 2022



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BJU M23A FED 15C-23 496 - Slot 15C-23
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 15C-23 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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 15C-23 496 - Slot 15C-23					
Well Position	+N/-S	-198.9 usft	Northing:	14,423,828.00 usft	Latitude:	39.684050
	+E/-W	-53.8 usft	Easting:	2,445,062.20 usft	Longitude:	-108.140223
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	51,187.30000000

Design	Design #2				
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	198.89	

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	
1,522.0	0.00	0.00	1,522.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,788.7	8.00	186.50	1,787.8	-18.5	-2.1	3.00	3.00	0.00	186.50	
4,788.7	8.00	186.50	4,758.6	-433.3	-49.4	0.00	0.00	0.00	0.00	
4,856.2	8.00	201.10	4,825.5	-442.4	-51.6	3.00	0.00	21.62	97.27	
7,808.7	8.00	201.10	7,749.3	-825.6	-199.5	0.00	0.00	0.00	0.00	
8,075.3	0.00	0.00	8,015.0	-843.0	-206.2	3.00	-3.00	0.00	180.00	OHCR - 15C-23
8,166.7	1.37	250.00	8,106.4	-843.3	-207.2	1.50	1.50	-120.29	250.00	
12,298.5	1.37	250.00	12,237.0	-877.2	-300.1	0.00	0.00	0.00	0.00	PBHL - 15C-23

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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 15C-23 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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	
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	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
Build 3° / 100'										
1,522.0	0.00	0.00	1,522.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,600.0	2.34	186.50	1,600.0	-1.6	-0.2	1.6	3.00	3.00	0.00	
1,700.0	5.34	186.50	1,699.7	-8.2	-0.9	8.1	3.00	3.00	0.00	
EOB @ 8.00° Inc. / 186.50° Azm										
1,788.7	8.00	186.50	1,787.8	-18.5	-2.1	18.2	3.00	3.00	0.00	
1,800.0	8.00	186.50	1,799.0	-20.0	-2.3	19.7	0.00	0.00	0.00	
1,900.0	8.00	186.50	1,898.1	-33.9	-3.9	33.3	0.00	0.00	0.00	
2,000.0	8.00	186.50	1,997.1	-47.7	-5.4	46.9	0.00	0.00	0.00	
2,100.0	8.00	186.50	2,096.1	-61.5	-7.0	60.5	0.00	0.00	0.00	
2,200.0	8.00	186.50	2,195.1	-75.3	-8.6	74.1	0.00	0.00	0.00	
2,300.0	8.00	186.50	2,294.2	-89.2	-10.2	87.7	0.00	0.00	0.00	
2,400.0	8.00	186.50	2,393.2	-103.0	-11.7	101.3	0.00	0.00	0.00	
2,500.0	8.00	186.50	2,492.2	-116.8	-13.3	114.8	0.00	0.00	0.00	
2,600.0	8.00	186.50	2,591.2	-130.7	-14.9	128.4	0.00	0.00	0.00	
2,700.0	8.00	186.50	2,690.3	-144.5	-16.5	142.0	0.00	0.00	0.00	
2,800.0	8.00	186.50	2,789.3	-158.3	-18.0	155.6	0.00	0.00	0.00	
2,900.0	8.00	186.50	2,888.3	-172.1	-19.6	169.2	0.00	0.00	0.00	
3,000.0	8.00	186.50	2,987.3	-186.0	-21.2	182.8	0.00	0.00	0.00	
3,100.0	8.00	186.50	3,086.4	-199.8	-22.8	196.4	0.00	0.00	0.00	
3,200.0	8.00	186.50	3,185.4	-213.6	-24.3	210.0	0.00	0.00	0.00	
3,300.0	8.00	186.50	3,284.4	-227.5	-25.9	223.6	0.00	0.00	0.00	
Wasatch										
3,313.7	8.00	186.50	3,298.0	-229.3	-26.1	225.5	0.00	0.00	0.00	
3,400.0	8.00	186.50	3,383.5	-241.3	-27.5	237.2	0.00	0.00	0.00	
3,500.0	8.00	186.50	3,482.5	-255.1	-29.1	250.8	0.00	0.00	0.00	
3,600.0	8.00	186.50	3,581.5	-268.9	-30.6	264.4	0.00	0.00	0.00	
3,700.0	8.00	186.50	3,680.5	-282.8	-32.2	278.0	0.00	0.00	0.00	
3,800.0	8.00	186.50	3,779.6	-296.6	-33.8	291.6	0.00	0.00	0.00	
3,900.0	8.00	186.50	3,878.6	-310.4	-35.4	305.2	0.00	0.00	0.00	
4,000.0	8.00	186.50	3,977.6	-324.2	-36.9	318.7	0.00	0.00	0.00	
4,100.0	8.00	186.50	4,076.6	-338.1	-38.5	332.3	0.00	0.00	0.00	
4,200.0	8.00	186.50	4,175.7	-351.9	-40.1	345.9	0.00	0.00	0.00	
4,300.0	8.00	186.50	4,274.7	-365.7	-41.7	359.5	0.00	0.00	0.00	
4,400.0	8.00	186.50	4,373.7	-379.6	-43.2	373.1	0.00	0.00	0.00	
4,500.0	8.00	186.50	4,472.7	-393.4	-44.8	386.7	0.00	0.00	0.00	
4,600.0	8.00	186.50	4,571.8	-407.2	-46.4	400.3	0.00	0.00	0.00	

