

Project: Garfield County, CO
Site: BJU M23A 496 Pad
Well: BJU M23A FED 13C-23 496
Wellbore: Wellbore #1
Design: Design #1
Latitude: 39.684450
Longitude: -108.140119
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 13C-23 496(0.0N, 0.0E)
Measured Depth Reference: RKB @ 8134.0usft (30')
Calculation Method: Minimum Curvature

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3394.0	3435.1	Wasatch
5794.0	5868.8	Wasatch G
6094.0	6173.0	Fort Union
8125.0	8229.5	Ohio Creek
8125.0	8229.5	TOG
8509.0	8613.6	William Fork
11319.0	11424.6	Cameo
11819.0	11924.8	Rollins

SECTION DETAILS

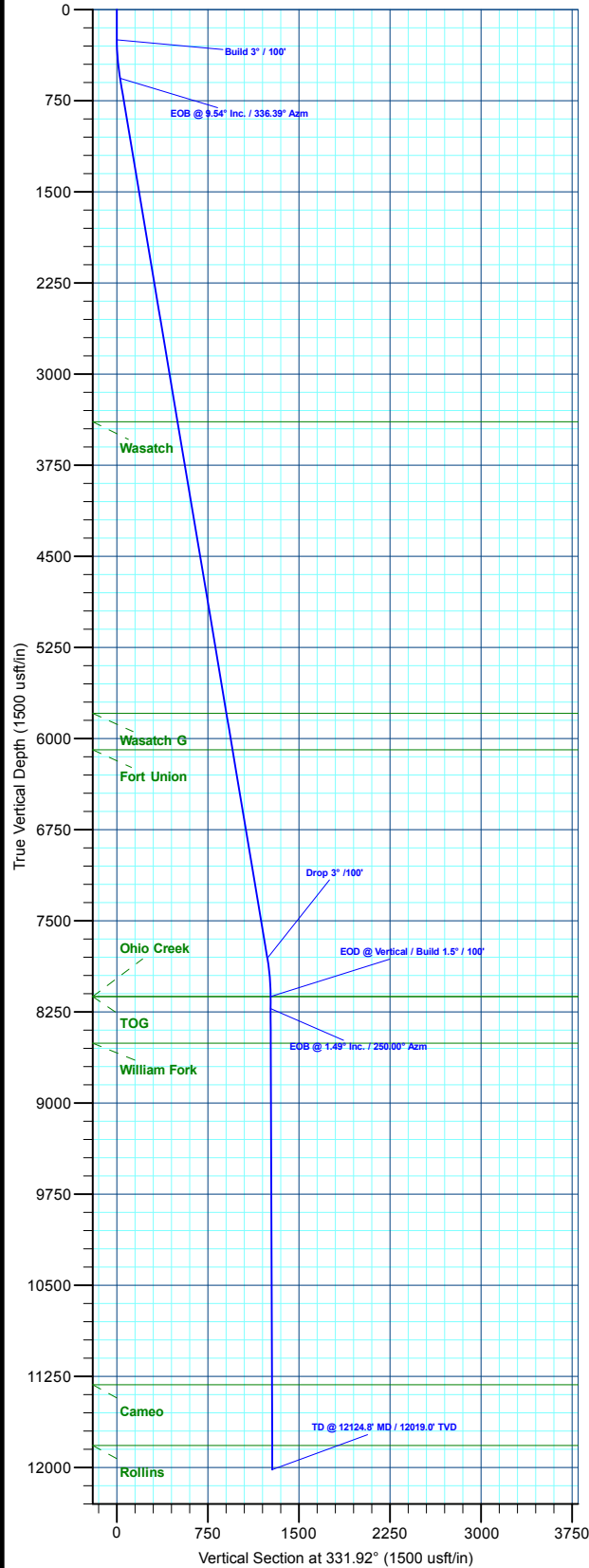
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
568.1	9.54	336.39	566.6	24.2	-10.6	3.00	336.39	26.3	EOB @ 9.54° Inc. / 336.39° Azm
7911.5	9.54	336.39	7808.4	1139.7	-498.0	0.00	0.00	1240.0	Drop 3° / 100'
8229.5	0.00	0.00	8125.0	1163.9	-508.6	3.00	180.00	1266.3	EOD @ Vertical / Build 1.5° / 100'
8328.9	1.49	250.00	8224.3	1163.4	-509.8	1.50	250.00	1266.5	EOB @ 1.49° Inc. / 250.00° Azm
12124.8	1.49	250.00	12019.0	1129.7	-602.6	0.00	0.00	1280.4	TD @ 12124.8° MD / 12019.0° TVD