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Well:	BJU M23A FED 15C-23 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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	8.00	186.50	4,670.8	-421.0	-48.0	413.9	0.00	0.00	0.00
Turn 3° / 100'									
4,788.7	8.00	186.50	4,758.6	-433.3	-49.4	426.0	0.00	0.00	0.00
4,800.0	7.96	188.93	4,769.8	-434.9	-49.6	427.5	3.00	-0.32	21.48
EOT @ 201.10° Azm									
4,856.2	8.00	201.10	4,825.5	-442.4	-51.6	435.2	3.00	0.06	21.64
4,900.0	8.00	201.10	4,868.9	-448.0	-53.8	441.3	0.00	0.00	0.00
5,000.0	8.00	201.10	4,967.9	-461.0	-58.8	455.2	0.00	0.00	0.00
5,100.0	8.00	201.10	5,066.9	-474.0	-63.8	469.1	0.00	0.00	0.00
5,200.0	8.00	201.10	5,165.9	-487.0	-68.8	483.0	0.00	0.00	0.00
5,300.0	8.00	201.10	5,265.0	-500.0	-73.8	496.9	0.00	0.00	0.00
5,400.0	8.00	201.10	5,364.0	-513.0	-78.8	510.8	0.00	0.00	0.00
5,500.0	8.00	201.10	5,463.0	-525.9	-83.8	524.8	0.00	0.00	0.00
5,600.0	8.00	201.10	5,562.1	-538.9	-88.8	538.7	0.00	0.00	0.00
5,700.0	8.00	201.10	5,661.1	-551.9	-93.9	552.6	0.00	0.00	0.00
Wasatch G									
5,737.3	8.00	201.10	5,698.0	-556.7	-95.7	557.7	0.00	0.00	0.00
5,800.0	8.00	201.10	5,760.1	-564.9	-98.9	566.5	0.00	0.00	0.00
5,900.0	8.00	201.10	5,859.1	-577.9	-103.9	580.4	0.00	0.00	0.00
6,000.0	8.00	201.10	5,958.2	-590.8	-108.9	594.3	0.00	0.00	0.00
Fort Union									
6,040.2	8.00	201.10	5,998.0	-596.1	-110.9	599.9	0.00	0.00	0.00
6,100.0	8.00	201.10	6,057.2	-603.8	-113.9	608.2	0.00	0.00	0.00
6,200.0	8.00	201.10	6,156.2	-616.8	-118.9	622.1	0.00	0.00	0.00
6,300.0	8.00	201.10	6,255.2	-629.8	-123.9	636.0	0.00	0.00	0.00
6,400.0	8.00	201.10	6,354.3	-642.8	-128.9	649.9	0.00	0.00	0.00
6,500.0	8.00	201.10	6,453.3	-655.8	-133.9	663.8	0.00	0.00	0.00
6,600.0	8.00	201.10	6,552.3	-668.7	-138.9	677.7	0.00	0.00	0.00
6,700.0	8.00	201.10	6,651.4	-681.7	-143.9	691.6	0.00	0.00	0.00
6,800.0	8.00	201.10	6,750.4	-694.7	-148.9	705.5	0.00	0.00	0.00
6,900.0	8.00	201.10	6,849.4	-707.7	-154.0	719.4	0.00	0.00	0.00
7,000.0	8.00	201.10	6,948.4	-720.7	-159.0	733.3	0.00	0.00	0.00
7,100.0	8.00	201.10	7,047.5	-733.6	-164.0	747.2	0.00	0.00	0.00
7,200.0	8.00	201.10	7,146.5	-746.6	-169.0	761.1	0.00	0.00	0.00
7,300.0	8.00	201.10	7,245.5	-759.6	-174.0	775.0	0.00	0.00	0.00
7,400.0	8.00	201.10	7,344.5	-772.6	-179.0	788.9	0.00	0.00	0.00
7,500.0	8.00	201.10	7,443.6	-785.6	-184.0	802.8	0.00	0.00	0.00
7,600.0	8.00	201.10	7,542.6	-798.6	-189.0	816.7	0.00	0.00	0.00
7,700.0	8.00	201.10	7,641.6	-811.5	-194.0	830.6	0.00	0.00	0.00
Drop 3° / 100'									
7,808.7	8.00	201.10	7,749.3	-825.6	-199.5	845.8	0.00	0.00	0.00
7,900.0	5.26	201.10	7,839.9	-835.5	-203.3	856.3	3.00	-3.00	0.00
8,000.0	2.26	201.10	7,939.7	-841.6	-205.6	862.8	3.00	-3.00	0.00
EOD @ Vertical - Ohio Creek - TOG									
8,075.3	0.00	0.00	8,015.0	-843.0	-206.2	864.3	3.00	-3.00	0.00
8,100.0	0.37	250.00	8,039.7	-843.0	-206.2	864.4	1.50	1.50	0.00
EOB @ 1.37° Inc. / 250.00° Azm									
8,166.7	1.37	250.00	8,106.4	-843.3	-207.2	865.0	1.50	1.50	0.00
8,200.0	1.37	250.00	8,139.7	-843.6	-207.9	865.5	0.00	0.00	0.00
8,300.0	1.37	250.00	8,239.7	-844.4	-210.2	867.0	0.00	0.00	0.00
8,400.0	1.37	250.00	8,339.6	-845.3	-212.4	868.5	0.00	0.00	0.00
William Fork									

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Well:	BJU M23A FED 15C-23 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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)
8,416.4	1.37	250.00	8,356.0	-845.4	-212.8	868.8	0.00	0.00	0.00
8,500.0	1.37	250.00	8,439.6	-846.1	-214.7	870.0	0.00	0.00	0.00
8,600.0	1.37	250.00	8,539.6	-846.9	-216.9	871.5	0.00	0.00	0.00
8,700.0	1.37	250.00	8,639.5	-847.7	-219.2	873.0	0.00	0.00	0.00
8,800.0	1.37	250.00	8,739.5	-848.5	-221.4	874.5	0.00	0.00	0.00
8,900.0	1.37	250.00	8,839.5	-849.4	-223.7	876.0	0.00	0.00	0.00
9,000.0	1.37	250.00	8,939.5	-850.2	-225.9	877.5	0.00	0.00	0.00
9,100.0	1.37	250.00	9,039.4	-851.0	-228.2	879.0	0.00	0.00	0.00
9,200.0	1.37	250.00	9,139.4	-851.8	-230.4	880.5	0.00	0.00	0.00
9,300.0	1.37	250.00	9,239.4	-852.6	-232.7	882.0	0.00	0.00	0.00
9,400.0	1.37	250.00	9,339.3	-853.4	-234.9	883.5	0.00	0.00	0.00
9,500.0	1.37	250.00	9,439.3	-854.3	-237.2	885.0	0.00	0.00	0.00
9,600.0	1.37	250.00	9,539.3	-855.1	-239.4	886.5	0.00	0.00	0.00
9,700.0	1.37	250.00	9,639.3	-855.9	-241.7	888.0	0.00	0.00	0.00
9,800.0	1.37	250.00	9,739.2	-856.7	-243.9	889.6	0.00	0.00	0.00
9,900.0	1.37	250.00	9,839.2	-857.5	-246.2	891.1	0.00	0.00	0.00
10,000.0	1.37	250.00	9,939.2	-858.4	-248.4	892.6	0.00	0.00	0.00
10,100.0	1.37	250.00	10,039.1	-859.2	-250.7	894.1	0.00	0.00	0.00
10,200.0	1.37	250.00	10,139.1	-860.0	-252.9	895.6	0.00	0.00	0.00
10,300.0	1.37	250.00	10,239.1	-860.8	-255.2	897.1	0.00	0.00	0.00
10,400.0	1.37	250.00	10,339.1	-861.6	-257.4	898.6	0.00	0.00	0.00
10,500.0	1.37	250.00	10,439.0	-862.5	-259.7	900.1	0.00	0.00	0.00
10,600.0	1.37	250.00	10,539.0	-863.3	-261.9	901.6	0.00	0.00	0.00
10,700.0	1.37	250.00	10,639.0	-864.1	-264.2	903.1	0.00	0.00	0.00
10,800.0	1.37	250.00	10,738.9	-864.9	-266.4	904.6	0.00	0.00	0.00
10,900.0	1.37	250.00	10,838.9	-865.7	-268.7	906.1	0.00	0.00	0.00
11,000.0	1.37	250.00	10,938.9	-866.5	-270.9	907.6	0.00	0.00	0.00
11,100.0	1.37	250.00	11,038.9	-867.4	-273.2	909.1	0.00	0.00	0.00
11,200.0	1.37	250.00	11,138.8	-868.2	-275.4	910.6	0.00	0.00	0.00