DESIGN TARGET DETAILS

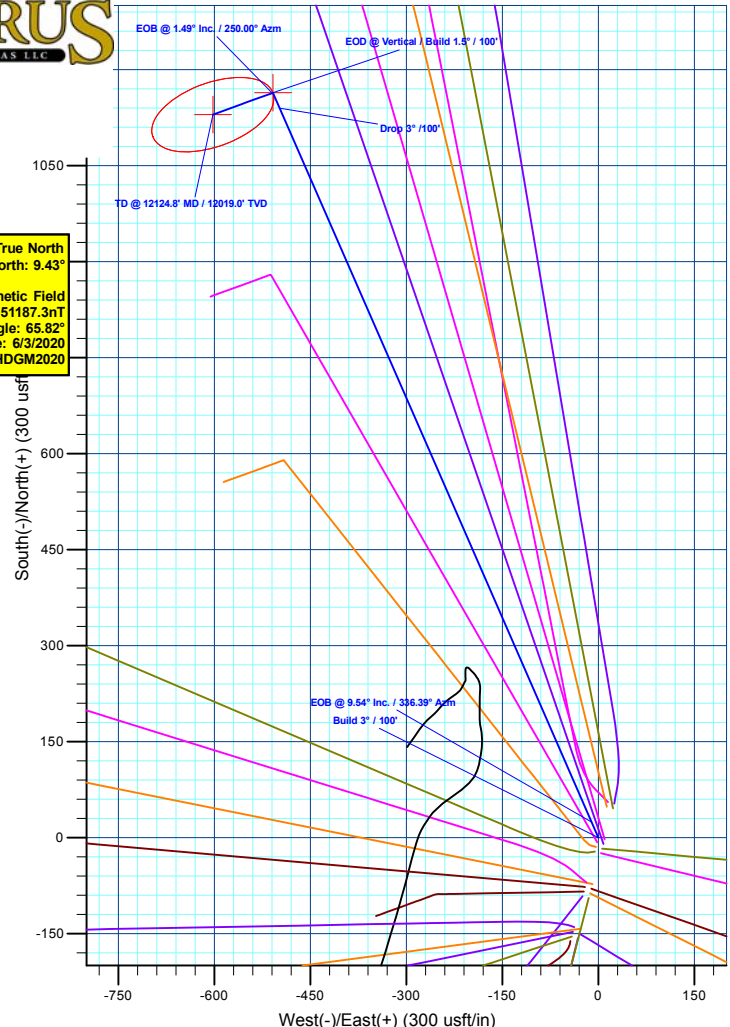
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
OHCR - 13C-23	8125.0	1163.9	-508.6	14425121.88	2444541.23	39.687644	-108.141926
PBHL - 13C-23	12019.0	1129.7	-602.6	14425084.70	2444448.40	39.687551	-108.142260

WELL DETAILS: BJU M23A FED 13C-23 496

+N/-S	+E/-W	Ground Level : 8104.0	Northing	Easting	Latitude	Longitude
0.0	0.0		14423974.80	2445086.70	39.684450	-108.140119



TM
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 13C-23 496/Wellbore #1)

Created By: Will Jircik Date: 19:05, June 04 2020



Caerus Oil & Gas

Garfield County, CO

BJU M23A 496 Pad

BJU M23A FED 13C-23 496 - Slot BJU M23A FED 13C-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 13C-23 496 - Slot BJU M23A FED 13C-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 13C-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 13C-23 496 - Slot BJU M23A FED 13C-23 496					
Well Position	+N/-S	-52.9 usft	Northing:	14,423,974.80 usft	Latitude:	39.684450
	+E/-W	-24.6 usft	Easting:	2,445,086.70 usft	Longitude:	-108.140120
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 #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	331.92	

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	
250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.00	0.00	
568.1	9.54	336.39	566.6	24.2	-10.6	3.00	3.00	0.00	336.39	
7,911.5	9.54	336.39	7,808.4	1,139.7	-498.0	0.00	0.00	0.00	0.00	
8,229.5	0.00	0.00	8,125.0	1,163.9	-508.6	3.00	-3.00	0.00	180.00	OHCR - 13C-23
8,328.9	1.49	250.00	8,224.3	1,163.4	-509.8	1.50	1.50	-110.73	250.00	
12,124.8	1.49	250.00	12,019.0	1,129.7	-602.6	0.00	0.00	0.00	0.00	PBHL - 13C-23

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BJU M23A FED 13C-23 496 - Slot BJU M23A FED 13C-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 13C-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
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
Build 3° / 100'									
250.0	0.00	0.00	250.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	1.50	336.39	300.0	0.6	-0.3	0.7	3.00	3.00	0.00
400.0	4.50	336.39	399.8	5.4	-2.4	5.9	3.00	3.00	0.00
500.0	7.50	336.39	499.3	15.0	-6.5	16.3	3.00	3.00	0.00
EOB @ 9.54° Inc. / 336.39° Azm									
568.1	9.54	336.39	566.6	24.2	-10.6	26.3	3.00	3.00	0.00
600.0	9.54	336.39	598.1	29.1	-12.7	31.6	0.00	0.00	0.00
700.0	9.54	336.39	696.7	44.3	-19.3	48.1	0.00	0.00	0.00
800.0	9.54	336.39	795.3	59.4	-26.0	64.7	0.00	0.00	0.00
900.0	9.54	336.39	893.9	74.6	-32.6	81.2	0.00	0.00	0.00
1,000.0	9.54	336.39	992.6	89.8	-39.3	97.7	0.00	0.00	0.00
1,100.0	9.54	336.39	1,091.2	105.0	-45.9	114.3	0.00	0.00	0.00
1,200.0	9.54	336.39	1,189.8	120.2	-52.5	130.8	0.00	0.00	0.00
1,300.0	9.54	336.39	1,288.4	135.4	-59.2	147.3	0.00	0.00	0.00
1,400.0	9.54	336.39	1,387.0	150.6	-65.8	163.8	0.00	0.00	0.00
1,500.0	9.54	336.39	1,485.6	165.8	-72.4	180.4	0.00	0.00	0.00
1,600.0	9.54	336.39	1,584.3	181.0	-79.1	196.9	0.00	0.00	0.00
1,700.0	9.54	336.39	1,682.9	196.2	-85.7	213.4	0.00	0.00	0.00
1,800.0	9.54	336.39	1,781.5	211.3	-92.4	229.9	0.00	0.00	0.00
1,900.0	9.54	336.39	1,880.1	226.5	-99.0	246.5	0.00	0.00	0.00
2,000.0	9.54	336.39	1,978.7	241.7	-105.6	263.0	0.00	0.00	0.00
2,100.0	9.54	336.39	2,077.3	256.9	-112.3	279.5	0.00	0.00	0.00
2,200.0	9.54	336.39	2,176.0	272.1	-118.9	296.0	0.00	0.00	0.00
2,300.0	9.54	336.39	2,274.6	287.3	-125.5	312.6	0.00	0.00	0.00
2,400.0	9.54	336.39	2,373.2	302.5	-132.2	329.1	0.00	0.00	0.00
2,500.0	9.54	336.39	2,471.8	317.7	-138.8	345.6	0.00	0.00	0.00
2,600.0	9.54	336.39	2,570.4	332.9	-145.5	362.2	0.00	0.00	0.00
2,700.0	9.54	336.39	2,669.0	348.1	-152.1	378.7	0.00	0.00	0.00
2,800.0	9.54	336.39	2,767.7	363.2	-158.7	395.2	0.00	0.00	0.00
2,900.0	9.54	336.39	2,866.3	378.4	-165.4	411.7	0.00	0.00	0.00
3,000.0	9.54	336.39	2,964.9	393.6	-172.0	428.3	0.00	0.00	0.00
3,100.0	9.54	336.39	3,063.5	408.8	-178.7	444.8	0.00	0.00	0.00
3,200.0	9.54	336.39	3,162.1	424.0	-185.3	461.3	0.00	0.00	0.00
3,300.0	9.54	336.39	3,260.7	439.2	-191.9	477.8	0.00	0.00	0.00
3,400.0	9.54	336.39	3,359.4	454.4	-198.6	494.4	0.00	0.00	0.00
Wasatch									
3,435.1	9.54	336.39	3,394.0	459.7	-200.9	500.2	0.00	0.00	0.00
3,500.0	9.54	336.39	3,458.0	469.6	-205.2	510.9	0.00	0.00	0.00
3,600.0	9.54	336.39	3,556.6	484.8	-211.8	527.4	0.00	0.00	0.00
3,700.0	9.54	336.39	3,655.2	500.0	-218.5	543.9	0.00	0.00	0.00