Cameo									
11,298.2	1.37	250.00	11,237.0	-869.0	-277.6	912.1	0.00	0.00	0.00
11,300.0	1.37	250.00	11,238.8	-869.0	-277.7	912.1	0.00	0.00	0.00
11,400.0	1.37	250.00	11,338.8	-869.8	-279.9	913.6	0.00	0.00	0.00
11,500.0	1.37	250.00	11,438.7	-870.6	-282.2	915.1	0.00	0.00	0.00
11,600.0	1.37	250.00	11,538.7	-871.5	-284.4	916.6	0.00	0.00	0.00
11,700.0	1.37	250.00	11,638.7	-872.3	-286.7	918.1	0.00	0.00	0.00
Rollins									
11,798.3	1.37	250.00	11,737.0	-873.1	-288.9	919.6	0.00	0.00	0.00
11,800.0	1.37	250.00	11,738.7	-873.1	-288.9	919.6	0.00	0.00	0.00
11,900.0	1.37	250.00	11,838.6	-873.9	-291.2	921.1	0.00	0.00	0.00
12,000.0	1.37	250.00	11,938.6	-874.7	-293.4	922.6	0.00	0.00	0.00
12,100.0	1.37	250.00	12,038.6	-875.6	-295.7	924.1	0.00	0.00	0.00
12,200.0	1.37	250.00	12,138.5	-876.4	-297.9	925.6	0.00	0.00	0.00
TD @ 12298.5' MD / 12237.0' TVD									
12,298.5	1.37	250.00	12,237.0	-877.2	-300.1	927.1	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BJU M23A FED 15C-23 496 - Slot 15C-23
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 15C-23 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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	-843.0	-206.2	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	12,237.0	-877.2	-300.1	14,422,941.70	2,444,790.20	39.681643	-108.141289

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,313.7	3,298.0	Wasatch			
5,737.3	5,698.0	Wasatch G			
6,040.2	5,998.0	Fort Union			
8,075.3	8,015.0	Ohio Creek			
8,075.3	8,015.0	TOG			
8,416.4	8,356.0	William Fork			
11,298.2	11,237.0	Cameo			
11,798.3	11,737.0	Rollins			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,522.0	1,522.0	0.0	0.0	Build 3° / 100'
1,788.7	1,787.8	-18.5	-2.1	EOB @ 8.00° Inc. / 186.50° Azm
4,788.7	4,758.6	-433.3	-49.4	Turn 3° / 100'
4,856.2	4,825.5	-442.4	-51.6	EOT @ 201.10° Azm
7,808.7	7,749.3	-825.6	-199.5	Drop 3° / 100'
8,075.3	8,015.0	-843.0	-206.2	EOD @ Vertical
8,166.7	8,106.4	-843.3	-207.2	EOB @ 1.37° Inc. / 250.00° Azm
12,298.5	12,237.0	-877.2	-300.1	TD @ 12298.5' MD / 12237.0' TVD