3,800.0	9.54	336.39	3,753.8	515.1	-225.1	560.5	0.00	0.00	0.00
3,900.0	9.54	336.39	3,852.4	530.3	-231.8	577.0	0.00	0.00	0.00
4,000.0	9.54	336.39	3,951.0	545.5	-238.4	593.5	0.00	0.00	0.00
4,100.0	9.54	336.39	4,049.7	560.7	-245.0	610.1	0.00	0.00	0.00
4,200.0	9.54	336.39	4,148.3	575.9	-251.7	626.6	0.00	0.00	0.00
4,300.0	9.54	336.39	4,246.9	591.1	-258.3	643.1	0.00	0.00	0.00
4,400.0	9.54	336.39	4,345.5	606.3	-264.9	659.6	0.00	0.00	0.00
4,500.0	9.54	336.39	4,444.1	621.5	-271.6	676.2	0.00	0.00	0.00
4,600.0	9.54	336.39	4,542.7	636.7	-278.2	692.7	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BJU M23A FED 13C-23 496 - Slot BJU M23A FED 13C-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 13C-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)
4,700.0	9.54	336.39	4,641.4	651.9	-284.9	709.2	0.00	0.00	0.00
4,800.0	9.54	336.39	4,740.0	667.0	-291.5	725.7	0.00	0.00	0.00
4,900.0	9.54	336.39	4,838.6	682.2	-298.1	742.3	0.00	0.00	0.00
5,000.0	9.54	336.39	4,937.2	697.4	-304.8	758.8	0.00	0.00	0.00
5,100.0	9.54	336.39	5,035.8	712.6	-311.4	775.3	0.00	0.00	0.00
5,200.0	9.54	336.39	5,134.4	727.8	-318.0	791.8	0.00	0.00	0.00
5,300.0	9.54	336.39	5,233.1	743.0	-324.7	808.4	0.00	0.00	0.00
5,400.0	9.54	336.39	5,331.7	758.2	-331.3	824.9	0.00	0.00	0.00
5,500.0	9.54	336.39	5,430.3	773.4	-338.0	841.4	0.00	0.00	0.00
5,600.0	9.54	336.39	5,528.9	788.6	-344.6	858.0	0.00	0.00	0.00
5,700.0	9.54	336.39	5,627.5	803.8	-351.2	874.5	0.00	0.00	0.00
5,800.0	9.54	336.39	5,726.1	818.9	-357.9	891.0	0.00	0.00	0.00
Wasatch G									
5,868.8	9.54	336.39	5,794.0	829.4	-362.4	902.4	0.00	0.00	0.00
5,900.0	9.54	336.39	5,824.8	834.1	-364.5	907.5	0.00	0.00	0.00
6,000.0	9.54	336.39	5,923.4	849.3	-371.2	924.1	0.00	0.00	0.00
6,100.0	9.54	336.39	6,022.0	864.5	-377.8	940.6	0.00	0.00	0.00
Fort Union									
6,173.0	9.54	336.39	6,094.0	875.6	-382.6	952.7	0.00	0.00	0.00
6,200.0	9.54	336.39	6,120.6	879.7	-384.4	957.1	0.00	0.00	0.00
6,300.0	9.54	336.39	6,219.2	894.9	-391.1	973.6	0.00	0.00	0.00
6,400.0	9.54	336.39	6,317.8	910.1	-397.7	990.2	0.00	0.00	0.00
6,500.0	9.54	336.39	6,416.5	925.3	-404.3	1,006.7	0.00	0.00	0.00
6,600.0	9.54	336.39	6,515.1	940.5	-411.0	1,023.2	0.00	0.00	0.00
6,700.0	9.54	336.39	6,613.7	955.7	-417.6	1,039.7	0.00	0.00	0.00
6,800.0	9.54	336.39	6,712.3	970.8	-424.3	1,056.3	0.00	0.00	0.00
6,900.0	9.54	336.39	6,810.9	986.0	-430.9	1,072.8	0.00	0.00	0.00
7,000.0	9.54	336.39	6,909.5	1,001.2	-437.5	1,089.3	0.00	0.00	0.00
7,100.0	9.54	336.39	7,008.2	1,016.4	-444.2	1,105.9	0.00	0.00	0.00
7,200.0	9.54	336.39	7,106.8	1,031.6	-450.8	1,122.4	0.00	0.00	0.00
7,300.0	9.54	336.39	7,205.4	1,046.8	-457.4	1,138.9	0.00	0.00	0.00
7,400.0	9.54	336.39	7,304.0	1,062.0	-464.1	1,155.4	0.00	0.00	0.00
7,500.0	9.54	336.39	7,402.6	1,077.2	-470.7	1,172.0	0.00	0.00	0.00
7,600.0	9.54	336.39	7,501.2	1,092.4	-477.4	1,188.5	0.00	0.00	0.00
7,700.0	9.54	336.39	7,599.9	1,107.6	-484.0	1,205.0	0.00	0.00	0.00
7,800.0	9.54	336.39	7,698.5	1,122.7	-490.6	1,221.5	0.00	0.00	0.00
7,900.0	9.54	336.39	7,797.1	1,137.9	-497.3	1,238.1	0.00	0.00	0.00
Drop 3° /100'									
7,911.5	9.54	336.39	7,808.4	1,139.7	-498.0	1,240.0	0.00	0.00	0.00
8,000.0	6.89	336.39	7,896.0	1,151.3	-503.1	1,252.6	3.00	-3.00	0.00
8,100.0	3.89	336.39	7,995.6	1,159.9	-506.9	1,261.9	3.00	-3.00	0.00
8,200.0	0.89	336.39	8,095.5	1,163.7	-508.5	1,266.1	3.00	-3.00	0.00
EOD @ Vertical / Build 1.5° / 100' - Ohio Creek - TOG									
8,229.5	0.00	0.00	8,125.0	1,163.9	-508.6	1,266.3	3.00	-3.00	0.00
8,300.0	1.06	250.00	8,195.5	1,163.7	-509.2	1,266.4	1.50	1.50	0.00
EOB @ 1.49° Inc. / 250.00° Azm									
8,328.9	1.49	250.00	8,224.3	1,163.4	-509.8	1,266.5	1.50	1.50	0.00
8,400.0	1.49	250.00	8,295.4	1,162.8	-511.6	1,266.7	0.00	0.00	0.00
8,500.0	1.49	250.00	8,395.4	1,161.9	-514.0	1,267.1	0.00	0.00	0.00
8,600.0	1.49	250.00	8,495.4	1,161.0	-516.5	1,267.5	0.00	0.00	0.00
William Fork									
8,613.6	1.49	250.00	8,509.0	1,160.9	-516.8	1,267.5	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BJU M23A FED 13C-23 496 - Slot BJU M23A FED 13C-23 496
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Site:	BJU M23A 496 Pad	North Reference:	True
Well:	BJU M23A FED 13C-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)
8,700.0	1.49	250.00	8,595.3	1,160.1	-518.9	1,267.8	0.00	0.00	0.00
8,800.0	1.49	250.00	8,695.3	1,159.3	-521.3	1,268.2	0.00	0.00	0.00
8,900.0	1.49	250.00	8,795.3	1,158.4	-523.8	1,268.6	0.00	0.00	0.00
9,000.0	1.49	250.00	8,895.2	1,157.5	-526.2	1,268.9	0.00	0.00	0.00
9,100.0	1.49	250.00	8,995.2	1,156.6	-528.7	1,269.3	0.00	0.00	0.00
9,200.0	1.49	250.00	9,095.2	1,155.7	-531.1	1,269.7	0.00	0.00	0.00
9,300.0	1.49	250.00	9,195.1	1,154.8	-533.6	1,270.0	0.00	0.00	0.00
9,400.0	1.49	250.00	9,295.1	1,153.9	-536.0	1,270.4	0.00	0.00	0.00
9,500.0	1.49	250.00	9,395.1	1,153.0	-538.4	1,270.8	0.00	0.00	0.00
9,600.0	1.49	250.00	9,495.0	1,152.1	-540.9	1,271.1	0.00	0.00	0.00
9,700.0	1.49	250.00	9,595.0	1,151.3	-543.3	1,271.5	0.00	0.00	0.00
9,800.0	1.49	250.00	9,695.0	1,150.4	-545.8	1,271.9	0.00	0.00	0.00
9,900.0	1.49	250.00	9,794.9	1,149.5	-548.2	1,272.2	0.00	0.00	0.00
10,000.0	1.49	250.00	9,894.9	1,148.6	-550.7	1,272.6	0.00	0.00	0.00
10,100.0	1.49	250.00	9,994.9	1,147.7	-553.1	1,273.0	0.00	0.00	0.00
10,200.0	1.49	250.00	10,094.8	1,146.8	-555.6	1,273.3	0.00	0.00	0.00
10,300.0	1.49	250.00	10,194.8	1,145.9	-558.0	1,273.7	0.00	0.00	0.00
10,400.0	1.49	250.00	10,294.8	1,145.0	-560.4	1,274.1	0.00	0.00	0.00
10,500.0	1.49	250.00	10,394.7	1,144.1	-562.9	1,274.4	0.00	0.00	0.00
10,600.0	1.49	250.00	10,494.7	1,143.2	-565.3	1,274.8	0.00	0.00	0.00
10,700.0	1.49	250.00	10,594.6	1,142.4	-567.8	1,275.1	0.00	0.00	0.00
10,800.0	1.49	250.00	10,694.6	1,141.5	-570.2	1,275.5	0.00	0.00	0.00
10,900.0	1.49	250.00	10,794.6	1,140.6	-572.7	1,275.9	0.00	0.00	0.00
11,000.0	1.49	250.00	10,894.5	1,139.7	-575.1	1,276.2	0.00	0.00	0.00
11,100.0	1.49	250.00	10,994.5	1,138.8	-577.5	1,276.6	0.00	0.00	0.00
11,200.0	1.49	250.00	11,094.5	1,137.9	-580.0	1,277.0	0.00	0.00	0.00
11,300.0	1.49	250.00	11,194.4	1,137.0	-582.4	1,277.3	0.00	0.00	0.00
11,400.0	1.49	250.00	11,294.4	1,136.1	-584.9	1,277.7	0.00	0.00	0.00
Cameo									
11,424.6	1.49	250.00	11,319.0	1,135.9	-585.5	1,277.8	0.00	0.00	0.00
11,500.0	1.49	250.00	11,394.4	1,135.2	-587.3	1,278.1	0.00	0.00	0.00
11,600.0	1.49	250.00	11,494.3	1,134.4	-589.8	1,278.4	0.00	0.00	0.00
11,700.0	1.49	250.00	11,594.3	1,133.5	-592.2	1,278.8	0.00	0.00	0.00
11,800.0	1.49	250.00	11,694.3	1,132.6	-594.6	1,279.2	0.00	0.00	0.00
11,900.0	1.49	250.00	11,794.2	1,131.7	-597.1	1,279.5	0.00	0.00	0.00
Rollins									
11,924.8	1.49	250.00	11,819.0	1,131.5	-597.7	1,279.6	0.00	0.00	0.00
12,000.0	1.49	250.00	11,894.2	1,130.8	-599.5	1,279.9	0.00	0.00	0.00
12,100.0	1.49	250.00	11,994.2	1,129.9	-602.0	1,280.3	0.00	0.00	0.00
TD @ 12124.8' MD / 12019.0' TVD									
12,124.8	1.49	250.00	12,019.0	1,129.7	-602.6	1,280.4	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BJU M23A FED 13C-23 496 - Slot BJU M23A FED 13C-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 13C-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 - 13C-23 - plan hits target center - Point	0.00	0.00	8,125.0	1,163.9	-508.6	14,425,121.88	2,444,541.23	39.687645	-108.141926
PBHL - 13C-23 - plan hits target center - Ellipse (radii L100.0 W50.0 on 250.00 azi)	0.00	0.00	12,019.0	1,129.7	-602.6	14,425,084.70	2,444,448.40	39.687551	-108.142260

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,435.1	3,394.0	Wasatch			
5,868.8	5,794.0	Wasatch G			
6,173.0	6,094.0	Fort Union			
8,229.5	8,125.0	Ohio Creek			
8,229.5	8,125.0	TOG			
8,613.6	8,509.0	William Fork			
11,424.6	11,319.0	Cameo			
11,924.8	11,819.0	Rollins			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
250.0	250.0	0.0	0.0	Build 3° / 100'
568.1	566.6	24.2	-10.6	EOB @ 9.54° Inc. / 336.39° Azm
7,911.5	7,808.4	1,139.7	-498.0	Drop 3° / 100'
8,229.5	8,125.0	1,163.9	-508.6	EOD @ Vertical / Build 1.5° / 100'
8,328.9	8,224.3	1,163.4	-509.8	EOB @ 1.49° Inc. / 250.00° Azm
12,124.8	12,019.0	1,129.7	-602.6	TD @ 12124.8' MD / 12019.0' TVD